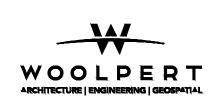
SITE IMPROVEMENT PLANS HERITAGE SQUARE

NE CORNER ROUTE 59 & AURORA AVENUE NAPERVILLE, ILLINOIS AUGUST 2018

BRIXMOR PROPERTY GROUP, LLC

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BENCHMARK #1

THE BASIS OF ELEVATIONS HEREON IS NAVD 88.

REBAR SET — SEE SITE MAP FOR LOCATION.

ELEVATION = 700.85'

BENCHMARK #2

THE BASIS OF ELEVATIONS HEREON IS NAD 1983 (1986) ILLINOIS STATE PLANE EAST ZONE. REBAR SET — SEE VICINITY MAP FOR LOCATION.

ELEVATION = 707.63'

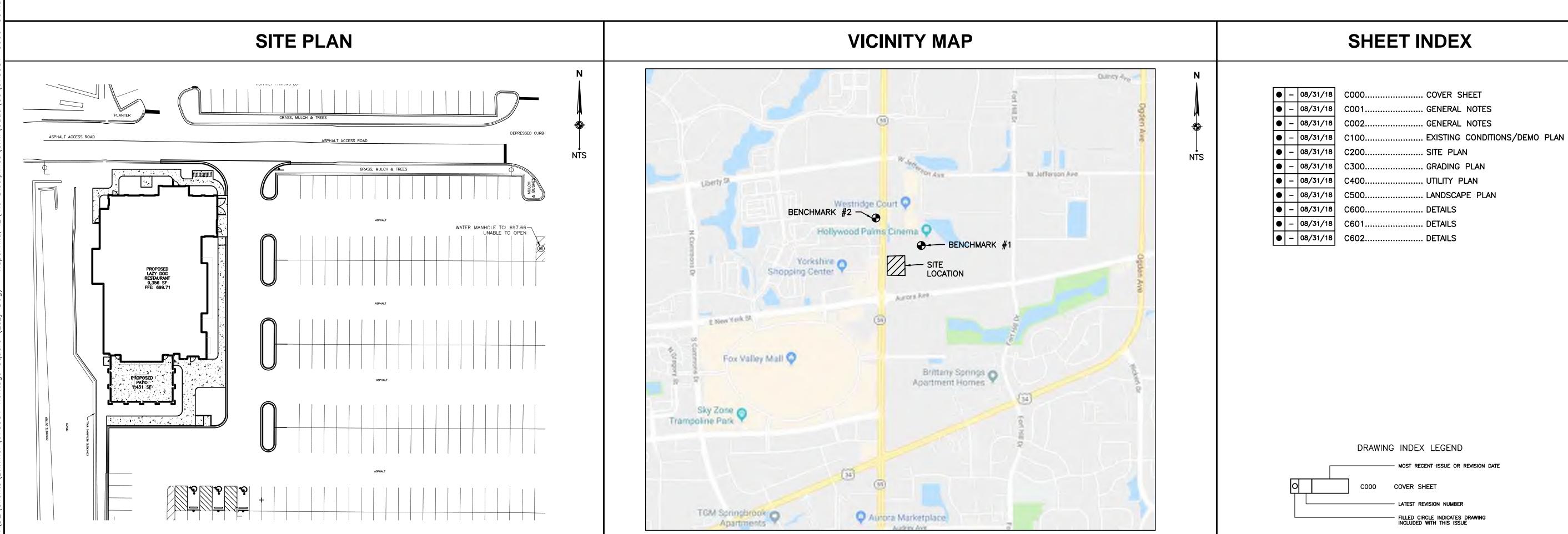
REVISION

REVISED PER CITY COMMENTS

REVISED PER CITY COMMENTS

PROJECT No.:

078581



GENERAL NOTES

- THE CONTRACTOR SHALL VERIFY ALL ELEVATIONS PRIOR TO THE START OF WORK. ANY DISCREPANCIES FOUND SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ENGINEER.
- THE ACCURACY AND COMPLETE INCLUSION OF THE LOCATIONS OF EXISTING UTILITIES IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PRIVATE AND PUBLIC UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER, PROJECT OWNER AND UTILITY OWNER, BY THE CONTRACTOR AT HIS OWN EXPENSE.
- ALL LOT IRONS DAMAGED OR REMOVED DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED BY THE ENGINEER AND SAID COST OF REPLACEMENT SHALL BE PAID BY THE CONTRACTOR.
- ALL SITE IMPROVEMENTS, INCLUDING STORM WATER DRAINAGE (BUT NOT WATER MAIN AND SANITARY SEWER) SHALL BE CONSTRUCTED IN ACCORDANCE WITH ALL APPLICABLE SECTIONS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION", ADOPTED APRIL 1, 2016 WITH 6. ALL SUBSEQUENT SUPPLEMENTS, AND THE CITY OF NAPERVILLE. IN CASE OF CONFLICT, THE LATTER SHALL TAKE PRECEDENCE.
- ALL SEWER AND WATER MAIN CONSTRUCTION SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS". LATEST EDITION. UNLESS OTHERWISE NOTED
- ALL SEWERS AND WATER MAINS WHICH FALL WITHIN THREE FEET OF EXISTING OR PROPOSED PAVED AREAS SHALL BE BACKFILLED WITH AGGREGATE CA-6 OR OTHER APPROVED GRANULAR MATERIAL. THE GRAVEL SHALL EXTEND A DISTANCE OF 2'-0" BEYOND THE PAVEMENT AND EXTEND DOWN FROM THAT POINT AT A 1:1 SLOPE, AWAY FROM THE PAVEMENT.
- ALL NEW AND EXISTING STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION OF THE WORK. ADJUSTMENTS UPWARD SHALL BE MADE USING PRECAST CONCRETE ADJUSTMENT RINGS, BUT NO MORE THAN 8" OF RINGS SHALL BE USED. IF THE TOTAL HEIGHT OF ALL ADJUSTMENTS EXCEEDS 8", THEN ADJUSTMENTS SHALL BE MADE BY INTERCHANGING AND/OR ADDING/REMOVING COMPLETE BARREL SECTIONS TO ACHIEVE DESIRED ELEVATIONS.
- WHENEVER A SEWER CROSSES UNDER A WATER MAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATER MAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN ALL SEWERS AND SERVICES AND WATER MAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE 11.1. ILLINOIS DEPARTMENT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE SEWER IS LAID IN A TRENCH WITH THE WATER MAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH KEEPING A MINIMUM OF 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED ABOVE CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THEN WITHIN A DISTANCE OF 10 FEET ON EITHER SIDE OF THE WATER MAIN, THE SEWER PIPES SHALL BE CAST IRON OR DUCTILE IRON.
- PERMITS AND LICENSES OF A TEMPORARY NATURE NECESSARY FOR THE PROSECUTION OF THE WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR. PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR SHALL CALL THE ATTENTION OF THE ENGINEER TO ANY MATERIAL OR EQUIPMENT HE DEEMS INADEQUATE AND TO ANY ITEM OF WORK OMITTED.
- 10. ALL EXISTING SEPTIC SYSTEMS ARE TO BE ABANDONED. ABANDONED TANKS ARE BE FILLED TO OR REMOVED BY A LICENSED SEPTIC SYSTEM CONTRACTOR, CERTIFICATES SHALL BE FURNISHED, SUBMITTED AND APPROVED BY THE APPROPRIATE HEALTH DEPARTMENT PRIOR TO ACCEPTANCE OF THE WORK.
- 11. A LICENSED WELL DRILLER SHALL CAP ALL WELLS IN ACCORDANCE WITH STATE AND COUNTY REGULATIONS. CERTIFICATES SHALL BE FURNISHED. SUBMITTED AND APPROVED BY THE APPROPRIATE HEALTH DEPARTMENT PRIOR TO ACCEPTANCE OF THE WORK.

PAVEMENT & CONCRETE CONSTRUCTION

- ALL EXISTING PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAWCUT ALONG LIMITS OF PROPOSED REMOVAL BEFORE REMOVAL OPERATION
- ALL CURBS CONSTRUCTED OR REPLACED OVER A UTILITY TRENCH SHALL BE 19. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AROUND ISLANDS. REINFORCED WITH TWO #4 REBARS FOR A LENGTH OF 20 FEET CENTERED OVER THE TRENCH. SIDEWALKS SHALL BE TREATED IN THE SAME MANNER 20. IN CASE OF ANY CONFLICT, MUNICIPAL SPECIFICATIONS, STANDARDS, AND 13. USING THREE #6 REBARS.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED AT TEN (10) FOOT MINIMUM INTERVALS. THE GRANULAR CURB BASE SHALL BE A MINIMUM OF THREE (3) INCHES OF 3/8" TO 3/4" OPEN GRADED GRANULAR MATERIAL TO ALLOW FOR PROPER SUBGRADE DRAINAGE. COMPACTED CURB SUBGRADE SHALL BE SHAPED PARALLEL TO THE CURB FLOW LINE AND POSITIVELY DRAINED TO THE INLETS AND CATCH BASINS. ALL PAVEMENTS SHALL BE CONSTRUCTED ON A SELECT COMPACTED SUBGRADE, GRADED PARALLEL TO THE FINISH SURFACE.
- EXPANSION JOINTS SHALL BE REQUIRED AT ALL POINTS OF CURVATURE, AT BOTH SIDES OF ALL DRAINAGE STRUCTURES AND ALL LOCATIONS WHERE THE SIDEWALK ABUTS THE CONCRETE CURB AND GUTTER.
- CURB AND GUTTER SHALL BE CONSTRUCTED AND TIED INTO EXISTING P.C.C. PAVEMENT IN ACCORDANCE WITH I.D.O.T. STANDARDS 606001 AND 420001
- ALL CONCRETE CURB AND GUTTER SHALL BE SEALED WITH W.R. MEADOWS T1A44 SEALANT OR APPROVED EQUAL, IMMEDIATELY AFTER SEVEN (7) DAYS OF CURING AT A RATE OF 300 S.F. PER GALLON UTILIZING A SPRAY APPLICATION. THE SURFACE MUST BE THOROUGHLY CLEAN AND DRY OF APPLICATION.

GRADING NOTES

- CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND 1. UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER AND THE OWNER, OR REPLACED.
- SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- CONTRACTOR TO PERFORM PAVEMENT RESTORATION FOR ALL UTILITY INSTALLATION AND RELOCATION WITHIN PAVEMENT LIMITS.
- THE GRADING AND CONSTRUCTION OF STREET AND PARKING LOT IMPROVEMENTS SHALL NOT CAUSE PONDING OF STORM WATER. ALL AREAS ADJACENT TO THESE IMPROVEMENTS SHALL BE GRADED TO ALLOW POSITIVE
- STREET PAVING AND CURBS TO REMAIN SHALL BE PROTECTED FROM DAMAGE, AND IF DAMAGED SHALL BE REPLACED TO MEET STATE AND LOCAL STANDARDS AND SPECIFICATIONS ON MATERIAL AND WORKMANSHIP.
- UNSUITABLE MATERIAL ENCOUNTERED IN EXCAVATION FOR STREETS BUILDING PADS AND PARKING LOTS SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.
- THE SOIL INVESTIGATION REPORT FOR THE SITE, AND ALL ADDENDA THERETO, ARE SUPPORTING DOCUMENTS TO THE PERMIT FOR THE PROJECT. THE RECOMMENDATIONS AS STATED IN THE REPORT SHALL BE FOLLOWED BY ALL CONTRACTORS.
- CONTRACTOR SHALL FIELD VERIFY SITE CONDITIONS, ELEVATIONS, SIZES, AND MATERIAL OF ALL EXISTING UTILITIES WHICH ARE TO BE TAPPED OR EXTENDED ON SITE. ANY DEVIATIONS FROM PLAN INFORMATION SHALL BE PROVIDED TO THE ENGINEER IN WRITING WITHIN 24 HOURS AND PRIOR TO THE START OF CONSTRUCTION ON THAT IMPROVEMENT. SHOULD THE CONTRACTOR START WORK WITHOUT NOTIFICATION TO THE ENGINEER OF ANY DISCREPANCIES, HE WILL ASSUME ALL RESPONSIBILITY OF THE WORK NECESSARY TO COMPLETE THE PROJECT.
- 10. ALL FIELD TILE ENCOUNTERED SHALL BE REPLACED AND/OR CONNECTED TO THE STORM SEWER SYSTEM AND LOCATED AND IDENTIFIED ON RECORD 7 PLANS BY THE CONTRACTOR.
- 11. ALL STORM DRAINAGE CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF NAPERVILLE AND THE ILLINOIS DEPARTMENT 8. OF TRANSPORTATION.
- CONSTRUCTION, LATEST EDITION.
- 11.2. STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION 9. IN ILLINIOS, LATEST EDITION.
- 11.3. LOCAL MUNICIPAL REQUIREMENTS.
- 12. ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.
- 13. PROPER TRANSITION TO BE PROVIDED FROM END OF PROPOSED STORM SEWERS, DITCHES, ROADWAY, ETC. TO EXISTING GRADE. RESTORATION OF DISTURBED AREAS OUTSIDE OF THE CONSTRUCTION LIMITS IS THE RESPONSIBILITY OF THE CONTRACTOR. AREAS SHALL BE RESTORED TO PRECONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE OWNER.
- CONTRACTOR TO ADJUST ALL EXISTING UTILITY STRUCTURES TO PROPOSED
- INVERTS AT BOTTOM OF MANHOLES AND CATCH BASINS MUST BE CHANNELIZED.
- 16. ALL ROOF LATERALS OUT OF THE BUILDING SHALL BE 6" PVC SDR 35 UNLESS OTHERWISE NOTED.
- 17. PROVIDE UNDERDRAINS FROM SEEPS OR SPRINGS ENCOUNTERED. EXTEND TO STORM SEWER SYSTEM OR DAYLIGHT AT THE BOTTOM OF THE FILL SLOPE.
- 18. GRADES SHOWN ARE FINISHED GRADES. LANDSCAPED AREAS TO HAVE MINIMUM 6 INCHES OF TOPSOIL RESPREAD.
- DETAILS SHALL BE FOLLOWED.
- 21. ALL DETENTION PONDS SHALL HAVE A TWO FOOT THICK CLAY LINER BETWEEN THE BOTTOM OF THE POND AND THE NORMAL WATER LEVEL.
- 22. ALL FLARED END SECTIONS SHALL HAVE A GRATE INSTALLED.
- 23. ALL STORM SEWER FRAMES AND GRATES/LIDS SHALL BE MARKED WITH "DUMP NO WASTE" AND "DRAINS TO CREEK".
- 24. THE SLOPE BETWEEN TWO ELEVATIONS SHOWN ON THE GRADING PLAN MUST BE UNIFORM, AND THERE SHALL NOT BE ANY CHANGE IN SLOPE OR REVERSAL OF SLOPE BETWEEN ANY TWO MARKED POINTS.
- 25. ALL OPEN LID GRATES IN GRASSY AREAS TO BE BEEHIVE STYLE GRATES, (IDOT TY. 8).
- SPOT ELEVATIONS AT TIE IN TO EXISTING CURB OR PAVEMENT ARE APPROXIMATE, CONTRACTOR TO MATCH EXISTING ELEVATIONS.

WATER NOTES

- ALL WATER MAIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", LATEST EDITION, AND NAPERVILLE STANDARD SPECS FOR THE PLANS, AND IN ACCORDANCE WITH THE CODES AND ORDINANCES OF THE CITY OF NAPERVILLE.
- ANY EXISTING UTILITY STRUCTURES REQUIRING ADJUSTMENT OR RECONSTRUCTION SHALL BE COMPLETED BY THE CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER. ADJUSTMENTS AND/OR RECONSTRUCTIONS NOT CALLED FOR ON THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. NO MORE THAN A TOTAL OF 12 INCHES OF ADJUSTING RINGS AND/OR 2 ADJUSTING RINGS SHALL BE ALLOWED. ALL STRUCTURE FRAMES SHALL BE FLUSH WITH FINAL GRADE.
- TREES SHALL BE INSTALLED A MINIMUM OF FIVE (5) FEET HORIZONTALLY FROM UNDERGROUND ELECTRICAL FEEDERS. SANITARY SEWERS. SANITARY SERVICES, WATER MAINS, AND WATER SERVICES. TREES SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET HORIZONTALLY FROM UTILITY STRUCTURES AND APPURTENANCES, INCLUDING, BUT NOT LIMITED TO, MANHOLES, VALVE 25. ALL WATER MAINS WILL BE STERILIZED AND BACTERIOLOGICAL TESTS VAULTS, VALVE BOXES AND FIRE HYDRANTS. NO TREES, SHRUBS OR OBSTACLES WILL BE ALLOWED 10' IN FRONT OF, 5' ON THE SIDES, AND 7' TO THE REAR OF THE ELECTRICAL TRANSFORMER.
- 4. NEW WATER MAIN VALVES, INCLUDING PRESSURE TAP VALVES, ADJACENT TO AN EXISTING WATER MAIN, AND EXISTING WATER MAIN VALVES SHALL ONLY BE OPERATED BY THE CITY OF NAPERVILLE, DEPARTMENT OF PUBLIC UTILITIES CEE/CM DIVISION PERSONNEL WITH 48- HOUR NOTICE (MONDAY-FRIDAY). CONTACT NAPERVILLE TED BUSINESS GROUP AT 630-420-6082 FOR SCHEDULING.
- ALL RETAINER GLANDS WHEN REQUIRED TO RESTRAIN VALVES, FITTINGS, HYDRANTS, AND PIPE JOINTS SHALL BE MECHANICAL JOINT WEDGE ACTION TYPE MEGALUG 1100 SERIES AS MANUFACTURED BY EBBA IRON, INC. OR UNI-FLANGE BLOCKBUSTER 1400 SERIES AS MANUFACTURED BY FORD METER BOX CO. AND SHALL BE FOR USE ON DUCTILE IRON PIPE CONFORMING TO ANSI/AWWA C151/A21.51, FOR NOMINAL PIPE SIZES 3" THROUGH 48".
- EXISTING DUCTILE IRON SYSTEMS FOR RESTRAINING PUSH-ON PIPE BELLS SHALL BE MEGALUG SERIES 1100HD OR FORD SERIES 1390. EXISTING DUCTILE IRON SYSTEMS REQUIRING RESTRAINT SHALL BE MEGALUG SERIES 1100SD (SPLIT MEGALUG) FOR MECHANICAL JOINTS.
- SERIES 1100SD (SPLIT MEGALUG) FOR MECHANICAL JOINTS.

EXISTING DUCTILE IRON SYSTEMS REQUIRING RESTRAINT SHALL BE MEGALUG

- DUCTILE IRON WATER MAIN TO BE CLASS 52. ALL DUCTILE IRON PIPE IS TO BE ENCASED IN POLYETHYLENE FILM POLYETHYLENE ENCASEMENT TO BE INSTALLED IN ACCORDANCE WITH ANSI/AWWA C105/A21.5-05.
- NAPERVILLE UPON COMPLETION OF IMPROVEMENTS SHOWING THE ELEVATION AND LOCATION (TIED TO TWO POINTS) OF ALL NEW AND EXISTING STRUCTURES INCLUDING FIRE HYDRANTS, VALVE BOXES AND VAULTS, LINESTOP SLEEVES, WATER SERVICE CORPORATION STOPS, WATER MAIN FITTINGS/BENDS, MANHOLES, SANITARY SERVICE WYES (MEASURED FROM DOWNSTREAM MANHOLE), AND ABANDONED WATER OR SANITARY SERVICE LINES. ALL ELEVATIONS SHOULD BE REFERENCED TO THE SAME BENCHMARK DATUM AS THE ORIGINAL DESIGN PLANS. HORIZONTAL TIES SHALL BE REFERENCED TO LOT LINES, BACK OF CURB, OR PROPERTY CORNERS.
- 10. THE VALVES LESS THAN 16" SHALL BE STANDARD PATTERN, GATE VALVES AND SHALL HAVE THE NAME OR MARK OF THE MANUFACTURER, SIZE AND WORKING PRESSURE PLAINLY CAST IN RAISED LETTERS ON THE VALVE BODY. VALVES MAY BE APPROVED FROM ONE OF THE FOLLOWING MANUFACTURERS: AMERICAN, CLOW, WATEROUS OR KENNEDY.
- 11. STAINLESS STEEL NUTS, BOLTS/T-BOLTS, AND WASHERS, TYPE 304 OR BETTER. WILL BE REQUIRED ON ALL WATER MAIN INSTALLATIONS. THIS WOULD APPLY TO HYDRANTS, TAPPING SLEEVES, VALVES, FITTINGS, RESTRAINT, AND OTHER APPURTENANCES BURIED OR IN VALVE VAULTS. MECHANICAL JOINTS AND RESTRAINT GLANDS REQUIRE 304 STAINLESS STEEL T-BOLTS. AN ANTI- SEIZE COMPOUND SHALL BE FACTORY APPLIED TO NUTS OR BOLTS - ANY DAMAGE TO THIS COATING SHALL BE REPAIR WITH FIELD APPLIED APPROVED ANTI-SEIZE COMPOUND THAT IS A
- 12. THE CONTRACTOR SHALL ROTATE AND/OR ADJUST ANY EXISTING AND/OR NEW HYDRANT TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC UTILITIES.
- FIRE HYDRANT SHOULD BE BAGGED "NOT IN SERVICE" UNTIL ALL TESTING AND DISINFECTION HAS BEEN COMPLETED AND NEW WATER MAIN SECTION IS SERVICE.
- 14. ALL VALVE BOXES, VAULTS, HYDRANTS, AND MANHOLES SHALL NOT BE COVERED WITH CONSTRUCTION DEBRIS AND SHALL REMAIN ACCESSIBLE TO THE RESPECTIVE UTILITY COMPANY.
- 15. WATER SERVICE LINE SMALLER THAN 3" SHALL BE TYPE K COPPER. IF JOINTS ARE REQUIRED DUE TO LENGTH OF SERVICE, THEN ONLY COMPRESSION TYPE COUPLING SHALL BE PERMITTED. NO SOLDERED OR FLARED TYPE JOINTS ARE ALLOWED.
- 16. CONTRACTOR WORK HOURS ARE ONLY ALLOWED FROM 7:00 A.M. TO 5:00 P.M., MONDAY THROUGH SATURDAY. NO WORK SHALL BE PERMITTED ON SUNDAYS.
- 17. ALL EXCAVATIONS MORE THAN 20 FEET DEEP MUST BE PROTECTED BY A SYSTEM DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER.
- 18. CONTRACTOR SHALL MAINTAIN 2' MINIMUM CLEARANCE BETWEEN EXISTING UTILITIES AND NEW FOUNDATIONS AND UNDERGROUND FACILITIES. IN AREAS WHERE FOUNDATIONS AND UNDERGROUND FACILITIES ARE PROPOSED ADJACENT TO EXISTING UTILITIES, THE CONTRACTOR SHALL POT HOLE BY VACUUM EXCAVATION OR HAND EXCAVATION TO LOCATE THE EXISTING UTILITY TO VERIFY MINIMUM CLEARANCE REQUIREMENT.
- 19. FENCES SHALL BE INSTALLED A MINIMUM OF 5 FEET FROM ANY WATER OR SANITARY MAINS WHEN RUNNING PARALLEL WITH THEM. WHERE FENCES ARE INSTALLED CROSSING WATER OR SANITARY MAINS, THE POSTS SHALL BE LOCATED TO HAVE THE MAIN BETWEEN THEM.
- 21. ALL BRASS COMPONENTS SHALL BE CERTIFIED TO BE LEAD FREE IN COMPLIANCE WITH NSF 61 AND NSF 372 AND IDENTIFIED WITH APPLICABLE MARKINGS.
- 22. ALL WATER MAINS 3 INCHES AND LARGER SHALL BE DUCTILE IRON PIPE CLASS 52 WITH EITHER MECHANICAL OR PUSH-ON JOINTS AND SHALL CONFORM TO ANSI A21.51, AWWA C151 AND ANSI A21.11, AWWA C111.
- 23. ALL PIPE AND FITTINGS SHALL BE CEMENT LINED IN ACCORDANCE WITH ANSI/AWWA.

WATER NOTES (CONT.)

- 21. ALL DIP WATER MAIN AND FITTINGS TO BE ENCASED IN 8-MIL POLYETHYLENE.
- WATERMAIN & SEWER CO. IN ILLINOIS, LATEST EDITION, AND THE NOTES ON 22. ALL FIRE HYDRANTS, VALVE TEES, AND BENDS MUST BE BRACED BY THE USED OF THRUST BLOCKING. PIPE JOINTS SHALL BE IN CONFORMANCE TO ANSI A21.11 AND FITTINGS IN CONFORMANCE TO ANSI A21.10, A21.51 AND AWWA C-151. WHERE NECESSARY MEGALUGS SHOULD BE USED TO RESTRAIN THE JOINTS IN LIEU OF OR IN ADDITION TO THRUST BLOCKING.
 - 23. ALL WATER MAIN IS REQUIRED TO HAVE A MINIMUM DEPTH OF 5.5' MEASURED FROM PROPOSED FINISHED GRADE TO TOP OF PIPE.
 - 24. ALL WATER MAIN MUST BE A MINIMUM OF 10' HORIZONTALLY FROM ANY SEWER LINES. IF THE NEW WATER MAIN IS PLACED WITHIN 10' OF AN EXISTING WATER SUPPLY, THE CONTRACTOR MUST FOLLOW ALL SPECIFICATIONS AND DETAILS FOUND IN "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS". THE SAME SEPARATION ALSO APPLIES TO ALL SEWER STRUCTURES.
 - PERFORMED, IN ACCORDANCE WITH AWWA STANDARD C600, C601, AND C603 SPECIFICATION FOR DISINFECTING WATER MAINS, AND WILL NOT BE PUT IN SERVICE UNTIL A SATISFACTORY REPORT IS IN EVIDENCE. WHEN CHLORINATING WATER MAINS TERMINATING INTO BUILDINGS, NO WATER SAMPLES SHALL BE TAKEN FROM TEMPORARY OR UNCOMPLETED CONNECTIONS.
 - 26. PRESSURE CONNECTIONS SHALL BE MADE WITH A SPLIT CASE TAPPING SLEEVE. THE VALVE ADJACENT TO THE PRESSURE TAP SHALL BE PLACED INSIDE A VALVE VAULT.
 - 27. WATER VALVE VAULTS MUST BE A TYPE A STRUCTURE AND CONFORM TO THE SAME SPECIFICATIONS AS PREVIOUSLY DETAILED FOR SEWER CONSTRUCTION. ALL ADJUSTMENTS AND FRAMES SHALL BE SEALED TO PREVENT INFILTRATION. ALL WATER VALVE VAULT LIDS, WHICH SHALL BE THE SAME HEAVY WEIGHT TYPE AS SPECIFIED FOR STORM SEWER, AND VALVE BOX LIDS SHALL BE IMPRINTED WITH THE WORD "WATER".
 - 28. FOR MAINS 8" AND LESS A 48" VAULT MAY BE USED. FOR MAINS LARGER THAN 8" A 60" VAULT MUST BE PROVIDED. THE VALVE VAULT SHALL BE SEALED WITH THE USE OF CONCRETE BLOCKS AND MORTAR. ALL PIPES ENTERING THE MANHOLE SHALL HAVE A 2" WIDE MORTARED COLLAR ON BOTH THE INSIDE AND OUTSIDE WALLS OF THE VAULT. VALVE VAULTS MAY ALSO BE SEALED WITH THE USE OF RUBBER BOOTS. A DISTANCE OF APPROXIMATELY 12" MUST BE PROVIDED BETWEEN THE FLOOR OF THE VALVE VAULT AND THE BOTTOM OF THE VALVE. THIS WILL ALLOW SPACE FOR A CONCRETE PEDESTAL WITH A MINIMUM HEIGHT OF 12". THE PEDESTAL SHALL EQUAL THE WIDTH OF THE PIPE. A 1/2" LAYER OF PREFORMED JOINT FILLER SHALL BE PLACED BETWEEN THE PEDESTAL AND THE VALVE.
- A SET OF AS-BUILT RECORD DRAWING SHALL BE GIVEN TO THE CITY OF 29. THE OPERATING NUT OF EACH VALVE SHALL BE LOCATED DIRECTLY BELOW THE MANHOLE OR VALVE BOX LID.
 - 30. VALVE BOX CONSTRUCTION AND MATERIALS SHALL CONFORM WITH ALL STANDARDS FOUND IN THE "STANDARD SPECIFICATIONS FOR THE CONSTRUCTION OF WATER AND SEWER MAIN IN ILLINOIS". VALVE BOXES SHALL BE SEALED AS TO NOT ALLOW THE ENTRANCE OF ANY LOOSE IMPEDIMENTS.
 - THE VALVE BOX SHALL BE PLACED VERTICAL WITH THE OPENING DIRECTLY ABOVE THE OPERATING NUT. ALL BOXES SHALL BE ADJUSTABLE WITH A MINIMUM OF 6" OF ADJUSTMENT REMAINING, AFTER THE BOX HAS BEEN BROUGHT TO MATCH EXISTING GRADE
 - 32. A MINIMUM OF 18" MUST BE PRESENT BETWEEN THE CENTER OF THE AUXILIARY VALVE AND THE FRONT OF THE HYDRANT TO ENSURE PROPER WRENCH CLEARANCE. ALL HYDRANTS WILL BE BRACED USING POURED IN PLACE CONCRETE BEHIND THE HYDRANT. THE SOLE USE OF RODS FOR BRACING THE HYDRANT WILL NOT BE PERMITTED. NO PART OF THE CONCRETE SHALL COME IN CONTACT WITH THE WEEP HOLE OF THE HYDRANT. A MINIMUM OF 1/2 C.Y. OF WASHED STONE SHALL BE PLACED AROUND THE HYDRANT AT THE WEEP HOLE. THIS STONE SHALL THEN BE COVERED WITH FILTER FABRIC TO PREVENT SEDIMENT FROM CLOGGING THE WEEP HOLE.
- MOLYBDENUM-BASE LUBRICANT, BOSTIK NEVER-SEEZ OR APPROVED EQUAL. 33. FIRE HYDRANTS SHALL BE OF THE COMPRESSION OR GATE TYPE. AS MANUFACTURED BY EAST JORDAN, OR APPROVED EQUAL CONFORMING TO THE LATEST AWWA SPECIFICATION, TESTED TO 300 PSI. HYDRANTS SHALL HAVE A MINIMUM FIVE AND ONE-QUARTER INCH VALVE OPENING AND BE PROVIDED WITH A FOUR AND ONE-HALF INCH PUMPER CONNECTION AND TWO, TWO AND ONE-HALF INCH HOSE CONNECTIONS WITH NATIONAL STANDARD THREAD.

REQUIRED WATER TESTING

WATER MAINS SHALL BE SUBJECTED TO A HYDROSTATIC/LEAKAGE TEST IN ACCORDANCE WITH NAPERVILLE STANDARD SPECIFICATIONS. TEST PRESSURE SHALL BE NO LESS THAN 150 PSI FOR A PERIOD OF 4 HOURS AND NOT VARY BY MORE THAN + 5 PSI. DURING THE TEST. THE TEST GAUGE SHALL BE APPROVED BY THE CITY AND SHALL BE GLYCERIN OR OIL FILLED, WITH A RANGE OF NOT MORE THAN 200 PSI AND INCREMENTS NOT GREATER THAN 5 PSI, 4 " MINIMUM DIAL SIZE. WATER RECOVERY TEST SHALL BE COMPLETED AT THE END OF THE TESTING PERIOD TO SHOW ACTUAL LEAKING AND THAT THE WATER MAIN DID NOT HAVE TOO MUCH TRAPPED AIR IN THE TESTED SECTION.

DISINFECTION

AFTER THE WATER MAIN WORK HAS BEEN SATISFACTORILY COMPLETED, INCLUDING PRESSURE AND LEAKAGE TESTING, THE CONTRACTOR SHALL FURNISH EQUIPMENT AND CHEMICALS NECESSARY TO PROPERLY DISINFECT THE WORK IN ACCORDANCE WITH THE LATEST REVISION OF AWWA STANDARD C601. CHLORINE WHICH MAY BE USED IN THE DISINFECTING SOLUTIONS IS CHLORINE GAS ONLY. DISINFECTING SOLUTIONS SHALL BE APPLIED BY CONTINUOUS FEED METHOD UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER, AND SHALL CONTAIN A MINIMUM OF 50 MILLIGRAMS PER LITER (mg/L) OF AVAILABLE CHLORINE. THE DISINFECTING SOLUTION SHALL BE RETAINED IN THE MAIN FOR A PERIOD OF NOT LESS THAN 24 HOURS AFTER WHICH THE WATER SHALL CONTAIN NO LESS THAN 25 mg/L CHLORINE THROUGHOUT THE NEW WORK. AFTER THE 24 HOUR RETENTION PERIOD, THE DISINFECTING SOLUTION SHALL BE FLUSHED FROM THE MAIN UNTIL THE CHLORINE CONCENTRATION IN THE WATER FLOWING FROM THE MAIN IS NO HIGHER THAN THAT GENERALLY PREVAILING IN THE OWNER'S SYSTEM, OR LESS THAN 1mg/L.

STORM SEWER

- 1. ALL STORM SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION, ADOPTED APRIL 1, 2016, AND REVISIONS THERETO, THE NOTES IN THE PLANS, AND IN ACCORDANCE WITH THE ORDINANCES OF THE CITY OF NAPERVILLE
- 2. ALL STORM SEWER SHALL BE CLASS IV REINFORCED CONCRETE PIPE CONFORMING TO ASTM C-361, PVC SDR-26, OR DUCTILE IRON PIPE CLASS 52 AS CALLED OUT ON THE PLANS. TRENCH SHALL BE BACKFILLED WITH
- 3. ALL MANHOLES AND INLET STRUCTURES SHALL BE PRECAST REINFORCED CONCRETE MANUFACTURED TO A.S.T.M. DESIGNATION C-478.
- 4. SEE DETAIL SHEET FOR MANHOLE FRAMES AND GRATES.

COMPACTED CA-7. RUBBER GASKETS SHALL BE USED.

- 5. AFTER THE STRUCTURE HAS PROPERLY SET AND PIPE HAS BEEN CONNECTED, ALL REMAINING OPENINGS TO THE STRUCTURE SHALL BE MORTARED. THIS INCLUDES BUT IS NOT LIMITED TO LIFT HOLES AND VOIDS AROUND CONNECTING PIPE. PRECAST ELEMENTS MUST BE SEALED WITH A BUTYL RUBBER JOINT SEALANT AND BE TUCKPOINTED WITH HYDRAULIC CEMENT. CONNECTING PIPE SHALL BE MORTARED ON BOTH THE INSIDE AND OUTSIDE OF THE STRUCTURE.
- 6. ALL STRUCTURES SHALL HAVE THE ADJUSTMENT RINGS AND FRAME SEALED WITH A RUBBER GASKET. ADJUSTMENT RINGS SHALL BE RUBBER, EJIW INFRARISER OR APPROVED EQUAL.
- ALL STRUCTURES SHALL HAVE THE FRAME AND LID OR GRATE PARALLEL TO THE SURROUNDING GRADE LINE. CASTINGS SHALL NOT BE SET ON SLOPES IN LEVEL AREAS AND VICE VERSA. IF A CASTING IS TO BE PLACED ON A SLOPE (I.E. STEEP DRIVE APPROACH) IT SHALL BE PROPERLY SLOPED WITH THE USE OF CONCRETE MORTAR AND BRICKS. BITUMINOUS MASTIC IS PERMITTED WHEN COMBINED WITH THE USE OF CONCRETE OR MORTAR.

SANITARY SEWER CONSTRUCTION

- 1. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", LATEST EDITION, AND NAPERVILLE STANDARD SPECS FOR WATERMAIN & SEWER CO. IN ILLINOIS, LATEST EDITION, AND REVISIONS THERETO, THE NOTES AND ON THE PLANS, AND IN ACCORDANCE WITH CODES AND ORDINANCES OF THE CITY OF NAPERVILLE.
- 2. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY UNPOLLUTED WATER SUCH AS GROUND AND SURFACE WATER FROM ENTERING THE EXISTING SANITARY SEWERS.
- 3. THE CONTRACTOR SHALL BE PROHIBITED FROM DISCHARGING ANY UNPOLLUTED WATER IN TO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OR FLOATING LINES FOR THE DEFLECTION TEST WITHOUT PRIOR APPROVAL.
- 4. ALL MANHOLES SHALL BE PRECAST, REINFORCED CONCRETE SECTIONS, 48 INSIDE DIAMETER MINIMUM, WITH PRECAST, REINFORCED CONCRETE OFF-SET CONES, MANUFACTURED TO A.S.T.M. C-478. ALL SANITARY MANHOLES SHALL HAVE CRETEX OR APPROVED EQUAL. INTERNAL GRADE ADJUSTMENT SKIRTS. ADJUSTMENTS TO FINISHED GRADE SHALL BE ACCOMPLISHED USING EJIW INFRA-RISER OR APPROVED EQUAL, RUBBERIZED GRADE ADJUSTING RINGS.
- 5. ALL ADJUSTMENT RINGS AND FRAMES SHALL BE SEALED. THE INSIDE OF TH STRUCTURE SHALL BE SEALED WITH CONCRETE MORTAR. THE OUTSIDE OF THE MANHOLE SHALL BE SEALED WITH AN INFASHIELD RUBBER GASKET. THIS GASKET SHALL ENCOMPASS ALL ADJUSTMENT RINGS, AND FORM A WATERPROOF SEAL BETWEEN THE STRUCTURE AND FRAME.
- 6. ALL STRUCTURES SHALL BE A TYPE A MANHOLE WITH A POURED BENCH AND TROUGH. THE BENCH AND TROUGH OF THE STRUCTURE SHALL BE POURED CONCRETE. WITH A SMOOTH FINISH. THE BENCH SHALL BE A MINIMUM HEIGHT OF ONE-HALF OF THE DIAMETER OF THE CONNECTING PIPE AND EXTEND TO THE INSIDE WALLS OF THE MANHOLES. ANY CHANGE IN DIRECTION SHOULD BE MADE WITH THE USE OF ROUNDED TURNS. SHARP ANGLES WILL BE NOT BE PERMITTED IN THE REDIRECTION OF SEWER FLOW.
- SANITARY MANHOLE LIDS SHALL BE A NEENAH HEAVY WEIGHT TYPE R-1712-C (WEIGHT 365 LBS), EAST JORDAN 1051 (WEIGHT 375 LBS) OR APPROVED EQUAL. ALL SANITARY LIDS ARE REQUIRED TO BE SELF SEALING WITH A CONCEALED PICK HOLE.
- SANITARY SEWER MANHOLES WITH INTERNAL DROPS TWO FEET OR LESS SHALL HAVE A PRECAST CONCRETE TROUGH BUILT IN THE STRUCTURE TO OBTAIN A SMOOTH FLOW TRANSITION FROM THE UPSTREAM PIPE INVERT TO THE DOWNSTREAM PIPE INVERT.
- 9. BAND SEAL, OR SIMILAR COUPLINGS SHALL BE USED IN CONNECTING SEWER PIPES OF DISSIMILAR MATERIALS
- 10. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
- A. CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOL "SEWER TAP" MACHINE (OR SIMILAR) AND PROPER INSTALLATION OF HUB-WYE SADDLE OR HUB-TEE SADDLE.
- B. REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION. C. WITH A PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED
- LENGTH OF PIPE FOR INSERTION OF PROPER FITTING USING "BAND SEAL" OR SIMILAR COUPLINGS TO HOLD IT FIRMLY IN PLACE. 12. WHERE A SEWER MAIN LATERAL OR BUILDING SERVICE SEWER CROSSES A
- WATERMAIN, A MINIMUM VERTICAL SEPARATION OF 18" SHALL BE PROVIDED BETWEEN THE TOP OF THE SEWER PIPE AND THE BOTTOM OF THE WATER PIPE. WHERE THE 18" VERTICAL SEPARATION IS NOT PROVIDED. THE SEWER SHALL BE CONSTRUCTED OF WATERMAIN QUALITY PIPE. ADDITIONALLY, THE SANITARY SEWER SHALL BE SUPPORTED AS INDICATED IN THE "STANDARD SPECIFICATIONS".
- 13. ALL SANITARY MANHOLES SHALL BE TESTED FOR LEAKAGE BY VACUUM TESTING. THE MANHOLE FRAME AND ADJUSTING RINGS SHALL BE IN PLACE WHEN TESTING. ANY LEAKS SHALL BE REPAIRED FROM EXTERIOR OF MANHOLE - PATCHING INSIDE OF MANHOLE SHALL NOT BE ACCEPTABLE. A VACUUM OF 10" (254 MM) HG SHALL BE PLACE ON THE MANHOLE AND THI TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9" (229 MM) HG THE VACUUM SHALL NOT DROP BELOW 9" (229 MM) HG FOR THE FOLLOWING TIME PERIODS FOR EACH SIZE OF MANHOLE:
 - a. 48-INCH DIAMETER 60 SECONDS b. 60-INCH DIAMETER - 75 SECONDS
 - c. 72-INCH DIAMETER 90 SECONDS
 - d. 84-INCH DIAMETER 105 SECONDS
 - e. ANY MANHOLES THAT FAIL THE TEST SHALL BE SEALED AND RE-TESTED UNTIL ACCEPTABLE.

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SANITARY SEWER CONSTRUCTION (CONT.)

- 14. ALL SANITARY SEWER PIPING SHALL BE PVC PIPE MEETING THE REQUIREMENTS OF ASTM D- 2241 WITH JOINTS CONFORMING TO ASTM D-3139. ALL SANITARY SEWER FITTINGS SHALL BE PVC MEETING THE FOLLOWING REQUIREMENTS: 4" TO 12" SHALL BE INJECTION MOLDED FITTINGS MEETING ASTM D-2241. GREATER THAN 12" SHALL BE FABRICATED FITTINGS MEETING ASTM D-2241 OR C905. MINIMUM PRESSURE RATING SHALL BE 150 PSI.
- 15. SANITARY PIPES WITH LESS THAN 4 FEET OR MORE THAN 25 FEET OF COVER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPING (CLASS 50, MINIMUM) AND ENCASED IN POLYWRAP.

REQUIRED SANITARY SEWER TESTING

THE ENGINEER SHALL DETERMINE DURING CONSTRUCTION WHETHER INFILTRATION OR EXFILTRATION TESTING SHALL BE REQUIRED. MAXIMUM ALLOWABLE INFILTRATION SHALL BE 100 GALLONS PER MILE PER INCH DIAMETER OF PIPE. THE USE OF A V-NOTCH WEIR OR A PLUG WITH SPIGOT TO MEASURE FLOWS SHALL BE DETERMINED BY THE ENGINEER PRIOR TO THE TEST.

- THE CONTRACTOR SHALL PROVIDE INTERNAL TELEVISED INSPECTION OF ALL INSTALLED SANITARY SEWER, LATERALS, MANHOLES AND CONNECTIONS TO THE PUBLIC SYSTEM. FOLLOWING COMPLETION OF TELEVISING WORK, THE CONTRACTOR SHALL SUBMIT VIDEO RECORDINGS ON DVD OR FLASH DRIVE ALONG WITH A COMPREHENSIVE TELEVISING REPORT WHICH WILL INDICATE THE LOCATION. FOOTAGES AND NATURE OF ANY DEFECTS. PRIOR TO FINAL ACCEPTANCE, THESE DEFECTS SHALL BE REPAIRED TO THE SATISFACTION OF THE WATER/WASTEWATER UTILITY AND RE-TELEVISED.
- ALL SANITARY SEWERS WILL BE AIR TESTED BY THE CONTRACTOR UNDER THE SUPERVISION OF THE CITY OF NAPERVILLE ENGINEER. ALL TESTING WILL BE DONE IN CONFORMANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", LATEST EDITION.
- ALL SANITARY MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH ASTM C-1244-02 STANDARDS AND LEAKAGE TESTED IN ACCORDANCE WITH ASTM C-1969-94 & ASTM C-1244-93 STANDARDS.

DEFLECTION TESTING FOR FLEXIBLE THERMOPLASTIC PIPE

ALL PIPELINE SHALL BE TESTED FOR EXCESS DEFLECTION BY PULLING A "GO -NO GO" MANDREL THROUGH THE PIPE FROM MANHOLE TO MANHOLE. THE MANDREL SHALL BE SIZED IN ACCORDANCE WITH THE TESTING LIMITS GIVEN BELOW, AND AS SPECIFIED IN THE SPECIAL PROVISIONS, A "DEFLECTOMETER" MAY ALSO BE USED TO CHECK AND RECORD DEFLECTION. WHEREVER POSSIBLE AND PRACTICAL. THE TESTING SHALL INITIATE AT THE DOWNSTREAM LINES AND PROCEED TOWARDS THE UPSTREAM LINES.

WHERE DEFLECTION IS FOUND TO BE IN EXCESS OF ALLOWABLE TESTING LIMITS. THE CONTRACTOR SHALL EXCAVATE TO THE POINT OF EXCESS DEFLECTION AND CAREFULLY COMPACT AROUND THE POINT WHERE EXCESS DEFLECTION WAS OUND. THE LINE SHALL THEN BE RETESTED FOR DEFLECTION. HOWEVER, SHOULD AFTER THE INITIAL TESTING THE DEFLECTED PIPE FAIL TO RETURN TO THE ORIGINAL SIZE (INSIDE DIAMETER), THE LINE SHALL BE REPLACED.

SAMPLING SHALL BE PERFORMED ON ALL SEWER PIPELINE BY THE ENGINEER.

DEFLECTION LIMITS FOR FLEXIBLE THERMOPLASTIC PIPES:

DEFLECTION OF POLYVINYL CHLORIDE (PVC) PIPE SHALL NOT EXCEED 5.0% OF THE "BASE I.D." (INTEGRAL DIAMETER) OF THE PIPE. "BASE I.D." (INTEGRAL DIAMETER) OF THE PIPE. "BASE I.D." SHALL BE CALCULATED IN ACCORDANCE WITH THE FOLLOWING:

AVG ID = AVG OD -2(1.06)T TOLERANCE PACKAGE = (A2+B2+B2+C2)/2WHERE:

A = OD TOLERANCE (ASTM D3034)

B = EXCESS WALL THICKNESS TOLERANCE = 0.06T

C = OUT OF ROUNDNESS TOLERANCE = 0.015 (AVERAGE OD)T = MINIMUM WALL THICKNESS (ASTM D3034)

BASE ID = AVG. ID - TOLERANCE PACKAGE

UTILITY CONTACTS

ELECTRICAL SERVICE

AGENCY: NAPERVILLE DEPARTMENT OF PUBLIC UTILITIES - ELECTRIC ADDRESS: CONTACT:

PHONE: (630) 420-6181 **EMAIL:**

GAS SERVICE

AGENCY: NICOR GAS ADDRESS: CONTACT:

PHONE: (888) 642-6748

TELEPHONE SERVICE

AGENCY: AT&T ADDRESS:

CONTACT: PHONE: (800) 288-2020 **EMAIL:**

SANITARY SEWER SERVICE

AGENCY: NAPERVILLE DEPARTMENT OF PUBLIC UTILITIES - WATER ADDRESS:

CONTACT: PHONE: (630) 420-6137

EMAIL:

STORM SEWER SERVICE

AGENCY: NAPERVILLE PUBLIC WORKS SERVICE CENTER ADDRESS:

CONTACT: (630) 420-6095 PHONE: **EMAIL:**

WATER SERVICE

AGENCY: NAPERVILLE DEPARTMENT OF PUBLIC UTILITIES - WATER ADDRESS:

CONTACT:

PHONE: (630) 420-6137

CITY OF NAPERVILLE GENERAL NOTES

GENERAL NOTES

1. THE OWNER OR HIS/HER/THEIR REPRESENTATIVE IS RESPONSIBLE TO OBTAIN ANY AND ALL PERMITS REQUIRED BY APPLICABLE GOVERNMENTAL AGENCIES.

- 2.ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF NAPERVILLE DESIGN MANUAL AND STANDARD SPECIFICATIONS (CURRENT EDITION) AND WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CNSTRUCTION" (CURRENT EDITION).
- 3.ALL CONTRACTORS DOING WORK IN THE PUBLIC RIGHT-OF-WAY MUST BE LICENSED (WHEN APPLICABLE) TO MAKE PUBLIC IMPROVEMENTS WITHIN THE NAPERVILLE CORPORATE LIMITS.
- 4.THE CONTRACTOR/DEVELOPER ASSUMES ALL RESPONSIBILITY AND LIABILITY FOR ANY ACTION RESULTING FROM THEIR WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
- 5.THE CONTRACTOR/DEVELOPER SHALL INDEMNIFY AND HOLD HARMLESS THE CITY OF NAPERVILLE.
- 6.PRIOR TO COMMENCEMENT OF ANY OFF-SITE CONSTRUCTION, THE CONTRACTOR SHALL SECURE WRITTEN AUTHORIZATION THAT ALL OFF-SITE EASEMENTS HAVE BEEN SECURED AND THAT PERMISSION HAS BEEN GRANTED TO ENTER ONTO PRIVATE PROPERTY.
- 7.THE CONTRACTOR AND THEIR ON-SITE REPRESENTATIVES WILL BE REQUIRED TO ATTEND A PRECONSTRUCTION MEETING WITH THE CITY OF NAPERVILLE PRIOR TO ANY WORK BEING STARTED. A PRECONSTRUCTION MEETING WILL NOT BE SCHEDULED UNTIL THE PROJECT HAS BEEN APPROVED BY THE CITY OF NAPERVILLE DEVELOPMENT REVIEW TEAM AND THE REQUIRED SURETY HAS BEEN POSTED.
- 8.A MINIMUM OF 48 HOURS NOTICE SHALL BE GIVEN TO THE CITY OF NAPERVILLE TED BUSINESS GROUP (630-420-6082) PRIOR TO STARTING WORK OR RESTARTING WORK AFTER SOME ABSENCE OF WORK FOR ANY REASON.
- 9.IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ADEQUATELY IDENTIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION. BEFORE STARTING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT JULIE FOR THE LOCATION OF ANY AND ALL UTILITIES. THE TOLL-FREE NUMBER IS 800-892- 0123. IT 8.CATCH BASINS AND INLETS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 24 IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY PRIVATE FACILITIES OR NON-JULIE MEMBER FACILITIES.
- 10. THE CONTRACTOR CAN SCHEDULE ALL NECESSARY SITE INSPECTIONS WITH THE CITY OF NAPERVILLE BY CALLING (630) 420-6082 BETWEEN THE HOURS OF 8:00AM AND 4:00PM (CLOSED 1:00PM TO 2:00PM DAILY) ON WEEKDAYS WHEN THE CITY IS OPEN FOR BUSINESS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE SITE PERMIT NUMBER FOR THE PROJECT IN ORDER TO SCHEDULE THE INSPECTION(S).
- 11.RECORD DRAWINGS ARE REQUIRED TO BE SUBMITTED AND APPROVED BY THE CITY OF NAPERVILLE PRIOR TO FINAL OCCUPANCY BEING GRANTED.
- 12. FINAL ACCEPTANCE OF PUBLIC IMPROVEMENTS SHALL BE GRANTED ONLY AFTER A FINAL INSPECTION HAS BEEN COMPLETED AND HAS REVEALED THAT ALL IMPROVEMENTS HAVE BEEN SATISFACTORILY COMPLETED IN ACCORDANCE WITH THE NAPERVILLE STANDARD SPECIFICATIONS. UTLITIES ARE NOT CONSIDERED ACCEPTED UNTIL THEY ARE FORMALLY ACCEPTED BY THE CITY COUNCIL AS REQUIRED IN ACCORDANCE WITH THE NAPERVILLE MUNICIPAL

STORM SEWER NOTES (GENERAL)

- 1.NO CONNECTION TO AN EXISTING PUBLIC STORM SEWER MAY BE MADE WITHOUT PERMISSION OF THE CITY ENGINEER.
- 2.THE CONTRACTOR SHALL REPAIR ANY EXISTING FIELD DRAINAGE TILE DAMAGED DURING CONSTRUCTION AND PROPERLY REPOUTE AND/OR CONNECT SAID TILE TO THE NEAREST STORM SEWER OUTLET. ALL LOCATIONS OF ENCOUNTERED FIELD

CITY OF NAPERVILLE GENERAL NOTES (CONT.)

STORM SEWER NOTES (STORM SEWER WORK IN PLANS)

- 1.THE FOLLOWING MATERIALS ARE PERMITTED FOR STORM SEWER AND PIPE CULVERTS. WHERE A PARTICULAR MATERIAL IS SPECIFIED IN THE PLANS OR SPECIAL PROVISIONS, NO OTHER KIND OF MATERIAL WILL BE PERMITTED:
- a)REINFORCED CONCRETE PIPE (RCP) REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM DESIGNATION C 76, CLASSES I, II, III, IV OR V. BITUMINOUS JOINTS SHALL CONFORM TO ASTM DESIGNATIONS C 14 OR C 76 AS MAY BE APPLICABLE. BITUMINOUS MATERIAL SHALL CONSIST OF A HOMOGENEOUS BLEND OF BITUMEN, INERT FILLER, AND SUITABLE SOLVENT APPROVED BY THE CITY ENGINEER. RUBBER GASKET JOINTS SHALL CONFORM TO ASTM C 433. REINFORCED CONCRETE PIPE SHALL ALSO BE PERMITTED AS ROUND, ELLIPTICAL, OR BOX SHAPED OR AS REINFORCED CONCRETE ARCH CULVERT.
- b)NON-REINFORCED CONCRETE PIPE NON-REINFORCED CONCRETE PIPE SHALL BE ALLOWED FOR PIPES WITH A 10 INCH OR SMALLER DIAMETER. NON-REINFORCED CONCRETE PIPE SHALL CONFORM TO ASTM DESIGNATION C 14, CLASS 3. BITUMINOUS JOINTS SHALL CONFORM TO ASTM DESIGNATIONS C 14 OR C 76 AS MAY BE APPLICABLE. BITUMINOUS MATERIAL SHALL CONSIST OF A HOMOGENEOUS BLEND OF BITUMEN, INERT FILLER, AND SUITABLE SOLVENT APPROVED BY THE CITY ENGINEER. RUBBER GASKET JOINTS SHALL CONFORM TO ASTM C 433.
- c)DUCTILE IRON PIPE (DIP) DUCTILE IRON PIPE SHALL CONFORM TO ANSI A 21.51 (AWWA C-151), CLASS THICKNESS DESIGNED PER ANSI A 21.50 (AWWA C-150), TAR (SEAL) COATED AND CEMENT LINED PER ANSI A 21.4 (AWWA C-104), WITH MECHANICAL OR RUBBER RING (SLIP SEAL OR PUSH ON) JOINTS. ALL DUCTILE IRON PIPE SHALL BE WRAPPED WITH POLYETHYLENE.
- d)POLYVINYL CHLORIDE PIPE (PVC) POLYVINYL CHLORIDE (PVC) PIPE SHALL CONFORM TO ASTM D 3034, TYPE PSM. THE MINIMUM STANDARD DIMENSION RATIO (SDR) SHALL BE 26. THE PIPE SHALL BE MADE OF PVC PLASTIC HAVING A MINIMUM CELL CLASSIFICATION OF 12454-C, AND SHALL HAVE A MINIMUM PIPE STIFFNESS OF FORTY-SIX (46) LBS. PER INCH (317 KPA). JOINTS FOR PVC PIPE SHALL BE FLEXIBLE ELASTOMETRIC SEALS PER ASTM D 3212.
- e)HIGH DENSITY POLYETHELYNE PIPE (HDPE) HIGH-DENSITY POLYETHYLENE (HDPE) PIPE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 252 AND M 294. PIPE AND FITTINGS SHALL BE MADE FROM VIRGIN PE COMPOUNDS WHICH CONFORM TO THE REQUIREMENTS OF CELL CLASS 324420C AS DEFINED AND DESCRIBED IN ASTM D 3350. RUBBER GASKET JOINTS SHALL BE USED.
- f)FULLY GALVANIZED CORRUGATED STEEL PIPE FULLY GALVANIZED CORRUGATED STEEL PIPE MAY BE USED FOR RESIDENTIAL DRIVEWAY CROSSINGS ONLY WHEN A DITCH SECTION IS PRESENT. THE MINIMUM CULVERT SIZE IS 12" DIAMETER.
- 2.BEDDING, OTHER THAN CONCRETE EMBEDMENT, SHALL CONSIST OF GRAVEL, CRUSHED GRAVEL, OR CRUSHED STONE 1/4 INCH TO 1 INCH IN SIZE. AS A MINIMUM. THE MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS. THE GRADATION SHALL CONFORM TO GRADATION CA-7 OR CA-11 OF THE STANDARD SPECIFICATIONS.
- 3.BACKFILL MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF IDOT STANDARD SPECIFICATIONS. THE GRADATION SHALL CONFORM TO GRADATION CA-6 OF THE STANDARD SPECIFICATIONS. BACKFILL MATERIAL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- 4.JOINTS CONNECTING DISSIMILAR PIPE MATERIALS SHALL BE MADE WITH SEWER CLAMP NON-SHEAR TYPE COUPLINGS; CASCADE CSS, ROMAC LSS, FERNCO. INC. SHEAR RING. OR APPROVED EQUAL. WHEN AVAILABLE, A STANDARD JOINT WITH A TRANSITION GASKET MAY BE USED. THE NAME OF THE MANUFACTURER, CLASS, AND DATE OF ISSUE SHALL BE CLEARLY IDENTIFIED ON ALL SECTIONS OF PIPE. THE CONTRACTOR SHALL ALSO SUBMIT BILLS OF LADING. OR OTHER QUALITY ASSURANCE DOCUMENTATION WHEN REQUESTED BY THE CITY ENGINEER. ALL NUTS AND BOLTS FOR COUPLINGS SHALL BE STAINLESS STEEL.
- 5.MANHOLES FOR STORM SEWERS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 4.STOCKPILES NOT BEING DISTURBED FOR MORE THAN 14 DAYS SHALL BE 48 INCHES AND SHALL BE CONSTRUCTED OF PRECAST CONCRETE UNITS IN ACCORDANCE WITH ASTM C478-05 (OR LATEST EDITION) AND SHALL CONFORM TO THE CITY OF NAPERVILLE STANDARD DETAIL. ALL MANHOLES SHALL BE WATER-TIGHT. ALL VISIBLE LEAKS SHALL BE SEALED IN A MANNER ACCEPTABLE TO THE CITY ENGINEER.
- 6.MANHOLES SHALL BE FURNISHED WITH A SELF-SEALING FRAME AND SOLID COVER (EAST JORDAN IRON WORKS 1022 WITH TYPE A SOLID COVER, OR APPROVED EQUAL) WITH THE WORD "STORM" IMPRINTED ON THE COVER IN RAISED LETTERS. ALL FRAMES AND LIDS SHALL MEET OR EXCEED AASHTO H-20 LOADING SPECIFICATIONS. FRAMES SHALL BE SHOP PAINTED WITH ASPHALTIC BASE PAINT. BOTH THE MANHOLE FRAME AND COVER SHALL HAVE MACHINED HORIZONTAL AND VERTICAL BEARING SURFACES. INVERTED MANHOLE FRAMES ARE NOT ALLOWED. PICK HOLES SHALL NOT CREATE OPENINGS IN THE MANHOLE COVER.
- 7.MANHOLE STEPS ON MAXIMUM 16 INCH CENTER SHALL BE FURNISHED WITH EACH MANHOLE, SECURELY ANCHORED IN PLACE, TRUE TO VERTICAL ALIGNMENT, IN ACCORDANCE WITH THE NAPERVILLE STANDARD DETAILS. STEPS SHALL BE COPOLYMER POLYPROPYLENE REINFORCED WITH 1/2 INCH A615/A615M-05A (OR LATEST EDITION) GRADE 60 STEEL REINFORCEMENT. MEETING OR EXCEEDING ASTM C 478-05 (OR LATEST EDITION) AND OSHA STANDARDS.
- INCHES AND SHALL BE CONSTRUCTED OF PRECAST CONCRETE UNITS IN ACCORDANCE WITH ASTM C478-05 (OR LATEST EDITION) AND SHALL CONFORM TO THE CITY OF NAPERVILLE STANDARD DETAIL. ALL CATCH BASINS AND INLETS SHALL BE WATER-TIGHT AT ALL POINTS BELOW GRADE. ALL VISIBLE LEAKS SHALL BE SEALED IN A MANNER ACCEPTABLE TO THE CITY ENGINEER. CATCH BASINS AND INLETS SHALL BE FURNISHED WITH A FRAME AND GRATE BASED UPON THE LOCATION OF THE INSTALLATION AS LISTED BELOW. ALL FRAMES AND GRATES SHALL MEET OR EXCEED AASHTO H-20 LOADING SPECIFICATIONS. FRAMES SHALL BE SHOP PAINTED WITH ASPHALTIC BASE PAINT.
- A)PAVEMENT: EAST JORDAN IRON WORKS 1022 FRAME WITH TYPE M1 RADIAL FLAT GRATE, OR APPROVED EQUAL.
- B)BARRIER CURB AND GUTTER: EAST JORDAN IRON WORKS 7220 FRAME WITH TYPE M1 GRATE AND T1 CURB BOX, OR APPROVED EQUAL.
- C) DEPRESSED CURB: EAST JORDAN IRON WORKS 5120 FRAME AND GRATE, OR APPROVED EQUAL.
- D)MOUNTABLE CURB: EAST JORDAN IRON WORKS 7525 FRAME AND GRATE, OR APPROVED EQUAL.
- E)NON-PAVED AREAS: EAST JORDAN IRON WORKS 6527 BEEHIVE GRATE, OR APPROVED EQUAL. ALTERNATELY, IN AREAS WHERE THERE IS THE LIKELIHOOD OF PEDESTRIAN TRAFFIC, EAST JORDAN IRON WORKS 1022 FRAME WITH TYPE M1 RADIAL FLAT GRATE, OR APPROVED EQUAL MAY BE

CITY OF NAPERVILLE GENERAL NOTES (CONT.)

- 9.THE STEEL CASING PIPE SHALL BE BITUMINOUS COATED, A MINIMUM OF 30 TRAFFIC CONTROL AND PROTECTION NOTES (GENERAL) MILS THICKNESS INSIDE AND OUT, AND SHALL BE OF LEAK PROOF CONSTRUCTION, CAPABLE OF WITHSTANDING THE ANTICIPATED LOADINGS. SEE TABLE 200-1 IN THE NAPERVILLE STANDARD SPECIFICATIONS FOR THE MINIMUM WALL THICKNESSES OF VARIOUS STEEL CASING DIAMETERS. THE STEEL CASING PIPE SHALL HAVE MINIMUM YIELD STRENGTH OF 35,000 PSI AND SHALL MEET THE REQUIREMENTS OF A139/A139M-04 (OR LATEST EDITION), GRADE B. RING DEFLECTION SHALL NOT EXCEED 2% OF THE NOMINAL DIAMETER. THE STEEL CASING PIPE SHALL BE DELIVERED TO THE JOBSITE WITH BEVELED ENDS TO FACILITATE FIELD WELDING.
- 10. ALL PIPE SHALL BE LAID TRUE TO LINE AND GRADE. DIRT AND OTHER FOREIGN MATERIAL SHALL BE PREVENTED FROM ENTERING THE PIPE OR PIPE JOINT DURING HANDLING OR LAYING OPERATIONS. ALL STORM SEWER PIPE TO PIPE CONNECTIONS SHALL BE SEALED WITH BUTYL MASTIC TO ENSURE WATER TIGHTNESS. LIFT HOLES TO BE SEALED USING BUTYL MASTIC AND CONCRETE PLUGS. AT NO TIME SHALL CONNECTIONS BETWEEN THE STORM SEWER AND SANITARY SEWER BE ALLOWED.
- 11. FOR STRUCTURES LOCATED IN PAVED AREAS, A MINIMUM OF FOUR, 2-INCH DIAMETER HOLES SHALL BE DRILLED OR PRECAST INTO THE STRUCTURE WITHIN 1 FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A 1-FOOT BY 1- FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIAL TO PREVENT SLIPPAGE DURING BACKFILLING.
- 12. ALL STORM SEWER STRUCTURE FRAMES WITHOUT INSIDE FLANGES SHALL BE SHAPED WITH NONSHRINKING HYDRAULIC CEMENT TO FORM A FILLET TO THE STRUCTURE OR ADJUSTING RING. WHEN ADJUSTMENTS ARE NECESSARY. THEY SHALL BE PERFORMED WITH A MAXIMUM OF 2 PRECAST CONCRETE RINGS SET IN A CONTINUOUS LAYER OF PREFORMED BITUMINOUS MASTIC. THE MAXIMUM HEIGHT OF ADJUSTMENTS SHALL BE 12 INCHES. TWO INCH CONCRETE RINGS SHALL ONLY BE USED WHEN THE ADJUSTMENT IS LESS THAN 3 INCHES. ADJUSTMENTS LESS THAN 4 INCHES MAY BE MADE USING HARD COMPOSITE RUBBER TYPE RINGS, SUCH AS GNR OR APPROVED EQUAL. ONLY ONE TYPE OF ADJUSTING RING MAY BE USED ON A STRUCTURE: COMBINING BOTH CONCRETE AND HARD COMPOSITE RUBBER RINGS ON A STRUCTURE IS NOT PERMITTED.

EROSION CONTROL AND DRAINAGE NOTES (GENERAL)

- 1. THE CONTRACTOR SHALL MAINTAIN PROPER DRAINAGE AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.
- 2.DURING EXTENDED DRY PERIODS, THE CONSTRUCTION AREA(S) MAY NEED TO BE WATERED DOWN TO PREVENT THE BLOWING OF SOIL FROM THE SITE.
- 3.DURING CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE UTILIZED TO MINIMIZE THE TRACKING OF DIRT ONTO THE PUBLIC STREETS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO KEEP PUBLIC STREET PAVEMENT CLEAN OF DIRT AND DEBRIS. ANY DIRT THAT IS TRACKED ONTO THE PUBLIC STREETS SHALL BE REMOVED THE SAME DAY. IF THE AMOUNT TRACKED ON THE PUBLIC STREET IS EXCESSIVE, CLEANING MAY BE REQUIRED MORE FREQUENTLY.

EROSION CONTROL AND DRAINAGE NOTES (PROJECT SPECIFIC)

- 1.ALL EROSION CONTROL MEASURES SHALL BE PROPERLY INSTALLED, AS PERMITTED, PRIOR TO ANY LAND DISTURBANCE ACTIVITIES, ALL EROSION CONTROL SHALL BE MAINTAINED UNTIL TURF IS ESTABLISHED
- 2.ACCEPTABLE PERIMETER EROSION CONTROL INCLUDES SILT FENCE, SILT WORM AND ANY OTHER APPLICATION APPROVED BY THE CITY ENGINEER.
- 3.ALL OPEN GRATE STRUCTURES SHALL HAVE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE APPROVED EROSION CONTROL PLANS. INLET BASKETS ARE THE PREFERRED METHOD; STRAW BALES SHALL NOT BE USED.
- SEEDED. 5.ALL EROSION CONTROL MEASURES SHALL BE INSPECTED WEEKLY, AFTER
- ANY 0.5 INCH RAINFALL, OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN THEIR FUNCTION.

EROSION CONTROL AND DRAINAGE NOTES (NPDES PERMIT)

1.IT IS THE RESPONSIBILITY OF THE OWNER OR HIS DESIGNEE TO INSPECT ALL TEMPORARY EROSION CONTROL MEASURES PER THE REQUIREMENTS OF THE NPDES PERMIT AND CORRECT ANY DEFICIENCIES AS NEEDED.

GEOMETRIC AND PAVING NOTES (GENERAL)

- 1. THE DEVELOPER AND CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO ADEQUATELY PROTECT THE PAVEMENT AND PROPERTY, CURB AND GUTTER AND OTHER RIGHT-OF-WAY IMPROVEMENTS. WHETHER NEWLY CONSTRUCTED OR EXISTING, FROM ANY AND ALL DAMAGE. SUFFICIENT MEANS SHALL BE EMPLOYED BY THE CONTRACTOR TO PROTECT AGAINST SUCH DAMAGE TO THE SATISFACTION OF THE CITY ENGINEER.
- 2.ANY NEW OR EXISTING IMPROVEMENTS THAT ARE DAMAGED SHALL BE REPAIRED OR REPLACED IN A MANNER THAT IS SATISFACTORY TO THE CITY ENGINEER.
- 3.THE CONTRACTOR AND/OR DEVELOPER SHALL SECURE ALL NECESSARY RIGHTS AND PERMISSIONS TO PERFORM ANY WORK ON PRIVATE PROPERTY NOT WITHIN THE OWNERSHIP RIGHTS OF THE DEVELOPER. THE DEVELOPER SHALL BEAR THE SOLE RESPONSIBILITY FOR DAMAGES THAT MAY OCCUR AS A RESULT OF WORK PERFORMED UNDER CONTRACTS THEY INITIATE.
- 4.THE CONTRACTOR/DEVELOPER WILL BE RESPONSIBLE FOR BRINGING PAVEMENTS (STREET, CURB AND GUTTER, SIDEWALK, DRIVEWAY) ON THE PROPERTY UP TO CITY STANDARDS INCLUDING ANY REPAIRS TO SUBSTANDARD PAVEMENTS THAT EXISTED PRIOR TO OR OCCURRED DURING CONSTRUCTION.
- 5. WHEREVER NEW WORK WILL MEET EXISTING CONDITIONS OTHER THAN LAWN AREAS, REGARDLESS OF WHETHER THE NEW OR EXISTING WORK IS ASPHALT OR CONCRETE, THE EXISTING ADJACENT SIDEWALK, DRIVEWAYS, PAVEMENT OR CURB SHALL BE NEATLY SAW CUT. THE SAW CUT SHALL BE IN A NEAT STRAIGHT LINE SUFFICIENTLY DEEP SO THAT IT RENDERS A SMOOTH VERTICAL FACE TO MATCH TO. IF THE CONTRACTOR IS NOT CAREFUL OR DOES NOT SAW DEEP ENOUGH AND THE CUT LINE BREAKS OUT OR CHIPS TO AN IMPERFECT EDGE, THEN THE EXISTING SIDE MUST BE RE-CUT SQUARE AND DONE OVER UNTIL IT IS CORRECT.

CITY OF NAPERVILLE GENERAL NOTES (CONT.)

- 1. ALL DEVELOPERS AND CONTRACTORS SHALL PROVIDE SUITABLE TRAFFIC CONTROL FOR THEIR CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. TRAFFIC CONTROL MUST BE PROVIDED FOR ANY ACTIVITY THAT IMPACTS TRAFFIC FLOW. THIS INCLUDES, BUT IS NOT LIMITED TO, ROAD CLOSURES REQUIRING DETOURS, DAILY LANE CLOSURES, LONG TERM LANE CLOSURES, NARROW LANES, AND CONSTRUCTION VEHICLES ENTERING AND EXITING THE PUBLIC ROADWAY. ALL TRAFFIC CONTROL SETUPS MAY BE INSPECTED BY THE CITY OF NAPERVILLE TO ENSURE THAT THEY ARE PROVIDING POSITIVE GUIDANCE TO MOTORISTS AND ARE NOT IN THEMSELVES PRESENTING A HAZARDOUS SITUATION. A REPRESENTATIVE OF THE DEVELOPER OR CONTRACTOR MUST PROVIDE PHONE NUMBERS AT WHICH THEY CAN BE REACHED 24 HOURS A DAY AND ON WEEKENDS SO THAT THEY CAN MAINTAIN TRAFFIC CONTROL DEVICES.
- 2.PEDESTRIANS MUST BE PROVIDED WITH A SAFE ALTERNATE ROUTE IF PEDESTRIAN FACILITIES ARE TO BE CLOSED AS A RESULT OF CONSTRUCTION ACTIVITIES. GUIDANCE MUST BE PROVIDED TO PEDESTRIANS SO THAT THEY MAY AVOID THE WORK ZONE. SAID PEDESTRIAN DETOUR PLAN (WITH SIGNAGE) IS TO BE REVIEWED AND ACCEPTED BY THE CITY IN WRITING. PRIOR TO THE COMMENCEMENT OF THE WORK.
- 3.THE CONTRACTOR SHALL EMPLOY THE APPROPRIATE METHODS OF TRAFFIC CONTROL IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, SUCH THAT THE SAFETY OF VEHICLES, AND PEDESTRIANS IS PRESERVED AT ALL TIMES. THE ERECTION AND MAINTENANCE OF THE TRAFFIC CONTROL DEVICES SHALL BE TO THE SATISFACTION OF THE AGENCY OF JURISDICTION AND THE CITY ENGINEER.
- 4.ANY TEMPORARY OPEN HOLES SHOULD BE BARRICADED AND PROTECTED IN ACCORDANCE WITH APPLICABLE STANDARDS.

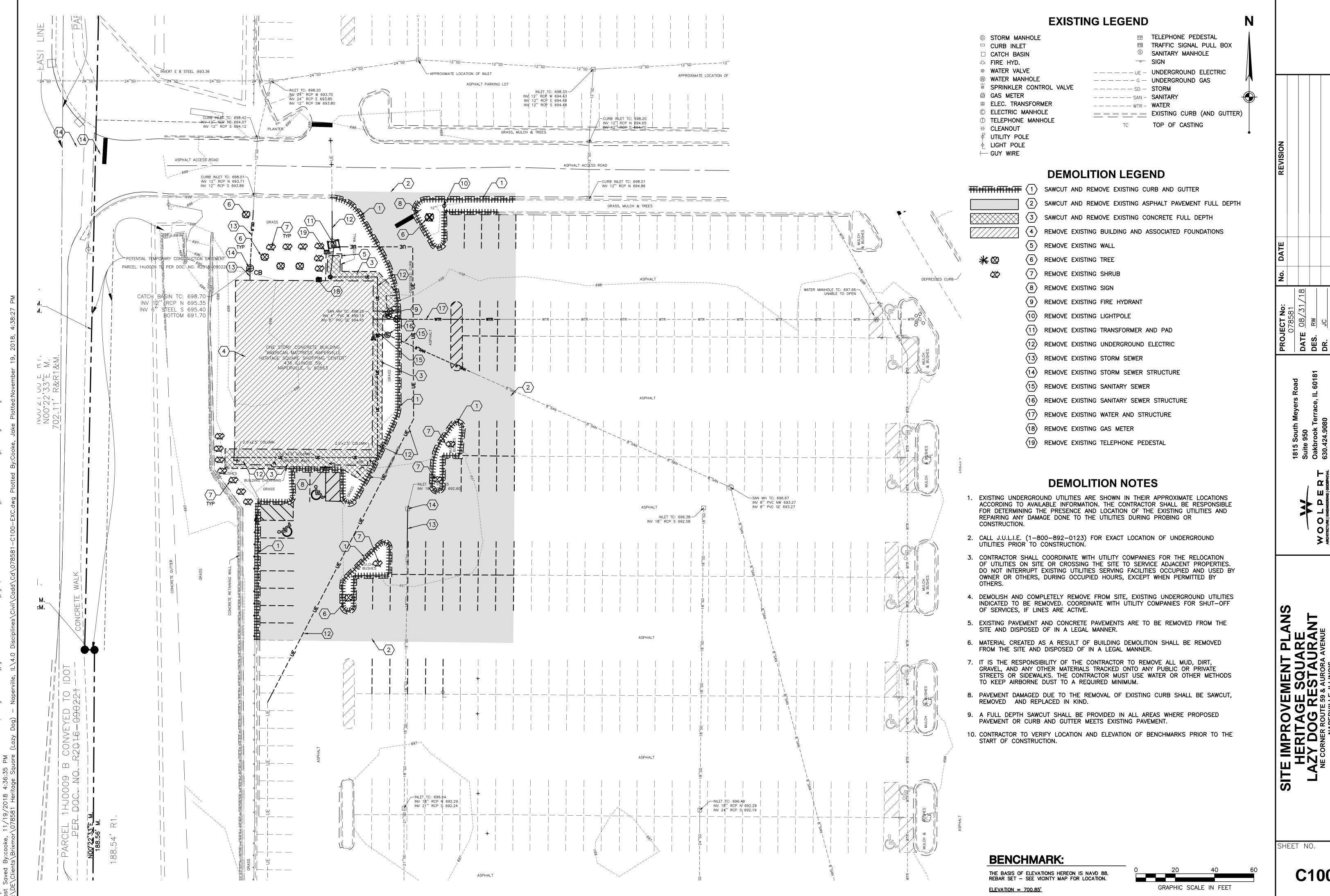
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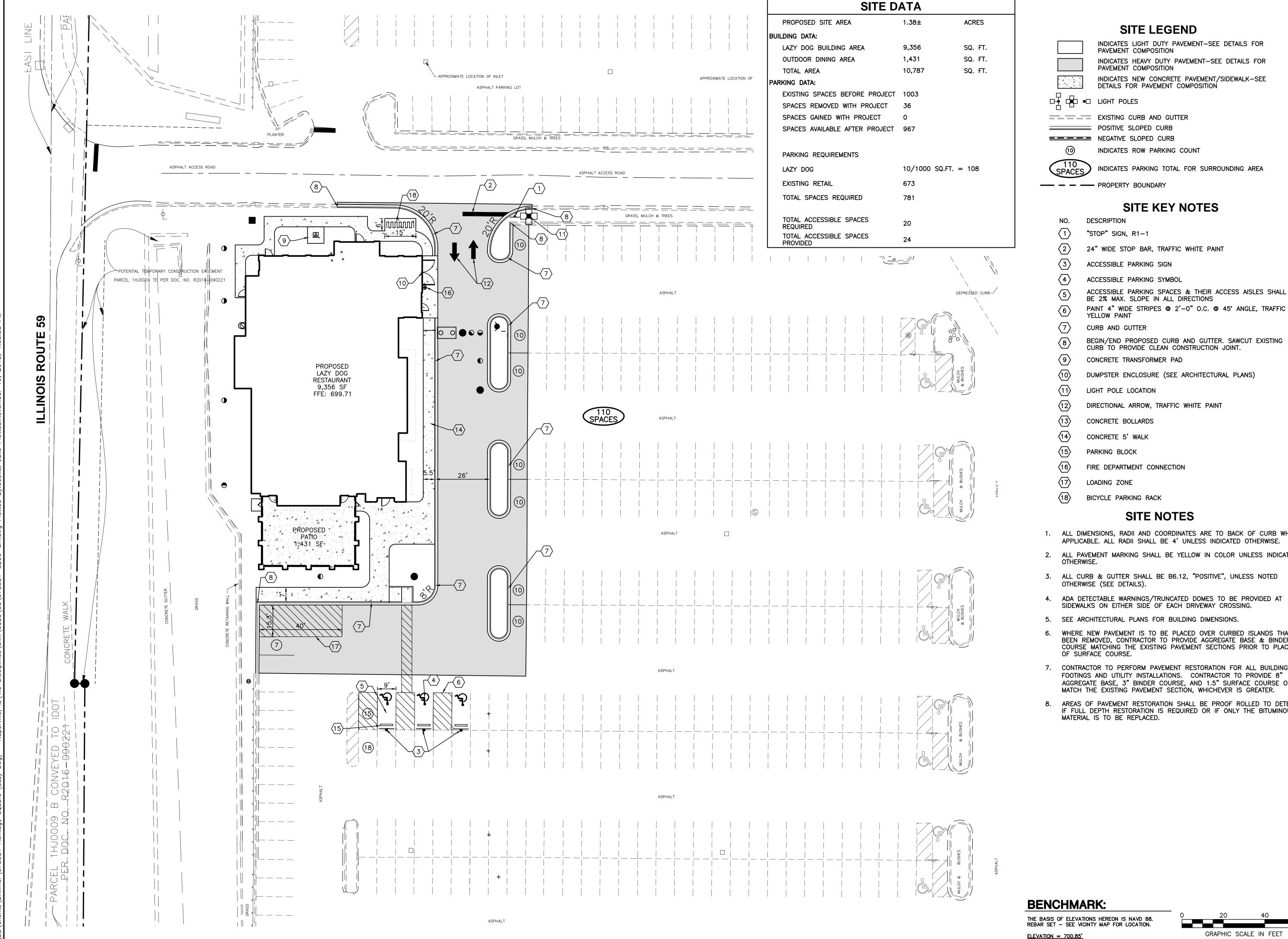
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1. ALL DIMENSIONS, RADII AND COORDINATES ARE TO BACK OF CURB WHERE

2. ALL PAVEMENT MARKING SHALL BE YELLOW IN COLOR UNLESS INDICATED

WHERE NEW PAVEMENT IS TO BE PLACED OVER CURBED ISLANDS THAT HAVE BEEN REMOVED, CONTRACTOR TO PROVIDE AGGREGATE BASE & BINDER COURSE MATCHING THE EXISTING PAVEMENT SECTIONS PRIOR TO PLACEMENT

7. CONTRACTOR TO PERFORM PAVEMENT RESTORATION FOR ALL BUILDING FOOTINGS AND UTILITY INSTALLATIONS. CONTRACTOR TO PROVIDE 8" AGGREGATE BASE, 3" BINDER COURSE, AND 1.5" SURFACE COURSE OR

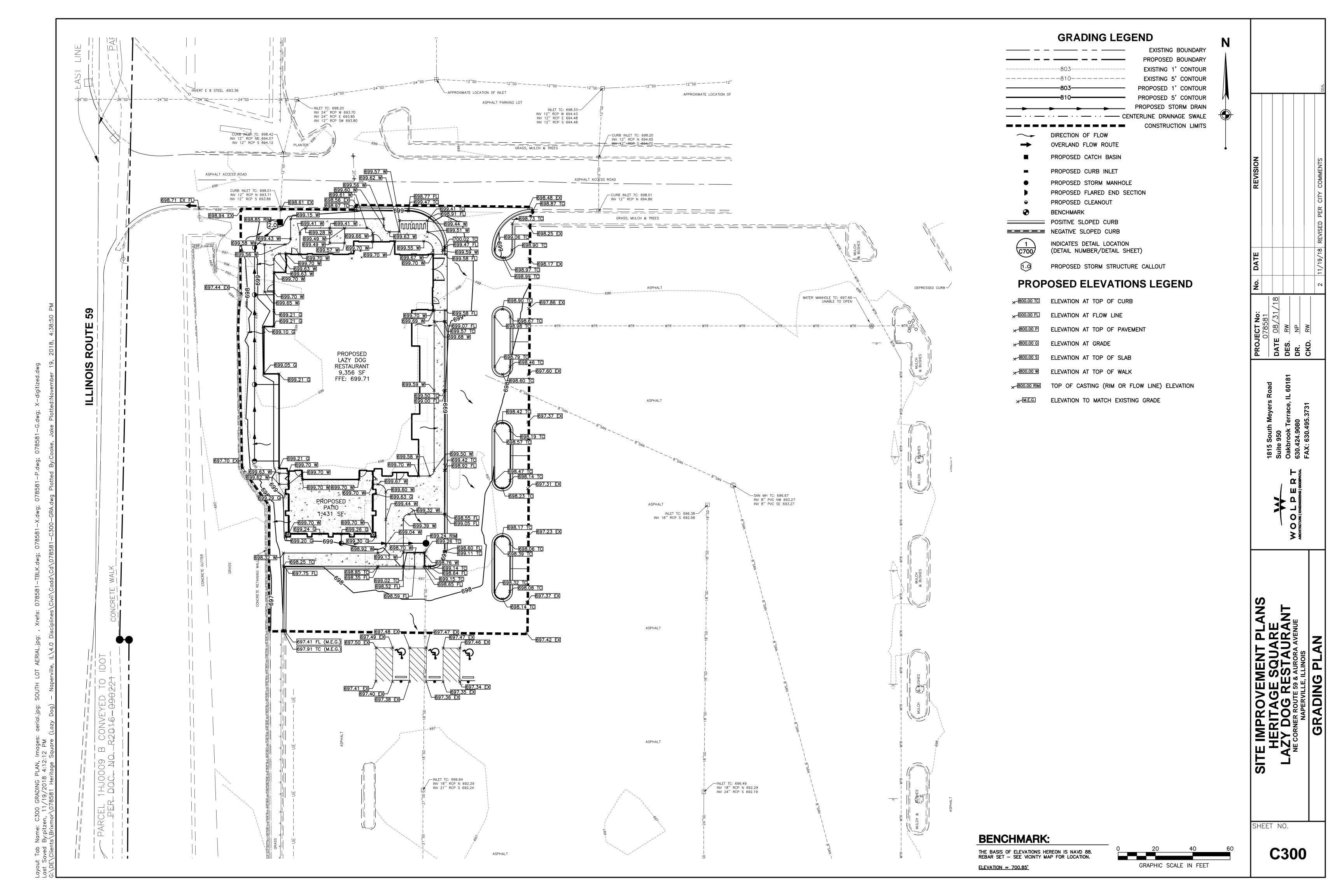
8. AREAS OF PAVEMENT RESTORATION SHALL BE PROOF ROLLED TO DETERMINE IF FULL DEPTH RESTORATION IS REQUIRED OR IF ONLY THE BITUMINOUS

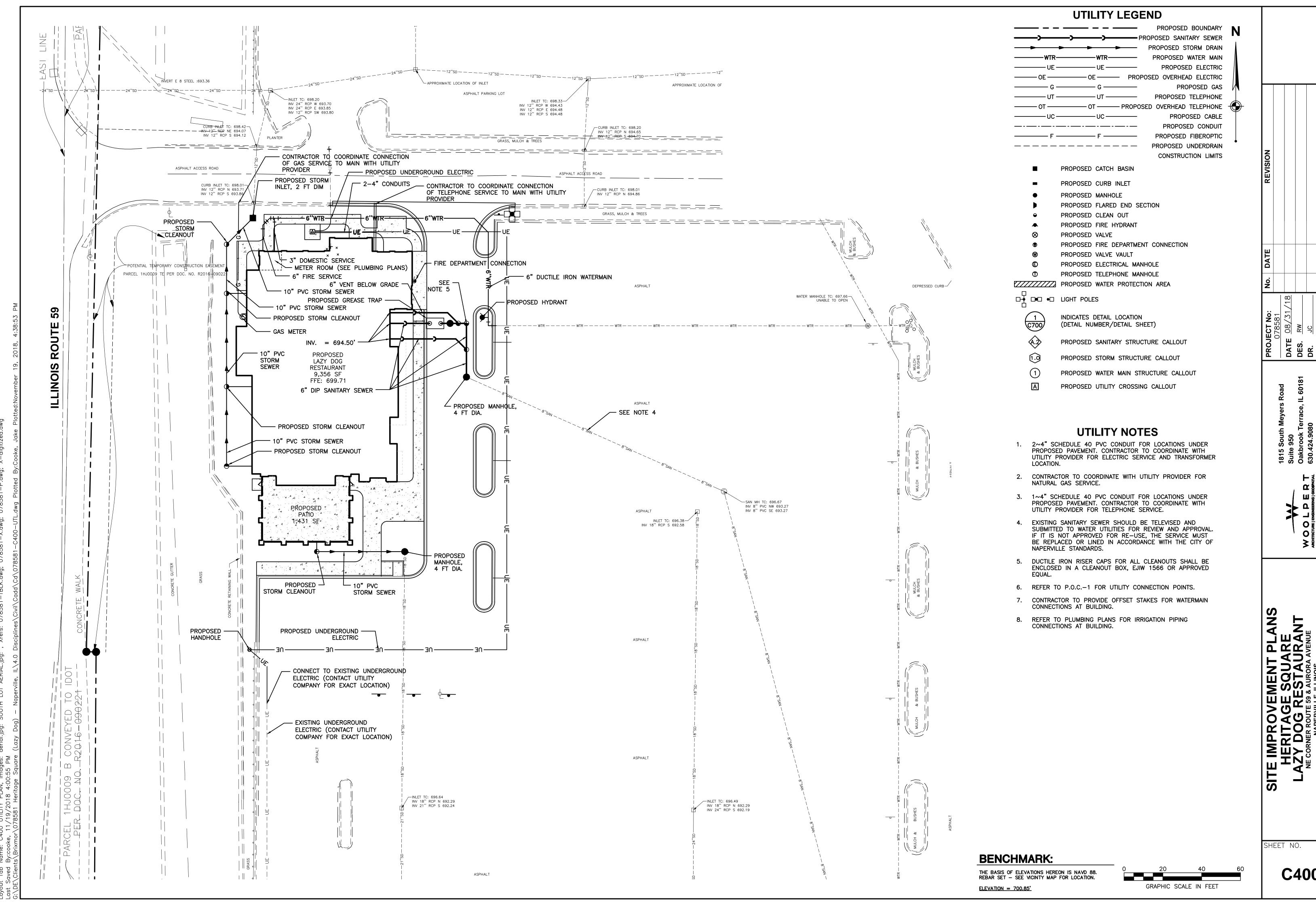


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LANDSCAPE CODE SUMMARY

NAPERVILLE, ILLINOIS - CODE OF ORDINANCES

TITLE 5 - BUILDING REGULATIONS

PARKWAY LANDSCAPING (5-10-3-3)

PROVIDE ONE TREE EVERY FORTY (40) LF OF ROAD FRONTAGE

= 6.8 TREES REQUIRED = EXISTING DETENTION BASIN PREVENTS TREE PLANTING

PERIMETER LANDSCAPING (5-10-3-4.1) PROVIDE ONE TREE EVERY SEVENTY (70) LF

= 2 EXISTING TREES & 1 NEW TREE PROVIDED

WEST PERIMETER (272 LF)

= 3.9 TREES REQUIRED

FOUNDATION LANDSCAPING (5-10-3-4.2)

PROVIDE ONE PLANT FOR EVERY THREE (3) LF OF BUILDING LENGTH

PARKING LOT INTERIOR LANDSCAPING (5-10-3-5.1)
PROVIDE ONE TREE FOR EVERY 130 SF OF ISLAND WITH 50% LIVE PLANT

= 9 TREES & OVER 50% LIVE PLANT MATERIAL COVERAGE PROVIDED

PARKING LOT PERIMETER LANDSCAPING (5-10-3-5.2)
PROVIDE LANDSCAPE ACROSS 50% OF THE PARKING LOT TO A HEIGHT OF 30 INCHES AND SPACED FOUR FEET ON CENTER

= 5.6 SHRUBS REQUIRED = 6 SHRUBS PROVIDED

LANDSCAPE NOTES

- LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES, PRIOR TO DIGGING, IS RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
- PRIOR TO INSTALLATION, THE LANDSCAPE CONTRACTOR SHALL INSPECT THE SUB GRADE, GENERAL SITE CONDITIONS, VERIFY ELEVATIONS, UTILITY LOCATIONS, IRRIGATION, APPROVE TOPSOIL PROVIDED BY GENERAL CONTRACTOR AND OBSERVE THE SITE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. NOTIFY GENERAL CONTRACTOR OF ANY UNSATISFACTORY CONDITIONS. WORK SHALL NOT PROCEED UNTIL SUCH CONDITIONS HAVE BEEN CORRECTED AND ARE ACCEPTABLE TO THE LANDSCAPE CONTRACTOR AND/OR CONSTRUCTION MANAGER.
- GENERAL AND LANDSCAPE CONTRACTOR ARE RESPONSIBLE FOR PROTECTING EXISTING TREES FROM DAMAGE DURING CONSTRUCTION. GENERAL CONTRACTOR TO INSTALL TREE PROTECTION FENCING PRIOR TO ANY SITE
- 4. ALL SHRUB AND GROUNDCOVER BEDS TO BE MULCHED WITH A MINIMUM OF 3 INCHES OF CLEAN SHREDDED HARDWOOD MULCH.
- PLANTING HOLES TO BE DUG A MINIMUM OF TWICE THE WIDTH AND 6-12 INCHES DEEPER THAN THE SIZE OF THE ROOT BALL OF BOTH SHRUB AND TREE. AMEND BACKFILL WITH TOPSOIL MIX. BACKFILL AND TAMP BOTTOM OF HOLE PRIOR TO PLANTING SO TOP OF ROOT BALL DOES NOT SETTLE BELOW SURROUNDING GRADE.
- TOPSOIL MIX TO BE 4 PARTS SCREENED TOPSOIL AND 1 PART ORGANIC MATERIAL (i.e. NATURE'S HELPER OR PRO MIX).
- EXISTING GRASS IN PROPOSED PLANTING AREAS TO BE REMOVED AND AREA TO BE HAND RAKED TO REMOVE ALL ROCKS AND DEBRIS LARGER THAN 1 INCH IN DIAMETER PRIOR TO PLANTING SHRUBS.
- 8. SOIL TO BE TESTED TO DETERMINE FERTILIZER AND LIME REQUIREMENTS. LIME AND FERTILIZER TO BE DISTRIBUTED PRIOR TO SPREADING SEED. ALL DISTURBED AREAS (INCLUDING RIGHT-OF-WAYS) NOT RECEIVING PLANTINGS TO RECEIVE 4 INCHES OF TOPSOIL AND SEEDED.
- 9. ALL CHANGES TO DESIGN AND/OR PLANT SUBSTITUTIONS TO BE AUTHORIZED BY LANDSCAPE ARCHITECT.
- 10. ALL PARKING ISLANDS TO BE BERMED UP 6"-10" WITH CLEAN FRIABLE TOPSOIL PRIOR TO PLANTING.
- 11. ALL LANDSCAPING SHALL BE INSTALLED IN CONFORMANCE WITH ANSI Z60.1 THE AMERICAN STANDARD FOR NURSERY STOCK, AND THE ACCEPTED STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
- 12. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANTS INSTALLED FOR ONE FULL YEAR FROM DATE OF ACCEPTANCE BY THE OWNER. ALL PLANTS SHALL BE ALIVE AND AT A VIGOROUS RATE OF GROWTH AT THE END OF THE GUARANTEE PERIOD. THE LANDSCAPE CONTRACTOR SHALL NOT BE RESPONSIBLE FOR ACTS OF GOD OR VANDALISM.
- 13. ANY PLANT THAT IS DETERMINED DEAD, IN AN UNHEALTHY OR UNSIGHTLY CONDITION, LOST ITS SHAPE DUE TO DEAD BRANCHES OR OTHER SYMPTOMS OF POOR, NON-VIGOROUS GROWTH SHALL BE REPLACED BY THE LANDSCAPE CONTRACTOR WITH THE COST OF THE REPLACEMENT INCLUDED IN THE BID OR PROPOSAL PRICE.
- 14. WATER THOROUGHLY TWICE IN THE FIRST 24 HOURS AND APPLY MULCH IMMEDIATELY.
- 15. TREES SHALL BE INSTALLED A MINIMUM OF FIVE (5) FEET HORIZONTALLY FROM UNDERGROUND ELECTRICAL FEEDERS, SANITARY SEWERS, SANITARY SERVICES, WATER MAINS, AND WATER SERVICES. TREES SHALL BE INSTALLED A MINIMUM TEN (10) FEET HORIZONTALLY FROM UTILITY STRUCTURES AND APPURTENANCES, INCLUDING, BUT NOT LIMITED TO, MANHOLES, VALVE UNITS, VALVE BOXES, AND FIRE HYDRANTS.

PERMANENT SEED BLEND

6 LBS PER 1000 SF

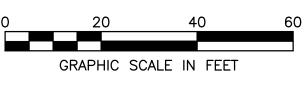
90% FINE LEAF FESCUE (FESTUCA ARUNDINACEA) REBEL, REBEL II, WRANGLER, BONANZA, MOJAVE OR EQUAL 10% KENTUCKY BLUEGRASS (POA PRATENSIS)

MIDNIGHT, RUGBY II, MIDIRON VARIETIES OR EQUAL 98% PURITY AND 85% GERMINATION 95% WEED FREE

8 LBS 12-12-12 FERTILIZER PER 1000 SF 1 1/2 BALES OF STRAW PER 1000 SF

TAG	QTY	SCIENTIFIC NAME	COMMON NAME	COND.	SIZE	REMARKS
SHAD	E TRE	E				
NS	2	Nyssa sylvatica	Black Gum	B&B	2.5" cal. 14'ht. 7'wd	Full, well shaped
QI	4	Quercus imbricaria	Shingle Oak	B&B	2.5" cal. 14'ht. 7'wd	Full, well shaped
UA	4	Ulmus americana 'Princeton'	Princeton American Elm	B&B	2.5" cal. 14'ht. 7'wd	Full, well shaped
ORNA	MENT	AL TREE	•			
AG	2	Amelanchier x grandiflora 'Autumn Brilliance'	Apple Serviceberry	B&B	1.5" cal. 8'ht. 4'wd.	Full, well shaped, single-stem
AE	1	Aesculus pavia	Red Buckeye	B&B	8'ht. 4'wd.	Full, well shaped, 3-stem
AP	1	Acer palmatum 'Bloodgood'	Bloodgood Japanese Maple	B&B	1.5" cal. 8'ht. 4'wd.	Full, well shaped, single-stem
CV	2	Chionanthus virginicus	White Fringetree	B&B	8'ht. 4'wd.	Full, well shaped, multi-stem
EVER	GREEN	SHRUB	1	L		
BU	5	Buxus 'Glencoe'	Chicagoland Green Boxwood	#3 cont.	18"ht. x 18"wd.	Full, vigorous
JC	18	Juniperus chinensis 'Sea Green'	Sea Green Juniper	#5 cont.	24"ht. x 24"wd.	Full, vigorous
JS	6	Juniperus chinensis sargentii 'Viridis'	Green Sargent Juniper	#3 cont.	12"ht. x 18"wd.	Full, vigorous
JK	4	Juniperus chinensis 'Keteleerii'	Keteleeri Upright Juniper	B&B	48"ht. x 24"wd.	Full, vigorous
РМ	28	Pinus mugo 'Slowmound'	Slowmound Dwarf Mugo Pine	#3 cont.	18"ht. x 18"wd.	Full, vigorous
TE	11	Taxus x media 'Everlow'	Everlow Yew	#3 cont.	12"ht. x 18"wd.	Full, vigorous
DECID	UOUS	SHRUB				
HQ	12	Hydrangea quercifolia 'Pee Wee'	Pee Wee Oakleaf Hydrangea	#3 cont.	18"ht. x 18"wd.	Full, vigorous
IV	13	Itea virginica 'Little Henry'	Little Henry Sweetspire	#3 cont.	 18"ht. x 18"wd.	Full, vigorous
RA	3	Rhus aromatica 'Gro—Low'	Gro-Low Fragrant Sumac	#3 cont.	18"ht. x 18"wd.	Full, vigorous
RO	5	Rosa x 'Radkopink'	Double Pink Knockout Rose	#5 cont.	24"ht. x 24"wd.	Full, vigorous
SJ	9	Spiraea japonica 'Shirobana'	Shirobana Spirea	#3 cont.	18"ht. x 18"wd.	Full, vigorous
ORNA	MENT	AL GRASS				<u>'</u>
CA	24	Calamagrostis x acutifolia 'Karl Foerster'	Feather Reed Grass	#2 cont.		Full, vigorous
PV	6	Panicum virgatum 'Hot Rod'	Hot Rod Red Switchgrass	#2 cont.		Full, vigorous
SH	12	Sporobolus heterolepis	Prairie Dropseed	#2 cont.		Full, vigorous
PERE	NNIAL					
BD	11	Buddleia 'Pugster Amethyst'	Dwarf Amethyst Butterflybush	#2 cont.		
HE	14	Hemerocalis 'Happy Returns'	Happy Returns Daylily	#1 cont.		
LM	44	Liriope muscari 'Big Blue'	Big Blue Liriope	#1 cont.		
MS	6	Matteuccia struthiopteris	Ostrich Fern	#1 cont.		
NF	15	Nepeta x faassenii 'Walker's Low'	Walker's Low Catmint	#1 cont.		
SE	23	Sedum kamtschaticum var. ellacombeanum	Yellow Stonecrop	#1 cont.		+

R BERCHMARKANTITIES OF PLANTS ON LANDSCAPE PLAN. THE BASIS OF ELEVATIONS HEREON IS NAVD 88. REBAR SET — SEE VICINTY MAP FOR LOCATION. ELEVATION = 700.85'



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