

VILLAGE OF BUFFALO GROVE CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION

BID# VoBG-2021-03

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EXISTING FORCE MAIN
DISCONNECTION

PROPOSED CAMBRIDGE ON THE
LAKE LIFT STATION

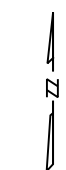
PROPOSED VILLAGE OF BUFFALO
GROVE 15" SANITARY SEWER

EXISTING VILLAGE OF BUFFALO
GROVE 21" SANITARY SEWER

MWRD INTERCEPTOR

EXISTING VILLAGE OF BUFFALO
GROVE 8" FORCE MAIN TO
BE ABANDONED

PROPOSED VILLAGE OF BUFFALO
GROVE 18" SANITARY SEWER

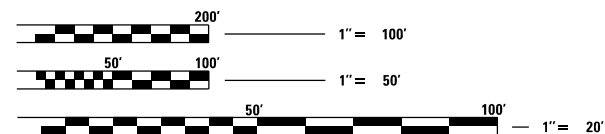


INDEX OF SHEETS	
1	Cover Sheet
2	Legend and General Notes
3	MWRD and Maintenance Notes
4 - 6	Existing Conditions and Removal Plan
7 - 11	Utility Plan and Profile
12	Utility Crossing Tables
13 - 15	Erosion Control and Restoration Plan
16	Lift Station Existing Conditions and Demolition Plan
17	Proposed Lift Station Plan and Details
18	Site Grading, Drainage, and Access Road Plan
19	Electrical Site Plan and Schedule
20	One Line Diagram and Electrical Details
21	Electrical Details
22 - 26	Village Details
27 - 34	IDOT Details
35 - 36	Erosion Control Details
37	Volume Control Storage Below Detention Basin Outlet

MH B14-8750

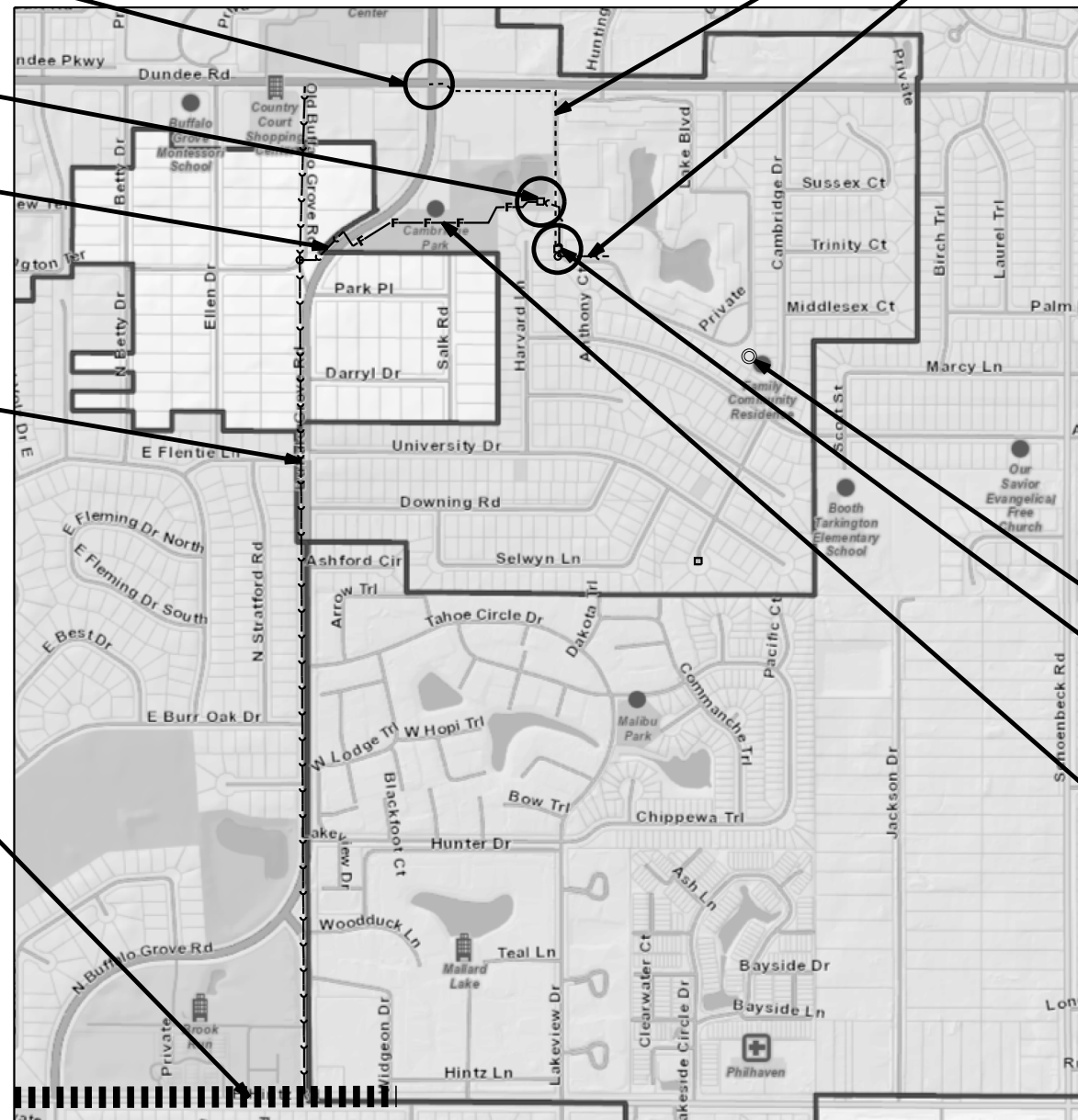
EXISTING CAMBRIDGE ON THE
LAKE LIFT STATION

PROPOSED VILLAGE OF BUFFALO
GROVE 10" FORCE MAIN



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED

CONTACT INFORMATION
J.U.L.I.E. 800.892.0123
Buffalo Grove Public Works 847.459.2545
Police 847.459.2560
Fire 847.537.0995
Emergency 911



CONTROL POINTS				
Point #	Northing	Easting	Elevation	Description
126	1993372.78	1087730.43	674.35	CP126-XTC
146	1993008.63	1085904.35	680.65	CP146-XSW
148	1992735.65	1085714.67	683.9	CP148-XSW
149	1993381.68	1086531.43	678.59	CP149-XSW
150	1993465.68	1087328.56	676.19	CP150-XSW
151	1992504.80	1086565.21	673.75	CP151-XTC
152	1992732.06	1086063.62	679.27	CP152-IR
153	1992726.06	1085706.92	684.12	CP153-XSW
154	1992439.39	1085248.93	692.73	CP154-IR
613	1993530.55	1085939.55	677.86	CP613-XCN



DATE: 10/29/2021
SEAL EXPIRES: 11/30/2021

SHEETS 1 - 18,
SHEETS 27 - 37



DATE: 10/29/2021
SEAL EXPIRES: 11/30/2021

SHEETS 19 - 21

CiorbaGroup
CIORBA GROUP, INC.
8725 W HIGGINS RD
SUITE 600
CHICAGO, IL 60631
773-775-4009

**CAMBRIDGE ON THE LAKE LIFT STATION
RECONSTRUCTION**

GENERAL NOTES:

- THE CONTRACTOR SHALL NOTIFY J.U.L.I.E (DIAL 1-800-892-0123) 48 HOURS PRIOR TO ANY EXCAVATION WORK TO DETERMINE THE LOCATIONS OF EXISTING UTILITIES.
- THE VILLAGE OF BUFFALO GROVE, AND THEIR DESIGNATED AGENTS SHALL BE NOTIFIED BY THE CONTRACTOR 48 HOURS PRIOR TO STARTING CONSTRUCTION.
- DO NOT SCALE DRAWINGS FOR CONSTRUCTION DIMENSIONS.
- THE ENGINEER PLEDGES THE DESIGN, RECOMMENDATIONS, AND SPECIFICATIONS TO HAVE BEEN PREPARED IN ACCORDANCE WITH CONDITIONS GENERALLY ENCOUNTERED IN THE INDUSTRY. THE DESIGN ENGINEER ASSUMES NO RESPONSIBILITY WITH RESPECT TO THE DESIGN RECOMMENDATIONS AND SPECIFICATIONS FOR COMPLEX OR UNUSUAL SOIL CONDITIONS ENCOUNTERED ON THE PROJECT. IT SHALL BE THE BIDDERS' RESPONSIBILITY TO ASCERTAIN THE EXACT NATURE OF SUBSURFACE CONDITIONS PRIOR TO THE CONSTRUCTION OF THE IMPROVEMENTS.
- THE LOCATION OF EXISTING UTILITIES, EASEMENTS, AND RIGHT-OF-WAYS ARE SHOWN ON THESE PLANS ACCORDING TO SURVEYS CARRIED OUT AND REPRESENT THE BEST INFORMATION MADE POSSIBLE TO THE ENGINEER. THIS DOES NOT PRECLUDE THE EXISTENCE OF OTHER UNDERGROUND UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION AND TO PROVIDE FOR THEIR PROTECTION FROM DAMAGE DURING THE CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OR REPLACEMENT OF ANY UTILITY DAMAGED DURING CONSTRUCTION TO THE SATISFACTION OF THE OWNERS'S REPRESENTATIVE AT THE CONTRACTOR'S COST. IF OTHER UTILITIES OR CONFLICTS ARE ENCOUNTERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THE CONFLICT CAN BE RESOLVED.
- BEFORE BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE LINE AND GRADES SHOWN ON THE CONTRACT DRAWINGS. IF THERE ARE ANY DISCREPANCIES FROM WHAT IS SHOWN ON THE CONTRACT DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY REPORT SAME TO THE OWNER PRIOR TO PERFORMING WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF WORK REQUIRED.
- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING SPECIFICATIONS, WHICH ARE HEREBY MADE A PART HEREOF:
 - "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN ILLINOIS", LATEST EDITION.
 - "STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS", LATEST EDITION.
 - OWNER AND CURRENT MUNICIPAL CODES.
 - NATIONAL ELECTRIC CODE.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALL MATERIAL QUANTITIES AND APPRAISE HIMSELF OF ALL CONDITIONS. THE CONTRACT PRICE SUBMITTED BY THE CONTRACTOR SHALL BE CONSIDERED AS THE TOTAL COST FOR THE COMPLETE PROJECT. NO CLAIMS FOR EXTRA WORK WILL BE RECOGNIZED DUE TO THE CONTRACTOR'S FAILURE TO UNDERSTAND THE SCOPE OF WORK.
- THE CONTRACTOR, AT HIS EXPENSE, SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND BONDS FOR CONSTRUCTION ALONG OR ACROSS EXISTING ROADWAYS WITHIN THE PROJECT SITE. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR PROPER BRACING, SHORING, OR OTHER PROTECTION REQUIRED, INCLUDING INSTALLATION AND MAINTENANCE OF ADEQUATE TRAFFIC CONTROL AND PROTECTION BEFORE CONSTRUCTION BEGINS. ALL WORK CONDUCTED SHALL BE PROTECTED IN ACCORDANCE WITH APPLICABLE PORTIONS OF THE LATEST EDITION OF THE "ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (IL STANDARD SPECIFICATIONS), SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, AND THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
- THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONTRACTORS' MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION, OR THE SAFETY, PRECAUTIONS, AND PROGRAMS INCIDENT THERETO, AND THE ENGINEER WILL NOT BE RESPONSIBLE FOR CONTRACTORS' FAILURE TO PERFORM OR FURNISH THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC. THE STANDARD SPECIFICATIONS SHALL APPLY. APPROPRIATE CONTROL METHODS SHALL BE APPLIED TO THE SPECIFIC SITUATIONS AND TYPES OF CONSTRUCTION OPERATIONS BEING PERFORMED.
- THE CONTRACTOR SHALL RESTORE SURFACES TO THE ORIGINAL PRE-CONSTRUCTION CONDITION IF DAMAGED BY CONSTRUCTION. ANY EXISTING CURB, PAVEMENT, OR SIDEWALK DISTURBED DURING THE CONSTRUCTION PROCESS IS TO BE REPLACED. UNPAVED AREAS ARE TO BE FINE GRADED AND SODDED UNLESS OTHERWISE NOTED. ALL EXCESS TRENCH MATERIAL IS TO BE REMOVED FROM THE SITE. THE COST OF SAID REPLACEMENT AND REMOVAL SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- ALL TRENCHES CAUSED BY THE CONSTRUCTION OF SEWERS, FORCEMAINS, WATERMAIN, WATER SERVICE PIPES, AND ALL EXCAVATIONS AROUND CATCH BASINS, MANHOLES, INLETS, AND OTHER APPURTENANCES WHICH OCCUR WITHIN TWO FEET OF THE LIMITS OF EXISTING AND PROPOSED PAVEMENTS, SIDEWALKS, AND CURB AND GUTTERS, SHALL BE BACKFILLED WITH SELECT GRANULAR BACKFILL (CRUSHED) (DOT GRADATION CA-11) AND COMPACTED PROPERLY, OR AS SHOWN ON THE DETAILS. ANY DEPRESSIONS IN PAVEMENT AREAS THAT WERE REPLACED SHALL BE REMOVED AND CONSTRUCTED PROPERLY AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH THE APPROPRIATE STANDARD.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ABIDE BY, ADHERE TO, AND PERFORM ALL WORK IN ACCORDANCE WITH THE REQUIREMENTS, SPECIFICATIONS, STANDARDS, PRACTICES, POLICIES, AND CODES OF THE OWNER WHICH INCLUDES, BUT IS NOT LIMITED TO, LABOR, MATERIALS, PROCEDURES, AND SAFETY.
- THE CONTRACTOR IS RESPONSIBLE FOR HAVING THE MOST RECENT SET OF APPROVED FINAL ENGINEERING PLANS WITH THE LATEST REVISION DATE ON THE JOB SITE PRIOR TO THE START OF CONSTRUCTION.
- NO HOLES ARE TO BE LEFT OPEN IN THE PAVEMENT OR PARKWAY OVER A HOLIDAY, WEEKEND, OR AFTER COMPLETION OF THE DAY'S ACTIVITIES ON THE DAY PRECEDING A HOLIDAY OR A WEEKEND.
- ANY CHANGES, REVISIONS, OR SUBSTITUTIONS TO THE PLANS, SPECIFICATIONS, MATERIALS, REQUIREMENTS, OR WORK SHALL BE SUBMITTED TO THE OWNER, IN WRITING, WITH WRITTEN APPROVAL BY THE OWNER RECEIVED PRIOR TO BEGINNING SAID WORK. ALL MATERIALS AND CONSTRUCTION WHETHER IMPLICITLY OR EXPLICITLY STATED OR COVERED WITHIN THE REQUIREMENTS, CODES OR SPECIFICATIONS, SHALL BE APPROVED BY THE OWNER, PRIOR TO COMMENCING THE INSTALLATION AND CONSTRUCTION.
- THE DESIGN OF PROPOSED LIFT STATION AND FORCEMAIN AND THE LOCATIONS AND ELEVATIONS OF EXISTING UTILITIES ARE SHOWN BASED ON INTERPRETATION OF INFORMATION RECEIVED. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING WATERMAIN, SANITARY AND STORM SEWER, AND UTILITIES PRIOR TO INSTALLATION OF LIFT STATION OR FORCEMAIN.
- NO EXTRA WORK OF ANY NATURE SHALL BE UNDERTAKEN WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER OR HIS REPRESENTATIVE.
- THE CONTRACTOR SHALL LIMIT CONSTRUCTION ACTIVITIES AND STORAGE OF EQUIPMENT OR MATERIALS TO THE DESIGNATED OR APPROVED WORK CONSTRUCTION LIMITS. ANY DAMAGE TO PRIVATE PROPERTY SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
- PROPOSED EQUIPMENT, CONDUITS, ETC. ARE SHOWN DIAGRAMMATICALLY. THE CONTRACTOR SHALL COORDINATE EXACT EQUIPMENT SIZES, LOCATIONS, ROUTING, ETC. VERIFY ALL LOCATIONS / ROUTING WITH OWNER.

- ANY AND ALL DEWATERING REQUIRED TO KEEP EXCAVATIONS DRY SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ALL SPOILS SHALL BE PROMPTLY REMOVED FROM SITE.
- LIMITS OF CONSTRUCTION SHALL BE SUBJECT TO OWNER'S APPROVAL AND SHALL NOT IMPACT EXISTING ROADWAY PAVEMENT EXCEPT WHERE IMPROVEMENTS ARE SHOWN BY DRAWINGS. LIMITS OF CONSTRUCTION (OTHER THAN ACROSS ROADWAY PAVEMENT) SHALL BE FENCED OFF AT THE LOCATIONS SHOWN ON THE PLANS AND IN ACCORDANCE WITH THE SPECIFICATIONS.

PROJECT SPECIFIC NOTES

- ALL CONSTRUCTION WILL BE INSPECTED BY THE OWNER'S REPRESENTATIVE. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MUNICIPALITY'S CODE AS WELL AS THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL INDEMNIFY THE OWNER, ENGINEER, THE MUNICIPALITY, AND THEIR AGENTS, FROM ALL LIABILITY INVOLVED IN CONSTRUCTION, INSTALLATION AND TESTING OF THE WORK ON THIS PROJECT.
- 3/4" THICK PRE-MOLDED FIBER EXPANSION JOINTS WITH 2, 3/4" X 18" PLAIN ROUND, STEEL DOWEL BARS SHALL BE INSTALLED IN ALL CURBS AT (45') FORTY FIVE FOOT INTERVALS AND AT ALL P.C.'S, P.T.'S, AND CURB RETURNS, ALTERNATE ENDS OF THE DOWEL BARS SHALL BE GREASED AND FITTED WITH METAL EXPANSION TUBES. ALL EXPANSION JOINTS MUST BE FREE OF CONCRETE FOR FULL DEPTH. CONTRACTION JOINTS SHALL BE TOOLED AT 15' INTERVALS.
- UNLESS OTHERWISE NOTED ON THE PLANS WHENEVER NEW CONCRETE ABUTS EXISTING/ OR NEW CONCRETE SET A 1/2" THICK PRE-MOLDED FIBER EXPANSION JOINT AND DOWEL WITH SMOOTH 12" #4 BARS @ 24" O.C. THIS INCLUDES CONCRETE POURED ADJACENT TO EXISTING SIDEWALKS, CURBS, AND BUILDING. THE DOWEL BARS SHOULD BE 4" INTO EXISTING CONCRETE WITH 8" EXTENDING INTO NEW CONCRETE.
- ALL DOWEL BARS AND TIE BARS SHALL BE EPOXY COATED UNLESS NOTED OTHERWISE.
- ALL PAVEMENT SUBGRADE SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY. ALL SUBGRADE IN LAWN AREAS SHALL BE COMPACTED TO 90% MODIFIED PROCTOR DENSITY.
- ALL REFERENCES TO "ENGINEER" SHALL BE INTERPRETED TO MEAN THE VILLAGE ENGINEER OR AUTHORIZED VILLAGE REPRESENTATIVE.

CONSTRUCTION MANAGEMENT REQUIREMENTS:

- CONTRACTOR SHALL SUBMIT A MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL PLAN AND RECEIVE APPROVAL FROM THE ENGINEER PRIOR TO BEGINNING ANY WORK. THE PLAN SHALL INCLUDE TEMPORARY TRAFFIC CONTROL MEASURES INCLUDING TRAFFIC FLOW, PARKING, AND ACCESS, AND INCLUDE ANY DETOURS, SIGNAGE, BARRIERS, COORDINATION, MAINTENANCE OF THE PLAN, AND ANY WORK NECESSARY TO LIMIT DISRUPTION OF ADJACENT PROPERTIES. ALL COST ASSOCIATED WITH TRAFFIC CONTROL SHALL BE INCLUDED IN THE COST OF THE VARIOUS ITEMS OF WORK BID.
- ACCESS MUST BE PROVIDED FOR VILLAGE PERSONNEL TO ENTER PROJECT SITE AND TAKE ACTION IN EMERGENCY OR VIOLATION SITUATIONS.
- SITE SECURITY FENCING IS REQUIRED AROUND LIFT STATION SITE, BORE AND JACK PITS, AND ANY OPEN EXCAVATIONS ALLOWED BY THE VILLAGE. A SITE PLAN MUST BE SUBMITTED THAT SHOWS THE PROPOSED LOCATION OF THE SECURITY FENCING TO BE PROVIDED DURING CONSTRUCTION. FENCING SHALL BE CONSTRUCTED OF SIX-FOOT HIGH CHAIN LINK FENCING LOCATED AT THE LIMITS OF CONSTRUCTION.
- THE FENCING MUST BE GATED AND THE GATE LOCKED WITH A SHARED LOCK AT THE END OF EVERY WORKDAY OR WHEN NO RESPONSIBLE PERSONS ARE ON SITE. FAILURE TO LOCK THE FENCE WILL RESULT IN A ONE-DAY STOP ORDER AND REQUIRE THE PAYMENT OF \$100 LOCKING SERVICE FEE TO REMOVE THE VILLAGE'S LOCK.
- DUMPSTERS AND PORTABLE TOILETS ARE REQUIRED. A PLAN MUST BE SUBMITTED WHICH INDICATES THE PROPOSED LOCATIONS OF THE DUMPSTER AND PORTABLE TOILET. ALL DUMPSTERS MUST BE COVERED AND ENCLOSED.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE RESTORATION OF ALL OFF-SITE AREAS DISTURBED IN CONJUNCTION WITH THE PERMITTED CONSTRUCTION ACTIVITY.
- SIDEWALKS, PARKING LOTS, AND OTHER PUBLIC AND PRIVATE PROPERTY MUST BE KEPT SAFE AND FREE FROM MUD, DIRT, DEBRIS, AND SWEEP DAILY.

VILLAGE OF BUFFALO GROVE NOTES

- FRAMES, LIDS, GRATES, VALVES, FIRE HYDRANTS, ECT. WHICH ARE ABANDONED OR REPLACED IN THIS PROJECT SHALL BE SALVAGED AND REMAIN PROPERTY OF THE VILLAGE OF BUFFALO GROVE. THE CONTRACTOR SHALL COORDINATE DELIVERY TO 51 RAUPP BLVD WITH THE ENGINEER. ANY DAMAGE TO THE SALVAGED ITEMS DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL GIVE NOTICES AND COMPLY WITH APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ALL PUBLIC AUTHORITIES BEARING ON SAFETY OF PERSONS OR PROPERTY OR THEIR PROTECTION FROM DAMAGE, INJURY, OR LOSS.
- ANY EARTH EXCAVATION DONE WITH REMOVAL OR FRAMING OF DRIVEWAY OR SIDEWALK IS INCIDENTAL TO THAT ITEM.
- ANY STREET LIGHT POLE BRACING REQUIRED SHALL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT.
- NO SIGNAGE IS TO BE REMOVED, IF SIGNS ARE TAKEN DOWN FOR CONSTRUCTION PURPOSES, THEY MUST BE RE-ERECTED ON THE SAME DAY TO THE SATISFACTION OF THE ENGINEER.
- ANY BRANCHES THAT REQUIRE TRIMMING FOR EQUIPMENT CLEARANCE/CONSTRUCTION OPERATIONS SHALL BE DONE IN ACCORDANCE WITH THE IDOT DISTRICT ONE DETAIL "PRUNING FOR SAFETY AND EQUIPMENT CLEARANCE" AND SHALL BE CONSIDERED INCLUDED IN THE COST OF THE CONTRACT. ALL ADDITIONAL TREE TRIMMING MUST BE APPROVED BY THE ENGINEER.
- ALL HOOKS AND LIFTING RINGS SHALL BE REMOVED AND CUT FLUSH ONCE THE STRUCTURE IS IN ITS FINAL LOCATION AND HAVE MORTAR INSTALLED TO COVER THE REBAR.
- ALL MISHANDLED OR DAMAGED MATERIALS AS INSPECTED BY THE ENGINEER WILL BE MARKED WITH SPRAY PAINT. THE MARKED MATERIALS REMAIN THE PROPERTY OF THE CONTRACTOR. ALL MATERIALS MARKED ARE DEEMED UNSUITABLE FOR CONSTRUCTION BY THE ENGINEER AND MUST BE REMOVED FROM THE PROJECT SITE ON A WEEKLY BASIS AT NO COST TO THE VILLAGE.
- BACKFILL IN TURF AREAS MAY UTILIZE THE EXISTING SUBGRADE. ANY SETTLEMENT WITHIN THE WARRANTY PERIOD AS DESCRIBED IN THE SPECIFICATIONS SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. AT THE CONTRACTOR'S OPTION SAND MAY BE UTILIZED AS BACKFILL IN TURF AREAS TO PREVENT SETTLEMENT. THE SAND MUST BE KEPT 6" BELOW FINISHED GRADE FOR ACCEPTANCE OF TOPSOIL. ALL SAND UTILIZED FOR BACKFILLING IN THE PARKWAY AND ADDITIONAL TOPSOIL NEEDED SHALL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE CONTRACT.

LEGEND:

EXISTING			
	BUILDINGS		FIRE HYDRANT
	RIGHT-OF-WAY		POWER POLE
	ROADWAY PLAN-PAVED		CATCH BASIN
	ROADWAY PLAN-UNPAVED		LIGHT POLE
	CENTERLINE		MANHOLE
	EASEMENT		CATCH BASIN
	EDGE OF EXISTING PAVEMENT		INLET
	FENCE		MISCELLANEOUS POST
	TELEPHONE LINE		BITUMINOUS PAVEMENT
	GAS MAIN		CONCRETE PAVEMENT
	WATER MAIN		BENCHMARK
	ELECTRIC LINE		BORINGS
	COMBINED SEWER		MONITORING WELL
	SANITARY SEWER		DECIDUOUS TREE
	STORM SEWER		STREET LIGHTS
	SUMMIT		VALVE VAULT
	DIRECTION OF DRAINAGE		VALVE BOX - VB
	TREELINE		
	TRAFFIC SIGNAL		
	STREET CENTERLINE		
	VAULT (Electric Utilities)		
	TELEPHONE POLE		
	SIGN (S)		
PROPOSED			
	CONSTRUCTION LIMITS		ABANDON AND REMOVE UTILITY
	FENCE		LINE STOP
	SILT FENCE		MANHOLE
	FORCE MAIN		VALVE VAULT
	COMBINED SEWER		VALVE BOX - VB
	SANITARY SEWER		TREE REMOVAL
	STORM SEWER		INLET FILTER
	WATER MAIN		TREE PROTECTION
	RESTRAINED PUSH-ON JOINT		

SOIL EROSION CONTROL NOTES:

- ANY STORM WATER DRAINAGE STRUCTURES THAT HAVE THE POTENTIAL TO ACCEPT RUNOFF CONTAINING SUSPENDED SOIL PARTICLES FROM THE LIMITS OF CONSTRUCTION SHALL HAVE INLET FILTERS INSTALLED DIRECTLY ON OR UNDER THE GRATE OF THE DRAINAGE STRUCTURE.
- IF APPLICABLE, SILT FENCE SHALL BE USED FOR PREVENTION OF SILT/SEDIMENT FROM LEAVING THE SITE. SILT FENCE SHALL BE MODIFIED AS NECESSARY TO ACCOMMODATE THE PHASING OF THE CONSTRUCTION AND REPAIRED/REPLACED AS BECOMES NECESSARY. SILT FENCE WILL REMAIN IN PLACE UNTIL ALL REMAINING ITEMS OF THE PROJECT HAVE BEEN COMPLETED.
- EXISTING PAVEMENT SURFACES SHALL BE INSPECTED DAILY FOR SOIL DEBRIS AND SHALL BE CLEANED WHEN NECESSARY OR AS DIRECTED BY OWNER.
- DISPOSAL OF DEBRIS SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE CONTRACT.
- EROSION CONTROL PRACTICES SHALL BE CONSTRUCTED IN ACCORDANCE WITH ILLINOIS URBAN MANUAL, LATEST REVISION.
- DEWATERING SHALL BE IN ACCORDANCE WITH SPECIFICATION 31 23 19. FILTRATION AND DISCHARGE LOCATION SHALL BE APPROVED BY THE VILLAGE.
- CONTRACTOR SHALL INSPECT ALL SEDIMENTATION AND EROSION CONTROL MEASURES AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS. CONTRACTOR SHALL CLEAN AND REPAIR ITEMS WITHIN 24 HOURS OF INSPECTION AS NECESSARY TO MAINTAIN EFFECTIVE SEDIMENTATION AND EROSION CONTROL MEASURES.
- LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE SEDIMENT TRACKING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY ROAD OR MATERIAL THAT IS FROM THE PROJECT. THIS WILL BE DONE AT THE CLOSE OF EACH DAY OF WORK OR MORE FREQUENTLY AS FIELD CONDITIONS WARRANT.
- PUMPS MAY BE USED AS BYPASS DEVICES, BUT IN NO CASE WILL THE WATER BE DIVERTED OUTSIDE OF THE PROJECT LIMIT. ALL PUMPED WATER SHALL BE FREE OF SILT. PUMPING MAY REQUIRE THE USE OF A SEDIMENT CONTAINMENT FILTER BAG AND OTHER SUPPLEMENTAL SEDIMENT CONTROL MEASURES.
- CONCRETE WASHOUT FACILITIES SHALL BE MADE AVAILABLE IF NEEDED, AND PROPERLY MAINTAINED THROUGHOUT THE PROJECT.
- PROPERLY MANAGE ALL MATERIAL, STORAGE AREAS, PORTABLE TOILETS, AND EQUIPMENT FUELING, CLEANING, AND MAINTENANCE AREAS TO ENSURE THESE AREAS ARE FREE OF SPILLS, LEAKS, OR OTHER POTENTIAL POLLUTANTS.
- WASTE, CONSTRUCTION DEBRIS, AND BUILDING MATERIALS SHALL BE COLLECTED AND PLACED IN APPROVED RECEPTACLES.

PLAN	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	ALIGNED		
	CHECKED		
	FIELD FILE NAME		

PROFILE	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
	GRAPHS CHECKED		
	STRUCTURE		
	NOTATIONS CHECKED		

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USER NAME = WaterResources	DESIGNED - LAM	REVISED -
	DRAWN - CLB	REVISED -
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PLOT DATE = 10/29/2021	DATE - 10/1/2021	REVISED -

VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION LEGEND AND GENERAL NOTES

SCALE: N.T.S.	SHEET NO. 1 OF 1 SHEETS	STA. - TO STA. -	RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
					COOK	37	2
						CONTRACT NO. 21157.02	
ILLINOIS							

PERPETUAL MAINTENANCE

NOTES

Planned annual lift station routine maintenance should include the following upon completion of construction:

- A. WEEKLY
 1. Visually inspect the station for vandalism and security.
 2. Record pump hours for each pump.
 3. Review control panel alarm history.
 4. Run each pump in hand mode and observe level control for proper operation.
 5. Visually inspect standby generator for fuel level and operation readiness.
- B. MONTHLY
 1. Open up wet well and visually inspect the pumping of each pump.
 2. Completely pump down the wet well to its lowest point and make a visual inspection.
 3. Check wet well floats and transducer for raga build up, clean as needed.
 4. Exercise generator.
- C. QUARTERLY
 1. Clean grit and grease from the wet well using a vac truck.
 2. Operate generator under load for 15 minutes by tripping station power. Observe for successful transfer to generator power.
 3. Operate emergency portable generator.

E. EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
2. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.
3. ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.
4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
5. INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
 - a) UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
 - b) ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.
6. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.
7. A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
8. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.
9. MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.
10. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.
12. DISTURBED AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN SEVEN (7) DAYS.
13. ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).
14. VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
15. SOIL STOCKPILES SHALL, AT A MINIMUM, BE PROTECTED WITH PERIMETER SEDIMENT CONTROLS. SOIL STOCKPILES SHALL NOT BE PLACED IN FLOOD PROTECTION AREAS OR THEIR BUFFERS.
16. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.
17. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.
18. THE CONTRACTOR SHALL EITHER REMOVE OR REPLACE ANY EXISTING DRAIN TILES AND INCORPORATE THEM INTO THE DRAINAGE PLAN FOR THE DEVELOPMENT. DRAIN TILES CANNOT BE TRIBUTARY TO A SANITARY OR COMBINED SEWER. DRAIN TILES ALLOWED IN COMBINED SEWER AREA FOR GREEN INFRASTRUCTURE PRACTICES.
19. IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. DEWATERING SYSTEMS SHOULD BE INSPECTED DAILY DURING OPERATIONAL PERIODS. THE SITE INSPECTOR MUST BE PRESENT AT THE COMMENCEMENT OF DEWATERING ACTIVITIES.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.
21. ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.
22. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AND REPAIRED AS NEEDED ON A YEAR-ROUND BASIS DURING CONSTRUCTION AND ANY PERIODS OF CONSTRUCTION SHUTDOWN UNTIL PERMANENT STABILIZATION IS ACHIEVED.
23. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.
24. THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER, SITE INSPECTOR, OR MWRD.

A. REFERENCED SPECIFICATIONS

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF THE FOLLOWING, EXCEPT AS MODIFIED HEREIN OR ON THE PLANS:
 - * STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION), BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION (IDOT SS) FOR ALL IMPROVEMENTS EXCEPT SANITARY SEWER AND WATER MAIN CONSTRUCTION;
 - * STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION (SSWS) FOR SANITARY SEWER AND WATER MAIN CONSTRUCTION;
 - * VILLAGE OF BUFFALO GROVE MUNICIPAL CODE;
 - * THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO (MWRD) WATERSHED MANAGEMENT ORDINANCE AND TECHNICAL GUIDANCE MANUAL;
 - * IN CASE OF CONFLICT BETWEEN THE APPLICABLE ORDINANCES NOTED, THE MORE STRINGENT SHALL TAKE PRECEDENCE AND SHALL CONTROL ALL CONSTRUCTION.

B. NOTIFICATIONS

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055).
2. THE VILLAGE OF BUFFALO GROVE ENGINEERING DEPARTMENT AND PUBLIC MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.
3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR TO CITY OF CHICAGO DATUM IS NAVD88 ELEVATION - 579.19 FT.
2. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.
3. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.
4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.
5. THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.
6. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
7. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.
8. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.
9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.
10. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.
2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.
3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.
4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).
5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
VITRIFIED CLAY PIPE	ASTM C-700	ASTM C-425
REINFORCED CONCRETE SEWER PIPE	ASTM C-76	ASTM C-443
CAST IRON SOIL PIPE	ASTM A-74	ASTM C-564
DUCTILE IRON PIPE	ANSI A21.51	ANSI A21.11
POLYVINYL CHLORIDE (PVC) PIPE 6-INCH TO 15-INCH DIAMETER SDR 26 18-INCH TO 27-INCH DIAMETER F/DY=46	ASTM D-3034 ASTM F-679	ASTM D-3212 ASTM D-3212
HIGH DENSITY POLYETHYLENE (HDPE)	ASTM D-3350 ASTM D-3035	ASTM D-3261,F-2620 (HEAT FUSION) ASTM D-3212,F-477 (GASKETED)
WATER MAIN QUALITY PVC 4-INCH TO 36-INCH 4-INCH TO 12-INCH 14-INCH TO 48-INCH	ASTM D-2241 AWWA C900 AWWA C905	ASTM D-3139 ASTM D-3139 ASTM D-3139

THE FOLLOWING MATERIALS ARE ALLOWED ON A QUALIFIED BASIS SUBJECT TO DISTRICT REVIEW AND APPROVAL PRIOR TO PERMIT ISSUANCE. A SPECIAL CONDITION WILL BE ADDED TO THE PERMIT WHEN THE PIPE MATERIAL BELOW IS USED FOR SEWER CONSTRUCTION OR A CONNECTION IS MADE.

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
POLYPROPYLENE (PP) PIPE		
12-INCH TO 24-INCH DOUBLE WALL	ASTM F-2736	D-3212, F-477
30-INCH TO 60-INCH TRIPLE WALL	ASTM F-2764	D3212, F-477

8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE 1/4" TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO 1/4 THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.
9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.
10. ALL MANHOLES SHALL BE PROVIDED WITH WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.
11. 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) A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("SEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUBWYE 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 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. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
13. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
14. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.
15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.
16. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.
17. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.
18. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

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VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION MWRD AND MAINTENANCE NOTES

SCALE: N.T.S.	SHEET NO. 1 OF 1 SHEETS	STA. - TO STA. -
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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	3
CONTRACT NO. 21157.02				
ILLINOIS				

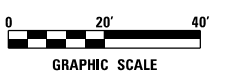
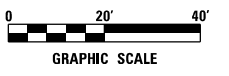
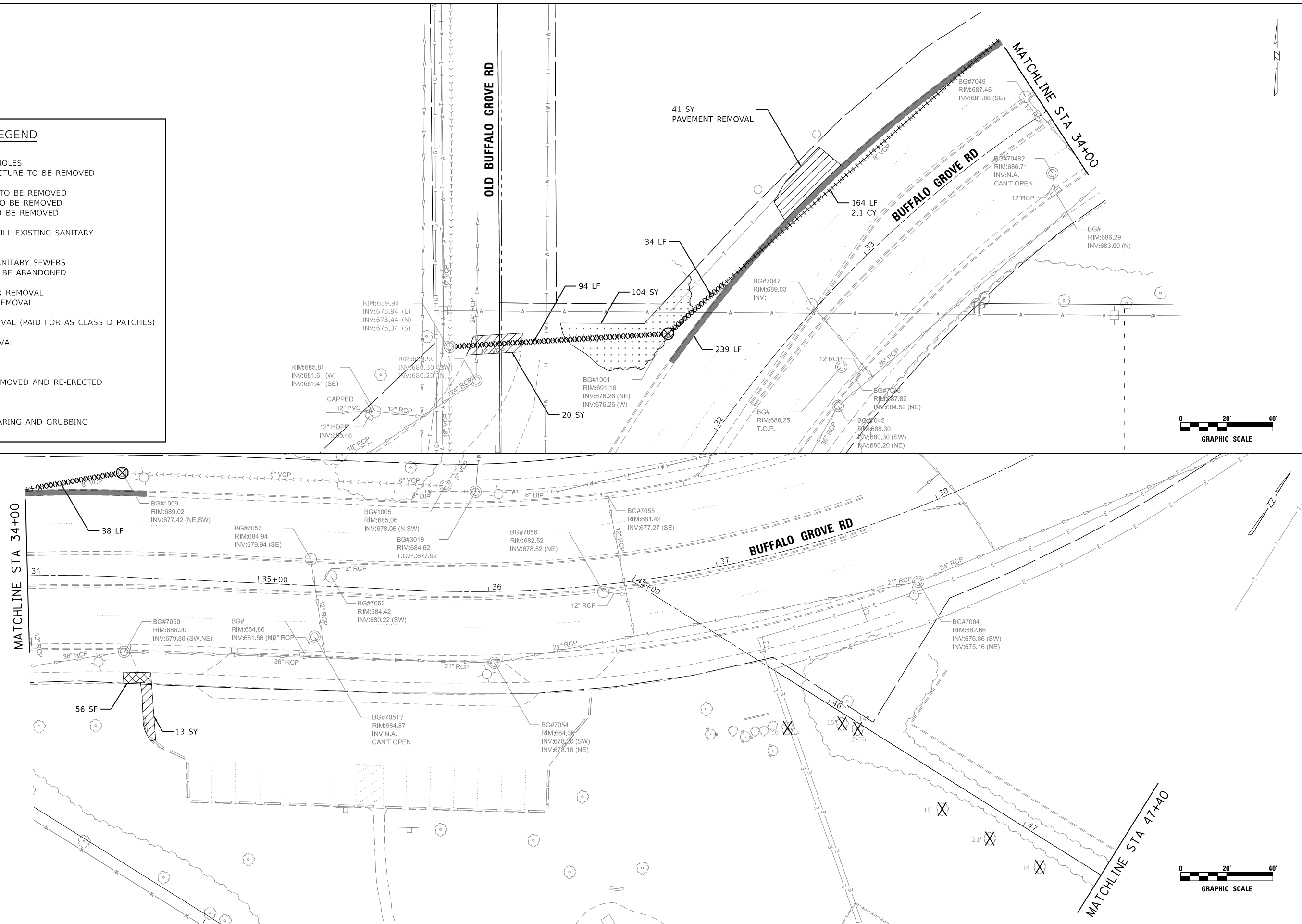
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REMOVAL LEGEND

- ⊗ REMOVING MANHOLES
DRAINAGE STRUCTURE TO BE REMOVED
- ⊠ FIRE HYDRANTS TO BE REMOVED
VALVE VAULTS TO BE REMOVED
VALVE BOXES TO BE REMOVED
- AB ABANDON AND FILL EXISTING SANITARY
MANHOLE
- ===== FILL EXISTING SANITARY SEWERS
WATER MAIN TO BE ABANDONED
- XXXXXXXXXX SANITARY SEWER REMOVAL
STORM SEWER REMOVAL
- ▨ PAVEMENT REMOVAL (PAID FOR AS CLASS D PATCHES)
- ▤ SIDEWALK REMOVAL
- CURB REMOVAL
- - - FENCE TO BE REMOVED AND RE-ERECTED
- X TREE REMOVAL
- INCIDENTAL CLEARING AND GRUBBING

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VILLAGE OF BUFFALO GROVE

**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
EXISTING CONDITIONS AND REMOVAL PLAN**

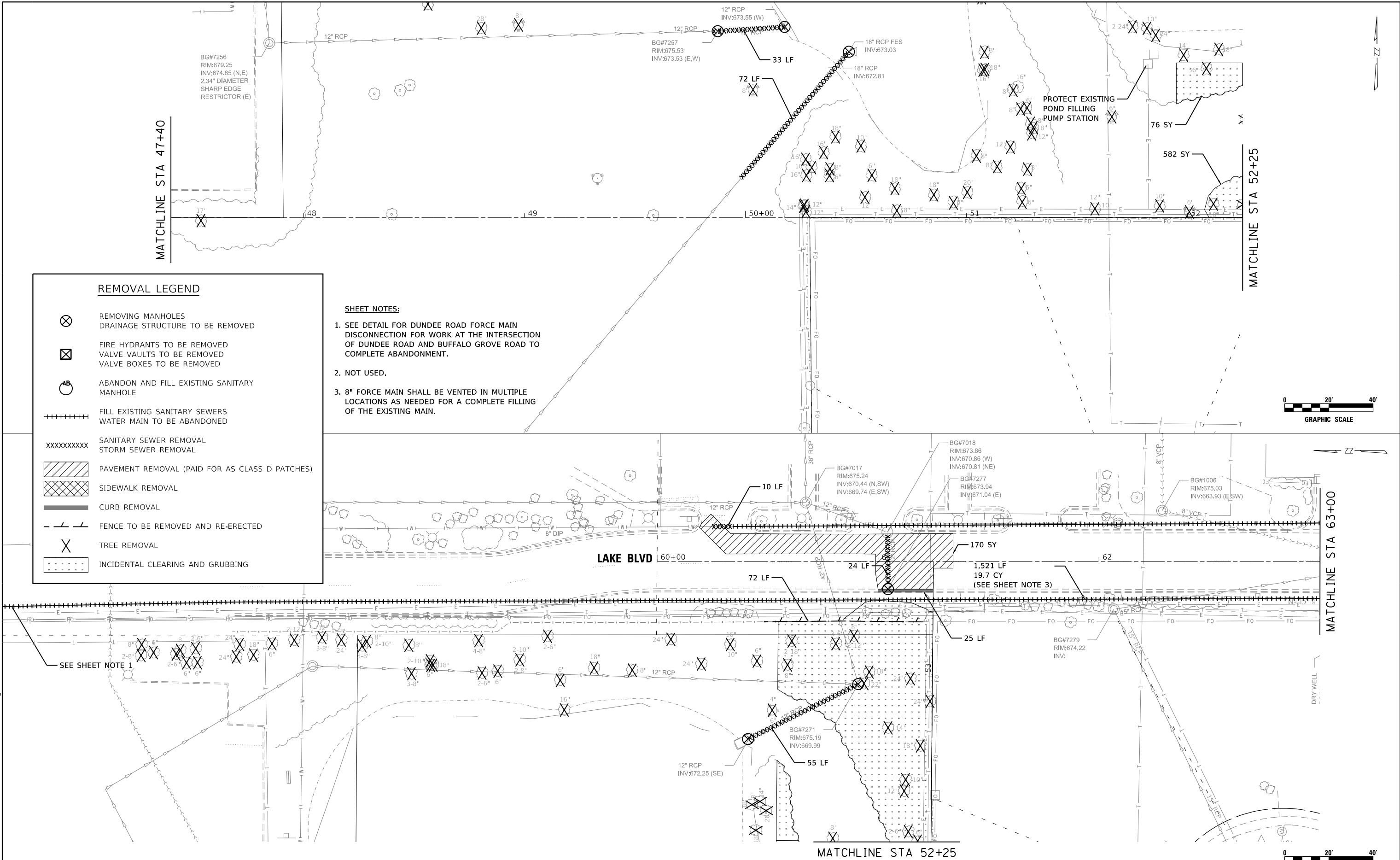
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CONTRACT NO. 21157.02				
ILLINOIS				

SCALE: 1" = 20' SHEET NO. 1 OF 3 SHEETS STA. - TO STA. 47+40

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REMOVAL LEGEND

- REMOVING MANHOLES
DRAINAGE STRUCTURE TO BE REMOVED
- FIRE HYDRANTS TO BE REMOVED
VALVE VAULTS TO BE REMOVED
VALVE BOXES TO BE REMOVED
- ABANDON AND FILL EXISTING SANITARY MANHOLE
- FILL EXISTING SANITARY SEWERS
WATER MAIN TO BE ABANDONED
- SANITARY SEWER REMOVAL
STORM SEWER REMOVAL
- PAVEMENT REMOVAL (PAID FOR AS CLASS D PATCHES)
- SIDEWALK REMOVAL
- CURB REMOVAL
- FENCE TO BE REMOVED AND RE-ERECTED
- TREE REMOVAL
- INCIDENTAL CLEARING AND GRUBBING

SHEET NOTES:

1. SEE DETAIL FOR DUNDEE ROAD FORCE MAIN DISCONNECTION FOR WORK AT THE INTERSECTION OF DUNDEE ROAD AND BUFFALO GROVE ROAD TO COMPLETE ABANDONMENT.
2. NOT USED.
3. 8" FORCE MAIN SHALL BE VENTED IN MULTIPLE LOCATIONS AS NEEDED FOR A COMPLETE FILLING OF THE EXISTING MAIN.



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VILLAGE OF BUFFALO GROVE

**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
EXISTING CONDITIONS AND REMOVAL PLAN**

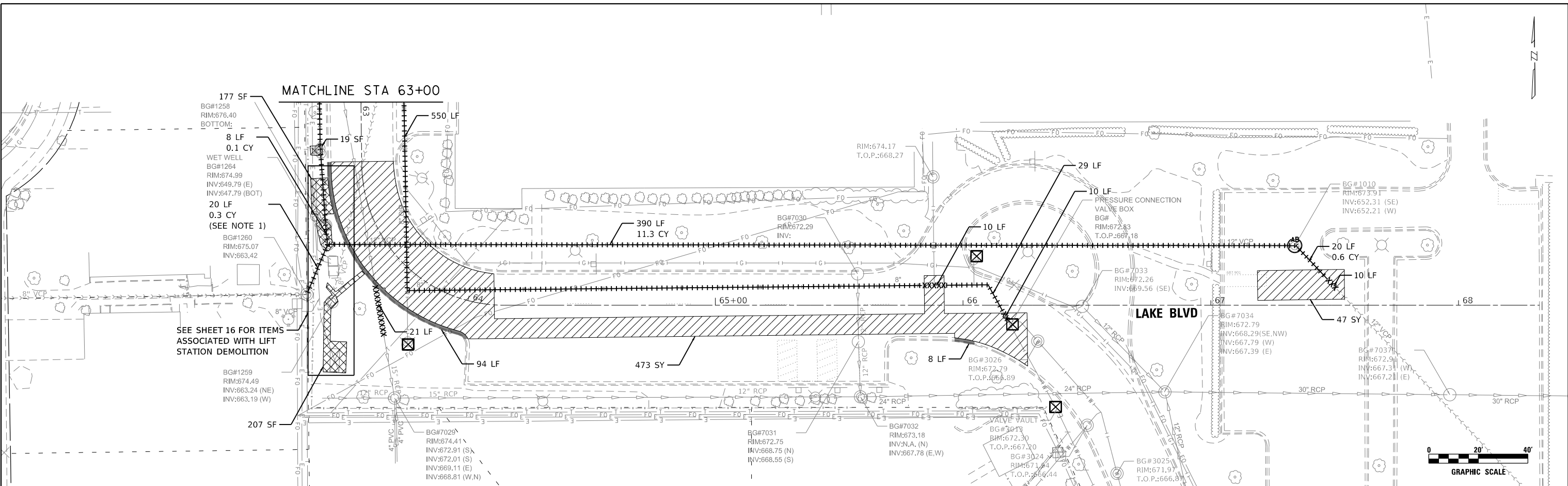
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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	5
CONTRACT NO. 21157.02				
ILLINOIS				

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REMOVAL LEGEND

- REMOVING MANHOLES
DRAINAGE STRUCTURE TO BE REMOVED
- FIRE HYDRANTS TO BE REMOVED
VALVE VAULTS TO BE REMOVED
VALVE BOXES TO BE REMOVED
- ABANDON AND FILL EXISTING SANITARY
MANHOLE
- FILL EXISTING SANITARY SEWERS
WATER MAIN TO BE ABANDONED
- SANITARY SEWER REMOVAL
STORM SEWER REMOVAL
- PAVEMENT REMOVAL (PAID FOR AS CLASS D PATCHES)
- SIDEWALK REMOVAL
- CURB REMOVAL
- FENCE TO BE REMOVED AND RE-ERECTED
- TREE REMOVAL
- INCIDENTAL CLEARING AND GRUBBING

SHEET NOTES:

1. SOUTH END OF SEWER SHALL BE PLUGGED WITH 2' MORTAR/CONCRETE PLUG. REMAINING SEWER SHALL BE FILLED WITH FLOWABLE FILL (SEE SHEET 16).



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VILLAGE OF BUFFALO GROVE

**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
EXISTING CONDITIONS AND REMOVAL PLAN**

SCALE: 1" = 20' SHEET NO. 3 OF 3 SHEETS STA. 63+00 TO STA. -

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CONTRACT NO. 21157.02				
ILLINOIS				

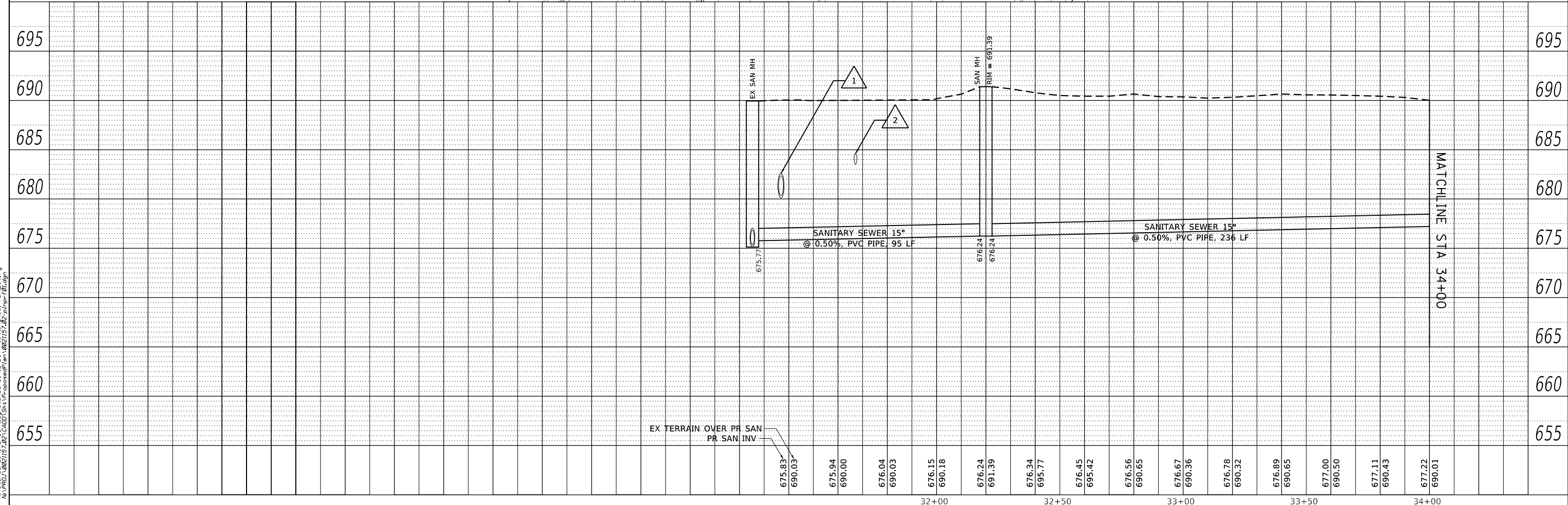
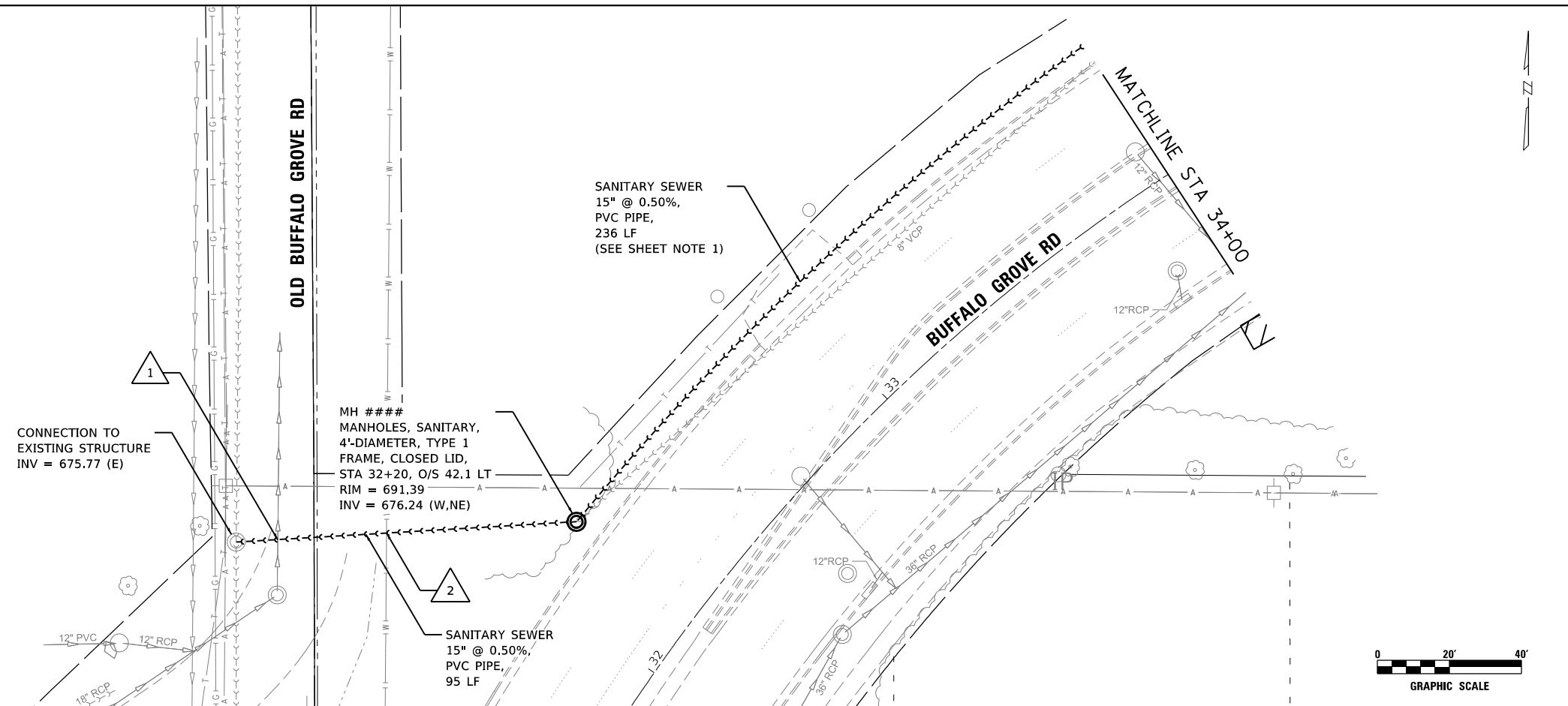
SHEET NOTES:

- SANITARY SEWER BETWEEN MANHOLE 1001A AND MANHOLE 1009A SHALL BE INSTALLED WITH ALLOWABLE 1.5° JOINT DEFLECTION TO ACHIEVE CURVATURE BEHIND BACK OF CURB.
- SEE SHEET 12 FOR UTILITY CROSSING INFORMATION.

PLAN	SURVEYED	DATE
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PROFILE	SURVEYED	DATE
NOTE BOOK NO.	GRADES CHECKED	
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VILLAGE OF BUFFALO GROVE

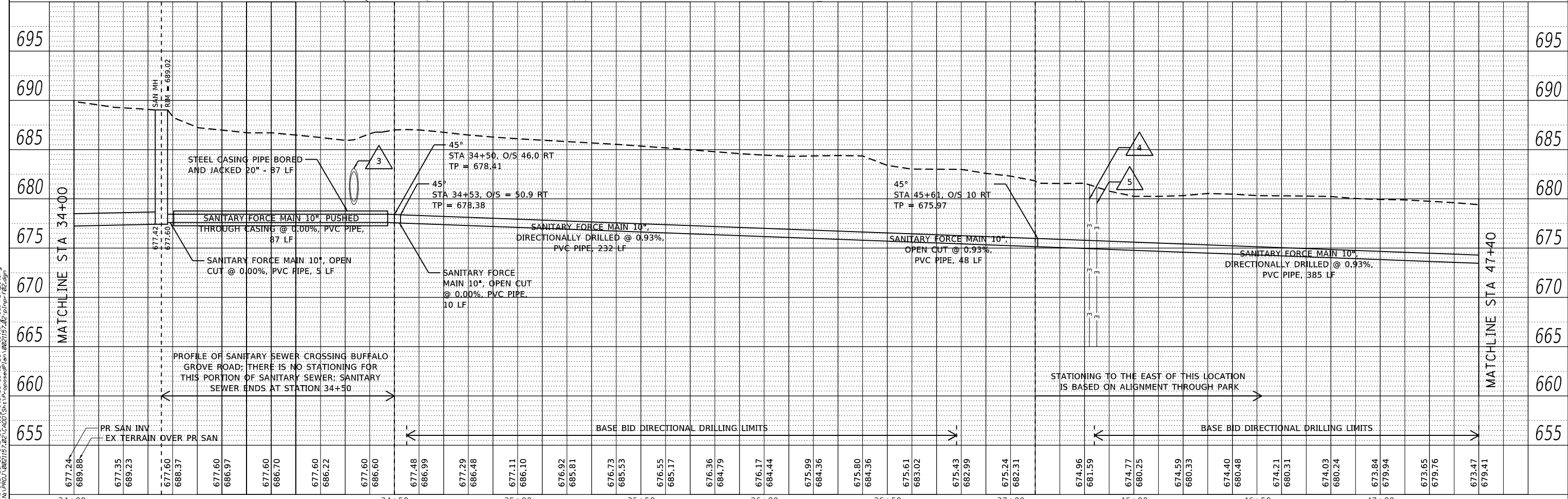
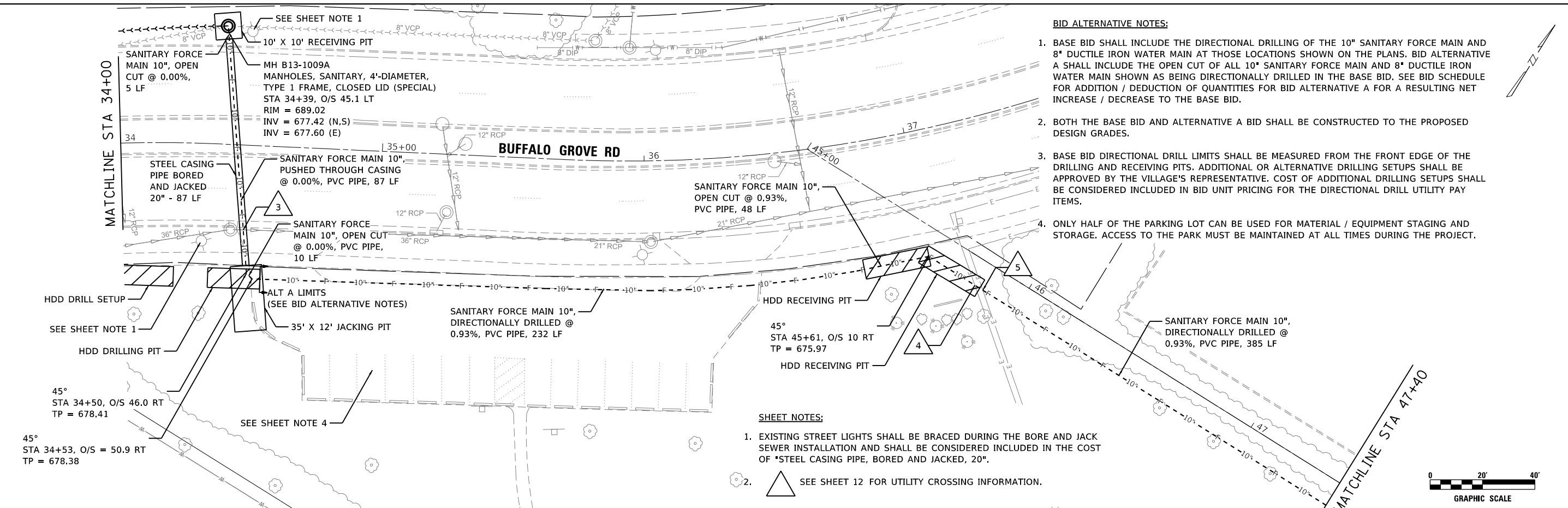
**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
 UTILITY PLAN AND PROFILE**

SCALE: 1" = 20'	SHEET NO. 1 OF 5 SHEETS	STA. - TO STA. 34+00	ILLINOIS
CONTRACT NO. 21157.02	COUNTY COOK	TOTAL SHEETS 37	SHEET NO. 7

PLAN	SURVEYED	DATE
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PLOT SCALE = 40.0000' / 1"	DRAWN - CLB	REVISED -
PLOT DATE = 10/29/2021	CHECKED - LAM	REVISED -
	DATE - 10/1/2021	REVISED -

VILLAGE OF BUFFALO GROVE

**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
 UTILITY PLAN AND PROFILE**

SCALE: 1" = 20' SHEET NO. 2 OF 5 SHEETS STA. 34+00 TO STA. 47+40

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	8
CONTRACT NO. 21157.02				
ILLINOIS				

SHEET NOTES:

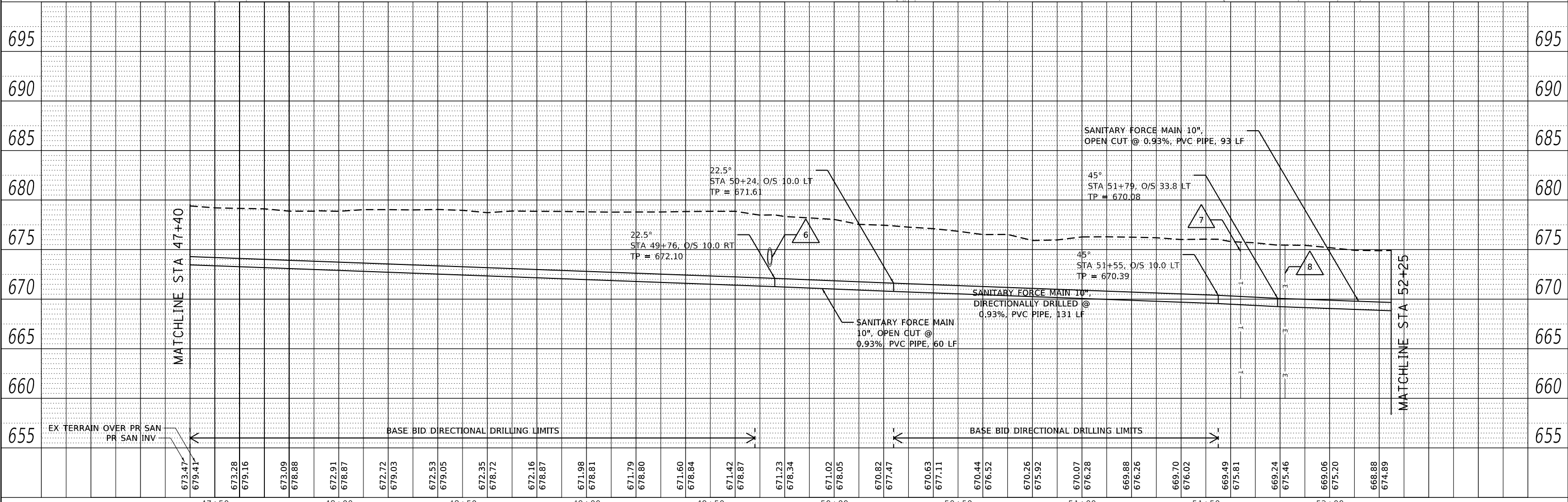
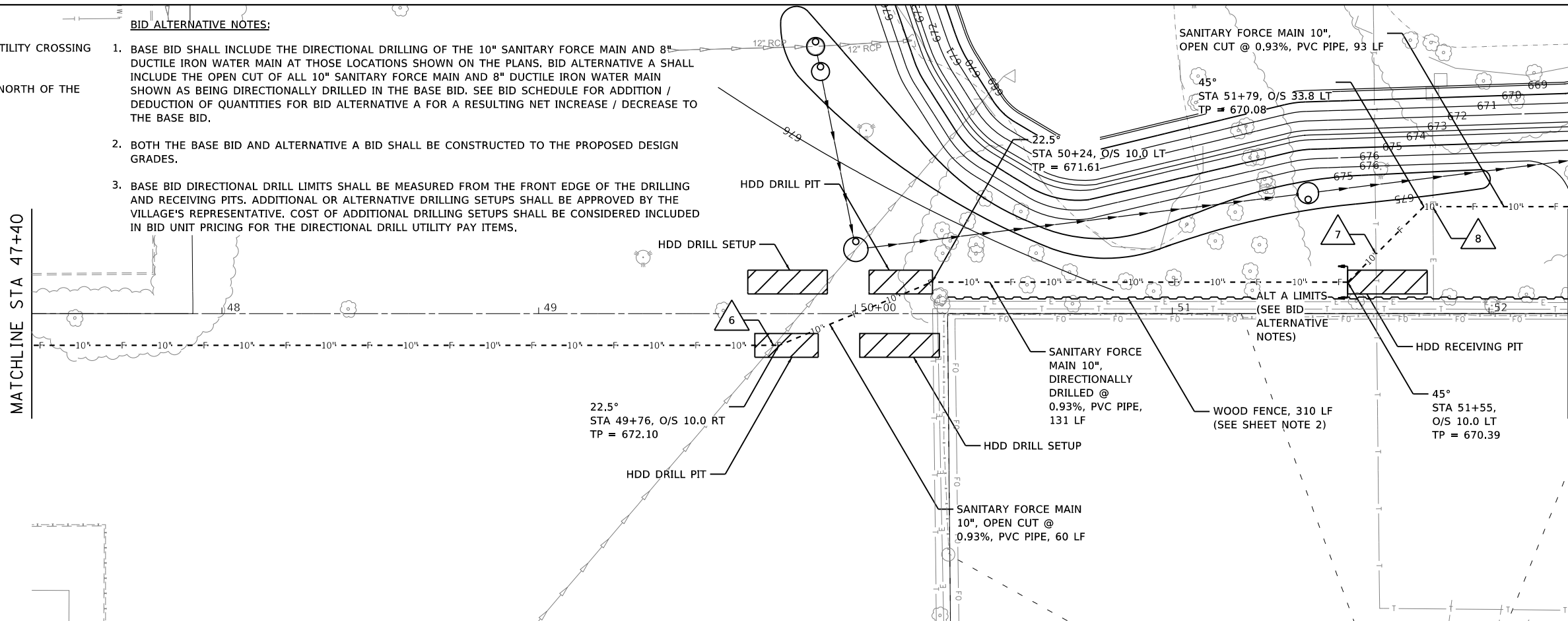
1. SEE SHEET 12 FOR UTILITY CROSSING INFORMATION.
2. FENCE SHALL BE LOCATED 5' NORTH OF THE EXISTING PROPERTY LINE.

BID ALTERNATIVE NOTES:

1. BASE BID SHALL INCLUDE THE DIRECTIONAL DRILLING OF THE 10" SANITARY FORCE MAIN AND 8" DUCTILE IRON WATER MAIN AT THOSE LOCATIONS SHOWN ON THE PLANS. BID ALTERNATIVE A SHALL INCLUDE THE OPEN CUT OF ALL 10" SANITARY FORCE MAIN AND 8" DUCTILE IRON WATER MAIN SHOWN AS BEING DIRECTIONALLY DRILLED IN THE BASE BID. SEE BID SCHEDULE FOR ADDITION / DEDUCTION OF QUANTITIES FOR BID ALTERNATIVE A FOR A RESULTING NET INCREASE / DECREASE TO THE BASE BID.
2. BOTH THE BASE BID AND ALTERNATIVE A BID SHALL BE CONSTRUCTED TO THE PROPOSED DESIGN GRADES.
3. BASE BID DIRECTIONAL DRILL LIMITS SHALL BE MEASURED FROM THE FRONT EDGE OF THE DRILLING AND RECEIVING PITS. ADDITIONAL OR ALTERNATIVE DRILLING SETUPS SHALL BE APPROVED BY THE VILLAGE'S REPRESENTATIVE. COST OF ADDITIONAL DRILLING SETUPS SHALL BE CONSIDERED INCLUDED IN BID UNIT PRICING FOR THE DIRECTIONAL DRILL UTILITY PAY ITEMS.

MATCHLINE STA 47+40

MATCHLINE STA 52+25



PLAN	SURVEYED	DATE
NOTE BOOK	PLOTTED	
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PROFILE	SURVEYED	DATE
NOTE BOOK	PLOTTED	
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PLOT DATE = 10/29/2021	CHECKED - LAM	REVISED -
	DATE - 10/1/2021	REVISED -

VILLAGE OF BUFFALO GROVE

**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
UTILITY PLAN AND PROFILE**

SCALE: 1" = 20' SHEET NO. 3 OF 5 SHEETS STA. 47+40 TO STA. 52+25

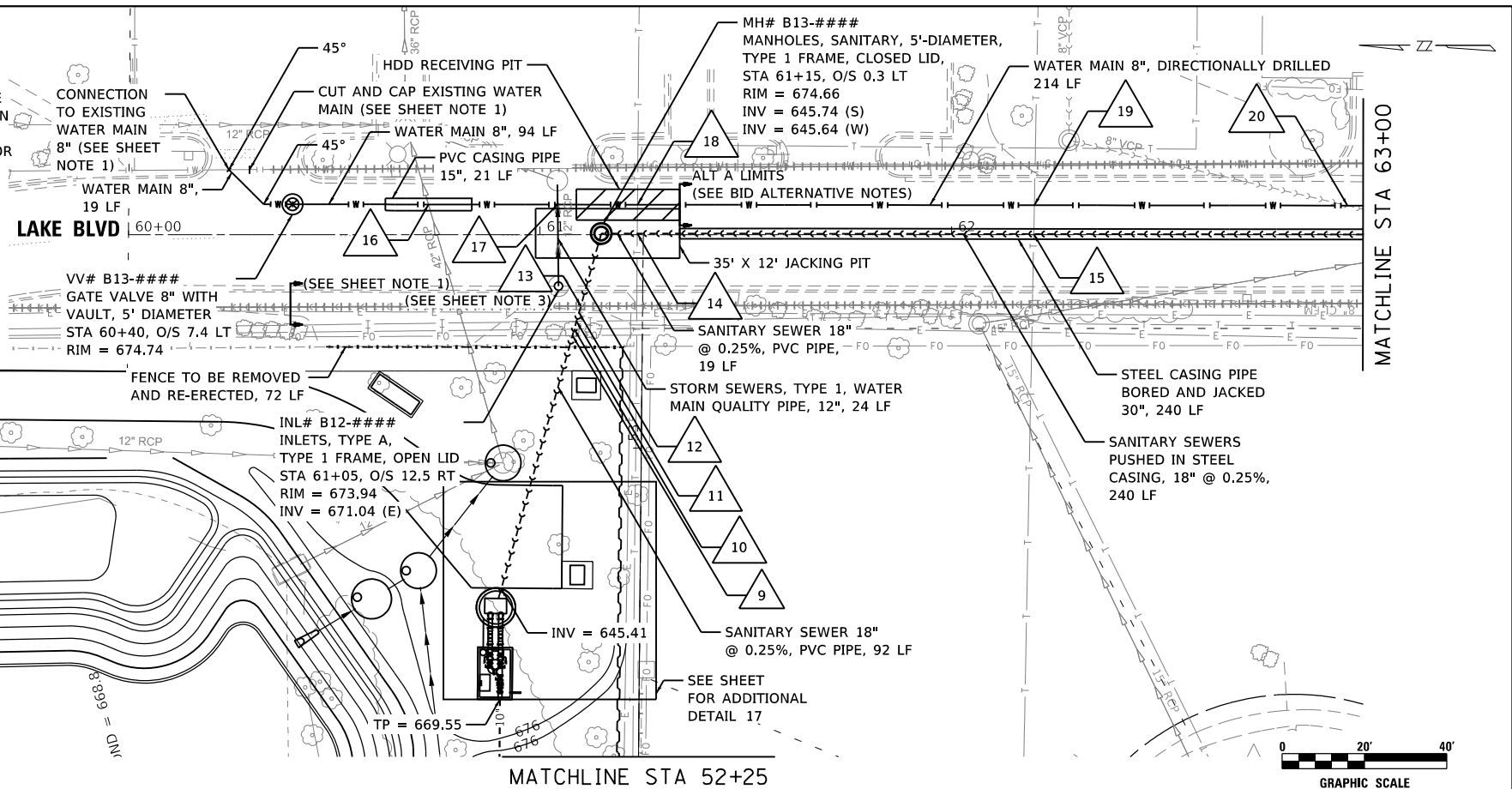
RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	9
		CONTRACT NO. 21157.02		
ILLINOIS				

SHEET NOTES:

- NORTH CONNECTION AND GATE VALVE SHALL BE CONSTRUCTED ON THE SAME DAY AS THE CUTTING AND CAPPING OF THE EXISTING WATER MAIN AT APPROXIMATE STATIONS 60+30 LT AND 65+83 LT, UNDER A SINGLE SHUT DOWN.
- EXISTING UTILITIES IN PROFILE VIEW SHOW LOCATIONS PROPOSED WATER MAIN CROSSES EXISTING UTILITIES. EXISTING UTILITY CROSSING WITH PROPOSED SANITARY SEWER ARE SHOWN IN PLAN VIEW.
- ELEVATION OF EXISTING FORCE MAIN IS ESTIMATED BASED ON BEST AVAILABLE INFORMATION.
- SEE SHEET 12 FOR UTILITY CROSSING INFORMATION.

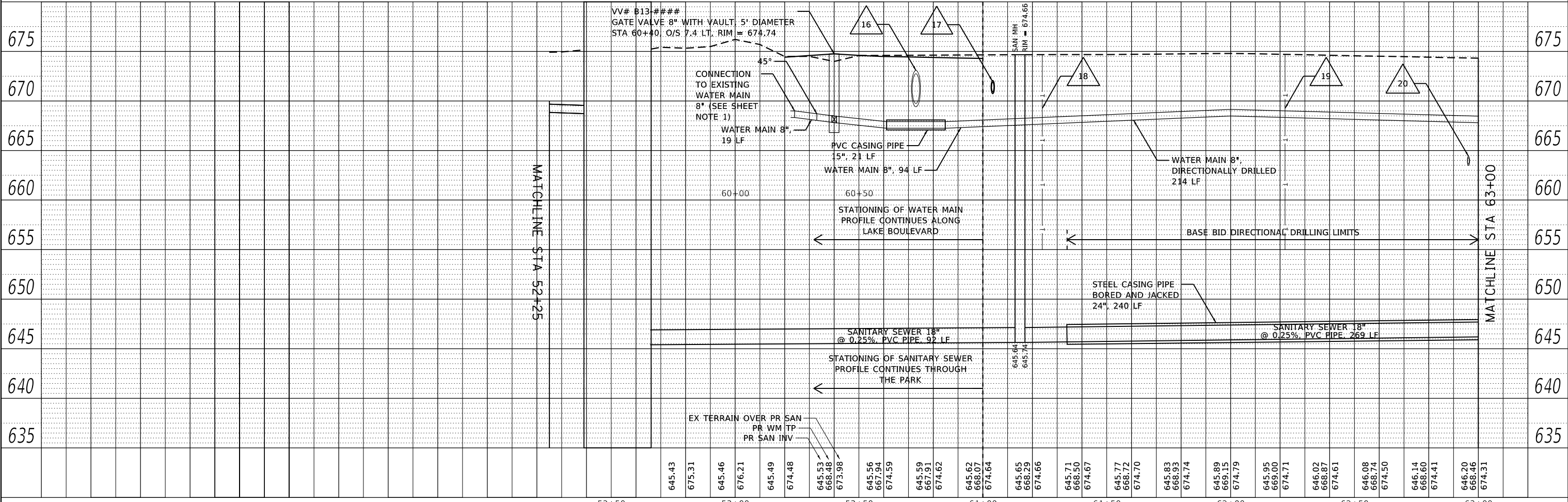
BID ALTERNATIVE NOTES:

- BASE BID SHALL INCLUDE THE DIRECTIONAL DRILLING OF THE 10" SANITARY FORCE MAIN AND 8" DUCTILE IRON WATER MAIN AT THOSE LOCATIONS SHOWN ON THE PLANS. BID ALTERNATIVE A SHALL INCLUDE THE OPEN CUT OF ALL 10" SANITARY FORCE MAIN AND 8" DUCTILE IRON WATER MAIN SHOWN AS BEING DIRECTIONALLY DRILLED IN THE BASE BID. SEE BID SCHEDULE FOR ADDITION / DEDUCTION OF QUANTITIES FOR BID ALTERNATIVE A FOR A RESULTING NET INCREASE / DECREASE TO THE BASE BID.
- BOTH THE BASE BID AND ALTERNATIVE A BID SHALL BE CONSTRUCTED TO THE PROPOSED DESIGN GRADES.
- BASE BID DIRECTIONAL DRILL LIMITS SHALL BE MEASURED FROM THE FRONT EDGE OF THE DRILLING AND RECEIVING PITS. ADDITIONAL OR ALTERNATIVE DRILLING SETUPS SHALL BE APPROVED BY THE VILLAGE'S REPRESENTATIVE. COST OF ADDITIONAL DRILLING SETUPS SHALL BE CONSIDERED INCLUDED IN BID UNIT PRICING FOR THE DIRECTIONAL DRILL UTILITY PAY ITEMS.



PLAN	SURVEYED	DATE
NOTE BOOK	ALIGNED	
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PROFILE	SURVEYED	DATE
NOTE BOOK	CHECKED	
NO.	STRUCTURE	
	NOTATIONS	



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PLOT SCALE = 40.0000' / in.	DRAWN - CLB	REVISED -
PLOT DATE = 10/29/2021	CHECKED - LAM	REVISED -
	DATE - 10/1/2021	REVISED -

VILLAGE OF BUFFALO GROVE		CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION	
UTILITY PLAN AND PROFILE		SCALE: 1" = 20'	SHEET NO. 4 OF 5 SHEETS
STA. 52+25 TO STA. 63+00		ILLINOIS	CONTRACT NO. 21157.02

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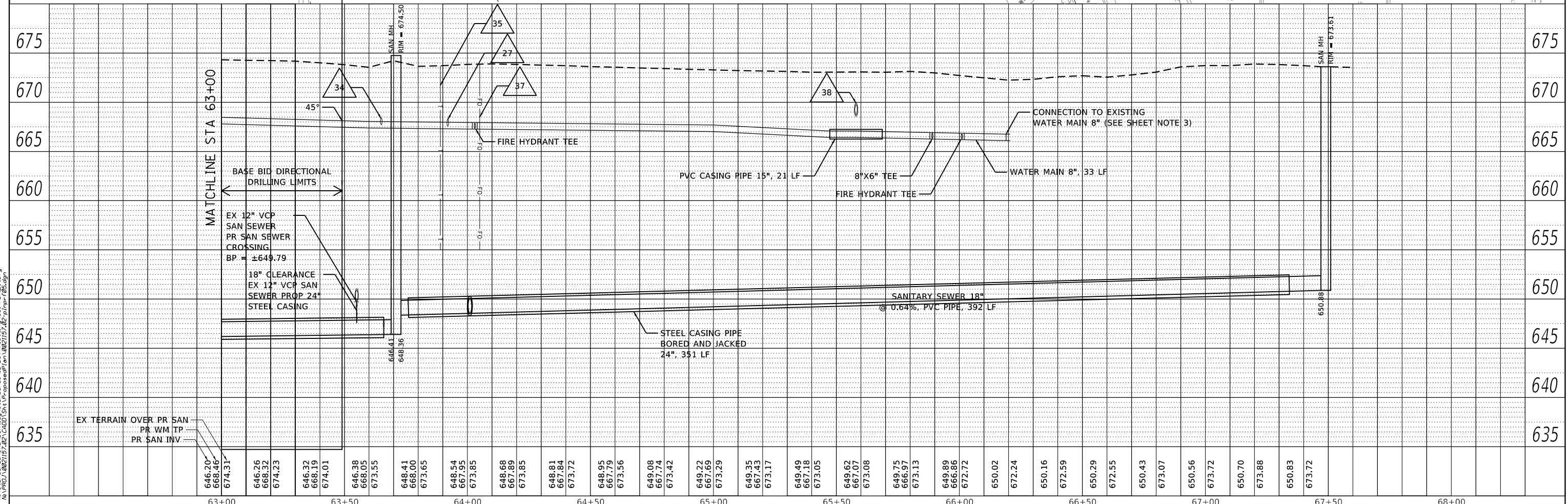
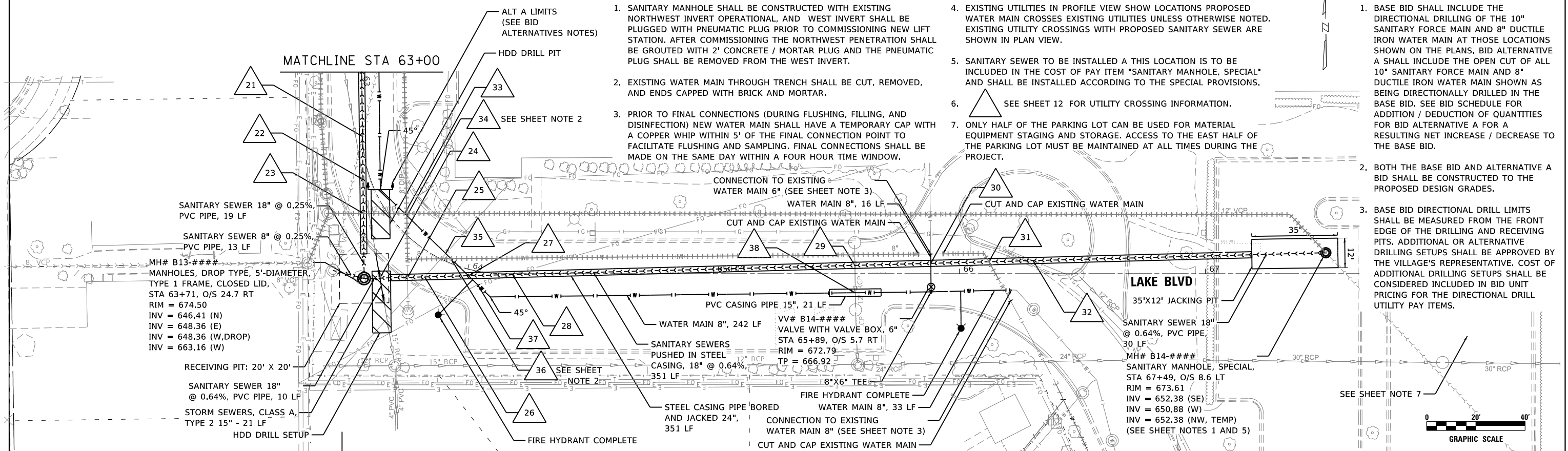
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PROFILE	SURVEYED
	GRADES CHECKED
	STRUCTURE NOTATIONS OK'D
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	NO. _____

SHEET NOTES:

- SANITARY MANHOLE SHALL BE CONSTRUCTED WITH EXISTING NORTHWEST INVERT OPERATIONAL, AND WEST INVERT SHALL BE PLUGGED WITH PNEUMATIC PLUG PRIOR TO COMMISSIONING NEW LIFT STATION. AFTER COMMISSIONING THE NORTHWEST PENETRATION SHALL BE GROUTED WITH 2' CONCRETE / MORTAR PLUG AND THE PNEUMATIC PLUG SHALL BE REMOVED FROM THE WEST INVERT.
- EXISTING WATER MAIN THROUGH TRENCH SHALL BE CUT, REMOVED, AND ENDS CAPPED WITH BRICK AND MORTAR.
- PRIOR TO FINAL CONNECTIONS (DURING FLUSHING, FILLING, AND DISINFECTION) NEW WATER MAIN SHALL HAVE A TEMPORARY CAP WITH A COPPER WHIP WITHIN 5' OF THE FINAL CONNECTION POINT TO FACILITATE FLUSHING AND SAMPLING. FINAL CONNECTIONS SHALL BE MADE ON THE SAME DAY WITHIN A FOUR HOUR TIME WINDOW.
- EXISTING UTILITIES IN PROFILE VIEW SHOW LOCATIONS PROPOSED WATER MAIN CROSSES EXISTING UTILITIES UNLESS OTHERWISE NOTED. EXISTING UTILITY CROSSINGS WITH PROPOSED SANITARY SEWER ARE SHOWN IN PLAN VIEW.
- SANITARY SEWER TO BE INSTALLED AT THIS LOCATION IS TO BE INCLUDED IN THE COST OF PAY ITEM "SANITARY MANHOLE, SPECIAL" AND SHALL BE INSTALLED ACCORDING TO THE SPECIAL PROVISIONS.
- SEE SHEET 12 FOR UTILITY CROSSING INFORMATION.
- ONLY HALF OF THE PARKING LOT CAN BE USED FOR MATERIAL EQUIPMENT STAGING AND STORAGE. ACCESS TO THE EAST HALF OF THE PARKING LOT MUST BE MAINTAINED AT ALL TIMES DURING THE PROJECT.

BID ALTERNATIVE NOTES:

- BASE BID SHALL INCLUDE THE DIRECTIONAL DRILLING OF THE 10" SANITARY FORCE MAIN AND 8" DUCTILE IRON WATER MAIN AT THOSE LOCATIONS SHOWN ON THE PLANS. BID ALTERNATIVE A SHALL INCLUDE THE OPEN CUT OF ALL 10" SANITARY FORCE MAIN AND 8" DUCTILE IRON WATER MAIN SHOWN AS BEING DIRECTIONALLY DRILLED IN THE BASE BID. SEE BID SCHEDULE FOR ADDITION / DEDUCTION OF QUANTITIES FOR BID ALTERNATIVE A FOR A RESULTING NET INCREASE / DECREASE TO THE BASE BID.
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<p>8725 W. Higgins Rd, Ste 600, Chicago, IL 60631 P 773.775.4009 www.ciorba.com</p>	USER NAME = WaterResources DESIGNED - LAM DRAWN - CLB CHECKED - LAM DATE - 10/1/2021	REVISED - REVISED - REVISED - REVISED -	VILLAGE OF BUFFALO GROVE CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION UTILITY PLAN AND PROFILE SCALE: 1" = 20' SHEET NO. 5 OF 5 SHEETS STA. 63+00 TO STA. -	R.T.E. SECTION COUNTY TOTAL SHEETS SHEET NO. CONTRACT NO. 21157.02
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UTILITY CROSSING TABLE SHEET 7								
CROSSED UTILITY					PROPOSED UTILITIES			
CROSSING	STATION	UTILITY	DIAMETER (IN)	TP / BP	UTILITY	DIAMETER (IN)	TP / BP	CLEARANCE (FT)
1	31+75	EX STORM SEWER	24	680.11, BP	SANITARY	12	677.08, TP	3.03
2	31+91	EX WATER MAIN	12	683.53, BP	SANITARY	12	677.18, TP	6.35

UTILITY CROSSING TABLE SHEET 8								
CROSSED UTILITY					PROPOSED UTILITIES			
CROSSING	STATION	UTILITY	DIAMETER (IN)	TP / BP	UTILITY	DIAMETER (IN)	TP / BP	CLEARANCE (FT)
3	34+48	EX STORM SEWER	36	679.43, BP	SANITARY	10	678.43, TP	1.00
4	45+82	EX ELECTRIC	UNK	UNK	SANITARY	10	675.77, TP	UNK
5	45+85	EX ELECTRIC	UNK	UNK	SANITARY	10	675.75, TP	UNK

UTILITY CROSSING TABLE SHEET 9								
CROSSED UTILITY					PROPOSED UTILITIES			
CROSSING	STATION	UTILITY	DIAMETER (IN)	TP / BP	UTILITY	DIAMETER (IN)	TP / BP	CLEARANCE (FT)
6	49+74	EX STORM SEWER	18	673.50, BP	SANITARY	10	672.12, TP	1.38
7	51+64	EX TELEPHONE	UNK	UNK	SANITARY	10	670.27, TP	UNK
8	51+82	EX ELECTRIC	UNK	UNK	SANITARY	10	670.05, TP	UNK

UTILITY CROSSING TABLE SHEET :10								
CROSSED UTILITY					PROPOSED UTILITIES			
CROSSING	STATION	UTILITY	DIAMETER (IN)	TP / BP	UTILITY	DIAMETER (IN)	TP / BP	CLEARANCE (FT)
9	53+27	EX FIBER OPTIC	UNK	UNK	SANITARY	18	647.00, TP	UNK
10	53+29	EX TELEPHONE	UNK	UNK	SANITARY	18	647.01, TP	UNK
11	53+31	EX TELEPHONE	UNK	UNK	SANITARY	18	647.01, TP	UNK
12	53+33	EX ELECTRIC	UNK	UNK	SANITARY	18	647.01, TP	UNK
13	53+34	EX SANITARY FORCE MAIN	8	668.50, BP	SANITARY	18	647.01, TP	21.49
14	61+24	EX TELEPHONE	UNK	UNK	SANITARY	18	647.02, TP	UNK
15	62+20	EX TELEPHONE	UNK	UNK	SANITARY	18	647.02, TP	UNK
16	60+73	EX STORM SEWER	42	669.41, BP	WATER MAIN	8	667.91, TP	1.50
17	61+04	PR STORM SEWER, WMQP	12	670.73, BP	WATER MAIN	8	668.11, TP	2.62
18	61+23	EX TELEPHONE	UNK	UNK	WATER MAIN	8	668.33, TP	UNK
19	62+20	EX TELEPHONE	UNK	UNK	WATER MAIN	8	669.00, TP	UNK
20	62+96	EX SANTARY SEWER	8	664.43, TP	WATER MAIN	8	667.82, BP	3.39

UTILITY CROSSING TABLE SHEET 11								
CROSSED UTILITY					PROPOSED UTILITIES			
CROSSING	STATION	UTILITY	DIAMETER (IN)	TP / BP	UTILITY	DIAMETER (IN)	TP / BP	CLEARANCE (FT)
21	63+26	EX SANITARY SEWER	8	663.35, BP	SANITARY	18	647.78, TP	15.57
22	63+43	EX STORM SEWER	15	669.12, BP	SANITARY	18	647.83, TP	21.29
23	63+55	EX SANITARY SEWER TO BE ABANDONED	12	649.79, BP	SANITARY	18	647.87, TP	1.92
24	63+74	PR STORM SEWER	15	668.62, BP	SANITARY	18	649.87, TP	18.75
25	63+81	EX WATER MAIN	8	667.24, BP	SANITARY	18	649.91, TP	17.33
26	63+89	EX TELEPHONE	UNK	UNK	SANITARY	18	649.97, TP	UNK
27	64+01	PR WATER MAIN	8	667.28, BP	SANITARY	18	650.05, TP	17.23
28	64+18	EX FIBER OPTIC	UNK	UNK	SANITARY	18	650.16, TP	UNK
29	65+58	EX STORM SEWER	12	669.21, BP	SANITARY	18	651.11, TP	18.10
30	65+88	PR WATER MAIN	8	666.26, BP	SANITARY	18	651.31, TP	14.95
31	66+12	EX WATER MAIN TO BE ABANDONED	8	666.43, BP	SANITARY	18	651.47, TP	14.96
32	66+30	EX GAS	4	UNK	SANITARY	18	651.59, TP	UNK
33	63+64	EX SANTIARY SEWER TO BE ABNDONED	12	651.12, TP	WATER MAIN	8	667.37, BP	16.25
34	63+65	EX WATER MAIN TO BE ABANDONED	8	668.39, TP	WATER MAIN	8	667.37, BP	IN CONFLICT
35	63+89	EX TELEPHONE	UNK	UNK	WATER MAIN	8	667.97, TP	UNK
36	63+92	EX WATER MAIN TO BE ABANDONED	8	668.25, TP	WATER MAIN	8	667.30, BP	IN CONFLICT
37	64+05	EX FIBER OPTIC	UNK	UNK	WATER MAIN	8	667.93, TP	UNK
38	65+58	EX STORM SEWER	12	668.66, BP	WATER MAIN	8	667.08, TP	1.58



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	DRAWN - CLB	REVISED -
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PLOT DATE = 10/29/2021	DATE - 10/1/2021	REVISED -

VILLAGE OF BUFFALO GROVE

**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
 UTILITY CROSSING TABLES**







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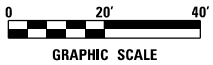
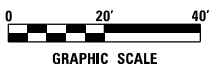
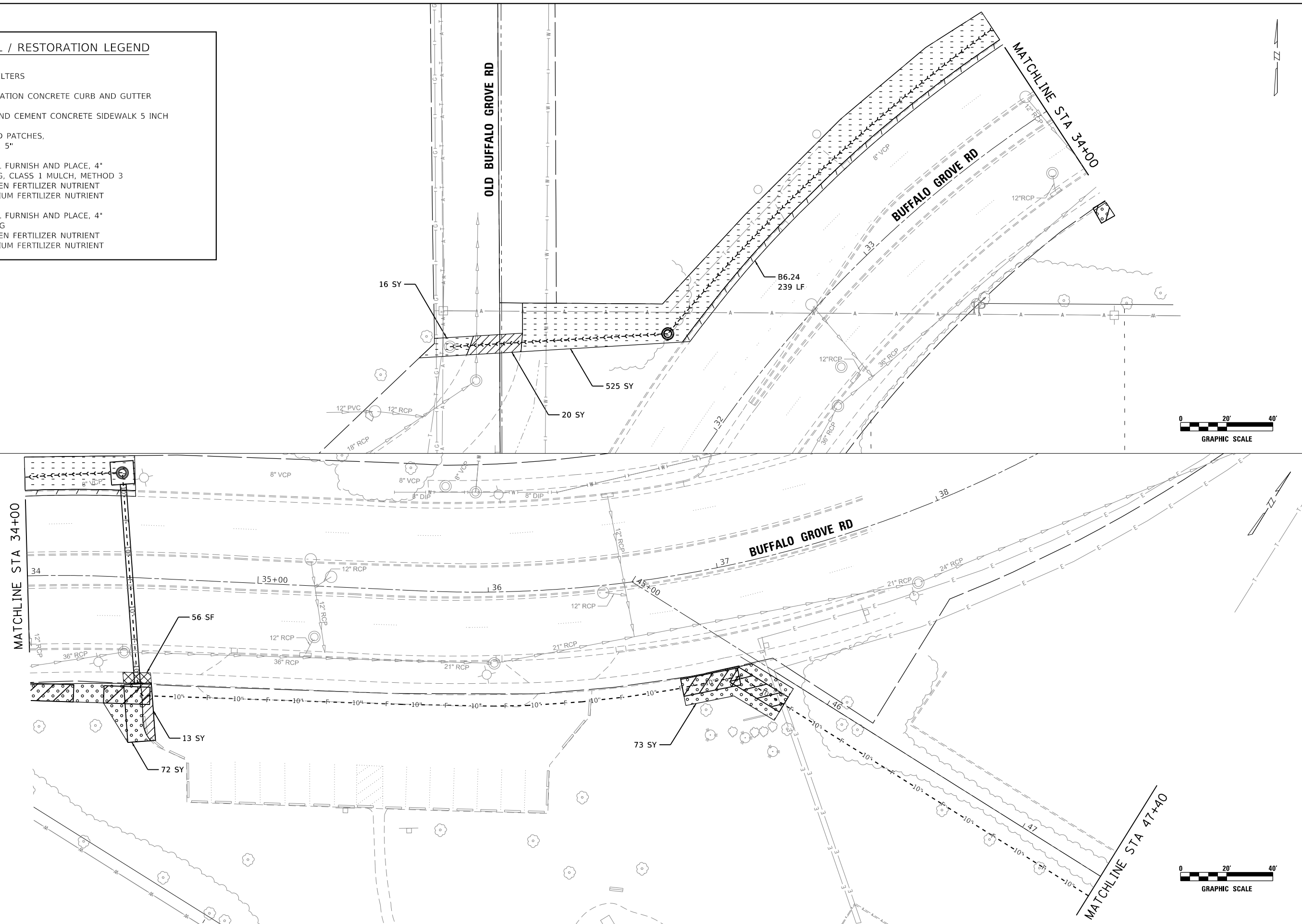
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		COOK	37	12
			CONTRACT NO. 21157.02	
ILLINOIS				

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PROFILE	SURVEYED	DATE
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EROSION CONTROL / RESTORATION LEGEND

-  INLET FILTERS
-  COMBINATION CONCRETE CURB AND GUTTER
-  PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
-  CLASS D PATCHES, TYPE IV, 5"
-  TOPSOIL FURNISH AND PLACE, 4" SEEDING, CLASS 1 MULCH, METHOD 3 NITROGEN FERTILIZER NUTRIENT POTASSIUM FERTILIZER NUTRIENT
-  TOPSOIL FURNISH AND PLACE, 4" SODDING NITROGEN FERTILIZER NUTRIENT POTASSIUM FERTILIZER NUTRIENT



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PLOT DATE = 10/29/2021	DATE - 10/1/2021	REVISED -








VILLAGE OF BUFFALO GROVE

**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
 EROSION CONTROL AND RESTORATION PLAN**

SCALE: 1" = 20' SHEET NO. 1 OF 3 SHEETS STA. - TO STA. 47+40

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	13
CONTRACT NO. 21157.02				
ILLINOIS				

EROSION CONTROL / RESTORATION LEGEND

-  INLET PROTECTION, SPECIAL
-  TOPSOIL FURNISH AND PLACE SEEDING, CLASS 1 MULCH, METHOD 3 NITROGEN FERTILIZER NUTRIENT POTASSIUM FERTILIZER NUTRIENT
-  TOPSOIL EXCAVATION AND PLACEMENT SEEDING, CLASS 1 MULCH, METHOD 3 NITROGEN FERTILIZER NUTRIENT POTASSIUM FERTILIZER NUTRIENT
-  TOPSOIL EXCAVATION AND PLACEMENT SEEDING, CLASS 4 EROSION CONTROL BLANKET
-  TOPSOIL EXCAVATION AND PLACEMENT SEEDING, CLASS 4A EROSION CONTROL BLANKET
-  SEEDING, CLASS 4A EROSION CONTROL BLANKET
-  PERIMETER EROSION BARRIER

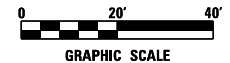
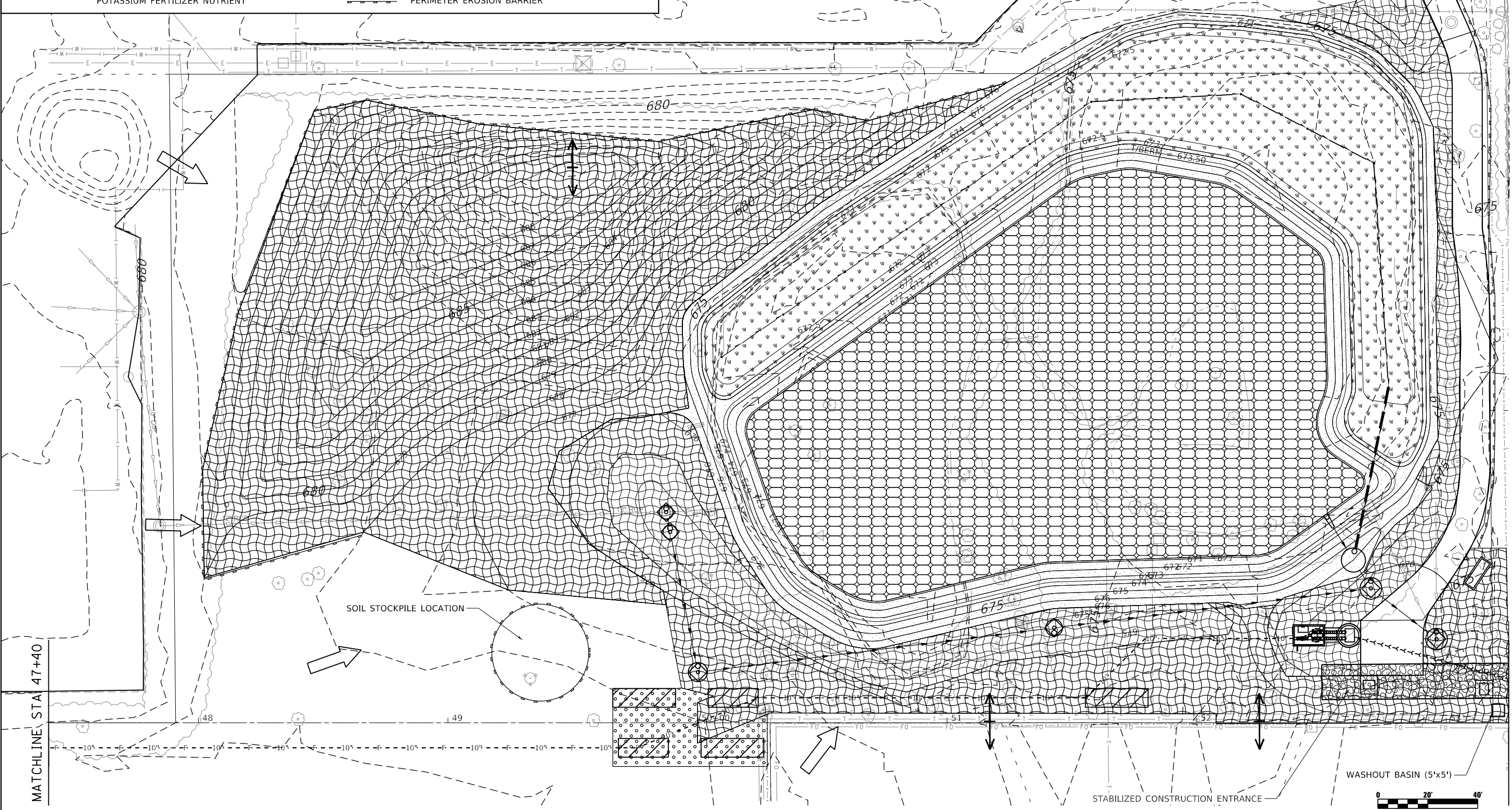
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PLAN	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
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PROFILE	SURVEYED	BY	DATE
NOTE BOOK NO.	PLOTTED		
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	NOTATIONS OK'D		

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USER NAME = WaterResources	DESIGNED - LAM	REVISED -
PLOT SCALE = 40.0000' / 1"	DRAWN - CLB	REVISED -
PLOT DATE = 10/29/2021	CHECKED - LAM	REVISED -
	DATE - 10/1/2021	REVISED -

VILLAGE OF BUFFALO GROVE

**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
 EROSION CONTROL AND RESTORATION PLAN**

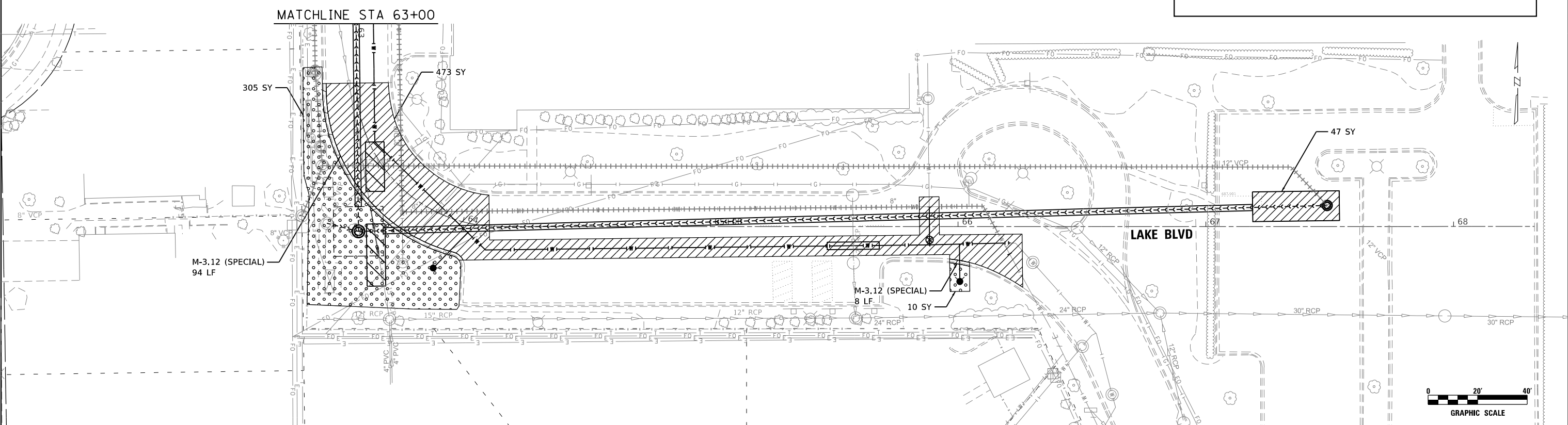
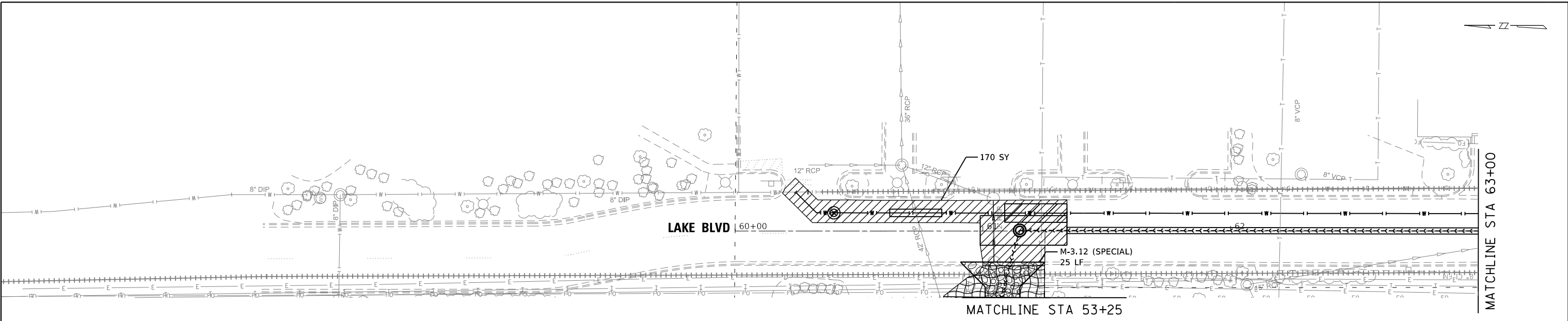
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		COOK	37	14
ILLINOIS			CONTRACT NO. 21157.02	

PLAN	SURVEYED	DATE
	PLOTTED	
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	FILE NAME	

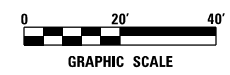
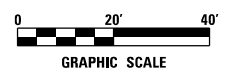
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EROSION CONTROL / RESTORATION LEGEND

- INLET FILTERS
- COMBINATION CONCRETE CURB AND GUTTER
- PORTLAND CEMENT CONCRETE SIDEWALK 5 INCH
- CLASS D PATCHES, TYPE IV, 5"
- TOPSOIL FURNISH AND PLACE SEEDING, CLASS 1 MULCH, METHOD 3
- NITROGEN FERTILIZER NUTRIENT
- POTASSIUM FERTILIZER NUTRIENT
- TOPSOIL EXCAVATION AND PLACEMENT SEEDING, CLASS 1 MULCH, METHOD 3
- NITROGEN FERTILIZER NUTRIENT
- POTASSIUM FERTILIZER NUTRIENT



USER NAME = WaterResources	DESIGNED - LAM	REVISED -
PLOT SCALE = 40.0000' / 1\"/>		

VILLAGE OF BUFFALO GROVE
SCALE: 1" = 20'

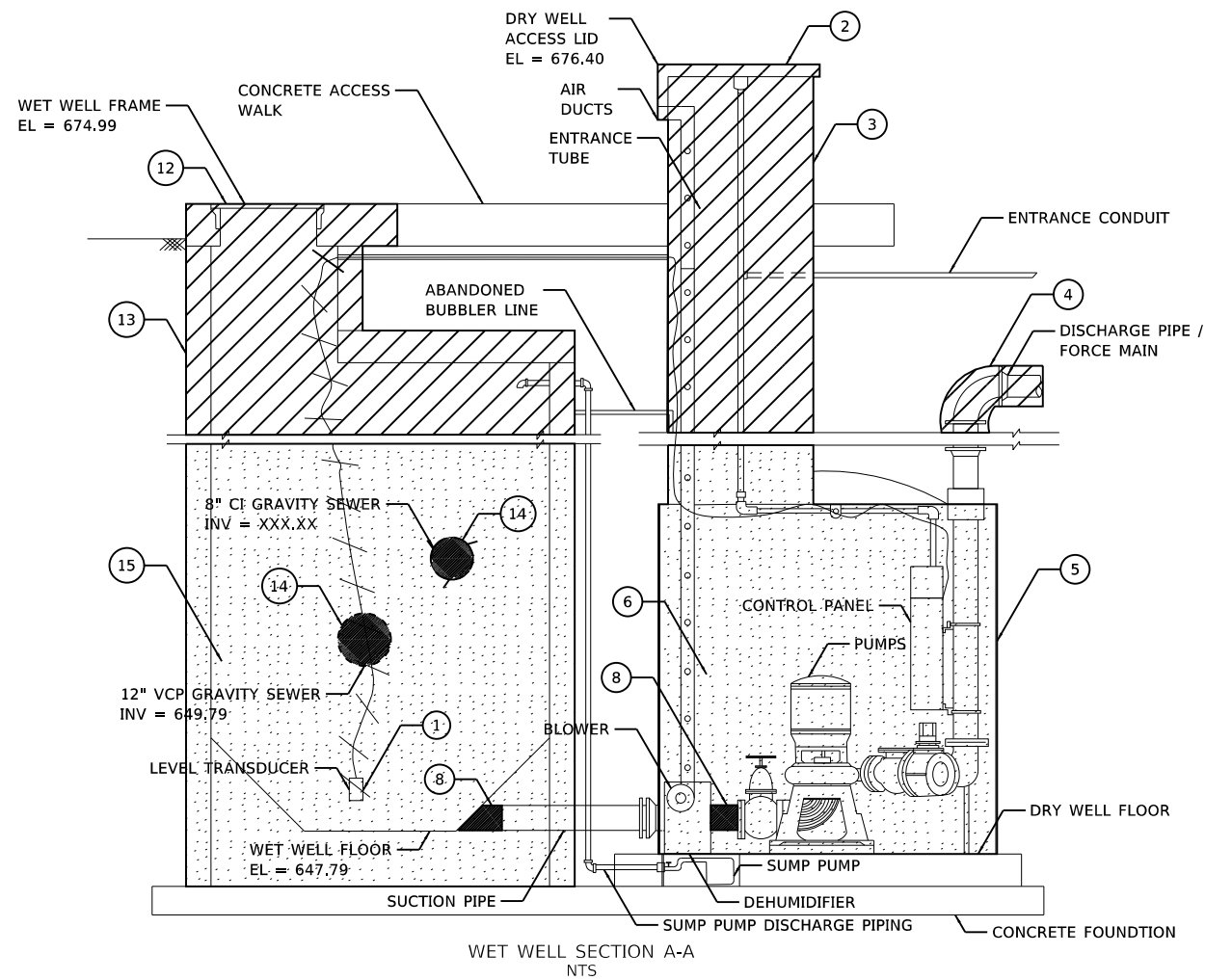
CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION		
EROSION CONTROL AND RESTORATION PLAN		
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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	15
CONTRACT NO. 21157.02				
ILLINOIS				

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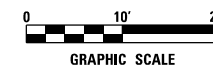
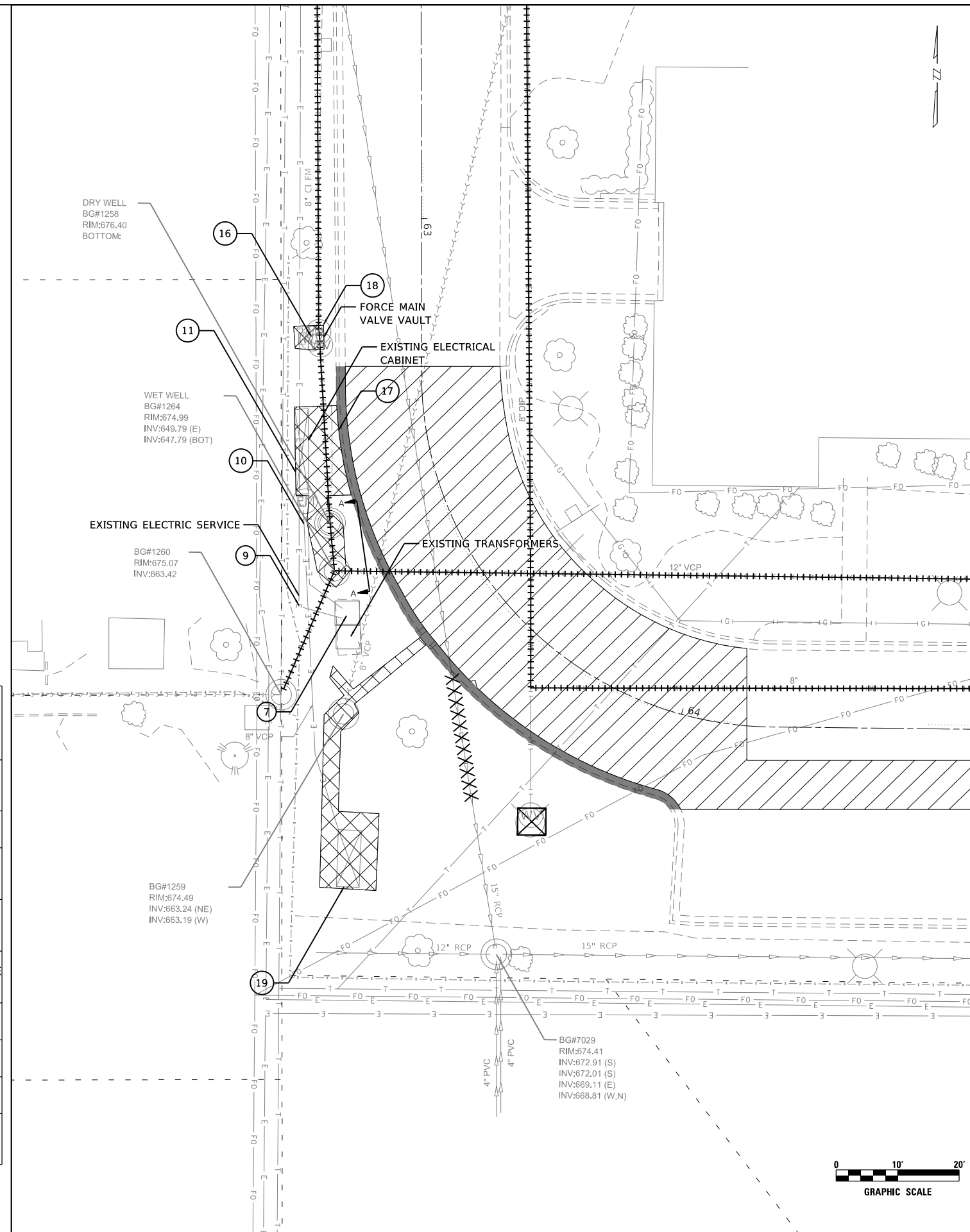


DEMOLITION SCHEDULE

1	REMOVE PRESSURE TRANSDUCER. PLUG WET WELL PENETRATIONS WITH NON-SHRINK GROUT.	10	REMOVE ELECTRICAL SERVICE METER AND EMERGENCY CUTOFF SWITCH. CONDUCTORS FEEDING METER SHALL ALSO BE REMOVED AFTER NEW COMED SERVICE IS ENERGIZED BY COMED.
2	REMOVE DRY WELL ACCESS LID AND RETURN TO THE VILLAGE.	11	REMOVE EXISTING ELECTRICAL AND CONTROLS CABINET AND DELIVER TO THE VILLAGE PUBLIC WORKS FACILITY.
3	REMOVE EXISTING DRY WELL ACCESS SHAFT, LADDER, AND HATCH TO A MINIMUM DEPTH OF 7-FEET BELOW GRADE.	12	REMOVE AND DISPOSE OF WET WELL FRAME AND LID.
4	ABANDON EXISTING FORCE MAIN. SEE EXISTING CONDITIONS AND REMOVAL PLAN. (PAID FOR AS "FILL EXISTING SANITARY SEWERS")	13	REMOVE EXISTING WET WELL ACCESS SHAFT AND HATCH TO A MINIMUM DEPTH OF 7-FEET BELOW GRADE.
5	REMOVE EXISTING DRY WELL EQUIPMENT (PUMPS AND VALVES) AND DELIVER TO THE VILLAGE PUBLIC WORKS FACILITY.	14	ABANDON EXISTING SEWER. SEE EXISTING CONDITIONS AND REMOVAL PLAN. (PAID FOR AS "FILL EXISTING SANITARY SEWERS")
6	BACK FILL EXISTING DRY WELL, ACCESS RISER, AND FORCE MAIN WITH FLOWABLE FILL.	15	BACK FILL EXISTING DRY WELL, ACCESS RISER, AND FORCE MAIN WITH FLOWABLE FILL.
7	REMOVE AND DISPOSE OF EXISTING TRANSFORMERS AND PADS. COORDINATE WITH COMED.	16	REMOVE EXISTING FORCE MAIN VALVE VAULT BYPASS VALVES.
8	ABANDON EXISTING SUCTION LINES (x2). INSTALL 2' NON-SHRINK CONCRETE / MORTAR PLUG.	17	177 SF ELECTRICAL AND CONTROL PANEL PAD AND CONCRETE WALK REMOVAL.
9	ABANDON EXISTING ELECTRIC SERVICE.	18	19 SF BYPASS VALVES PAD REMOVAL.
		19	REMOVE EXISTING GENERATOR AND DELIVER TO THE VILLAGE PUBLIC WORKS FACILITY.

SHEET NOTES:

- ALL ITEMS IN THE DEMOLITION SCHEDULE SHALL BE INCLUDED IN THE COST OF DEMOLITION, PAY ITEM LS-02 41 00, UNLESS OTHERWISE NOTED.



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PLOT DATE = 10/29/2021	CHECKED - LAM	REVISED -
	DATE - 10/1/2021	REVISED -

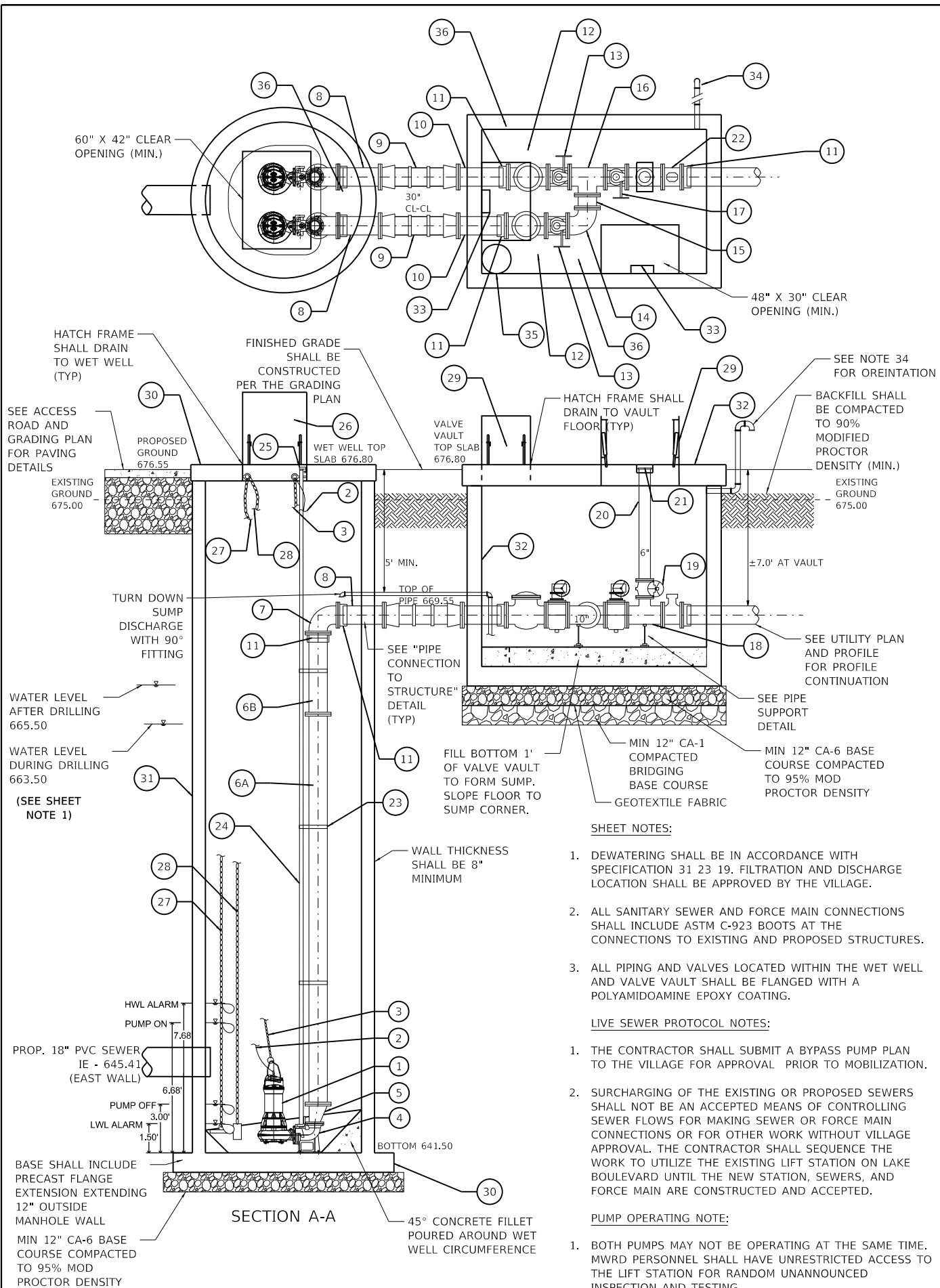
VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
LIFT STATION EXISTING CONDITIONS AND DEMOLITION PLAN

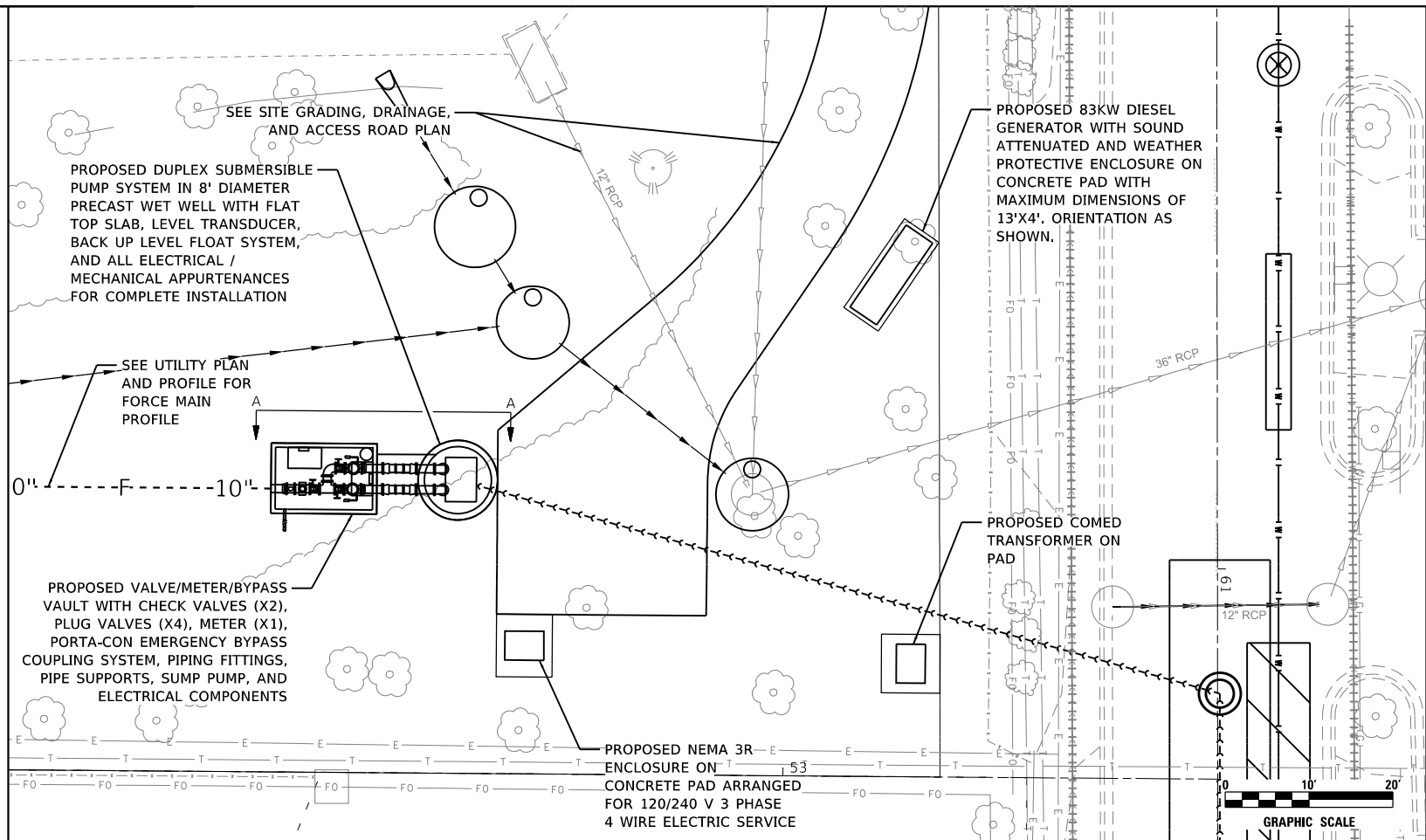
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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	16
			CONTRACT NO. 21157.02	

DATE	
BY	
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- SHEET NOTES:**
- DEWATERING SHALL BE IN ACCORDANCE WITH SPECIFICATION 31 23 19. FILTRATION AND DISCHARGE LOCATION SHALL BE APPROVED BY THE VILLAGE.
 - ALL SANITARY SEWER AND FORCE MAIN CONNECTIONS SHALL INCLUDE ASTM C-923 BOOTS AT THE CONNECTIONS TO EXISTING AND PROPOSED STRUCTURES.
 - ALL PIPING AND VALVES LOCATED WITHIN THE WET WELL AND VALVE VAULT SHALL BE FLANGED WITH A POLYAMIDOAMINE EPOXY COATING.
- LIVE SEWER PROTOCOL NOTES:**
- THE CONTRACTOR SHALL SUBMIT A BYPASS PUMP PLAN TO THE VILLAGE FOR APPROVAL PRIOR TO MOBILIZATION.
 - SURCHARGING OF THE EXISTING OR PROPOSED SEWERS SHALL NOT BE AN ACCEPTED MEANS OF CONTROLLING SEWER FLOWS FOR MAKING SEWER OR FORCE MAIN CONNECTIONS OR FOR OTHER WORK WITHOUT VILLAGE APPROVAL. THE CONTRACTOR SHALL SEQUENCE THE WORK TO UTILIZE THE EXISTING LIFT STATION ON LAKE BOULEVARD UNTIL THE NEW STATION, SEWERS, AND FORCE MAIN ARE CONSTRUCTED AND ACCEPTED.
- PUMP OPERATING NOTE:**
- BOTH PUMPS MAY NOT BE OPERATING AT THE SAME TIME. MWRD PERSONNEL SHALL HAVE UNRESTRICTED ACCESS TO THE LIFT STATION FOR RANDOM UNANNOUNCED INSPECTION AND TESTING.



IMPROVEMENTS SCHEDULE

1	2X SUBMERSIBLE RAW SEWAGE PUMP WITH CENTER DISCHARGE, 6" ABS XFP 150G CB1 OR APPROVED EQUAL.	12	10" SWING CHECK VALVE WITH BOTTOM MOUNTED SCREW TYPE BACKFLOW ACTUATOR.	26	SPRING ASSIST DOUBLE LEAF ACCESS HATCH, ALUMINUM WITH ALUMINUM DIAMOND PLATE AND FALL PROTECTION PER PROJECT SPECIFICATIONS. MINIMUM CLEAR OPENING SHALL BE 60" X 42".
2	POWER AND CONTROL CABLES TO PUMPING UNIT, SUPPORT CABLES WITH STAINLESS STEEL KELLEMS GRIPS HUNG FROM SUPPORT. LOOP EXCESS PUMP CABLE (3' MIN TO 6' MAX LENGTH) OVER SUPPORT. TIE POWER AND CONTROL CABLES TOGETHER PER MANUFACTURERS RECOMMENDATIONS.	13	10" PLUG VALVE WITH HANDWHEEL ACTUATOR.	27	316 STAINLESS STEEL LIFTING CHAIN ATTACHED TO 15 LB PVC COATED WEIGHT. LOCATE APPROXIMATELY 12" FROM BOTTOM OF WET WELL. ATTACH BACKUP FLOAT SWITCH CABLES TO WIRE ROPE AT LEVELS SPECIFIED WITH NYLON TIES. PROVIDE CLOSED LOOP AT TOP OF WIRE ROPE FOR SUPPORT HOOK.
		14	10" DI 90° FLANGED ELBOW ON PIPE SUPPORT.		
3	316 STAINLESS STEEL LIFTING CHAIN LOOPED THROUGH PUMP LIFTING ASSEMBLY AND SECURED WITH 316 STAINLESS STEEL LOCKING CLEVIS. PROVIDE CONNECTOR AT END OF CHAIN TO CREATE LOOP AND HANG FROM CHAIN SUPPORT. CHAIN SHALL HAVE A MINIMUM RATED CAPACITY OF 3 TIMES PUMPING UNIT WEIGHT.	15	10" FLG X FLG DI PIPE SPOOL, 0'-8" (LENGTH TO BE VERIFIED IN FIELD) ON PIPE SUPPORT.	28	WATER LEVEL PRESSURE TRANSDUCER, 316 STAINLESS STEEL LIFTING CHAIN ATTACHED TO 15 LB PVC COATED WEIGHT. PROVIDE CLOSED LOOP AT TOP OF WIRE ROPE FOR SUPPORT HOOK.
		16	10" DI FLANGED EQUAL TEE ON PIPE SUPPORT.		
4	PUMP DISCHARGE ELBOW FURNISHED BY PUMP MANUFACTURER. ANCHOR ELBOW WITH STAINLESS STEEL ANCHOR BOLTS (CAST-IN-PLACE OR DRILL AND EPOXY). ANCHOR BOLT SIZE, NUMBER, AND EMBEDMENT PER PUMP MANUFACTURER.	17	10" PLUG VALVE WITH HANDWHEEL ACTUATOR.	29	SPRING ASSIST ACCESS HATCH, ALUMINUM WITH ALUMINUM DIAMOND PLATE PER PROJECT SPECIFICATIONS. MINIMUM CLEAR OPENING SHALL BE 48" X 30".
		18	10" X 6" DI FLANGED TEE ON PIPE SUPPORT.		
5	6" X 10" DI FLANGED ECCENTRIC REDUCER.	19	6" PLUG VALVE ON BYPASS LINE WITH HANDWHEEL ACTUATOR.	30	NEW HS-20 LOAD RATED 10" PRECAST WET WELL FLAT TOP SLAB. CASTING SHALL BE COORDINATED WITH PUMP SUPPLIER.
		20	6" DI BYPASS PIPE SPOOL, 5'-9" (LENGTH TO BE VERIFIED IN FIELD) WITH FLANGED END AND PORTA-CON BYPASS CONNECTION.		
6A	10" FLG X FLG DI SPOOL, 20'-0" (LENGTH TO BE VERIFIED IN FIELD).	21	PORTA-CON EMERGENCY BYPASS PUMP COUPLING SYSTEM, PART# PC106, AS MANUFACTURED BY PRECISION SYSTEMS.	31	NEW 8" DIAMETER WET WELL WITH EXTERIOR ASPHALT EMULSION COATING.
		22	10" MAGNETIC FLOW METER. FURNISH FLANGED ND SPOOL (LENGTH TO MATCH LENGTH OF FLOW METER) TO BE INSTALLED WHEN METER IS REMOVED FOR SERVICE. CONTRACTOR TO SET PIPE SPOOL IN PLACE TO VERIFY FIT, THEN REPLACE WITH FLOW METER.		
6B	10" FLG X PR DI SPOOL, 4'-2" (LENGTH TO BE VERIFIED IN FIELD)	23	INTERMEDIATE GUIDE RAIL SUPPORT, 316 SS, SPACED VERTICALLY AT 8' INTERVALS, ATTACH TO PIPE PER MANUFACTURERS SPECIFICATION.	32	NEW VALVE VAULT PER DETAIL, SHEET 23.
8	10" PE X FLG DI SPOOL, 2'-5" (LENGTH TO BE VERIFIED IN FIELD).	24	SCHEDULE 40 316 STAINLESS STEEL PIPE GUIDE RAILS FOR SUBMERSIBLE PUMP, PER MANUFACTURERS SPECIFICATIONS.	33	14" WIDE COPOLYMER PLASTIC STEPS WITH CONTINUOUS 1/2 INCH STEEL REINFORCEMENT, SPACED VERTICAL AT 16" FROM HATCH VAULT TO FLOOR.
10	10" FLG X PE DI SPOOL, 2'-3" (LENGTH TO BE VERIFIED IN FIELD).	25	UPPER GUIDE RAIL SUPPORT ALL 316 STAINLESS STEEL. ATTACH TO CONCRETE WITH 316 STAINLESS STEEL EPOXY ANCHORS.	34	3" THREADED GALVANIZED STEEL VENT WITH LONG RADIUS 90 DEGREE FITTINGS FOR GOOSENECK DOWNWARD TURNING OUTLET AND STAINLESS STEEL INSECT SCREEN 2-FEET ABOVE FINISHED GRADE. SAND, CLEAN, AND APPLY PRIMER AND TOP COAT OF BLACK RUST PREVENTION PAINT.

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VILLAGE OF BUFFALO GROVE

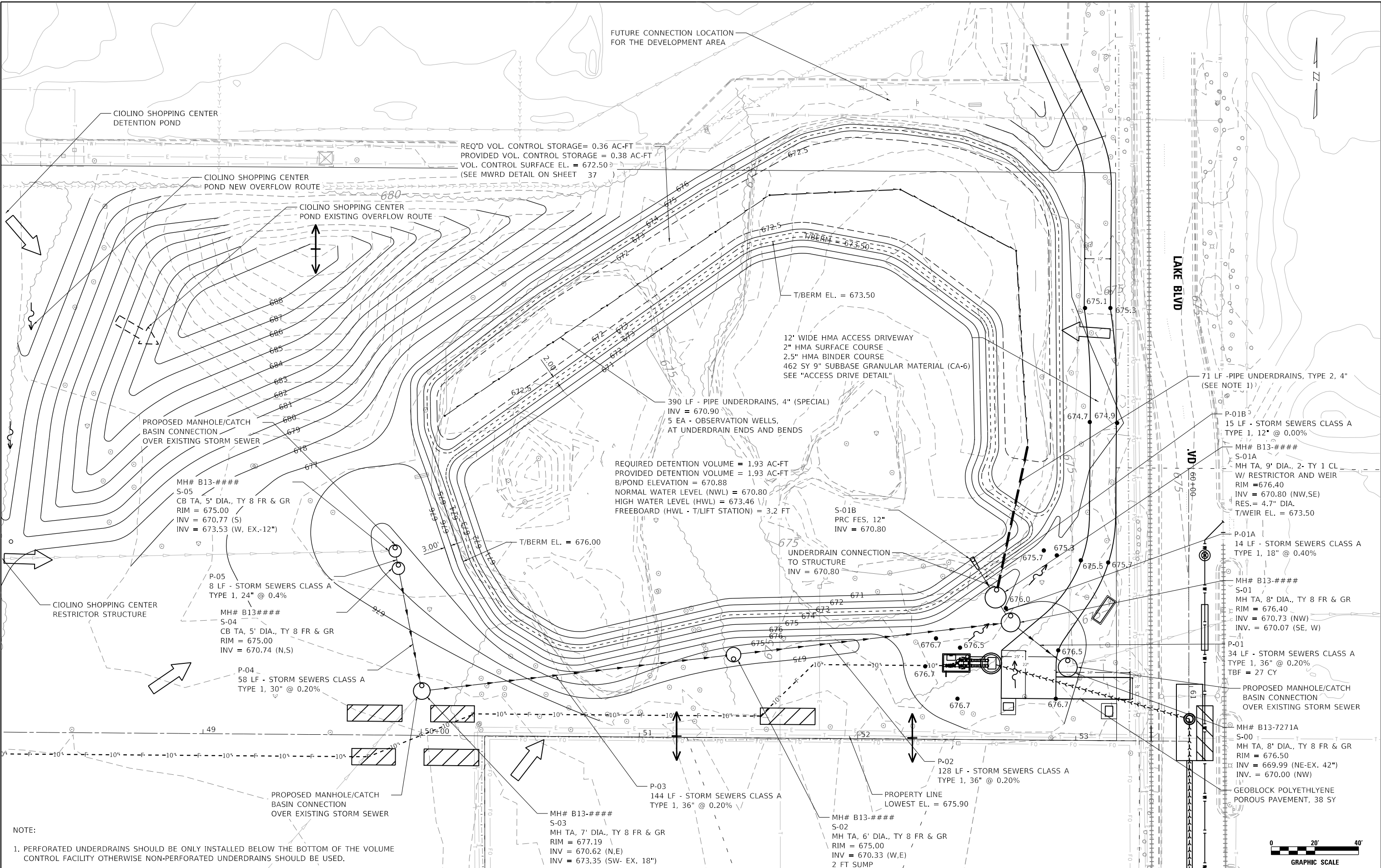
**CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
 PROPOSED LIFT STATION PLAN AND DETAILS**
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RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	17
CONTRACT NO. 21157.02				
ILLINOIS				

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NOTE:
 1. PERFORATED UNDERDRAINS SHOULD BE ONLY INSTALLED BELOW THE BOTTOM OF THE VOLUME CONTROL FACILITY OTHERWISE NON-PERFORATED UNDERDRAINS SHOULD BE USED.



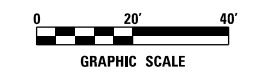
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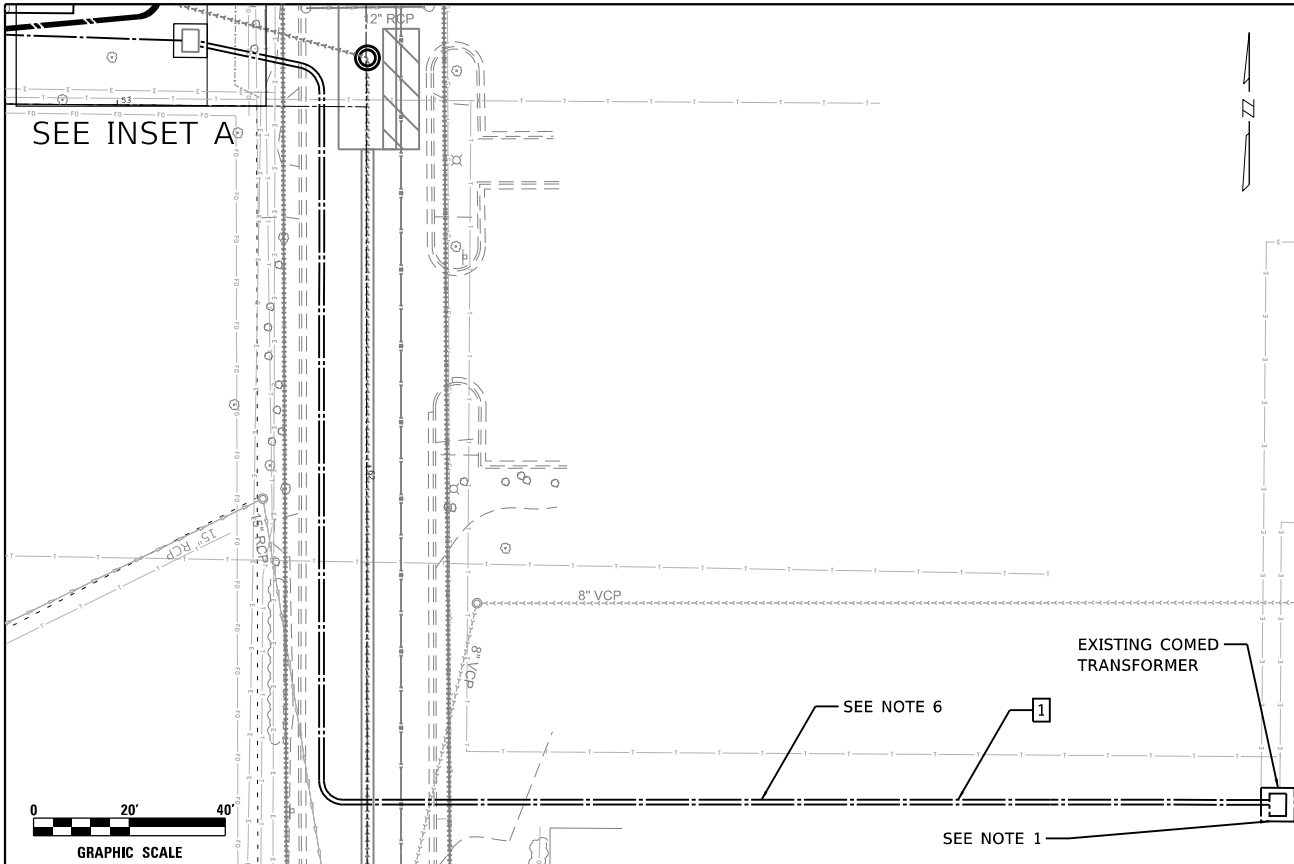
VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
 SITE GRADING, DRAINAGE, AND ACCESS ROAD PLAN

SCALE: 1" = 20'	SHEET NO. 1 OF 1 SHEETS	STA. - TO STA. -
ILLINOIS		
RTE.	SECTION	COUNTY
		COOK
		CONTRACT NO. 21157.02
		TOTAL SHEETS 37
		SHEET NO. 18

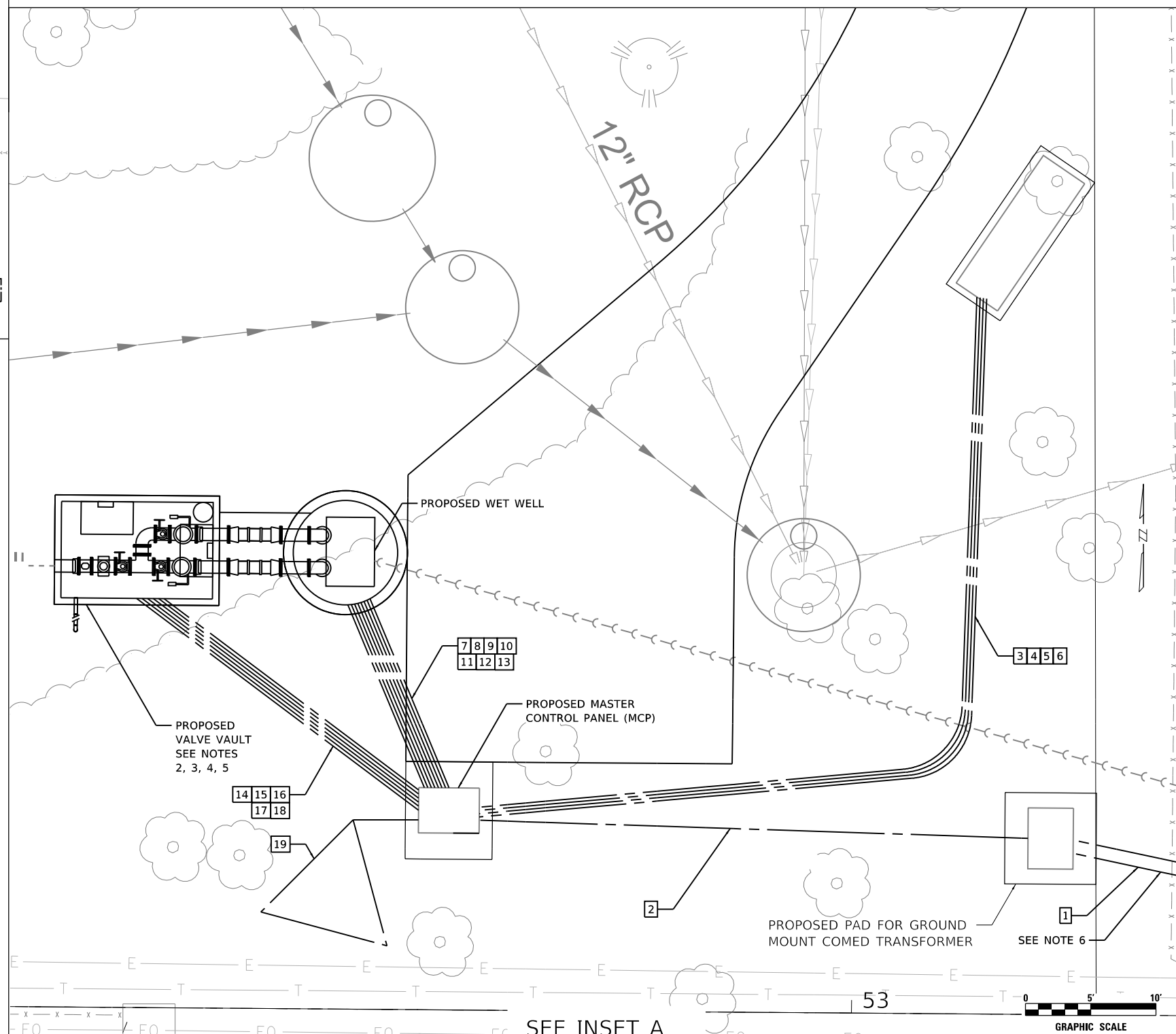


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NOTES:

- 1) THE CONTRACTOR SHALL PROVIDE AND COIL 15' OF SLACK AT THE TRANSFORMER FOR CONNECTION BY COMED PERSONNEL.
- 2) PROVIDE A DUPLEX RECEPTACLE WITHIN THE VALVE VAULT. EACH RECEPTACLE SHALL BE ON A SEPERATE CIRCUIT. RECEPTACLES SHALL BE MOUNTED IN A BOX WITH A GASKETED AND WEATHERPROOF CAST METAL COVER PLATE AND CAP OVER EACH RECEPTACLE OPENING. CAPS SHALL BE PERMANENTLY ATTACHED TO THE COVER PLATE BY MEANS OF A SPRING HINGED CAP.
- 3) VALVE VAULT LUMINAIRE SHALL BE A LED TYPE, CORROSION RESISTANT, EXPLOSION PROOF AND SHALL BE WALL OR CEILING MOUNTED. LUMINAIRE SHALL BE CONTROLLED BY AN EXPLOSION PROOF, WALL MOUNTED TOGGLE SWITCH.
- 4) JUNCTION BOX SHALL BE 316 STAINLESS STEEL WATERTIGHT, 20"x16"x8", N.E.M.A. 4X.
- 5) CONDUIT ENTRIES INTO JUNCTION BOX SHALL BE FILLED WITH DUCT PUTTY.
- 6) SERVICE DUCT SHALL HAVE A MINIMUM OF 36" COVER.



SCHEDULE OF CONDUIT AND CABLE

TAG	FROM	TO	CONDUIT			POWER (P) / CONTROLS (C)	CABLE
			QTY.	SIZE	MATL.		
1	EXISTING COMED TRANSFORMER	PROPOSED COMED TRANSFORMER	2	4"	PVC	-	COMED TO SPECIFY AND/OR PROVIDE
2	PROPOSED COMED TX	MCP	1	4"	PVC	-	4-1/C #3/0
3	STANDBY GENERATOR	MCP	1	4"	RGS	P	4-1/C #250MCM & 1/C #2 GROUND
4	STANDBY GENERATOR	MCP	1	1"	RGS	P	CABLE PER MANUFACTURER (BATTERY CHARGER)
5	STANDBY GENERATOR	MCP	1	1"	RGS	P	CABLE PER MANUFACTURER (BLOCK HEATER)
6	STANDBY GENERATOR	MCP	1	1"	RGS	C	CABLE PER MANUFACTURER (CONTROLS)
7	PUMP 1	MCP	1	2"	RGS	P	4-1/C #4 & 1/C #6 GROUND
8	PUMP 2	MCP	1	2"	RGS	P	4-1/C #4 & 1/C #6 GROUND
9	LEVEL TRANSDUCER	MCP	1	1"	RGS	C	CABLE PER MANUFACTURER
10	FLOATS	MCP	1	2"	RGS	C	CABLES PER MANUFACTURER
11	HATCH LIMIT SWITCH	MCP	1	1"	RGS	C	2-1/C #12 & 1/C #12 GROUND
12	SPARE WET WELL	MCP	1	1"	RGS	P	NA
13	SPARE WET WELL	MCP	1	2"	RGS	NA	NA
14	MCP	RECEPTACLE/SUMP PUMP	1	1"	RGS	P	3-1/C #10 & 1/C #12 GROUND
15	MCP	LIGHT	1	1"	RGS	P	2-1/C #12 & 1/C #12 GROUND
16	FLOW METER	MCP	2	1"	RGS	C	CABLE PER MANUFACTURER
17	FLOAT SWITCH/HATCH LIMIT SWITCHES	MCP	1	1"	RGS	C	3-1/C #12 & 1/C #12 GROUND
18	SPARE VALVE VAULT	MCP	1	1"	RGS	P	NA
19	MCP	SITE GROUNDING ELECTRODE SYSTEM	1	1"	RGS	P	#2/0 TINNED BARE STRANDED COPPER

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PLOT DATE = 10/29/2021	CHECKED - LAM	REVISED -
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VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
ELECTRICAL SITE PLAN AND SCHEDULE

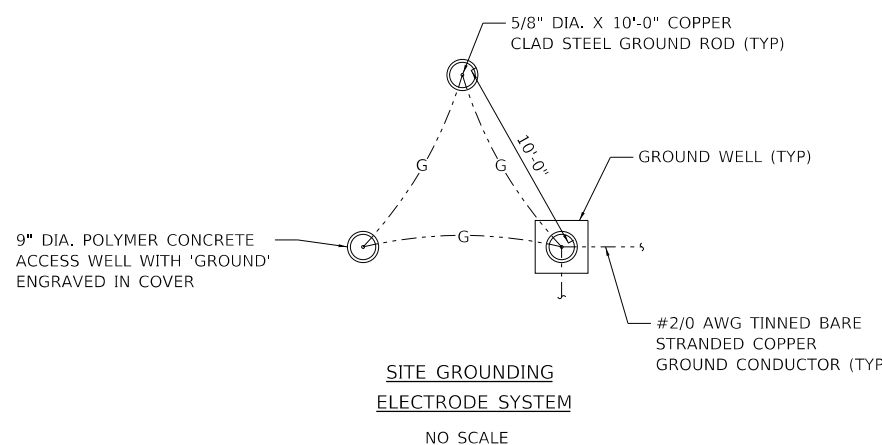
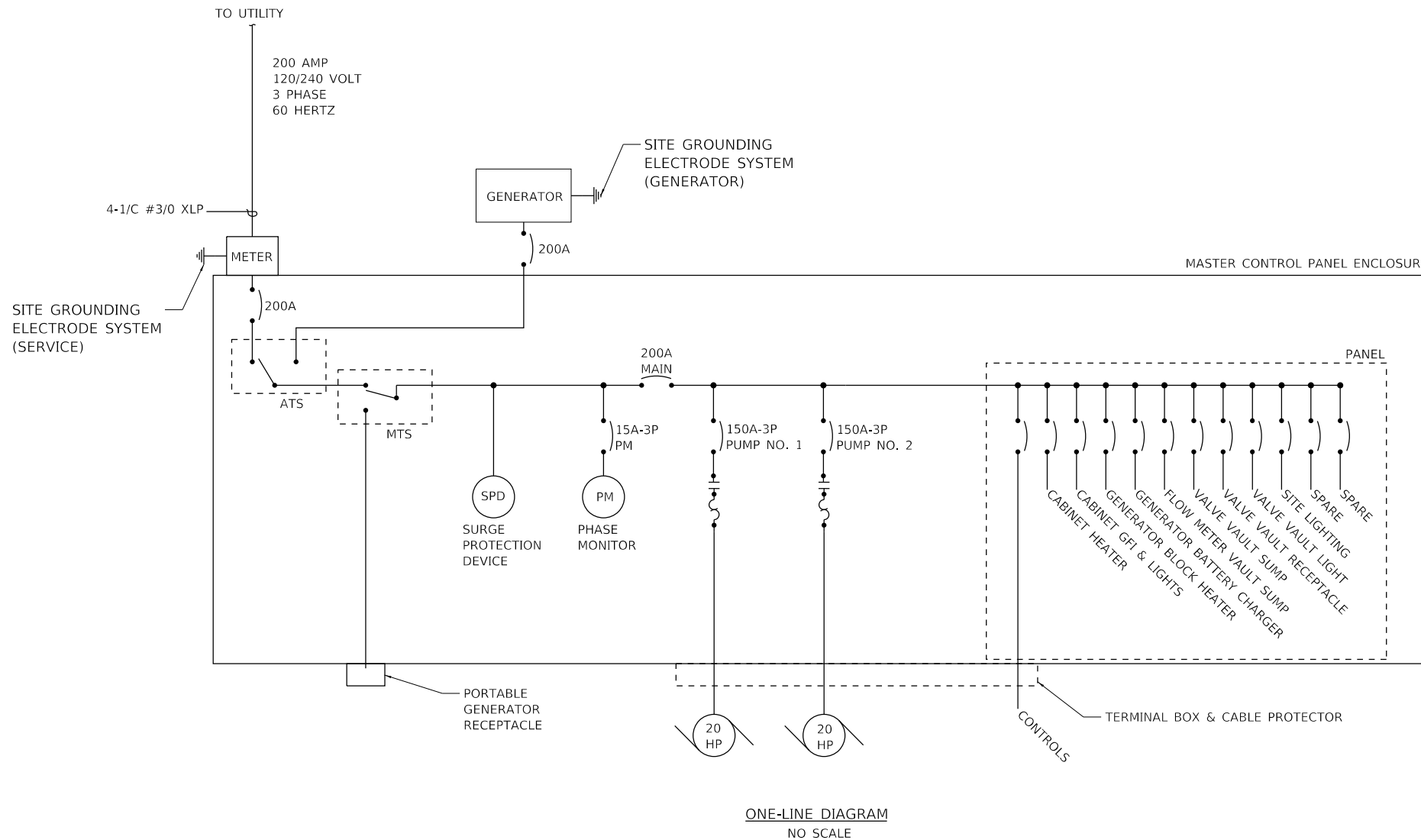
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					COOK	37	19
						CONTRACT NO. 21157.02	

ILLINOIS

PLAN	SURVEYED	DATE
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NOTES

1. ALL COMPONENTS AND ASSEMBLIES SHOWN ARE NEW UNLESS NOTED.
2. CONTRACTOR TO COORDINATE WITH COMED PRIOR TO ANY WORK ON EXISTING ELECTRICAL SERVICE.
3. ALL ELECTRICAL COMPONENTS SHALL BE NEMA 4X RATED.
4. ALL PENETRATIONS IN STRUCTURES SHALL BE SEALED COMPLETELY.
5. INSTALLATION OF ELECTRICAL SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE 2020 NATIONAL ELECTRICAL CODE, 2020 NATIONAL ELECTRICAL SAFETY CODE, OCCUPATIONAL SAFETY AND HEALTH ACT, APPLICABLE LOCAL CODES AND REGULATIONS.
6. EQUIPMENT SHALL BE GROUNDED AND BONDED IN ACCORDANCE WITH 2020 NATIONAL ELECTRICAL CODE, 2020 NATIONAL ELECTRICAL SAFETY CODE, AND RELATED CODES.
7. CONDUIT PENETRATIONS SHALL BE MADE THROUGH THE BOTTOM OF FOUNDATION ONLY.
8. ALL BREAKERS SHALL BE 20A UNLESS OTHERWISE NOTED.



USER NAME = WaterResources	DESIGNED - LAM	REVISED -
	DRAWN - CLB	REVISED -
PLOT SCALE = 20.0000' / 1"	CHECKED - LAM	REVISED -
PLOT DATE = 10/29/2021	DATE - 10/1/2021	REVISED -

VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
 ONE LINE DIAGRAM AND ELECTRICAL DETAILS

SCALE: N.T.S. SHEET NO. 2 OF 3 SHEETS STA. - TO STA. -

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	20
CONTRACT NO. 21157.02			ILLINOIS	

3-PH FEEDTHRU COMPT TR PAD - ESS(2)(1)(2)

C5293.1	TRANSFORMER		SECONDARY CONDUIT CONFIGURATIONS (24)				ESTIMATING DATA	
	kVA	MIN SEC VOLTAGE	3/4" CONDUIT		4" CONDUIT		REINFORCING BARS (FT)	CONCRETE (CU YD)
			MAX NUMBER	MAX NUMBER	MAX NUMBER	MAX NUMBER		
.A	75	150	208/120	8	6	8	180	0.75
			240/120	8	6	8		
			480/277	8	6	8		
.B	225	500	208/120	8	9	8	180	0.75
			240/120	8	9	8		
			480/277	8	9	8		
.B	500	750	208/120	16	12	12	240	2.80
			240/120	16	12	12		
			480/277	16	12	12		
.B	500	1000	208/120	9	9	9	240	2.80
			480/277	9	9	9		

ITEM	CAT ID	DESCRIPTION	TABLE-1	CAT ID	UNIT	QUANTITY
A		GROUNDING INSTALLATION	C8550. _G0			
C		WIRE, COPPER, OVERHEAD, BARE, 1/0, 19 STR, SOFT DRAWN TINNED, 3	(1)	0000355082	FT	55 60
D		CONNECTOR, COMPRESSION, 1/0 OR 2/0 STR CU. RUN & TAP, BURNDY C		0000368545	EA	1 1

PRESSING TABLE (18)		
ITEM	TOOL & DIE	NO. OF CRIMPS
D	Y-35	
	U-0	1
	U-E	3

NOTES:

APPLICATION

- THIS STANDARD SHALL BE USED FOR THE INSTALLATION OF AN ELECTRIC SERVICE STATION FOUNDATION AS DESCRIBED IN "ComEd's GENERAL TERMS AND CONDITIONS".

SUPPLEMENTARY MATERIAL

- WHEN BARE LEAD COVERED CABLES ARE LOCATED OR PLANNED WITHIN 200 FEET, OMIT ITEM "C" AND REPLACE WITH 1/0 LEAD CLAD COPPER CONDUCTOR (CATID 0000360809). SPECIFY STAINLESS STEEL GROUND RODS PER C8550.G00.
- PRECAST ALTERNATIVES TO THIS POURED DESIGN MAY BE AVAILABLE. CONTACT DISTRIBUTION STANDARDS.

INFORMATION

- THE CUSTOMER TO INSTALL THE TRANSFORMER FOUNDATION, 1 INCH CONDUITS, AND TRENCH FOR ComEd GROUND WIRE.
- ComEd TO PROVIDE, INSTALL, AND TEST THE GROUND WIRE AND RODS.
- AFTER PRIMARY AND SECONDARY CONDUITS ARE IN PLACE, BACKFILL WITH SCREENINGS, SAND, OR FINE EXCAVATED MATERIAL. COMPACT THOROUGHLY BEFORE POURING FOUNDATION.
- CONCRETE TO BE IN ACCORDANCE WITH THE LATEST EDITION OF THE APPLICABLE ACI CODE AND AIR ENTRAINED. IT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS. AIR ENTRAINMENT SHALL BE 4 TO 7 PERCENT OF THE VOLUME OF CONCRETE.

- TOP OF FOUNDATION TO BE SMOOTH AND LEVEL.
- GRADE AWAY FROM FOUNDATION. FINAL GRADE SHALL BE WELL DRAINED AT ALL TIMES.
- PRIMARY AND SECONDARY CONDUIT MUST COME THROUGH FOUNDATION IN DESIGNATED AREAS. DEVIATIONS FROM THE DESIGN AS SHOWN MUST HAVE ComEd APPROVAL.
- SEE C7723 FOR BURNDY-HUSKY DIE SET CROSS REFERENCE.
- DO NOT PLACE CONDUITS UNDER THIS SECTION OF FOUNDATION IF AVOIDABLE.
- DO NOT DISTURB GROUND IN FOUNDATION AREA MORE THAN NECESSARY WHEN INSTALLING CONDUIT.
- TERMINATE PRIMARY AND SECONDARY CONDUITS FLUSH WITH TOP OF FOUNDATION.
- BOX OUT PRIMARY CONDUIT OPENING.
- BOX OUT SECONDARY CONDUIT OPENING.
- MAXIMUM NUMBER OF CONDUITS IS BASED UPON NUMBER OF TERMINATIONS ALLOWED ON SECONDARY TERMINAL.
- CONSULT SPILL PREVENTION, CONTROL AND COUNTERMEASURES (SPCC) PROGRAM OR ENVIRONMENTAL SERVICES IF TOTAL OIL CAPACITY EQUAL TO OR EXCEEDING 1320 GALLONS EXISTS OR IS PLANNED AT ESS SITE.

ACAD

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ComEd SYSTEM STANDARD

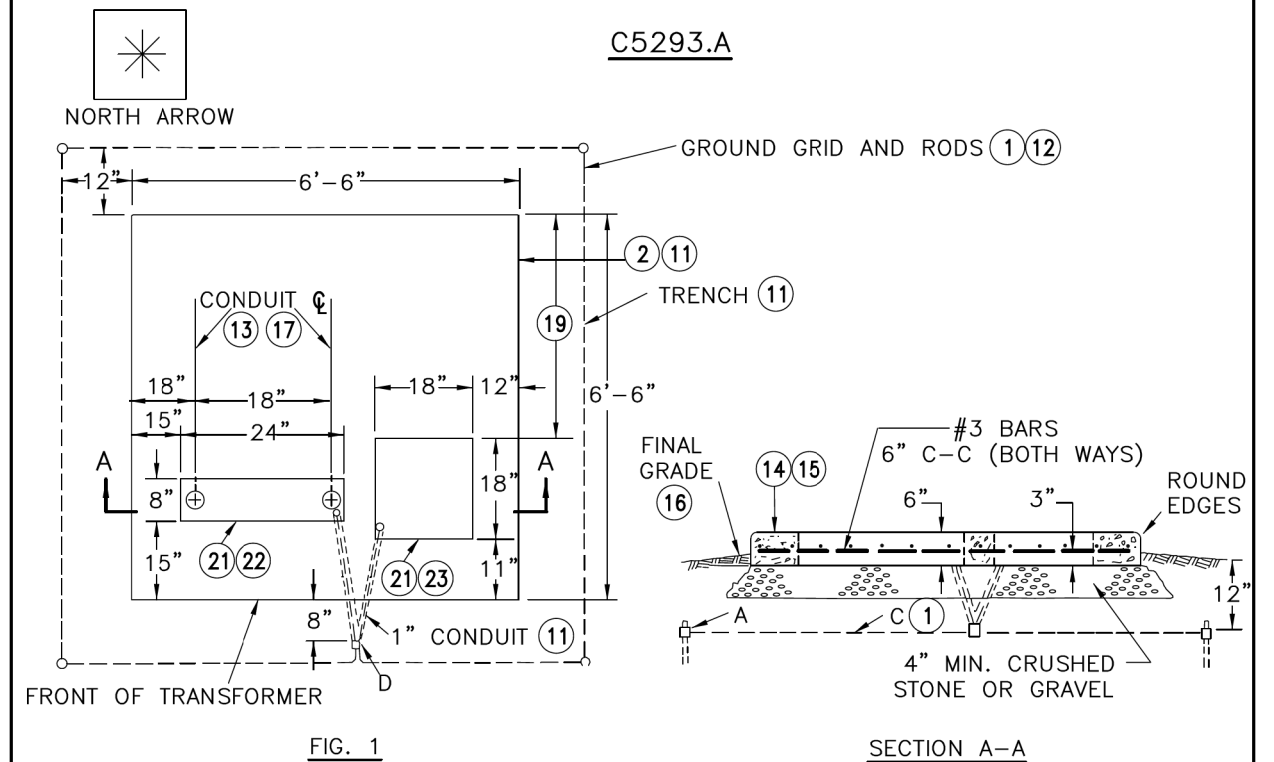


FIG. 1

SECTION A-A

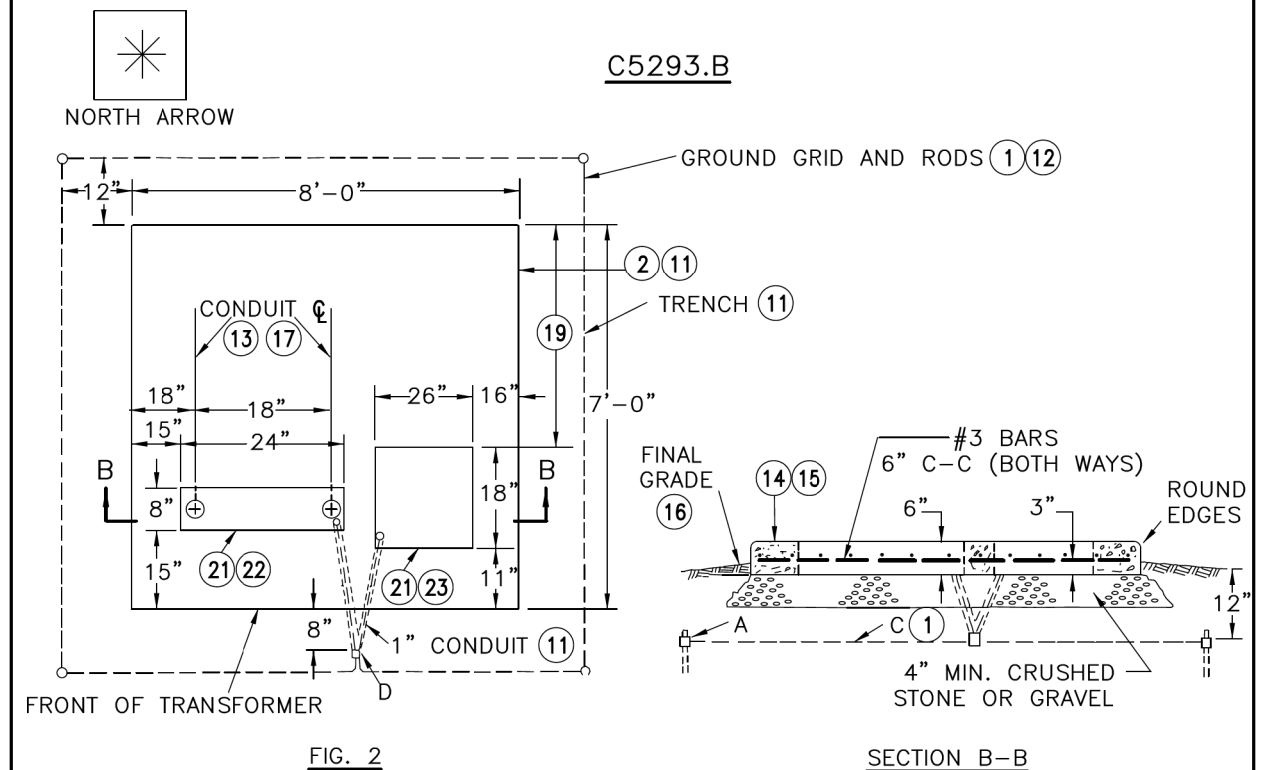


FIG. 2

SECTION B-B

ACAD

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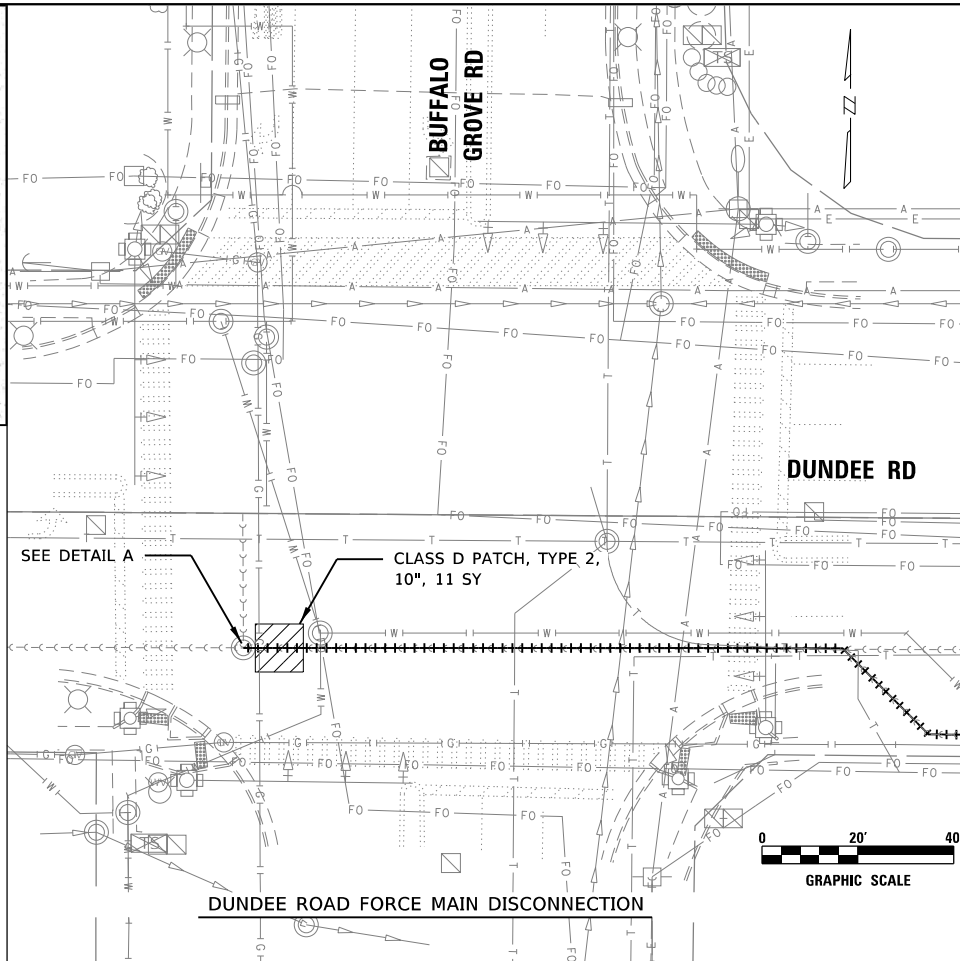
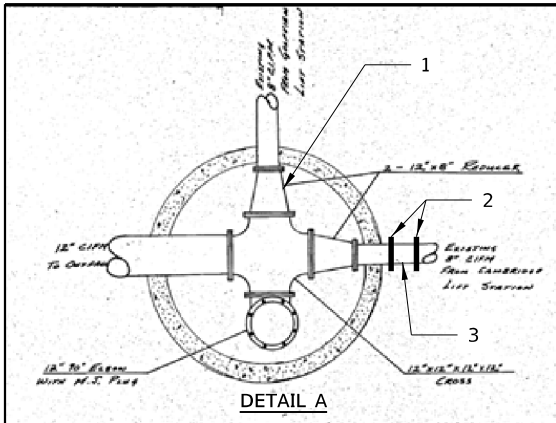
ComEd SYSTEM STANDARD

DATE	BY	SURVEYED	PLANNED	NOTED	FILED

DATE	BY	SURVEYED	PLANNED	NOTED	FILED

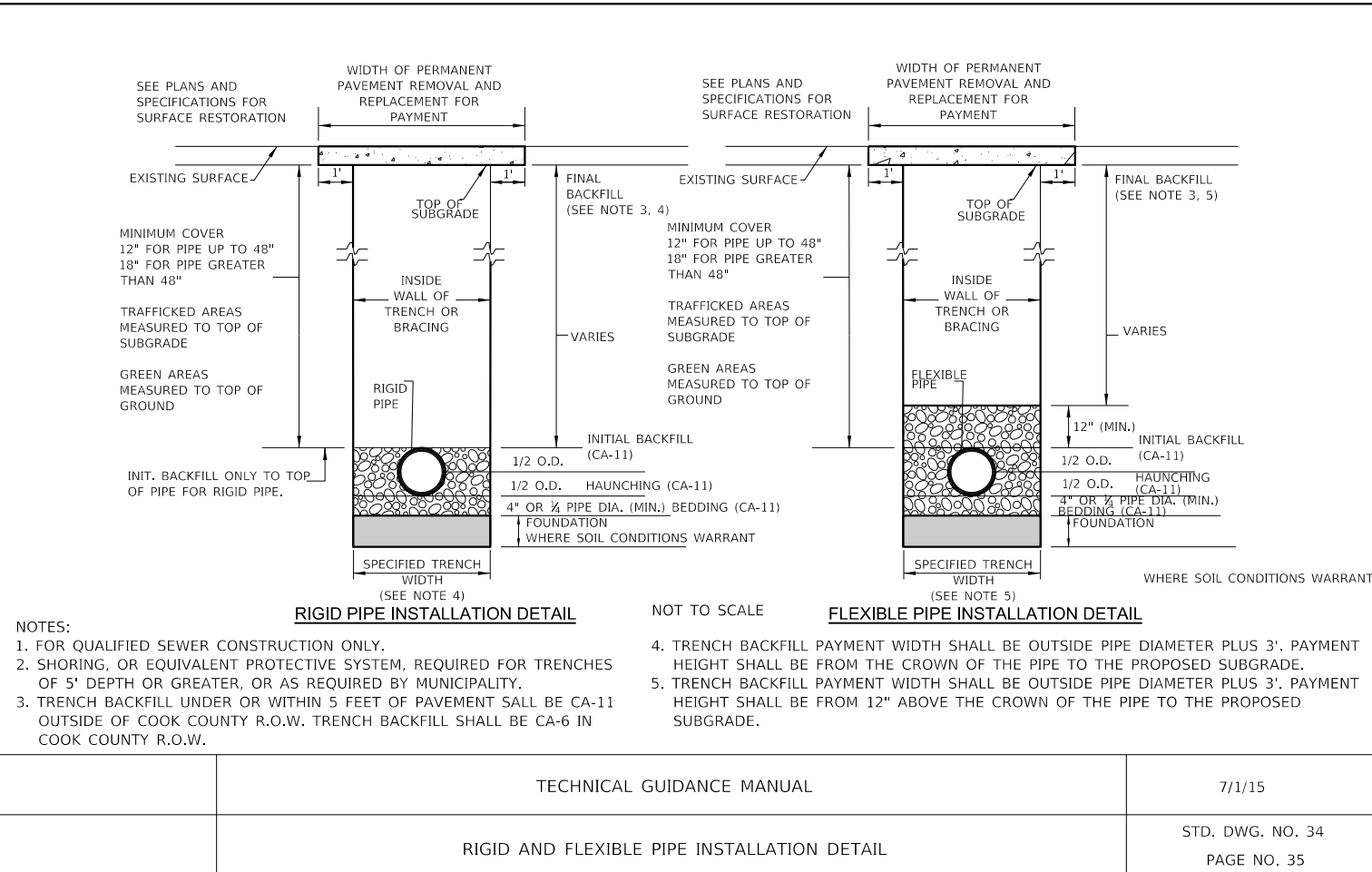
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PLOT DATE = 10/29/2021

DATE	
BY	
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	PLOTTED
	ALIGNED
	CHECKED
	FILED
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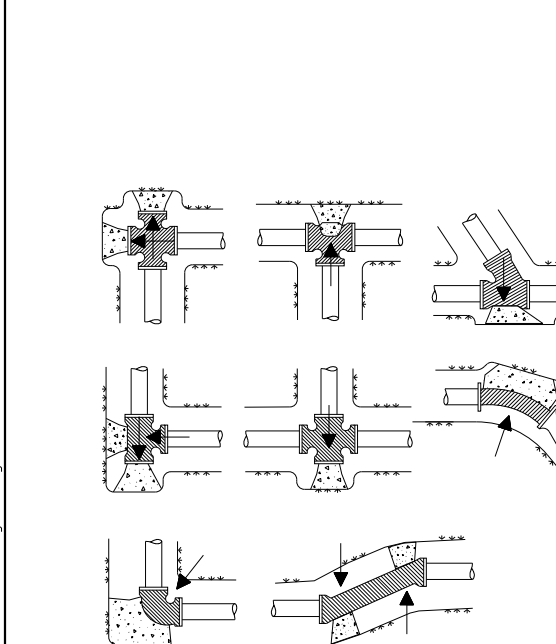


- SCHEDULE**
- COORDINATE SHUTDOWN OF GOLFOVIEW LIFT STATION WITH VILLAGE. SHUTDOWN TIME SHALL NOT EXCEED 2 HOURS.
 - CAP EXISTING FORCE MAIN WITH 8" MJ PLUG. PLUG.
 - CUT AND REMOVE 2' OF EXISTING 8" FORCE MAIN.

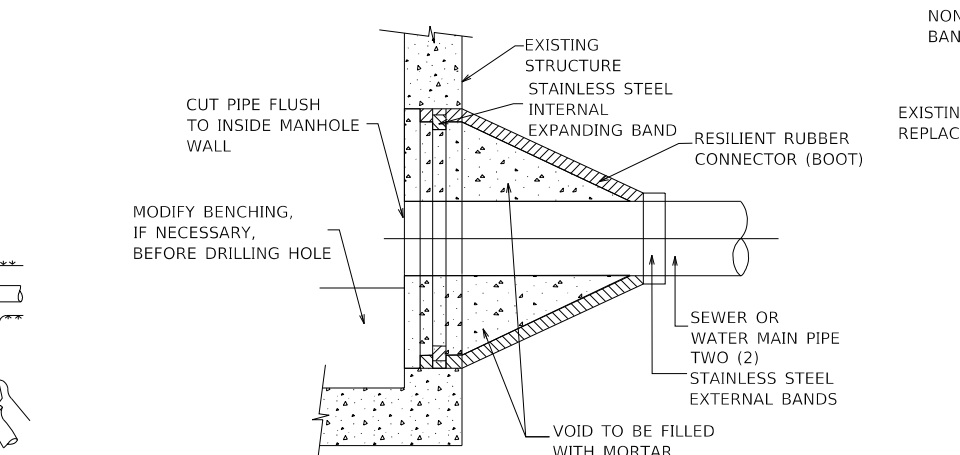
- NOTES**
- UTILIZE VACUUM TRUCK TO DEWATER SEWAGE DURING THE WORK.
 - WASH DOWN EXCESS SEWAGE INSIDE THE STRUCTURE AFTER COMPLETION OF DISCONNECTION AND VAC OUT.



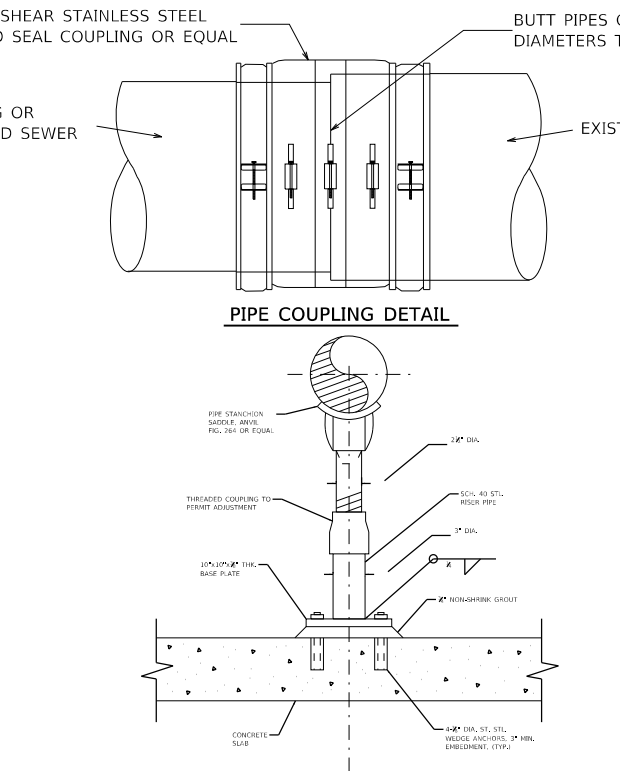
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BY	
PROFILE	SURVEYED
	PLOTTED
	GRADES CHECKED
	STRUCTURE NOTATIONS CHECKED
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NO.	



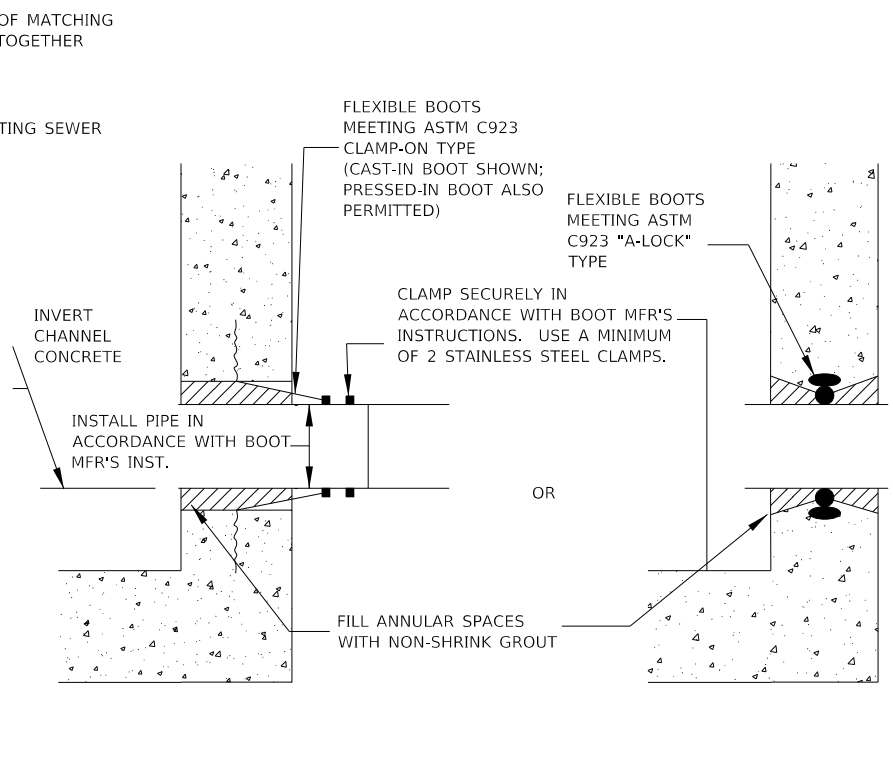
- ALL BLOCKS BEAR AGAINST UNDISTURBED EARTH.
- ARROWS INDICATE DIRECTION OF THRUST.
- ALL BLOCKS TO BE 3000 P.S.I. CONCRETE.
- ALL FITTINGS SHOWN IN PLAN EXCEPT VERTICAL BEND.



- NOTES:**
- RESILIENT RUBBER CONNECTOR COMPLYING WITH ASTM STANDARD C-923 (MOST RECENT EDITION) SHALL BE USED.
 - CORE-DRILL CIRCULAR OPENING IN STRUCTURE WALL OF DIAMETER NECESSARY TO FIT THE REQUIRED BOOT SIZE.
 - KOR-N SEAL FLEXIBLE RUBBER BOOT (MANUFACTURED BY NATIONAL POLLUTION CONTROL SYSTEMS, INC.) MAY BE USED IF APPROVED BY VILLAGE ENGINEERING DEPARTMENT.
 - CUT, SHAPE AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW FROM NEW CONNECTION.
 - CLEAN EXISTING STRUCTURE AND SEWER PIPE OF ANY DIRT, CONCRETE OR DEBRIS WHICH MAY ACCUMULATE DURING THE CONSTRUCTION PROCESS.



- NOTE:**
- PIPE SUPPORT SHALL BE HOT DIPPED GALVANIZED.



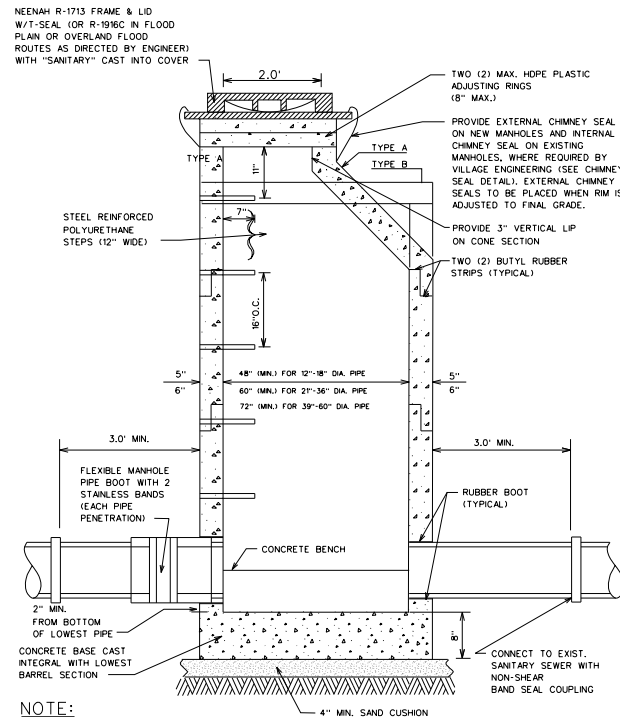
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PLOT SCALE = 2.0000' / in.	DRAWN - CLB	REVISED -
PLOT DATE = 10/29/2021	CHECKED - LAM	REVISED -
	DATE - 10/1/2021	REVISED -

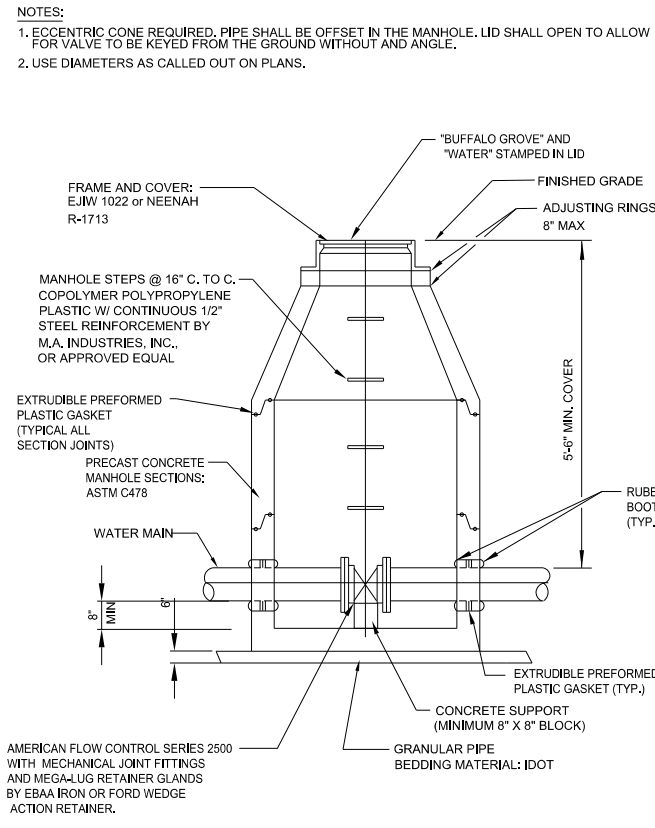
VILLAGE OF BUFFALO GROVE		CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION		RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		VILLAGE DETAILS				COOK	37	22
SCALE: 1" = 20'		SHEET NO. 1 OF 4 SHEETS		STA. - TO STA. -		CONTRACT NO. 21157.02		
ILLINOIS								

DATE	
BY	
PLAN	SURVEYED
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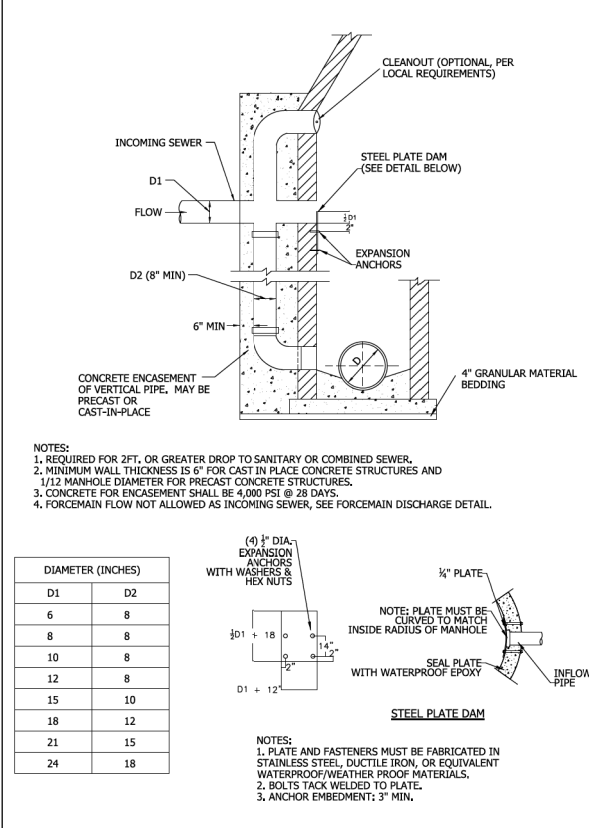


- NOTE:**
1. MANHOLES MUST CONFORM TO ASTM C-478.
 2. MANHOLE SECTIONS TO BE TONGUE AND GROOVED.
 3. BENCHES MUST BE PROVIDED IN ALL SANITARY SEWER MANHOLES
 4. USE EXTERNAL LIFTING "HOLES" ONLY, BUT NOT FULL PENETRATION.
 5. ALL PIPE PENETRATIONS AND ALL NON-PRECAST OPENINGS SHALL BE CORED, RUBBER BOOTED AND INTERIOR MORTARED AROUND PIPE.
 6. USE ECCENTRIC CONE ONLY.

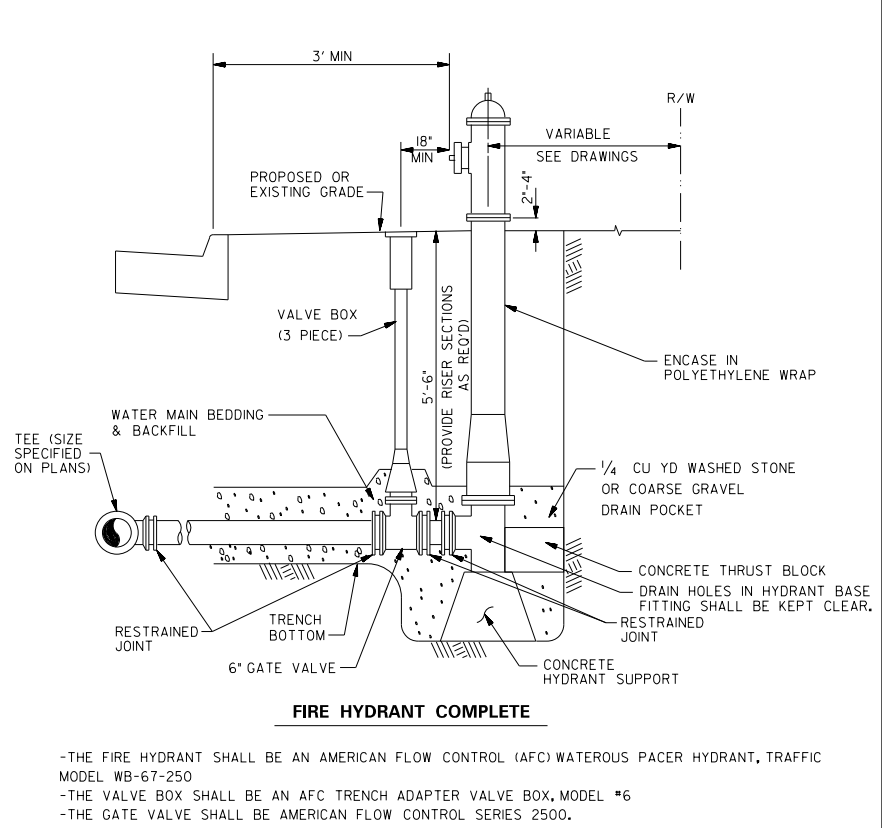
SANITARY MANHOLE DETAIL



STANDARD VALVE IN VAULT
NOT TO SCALE

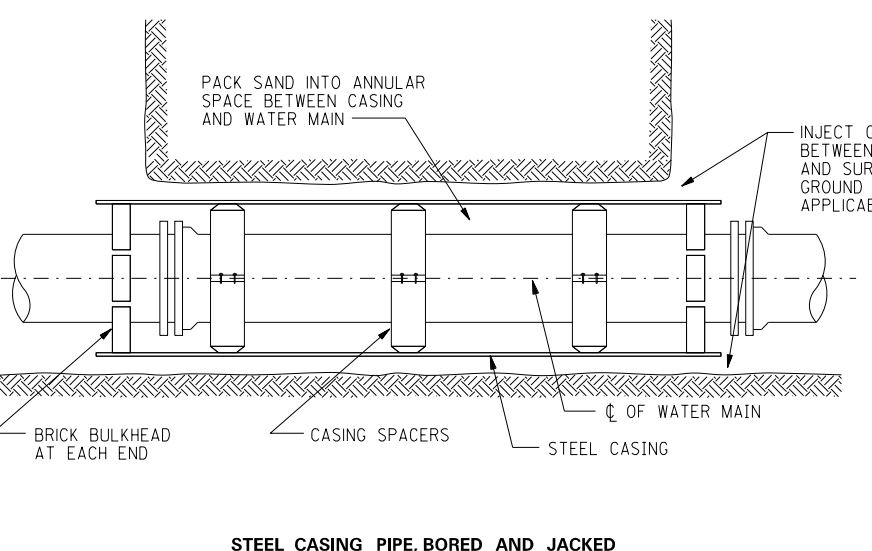


TYPICAL DROP MANHOLE CONNECTION
NOT TO SCALE

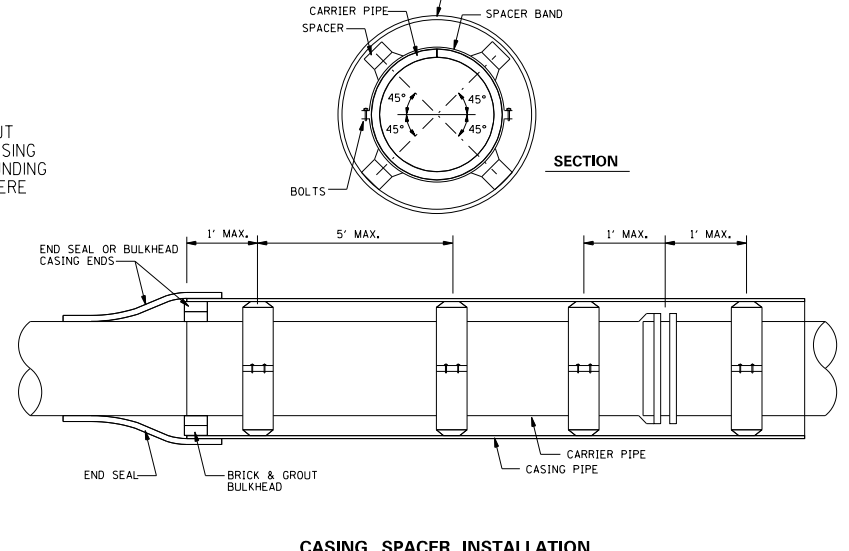


FIRE HYDRANT COMPLETE
-THE FIRE HYDRANT SHALL BE AN AMERICAN FLOW CONTROL (AFC) WATEROUS PACER HYDRANT, TRAFFIC MODEL WB-67-250
-THE VALVE BOX SHALL BE AN AFC TRENCH ADAPTER VALVE BOX, MODEL #6
-THE GATE VALVE SHALL BE AMERICAN FLOW CONTROL SERIES 2500.
-FIRE HYDRANT COMPLETE SHALL INCLUDE:
1. AUXILIARY VALVE
2. DUCTILE IRON WATER MAIN LEAD AND TEE
3. FIRE HYDRANT

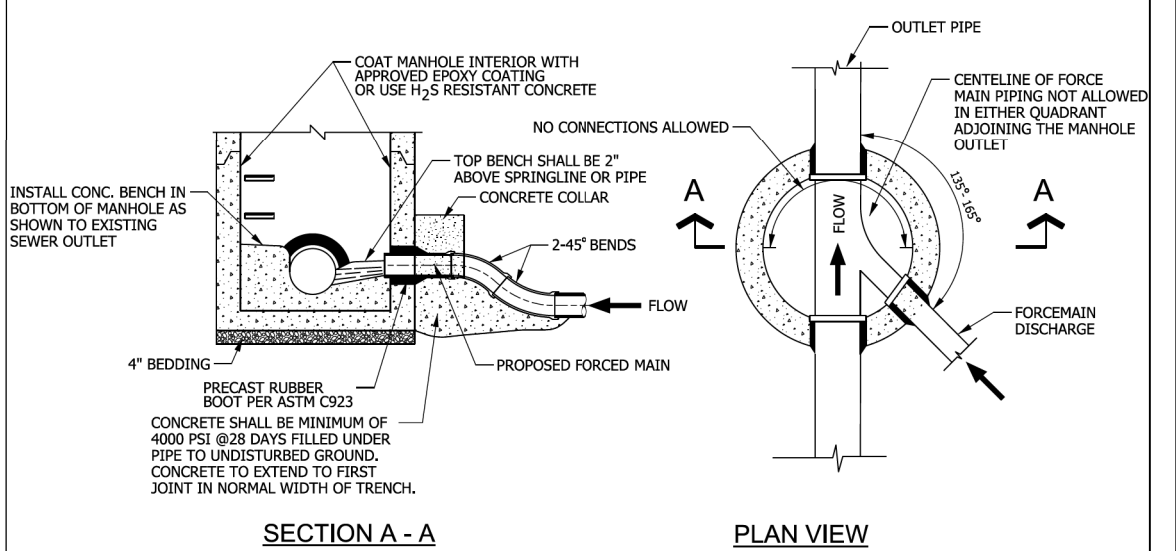
DATE	
BY	
PROFILE	SURVEYED
	PLOTTED
	GRADES CHECKED
	STRUCTURE NOTATIONS OK'D
NO.	
NO.	



STEEL CASING PIPE, BORED AND JACKED
*STEEL CASING DIA. AS SPECIFIED



CASING SPACER INSTALLATION



TYPICAL FORCEMAIN DISCHARGE TO GRAVITY MANHOLE
NOT TO SCALE

TECHNICAL GUIDANCE MANUAL		7/1/12
TYPICAL FORCEMAIN DISCHARGE TO GRAVITY MANHOLE		STD. DWG. NO. 35
		PAGE NO. 36

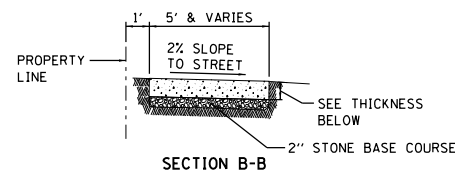
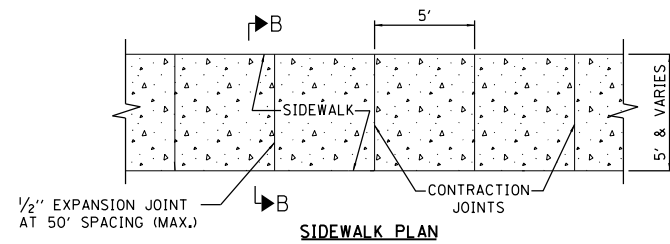
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USER NAME = WaterResources	DESIGNED - LAM	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - CLB	REVISED -
PLOT DATE = 10/29/2021	CHECKED - LAM	REVISED -
	DATE - 10/1/2021	REVISED -

VILLAGE OF BUFFALO GROVE
CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
VILLAGE DETAILS
SCALE: N.T.S. SHEET NO. 2 OF 4 SHEETS STA. - TO STA. -

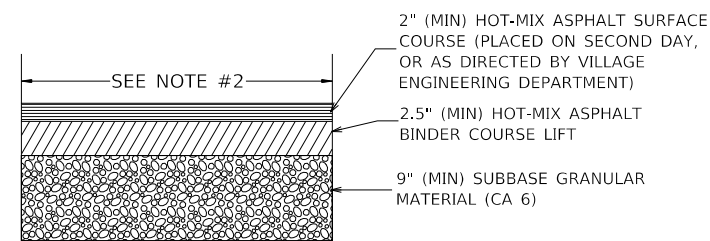
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	23
CONTRACT NO. 21157.02				
ILLINOIS				

DATE	
BY	
PLAN	
NO.	
DATE	
BY	
PROFILE	
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DATE	
BY	



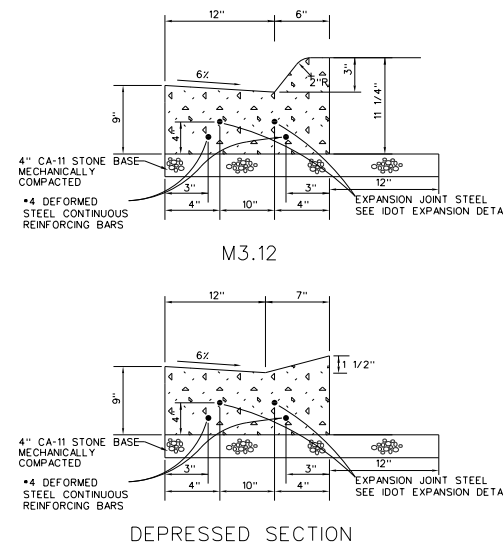
- NOTES:**
1. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 2. ALL POURS MUST BE SEPARATE. NO MONOLITHIC POURS WITH CURB AND GUTTER, DRIVEWAY APPROACHES, AND SIDEWALKS.
 3. ALL SAWCUTS ARE TO BE FULL DEPTH.
 4. THE CONTRACTOR SHALL NOTIFY THE VILLAGE 48 HOURS PRIOR TO COMMENCING WORK.
 5. CURING AGENT SHALL BE INSTALLED ON ALL CONCRETE WORK.
 6. INSTALL CONTRACTION JOINTS 1/8" WIDE EVERY FIVE (5) LINEAL FEET.
 7. INSTALL 1/2" EXPANSION MATERIAL EVERY FIFTY (50) LINEAL FEET.
 8. INSTALL 1/2" EXPANSION MATERIAL BETWEEN THE SIDEWALKS AND ALL STRUCTURES SUCH AS LIGHT STANDARDS, TRAFFIC SIGNAL STANDARDS, POLES, COLUMNS, OR ANY STRUCTURE WHICH EXTENDS THROUGH THE SIDEWALK.
 9. SIDEWALK THICKNESS: 5" - EVERYWHERE, EXCEPT WHERE DRIVEWAYS CROSS SIDEWALKS.
8" - WHERE RESIDENTIAL DRIVEWAYS CROSS SIDEWALKS IN COOK COUNTY ROW.
8" - WHERE COMMERCIAL DRIVEWAYS CROSS SIDEWALKS.
- SIDEWALK CONSTRUCTION**

DATE	
BY	
PROFILE	
NO.	
DATE	
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- NOTES:**
1. REFER TO GRADING PLAN FOR DRIVEWAY SLOPES.
 2. DRIVEWAY WIDTH AND GEOMETRY SHALL BE AS SHOWN ON THE PLANS.

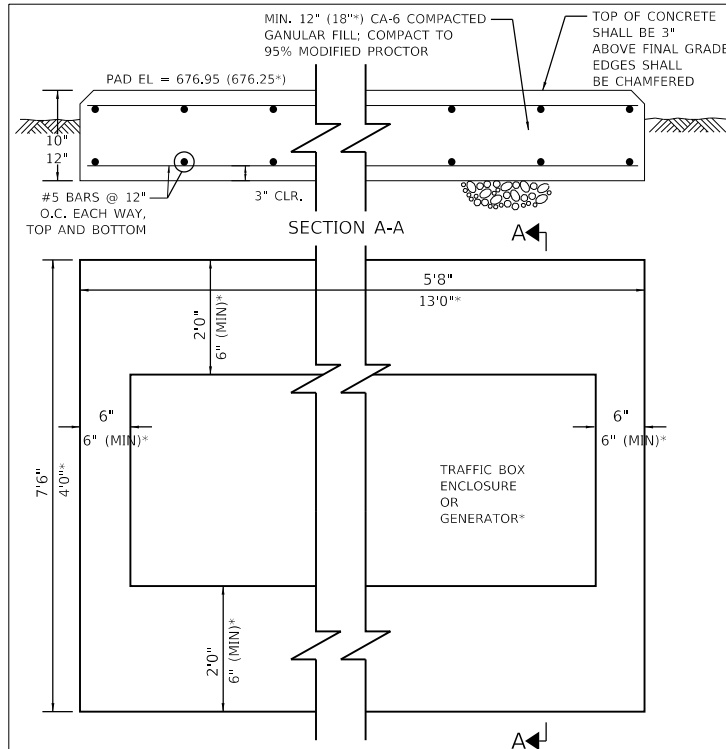
**EXHIBIT NO. 501
(MODIFIED)**



M3.12 CURB AND GUTTER DETAIL

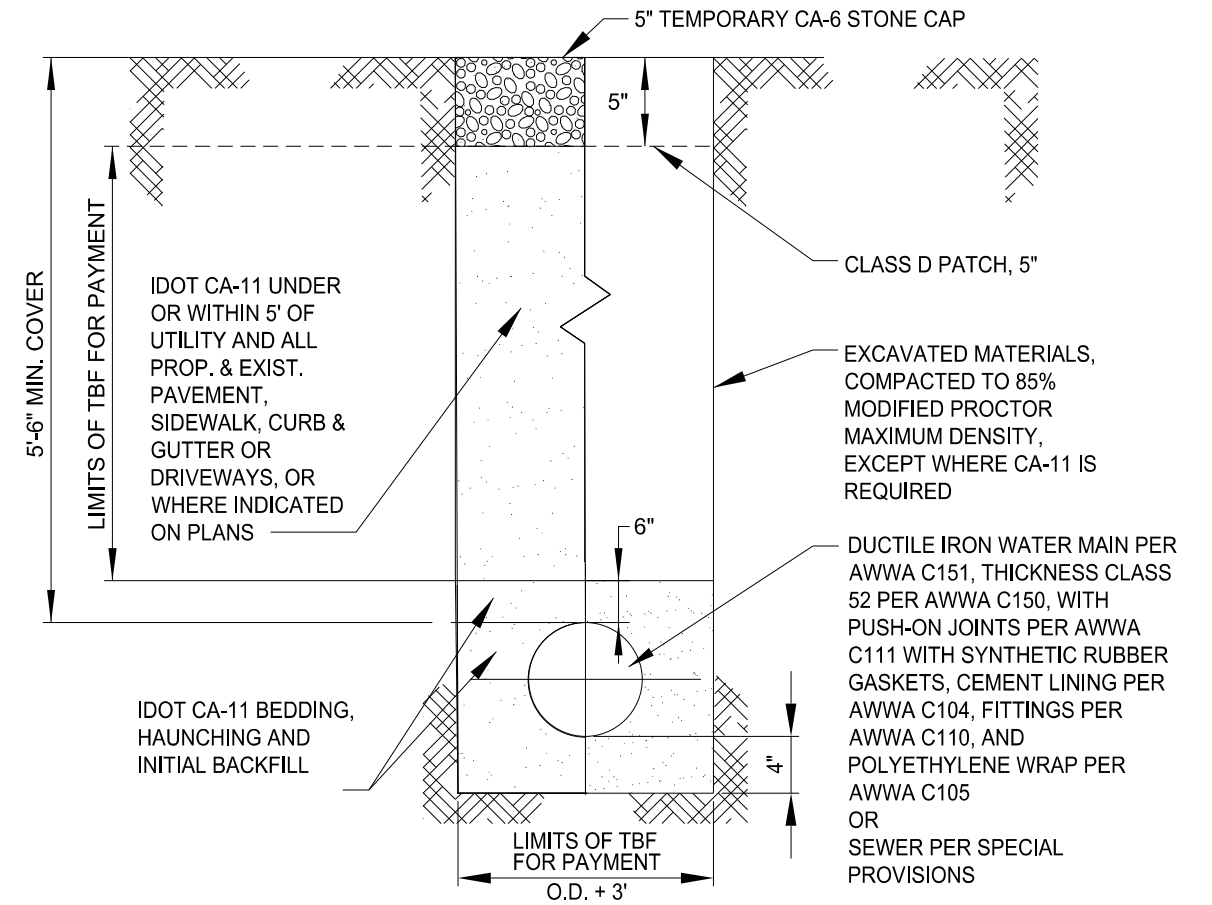
- NOTE:**
1. SET EXPANSION JOINTS AT ALL P.C.'S, P.T.'S, FIVE FEET ON EITHER SIDE OF ANY FRAMES, AND AT 45' MAX. INTERVALS.
 2. CONTRACTION JOINTS SHALL BE TOoled AT 15' INTERVALS AND SAW CUT WITHIN 24 HOURS.
 3. JOINTS SHALL BE CLEANED AND SEALED ACCORDING TO ARTICLE 420.12.
 4. CURING COMPOUND REQUIRED.
 5. IDOT APPROVED CURBS ALSO PERMITTED.

Prepared by the Village Engineering Division



**ENCLOSURE / GENERATOR
TRAFFIC BOX CONCRETE PAD DETAIL**

- NOTES:**
1. FOUNDATION DIMENSIONS AND REINFORCEMENT SHOWN HEREON ARE PRELIMINARY AND REPRESENT MINIMUM CONSTRUCTION REQUIREMENTS.
 2. REFER TO SHEET 25 FOR TRAFFIC BOX ENCLOSURES DIMENSIONS AND LAYOUT.
 3. DIMENSIONS / NOTES WITH ASTERISK * REFER TO STANDBY GENERATOR PAD. OTHER NOTES / DIMENSIONS REFER TO TRAFFIC BOX ENCLOSURE.



WATER MAIN NOTES:

1. MAINS SHALL BE PRESSURE TESTED AT A MAXIMUM PRESSURE OF 150 PSI FOR 2 HOUR AND SHALL NOT EXCEED THE ALLOWABLE LEAKAGE WITH AWWA C600 AND AWWA C603. IF MAINS TO BE TESTED INCLUDE CONCRETE THRUST BLOCKING, DO NOT BEGIN TEST UNTIL AT LEAST 5 DAYS AFTER THE INSTALLATION OF THE THRUST BLOCKING.
2. NO CHAINS SHALL BE USED DURING THE INSTALLATION OF THE PROPOSED WATER MAIN. NYLON STRAPS SHALL BE UTILIZED INSTEAD. ANY PIPE THAT IS SCRATCHED DURING INSTALLATION SHALL BE SPRAYED WITH A DIALECTRIC UNDERCOATING PAINT.
3. RESTRAINED JOINT PIPE SHALL BE USED THROUGH ALL CASING.
4. 16-INCH AND LARGER MAINS SHALL INCLUDE RESTRAINED JOINT PIPE FOR THREE PIPE LENGTHS FROM EACH DIRECTIONAL CHANGE (I.E. BENDS, ELBOWS).

WATER MAIN INSTALLATION

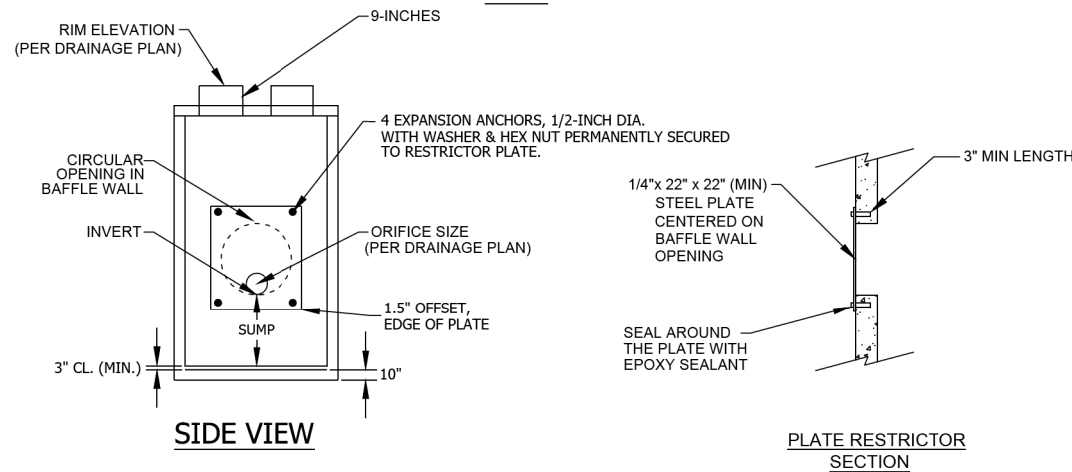
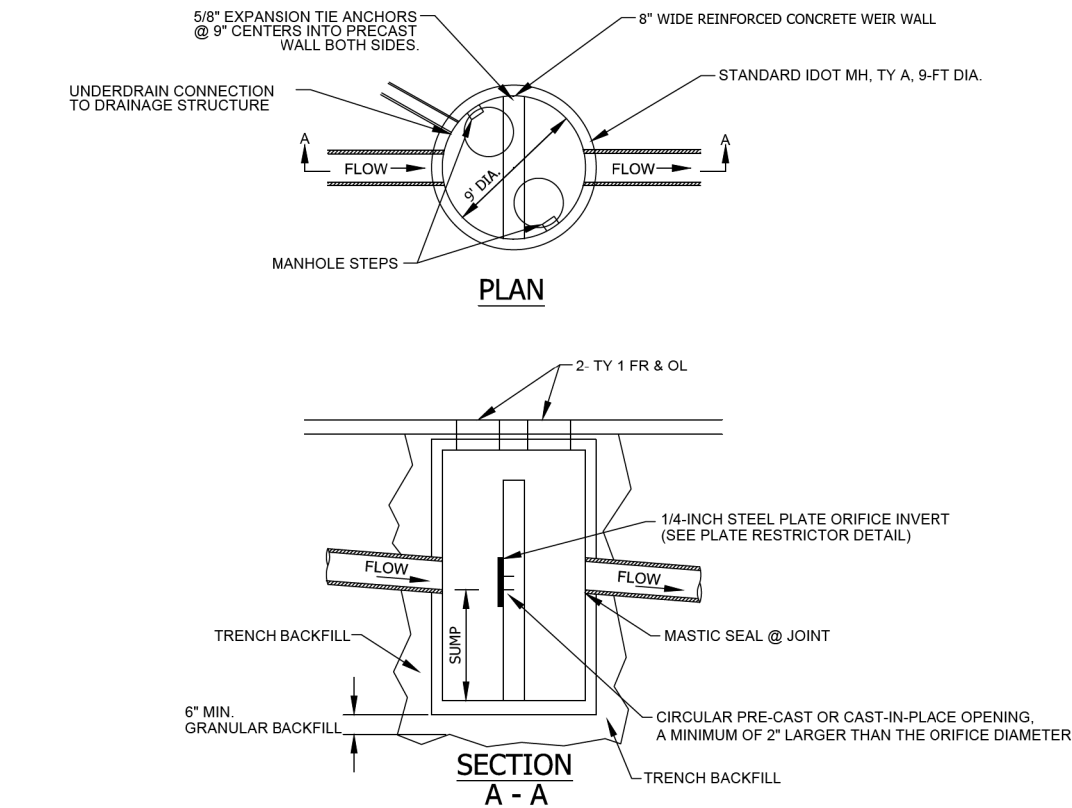
NOT TO SCALE

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	DRAWN - CLB	REVISED -
PLOT SCALE = 2.0000' / in.	CHECKED - LAM	REVISED -
PLOT DATE = 10/29/2021	DATE - 10/1/2021	REVISED -

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	24
CONTRACT NO. 21157.02				
ILLINOIS				

DATE	
BY	
PLAN	
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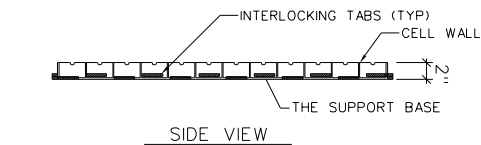
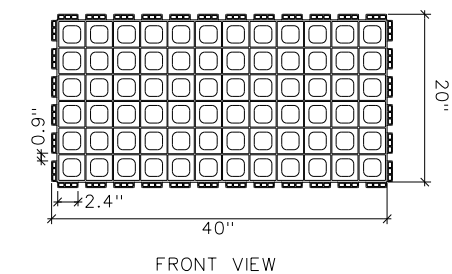
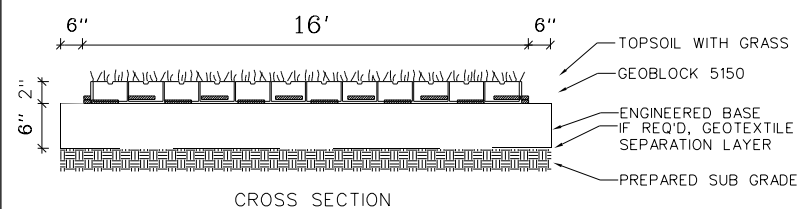
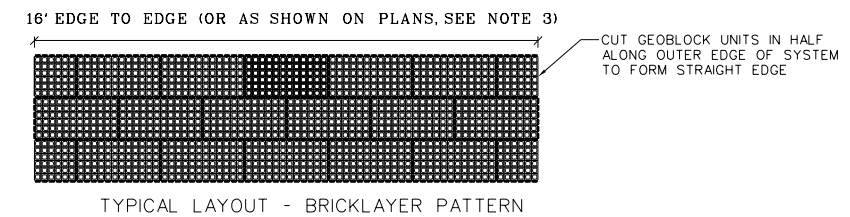
DATE	
BY	
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PROFILE	
NO.	



- NOTES:
1. STRUCTURE AND BAFFLE WALL FABRICATED USING REINFORCED PORTLAND CEMENT CONCRETE.
 2. RESTRICTORS LESS THAN 4" IN DIAMETER PROVIDE HOOD/SNOOT OR WIRE MESH
 3. BAFFLE WALL PERMANENTLY INSTALLED AS PRECAST OR CAST-IN-PLACE
 4. PIPE TO STRUCTURE CONNECTIONS SHALL BE ASTM C923 IN COMBINED SEWER AREAS.
 5. CAUTION: 1/4-INCH STEEL PLATE DIMENSIONS TO BEST FIT PROPOSED STRUCTURE.
 6. ANCHOR EMBEDMENT SHALL BE 3-INCHES MINIMUM.
 7. SEE IDOT STANDARD MANHOLE DETAILS FOR MORE INFORMATION.

MANHOLE W/ RESTRICTOR PLATE

GEOBLOCK 5150 MATERIAL SPECIFICATION	
MATERIAL	UP TO 97% RECYCLED POLYETHYLENE
COLOR	RANGES DARK SHADES GRAY TO BLACK
CHEMICAL RESISTANCE	SUPERIOR
CARBON BLACK FOR UV STABILIZATION, %	1.5 TO 2.0%
UNIT MIN CRUSH STRENGTH - EMPTY @ 70F (21C)	420 PSI (2,900 KPa)
UNIT MIN CRUSH STRENGTH - SAND FILLED @ 70F (21C)	7,058 PSI (48,734 KPa)
FLEXURAL MODULUS @ 73F (21C)	35,000 PSI (240,000 KPa)
NOMINAL DIMENSIONS - WIDTH X LENGTH	20 X 40 IN (0.5 X 1.0 M)
NOMINAL UNIT DEPTH	2 IN (50 MM)
NOMINAL AREA	5.3 SQFT (0.5 SQMTR)
CELLS PER UNIT	72
CELL SIZE	3.1 X 3.2 IN (79 X 81 MM)
TOP OPEN AREA PER UNIT	87%
BOTTOM OPEN AREA PER UNIT	41%
INTERLOCKING OFFSET SHEAR TRANSFER PINS	12 TABS PER 40 IN (PER 1 M)
NOMINAL WEIGHT PER UNIT	9.0 LBS (4.0 KG)
RUNOFF COEFFICIENT @ 2.5 IN/HR (64 MM) RAIN	0.15
UNITS PER PALLET	50



GEOBLOCK POLYETHYLENE POROUS PAVEMENT SYSTEM

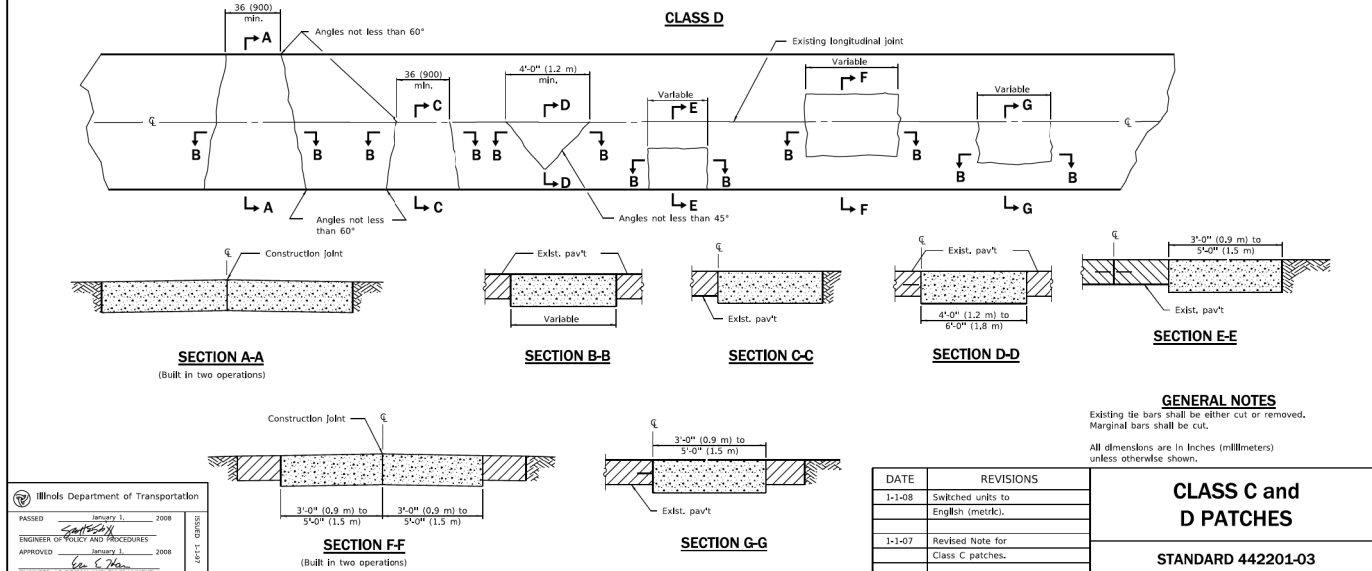
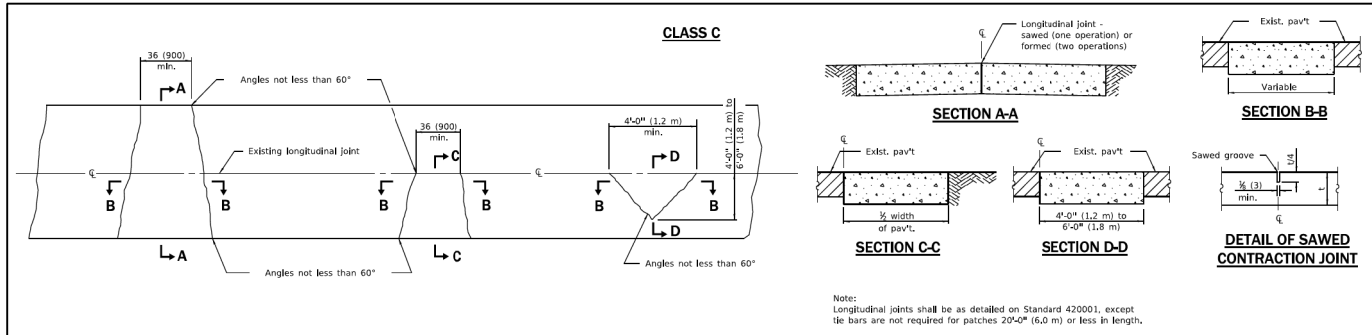
- NOTES
1. SYSTEM SHALL BE A GEOBLOCK 5150 POROUS PAVEMENT SYSTEM, MANUFACTURED BY PRESTO GEOSYSTEMS, APPLETON WISCONSIN.
 2. ENGINEERED BASE SHALL BE A HOMOGENOUS MIXTURE CONSISTING OF CRUSHED ROCK HAVING AN AASHTO #5 OR SIMILAR DESIGNATION BLENDED WITH PULVERIZED TOPSOIL AND VOID COMPONENT GENERALLY CONTAINING AIR AND/OR WATER. THIS HOMOGENOUS MIXTURE WILL PROMOTE VEGETATIVE GROWTH AND PROVIDE REQUIRED STRUCTURAL SUPPORT. THE AGGREGATE PORTION SHALL HAVE A PARTICLE RANGE FROM 0.375 IN TO 1.0 IN WITH A D50 OF 0.5 IN. THE PERCENTAGE VOID-SPACE OF THE AGGREGATE PORTION WHEN COMPACTED SHALL BE AT LEAST 30%. THE PULVERIZED TOPSOIL PORTION SHALL EQUAL 25% OF THE TOTAL VOLUME AND BE ADDED AND BLENDED TO PRODUCE A HOMOGENOUS MIXTURE PRIOR TO PLACEMENT OR WASHED INTO THE IN-PLACE COMPACTED AGGREGATE. ONCE PLACED, THE MIXTURE SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 3. LIMITS OF MAT SHALL BE WITHIN CONSTRUCTION LIMITS SHOWN ON THE EROSION AND LANDSCAPE PLAN. WIDTH SHALL NOT EXCEED 20' WITHOUT WRITTEN DIRECTION BY THE ENGINEER. PLACEMENT OF MATTING BEYOND THESE SPECIFIED LIMITS SHALL BE PAID FOR BY THE CONTRACTOR.

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PLOT SCALE = 2.0000' / in.	DRAWN - CLB	REVISED -
PLOT DATE = 10/29/2021	CHECKED - LAM	REVISED -
	DATE - 10/1/2021	REVISED -

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	26
CONTRACT NO. 21157.02				
ILLINOIS				

PLAN	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	FILED		
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	FILE NAME		



DATE	REVISIONS
1-1-08	Switched units to English (metric).
1-1-07	Revised Note for Class C patches.

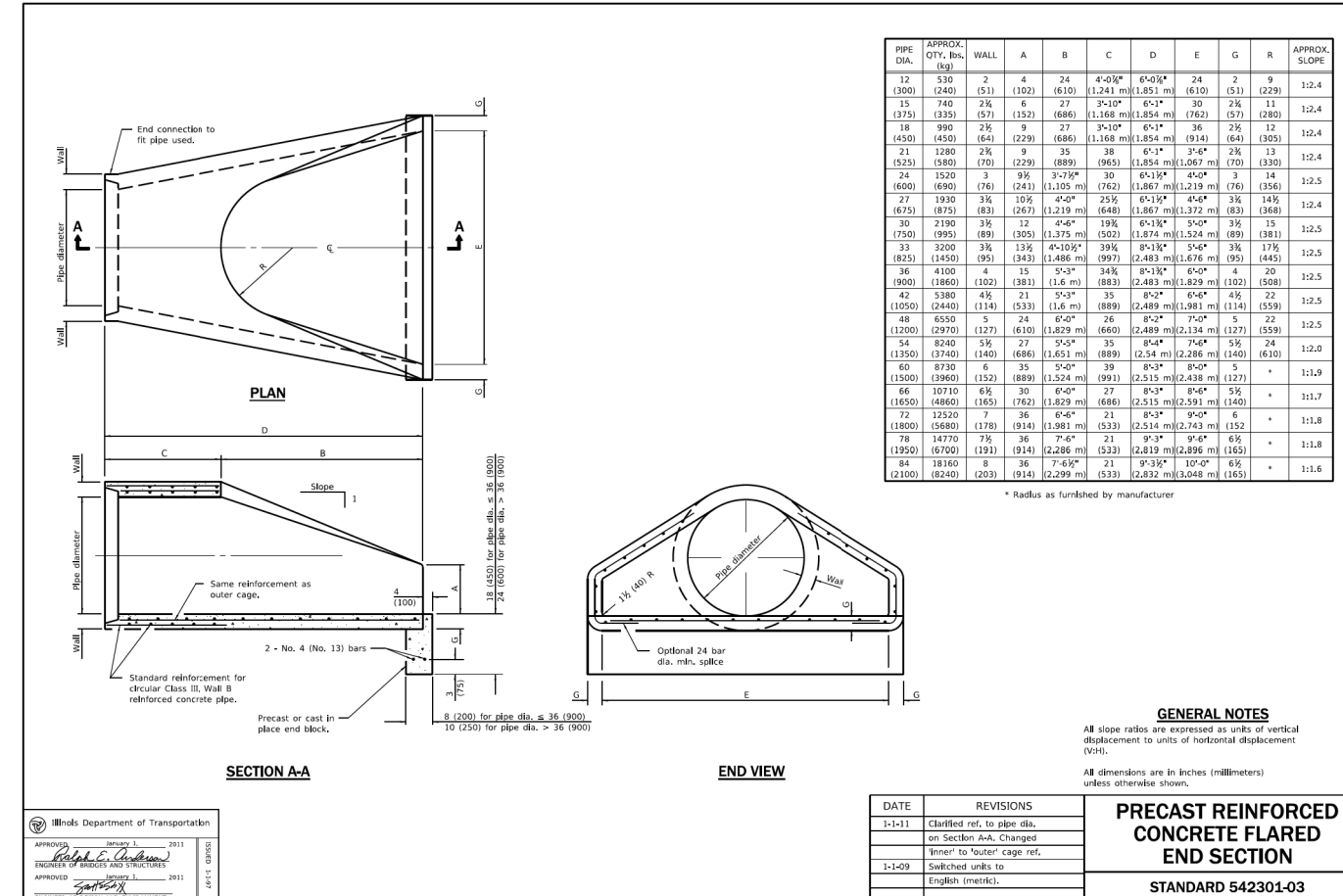
Illinois Department of Transportation

APPROVED January 1, 2008

ENGINEER OF POLICY AND PROCEDURES

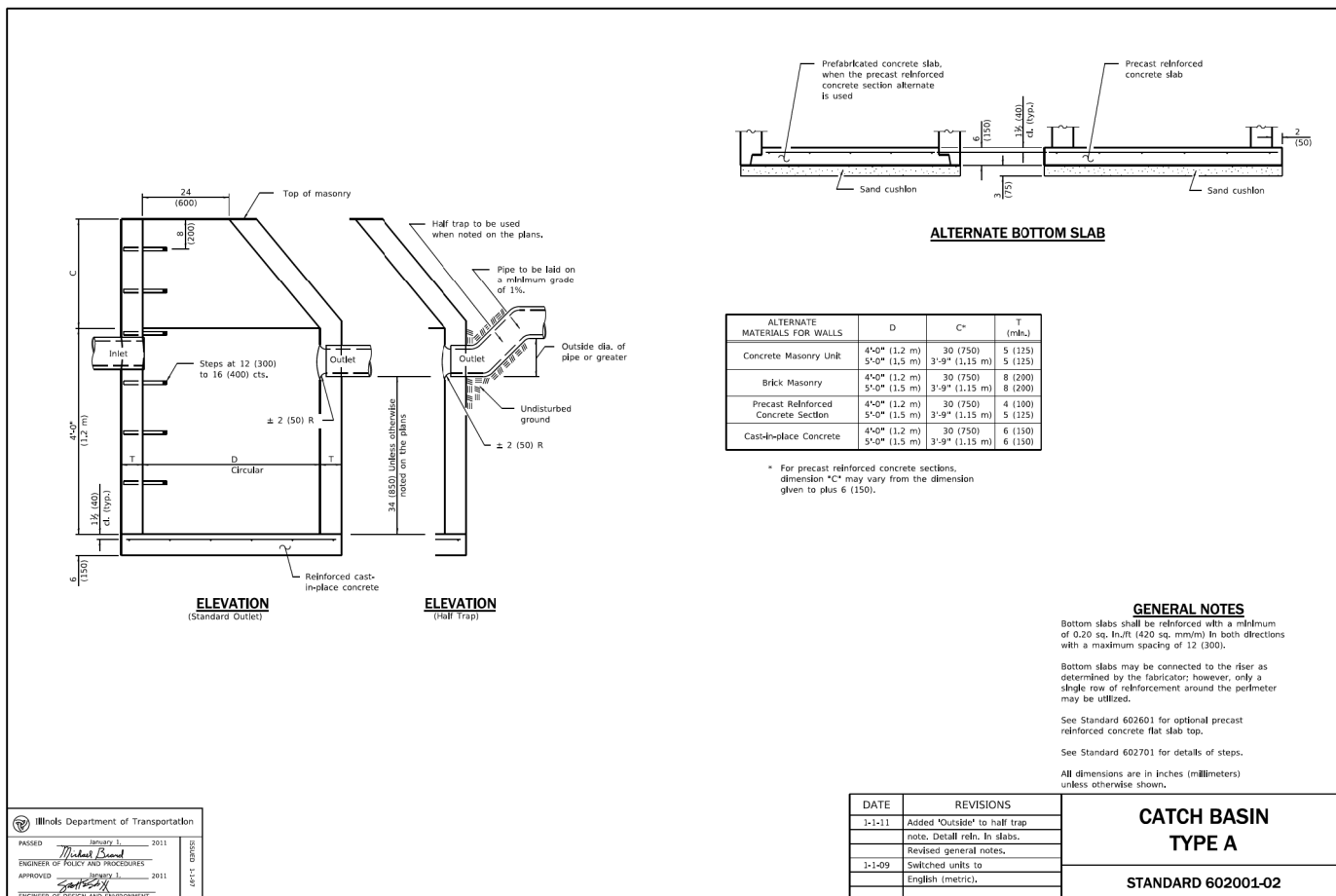
APPROVED January 1, 2008

INSPECTOR OF POLICY AND PROCEDURES



PIPE DIA.	APPROX. QTY. (sq. ft.)	WALL	A	B	C	D	E	G	R	APPROX. SLOPE
12 (300)	530 (240)	2 (4)	24 (610)	4'-0" (1.21 m)	6'-0" (1.83 m)	24 (610)	2 (4)	9 (229)	12.4	
15 (375)	740 (335)	2 (6)	27 (686)	3'-10" (1.168 m)	6'-1" (1.854 m)	30 (762)	2 (6)	11 (280)	12.4	
18 (450)	990 (450)	2 (8)	27 (686)	3'-10" (1.168 m)	6'-1" (1.854 m)	36 (914)	2 (6)	12 (305)	12.4	
21 (525)	1280 (580)	2 (10)	35 (889)	4'-0" (1.21 m)	6'-1" (1.854 m)	42 (1067)	2 (6)	13 (330)	12.4	
24 (600)	1520 (690)	2 (12)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	48 (1219)	2 (6)	14 (356)	12.5	
27 (675)	1930 (875)	2 (15)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	54 (1371)	2 (6)	14 (356)	12.5	
30 (750)	2190 (995)	2 (18)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	60 (1524)	2 (6)	15 (381)	12.5	
33 (825)	2500 (1130)	2 (21)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	66 (1676)	2 (6)	15 (381)	12.5	
36 (900)	2800 (1260)	2 (24)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	72 (1828)	2 (6)	15 (381)	12.5	
42 (1050)	3380 (1530)	2 (30)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	84 (2130)	2 (6)	15 (381)	12.5	
48 (1200)	3960 (1800)	2 (36)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	96 (2432)	2 (6)	15 (381)	12.5	
54 (1350)	4540 (2070)	2 (42)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	108 (2734)	2 (6)	15 (381)	12.5	
60 (1500)	5120 (2340)	2 (48)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	120 (3036)	2 (6)	15 (381)	12.5	
66 (1650)	5700 (2610)	2 (54)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	132 (3338)	2 (6)	15 (381)	12.5	
72 (1800)	6280 (2880)	2 (60)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	144 (3640)	2 (6)	15 (381)	12.5	
78 (1950)	6860 (3150)	2 (66)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	156 (3942)	2 (6)	15 (381)	12.5	
84 (2100)	7440 (3420)	2 (72)	36 (914)	4'-0" (1.21 m)	6'-1" (1.854 m)	168 (4244)	2 (6)	15 (381)	12.5	

PROFILE	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
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	FILE NAME		



ALTERNATE MATERIALS FOR WALLS	D	C*	T
Concrete Masonry Unit	4'-0" (1.2 m)	30 (750)	5 (125)
Brick Masonry	4'-0" (1.2 m)	3'-9" (1.15 m)	5 (125)
Precast Reinforced Concrete Section	4'-0" (1.2 m)	30 (750)	8 (200)
Cast-in-place Concrete	4'-0" (1.2 m)	3'-9" (1.15 m)	8 (200)

DATE	REVISIONS
1-1-11	Added 'Outside' to half trap note. Detail refn. in slabs.
1-1-09	Switched units to English (metric).

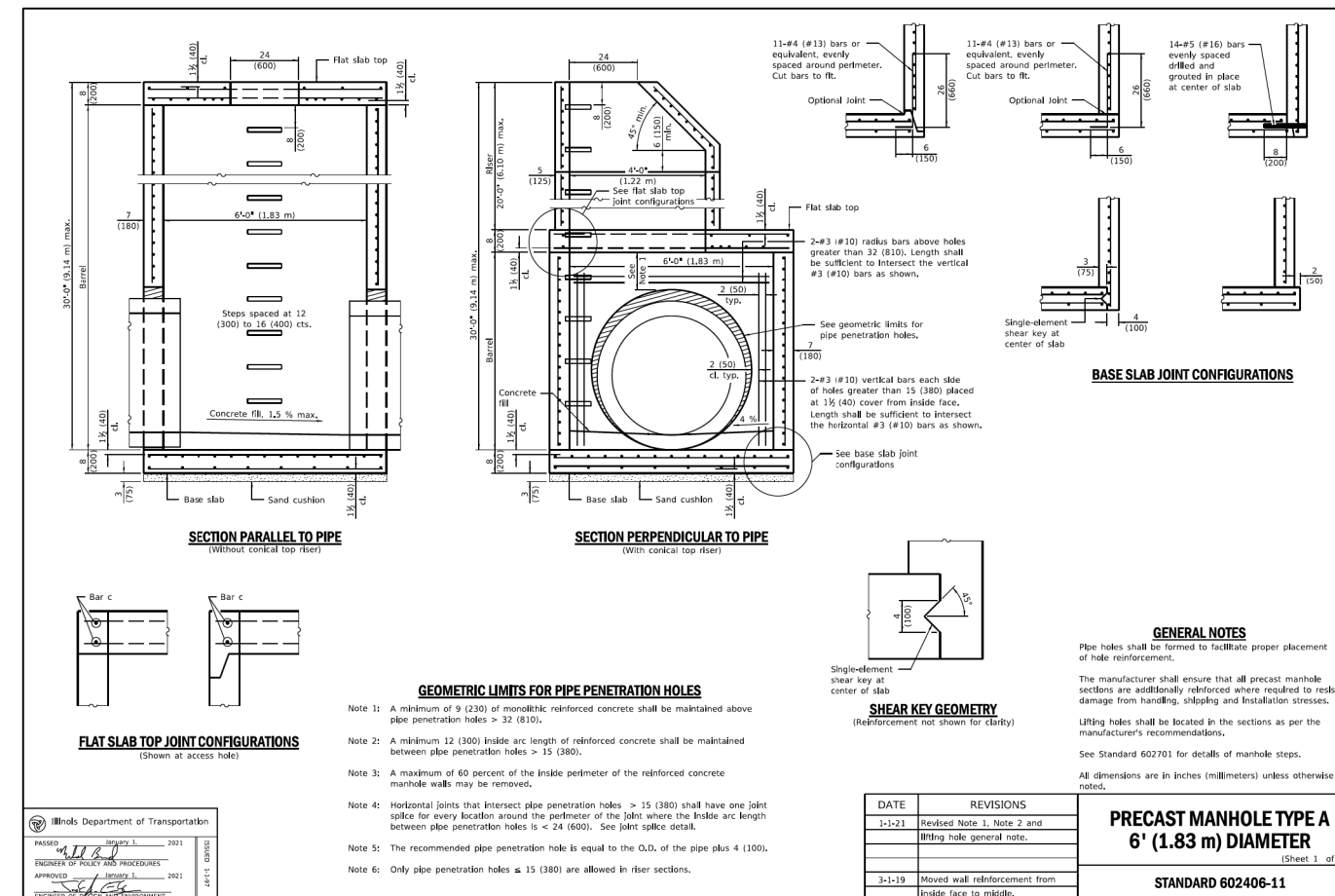
Illinois Department of Transportation

APPROVED January 1, 2011

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2011

INSPECTOR OF POLICY AND PROCEDURES



DATE	REVISIONS
1-1-21	Revised Note 1, Note 2 and lifting hole general note.
1-1-19	Moved wall reinforcement from inside face to middle.

Illinois Department of Transportation

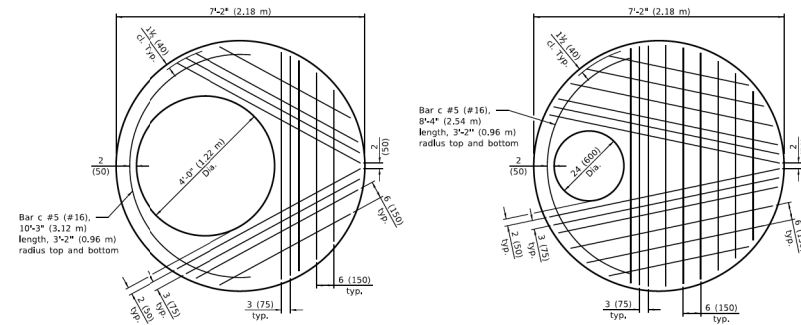
APPROVED January 1, 2011

ENGINEER OF POLICY AND PROCEDURES

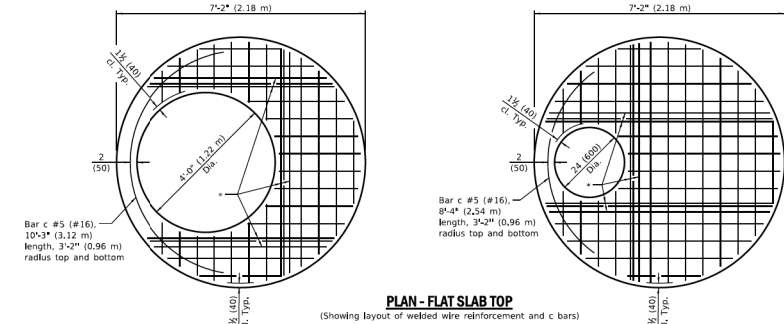
APPROVED January 1, 2011

INSPECTOR OF POLICY AND PROCEDURES

PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK	
	NO.	



PLAN - FLAT SLAB TOP
(Showing layout of bottom reinforcement bars and c bars)



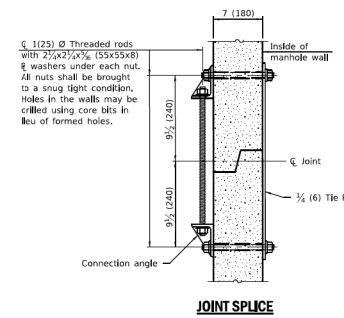
PLAN - FLAT SLAB TOP
(Showing layout of welded wire reinforcement and c bars)

* #5 (#16) bars for risers ≤ 10 ft. (3.05 m) tall or #6 (#19) bars for risers > 10 ft. (3.05 m) tall bottom. Bundle first bar with closest WWR bar to the opening and place second bar ≥ 3 (75) away.

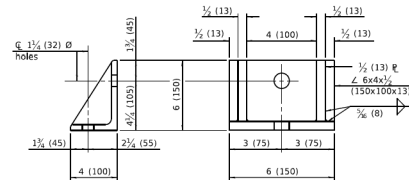
PRECAST MANHOLE TYPE A
6' (1.83 m) DIAMETER

(Sheet 2 of 3)

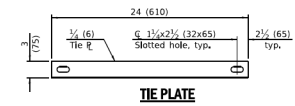
STANDARD 602406-11



JOINT SPLICE



CONNECTION ANGLE



TIE PLATE

FLAT SLAB TOP REINFORCEMENT

Location	Riser Height (RH)	WWR (each direction)		Rebar (each direction except as noted)		Bar Size
		A _s (min.)	Spacing (max.)	A _s (min.)	Spacing (max.)	
Top Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	#3 or #4 (#10) (#13)
Bottom Mat	RH ≤ 10 ft. (3.05 m)	** 0.62 sq. in./ft. (1312 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size	6 (150)	#5 (#16)
	RH > 10 ft. (3.05 m)	** 0.88 sq. in./ft. (1863 sq. mm/m)	6 (150)			#6 (#19)

** Only one layer of WWR permitted to avoid congestion.

WALL REINFORCEMENT

Location	Orientation	WWR or Rebar	
		A _s (min.)	Spacing (max.)
4 ft. (1.22 m) @ Riser	Circumferential	0.12 sq. in./ft. (254 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (95 sq. mm/m)	6 (150)
6 ft. (1.83 m) @ Riser	Circumferential	0.18 sq. in./ft. (381 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (95 sq. mm/m)	6 (150)

BASE SLAB REINFORCEMENT

Location	Riser Height (RH) / Total Height (TH)	WWR or Rebar (each direction)	
		A _s (min.)	Spacing (max.)
Top Mat	RH ≤ 10 ft. (3.05 m)	0.28 sq. in./ft. (593 sq. mm/m)	6 (150)
	6 ft. TH ≤ 20 ft. (6.10 m) or TH > 20 ft. (6.10 m)	0.40 sq. in./ft. (847 sq. mm/m)	6 (150)
Bottom Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)

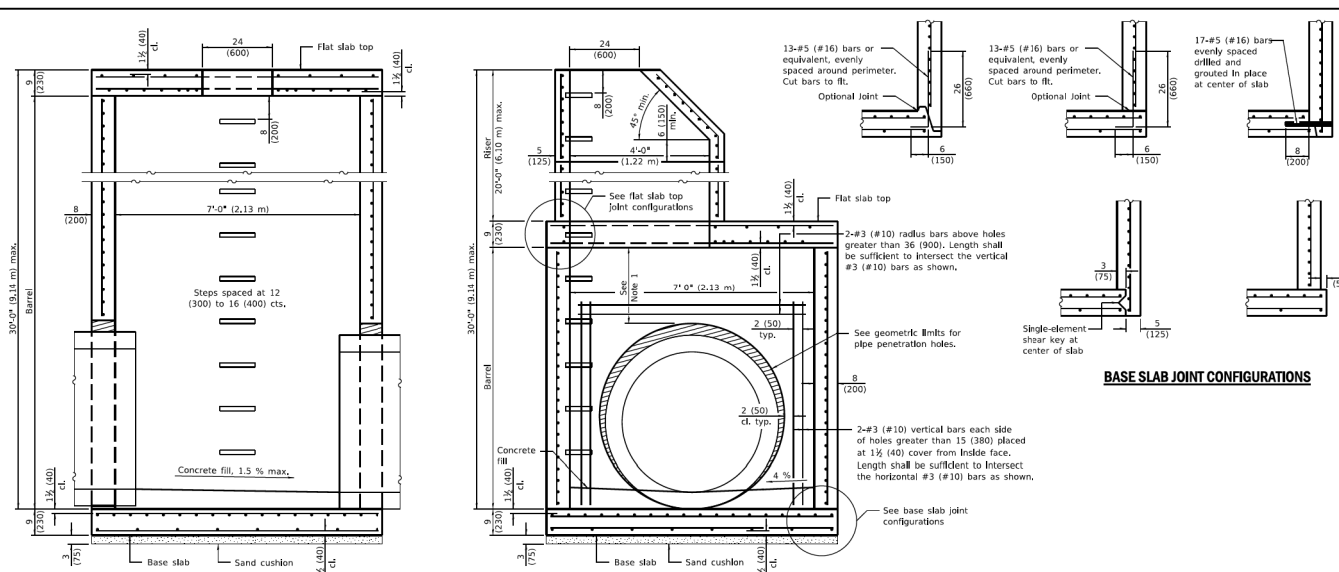
Illinois Department of Transportation
PASSED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES

PRECAST MANHOLE TYPE A
6' (1.83 m) DIAMETER

(Sheet 3 of 3)

STANDARD 602406-11

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS CHECKED	
	NOTE BOOK	
	NO.	



SECTION PARALLEL TO PIPE
(Without conical top riser)

SECTION PERPENDICULAR TO PIPE
(With conical top riser)

BASE SLAB JOINT CONFIGURATIONS

FLAT SLAB TOP JOINT CONFIGURATIONS
(Shown at access hole)

GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES

- Note 1: A minimum of 12 (300) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 36 (900).
- Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).
- Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.
- Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.
- Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).
- Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.

SHEAR KEY GEOMETRY
(Reinforcement not shown for clarity)

GENERAL NOTES

- Pipe holes shall be formed to facilitate proper placement of hole reinforcement.
- The manufacturer shall ensure that all precast manhole sections are additionally reinforced where required to resist damage from handling, shipping and installation stresses.
- Lifting holes shall be located in the sections as per the manufacturer's recommendations.
- See Standard 602701 for details of manhole steps.
- All dimensions are in inches (millimeters) unless otherwise noted.

PRECAST MANHOLE TYPE A
7' (2.13 m) DIAMETER

(Sheet 1 of 3)

STANDARD 602411-09

DATE	REVISIONS
1-1-21	Revised Note 1 and lifting hole general note.
3-3-19	Moved wall reinforcement from inside face to middle.

Illinois Department of Transportation
PASSED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES

PRECAST MANHOLE TYPE A
7' (2.13 m) DIAMETER

(Sheet 2 of 3)

STANDARD 602411-09



USER NAME = WaterResources	DESIGNED - LAM	REVISED -
PLOT SCALE = 2.0000' / in.	DRAWN - CLB	REVISED -
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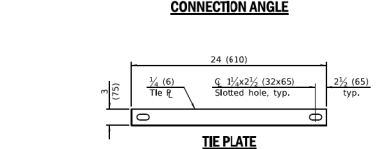
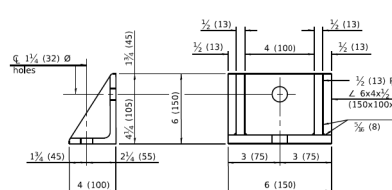
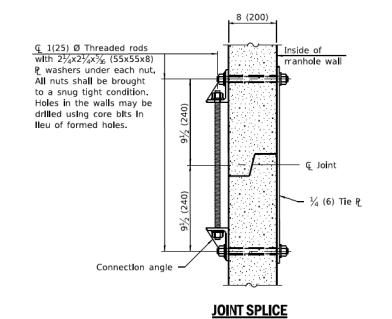
CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
IDOT DETAILS

SCALE: N.T.S. SHEET NO. 2 OF 7 SHEETS STA. - TO STA. -

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 21157.02	
ILLINOIS				

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FLAT SLAB TOP REINFORCEMENT

Location	Riser Height (RH)	WWR (each direction)		Rebar (each direction except as noted)		Bar Size
		A _s (min.)	Spacing (max.)	A _s (min.)	Spacing (max.)	
Top Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	#3 or #4 (#10) (#13)
Bottom Mat	RH ≤ 10 ft. (3.05 m)	** 0.62 sq. in./ft. (312 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size	6 (150)	#5 (#16)
	RH > 10 ft. (3.05 m)	WWR not permitted				#7 (#22)

** Only one layer of WWR permitted to avoid congestion.

WALL REINFORCEMENT

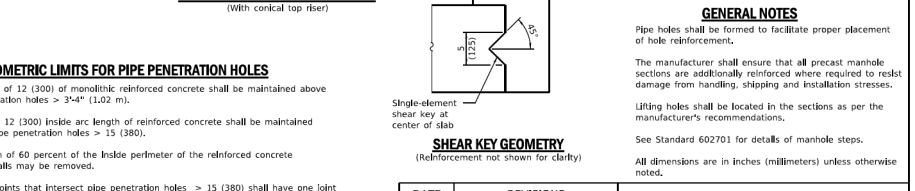
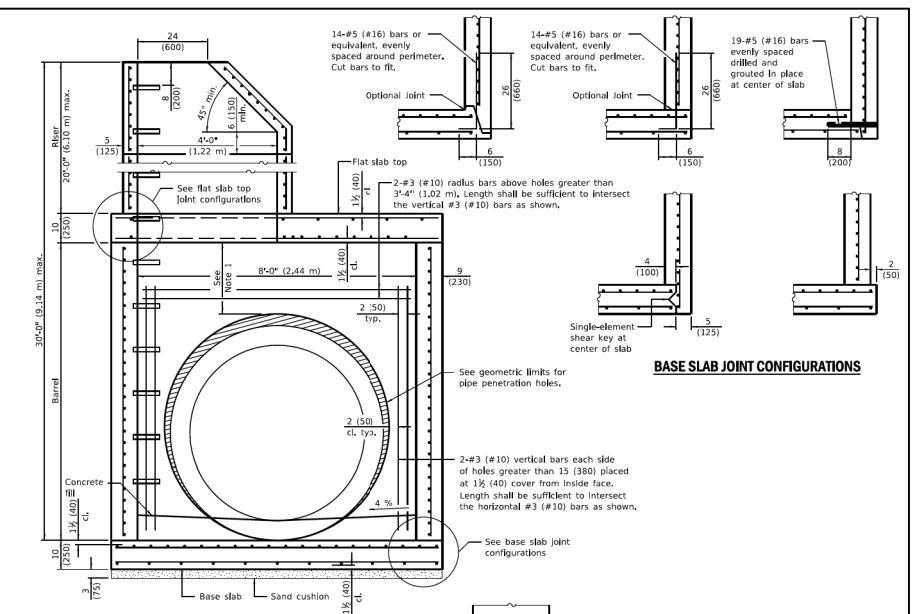
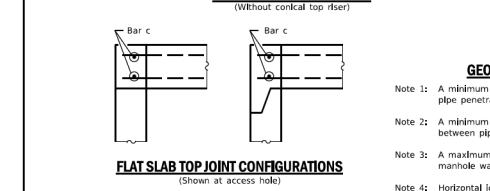
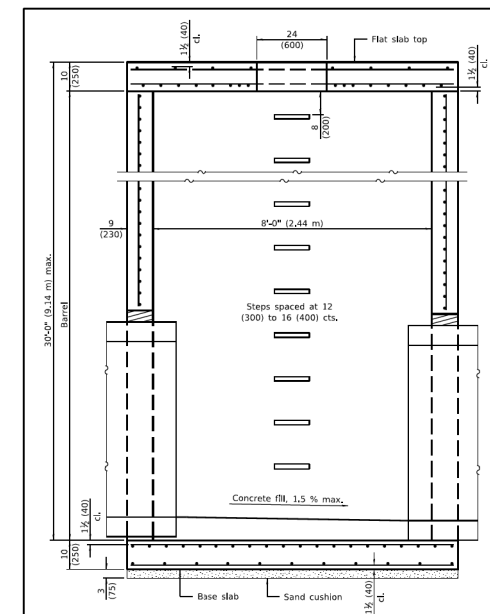
Location	Orientation	WWR or Rebar	
		A _s (min.)	Spacing (max.)
4 ft. (1.22 m) Ø Riser	Circumferential	0.12 sq. in./ft. (254 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (93 sq. mm/m)	8 (200)
7 ft. (2.13 m) Ø Barrel	Circumferential	0.21 sq. in./ft. (445 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (93 sq. mm/m)	8 (200)

BASE SLAB REINFORCEMENT

Location	Riser Height (RH)/ Total Height (TH)	WWR or Rebar (each direction)	
		A _s (min.)	Spacing (max.)
Top Mat	RH ≤ 10 ft. (3.05 m)	0.32 sq. in./ft. (677 sq. mm/m)	6 (150)
	RH > 10 ft. (3.05 m) or TH > 20 ft. (6.10 m)	0.52 sq. in./ft. (1101 sq. mm/m)	18 (450)
Bottom Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)

PRECAST MANHOLE TYPE A
7' (2.13 m) DIAMETER
(Sheet 3 of 3)
STANDARD 602411-09

Illinois Department of Transportation
PASSED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES



- GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES**
- Note 1: A minimum of 12 (300) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 3'-4" (1.02 m).
 - Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).
 - Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.
 - Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.
 - Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).
 - Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.

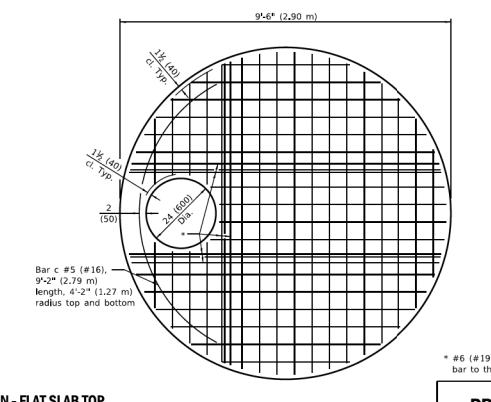
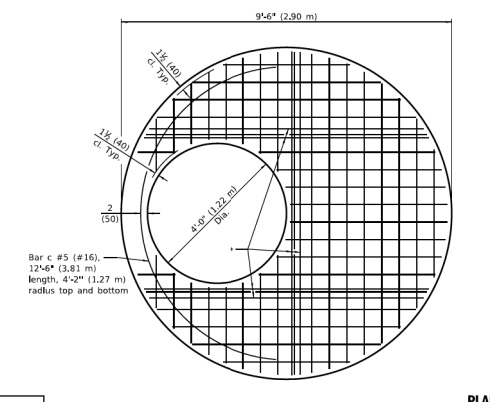
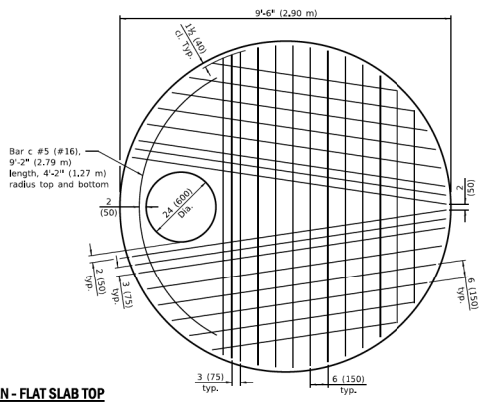
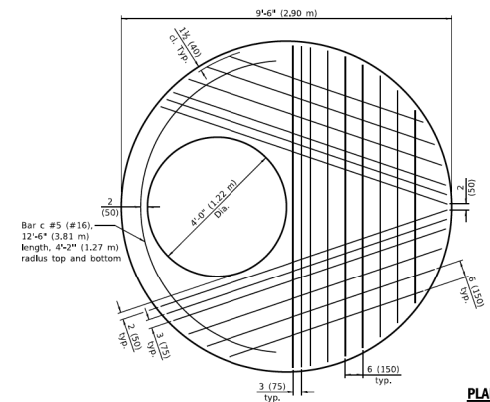
GENERAL NOTES
Pipe holes shall be formed to facilitate proper placement of hole reinforcement.
The manufacturer shall ensure that all precast manhole sections are additionally reinforced where required to resist damage from handling, shipping and installation stresses.
Lifting holes shall be located in the sections as per the manufacturer's recommendations.
See Standard 602701 for details of manhole steps.
All dimensions are in inches (millimeters) unless otherwise noted.

DATE	REVISIONS
1-1-21	Revised Note 1 and lifting hole general note.
3-1-19	Moved wall reinforcement from inside face to middle.

PRECAST MANHOLE TYPE A
8' (2.44 m) DIAMETER
(Sheet 1 of 3)
STANDARD 602416-09

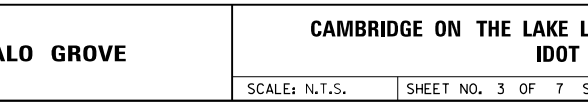
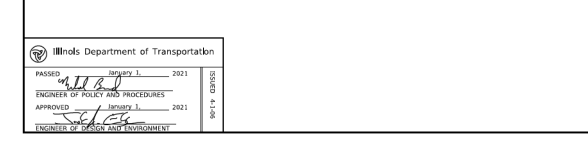
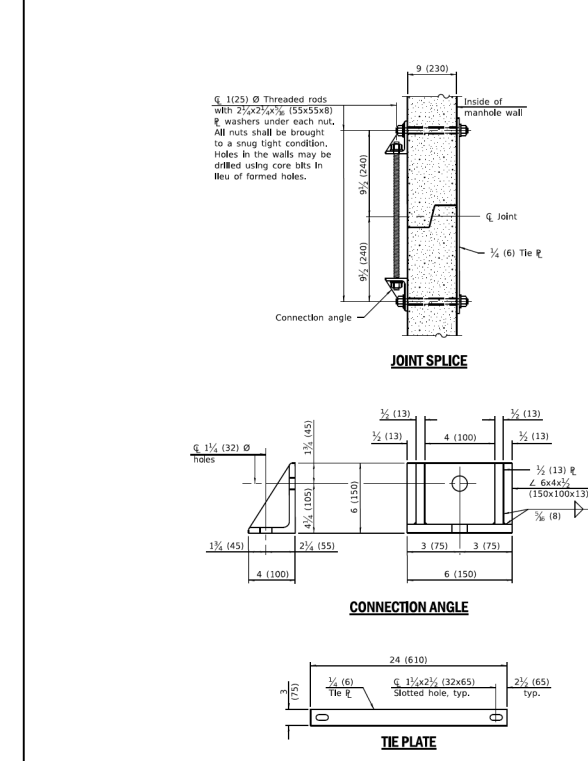
Illinois Department of Transportation
PASSED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES

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PRECAST MANHOLE TYPE A
8' (2.44 m) DIAMETER
(Sheet 2 of 3)
STANDARD 602416-09

Illinois Department of Transportation
PASSED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2021
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FLAT SLAB TOP REINFORCEMENT

Location	Riser Height (RH)	WWR (each direction)		Rebar (each direction except as noted)		Bar Size
		A _s (min.)	Spacing (max.)	A _s (min.)	Spacing (max.)	
Top Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	#3 or #4 (#10) (#13)
Bottom Mat	RH ≤ 10 ft. (3.05 m)	** 0.89 sq. in./ft. (1863 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size	6 (150)	#6 (#19)
	RH > 10 ft. (3.05 m)	WWR not permitted				#7 (#22)

** Only one layer of WWR permitted to avoid congestion.

WALL REINFORCEMENT

Location	Orientation	WWR or Rebar	
		A _s (min.)	Spacing (max.)
4 ft. (1.22 m) Ø Riser	Circumferential	0.12 sq. in./ft. (254 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (93 sq. mm/m)	8 (200)
8 ft. (2.44 m) Ø Barrel	Circumferential	0.24 sq. in./ft. (508 sq. mm/m)	6 (150)
	Vertical	0.045 sq. in./ft. (93 sq. mm/m)	8 (200)

BASE SLAB REINFORCEMENT

Location	Riser Height (RH)/ Total Height (TH)	WWR or Rebar (each direction)	
		A _s (min.)	Spacing (max.)
Top Mat	RH ≤ 10 ft. (3.05 m)	0.36 sq. in./ft. (762 sq. mm/m)	6 (150)
	RH > 10 ft. (3.05 m) or TH > 20 ft. (6.10 m)	0.60 sq. in./ft. (1270 sq. mm/m)	18 (450)
Bottom Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)

PRECAST MANHOLE TYPE A
8' (2.44 m) DIAMETER
(Sheet 3 of 3)
STANDARD 602416-09

Illinois Department of Transportation
PASSED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES
APPROVED January 1, 2021
ENGINEER OF POLICY AND PROCEDURES



USER NAME = WaterResources
DESIGNED - LAM
DRAWN - CLB
CHECKED - LAM
DATE - 10/1/2021

REVISIONS -
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VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
IDOT DETAILS
SCALE: N.T.S. SHEET NO. 3 OF 7 SHEETS STA. - TO STA. -

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	29
CONTRACT NO. 21157.02				
ILLINOIS				

PLAN	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NOTE BOOK	
	NO.	
	FILE NAME	

SECTION PARALLEL TO PIPE
(Without conical top riser)

SECTION PERPENDICULAR TO PIPE
(With conical top riser)

BASE SLAB JOINT CONFIGURATIONS

FLAT SLAB TOP JOINT CONFIGURATIONS
(Shown at access hole)

GEOMETRIC LIMITS FOR PIPE PENETRATION HOLES

Note 1: A minimum of 12 (300) of monolithic reinforced concrete shall be maintained above pipe penetration holes > 3'-8" (1.12 m).

Note 2: A minimum 12 (300) inside arc length of reinforced concrete shall be maintained between pipe penetration holes > 15 (380).

Note 3: A maximum of 60 percent of the inside perimeter of the reinforced concrete manhole walls may be removed.

Note 4: Horizontal joints that intersect pipe penetration holes > 15 (380) shall have one joint splice for every location around the perimeter of the joint where the inside arc length between pipe penetration holes is < 24 (600). See joint splice detail.

Note 5: The recommended pipe penetration hole is equal to the O.D. of the pipe plus 4 (100).

Note 6: Only pipe penetration holes ≤ 15 (380) are allowed in riser sections.

GENERAL NOTES

Pipe holes shall be formed to facilitate proper placement of hole reinforcement.

The manufacturer shall ensure that all precast manhole sections are additionally reinforced where required to resist damage from handling, shipping and installation stresses.

Lifting holes shall be located in the sections as per the manufacturer's recommendations.

See Standard 602701 for details of manhole steps.

All dimensions are in inches (millimeters) unless otherwise noted.

REVISIONS

DATE	REVISIONS
1-1-21	Revised Note 1 and lifting hole general note.
3-1-19	Moved wall reinforcement from inside face to middle.

PRECAST MANHOLE TYPE A
9' (2.74 m) DIAMETER
(Sheet 1 of 3)
STANDARD 602421-09

PLAN - FLAT SLAB TOP
(Showing layout of bottom reinforcement bars and c bars)

PLAN - FLAT SLAB TOP
(Showing layout of welded wire reinforcement and c bars)

PLAN - FLAT SLAB TOP
(Showing layout of welded wire reinforcement and c bars)

PLAN - FLAT SLAB TOP
(Showing layout of welded wire reinforcement and c bars)

REVISIONS

DATE	REVISIONS
1-1-21	Expanded / refined reinforcement options.
1-1-18	Revised for compliance with LRFD.

PRECAST MANHOLE TYPE A
9' (2.74 m) DIAMETER
(Sheet 2 of 3)
STANDARD 602421-09

PROFILE	SURVEYED	DATE
	PLOTTED	
	GRADES CHECKED	
	STRUCTURE NOTATIONS OK'D	
	NOTE BOOK	
	NO.	
	FILE NAME	

FLAT SLAB TOP REINFORCEMENT

Location	Riser Height (RH)	WWR (each direction)	Rebar (each direction except as noted)	Bar Size
		A ₁ (min.) Spacing (max.)	A ₂ (min.) Spacing (max.)	
Top Mat	All	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	#3 or #4 (#10) (#13)
Bottom Mat	RH ≤ 10 ft. (3.05 m)	** 0.88 sq. in./ft. (188.8 sq. mm/m)	6 (150)	#3 (#10) (#13)
	RH > 10 ft. (3.05 m)	WWR not permitted	See plan view for rebar orientation and spacing and this table for bar size	#3 (#10) (#13) (#25)

** Only one layer of WWR permitted to avoid congestion.

WALL REINFORCEMENT

Location	Orientation	WWR or Rebar
		A ₁ (min.) Spacing (max.)
4 ft. (1.22 m) Ø Riser	Circumferential	0.12 sq. in./ft. (254 sq. mm/m) (150)
	Vertical	0.043 sq. in./ft. (95 sq. mm/m) (200)
9 ft. (2.74 m) Ø Barrel	Circumferential	0.27 sq. in./ft. (572 sq. mm/m) (150)
	Vertical	0.043 sq. in./ft. (95 sq. mm/m) (200)

BASE SLAB REINFORCEMENT

Location	Riser Height (RH) Total Height (TH)	WWR or Rebar (each direction)
		A ₁ (min.) Spacing (max.)
Top Mat	RH ≤ 10 ft. (3.05 m) & TH ≤ 20 ft. (6.10 m)	0.44 sq. in./ft. (931 sq. mm/m) (150)
	RH > 10 ft. (3.05 m) or TH > 20 ft. (6.10 m)	0.72 sq. in./ft. (1524 sq. mm/m) (150)
Bottom Mat	All	0.11 sq. in./ft. (233 sq. mm/m) (18 (450))

CONNECTION ANGLE

TIE PLATE

REVISIONS

DATE	REVISIONS
1-1-19	Expanded / refined reinforcement options.
1-1-18	Revised for compliance with LRFD.

PRECAST MANHOLE TYPE A
9' (2.74 m) DIAMETER
(Sheet 3 of 3)
STANDARD 602421-09

FLAT SLAB TOP JOINT CONFIGURATIONS
FOR D = 36 (900) AND D = 4'-0" (1.22 m)
(Shown at access hole)

SECTION THRU FLAT SLAB TOP
FOR D = 36 (900) AND D = 4'-0" (1.22 m)

FLAT SLAB TOP JOINT CONFIGURATIONS
D = 5'-0" (1.52 m)
(Shown at access hole)

SECTION THRU FLAT SLAB TOP
FOR D = 5'-0" (1.52 m)

PLAN - FLAT SLAB TOP FOR D = 36 (900)
(Showing layout of reinforcement bars and c bars)

PLAN - FLAT SLAB TOP FOR D = 36 (900)
(Showing layout of welded wire reinforcement and c bars)

GENERAL NOTES

The flat slab top may be used in lieu of the tapered tops shown on Standards 602001, 602116, or 602306 at the option of the Contractor or when field conditions prohibit the use of tapered tops.

Lifting holes shall be located in the sections as per the manufacturer's recommendations.

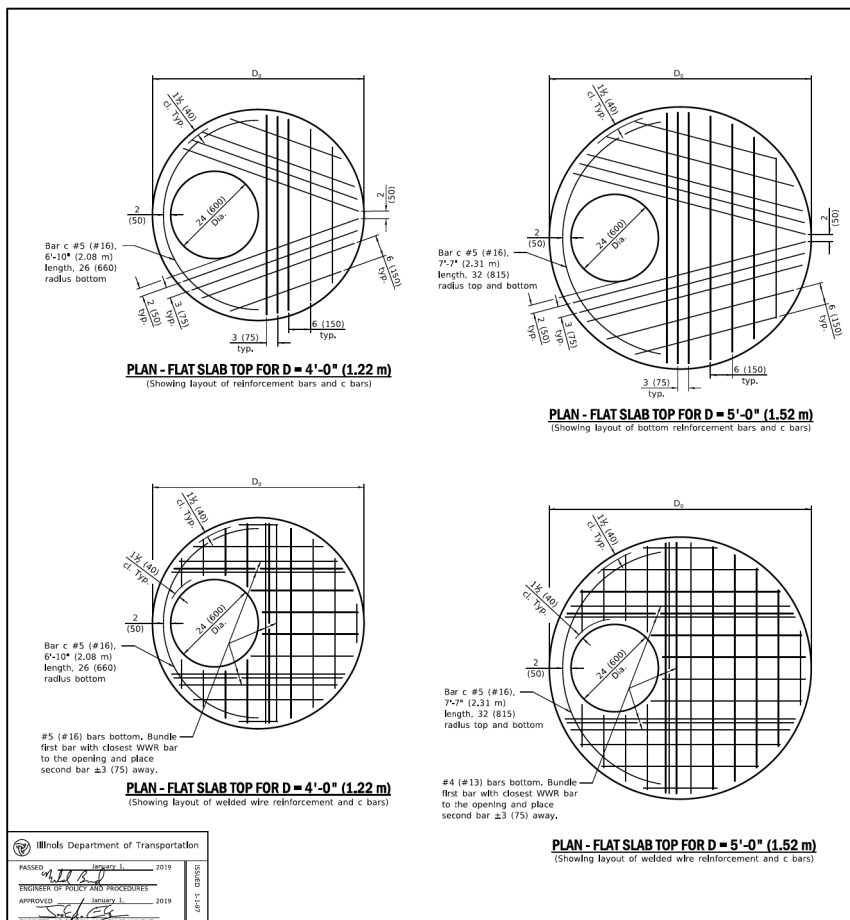
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REVISIONS

DATE	REVISIONS
1-1-19	Expanded / refined reinforcement options.
1-1-18	Revised for compliance with LRFD.

PRECAST REINFORCED CONCRETE FLAT SLAB TOP
(Sheet 1 of 2)
STANDARD 602601-06

PLAN	SURVEYED	DATE
	PLOTTED	
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	STRUCTURE NOT AT THIS OFFICE	
	NOTE BOOK	
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FLAT SLAB TOP REINFORCEMENT FOR D = 36 (900)

Location	WWR (each direction)		Rebar		Bar Size
	A _s (min.)	Spacing (max.)	A _s (min.)	Spacing (max.)	
Bottom Mat	* 0.60 sq. in./ft. (1270 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size	#4	#4 (#13)

FLAT SLAB TOP REINFORCEMENT FOR D = 4'-0" (1.22 m)

Location	WWR (each direction)		Rebar		Bar Size
	A _s (min.)	Spacing (max.)	A _s (min.)	Spacing (max.)	
Bottom Mat	* 0.62 sq. in./ft. (1312 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size	#5	#5 (#13)

FLAT SLAB TOP REINFORCEMENT FOR D = 5'-0" (1.52 m)

Location	WWR (each direction)		Rebar (each direction except as noted)		Bar Size
	A _s (min.)	Spacing (max.)	A _s (min.)	Spacing (max.)	
Top Mat	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	0.11 sq. in./ft. (233 sq. mm/m)	18 (450)	#3 or #4 (#10) (#13)
Bottom Mat	* 0.40 sq. in./ft. (847 sq. mm/m)	6 (150)	See plan view for rebar orientation and spacing and this table for bar size	#4	#4 (#13)

* Only one layer of WWR permitted to avoid congestion.

PRECAST REINFORCED CONCRETE FLAT SLAB TOP
(Sheet 2 of 2)
STANDARD 602601-06

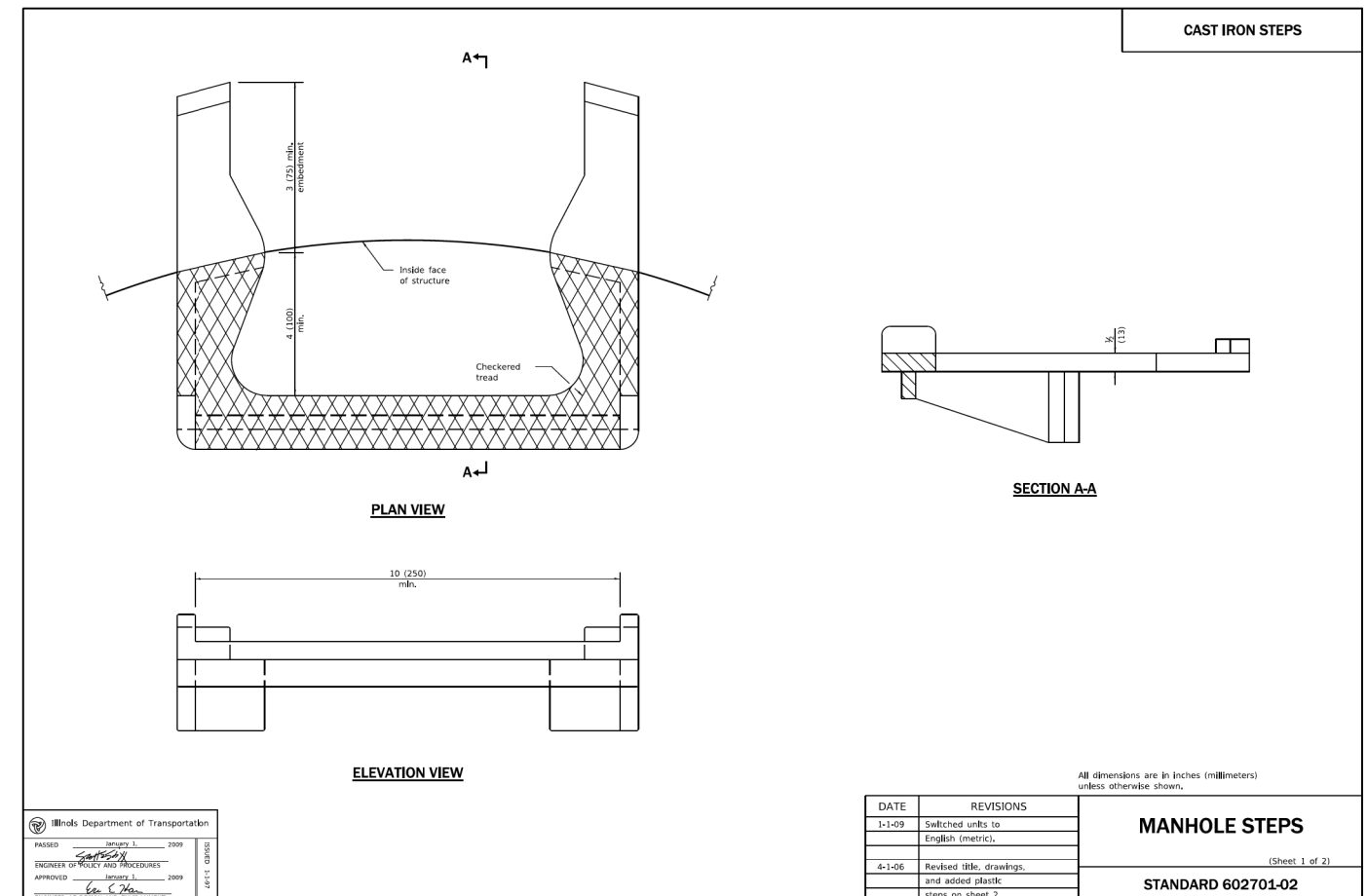
Illinois Department of Transportation

PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT



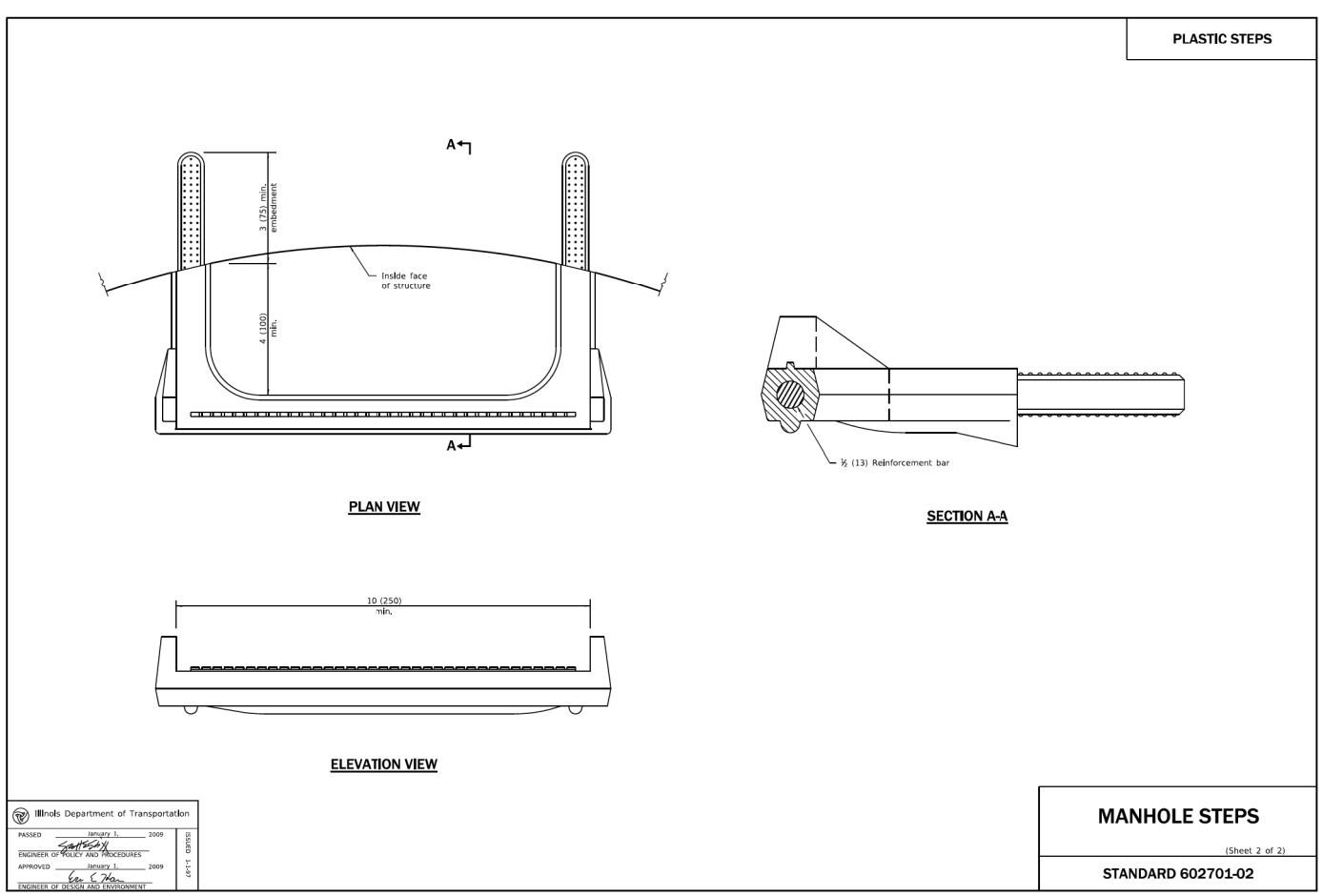
DATE REVISIONS

1-1-09 Switched units to English (metric).

4-1-06 Revised title, drawings, and added plastic steps on sheet 2.

MANHOLE STEPS
(Sheet 1 of 2)
STANDARD 602701-02

PROFILE	SURVEYED	DATE
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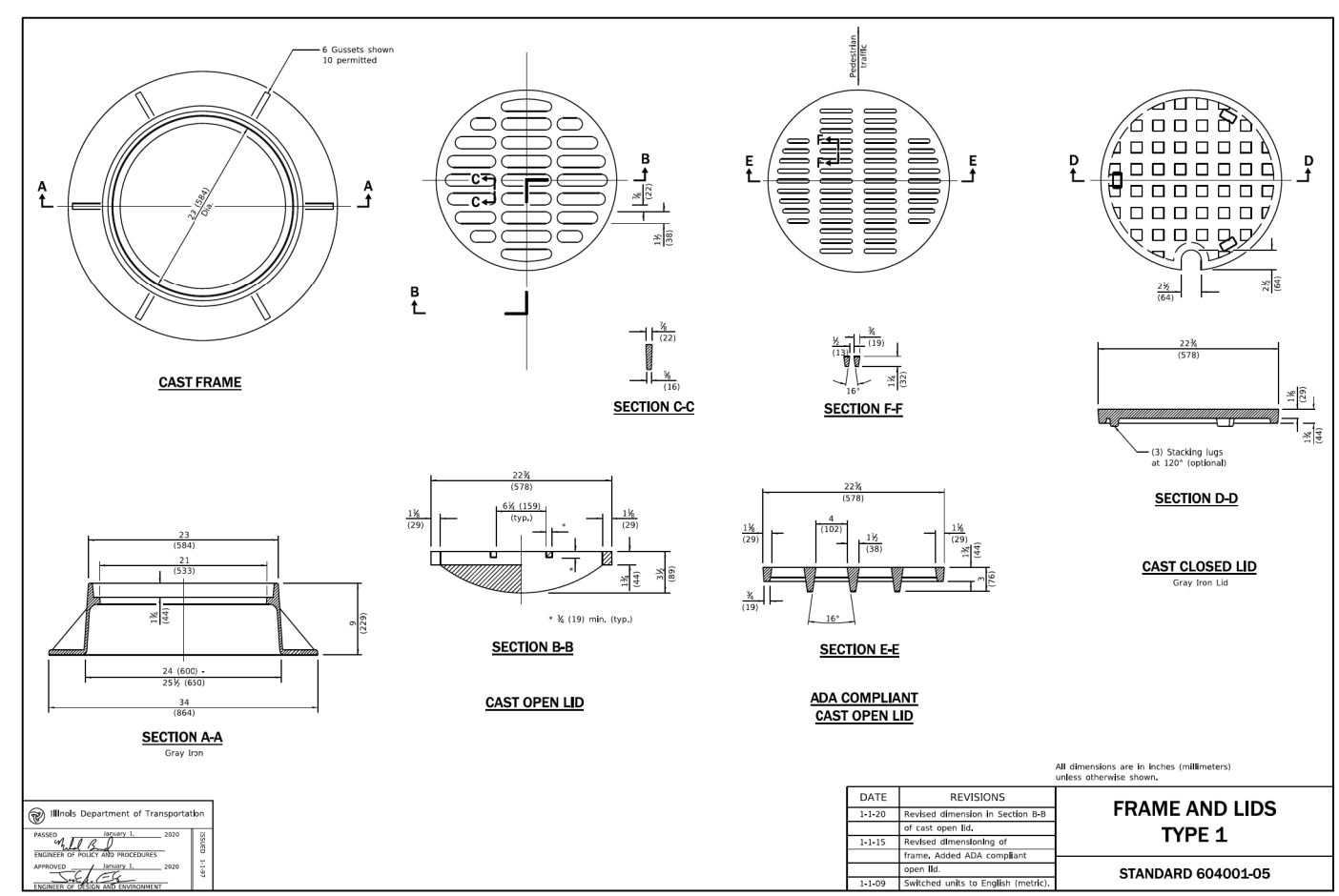
PASSED January 1, 2009

ENGINEER OF POLICY AND PROCEDURES

APPROVED January 1, 2009

ENGINEER OF DESIGN AND ENVIRONMENT

MANHOLE STEPS
(Sheet 2 of 2)
STANDARD 602701-02



DATE REVISIONS

1-1-20 Revised dimension in Section B-B of cast open lid.

1-1-15 Revised dimensioning of frame. Added ADA compliant open lid.

1-1-09 Switched units to English (metric).

FRAME AND LIDS TYPE 1
STANDARD 604001-05

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CiorbaGroup
8725 W. Higgins Rd, Ste 600, Chicago, IL 60631
P 773.775.4009 | www.ciorba.com

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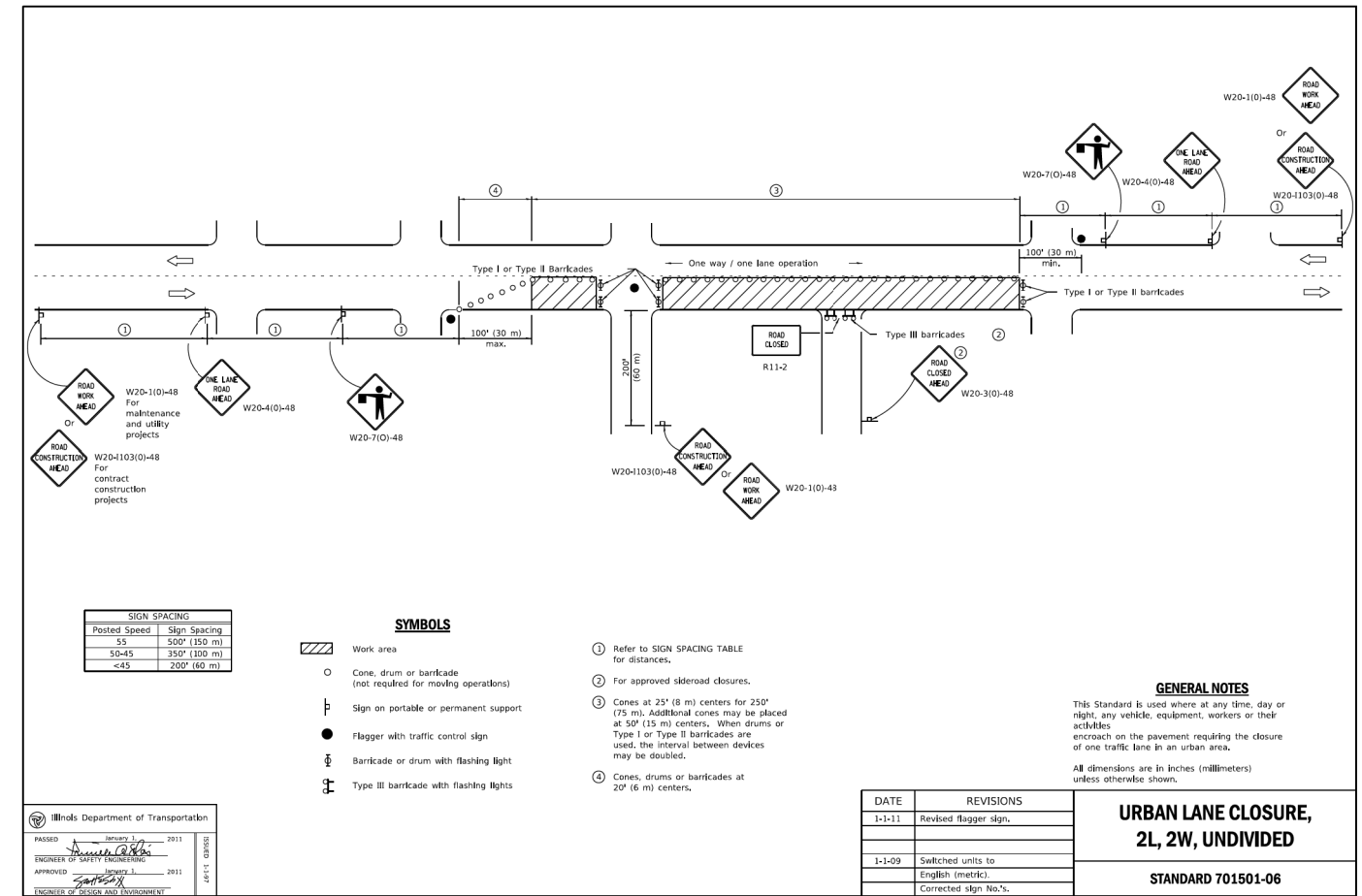
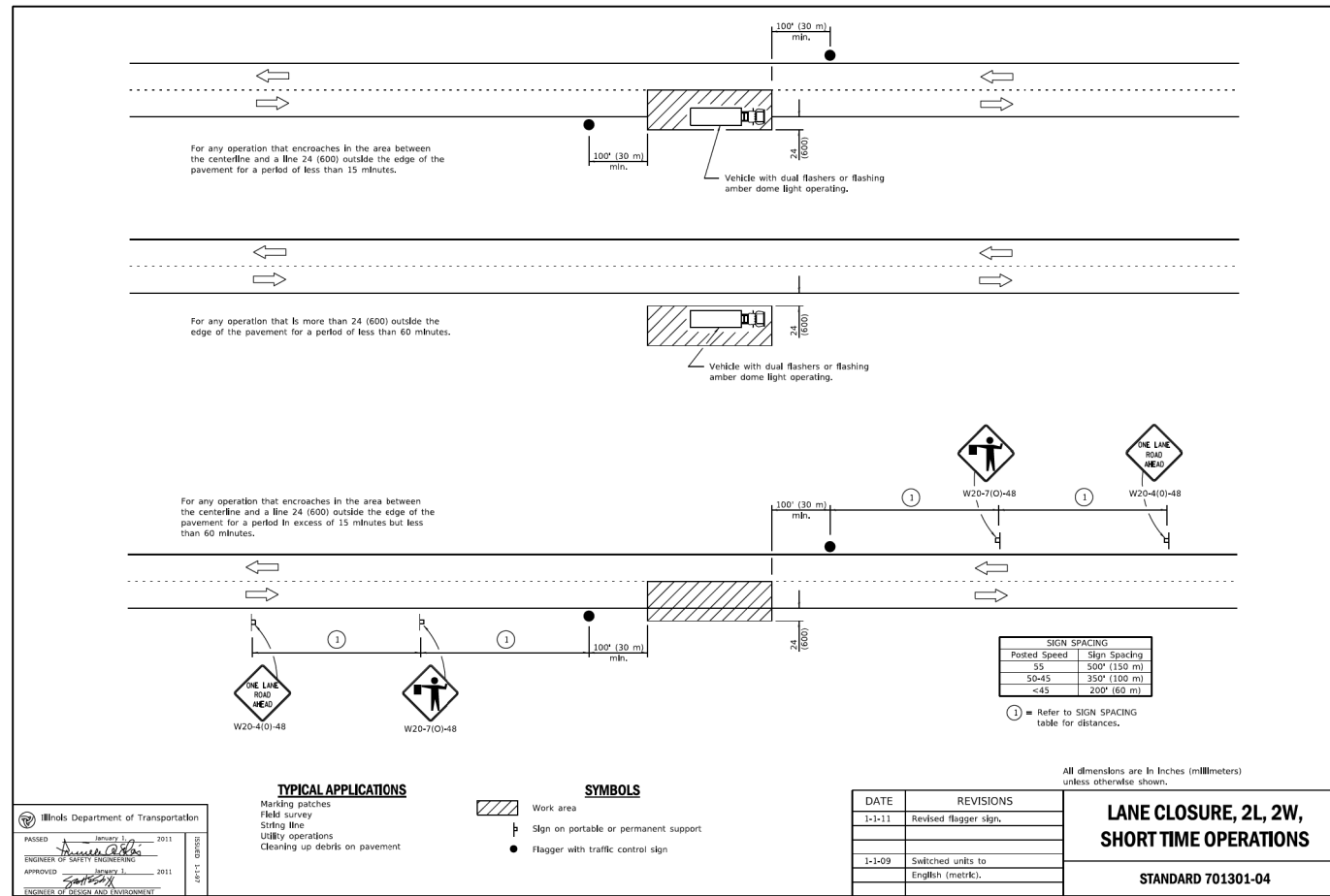
VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
IDOT DETAILS

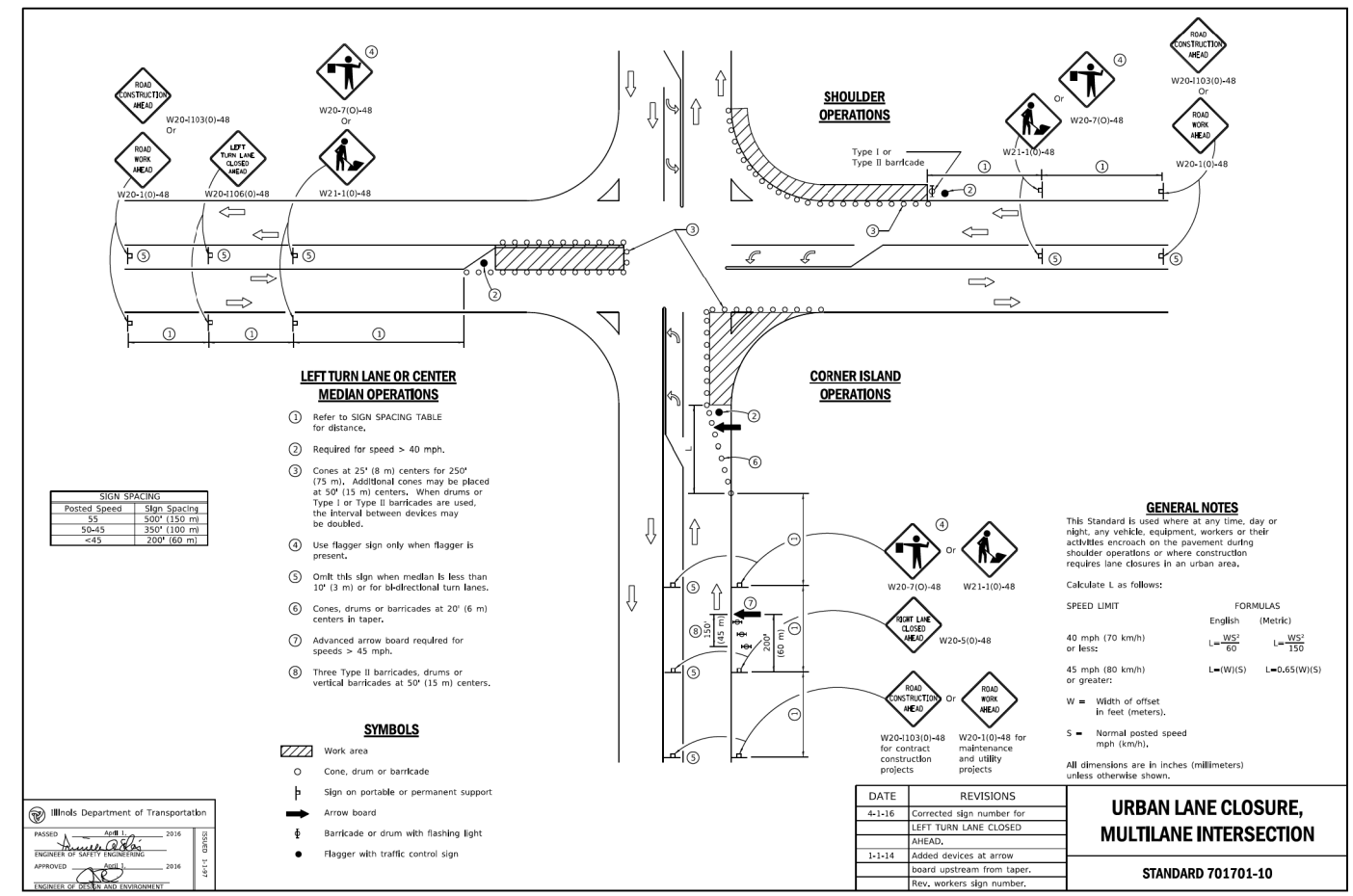
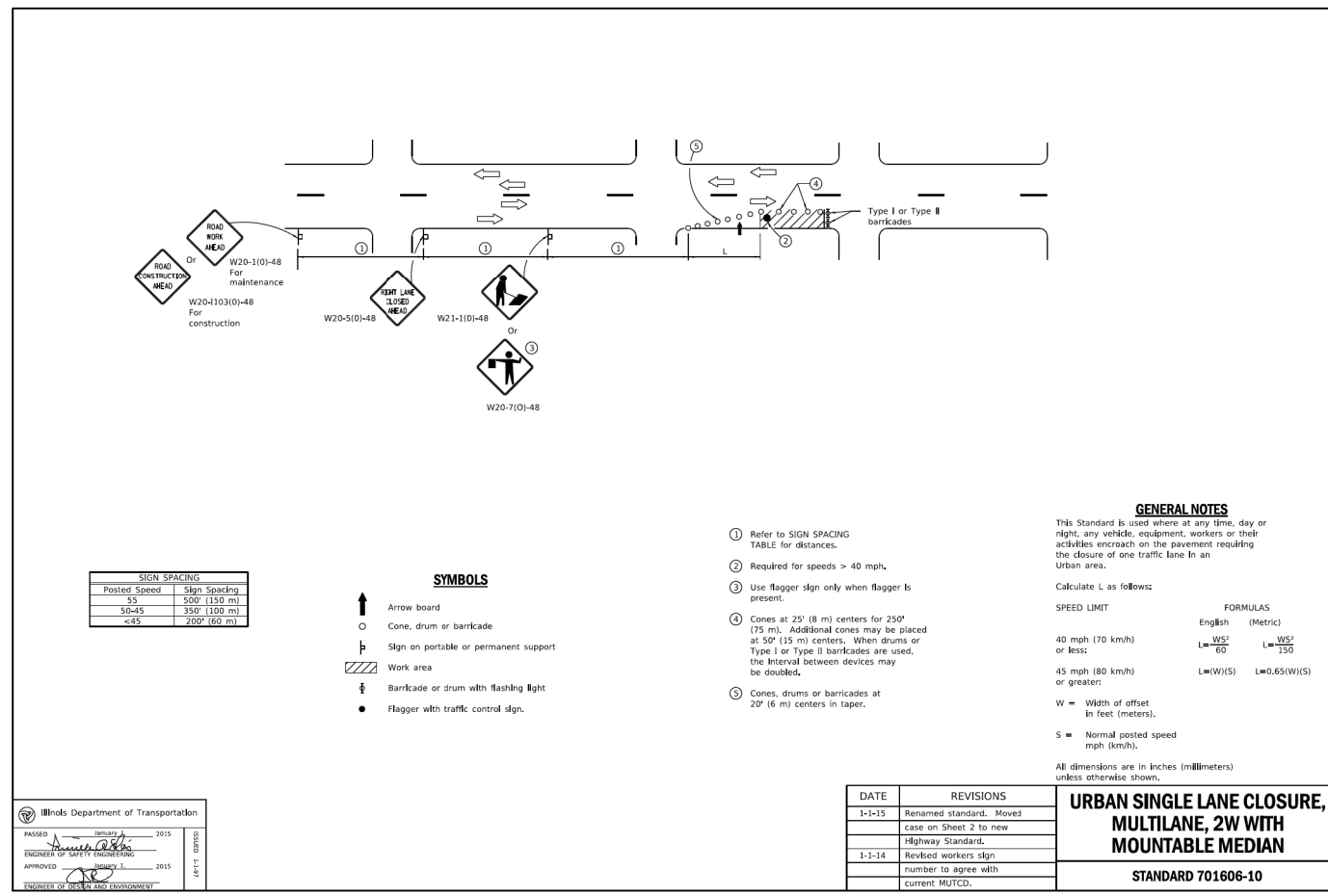
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		COOK	37	31
ILLINOIS			CONTRACT NO. 21157.02	

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VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION	
IDOT DETAILS	
SCALE: N.T.S.	SHEET NO. 7 OF 7 SHEETS
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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	33
CONTRACT NO. 21157.02				
ILLINOIS				

VILLAGE EROSION AND SEDIMENT CONTROL NOTES

1. All erosion and sediment control measures are to be constructed and maintained in accordance with the *Illinois Urban Manual*, latest edition.

2. All erosion and sediment control measures shall be installed prior to the start of any construction or disturbance of the site. The measures may have to be adjusted to meet field conditions during construction. Any measures, in addition to those outlined in the plans and which are deemed necessary by the village, shall be implemented immediately by the developer.

3. Regular inspection and maintenance of all erosion and sediment control measures must be provided by the contractor. Inspections should occur weekly, and after any rainfall greater than 1/2". Any non-functioning sediment control measures or damaged devices that are found during inspection shall be repaired or replaced immediately. The contractor shall be responsible for any sediment which leaves the property, and the contractor is also responsible for maintenance of all sediment control measures until the site is permanently stabilized.

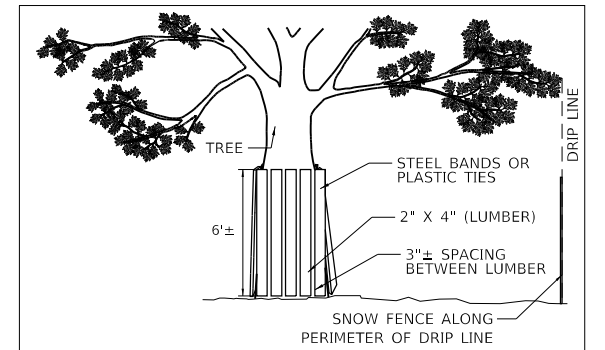
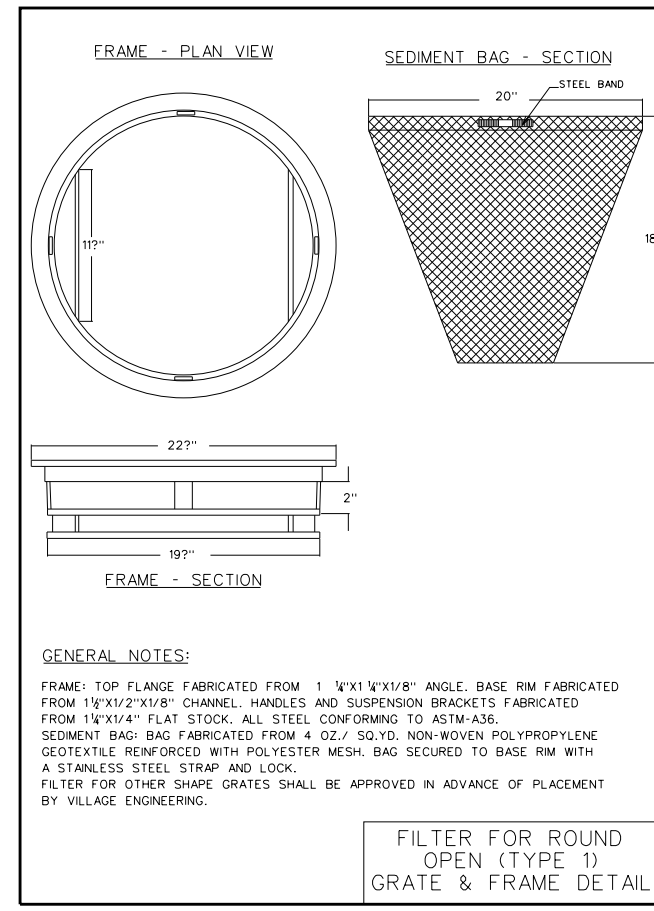
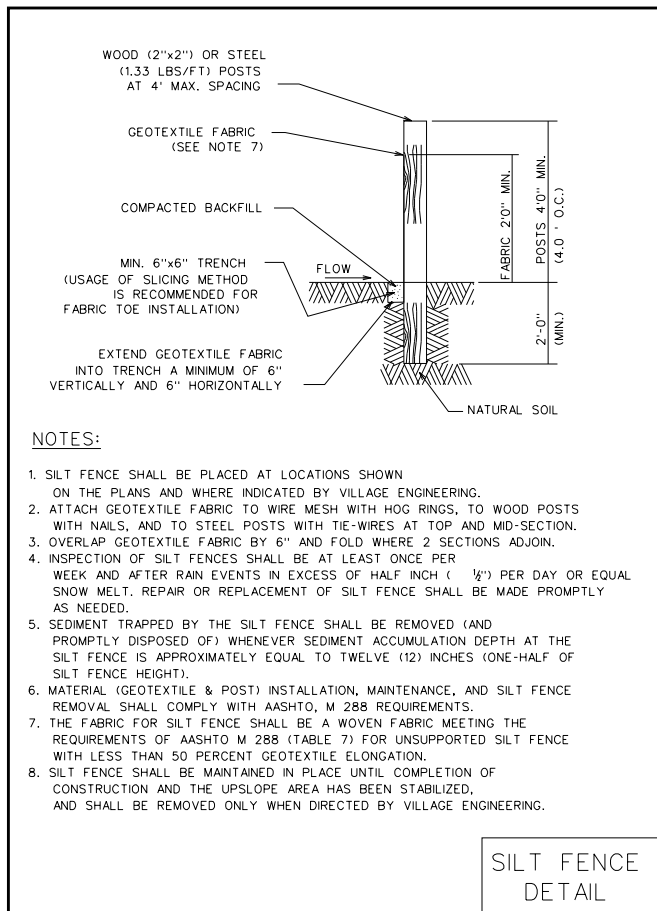
4. All points of construction ingress and egress shall be protected to prevent tracking of debris, dirt, and mud onto adjacent streets, parking lots, or properties. Any debris, dirt, or mud that reaches an improved public right-of-way, street, or parking area shall be promptly removed, and transported to a proper disposal area.

5. All sediment must be prevented from entering any public or private storm drainage system. Reusable inlet filter baskets, sediment basins, and water filtering bags, shall be provided as needed.

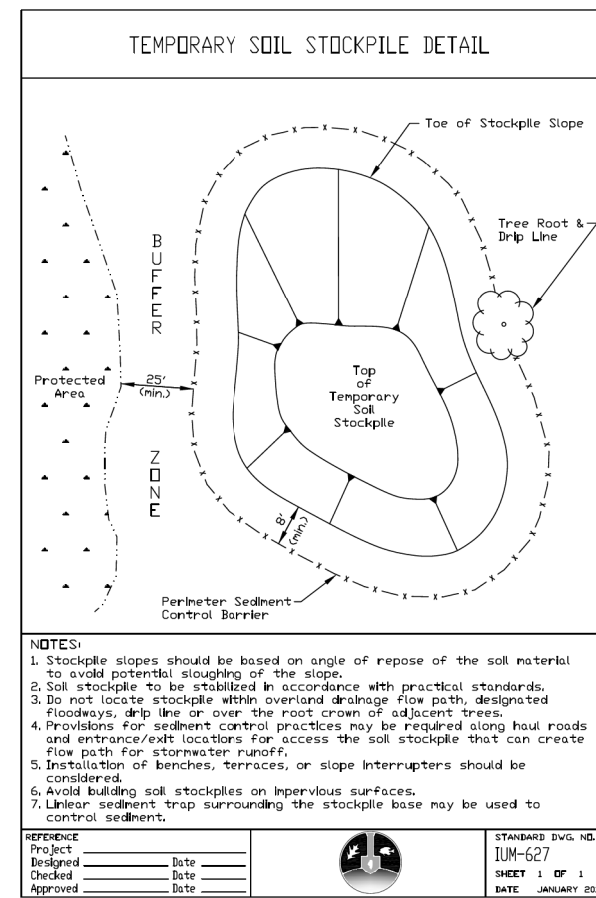
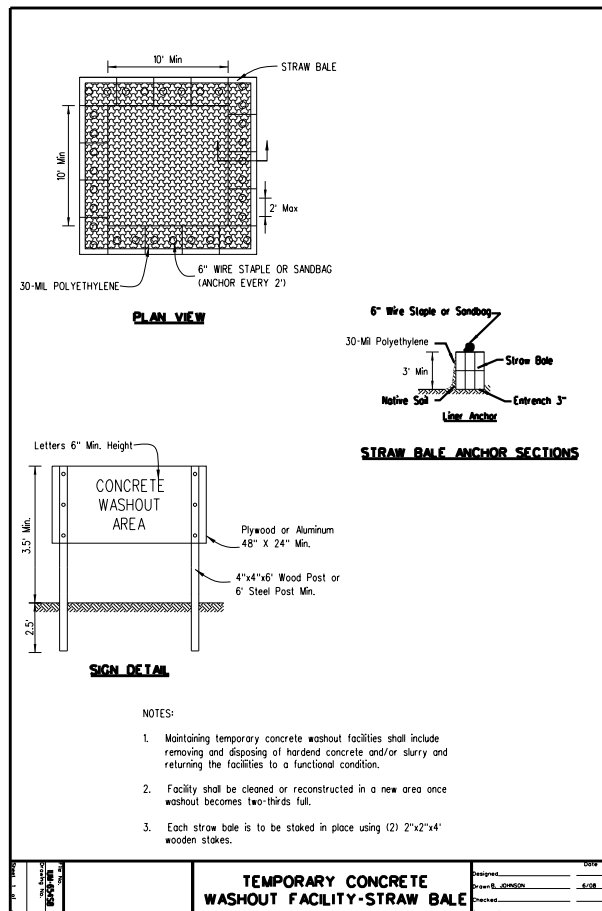
6. Topsoil stockpiles shall be located to avoid erosion of stockpile onto neighboring properties or into restored project areas. Stockpiles shall be located so that a drainage swale is located between the stockpile and any downstream properties. If a stockpile is to remain in place for more than 14 days, it must be seeded and blanketed to minimize soil erosion by both wind and water.

7. Disturbed areas shall be stabilized with temporary or permanent measures within 14 calendar days of the end of active hydrologic disturbance, or redistribution.

8. If dewatering services are used, adjacent properties and discharge locations shall be protected from erosion. Discharges from construction dewatering shall be routed through an effective sediment control measure such as a sediment trap, a sediment basin, or any other appropriate measure.



- NOTES:**
- EXISTING VEGETATION WHICH IS TO REMAIN IN PLACE SHALL BE PROTECTED AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING AND BRUISING OF BARK, SMOTHERING BY STOCKPILING OF CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN THE DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN THE DRIP LINE.
 - ALL TREES TO REMAIN SHALL BE PROTECTED WITH A SNOW FENCE INSTALLED AROUND THE PERIMETER OF THE TREES DRIP LINE. ANY CONSTRUCTION INSIDE OF THE DRIP LINE OF THE TREE REQUIRES ROOT PRUNING PRIOR TO THE EXCAVATION.
 - EXISTING VEGETATION WHICH IS TO REMAIN IN PLACE SHALL BE WATERED AS REQUIRED TO MAINTAIN ITS HEALTH DURING THE COURSE OF CONSTRUCTION OPERATIONS.
 - PROTECTION SHALL BE PROVIDED FOR ROOTS OVER 1 1/2" IN DIAMETER WHICH ARE CUT DURING CONSTRUCTION OPERATIONS. WHENEVER SUCH A ROOT IS CUT, THE CUT FACES SHALL BE COATED WITH AN EMULSIFIED ASPHALT OR OTHER ACCEPTABLE COATING SPECIFICALLY FORMULATED FOR HORTICULTURAL USE ON DAMAGED OR CUT PLANT TISSUES. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH WET BURLAP TO PREVENT THE ROOTS FROM DRYING OUT. EXPOSED ROOTS SHALL BE PROVIDED WITH EARTH COVER AS SOON AS POSSIBLE.
 - VEGETATION THAT BECOMES DAMAGED BY CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED IN A MANNER ACCEPTABLE TO THE VILLAGE.
 - DAMAGED TREES SHALL BE REPAIRED BY A QUALIFIED TREE SURGEON. DAMAGED TREES WHICH CANNOT BE REPAIRED AND RESTORED TO FULL GROWTH STATUS, AS DETERMINED BY THE TREE SURGEON, SHALL BE REPLACED.



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PLOT DATE =	10/29/2021

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DATE -	10/1/2021	REVISED -	

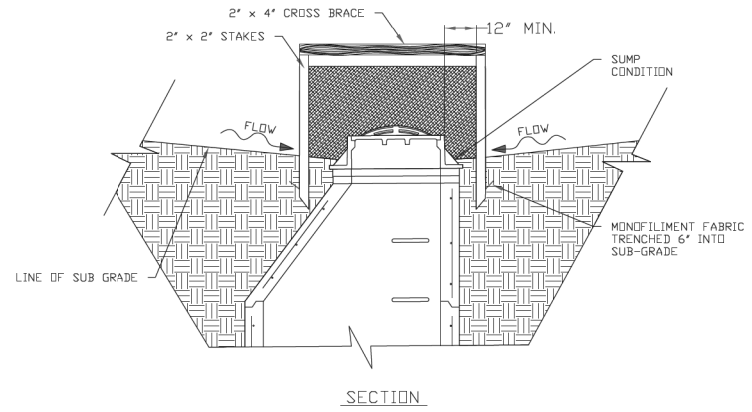
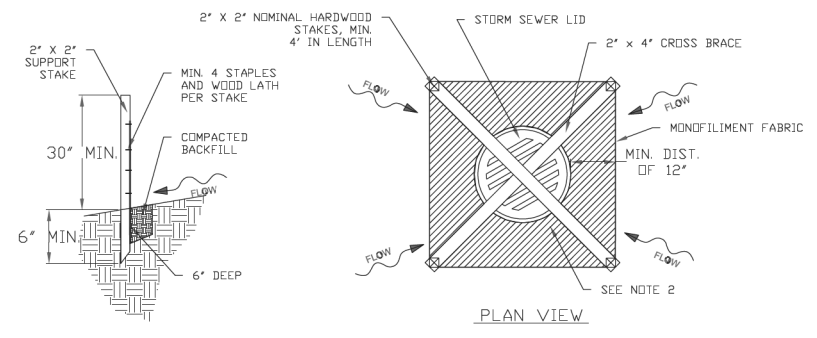
VILLAGE OF BUFFALO GROVE

CAMBRIDGE ON THE LAKE LIFT STATION RECONSTRUCTION
 EROSION CONTROL DETAILS

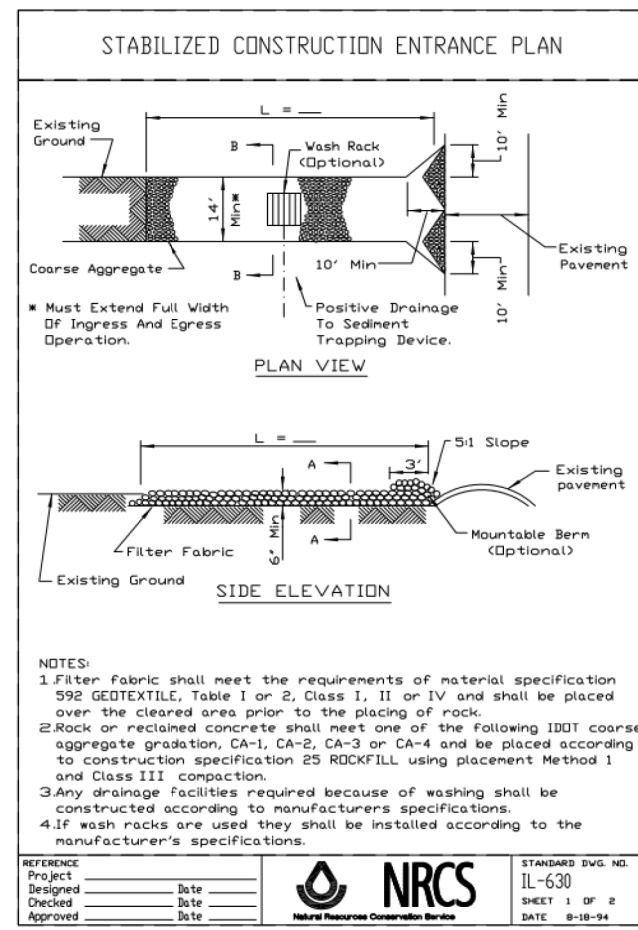
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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	35
CONTRACT NO. 21157.02				
ILLINOIS				

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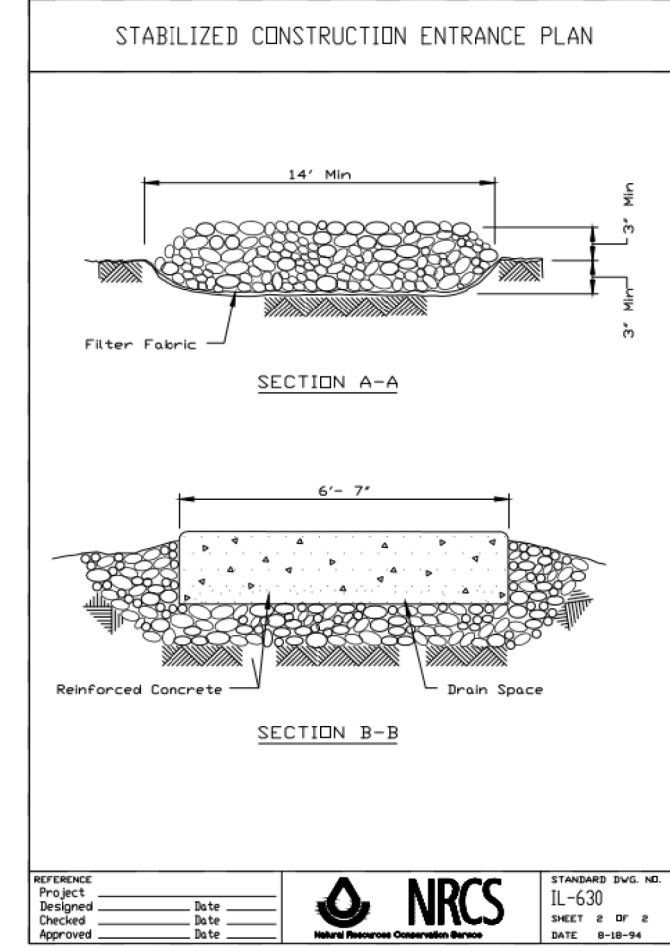
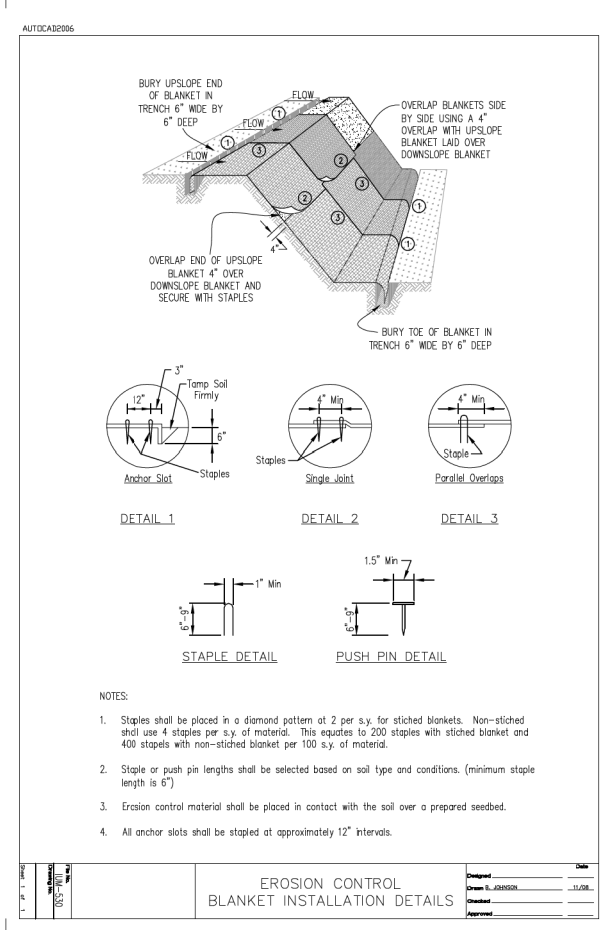


INLET PROTECTION, SPECIAL
INLET PROTECTION, SPECIAL



- NOTES:
- Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table 1 or 2, Class I, II or IV and shall be placed over the cleared area prior to the placing of rock.
 - Rock or reclaimed concrete shall meet one of the following IDOT coarse aggregate gradation, CA-1, CA-2, CA-3 or CA-4 and be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
 - Any drainage facilities required because of washing shall be constructed according to manufacturers specifications.
 - If wash racks are used they shall be installed according to the manufacturer's specifications.

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	STRUCTURE NOTATIONS OK'D
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RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		COOK	37	36
CONTRACT NO. 21157.02				
ILLINOIS				

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