

1. GENERAL CONSTRUCTION

- A. ALL CONSTRUCTION SHALL BE DONE ACCORDING TO THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", 8TH EDITION (2020); THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS", ADOPTED JANUARY 1, 2015; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; "THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS; THE DETAILS IN THESE PLANS, AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS. ALL WORK SHALL BE IN ACCORDANCE WITH THE VILLAGE OF GURNEE MUNICIPAL CODE OR AS DIRECTED BY THE VILLAGE ENGINEER.
- B. PRIOR TO WORK BEGINNING, THE CONTRACTOR SHALL NOTIFY THE VILLAGE OF GURNEE ENGINEERING DIVISION 72 HOURS IN ADVANCE.
- C. BEFORE STARTING AND EXCAVATION, THE CONTRACTOR SHALL CONTACT "JULIE" AT 1-800-892-0123 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, GAS, WATER, SEWER, CABLE, ETC., UTILITY LINES (MINIMUM 48 HOURS NOTIFICATION IS REQUIRED).CTURES SHALL BE ADJUSTED TO THE FINAL ELEVATIONS OF THE AREAS IN WHICH THEY ARE LOCATED AS PART OF THE STRUCTURE COST. ANY PLATING OF THE STRUCTURE REQUIRED FOR STAGED CONSTRUCTION SHALL BE INCLUDED IN THE COST OF THE STRUCTURE.
- D. THE INFORMATION OF EXISTING UTILITIES ARE ON THE PLANS FOR INFORMATION ONLY AND REPRESENTS THE BEST KNOWLEDGE OF THE ENGINEER. THE CONTRACTOR HAS THE RESPONSIBILITY TO VERIFY LOCATIONS BEFORE STARTING CONSTRUCTION AND TO PROTECT THE UTILITIES FROM DAMAGE DUE TO THE PROPOSED CONSTRUCTION.
- E. THE CONTRACTOR SHALL AT ALL TIMES KEEP PUBLIC WAYS OPEN AND CLEAN OF DIRT AND DEBRIS.
- F. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL STAKING AND LAYOUT OF THE GRADING, UNDERGROUND, AND PAVING IMPROVEMENTS.
- G. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A SAFE WORK SITE. ALL WORK SHALL BE PERFORMED UNDER THE GUIDANCE OF A COMPETENT ENGLISH SPEAKING SUPERVISOR, AND SHALL BE IN ACCORDANCE WITH APPLICABLE OSHA REGULATIONS.
- H. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS IN THE FIELD PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION. WHERE NEW WORK IS PROPOSED TO MEET EXISTING FEATURES, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD CHECK ALL DIMENSIONS AND ELEVATIONS AND NOTIFY THE ENGINEER OF DISCREPANCIES BEFORE PROCEEDING WITH CONSTRUCTION.
- I. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE THE MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- J. ALL PAVEMENT, CURB AND GUTTER, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND OTHER FEATURES SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITION.
- K. PRIOR TO APPROVAL OF THE PROJECT BY THE VILLAGE OF GURNEE, AN AS-BUILT PLAN OF UNDERGROUND IMPROVEMENTS AND SURFACE FEATURES SHALL BE SUBMITTED TO THE VILLAGE OF GURNEE FOR APPROVAL. THIS PLAN SHALL BE SUBMITTED IN DIGITAL FORMAT AS WELL AS ON PAPER IN TRIPPLICATE.
- L. 4" OF TOPSOIL IS REQUIRED OVER ALL DISTURBED AREAS PRIOR TO LANDSCAPING RESTORATION.
- M. ANY AREAS DISTURBED AS A RESULT OF MATERIAL STORAGE OR STOCKPILING WILL BE RESTORED AT THE CONTRACTOR'S EXPENSE.

2. UNDERGROUND UTILITIES

- A. TRENCHES SHALL BE AS NARROW AS POSSIBLE TO AVOID EXCESS LOADING ON THE PIPE. THE TRENCH SIDES SHALL BE VERTICAL TO A POINT 12 INCHES ABOVE THE TOP OF THE PIPE AND THE MAXIMUM WIDTH, AS DEFINED IN THE STANDARD DETAILS. ABOVE THIS POINT, THE TRENCH MAY BE SLOPED AS CONDITIONS PERMIT, BUT MUST BE KEPT AS VERTICAL AS POSSIBLE. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR EXCAVATION BEYOND THE ALLOWABLE LIMITS CALLED FOR IN THE PLANS AND SPECIFICATIONS.
- B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER CONNECTION TO EXISTING SEWERS REGARDLESS OF THE MATERIALS ENCOUNTERED. CONNECTION AND MATERIALS SHALL BE APPROVED BY THE ENGINEER BEFORE PROCEEDING WITH NEW CONSTRUCTION.
- C. THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IN THE EVENT THAT THE CONTRACTOR ENCOUNTERS PIPING OR OTHER UTILITIES NOT SHOWN ON THE DRAWINGS DURING EXCAVATION. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY COMPANIES IN MAINTAINING SERVICE AND SHALL BE RESPONSIBLE FOR REPAIRS OF ANY DAMAGED UTILITIES DUE TO HIS OWN NEGLIGENCE AT NO ADDITIONAL COMPENSATION.
- D. THE UNDERGROUND CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING ANY EXCAVATION FOR THE INSTALLATION OF THE SEWER OR WATER SYSTEMS. ANY DEWATERING ENCOUNTERED SHALL BE INCIDENTAL TO THE RESPECTIVE UNDERGROUND UTILITY.
- E. PRECAST CONCRETE ADJUSTMENT RINGS, MAXIMUM OF 8" HEIGHT, WILL BE ALLOWED IN THE ADJUSTMENT OR RECONSTRUCTION OF CATCH BASIN, MANHOLE, INLET AND VALVE VAULT STRUCTURES. HDPE PLASTIC OR RECYCLE RUBBER ADJUSTING RINGS MAY BE USED ACCORDING TO SECTION 602 OF THE "STANDARD SPECIFICATIONS". COMMON BRICK WILL NOT BE ALLOWED. ALL TYPE 8 GRATES ON DRAINAGE STRUCTURES SHALL BE ADJUSTED TO PLAN GRADE WITH 4" MINIMUM CONCRETE ADJUSTMENT RINGS. THE RINGS SHALL BE INCLUDED IN THE COST OF THE STRUCTURE.
- F. NO MORE THAN 8" OF ADJUSTING RINGS ARE PERMITTED TO BE INSTALLED ON ALL MANHOLE STRUCTURES. IF ADDITIONAL ADJUSTMENT IS REQUIRED, FULL DIAMETER BARREL SECTIONS OF THE MANHOLES MUST BE INSTALLED.
- G. ALL EXCAVATION WITHIN 3' OF PAVEMENT SHALL BE BACKFILLED WITH GRANULAR MATERIAL AND COMPACTED IN 1' LIFTS TO ACHIEVE A MINIMUM OF 92% DENSITY TO PREVENT FUTURE SETTLEMENT.

3. PUBLIC ROADWAY CONSTRUCTION

- A. ANY OPEN CUTTING OF ROADWAY PAVEMENT SHALL BE BACKFILLED USING CA-7 OR CA-6 STONE AND COMPACTED IN 1 FT MAXIMUM LIFTS. CA-7 (I.E. WASH STONE) SHALL BE PLACED TO WITHIN SIX VERTICAL INCHES OF THE EXISTING PAVEMENT SECTION, TOPPED WITH CA-6 AGGREGATE, AND THE PAVEMENT SECTION SHALL BE RESTORED AS SHOWN ON THE PLANS.
- B. THE PAVEMENT SECTION SHALL BE RESTORED AS SHOWN ON THE PLANS.

4. SANITARY SEWER CONSTRUCTION

- A. SANITARY SEWER FACILITIES SHALL CONFORM TO THE VILLAGE OF GURNEE STANDARD DETAILS.
- B. ALL SANITARY SEWER PIPE AND FITTINGS SHALL BE SDR 26 PVC PIPE UNLESS WATER MAIN EQUIVALENT PIPE IS REQUIRED. WHEN WATER MAIN EQUIVALENT PIPE IS REQUIRED, THE SEWER PIPE MUST EITHER BE IN A WATER MAIN EQUIVALENT CASING PIPE, OR THE SEWER PIPE ITSELF SHALL BE WATER MAIN EQUIVALENT PIPE.
- C. ALL SANITARY MANHOLES ARE REQUIRED TO HAVE EXTERNAL CHIMNEY SEALS INSTALLED OVER THE FRAME AND AROUND THE MANHOLE TO PREVENT INFILTRATION. WHEN SANITARY FRAMES ARE INSTALLED DIRECTLY ON TOP OF FLAT TOP MANHOLE STRUCTURES, IT IS PERMISSIBLE TO INSTALL AN INTERNAL CHIMNEY SEAL PER THE MANUFACTURER'S INSTRUCTIONS.
- D. "BAND SEAL" JOINTS WITH STAINLESS STEEL STRAPS AND BOLTS SHALL BE USED AT ALL CHANGES IN SEWER PIPE MATERIAL.
- E. ALL SANITARY SEWER SERVICES INSTALLED ON A NEW MAIN SHALL BE MADE WITH SDR 26 OR C900 WYES.
- F. ALL SANITARY SEWER SERVICES SHALL BE INSTALLED AT A MINIMUM 1%PITCH.
- G. ENDS OF SANITARY STUBS SHALL BE MARKED WITH A 4"x4"x10' BOARD PAINTED GREEN.
- H. THE UNDERGROUND CONTRACTOR IS RESPONSIBLE FOR DOCUMENTING THE LOCATION OF EACH SERVICE. A FINAL COMPILATION OF SERVICE LOCATIONS SHALL BE PROVIDED TO THE VILLAGE OF GURNEE UPON COMPLETION OF THE INSTALLATION.
- I. TESTING OF SANITARY SEWER PIPE PER THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS IS REQUIRED AFTER INSTALLATION. ANY FAILURES OR PROBLEMS IDENTIFIED REQUIRE CORRECTION BY THE DEVELOPER
- I. THE VILLAGE OF GURNEE REQUIRES AIR PRESSURE EXFILTRATION TESTING OF ALL SANITARY SEWER PIPE AFTER INSTALLATION.
- II. THE VILLAGE OF GURNEE REQUIRES DEFLECTION TESTING OF ALL SANITARY SEWER PIPE AFTER INSTALLATION USING A RIGID MANDREL OR BALL WITH A DIAMETER OF 95% OF THE INSIDE PIPE DIAMETER.
- III. SANITARY SEWER PIPE SHALL BE TELEVISED USING A CLOSED CIRCUIT CAMERA AND RECORDING DEVICE. A COPY OF A VHS OR DVD VIDEO OF THE TELEVISED LINE SHALL BE SUBMITTED TO THE VILLAGE OF GURNEE FOR APPROVAL. AN ADDITIONAL COPY OF THE VIDEO IS REQUIRED FOR THE NORTH SHORE SANITARY DISTRICT IF APPLICABLE.
- J. FORCEMAIN SEWER PIPE SHALL BE DUCTILE IRON PIPE SPECIFICALLY DESIGNED FOR SANITARY FORCEMAIN APPLICATIONS.

MATERIAL STANDARDS

PUBLIC MANHOLE LIDS

EJIW #00102441 (VILLAGE OF GURNEE LOGO)  
NEENAH #10155581 (VILLAGE OF GURNEE LOGO)

PRIVATE MANHOLE LIDS

HEAVY DUTY SELF SEALING LID WITH UTILITY TYPE

SANITARY SERVICE SADDLES

SERVICE SADDLE: CASCADE CSWRT-0863-06RC

5. WATER MAIN CONSTRUCTION

- A. ALL WATER MAIN MATERIAL SHALL BE INSPECTED PRIOR TO INSTALLATION BY THE VILLAGE OF GURNEE PUBLIC WORKS DEPARTMENT.
- B. ALL WATER MAIN FIXTURES SHALL BE THE CURRENT MODEL YEAR.
- C. ALL WATER MAIN PIPE SHALL CONFORM TO AWWA C900-07 WITH AWWA F477 GASKETS.
- D. WATER MAIN COVER SHALL BE 5.5' FROM GRADE TO TOP OF PIPE. COVER SHALL NOT EXCEED 8' UNLESS APPROVED BY THE VILLAGE ENGINEER.
- E. ALL FITTINGS SHALL BE RESTRAINED USING "MEG-A-LUG" OR EQUIVALENT RESTRAINTS.
- F. ALL FITTING BOLTS SHALL HAVE SACRIFICIAL ZINC ANODE NUTS.
- G. THRUST BLOCKING IS REQUIRED AT ALL BENDS, TEES, CAPS, VALVES, AND HYDRANTS.
- H. MAIN CONNECTIONS TO EXISTING WATER MAINS SHALL BE DRY CONNECTIONS, NOT UNDER PRESSURE, UNLESS OTHERWISE APPROVED IN WRITING BY THE VILLAGE OF GURNEE.
- I. COPPER SERVICE TAPS SHALL BE MADE USING PRESSURE TAPPING METHODS WITH SADDLES.
- J. ALL VALVES SHALL BE INSTALLED IN VALVE VAULTS. UNLESS OTHERWISE APPROVED IN WRITING BY THE VILLAGE OF GURNEE, VALVE BOXES ARE ONLY PERMITTED FOR FIRE HYDRANT AUXILIARY VALVES.
- K. #12 SOLID STRAND INSULATED TRACER WIRE SHALL BE INSTALLED WITH THE WATER MAIN AS SHOWN ON THE PLANS. THE WIRE SHALL TERMINATE INTO A COBRA ACCESS POINT MOUNTED TO THE HYDRANT FLANGE.
- L. VALVE VAULT FRAMES SHALL BE SET TO FINAL GRADE AND FASTENED TO THE VAULT WITH "KENT-SEAL" OR APPROVED EQUAL TO CREATE A WATER TIGHT SEAL.
- M. VALVE VAULT JOINTS SHALL HAVE "O" RING GASKETS OR SHALL BE BITUMINOUS GASKET PREFORMED INTO RINGS FOR EASE OF INSTALLATION.
- N. HYDRANTS SHALL BE INSTALLED PLUMB WITH NOZZLE POINTED TOWARD THE ROADWAY MAINTAINING 24" CLEARANCE BETWEEN THE FINISHED GRADE AND NOZZLE.
- O. 1.25 CUBIC YARDS OF 1" CLEAN WASH STONE SHALL BE PLACED AROUND HYDRANT WEEP HOLES FOR PROPER DRAINAGE.
- P. REPAIR SLEEVES SHALL NOT BE PERMITTED DURING NEW CONSTRUCTION.
- Q. ALL DEAD END WATER MAIN SHALL BE PROVIDED WITH A MEANS TO FLUSH PIPE BEFORE CHLORINATION WITH A 2" COPPER WHIP OR A TEMPORARY HYDRANT.
- R. HORIZONTAL SEPARATION WATER MAINS AND SEWERS:
- I. WATER MAINS SHALL BE LOCATED AT LEAST TEN FEET HORIZONTALLY FROM AN EXISTING OR PROPOSED DRAIN, STORM SEWER, SANITARY SEWER, OR SEWER SERVICE CONNECTION.
- II. WATER MAINS MAY BE LOCATED CLOSER THAN TEN FEET TO A SEWER LINE WHEN:
- a. LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF TEN FEET; AND
- b. THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES ABOVE THE CROWN OF THE SEWER; AND
- c. THE WATER MAIN IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.

- S. WHEN IT IS IMPOSSIBLE TO MEET a. OR b. ABOVE, BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF WATER QUALITY PIPE TO WATER MAIN STANDARDS OF CONSTRUCTION.
- T. VERTICAL SEPARATION WATER MAINS AND SEWERS:
- I. A WATER MAIN SHALL BE SEPARATED FROM A SEWER SO THE BOTTOM OF THE WATER MAIN IS A MINIMUM OF 18 INCHES ABOVE THE CROWN OF THE SEWER WHENEVER WATER MAINS CROSS STORM SEWERS, SANITARY SEWERS OR SEWER SERVICE CONNECTIONS. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATER MAIN LOCATED WITHIN TEN FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSED. A LENGTH OF WATER MAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER.
- II. BOTH THE WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF WATER QUALITY PIPE TO WATER MAIN STANDARDS OF CONSTRUCTION WHEN:
- a. IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION AS DESCRIBED IN I. ABOVE; OR
- b. THE WATER MAIN PASSES UNDER A SEWER DRAIN.
- III. A VERTICAL SEPARATION OF 18 INCHES BETWEEN THE INVERT OF THE SEWER AND THE CROWN OF THE WATER MAIN SHALL BE MAINTAINED WHERE A WATER MAIN CROSSES UNDER A SEWER. SUPPORT THE SEWER LINES TO PREVENT SETTTLING AND BREAKING THE WATER MAIN, AS SHOWN ON THE PLANS OR AS APPROVED BY THE ENGINEER. THIS MAY BE AS FOLLOWS:
- a. THE SEWER SHALL BE DESIGNED AND CONSTRUCTED EQUAL TO WATER QUALITY PIPE, AND SHALL BE PRESSURE TESTED TO ASSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
- b. EITHER THE WATER MAIN OR THE SEWER LINE MAY BE ENCASED IN A WATERTIGHT CARRIER PIPE WHICH EXTENDS TEN FEET ON BOTH SIDES OF THE CROSSING, MEASURED PERPENDICULAR TO THE WATER MAIN. THE CARRIER PIPE SHALL BE OF MATERIALS APPROVED FOR USE IN WATER MAIN CONSTRUCTION.
- IV. CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE PERPENDICULAR DISTANCE FROM THE WATER MAIN TO THE SEWER OR DRAIN IS AT LEAST TEN FEET.
- U. THE CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING UTILITIES OF ANY KIND CAUSED BY THE AUGERING OPERATION OR DIRECTIONAL DRILLING.
- V. REGRAIDING AND SHAPING OF DITCHES FOR POSITIVE DRAINAGE SHALL BE CONSIDERED INCIDENTAL WITHIN THE AREAS DISTURBED BY THE INSTALLATION OF THE PROPOSED UTILITIES AND ITS APPURTENANCES.
- Y. TESTING OF WATER MAIN PIPE IS REQUIRED AFTER INSTALLATION. ANY FAILURES OR PROBLEMS IDENTIFIED REQUIRE CORRECTION BY THE DEVELOPER.
- I. WATER MAIN SHALL BE PRESSURE TESTED TO PRESSURE TESTED AT 150 PSI FOR TWO (2) HOURS PER AWWA STANDARD C-600 AND C-605 OR AS DIRECTED BY THE VILLAGE ENGINEER.
- II. WATER SERVICES 3" AND LARGER SHALL BE PRESSURE TESTED AT 150 PSI PER ILLINOIS PLUMBING CODE SECTION 890.1930(d) OR AS DIRECTED BY THE PLUMBING INPECTOR.
- III. WATER MAIN AND SERVICES THAT ARE 3" AND LARGER SHALL BE FLUSHED OF ALL DEBRIS AND SUBSEQUENTLY CHLORINATED PER AWWA C651.
- IV. THE MAIN WILL BE FLUSHED AND WATER SAMPLES WILL BE COLLECTED BY THE VILLAGE OF GURNEE PUBLIC WORKS DEPARTMENT. WATER SAMPLES CAN ONLY BE TAKEN BETWEEN TUESDAY AND THURSDAY, THEREFORE, CHLORINATING MAY ONLY OCCUR MONDAY THROUGH WEDNESDAY.

MATERIAL STANDARDS

FIRE HYDRANTS (AUX. VALES SHOULD BE SAME MANUFACTURER)

MUELLER CENTURION, A-423-250

GATE VALVES UP TO 12"

EJIW, FLOWMASTER  
MUELLER, A-2360, NON-RISING STEM, 2"NUT, M.J., OPEN LEFT

VALVES OVER 12" MUST BE BUTTERFLY TYPE APPROVED BY THE VILLAGE ENGINEER

VALVE BOXES

EJIW 8550  
TYLER 6850-664S

CURB STOP

MUELLER, H-15154  
MUELLER B-25154  
FORD, B22-XXX-M WHERE XXX (INLET, BODY, OUTLET)(333 IS 3/4X3/4) (444 IS 1"X 1")

CORPORATION COCKS

MUELLER H15000  
FORD F-600 (3/4" AND 1")  
FORD FB-600 (3/4" – 2")

WATER SERVICE SADDLES

SERVICE SADDLES SHALL BE DOUBLE STRAP, BRONZE, NYLON COATED, OR STAINLESS STEEL

BUFFALO BOX WITH 1.5" TOP SECTION

FORD EM2-60-67  
MUELLER, H-10302  
MUELLER H-10304, 2" UPPER SECTION FOR 1.5"-2" H SERIES VALVE

PUBLIC MANHOLE LIDS

EJIW #00102443 (VILLAGE OF GURNEE LOGO)  
NEENAH #10155582 (VILLAGE OF GURNEE LOGO)

PRIVATE MANHOLE LIDS

HEAVY DUTY SELF SEALING LID WITH UTILITY TYPE

		0		SCALE: 1" = XX'							
				DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____							
DATE	BY	DESCRIPTION									
		7/27/22	DAS	CREATED PLAN FILE							
		8/31/23	DAS	UPDATED GENERAL NOTES ON LANDSCAPING							
REVISIONS											
		SHEET NUMBER									
		JOB No. _____									

[illegible]