

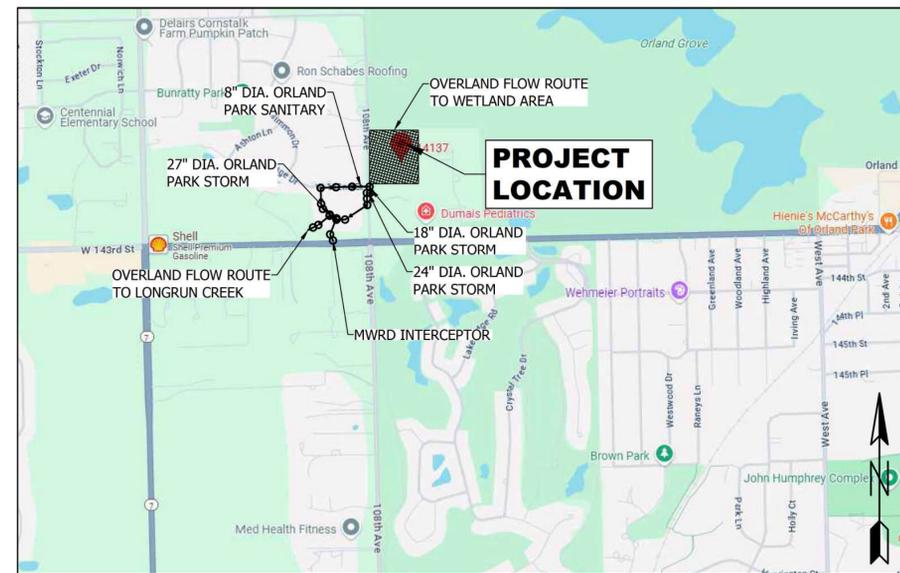
BRIDLEWOOD SUBDIVISION

14137 S 108TH AVE.
 ORLAND PARK, IL 60467
 JOB NO. W24323.00
 PRELIMINARY ENGINEERING

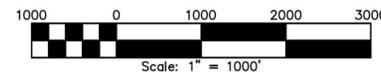
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SECTION 5 T36N R12E



LOCATION MAP



AREA SUMMARY
 LOT AREA: 411,135 SF = 9.44 AC
 REDEVELOPMENT AREA: 350,047 SF = 8.04 AC

ZONING DISTRICT:
 EXISTING: E-1 ESTATE RESIDENTIAL
 PROPOSED: R-3 RESIDENTIAL

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ENGINEERING
 RESOURCE ASSOCIATES

2416 GALEN DRIVE
 CHAMPAIGN, ILLINOIS 61821
 PHONE (217) 351-6268
 FAX (217) 355-1902

35701 WEST AVENUE, SUITE 150
 WARRENVILLE, ILLINOIS 60555
 PHONE (630) 393-3060
 FAX (630) 393-2152

10 S. RIVERSIDE PLAZA, SUITE 875
 CHICAGO, ILLINOIS 60606
 PHONE (312) 474-7841
 FAX (312) 474-6099

VILLAGE OF ORLAND PARK:
 14700 S. RAVINIA AVENUE
 ORLAND PARK, IL 60462
 (708) 403-6100

SITE BENCHMARK #1:
 WEST SOUTHWEST FLANGE BOLT ON FIRE HYDRANT LOCATED ON THE WEST SIDE OF 108TH AVENUE AT APPROXIMATELY NORTH PROPERTY LINE OF SUBJECT SITE EXTENDED.
 ELEV: 736.43 (NAVD 88)

SITE BENCHMARK #2:
 WEST SOUTHWEST FLANGE BOLT ON FIRE HYDRANT LOCATED ON THE WEST SIDE OF 108TH AVENUE NEAR NORTHEAST CORNER OF PROPERTY AT 10801 W 142ND ST.
 ELEV: 722.40 (NAVD 88)

Professional Engineer Seal for Jon P. Green, P.E., No. 062-052108, State of Illinois.

Jon P. Green, P.E.
 IL. P.E. NO. 062-052108
 Expires November 30, 2025

PROFESSIONAL DESIGN FIRM NUMBER: 184.001186

ENGINEERING
 RESOURCE ASSOCIATES
 35701 WEST AVENUE, SUITE 150
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RT/MGR, LLC
 1965 BRENTWOOD RD., NORTHBROOK, IL 60062
 (847) 863-8808

BRIDLEWOOD SUBDIVISION
 14137 S 108TH AVE, ORLAND PARK, IL

DATE : 03-11-2025
 PROJECT # : W24323.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV
 DESCRIPTION: SITE DEVELOPMENT\W24323 SHEET Prelim Engineering.dwg

DATE : 03-11-2025
 PROJECT # : W24323.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV

COVER

C-1.0
 SHEET

GENERAL NOTES:

- AT LEAST TWO WORKING DAYS PRIOR TO THE COMMENCEMENT OF ALL PHASES OF WORK, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING:
ENGINEERING RESOURCE ASSOCIATES: (630) 393-3060
VILLAGE OF ORLAND PARK DEVELOPMENT SERVICES:(708) 403-5300
VILLAGE OF ORLAND PARK PUBLIC WORKS: (708) 403-6350
- UTILITY INFORMATION IS BASED UPON FIELD MEASUREMENTS AND BEST AVAILABLE RECORDS. FIELD DATA IS LIMITED TO THAT WHICH IS VISIBLE AND CAN BE MEASURED. THIS DOES NOT PRECLUDE THE EXISTENCE OF OTHER UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. (800) 892-0123, 48 HOURS PRIOR TO ANY EXCAVATION WORK TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
- EXCEPT WHERE MODIFIED BY THE CONTRACT DOCUMENTS, ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING DOCUMENTS:
 - IDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN THE STATE OF ILLINOIS", LATEST EDITION.
 - "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS"
 - MWRDGC "WATERSHED MANAGEMENT ORDINANCE"
 - ILLINOIS URBAN MANUAL, LATEST EDITION
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ADEQUATE SIGNS AND WARNING DEVICES TO INFORM AND PROTECT THE PUBLIC. "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS", AS ADOPTED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION, LATEST EDITION, SHALL BE CONSULTED. APPROPRIATE CONTROL METHODS SHOULD BE APPLIED TO THE SPECIFIC SITUATIONS AND TYPES OF CONSTRUCTION OPERATIONS BEING PERFORMED.
- THE CONTRACTOR SHALL ESTABLISH THE NECESSARY PERFORMANCE BONDS REQUIRED. PERMITS SHALL BE OBTAINED FROM ALL OUTSIDE GOVERNMENTAL AGENCIES HAVING JURISDICTION PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.
- 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.
- THE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION AND WILL BE RESPONSIBLE FOR ANY DAMAGE TO THE SAME.
- CONTRACTOR SHALL RESTORE OFF-SITE SURFACES TO ORIGINAL CONDITION IF DAMAGED BY CONSTRUCTION.
- THE CONTRACTOR IS TO PROVIDE THE VILLAGE ENGINEER WITH RECORD DRAWINGS OF ALL UTILITIES SHOWING LOCATIONS OF ALL SEWER PIPE, MAINS, SERVICE STUBS, & STRUCTURES.
- THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO PERFORM OR FURNISH THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- THE ENGINEER WARRANTS THE DESIGN, RECOMMENDATIONS, AND SPECIFICATIONS TO HAVE BEEN PROMULGATED ON CONDITIONS GENERALLY ENCOUNTERED WITHIN THE INDUSTRY. THE ENGINEER ASSUMES NO RESPONSIBILITY WHATSOEVER, WITH RESPECT TO THE DESIGN RECOMMENDATIONS AND SPECIFICATIONS, FOR COMPLEX OR UNUSUAL SOIL CONDITIONS ENCOUNTERED ON THE PROJECT. IT SHALL BE THE OWNERS/BIDDER'S RESPONSIBILITY TO ASCERTAIN THE EXACT NATURE OF SUBSURFACE CONDITIONS PRIOR TO THE CONSTRUCTION OF THE IMPROVEMENT.
- ALL TRENCHES CAUSED BY THE CONSTRUCTION OF SEWERS, WATERMANS, WATER SERVICE PIPES AND IN EXCAVATIONS AROUND CATCH BASINS, MANHOLES, INLETS AND OTHER APPURTENANCES WHICH OCCUR WITHIN TWO FEET OF THE LIMITS OF EXISTING AND PROPOSED PAVEMENT IMPROVEMENTS, SIDEWALKS, AND CURB AND GUTTERS SHALL BE BACKFILLED WITH TRENCH BACKFILL (AS DEFINED IN SECTION 208 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND SPECIAL PROVISIONS).
- AT LEAST 2 WORKING DAYS BEFORE COMMENCEMENT OF ANY WORK ACTIVITIES, THE CONTRACTOR WILL BE REQUIRED TO ATTEND AN ON-SITE PRECONSTRUCTION CONFERENCE. AT THIS CONFERENCE, THE CONTRACTOR WILL BE REQUIRED TO FURNISH AND DISCUSS INCLUDING BUT NOT LIMITED TO THE FOLLOWING: 1) WRITTEN PROGRESS SCHEDULE AND BEGINNING OF WORK 2) NAMES OF PROJECT MANAGER, FIELD SUPERINTENDENT AND THE NAME AND PHONE NUMBER OF A RESPONSIBLE INDIVIDUAL WHO CAN BE REACHED 24 HOURS A DAY.
- THE CONTRACTOR SHALL NOT BE PERMITTED TO OPERATE EXISTING WATER VALVES OR HYDRANTS WITHOUT PERMISSION FROM THE WATER DEPARTMENT. THE CONTRACTOR SHALL CALL THE WATER DEPARTMENT 24 HOURS PRIOR TO THE NEED TO OPERATE THE VALVES OR HYDRANTS.

- THE OWNER SHALL PROVIDE A FULL AND COMPLETE CIVIL ENGINEERING RECORD DRAWING PLAN SET IN HARD COPY AND AUTOCAD AT THE COMPLETION OF THE PROJECT. THE RECORD DRAWINGS SHALL INCLUDE ANY CHANGES FROM THE ORIGINAL CIVIL ENGINEERING PLANS. CURRENT ELEVATIONS SHALL BE SHOWN FOR THE FOLLOWING, AT A MINIMUM: 1) ALL RIM AND INVERTS 2) GRADE INFLECTION POINTS WITH PERIODIC GRADES SHOTS IN LEVEL AREAS 3) DETENTION POND GRADES WITH VOLUME CALCULATION. ADD NOTE COMPARING ACTUAL TO REQUIRED POND VOLUME.
- DUST CONTROL WILL BE IN ACCORDANCE WITH IDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION IN THE STATE OF ILLINOIS", LATEST EDITION, SECTION 107.36.
- ANY DEWATERING NECESSARY FOR THE INSTALLATION OF THE IMPROVEMENTS AS SHOWN ON THE PLANS SHALL BE THE CONTRACTORS RESPONSIBILITY. THE COST FOR DEWATERING SHALL BE INCLUDED IN THE INSTALLATION OF THE IMPROVEMENTS.
- ANY POOR SOILS ENCOUNTERED UNDER AREAS TO BE PAVED SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- THE CONTRACTOR SHALL TAKE CARE TO PROTECT ADJACENT LAND TO THE PROJECT BY NOT DISTURBING THE SOIL BY DRIVING VEHICLES ON IT.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR DAMAGE TO PLANT MATERIAL OR SOILS OUTSIDE THE CONSTRUCTION LIMITS.
- ANY REMOVAL ITEMS SHALL BE PROPERLY DISPOSED OF IN ACCORDANCE WITH THE SPECIFICATIONS
- FIRE HYDRANTS SHALL BE REQUIRED AND IN SERVICE PRIOR TO VERTICAL CONSTRUCTION WITH A MINIMUM FIRE FLOW 1000 GPM FOR 2 HOURS. HYDRANTS SHALL BE NO FURTHER THAN 250' FROM ANY HOME WITH AN AVERAGE SPACING BETWEEN HYDRANTS OF 500'.
- DURING CONSTRUCTION, ALL ROADS SHALL BE HARD SURFACED (TEMPORARY OR PERMANENT) AND IN PLACE, CAPABLE OF SUPPORTING VEHICLE LOADING UNDER ALL WEATHER CONDITIONS, PURSUANT TO THE 2015 INTERNATIONAL FIRE CODE, CHAPTER 5, CHAPTER 33, AND APPENDIX D. THE BINDER COAT SHALL BE AN ACCEPTABLE MATERIAL. ACCESS FOR FIRE DEPARTMENT VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

STORM SEWER:

- STORM SEWER PIPE RCP SHALL CONFORM TO CLASS B MATERIALS FROM SECTION 550 OF THE IDOT STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
- SEWER PIPE JOINTS SHALL BE SEALED WITH "O-RING" GASKETS. WATERMAIN QUALITY PIPE JOINTS SHALL BE "O-RING" TYPE, ASTM C-443
- VERTICAL SEPARATION:
 - A WATERMAIN SHALL BE SEPARATED FROM A SEWER SO THAT ITS INVERT IS A MINIMUM OF 18 INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER WHENEVER WATERMANS CROSS STORM SEWERS, SANITARY SEWERS OR SEWER SERVICE CONNECTIONS. THE VERTICAL SEPARATION SHALL BE MAINTAINED FOR THAT PORTION OF THE WATERMAIN LOCATED WITHIN TEN (10) FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSED. A LENGTH OF WATERMAIN PIPE SHALL BE CENTERED OVER THE SEWER TO BE CROSSED WITH JOINTS EQUIDISTANT FROM THE SEWER OR DRAIN
 - BOTH THE WATERMAIN AND SEWER SHALL BE CONSTRUCTED OF SLIP-ON OR MECHANICAL JOINT CAST OR DUCTILE IRON PIPE, PRE-STRESSED CONCRETE PIPE, OR PVC PIPE EQUIVALENT TO WATERMAIN STANDARDS OF CONSTRUCTION WHEN:
 - IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION AS DESCRIBED ABOVE, OR:
 - THE WATERMAIN PASSES UNDER A SEWER OR DRAIN.
 - A VERTICAL SEPARATION OF 18" BETWEEN THE INVERT OF THE SEWER OR DRAIN AND THE CROWN OF THE WATERMAIN SHALL BE MAINTAINED WHERE A WATERMAIN CROSSES UNDER A SEWER, SUPPORT THE SEWER OR DRAIN LINES TO PREVENT SETTLLING AND BREAKING THE WATERMAIN, AS SHOWN ON THE PLANS OR APPROVED BY THE ENGINEER.
- CONSTRUCTION SHALL EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE PERPENDICULAR DISTANCE FROM THE WATERMAIN TO THE SEWER OR DRAIN LINE IS AT LEAST 10 FEET.
- MANHOLES AND CATCH BASINS SHALL BE PRECAST REINFORCED CONCRETE - ASTM C-478 AND ASTM C-443 CONFORMING TO THE FOLLOWING MINIMUM SIZE CRITERIA UNLESS SPECIFIED OTHERWISE: A.) FOR SEWER EIGHTEEN (18) INCH DIAMETER OR LESS, MANHOLE SHALL HAVE A FORTY-EIGHT (48) INCH INSIDE DIAMETER. B.) FOR SEWER TWENTY-ONE (21) INCH TO THIRTY-SIX (36) INCH IN DIAMETER, MANHOLE SHALL HAVE A SIXTY (60) INCH INSIDE DIAMETER. C.) FOR SEWER GREATER THAN THIRTY-SIX (36) INCH DIAMETER, MANHOLE SHALL HAVE AN OFFSET RISER PIPE OF FORTY-EIGHT (48) INCH INSIDE DIAMETER.

- NO MORE THAN TWO PRECAST ADJUSTING RINGS WITH A MAXIMUM HEIGHT ADJUSTMENT OF 8 INCHES SHALL BE ALLOWED.
- INLETS SHALL BE TWENTY-FOUR (24) INCH DIAMETER PRECAST REINFORCED CONCRETE CONFORMING TO ASTM C-478.
- FOUR INCHES OF CA-7 CRUSHED GRAVEL OR CRUSHED STONE AGGREGATE SHALL BE USED AS BEDDING UNDER THE PIPE. THE BEDDING STONE SHALL BE GRADED ALONG THE ENTIRE LENGTH OF PIPE TO PROVIDE FULL BEARING. THE BEDDING STONE SHALL EXTEND TO THE SPRINGLINE OF THE PIPE.
- ANY PIPES OR MANHOLES CONTAINING SEDIMENT SHALL BE CLEANED OUT PRIOR TO FINAL ACCEPTANCE.
- STORM SEWER MANHOLE JOINTS SHALL BE SEALED WITH "O-RING" GASKETS OR MASTIC MATERIAL.

PAVEMENT, SIDEWALK:

- EXPANSION JOINTS SHALL BE PLACED, AS A MINIMUM AT ALL CONSTRUCTION JOINTS IN THE CURB. EXPANSION JOINTS SHALL BE DOWELED AND SPACED NO MORE THAN SIXTY (60) FEET ON CENTER.
- PRIOR TO PLACING ANY PAVEMENT MATERIAL, THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY PREPARING AND COMPACTING THE SUBGRADE. THE PAVEMENT BASE COURSE SHALL BE PROOF-ROLLED WITH A FULLY LOADED DUMP TRUCK. THE ENGINEER SHALL BE NOTIFIED AT LEAST 24 HOURS BEFORE PROOF-ROLLING. ADDITIONAL PROOF-ROLLS MAY BE NECESSARY TO VERIFY THAT ANY UNSTABLE AREAS HAVE BEEN REPAIRED. NO PAVEMENT MATERIAL IS TO BE PAVED ON A WET OR SOFT SUBGRADE.
- ALL EXISTING PAVEMENT OR CONCRETE TO BE REMOVED SHALL BE SAWCUT TO A NEAT EDGE ALONG LIMITS OF PROPOSED REMOVAL BEFORE REMOVAL OPERATIONS BEGIN.

SANITARY SEWER:

- EMBEDMENT MATERIALS FOR BEDDING, HAUNCHING AND INITIAL BACKFILL TO AT LEAST TWELVE INCHES OVER THE TOP OF THE PIPE WITH CA-7. PROCESSED MATERIAL PRODUCED FOR HIGHWAY CONSTRUCTION USED IN THE PROJECT CLASSIFIED ACCORDING TO PARTICLE SIZE, SHAPE AND GRADATION IN ACCORDANCE WITH ASTM D-2321-89, SECTION 9, TABLE 1.
- ALL RIGID GRAVITY SEWER PIPE TO BE INSTALLED IN ACCORDANCE WITH ASTM C-12 AND BEDDING MATERIAL CA-7.
- A CURRENT COLOR VIDEO RECORD AND A TYPE WRITTEN TRANSCRIPTION OF THE INTERNAL INSPECTION OF THE NEWLY CONSTRUCTED SEWER SYSTEM SHALL BE SUBMITTED PRIOR TO REFUNDING OF SITE IMPROVEMENT ESCROW RETENTION MONIES BY THE VILLAGE OF ORLAND PARK. ALL PUBLIC MAINS SHALL BE VIDEOTAPE. THE CONTRACTOR MUST ROTATE THE LENS OF THE CAMERA TO LOOK AT ALL SERVICES. THE SEWER CONNECTIONS MUST BE NOTED IN THE TELEVISION REPORT. WHEN THE PROPOSED SANITARY SEWER SYSTEM IS TO CONNECT TO AN EXISTING SANITARY SEWER SYSTEM ABUTTING THE PROPERTY, THE EXISTING CONTIGUOUS SEWERS WITH THE VILLAGE OF ORLAND PARK. ALL LINES SHALL BE FLUSHED AND CLEANED PRIOR TO VIDEOTAPING.
- THE MINIMUM BUILDING SANITARY SEWER SERVICE SIZE SHALL BE SIX (6) INCHES IN DIAMETER. THE SERVICE LATERAL SHALL SLOPE TOWARD THE MAIN AT THE MINIMUM RATE OF ONE (1) PERCENT.
- MANHOLES SHALL BE PRECAST REINFORCED CONCRETE- ASTM C-478 WITH TONGUE AND GROOVE JOINTS SEALED WITH GASKETS CONFORMING TO ASTM C-443 OR BITUMINOUS JOINTING MATERIAL.
- NO MORE THAN TWO PRECAST ADJUSTING RINGS WITH A MAXIMUM HEIGHT ADJUSTMENT OF SIX INCHES SHALL BE ALLOWED.
- ALL PIPE CONNECTION OPENINGS SHALL BE PRECAST WITH RESILIENT RUBBER WATER-TIGHT PIPE TO MANHOLE SLEEVES OR SEALS, PER ASTM C-923.
- MANHOLES SHALL INCLUDE EXTERNAL CHIMNEY SEALS.
- ALL SANITARY SEWER CONSTRUCTION REQUIRES SIX (6) INCHES OF CA-7 CRUSHED GRAVEL OR CRUSHED STONE BEDDING UNDER THE PIPE. BEDDING STONE SHALL EXTEND TO A POINT TWELVE INCHES ABOVE THE TOP OF PIPE.
- THE INSTALLATION OF SANITARY SEWER AND APPURTENANCES SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-2321 FOR PVC PIPE AND FITTINGS.
- BACKFILLING OF THE TRENCH SHALL BE ACCOMPLISHED BY CAREFUL REPLACEMENT OF THE EXCAVATED MATERIAL AFTER THE PIPE, BEDDING, AND THE COVER MATERIAL HAVE BEEN INSTALLED. ANY PIPE INSTALLED UNDER OR WITHIN TWO (2) FEET OF A PAVEMENT EDGE, SIDEWALK, OR CURB AND GUTTER SHALL BE BACKFILLED TO THE TOP OF THE TRENCH WITH CA-7 MATERIAL.
- "BAND-SEAL" OR SIMILAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPE DISSIMILAR MATERIALS. ALL CHANGES OF MATERIAL SHALL OCCUR INSIDE A MANHOLE.

- WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHOULD BE USED: A.) CIRCULAR SAWCUT OF SEWER MAIN BY PROPER TOOLS ("SEWER-TAP" MACHINE OR SIMILAR) AND PROPER INSTALLATION OF HUB-WYE SADDLE OR HUB-TEE SADDLE. B.) REMOVE AN ENTIRE SECTION OF PIPE (BREAKING ONLY THE TOP OF ONE BELL) AND REPLACE WITH A WYE OR TEE BRANCH SECTION. C.) WITH PIPE CUTTER, NEATLY AND ACCURATELY CUT OUT DESIRED LENGTH OF PIPE FOR INSERTION OF PROPER FITTING, USING "BAND-SEAL" OR SIMILAR COUPLINGS TO HOLE IT FIRMLY IN PLACE.
- MANHOLE FRAMES SHALL BE NEENAH NO. R-1710 / WATERTIGHT LID OR EAST JORDAN IRON WORKS 1020AGS. ALL CLOSED LIDS SHALL HAVE A CONCEALED PICK HOLE. WATER AND SANITARY LIDS SHALL BE WATER TIGHT AND SELF-SEALING. LIDS SHALL BE EMBOSSED WITH "SANITARY SEWER" AND "VILLAGE OF ORLAND PARK", UNLESS OTHERWISE NOTED.
- ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER.
- ALL SANITARY SEWER PIPES SHALL BE TESTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, AS A MINIMUM, AND WITH THE VILLAGE OF ORLAND PARK SANITARY CODE REQUIREMENTS, INCLUDING VISUAL, TELEVISED, INFILTRATION, EXFILTRATION, AIR TESTS, LEAKAGE TESTS AND DEFLECTION TESTS.
- THE SEWER SHALL MEET THE REQUIREMENTS OF EXFILTRATION OR AIR UNDER PRESSURE AND TELEVISION INSPECTION. ALL TEST MUST BE CONDUCTED IN THE PRESENCE OF AN EMPLOYEE OF THE VILLAGE AND THE ENGINEER'S REPRESENTATIVES.
- MANHOLES SHALL BE TESTED PER ASTM C1244.
- ALL SANITARY SEWER AND SERVICES TO BE WATERMAIN QUALITY SEWER.

SOIL EROSION CONTROL PLAN:

- THE PROJECT AREA SHALL BE GRADED SO A MINIMAL AMOUNT OF STORMWATER RUNOFF AND LIKEWISE SOIL SEDIMENT WILL DISCHARGE UNRESTRICTED FROM THE SITE.
- IN ACCORDANCE WITH THE NPDES, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL PROTECTION DURING CONSTRUCTION AS WELL AS PROVIDING PROTECTION TO ADJOINING STREETS FROM MUD AND POLLUTED RUNOFF AS WELL AS KEEPING EXISTING PAVEMENT CLEAN OF MUD AND DEBRIS. PAVEMENT SWEEPING OF COUNTY ROADS SHALL BE PERFORMED AS NECESSARY OR AT THE DIRECTION OF THE COUNTY ENGINEER. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED AND CLEANED OR OTHERWISE MAINTAINED ON A WEEKLY BASIS, AND WITHIN 24 HOURS AFTER ANY SIGNIFICANT RAINFALL (0.5 INCHES OR GREATER) TO INSURE THAT ANY DAMAGE THAT MAY HAVE OCCURRED IS REPAIRED. ALL EROSION CONTROL INSTALLATION SHALL BE APPROVED BY THE VILLAGE OF ORLAND PARK BEFORE CONSTRUCTION IS ALLOWED TO BEGIN.
- INLET PROTECTORS SHALL BE USED IN ALL STORM GRATES DURING CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL THE RESTORATION IS SUFFICIENTLY ESTABLISHED. THE INLET PROTECTORS SHALL BE MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL KEEP A MAINTENANCE LOG. THE COUNTY ENGINEER CAN DETERMINE IF ADDITIONAL PRACTICES ARE NEEDED FOR BETTER SOIL EROSION AND SEDIMENT CONTROL.
- SILT FENCING SHALL REMAIN IN PLACE THROUGH THE CONSTRUCTION OF HOUSE/BUILDINGS TO SERVE AS EROSION CONTROL FOR THAT CONSTRUCTION.
- TO PREVENT SOIL FROM LEAVING THE SITE ON CONSTRUCTION VEHICLE WHEELS, WORK ENTRANCES SHALL BE CONSTRUCTED OF GRAVEL AND SHALL EXTEND AT LEAST 50 FEET INTO THE JOB SITE. THE EXISTING PAVEMENT SURFACES SHALL BE INSPECTED DAILY FOR SOIL DEBRIS AND SHALL BE CLEANED WHEN NECESSARY.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROPERLY DISPOSE OF ANY EXCESS EXCAVATED MATERIAL.
- DISPOSAL OF DEBRIS EXCAVATION AND PAVEMENT REMOVAL SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND CONSIDERED AS AN INCIDENTAL EXPENSE.
- ANY TOPSOIL THAT WILL BE STOCKPILED ON SITE SHALL BE MANAGED IN ACCORDANCE WITH THE CURRENT NPDES REGULATIONS. IF THE STOCKPILE WILL REMAIN ON SITE FOR AN EXTENDED PERIOD, IT SHALL BE STABILIZED WITH GRASS AND/OR OTHER VEGETATION AND DOUBLE ROW OF SILT FENCING SHALL BE PLACED AROUND THE STOCKPILE.
- ALL ACCESS TO AND FROM THE CONSTRUCTION SITE IS TO BE RESTRICTED TO THE CONSTRUCTION ENTRANCE.
- ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE EFFECTIVE PERFORMANCE OF THEIR INTENDED FUNCTION.
- THE ENGINEER SHALL BE NOTIFIED OF MAJOR AMENDMENTS OF THE SITE DEVELOPMENT OR EROSION AND SEDIMENTATION CONTROL PLANS, WHICH WILL BE APPROVED IN THE SAME MANNER AS THE ORIGINAL PLANS.

- ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY SHOVELING OR STREET CLEANING (NOT FLUSHING) BEFORE THE END OF EACH WORKDAY AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISPOSED OF WITHIN 30 DAYS AFTER THE FINAL SITE STABILIZATION IS ACHIEVED WITH PERMANENT SOIL STABILIZATION MEASURES
- DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 7 CALENDAR DAYS FOLLOWING THE END OF ACTIVE DISTURBANCE OR REDISTURBANCE"
- DISTURBED AREA ON SITE SHALL BE RESTORED WITH 4" OF TOPSOIL AND HYDROSEED. DISTURBED AREAS IN THE DEDICATED R.O.W. SHALL BE RESTORED WITH 6" OF TOPSOIL AND SEED AND STRAW BLANKET.
- IF DEWATERING DEVICES ARE USED, DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. ALL PUMPED DISCHARGES SHALL BE ROUTED THROUGH APPROPRIATELY DESIGNED SEDIMENT TRAPS OR BASINS.

SITE GRADING:

- EXCAVATION OF TOPSOIL AND OTHER STRUCTURALLY UNSUITABLE MATERIALS MAY REQUIRE EARTH EXCAVATION AND COMPACTED EARTH FILL MATERIAL IN ORDER TO ACHIEVE THE PLAN SUBGRADE ELEVATIONS.
- PLACEMENT OF THE EXCAVATED MATERIAL SHALL BE IN AREAS DESIGNATED BY THE OWNER FOR FUTURE USE, WITHIN AREAS TO BE LANDSCAPED, AND THOSE AREAS NOT REQUIRING STRUCTURAL FILL MATERIAL.
- COMPACTION OF THE EXCAVATED MATERIAL PLACED IN AREAS NOT REQUIRING STRUCTURAL FILL SHALL BE MODERATE.
- EXCESS MATERIALS, IF NOT UTILIZED AS FILL OR STOCKPILED FOR FUTURE LANDSCAPING, SHALL BE COMPLETELY REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF BY THE CONTRACTOR.
- EXCAVATION OF EARTH AND OTHER MATERIALS WHICH ARE SUITABLE FOR USE AS STRUCTURAL FILL: THE EXCAVATION SHALL BE TO WITHIN A TOLERANCE OF 0.3' +/- OF THE PLAN SUBGRADE ELEVATIONS. THE TOLERANCE WITHIN PAVEMENT AREAS SHALL BE SUCH THAT THE EARTH MATERIAL SHALL BALANCE AS PART OF THE FINE GRADING OPERATION.
- PLACEMENT AND COMPACTION OF MATERIALS SHALL CONFORM TO I.D.O.T SPECIFICATIONS.
- THE CONTRACTOR SHALL MAINTAIN PROPER SITE DRAINAGE AT ALL TIMES DURING THE COURSE OF CONSTRUCTION AND PREVENT STORM WATER FROM RUNNING INTO OR STANDING IN EXCAVATED AREAS.
- PAYMENT FOR THE REMOVAL OF UNSUITABLE MATERIAL (EXCLUDING TOPSOIL EXCAVATION) SHALL BE BASED ON THE QUANTITIES AS FIELD MEASURED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE AS PART OF HIS BID A UNIT PRICE PER CUBIC YARD FOR THE REMOVAL OF UNSUITABLE MATERIALS. SAID UNIT PRICE SHALL INCLUDE THE COMPLETE REMOVAL OF THE MATERIAL, REPLACEMENT WITH SUITABLE MATERIAL OBTAINED BY THE CONTRACTOR FROM A BORROW SOURCE, AND COMPACTION TO THE REQUIRED SPECIFICATIONS OF THE ENGINEER.
- ALL DISTURBED AREAS SHALL BE RESTORED W/4" TOPSOIL AND SEED AND BLANKET UNLESS OTHERWISE INDICATED.
- PRIOR TO CONSTRUCTION, AREAS NOTED AS RESERVED FOR SEPTIC FIELDS SHALL BE STAKED AND ROPED OFF WITH SURVEYOR TAPE. NO DISTURBANCE IS ALLOWED IN FUTURE SEPTIC FIELD AREA.
- IT IS THE RESPONSIBILITY OF THE DEVELOPER TO MAINTAIN ALL THE SEDIMENTATION CONTROL MEASURES. INSPECTIONS SHALL BE CONDUCTED AFTER A RAIN EVENT, AND IF MAINTENANCE OF THE STRUCTURES IS NECESSARY, INCLUDING REPAIR OF DAMAGE AND REMOVAL OF DEPOSITS OR SEDIMENT FROM VEGETATIVE FILTERS, IT SHALL BE DONE BY THE DEVELOPER.

- PERFORM TREE REMOVAL
- INSTALL TEMPORARY EROSION CONTROL MEASURES.
- MASS GRADE SITE AND EXCAVATE DETENTION FACILITIES.
- CONSTRUCT UTILITIES
- CONSTRUCT ROADWAY
- PERFORM RESTORATION, STABILIZATION, AND REMOVAL OF TEMPORARY EROSION CONTROL MEASURES.

DATE OF CONSTRUCTION: IT IS ANTICIPATED THAT CONSTRUCTION WILL BEGIN IN SUMMER 2025, AND THAT EARTHWORK AND UTILITY OPERATIONS WILL BE COMPLETED BY SPRING 2026.



RT/MGR, LLC
1965 BRENTWOOD RD. NORTHBROOK, IL 60062
(847) 863-8888

BRIDLEWOOD SUBDIVISION

14137 S 108TH AVE, ORLAND PARK, IL

DATE : 03-11-2025
PROJECT # : W242323.00
DESIGNED BY : KF
DRAWN BY : KF
CHECKED BY : NAV

GENERAL NOTES
C-2.0
SHEET

GENERAL WATERMAIN CONSTRUCTION NOTES:

- 1) A MINIMUM OF 48 HOURS PRIOR TO ANY WATER USAGES (I.E. FLUSHES, FILLS, ETC.), THE CONTRACTOR MUST CALL THE VILLAGE OF ORLAND PARK'S PUBLIC WORKS DEPARTMENT AT (708) 403-6350 TO GET APPROVAL OF SAID USAGE. ANY UNAUTHORIZED USAGES WILL RESULT IN PENALTIES.
- 2) ALL WATERMANS NEAR SEWER WILL BE PROTECTED IN ACCORDANCE WITH IEPA REQUIREMENTS.
- 3) SHUT-DOWN OF ANY WATERMAIN WILL NEED TO BE COORDINATED WITH THE VILLAGE OF ORLAND PARK'S PUBLIC WORKS DEPARTMENT.
- 4) ALL WATER APPURTENANCE (VALVES, INSERTION VALVES, VALVE VAULTS, ETC.) SHALL BE SUBMITTED TO THE VILLAGE OF ORLAND PARK'S PUBLIC WORKS DEPARTMENT FOR APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES. THE CITY PUBLIC WORKS DEPARTMENT WILL HAVE THE FINAL SAY ON THE MANUFACTURER OF ALL WATER APPURTENANCE.
- 5) SEE CONSTRUCTION DETAILS FOR ALL CIVIL DETAILS.

BEDDING, HAUNCHING & INITIAL BACKFILL

- 1) ALL WATER MAIN ON THIS PROJECT SHALL BE BEDDED, HAUNCHED AND INITIAL BACKFILL PLACED IN ACCORDANCE WITH ASTM SPECIFICATION D-2321 AND THE APPLICABLE PARTS OF DIVISION II SECTION 20-4.05 AND 20-4.06 OF THE STANDARD SPECIFICATIONS (ISPE).
- 2) THE BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIAL SHALL BE PLACED FROM 6" BELOW THE OUTSIDE DIAMETER OF THE PIPE TO 12" ABOVE THE OUTSIDE OF THE PIPE. EMBEDMENT MATERIALS FOR THE WATER MAIN SHALL BE CLASS IA, IB, OR II.
- 3) IF WET CONDITIONS ARE ENCOUNTERED IN THE TRENCH, A CA-7 BEDDING MATERIAL (CLASS 1A BEDDING PER ASTM D-2321) SHALL BE REQUIRED, AS DIRECTED BY THE ENGINEER.

FINAL BACKFILL

- 1) ALL WATER MAIN SHALL BE BACKFILLED IN ACCORDANCE WITH SECTION 20-4.06 OF THE STANDARD SPECIFICATIONS (ISPE). THE MATERIALS USED FOR TRENCH BACKFILL SHALL BE CRUSHED GRAVEL OR CRUSHED STONE WITH IDOT GRADATION NUMBER OF CA 7 (ASTM D 448 GRADATION SIZE 57).
- 2) IN ALL AREAS WHERE THE WATER MAIN TRENCH IS LOCATED MORE THAN 2' OUTSIDE OF THE ROADWAYS, DRIVEWAYS, AND SIDEWALKS, THE TRENCH SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH SECTION 20-4.06B, METHOD 2 OF THE STANDARD SPECIFICATIONS (ISPE).

WATER DESIGN RESTRICTIONS

- 1) DEAD END WATER MAIN: THE CONSTRUCTION OF DEAD END WATER MAIN WILL NOT BE PERMITTED. WHERE DEAD END MAINS CANNOT BE AVOIDED ON A TEMPORARY BASIS, A FIRE HYDRANT SHALL BE PLACED AT THE END.
- 2) PIPE COMPOUND: PIPE COMPOUND WILL NOT BE PERMITTED IN ANY WATER MAIN CONSTRUCTION, INCLUDING SERVICE CONNECTIONS.

WATER DESIGN REQUIREMENTS:

- 1) AUGERING OR DIRECTIONAL DRILLING WILL BE REQUIRED AT ALL ROADWAY CROSSINGS UNLESS OTHERWISE PERMITTED BY THE VILLAGE OF ORLAND PARK'S APPROPRIATE ENGINEERING DIVISION. STEEL CASING AND "CASCADE" SPACERS SHALL BE UTILIZED EXCLUSIVELY. FOLLOWING COMPLETION OF THE AUGER, THE CASING SHALL BE FILLED WITH PEA GRAVEL OR SAND, THE ENDS SHALL BE BLOCKED AND MORTARED SHUT, OR HAVE END BOOTS INSTALLED.
- 2) COVER DEPTH: ALL WATER MAIN, HYDRANT LEADS, AND SERVICES MUST HAVE A MINIMUM COVER OF FIVE AND A HALF FEET (5.5'), AND A MAXIMUM COVER OF TEN FEET (10'). VARIATIONS FROM THESE STANDARDS WILL REQUIRE APPROVAL OF APPROPRIATE ENGINEERING DIVISION.
- 3) FIRE FLOWS: FIRE FLOWS SHALL BE CALCULATED AT A TWENTY (20) PSI RESIDUAL PRESSURE AND SHALL BE AVAILABLE FOR A MINIMUM FOUR (4) HOUR CONTINUOUS DURATION FOR FLOWS ABOVE 2,000 GPM, AND A TWO (2) HOUR CONTINUOUS DURATION FOR FLOWS BELOW 2,000 GPM. APPROPRIATE WATER PRESSURE AND FLOW MUST BE PROVIDED IN ACCORDANCE WITH THE VILLAGE OF ORLAND PARK'S MUNICIPAL CODE:
 - SINGLE FAMILY DETACHED RESIDENTIAL: 1,000 - 1,500 GPM
 - TOWN / ROW OR CLUSTER HOUSING: 1,500 - 2,000 GPM
 - APARTMENT TYPE CONSTRUCTION: 3,000 - 4,000 GPM
 - INDUSTRIAL & STORAGE: 3,000 - 5,000 GPM
 - RESEARCH & DEVELOPMENT LABORATORIES: 3,000 - 4,000 GPM
 - BUSINESS & COMMERCIAL AREAS: 3,000 - 4,500 GPM MERCANTILE CENTERS: 3,000 - 6,000 GPM
 - ASSEMBLY & EDUCATION: 3,000 - 5,000 GPM
 - HEALTH CARE & INSTITUTIONAL: 3,000 - 4,000 GPM

- 4) HYDRANT LEADS: ALL HYDRANT LEADS MUST BE CONSTRUCTED OF DIWM CL 52 WITH A MINIMUM DIAMETER OF 6". WHERE HYDRANT LEADS ARE LONGER THAN 100', 8" DIAMETER DIWM WILL BE REQUIRED.
- 5) HYDRANT SPACING: HYDRANTS MUST BE PLACED AT A MINIMUM OF 350-FOOT INTERVALS, AND MAY NOT BE LESS THAN FIVE (5) FEET FROM THE BACK OF CURB. NO BUILDABLE AREA SHALL BE FARTHER THAN 300' FROM A FIRE 21 HYDRANT, AND A MINIMUM OF ONE HYDRANT SHALL BE LOCATED AT EACH INTERSECTION. FOR LARGER PROJECTS, HYDRANTS SHALL BE PROPOSED AT HIGH POINTS FOR AIR RELEASE. ALL HYDRANT LOCATIONS SHALL BE COORDINATED WITH THE VILLAGE OF ORLAND PARK'S FIRE DEPARTMENT AND APPROPRIATE ENGINEERING DIVISION.
- 6) HORIZONTAL AND VERTICAL SEPARATION: - WATERMANS AND SEWER HORIZONTAL AND VERTICAL SEPARATIONS SHALL CONFORM TO THE LATEST VERSION OF THE "STANDARD SPECIFICATIONS FOR WATER & SEWER CONSTRUCTION IN ILLINOIS. REFERENCE TO THESE STANDARD AND SPECIFICATION SHOULD BE MADE WHEN IT IS IMPOSSIBLE TO MEET SEPARATION REQUIREMENTS FOR CASING PIPE REQUIREMENTS (REFER TO STANDARD CASING PIPE DETAIL).
- 7) ABANDONING AND REPLACING EXISTING SERVICES: ALL EXISTING SERVICES SHALL BE ABANDONED AT THE CORPORATION STOP (CLOSE CORPORATION STOP, CUT SERVICES, AND INSTALL COPPER DISK). EXISTING SERVICES SHOULD BE REPLACED FROM THE NEW MAIN TO THE B-BOX IF SERVICE IS LEAD. IF SERVICE IS COPPER, IT SHOULD BE CUT AND TAPPED INTO THE NEW MAIN. APPROVED TRENCH BACKFILL MATERIAL IS TO BE PLACED WHERE ANY TRENCH LIES WITHIN (3) FEET OF THE EDGE OF PAVEMENT, CURB, OR SIDEWALK. IT IS ASSUMED ALL LINES ARE LEAD AND MUST BE REPLACED TO B-BOX.
- 8) INTERRUPTION OF WATER USAGE: WATER SERVICES MAY ONLY BE INTERRUPTED WHEN THE TRANSFER OF SERVICES TO THE NEW MAIN TAKES PLACE. SERVICES SHALL BE TRANSFERRED SUBSEQUENT TO TESTING AND CHLORINATION OF THE PROPOSED MAIN. THE CONTRACTOR SHALL CONTACT THE VILLAGE OF ORLAND PARK'S PUBLIC WORKS DEPARTMENT AT (708) 403-6350 PRIOR TO TRANSFER OF SERVICE. RESIDENTS AND BUSINESSES MUST BE INFORMED A MINIMUM OF 24 HOURS IN ADVANCE OF ANY INTERRUPTION BY THE CITY OF ST. CHARLES WATER DIVISION STAFF.
- 9) SERVICES, DOMESTIC: DOMESTIC WATER SERVICES SHALL BE PROVIDED TO EACH LOT. THE MINIMUM SIZE FOR DOMESTIC SERVICES IS ONE AND A HALF INCHES (1.5"). ONCE INSTALLED ALL SERVICES EXTENDING TO THE CITY RIGHT-OF-WAY LIMITS SHALL BE LOCATED UTILIZING A 2" X 4" WOODEN STAKE PAINTED BLUE.
- 10) THRUST BLOCKING: PREFORMED CONCRETE BLOCK THRUST BLOCKING SHALL BE PROVIDED AT ALL BENDS GREATER THAN 10 DEGREES, AT ALL MECHANICAL JOINT CONNECTIONS, AND AT ALL FIRE HYDRANTS (REFER TO THRUST BLOCKING DETAIL).
- 11) TRENCH BACKFILL: ALL UTILITY AND SERVICE TRENCHES WITHIN (3) FEET OF PAVED SURFACES, OR AT A DISTANCE SPECIFIED BY THE ENGINEER, SHALL BE BACKFILLED WITH CA-7 (VIRGIN CRUSHED LIMESTONE). FA-6 (CLEAN BEACH SAND) MATERIAL SHALL BE USED IN ALL OTHER UNPAVED LOCATIONS. ALL BACKFILL MATERIAL SHALL BE PROPERLY COMPACTED UNLESS OTHERWISE DIRECTED BY THE APPROPRIATE ENGINEERING DIVISION. BACKFILL UNDER EXISTING PAVEMENTS, WHERE AN OPEN CUT OF THE PAVEMENT HAS BEEN APPROVED, SHALL BE FLOWABLE FILL THAT MEETS THE IDOT STANDARDS OF CONTROLLED LOW STRENGTH MATERIAL (CLSM) MIXTURE #1. NO FLY ASH WILL BE PERMITTED IN THIS MIX (REFER TO CITY PIPE TRENCH DETAIL).

- 12) VALVE SPACING: RIGHT-HAND CLOSING RESILIENT WEDGE GATE VALVES AT INTERVALS NOT OVER 600 FEET INTERVALS.
- 13) VALVE VAULTS: VALVE VAULTS ARE TO BE PRECAST REINFORCED CONCRETE, ECCENTRIC TYPE (REFER TO STANDARD DETAIL AND MATERIALS SECTION FOR SIZING SPECIFICATIONS). A MAXIMUM OF (8-INCHES) OF ADJUSTING RINGS SHALL BE USED.
- 14) FRAME AND COVERS: ALL VALVE VAULT STRUCTURES SHALL HAVE A NEENAH FOUNDRY COMPANY R-1713 FRAME AND TYPE "B" LID WITH CONCEALED PICK HOLE. LIDS SHALL BE FURNISHED WITH "VILLAGE OF ORLAND PARK - WATER" CAST INTO THE TOP SURFACE.
- 15) WATER MAIN, MINIMUM SIZE: THE MINIMUM SIZE FOR ANY PUBLIC WATER MAIN SHALL BE 8" (WITH THE EXCEPTION OF HYDRANT LATERALS THAT MAY BE 6", (SEE DESIGN REQUIREMENT #3 ABOVE FOR FIRE FLOW CONSIDERATIONS).
- 16) SEPARATION: A TEN-FOOT HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN WATER MAINS AND APPURTENANCES, AND ALL OTHER UTILITIES, PUBLIC OR PRIVATE.
- 17) APPURTENANCE SEPARATION: WATER APPURTENANCES SHALL BE A MINIMUM OF (20) FEET FROM PERMANENT STRUCTURES; THIS APPLIES TO ANY STRUCTURE THAT MAY REQUIRE A BUILDING PERMIT (I.E. RETAINING WALLS, POOLS, SHED, GARAGES, ETC.)
- 18) DEAD ENDS: DEAD END WATER MAINS LONGER THAN 300' SHOULD NOT BE PERMITTED. THE WATER SYSTEM MUST BE EXTENDED, AS A MINIMUM, TO THE LIMITS OF THE DEVELOPMENT AND LOOPED WHEREVER POSSIBLE.
- 19) ADJUSTMENT OF STRUCTURES: ALL ADJUSTMENTS TO VALVE VAULTS SHALL BE MADE WITH PRECAST CONCRETE ADJUSTING RINGS NOT TO EXCEED A MAXIMUM OF EIGHT (8) INCHES OVERALL IN HEIGHT. WATERTIGHT VALVE VAULTS SHALL BE PROVIDED FOR EACH VALVE. BARREL SECTIONS SHALL BE SEATED USING (2) BUTYL RUBBER STRIPS PER TONGUE AND GROOVE SECTION. VALVE VAULTS ARE TO BE PRECAST REINFORCED CONCRETE, CONCENTRIC TYPE (REFER TO STANDARD DETAIL AND MATERIALS SECTION FOR SIZING SPECIFICATIONS). AFTER FINAL ADJUSTMENTS HAVE BEEN MADE, ALL JOINTS IN PRECAST STRUCTURES SHALL BE MORTARED. THE MORTAR SHALL BE COMPOSED OF ONE PART CEMENT TO THREE PARTS SAND, BY VOLUME, BASED ON DRY METALS AND SHALL BE THOROUGHLY WETTED BEFORE LAYING. VAULTS MAY ONLY BE EXTENDED TO A MAXIMUM OF 23" FROM THE SURFACE TO THE INSIDE FLARE OF THE MANHOLE CONE SECTION.

- 20) CONNECTING TO EXISTING WATER MAINS: CONNECTION TO THE END OF AN EXISTING A WATER MAIN SHALL BE WITH A VALVE ONLY. NO NEW WATER MAIN SHOULD BE CONNECTED TO THE EXISTING WATER MAIN UNLESS THE NEW WATER MAIN CAN BE PRESSURE TESTED SEPARATELY. CONNECTION TO AN EXISTING WATER MAIN SHALL BE DONE BY PRESSURE CONNECTION ONLY UNLESS AUTHORIZED BY THE APPROPRIATE ENGINEERING DIVISION. PRESSURE CONNECTION AND VALVE SHALL BE LOCATED WITHIN THE VALVE VAULT. NO PRESSURE CONNECTION SHALL BE WITHIN 3 FEET OF AN EXISTING WATER MAIN JOINT. IF PRESSURE CONNECTION CANNOT BE DONE, USE A CUT IN SLEEVE AND TEE CONNECTION. ALL FITTINGS WILL BE SWABBED OUT WITH A CHLORINE SOLUTION OF AT LEAST 50 MG/L. A CITY REPRESENTATIVE MUST TEST THIS SOLUTION.

- 21) SERVICE TAPS: SERVICE TAPS TO WATER MAINS ARE NOT PERMITTED UNTIL AFTER BACTERIOLOGICAL SAMPLING AND ANALYSIS HAS BEEN COMPLETED TO THE SATISFACTION OF THE APPROPRIATE ENGINEERING DIVISION. NO WATER SERVICE CONNECTION SHALL BE MADE BY ANY PERSON OR FIRM OTHER THAN A STATE OF ILLINOIS LICENSED CONTRACTOR, WITH A STATE OF ILLINOIS LICENSED PLUMBER ON THE JOB, BONDED WITH THE CITY.

- 22) LANDSCAPING: LANDSCAPE PLANTINGS SHALL NOT INTERFERE WITH OPERATION AND MAINTENANCE OF WATER APPURTENANCES. TREES SHALL BE PLACED NO CLOSER THAN (10) FEET FROM ANY STRUCTURE(S).

- 23) FIRE HYDRANTS: FIRE HYDRANTS SHALL BE INSTALLED WITH A MAXIMUM OF ONE EXTENSION KIT USED, AND A MAXIMUM EXTENSION OF 36". FIRE HYDRANT EXTENSION KITS MUST BE OF THE SAME MANUFACTURE AS THE HYDRANT, AND MUST BE INSTALLED ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS USING ORIGINAL MANUFACTURER'S PARTS.

- 24) JOINT RESTRAINT: ALL MECHANICAL JOINT FITTINGS SHALL HAVE RESTRAINING GLANDS INSTALLED. RESTRAINT DEVICE SHALL BE UNI-FLANGE BY FORD COMPANY OR MEGA-LUG BY EBAA IRON. PUSH JOINT PIPE RESTRAINT SHALL BE FIELD LOCK GASKETS BY US PIPE OR SERIES 1700 MEGA-LUG OR SERIES 1390 PIPE RESTRAINT BY FORD. LENGTHS OF PIPE RESTRAINT SHALL BE DETERMINED FROM MANUFACTURERS INSTALLATION SPECIFICATIONS (REFER TO WATERMAIN RESTRAINT DETAIL).

WATER MATERIALS:

- 1) CORPORATION STOPS:
 - a. COMPRESSION FITTINGS.
 - i. MUELLER B-25008-N (1"-1 1/2"-2")
 - ii. FORD
 - 1. FB1000-4-Q-NL 1"
 - 2. FB1000-6-Q-NL 1 1/2"
 - 3. FB 1000-7-Q-NL 2"
 - iii. A. Y. MCDONALD 4701-BQ (1", 1 1/2", 2")
 - iv. Q SERIES BRASS
- 2) CURB STOPS:
 - a. COMPRESSION FITTINGS.
 - i. MUELLER B-25155-N (1"-1 1/2"-2")
 - ii. FORD
 - 1. B-44-444-Q-NL 1"
 - 2. B-44-666-Q-NL 1 1/2"
 - 3. B-44-777-Q-NL 2"
 - iii. A. Y. MCDONALD 6104-Q (1", 1 1/2", 2")
 - iv. Q SERIES BRASS
 - v.
- 3) CURB BOX: (MINNEAPOLIS PATTERN, LID MARKED "WATER")

- 4) BUFFALO TYPE:
 - a. FOR 1" THRU 2", MUELLER H-10300 COPPER SERVICE
 - b. A. Y. MCDONALD, 5615 1 1/2" 24

- 5) FIRE HYDRANT:
 - a. APPROVED MODELS: (REFER TO STANDARD FIRE HYDRANT DETAIL)
 - i. MUELLER SUPER CENTURION 200
 - ii. WATEROUS PACER MODEL WB-67-250
 - iii. CLOW MEDALLION IV. ALL HYDRANTS SHALL HAVE:
 - 1. 6" MECHANICAL JOINT CONNECTION
 - 2. 5 1/2" VALVE OPENING
 - 3. 5" COVER OVER HYDRANT LATERAL
 - 4. 6" VALVE ON LATERAL
 - 5. "HYDRAFINDER" STANDARD HYDRANT LOCATOR, INSTALLED
 - 6. VALVE BOX SHALL HAVE A VALVE BOX STABILIZER INSTALLED *

- 6) FIRE HYDRANT PAINT: SAFETY RED, SHERWIN WILLIAMS 'SHERCRYL' 6403-31922, B66R300

- 7) BOLTS PLACED UNDERGROUND: ALL BELOW GRADE FACTORY INSTALLED BOLTS AND FASTENERS SHALL BE 304- GRADE STAINLESS STEEL.

- 8) VALVES: 4" THROUGH 16" DIAMETER" RIGHT-HAND CLOSING RESILIENT WEDGE GATE VALVES, CONFORMING TO AWWA STANDARD C-509 AS MANUFACTURED BY THE CLOW CORPORATION, WATEROUS COMPANY OR APPROVED EQUAL. ALL BELOW GRADE FACTORY INSTALLED BOLTS AND FASTENERS SHALL BE 304-GRADE STAINLESS STEEL.

- 9) VALVE VAULTS: WATERTIGHT VALVE VAULTS SHALL BE PROVIDED FOR EACH VALVE. BARREL SECTIONS SHALL BE SEALED USING A BUTYL RUBBER OR RUBBER STRIP (REFER TO CITY STANDARD VALVE VAULT DETAIL).
 - a. 3" THROUGH 6" VALVES..... MIN. 4' INSIDE DIAMETER VAULT MINIMUM
 - b. 8" AND LARGER VALVES..... MIN. 5' INSIDE DIAMETER VAULT MINIMUM
 - c. PRESSURE TAPS..... MIN. 5' INSIDE DIAMETER VAULT MINIMUM
 - d. VALVE VAULT LID..... NEENAH R-1712, TYPE B OR APPROVED EQUAL
 - e. THE WORD "WATER" SHALL BE CAST INTO THE SURFACE OF THE LID.
 - f. VAULTS ARE NOT REQUIRED FOR HYDRANT AUXILIARY VALVES EXCEPT WHEN A PRESSURE TAP FOR A HYDRANT LATERAL IS IN A ROADWAY.

- 10) WATERMAIN PIPES:
 - a. DUCTILE IRON CLASS 52, CONFORMING TO AWWA STANDARD C-151.
 - i. CEMENT LINING, CONFORMING TO AWWA STANDARD C-104.
 - ii. MECHANICAL OR PUSH-ON JOINTS SHALL CONFORM TO AWWA STANDARD C-111.
 - iii. AT MINIMUM, TYPE 3 LAYING CONDITIONS SHALL BE PROVIDED, CONFORMING TO AWWA STANDARD C-600 (ATTACHED).
 - b. ALL WATERMANS SHALL BE ENCASED IN A HIGH DENSITY POLYETHYLENE ENCASEMENT WITH ITS MATERIAL SPECIFICATIONS AND INSTALLATION METHOD IN ACCORDANCE WITH ANSI.AWWA C105/A21.5, ASTM A674, USING "METHOD A" INSTALLATION.
 - c. ALL SIDE YARD AND REAR YARD WATER MAINS NOT DIRECTLY ADJACENT TO PUBLIC ROADWAYS OR PAVED SURFACES SHALL BE DUCTILE IRON PIPE, CLASS 55 WITH A TYPE 5 LAYING CONDITION.
 - d. BRASS WEDGES SHALL BE INSTALLED TO PROVIDE ELECTRICAL CONDUCTIVITY.

- 11) JOINT RESTRAINT: ALL MECHANICAL JOINT FITTINGS SHALL HAVE RESTRAINING GLANDS INSTALLED. RESTRAINT DEVICE SHALL BE UNI-FLANGE BY FORD COMPANY OR MEGA-LUG BY EBAA IRON. PUSH JOINT PIPE RESTRAINT SHALL BE FIELD LOCK GASKETS BY US PIPE OR SERIES 1700 MEGA-LUG OR SERIES 1390 PIPE RESTRAINT BY FORD. LENGTHS OF PIPE RESTRAINT SHALL BE DETERMINED FROM MANUFACTURERS INSTALLATION SPECIFICATIONS (REFER TO WATERMAIN RESTRAINT DETAIL).

- 12) COPPER SERVICE LINES:
 - a. ONE-INCH DIAMETER MINIMUM
 - b. TYPE K COPPER TUBING
 - c. COMPRESSION FITTINGS ONLY

- 1- INCH SERVICE CONNECTIONS ONLY MAY BE CONNECTED UTILIZE THE DIRECT TAP METHODS TO 6-INCH MAINS AND LARGER ONLY. IF THERE IS INSUFFICIENT DIAMETER WATER MAIN TO INSTALL A DIRECT TAP, THEN A SADDLE TAP SHALL BE ALLOWED. SERVICE TAPS OF 1 1/4", 1 1/2" & 2" REQUIRE THE USE OF A TAPPING SADDLE. SADDLES SHALL BE FULL CIRCLE, 304-GRADE STAINLESS STEEL, WITH NYLON WASHERS AND NITRILE GASKET, AS MANUFACTURED BY SMITH-BLAIR; MODEL #372, OR APPROVED EQUAL.

- 13) TAPPING SLEEVES:
 - a. 4" THROUGH 8" DIAMETER: I. ROMAC SST-945 STAINLESS STEEL OR APPROVED EQUAL OR SMITH - BLAIR 665 STAINLESS STEEL OR APPROVED EQUAL, OR MUELLER H-615 CAST IRON OR APPROVED EQUAL.
 - b. 10" AND LARGER DIAMETER: I. MUELLER H-615 CAST IRON OR APPROVED EQUAL. II. FLANGE FASTENERS SHALL BE 304-GRADE STAINLESS STEEL.

- 14) CASING PIPE: CARRIER PIPE SHALL BE CENTERED WITHIN A CASING BY USE OF MODEL CCS STAINLESS STEEL CASING SPACERS AS MANUFACTURED BY CASCADE WATERWORKS MFG. OF YORKVILLE, ILLINOIS OR PRIOR APPROVED EQUAL. FILL CASING PIPE VOID WITH SAND AND INSTALL END BOOTS AS MANUFACTURED BY CASCADE WATERWORKS MFG. OF YORKVILLE, ILLINOIS.

- 15) DUCTILE SERVICE LINES:
 - a. FIRE:
 - i. THE FIRST O. S. & Y. VALVE ON THE INSIDE OF THE BUILDING MUST BE IN PLACE FOR PRESSURE TESTING, CHLORINATION AND SAMPLING. II. TESTING AGAINST FLANGES WILL NOT BE ALLOWED.
 - b. DOMESTIC:
 - i. THE FIRST PERMANENT VALVE ON THE INSIDE OF THE BUILDING MUST BE IN PLACE FOR PRESSURE TESTING, CHLORINATION AND SAMPLING. II. TESTING AGAINST FLANGES WILL NOT BE ALLOWED.



RT/MGR, LLC
 1965 BRENTWOOD RD. NORTHBROOK, IL 60062
 (847) 863-8808

BRIDLEWOOD SUBDIVISION
 14137 S 108TH AVE, ORLAND PARK, IL

DATE	: 03-11-2025
PROJECT #	: W24223.00
DESIGNED BY	: KF
DRAWN BY	: KF
CHECKED BY	: NAV
DESCRIPTION:	

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GENERAL NOTES

C-2.1
SHEET

A. REFERENCED SPECIFICATIONS

- 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 _____ 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

- 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 708-538-4055 OR SEND EMAIL NOTIFICATION WITH PROJECT NAME, LOCATION AND PERMIT NUMBER TO WMOJOBSTART@MWRD.ORG).
- THE VILLAGE OF _____ 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.
- 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

- ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). CONVERSION FACTOR IS _____ FT.
- MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.
- 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.
- 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.
- 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.
- 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.
- MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.
- THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.
- ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.
- 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

- THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.
- 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.
- 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.
- ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).
- ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.
- ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.
- 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	ASTM D-3034	ASTM D-3212
18-INCH TO 27-INCH DIAMETER F/DY=46	ASTM F-679	ASTM D-3212
HIGH DENSITY POLYETHYLENE (HDPE)		
	ASTM D-3350	ASTM D-3261,F-2620 (HEAT FUSION)
	ASTM D-3035	ASTM D-3212,F-477 (GASKETED)
WATER MAIN QUALITY PVC		
4-INCH TO 36-INCH	ASTM D-2241	ASTM D-3139
4-INCH TO 12-INCH	AWWA C900	ASTM D-3139
14-INCH TO 48-INCH	AWWA C905	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

- 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.
- NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.
- ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.
- 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 ("SHEWER-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.
- 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 WATERMANS 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.
- ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.
- 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.
- 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.
- ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.
- 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 PIPES, 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.
- 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.

E. EROSION AND SEDIMENT CONTROL

- THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.
- ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.
- A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- 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.
- 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.
- 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 SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- 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.
- MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.
- 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.
- 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.
- ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).
- VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
- 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.
- EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.
- STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.
- 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.
- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMANS 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 JUMP 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.
- ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.
- 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.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.
- 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.

TECHNICAL GUIDANCE MANUAL
MWRD GENERAL NOTES

10/13/2022

STD. DWG. NO.18

PAGE NO. 19



RT/MGR, LLC
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BRIDLEWOOD SUBDIVISION
14137 S 108th Ave, ORLAND PARK, IL

DATE	03-11-2025
PROJECT #	W242323.00
DESIGNED BY	KF
DRAWN BY	KF
CHECKED BY	NAV
DESCRIPTION:	

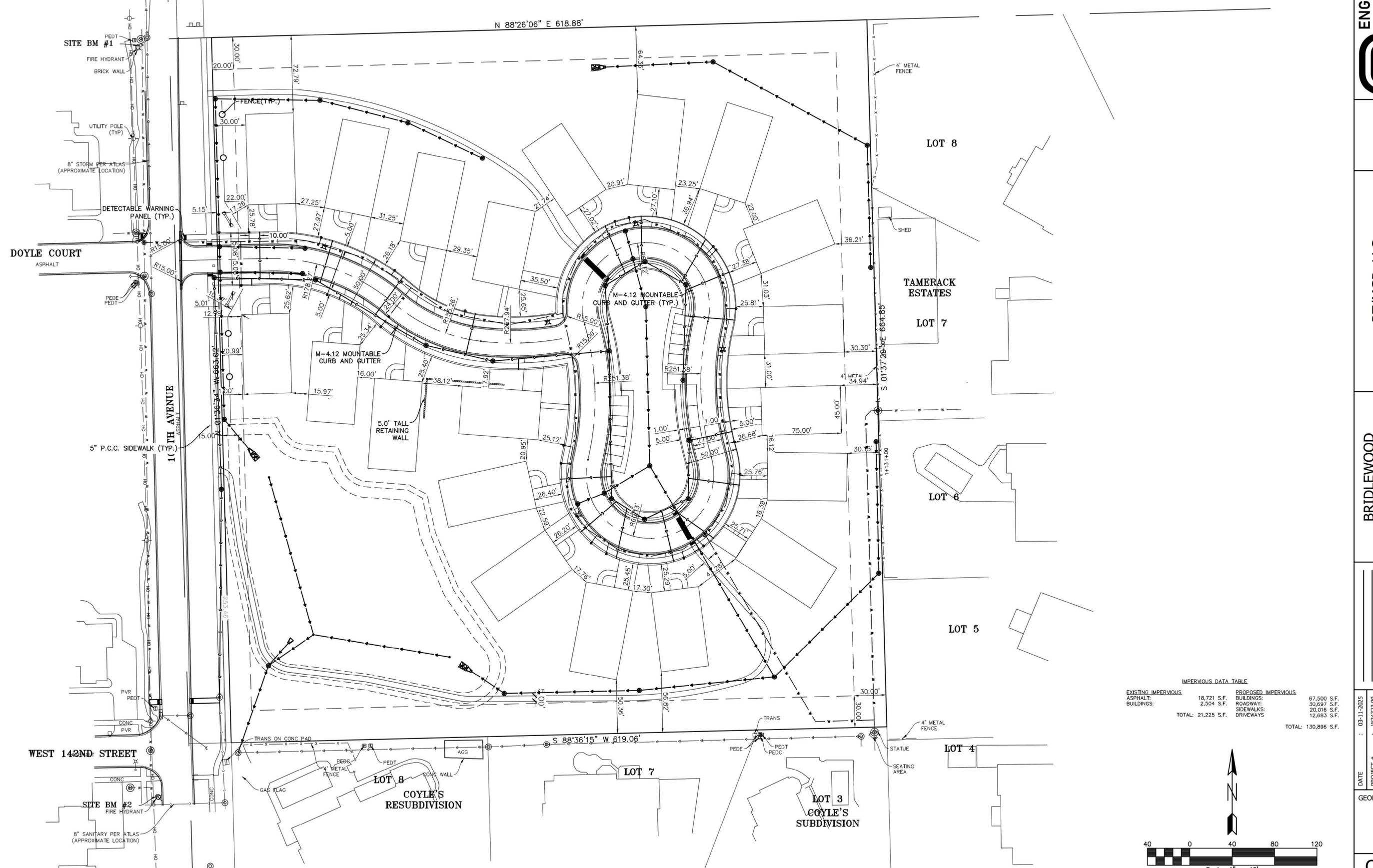
DATE	03-11-2025
PROJECT #	W242323.00
DESIGNED BY	KF
DRAWN BY	KF
CHECKED BY	NAV
DESCRIPTION:	

MWRD GENERAL NOTES

C-2.2
SHEET

FOREST PRESERVE

N 88°26'06" E 618.88'



IMPERVIOUS DATA TABLE

EXISTING IMPERVIOUS	PROPOSED IMPERVIOUS
ASPHALT: 18,721 S.F.	BUILDINGS: 67,500 S.F.
BUILDINGS: 2,504 S.F.	ROADWAY: 50,887 S.F.
	SIDEWALKS: 20,016 S.F.
	DRIVEWAYS: 12,683 S.F.
TOTAL: 21,225 S.F.	TOTAL: 130,896 S.F.

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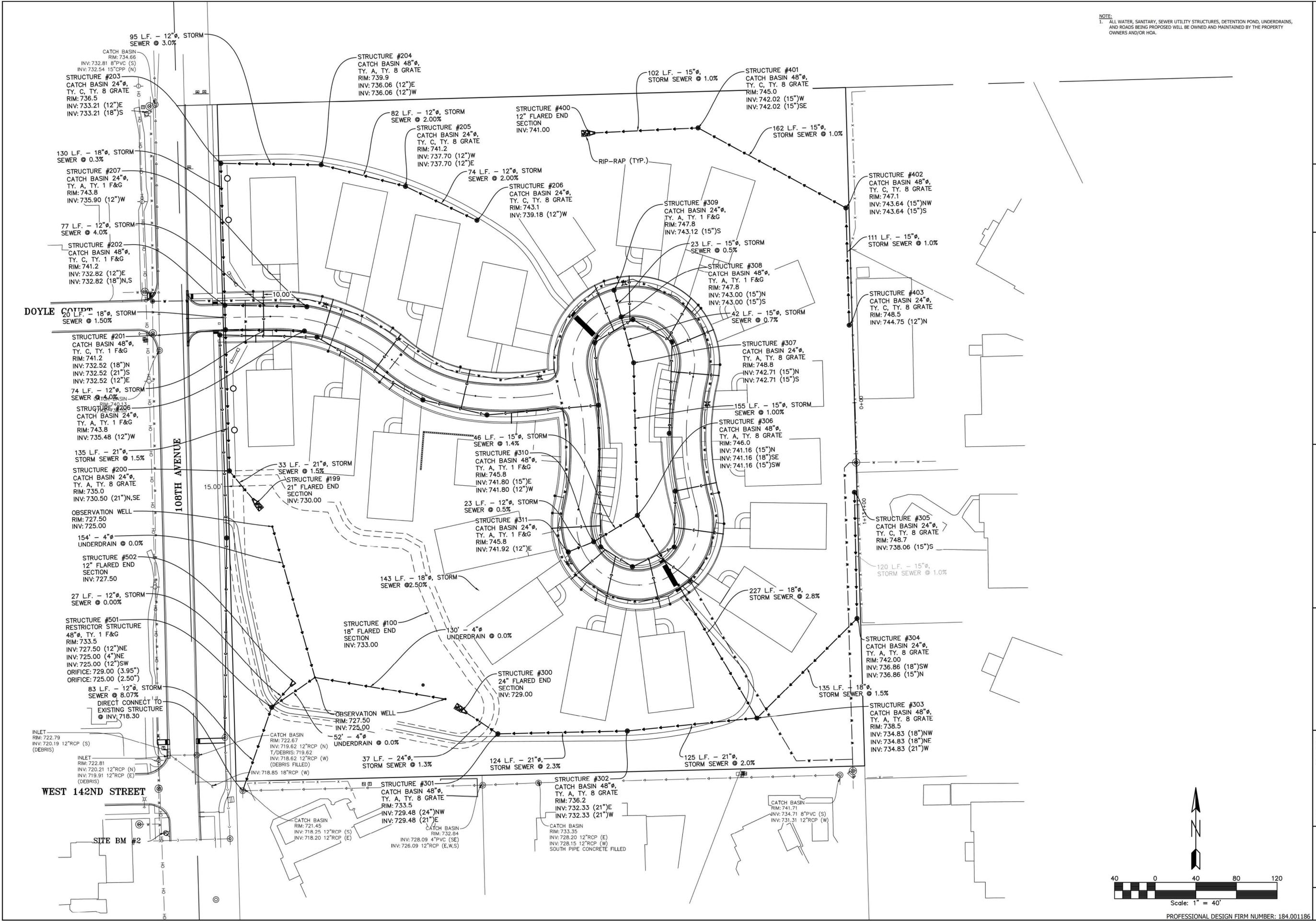
BRIDLEWOOD SUBDIVISION
 14137 S 108TH AVE, ORLAND PARK, IL

11-10-2025 UP PER PLAN CHANGES
 09-08-2025 UP PER VILLAGE COMMENTS
 07-30-2025 UP PER VILLAGE COMMENTS
 DESCRIPTION:

DATE : 03-11-2025
 PROJECT # : W24323.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV

GEOMETRY PLAN
C-5.0
 SHEET

NOTE:
 1. ALL WATER, SANITARY, SEWER UTILITY STRUCTURES, DETENTION POND, UNDERDRAINS, AND ROADS BEING PROPOSED WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNERS AND/OR HOA.



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 SUBDIVISION**
 14137 S 108TH AVE, ORLAND PARK, IL

DATE : 03-11-2025
 PROJECT # : W24232.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV
 DESCRIPTION: STORM SEWER UTILITY PLAN

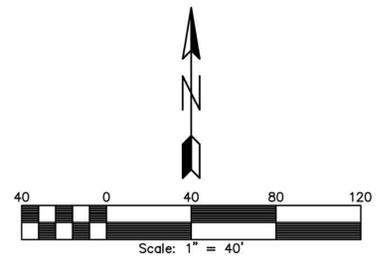
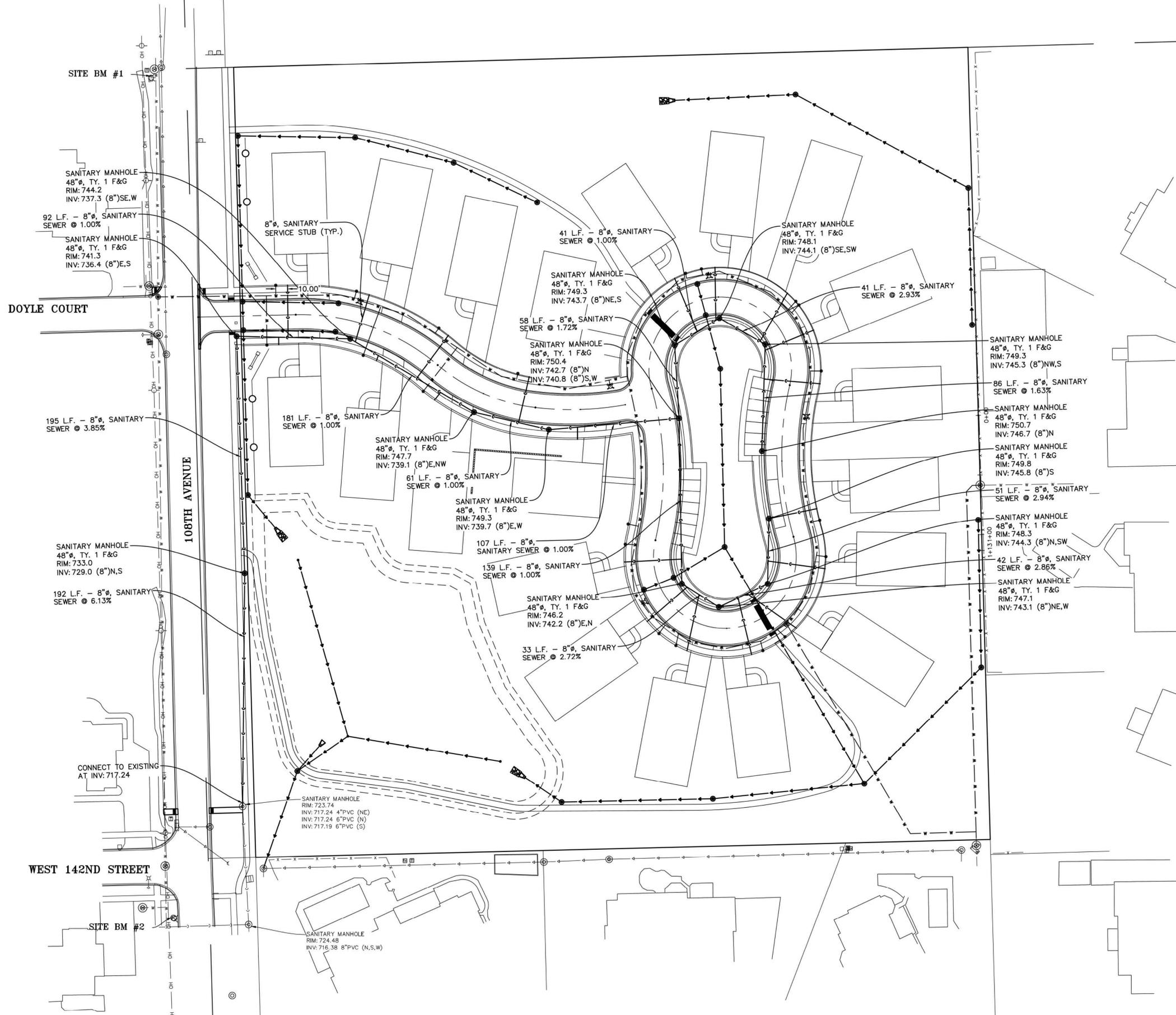
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 PROJECT # : W24232.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV

C-6.0
 SHEET

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PROFESSIONAL DESIGN FIRM NUMBER: 184.001186

NOTE:
 1. ALL WATER, SANITARY, SEWER UTILITY STRUCTURES, DETENTION POND, AND ROADS BEING PROPOSED WILL BE OWNED AND MAINTAINED BY THE PROPERTY OWNERS AND/OR HOA.



PROFESSIONAL DESIGN FIRM NUMBER: 184.001186

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SUBDIVISION
 14137 S 108TH AVE, ORLAND PARK, IL

DATE : 03-11-2025
 PROJECT # : W24323.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV
 DESCRIPTION: SANITARY SEWER UTILITY PLAN

11-10-2025 UP PER PLAN CHANGES
 09-08-2025 UP PER VILLAGE COMMENTS
 07-30-2025 UP PER VILLAGE COMMENTS

C-6.1
 SHEET

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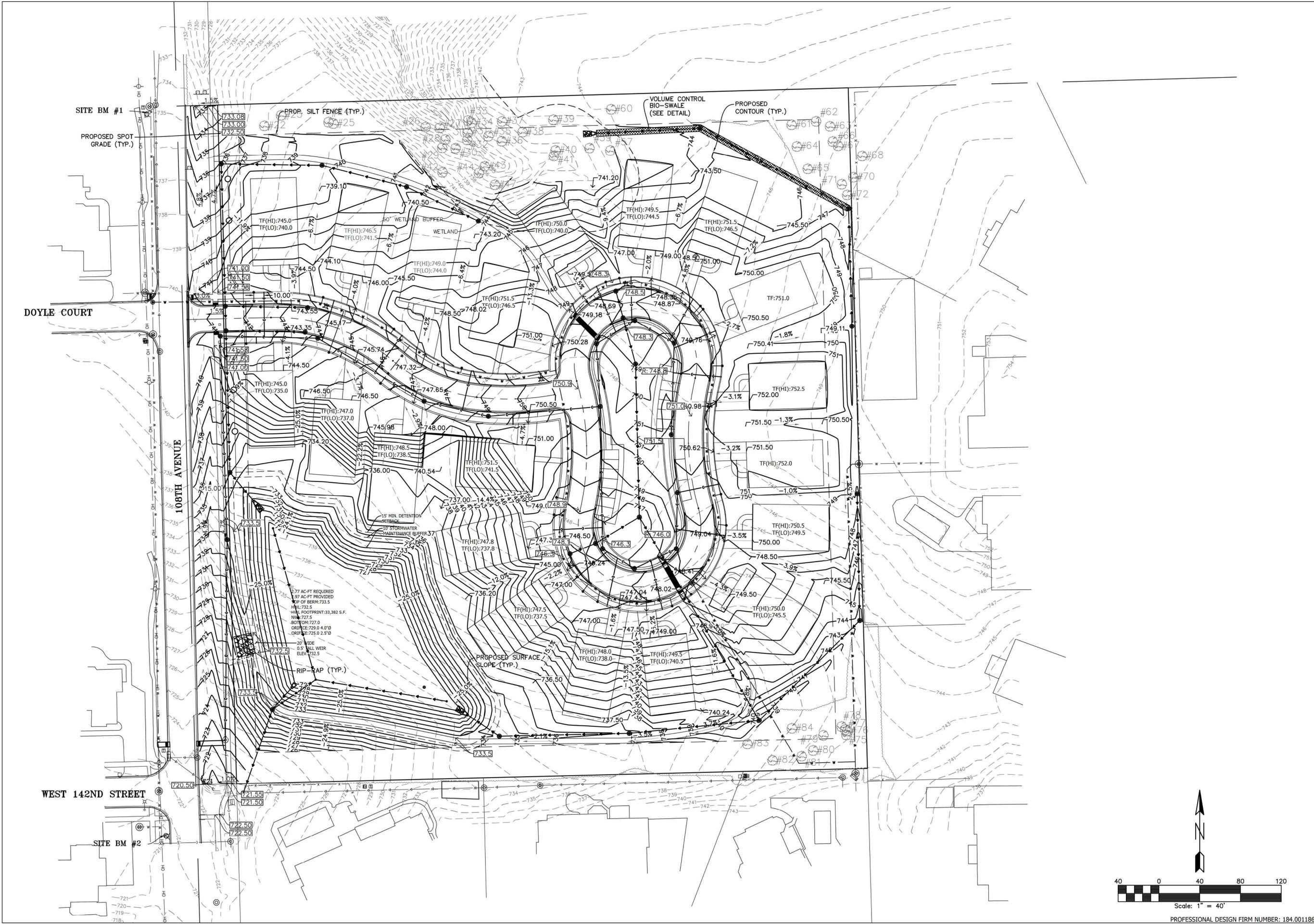
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PROJECT # : W24323.00
DESIGNED BY : KF
DRAWN BY : KF
CHECKED BY : NAV
DESCRIPTION: FIRE HYDRANT COVERAGE PLAN

11-10-2025 UP PER PLAN CHANGES
09-08-2023 UP PER VILLAGE COMMENTS
07-30-2025 UP PER VILLAGE COMMENTS

C-6.3
SHEET

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PROFESSIONAL DESIGN FIRM NUMBER: 184.001186



SITE BM #1

PROPOSED SPOT GRADE (TYP.)

DOYLE COURT

108TH AVENUE

WEST 142ND STREET

SITE BM #2

PROP. SILT FENCE (TYP.)

VOLUME CONTROL BIO-SWALE (SEE DETAIL)

PROPOSED CONTOUR (TYP.)

RIP-RAP (TYP.)

PROPOSED SURFACE SLOPE (TYP.)

3.77 AC-FT REQUIRED
3.97 AC-FT PROVIDED
TOP OF BERM: 733.5
HW: 732.5
HWL FOOTPRINT: 33,382 S.F.
NW: 727.5
BOT: 727.0
ORIFICE: 729.0 4.0'Ø
ORIFICE: 725.0 2.5'Ø

15' MIN. DETENTION SETBACK
10' STORMWATER MAINTENANCE BUFFER 3'

TF(HI): 745.0
TF(LO): 740.0

TF(HI): 745.0
TF(LO): 735.0

TF(HI): 745.0
TF(LO): 740.0

TF(HI): 745.0
TF(LO): 740.0

TF(HI): 750.0
TF(LO): 740.0

TF(HI): 751.5
TF(LO): 746.5

TF(HI): 751.5
TF(LO): 741.5

TF(HI): 747.5
TF(LO): 737.5

TF(HI): 747.5
TF(LO): 737.5

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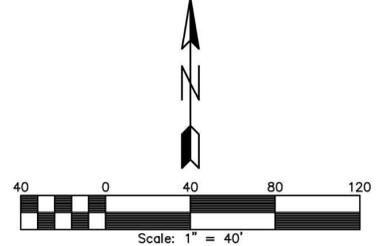
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TF(HI): 748.5
TF(LO): 743.5



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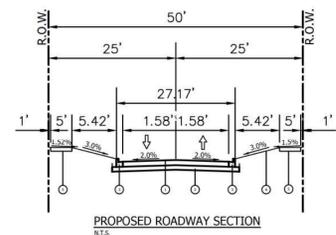
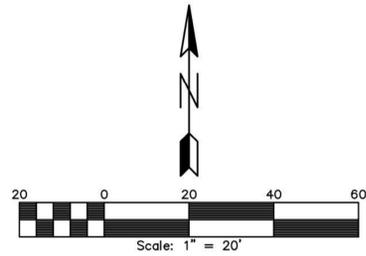
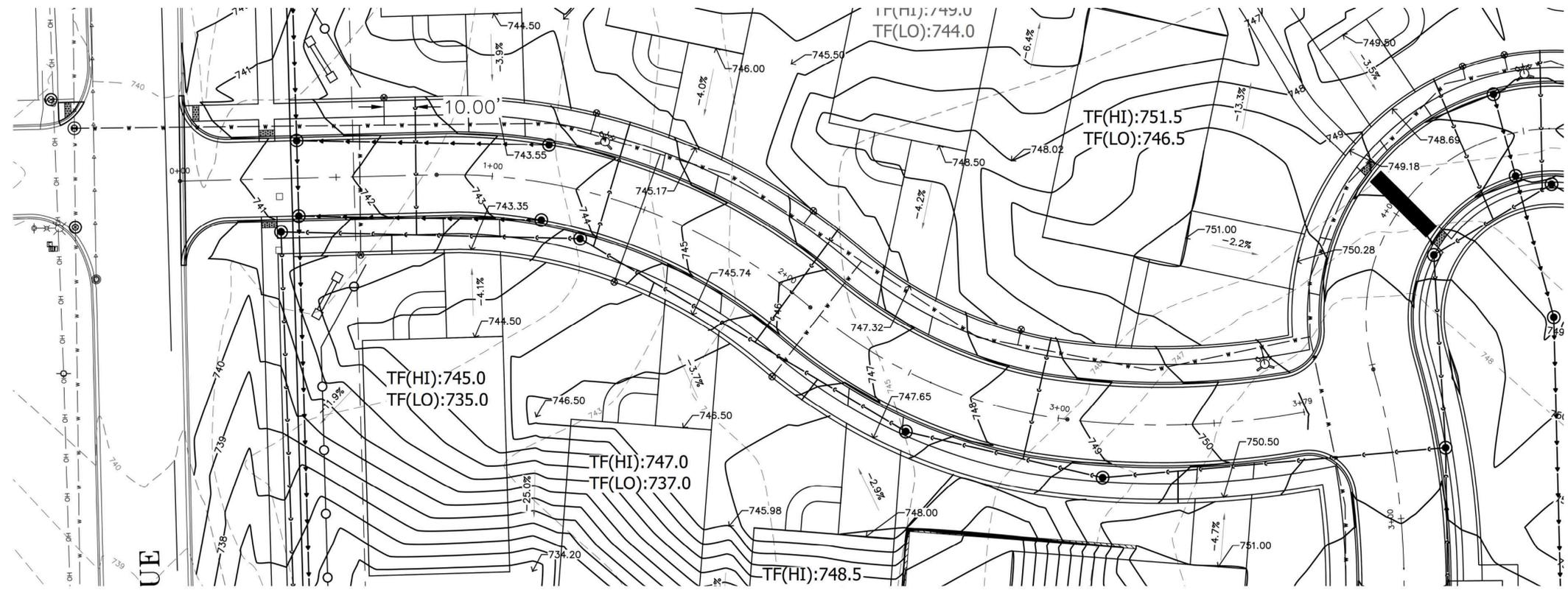
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PROJECT #	: W24233.00
DESIGNED BY	: KF
DRAWN BY	: KF
CHECKED BY	: NAV

11-10-2025 RE PER PLAN CHANGES
09-08-2025 RE PER VILLAGE COMMENTS
07-30-2025 RE PER VILLAGE COMMENTS

GRADING PLAN

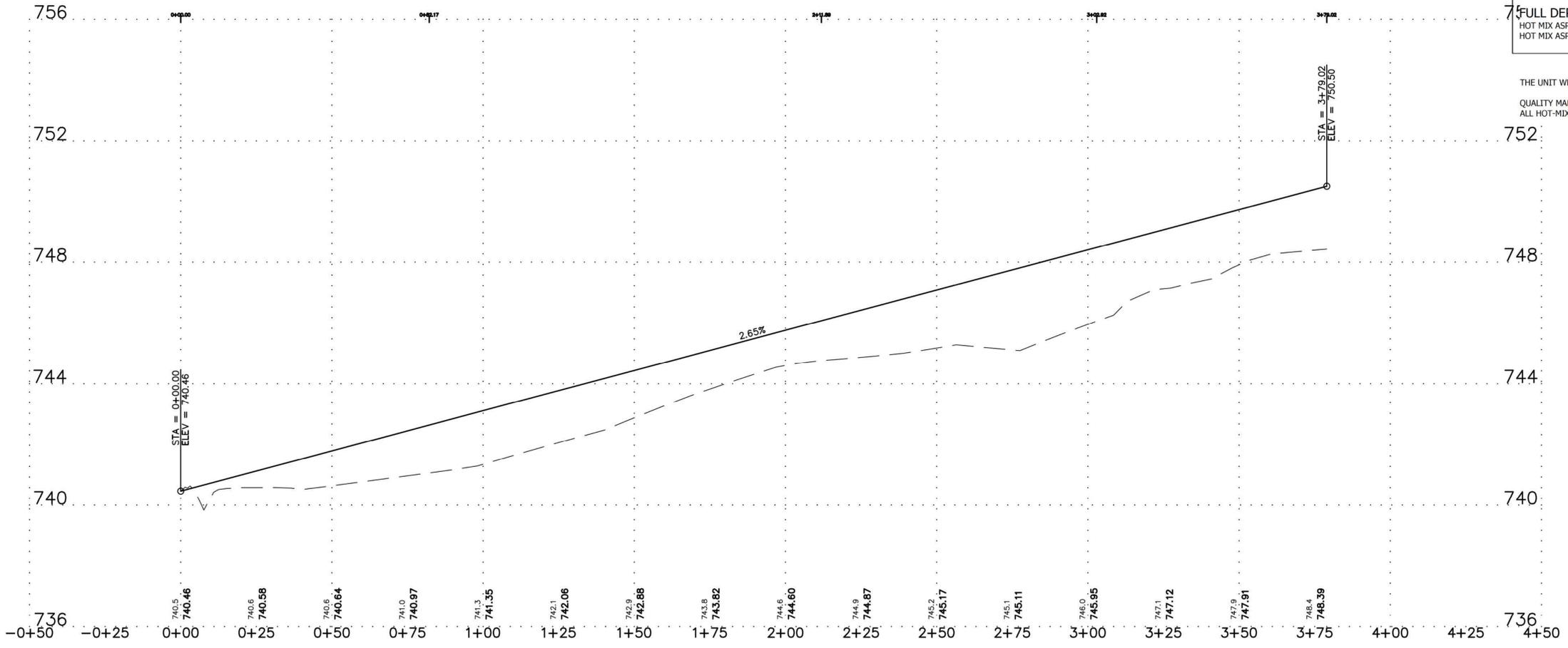
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PROFESSIONAL DESIGN FIRM NUMBER: 184.001186



- PROPOSED LEGEND**
- ① HOT-MIX ASPHALT PAVEMENT (FULL DEPTH) 6" (SEE MIX TABLE)
 - ② AGGREGATE SUB-GRADE IMPROVEMENT, 12", CA-6
 - ③ COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.12 (MOUNTABLE CURB)
 - ④ SEEDING, CLASS 2A, TOPSOIL 6"
 - ⑤ PORTLAND CEMENT CONCRETE SIDEWALK, 5" SUBBASE GRANULAR MATERIAL, TYPE B 4"

Profile View of Roadway



HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AC TYPE	AIR VOIDS @ NDES
① FULL DEPTH PAVEMENT, 6" HOT MIX ASPHALT SURFACE COURSE, MIX "D", N50; 1.5" HOT MIX ASPHALT BINDER COURSE, IL-19.0L, N50; 4.5"	PG 64-22 PG 64-22	4% @ 50 GYR. 4% @ 50 GYR.

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT MIXTURES IS 112 LBS/SQ YD/IN.
 QUALITY MANAGEMENT PROGRAM (QMP) SHALL BE QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) FOR ALL HOT-MIX ASPHALT PAVEMENTS

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 (847) 663-8868

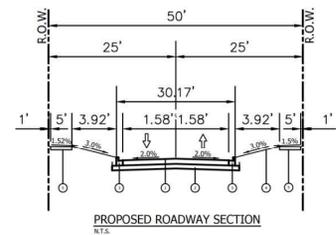
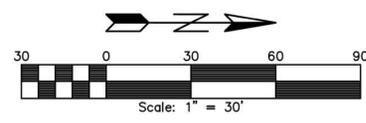
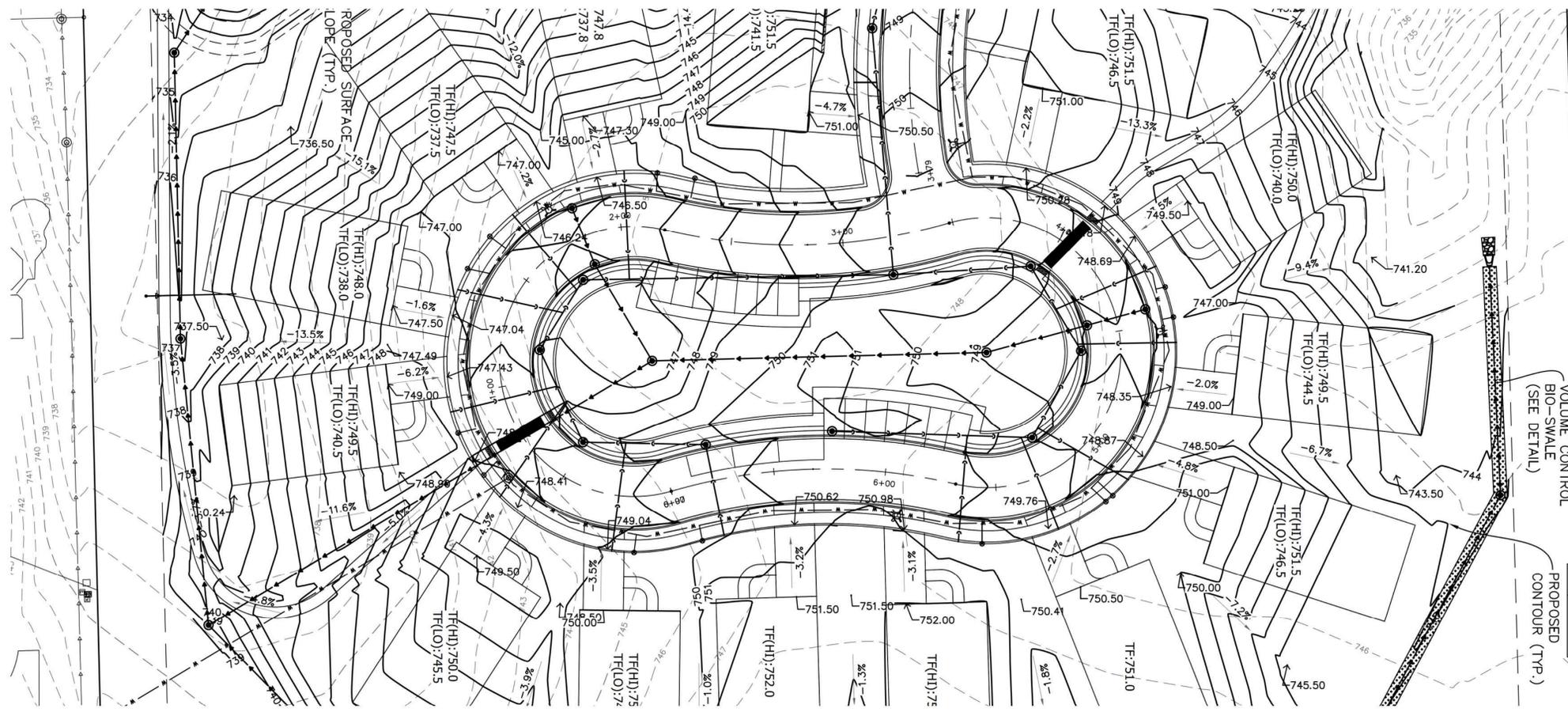
BRIDLEWOOD SUBDIVISION
 14137 S 108TH AVE, ORLAND PARK, IL

11-10-2025 UP PER PLAN CHANGES
 09-08-2025 UP PER VILLAGE COMMENTS
 07-30-2025 UP PER VILLAGE COMMENTS

DATE : 03-11-2025
 PROJECT # : W24233.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV

ROADWAY PLAN

C-7.1
 SHEET



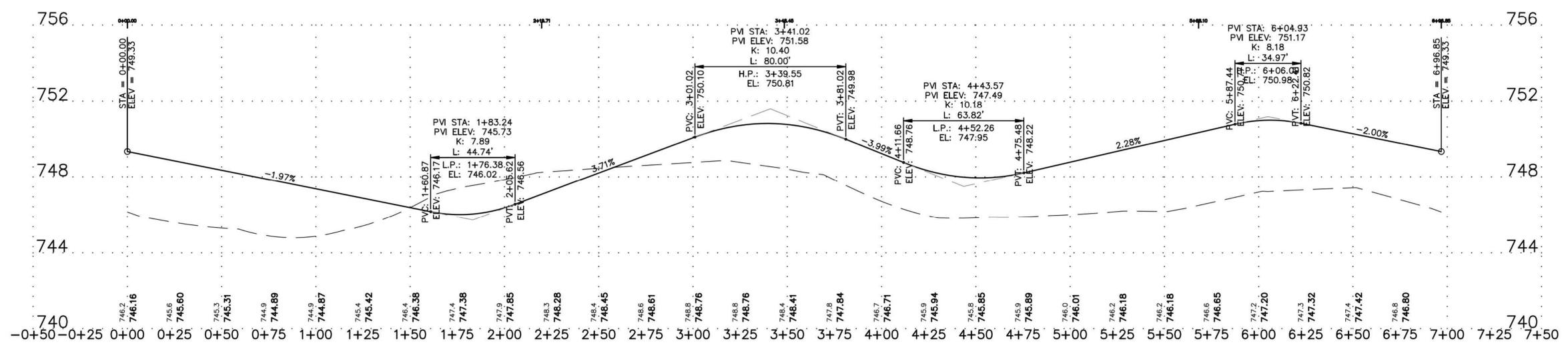
- PROPOSED LEGEND**
- 1 HOT-MIX ASPHALT PAVEMENT (FULL DEPTH) 6", (SEE MIX TABLE)
 - 2 AGGREGATE SUB-GRADE IMPROVEMENT, 12", CA-6
 - 3 COMBINATION CONCRETE CURB AND GUTTER, TYPE M-4.12 (MOUNTABLE CURB)
 - 4 SEEDING, CLASS 2A, TOPSOIL 6"
 - 5 PORTLAND CEMENT CONCRETE SIDEWALK, 5" SUBBASE GRANULAR MATERIAL, TYPE B 4"

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE TYPE	AC TYPE	AIR VOIDS @ NDES
FULL DEPTH PAVEMENT, 6"		
HOT MIX ASPHALT SURFACE COURSE, MIX "D", N50; 1.5"	PG 64-22	4% @ 50 GYR.
HOT MIX ASPHALT BINDER COURSE, IL-19.0L, N50; 4.5"	PG 64-22	4% @ 50 GYR.

THE UNIT WEIGHT USED TO CALCULATE ALL HOT-MIX ASPHALT MIXTURES IS 112 LBS/SQ YD/IN.
 QUALITY MANAGEMENT PROGRAM (QMP) SHALL BE QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) FOR ALL HOT-MIX ASPHALT PAVEMENTS

Profile View of Roadway

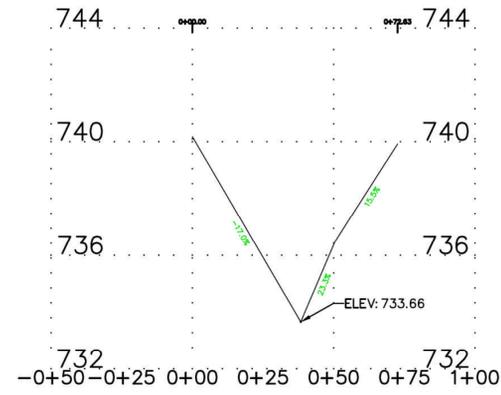


DATE	DESCRIPTION
03-11-2025	11-10-2025 (IF PER PLAN CHANGES)
09-08-2025	09-08-2025 (IF PER VILLAGE COMMENTS)
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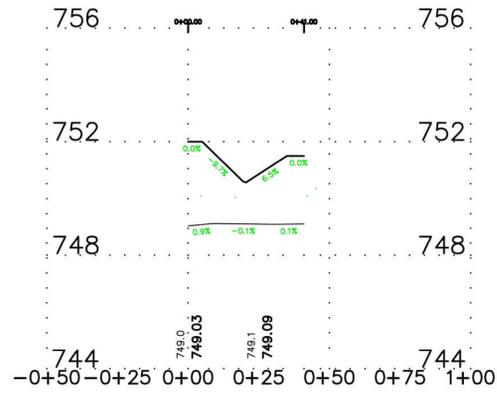
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ROADWAY PLAN

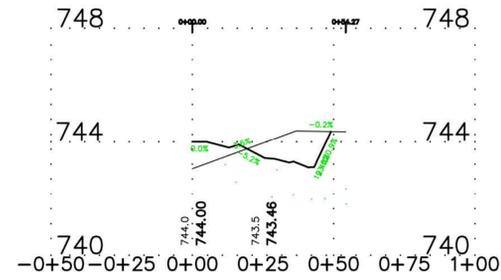
Profile View of A-A



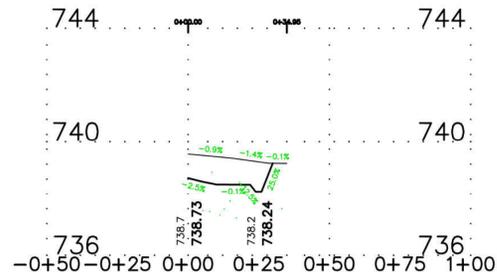
Profile View of E-E



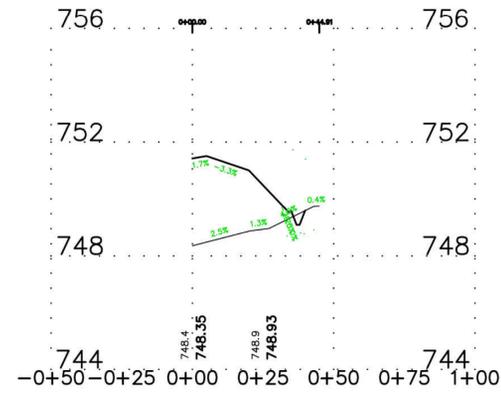
Profile View of B-B



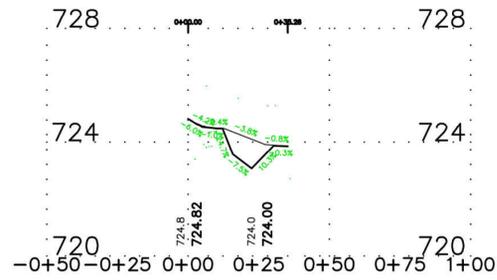
Profile View of F-F



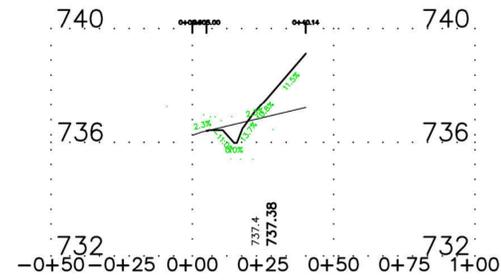
Profile View of C-C



Profile View of G-G



Profile View of D-D



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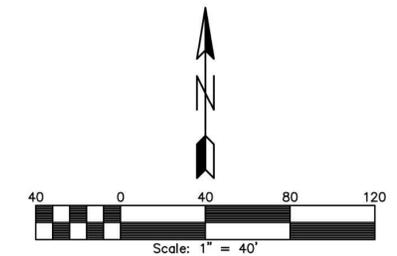
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CROSS-SECTIONS PLAN

C-7.3
 SHEET



PROFESSIONAL DESIGN FIRM NUMBER: 184.001186

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CHECKED BY	: NAV

**EROSION
CONTROL PLAN**

C-8.0
SHEET

STORMWATER POLLUTION PREVENTION PLAN

THE FOLLOWING PLAN IS ESTABLISHED AND INCORPORATED IN THE PROJECT TO DIRECT THE CONTRACTOR IN THE PLACEMENT OF TEMPORARY EROSION CONTROL SYSTEMS AND TO PROVIDE A STORM SEWER WATER POLLUTION PREVENTION PLAN FOR COMPLIANCE UNDER NPDES.

THE PURPOSE OF THIS PLAN IS TO MINIMIZE EROSION WITHIN THE CONSTRUCTION SITE AND TO LIMIT SEDIMENTS FROM LEAVING THE CONSTRUCTION SITE BY UTILIZING PROPER TEMPORARY EROSION CONTROL SYSTEMS AND PROVIDING GROUND COVER WITHIN A REASONABLE AMOUNT OF TIME.

CERTAIN EROSION CONTROL FACILITIES SHALL BE INSTALLED BY THE CONTRACTOR AT THE BEGINNING OF CONSTRUCTION. OTHER ITEMS SHALL BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER ON A CASE BY CASE SITUATION DEPENDING ON THE CONTRACTOR'S SEQUENCE OF ACTIVITIES, TIME OF YEAR, AND EXPECTED WEATHER CONDITION.

THE CONTRACTOR SHALL INSTALL PERMANENT EROSION CONTROL SYSTEMS AND SEEDING WITHIN A TIME FRAME SPECIFIED HEREIN AND AS DIRECTED BY THE ENGINEER, THEREFORE MINIMIZING THE AMOUNT OF AREA SUSCEPTIBLE TO EROSION AND REDUCING THE AMOUNT OF TEMPORARY SEEDING. THE ENGINEER WILL DETERMINE IF ANY TEMPORARY EROSION CONTROL SYSTEMS SHOWN IN THE PLAN CAN BE DELETED AND IF ANY ADDITIONAL TEMPORARY EROSION CONTROL SYSTEMS, WHICH ARE NOT INCLUDED IN THIS PLAN, SHALL BE ADDED. THE CONTRACTOR SHALL PERFORM ALL WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN STANDARD 280001 OF THE PLANS. SECTION 280. TEMPORARY EROSION CONTROL, OF THE STANDARD SPECIFICATIONS ADDITIONALLY SUPPLEMENTS THIS PLAN.

SITE DESCRIPTION

DESCRIPTION OF CONSTRUCTION ACTIVITY

THE PROJECT CONSISTS OF THE CONSTRUCTION OF A 410,954 +/- SQUARE FOOT 20 - LOT SUBDIVISION WITH A ROADWAY, SIDEWALK, STORM SEWER, SANITARY SEWER, WATER MAIN, STORMWATER DETENTION, MASS GRADING, EROSION CONTROL, AND LANDSCAPING. THE PROPERTY IS LOCATED WITHIN A RESIDENTIAL AREA. THE PROPOSED 20 LOT SUBDIVISION IS SURROUNDED BY 108TH AVE. ON THE WEST, RESIDENTIAL PROPERTIES ON THE EAST AND SOUTH, AND FOREST PRESERVE ON THE NORTH IN THE VILLAGE OF ORLAND PARK.

DESCRIPTION OF INTENDED SEQUENCE FOR MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB SOILS FOR MAJOR PORTION OF THE CONSTRUCTION SITE:

- EROSION CONTROL SILT FENCING SHALL BE IN PLACE PRIOR TO EARTHWORK ACTIVITIES.
- DETENTION BASIN SHALL BE CONSTRUCTED BEFORE ANY OTHER IMPROVEMENTS.
- SITE SHALL BE ROUGH GRADED
- UNDERGROUND UTILITY NETWORK DIRECTING FLOW TO DETENTION FACILITY SHALL BE INSTALLED.
- OTHER UNDERGROUND UTILITIES SHALL BE CONSTRUCTED
- SITE SHALL BE FINE-GRADED, WITH ALL PROPOSED PAVING AREAS GRADED TO ROUGHLY 1-FOOT BELOW FINAL ELEVATION ON PLANS.
- ROADWAY AND SIDEWALK SHALL BE CONSTRUCTED.
- DISTURBED AREAS SHALL BE TOP SOILED & SEEDED.

AREA OF CONSTRUCTION SITE:

THE TOTAL AREA OF THE CONSTRUCTION SITE IS ESTIMATED TO BE 9.4 ACRES BY WHICH 8.0 ACRES WILL BE DISTURBED BY EXCAVATION, GRADING, AND OTHER ACTIVITIES.

OTHER REPORTS, STUDIES AND PLANS, WHICH AID IN THE DEVELOPMENT OF THE STORM WATER POLLUTION PREVENTION PLAN AS REFERENCED DOCUMENTS:

- INFORMATION OF THE SOILS AND TERRAIN WITHIN THE SITE WAS OBTAINED FROM TOPOGRAPHIC SURVEYS AND SOIL BORINGS THAT WERE UTILITIES FOR THE DEVELOPMENT OF THE PROPOSED TEMPORARY EROSION CONTROL SYSTEMS.
- PROJECT PLAN DOCUMENTS, SPECIFICATIONS AND SPECIAL PROVISIONS, AND PLAN DRAWINGS INDICATING DRAINAGE PATTERNS AND APPROXIMATE SLOPES ANTICIPATED AFTER GRADING ACTIVITIES WERE UTILIZED FOR THE PROPOSED PLACEMENT OF THE TEMPORARY EROSION CONTROL SYSTEMS.

DRAINAGE TRIBUTARIES AND SENSITIVE AREAS RECEIVING RUNOFF FROM THIS CONSTRUCTION SITE:

THE SITE SHALL DRAIN INTO THE PROPOSED STORMWATER DETENTION PONDS BY MEANS OF AN EXISTING STORM SEWER SYSTEM.

CONTROLS, EROSION CONTROLS AND SEDIMENT CONTROL:

- THE DRAWINGS, SPECIFICATIONS AND SPECIAL PROVISIONS WILL ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE ATTAINABLE AND DISTURBED PORTIONS OF THE SITE WILL BE STABILIZED. STABILIZATION PRACTICES INCLUDE TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, PROTECTION OF TREES, PRESERVATION OF NATURE VEGETATION, AND OTHER APPROPRIATE MEASURES AS DIRECTED BY THE ENGINEER. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
 - (a.) AREAS OF EXISTING VEGETATION, WOOD AND GRASSLANDS, OUTSIDE THE PROPOSED CONSTRUCTION LIMITS SHALL BE IDENTIFIED BY THE ENGINEER FOR PRESERVING AND SHALL BE PROTECTED FROM CONSTRUCTION ACTIVITIES.
 - (b.) DEAD, DISEASED, OR UNSUITABLE VEGETATION WITHIN THE SITE SHALL BE REMOVED AS DIRECTED BY THE ENGINEER, ALONG WITH REQUIRED TREE REMOVAL.
 - (c.) AS SOON AS REASONABLE ACCESS IS AVAILABLE TO ALL LOCATIONS WHERE WATER DRAINS AWAY FROM THE PROJECT, TEMPORARY PERIMETER EROSION BARRIER SHALL BE INSTALLED AS CALLED OUT IN THIS PLAN AND DIRECTED BY THE ENGINEER.
 - (d.) BARE AND SPARSELY VEGETATED GROUND IN HIGH ERODIBLE AREAS AS DETERMINED BY THE ENGINEER SHALL BE TEMPORARILY SEEDED AT THE BEGINNING OF CONSTRUCTION WHERE NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN SEVEN (7) DAYS.
 - (e.) IMMEDIATELY AFTER TREE REMOVAL IS COMPLETED, AREAS WHICH ARE HIGHLY ERODIBLE AS DETERMINED BY THE ENGINEER, SHALL BE TEMPORARILY SEEDED WHEN NO CONSTRUCTION ACTIVITIES ARE EXPECTED WITHIN SEVEN (7) DAYS.
- ESTABLISHMENT OF THESE TEMPORARY EROSION CONTROL MEASURES WILL HAVE ADDITIONAL BENEFITS TO THE PROJECT. DESIRABLE GRASS SEED WILL BECOME ESTABLISHED IN THESE AREAS AND WILL SPREAD SEEDS ONTO THE CONSTRUCTION SITE UNTIL PERMANENT SEEDING/MOWING AND OVER SEEDING CAN BE COMPLETED.
- THE SOIL AND WATER CONSERVATION DISTRICT IS RESPONSIBLE FOR CONDUCTING SITE VISITS AND VERIFYING THAT THE PRACTICES ARE WORKING PROPERLY AND DETERMINE IF ADDITIONAL PRACTICES ARE NEEDED FOR BETTER SOIL EROSION AND SEDIMENT CONTROL. IF ADDITIONAL PRACTICES ARE DEEMED NECESSARY BY THE SWCD THE CONTRACTOR WILL IMPLEMENT THE PRACTICE IN A TIMELY MANNER.

THIS PLAN HAS BEEN PREPARED TO COMPLY WITH THE PROVISIONS OF THE NPDES PERMIT NUMBER ILR10 ISSUED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY FOR STORM WATER DISCHARGES FROM CONSTRUCTION SITE ACTIVITIES.

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS.

ENGINEER: NICHOLAS A. VARCHETTO, PE

DATE

DESCRIPTION OF STABILIZATION PRACTICES DURING CONSTRUCTION:

- DURING CONSTRUCTION, AREAS OUTSIDE THE CONSTRUCTION LIMITS AS OUTLINED PREVIOUSLY HEREIN SHALL BE PROTECTED. THE CONTRACTOR SHALL NOT USE THIS AREA FOR STAGING, PARKING OF VEHICLES OF CONSTRUCTION EQUIPMENT, STORAGE OF MATERIALS OR OTHER CONSTRUCTION RELATED ACTIVITIES.
 - (a.) WITHIN THE CONSTRUCTION LIMITS, AREAS WHICH MAY BE SUSCEPTIBLE TO EROSION AS DETERMINED BY THE ENGINEER SHALL REMAIN UNDISTURBED UNTIL FULL SCALE CONSTRUCTION IS UNDERWAY TO PREVENT UNNECESSARY SOIL EROSION.
 - (i.) PLACE TEMPORARY EROSION CONTROL FACILITIES AT LOCATIONS SHOWN ON THE PLANS.
 - (ii.) TEMPORARILY SEED ERODIBLE BARE EARTH ON A WEEKLY BASIS TO MINIMIZE THE AMOUNT OF ERODIBLE SURFACE AREA WITHIN THE CONTRACT LIMITS.
 - (iii.) PROVIDE TEMPORARY EROSION CONTROL SYSTEMS.
 - (iv.) CONTINUE BUILDING UP THE EMBANKMENT TO THE PROPOSED GRADE WHILE, AT THE SAME TIME, PLACING PERMANENT EROSION CONTROL FINAL SHAPING TO THE SLOPES.
 - (c.) EXCAVATED AREAS AND EMBANKMENT SHALL BE PERMANENTLY SEEDED IMMEDIATELY AFTER FINAL GRADING. IF NOT, THEY SHALL BE TEMPORARILY SEEDED IF NO CONSTRUCTION ACTIVITY IN THE AREA IS PLANNED FOR SEVEN (7) DAYS.
 - (d.) CONSTRUCTION EQUIPMENT SHALL BE STORED AND FUELED ONLY AT DESIGNATED LOCATIONS. ALL NECESSARY MEASURES SHALL BE TAKEN TO CONTAIN ANY FUEL OR OTHER POLLUTANT IN ACCORDANCE WITH EPA WATER QUALITY REGULATIONS. LEAKING EQUIPMENT OR SUPPLIES SHALL BE IMMEDIATELY REPAIRED OR REMOVED FROM THE SITE.
 - (e.) THE RESIDENT ENGINEER SHALL INSPECT THE PROJECT WEEKLY DURING CONSTRUCTION ACTIVITIES. INSPECTION SHALL ALSO BE DONE WEEKLY AND AFTER RAINS OF 1/2-INCH OR GREATER OR EQUIVALENT SNOWFALL AND DURING THE WINTER SHUTDOWN PERIOD. THE PROJECT SHALL ADDITIONALLY BE INSPECTED BY THE CONSTRUCTION FIELD ENGINEER ON A BIWEEKLY BASIS TO DETERMINE THAT EROSION CONTROL EFFORTS ARE IN PLACE AND EFFECTIVE AND IF OTHER EROSION CONTROL WORK IS NECESSARY.
 - (f.) SEDIMENT COLLECTED DURING CONSTRUCTION OF THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR EARTH EXCAVATION FOR EROSION CONTROL.
 - (g.) THE TEMPORARY EROSION CONTROL SYSTEMS SHALL BE REMOVED, AS DIRECTED BY THE ENGINEER, AFTER USE IS NO LONGER NEEDED OR NO LONGER FUNCTIONING.

DESCRIPTION OF STRUCTURAL PRACTICES AFTER FINAL GRADING:

- TEMPORARY EROSION CONTROL SYSTEMS SHALL BE LEFT IN PLACE WITH PROPER MAINTENANCE UNTIL PERMANENT EROSION CONTROL IS IN PLACE AND WORKING PROPERLY AND ALL PROPOSED TURF AREAS SODDED AND ESTABLISHED.
- ONCE PERMANENT EROSION CONTROL SYSTEMS AS PROPOSED IN THE PLANS ARE FUNCTIONAL AND ESTABLISHED, TEMPORARY ITEMS SHALL BE REMOVED, CLEANED UP, AND DISTURBED TURF RESEEDED.

MISCELLANEOUS:

- TEMPORARY EROSION CONTROL SEEDING SHALL BE APPLIED AT A RATE OF 100 LBS/ACRES, IF DIRECTED.
- SEDIMENT COLLECTED DURING CONSTRUCTION BY THE VARIOUS TEMPORARY EROSION CONTROL SYSTEMS SHALL BE DISPOSED OF ON THE SITE ON A REGULAR BASIS, AS DIRECTED BY THE ENGINEER. THE COST OF THIS MAINTENANCE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION.
- ALL EROSION CONTROL PRODUCTS FURNISHED SHALL BE SPECIFICALLY RECOMMENDED BY THE MANUFACTURER FOR THE USE SPECIFIED IN THE EROSION CONTROL PLAN. PRIOR TO THE APPROVAL AND USE OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE MANUFACTURER INSTALLATION PROCEDURES TO FACILITATE THE ENGINEER IN CONSTRUCTION INSPECTION.

SOIL EROSION CONTROL:

1. SOIL EROSION CONTROL MUST CONFORM TO THE CITY ORDINANCE.

A. SPECIFICATIONS:

1. A CONSTRUCTION ENTRANCE TO THE SITE SHALL BE INSTALLED AND STABILIZED PRIOR TO ANY WORK ON THE SITE. THE CONSTRUCTION ENTRANCE SHALL CONSIST OF 12" OF CRUSHED CONCRETE, 50 FEET IN LENGTH AND 24 FEET WIDE, AS SHOWN ON PLANS.
2. ALL STOCK PILES ON THE SITE WHICH WILL NOT BE REDISTRIBUTED FOR A WEEK OR LONGER WILL BE SEEDED WITHIN SEVEN DAYS OF THE FORMATION OF THE STOCKPILE.
3. SEEDING IN DISTRIBUTED AREAS OUTSIDE OF THE RIGHT-OF-WAYS WILL BE DONE WITH PERENNIAL RYE GRASS, 1/2 LB. PER 1,000 SF, IF IT IS LATER IN THE FALL AND A MORE RAPID GERMINATION IS REQUIRED, 1 LB OF OATS PER 1,000 S.F. CAN BE ADDED TO THE RYE GRASS.
4. THE SEEDING AND MULCH WILL BE MAINTAINED AND REPAIRED WHEN NECESSARY UNTIL THE PROJECT IS COMPLETED.
5. AGGREGATE BASE SHALL BE INSTALLED AS SOON AS POSSIBLE IN THE CONSTRUCTION SEQUENCE FOR ROADS TO PROVIDE REQUIRED STABILIZATION.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL STRUCTURES.
7. CONTRACTOR SHALL INSPECT EROSION CONTROL STRUCTURES WEEKLY OR AFTER ANY MAJOR STORMS OR AS DIRECTED BY THE CITY.
8. ALL DESIGN AND CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AS CONTAINED IN THE IEPA/WPC/87-012 OR CURRENT EDITION AND THE ILLINOIS PROCEDURE AND STANDARDS FOR URBAN SOIL EROSION AND SEDIMENTATION CONTROL.
9. DUST CONTROL AND CLEANING OF ROADWAYS AS REQUESTED BY THE CITY SHALL BE THE RESPONSIBILITY OF THE DEVELOPER.

B. INSTALLATION

1. INSPECTION SHALL BE FREQUENT AND REPAIR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
2. NOTIFY COUNTY BUILDING AND ZONING DEPARTMENTS 24 HOURS PRIOR TO INITIATING CONSTRUCTION.

CONTRACTOR'S CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR 10) THAT AUTHORIZES THE STORMWATER DISCHARGES ASSOCIATED WITH ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

GENERAL CONTRACTOR

SIGNATURE	TITLE	DATE
COMPANY		

OWNER'S CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHERED AND EVALUATED THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

OWNER

SIGNATURE	TITLE	DATE
COMPANY		

DRAINAGE STATEMENT

WE HEREBY STATE THAT TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS OF THIS PLAT WILL NOT BE CHANGED BY THE CONSTRUCTION OF THE IMPROVEMENTS OF THIS SUBDIVISION OR ANY PART THEREOF OR THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISIONS HAVE BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATE: _____
NAME OF ENGINEER
ILLINOIS REGISTERED PROF.ENG.NO. _____

OWNER AND DEVELOPER:
NAME OF DEVELOPER/OWNER

TITLE: _____

CORPORATION: _____

SOIL PROTECTION CHART

STABILIZATION TYPE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PERMANENT SEEDING			A			*	*					
DORMANT SEEDING	B											B
TEMPORARY SEEDING			C			*	D*					
SODDING			E**									
MULCHING	F											

- | | |
|--|-----------------------------------|
| A. KENTUCKY BLUEGRASS 90 LBS/AC
MIXED WITH PERENNIAL RYEGRASS 30 LBS/AC | C. SPRING OATS 100 LBS/AC |
| B. KENTUCKY BLUEGRASS 135 LBS/AC
MIXED WITH PERENNIAL RYE GRASS 45 LBS/AC + 2 TONS STRAW MULCH/AC | D. WHEAT OR CEREAL RYE 150 LBS/AC |
| | E. SOD |
| | F. STRAW MULCH 2 TONS/AC |

* IRRIGATION NEEDED DURING JUNE AND JULY

** IRRIGATION NEEDED FOR 2 TO 3 WEEKS AFTER APPLYING SOD



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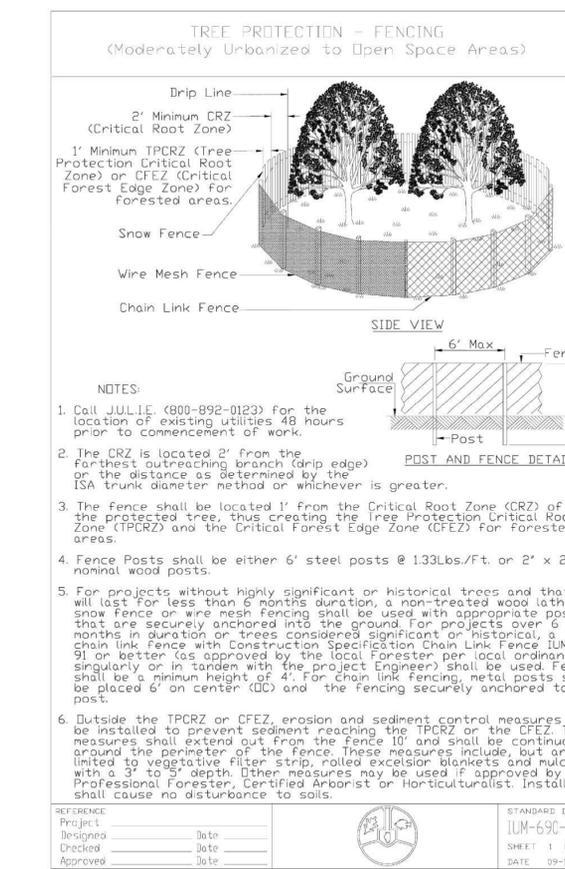
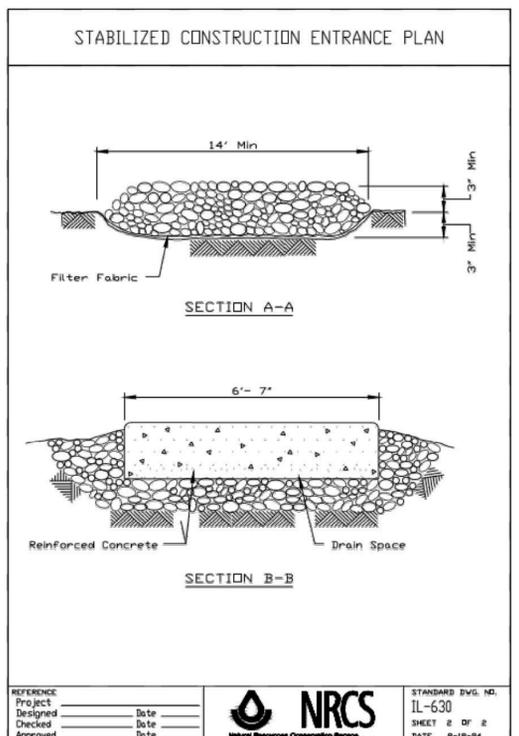
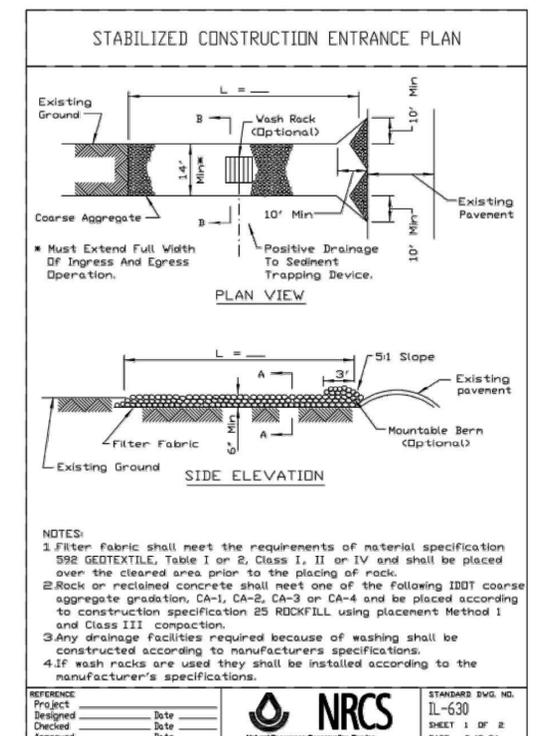
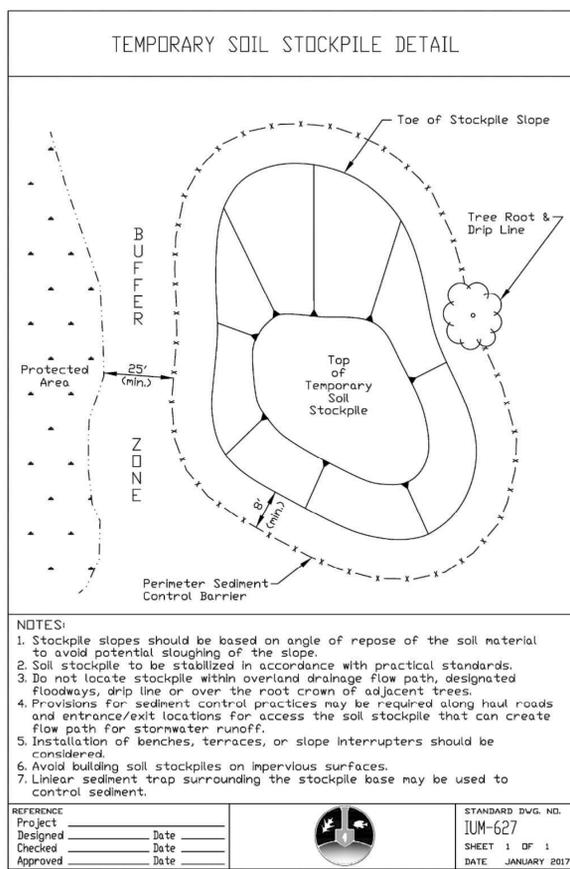
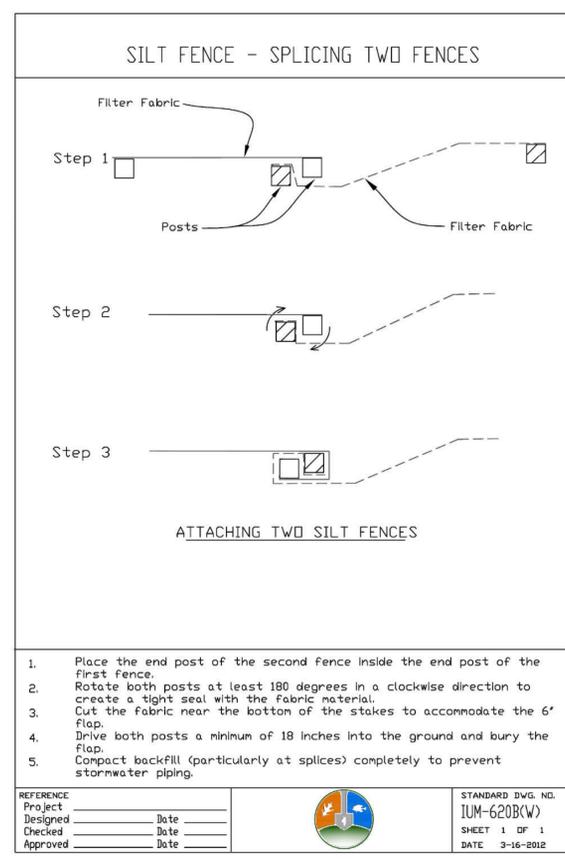
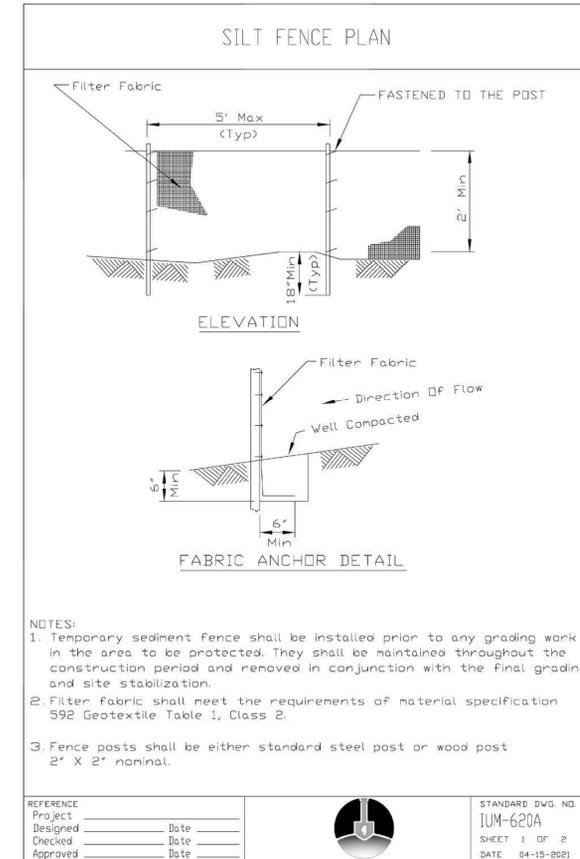
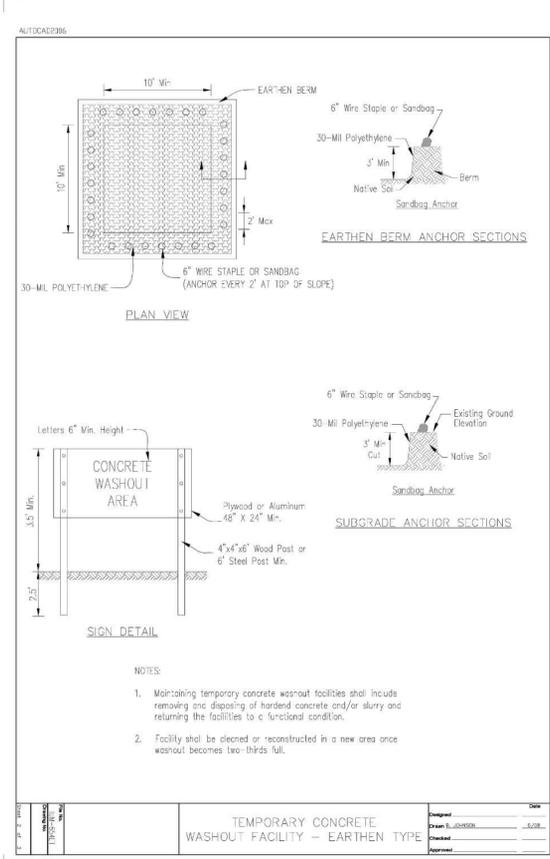
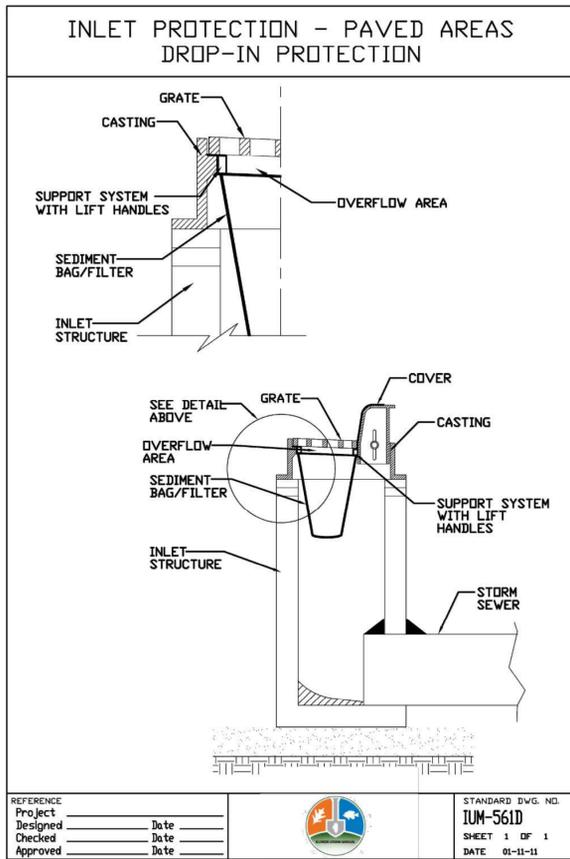
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SUBDIVISION
14137 S 108TH AVE, ORLAND PARK, IL

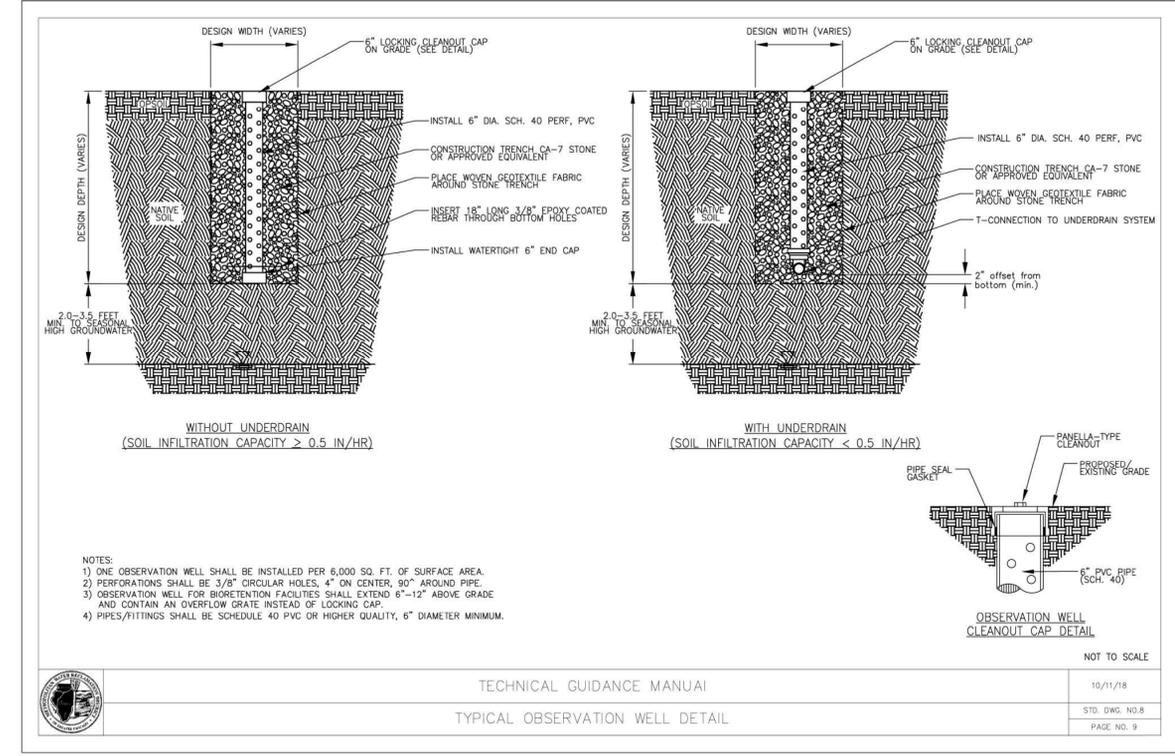
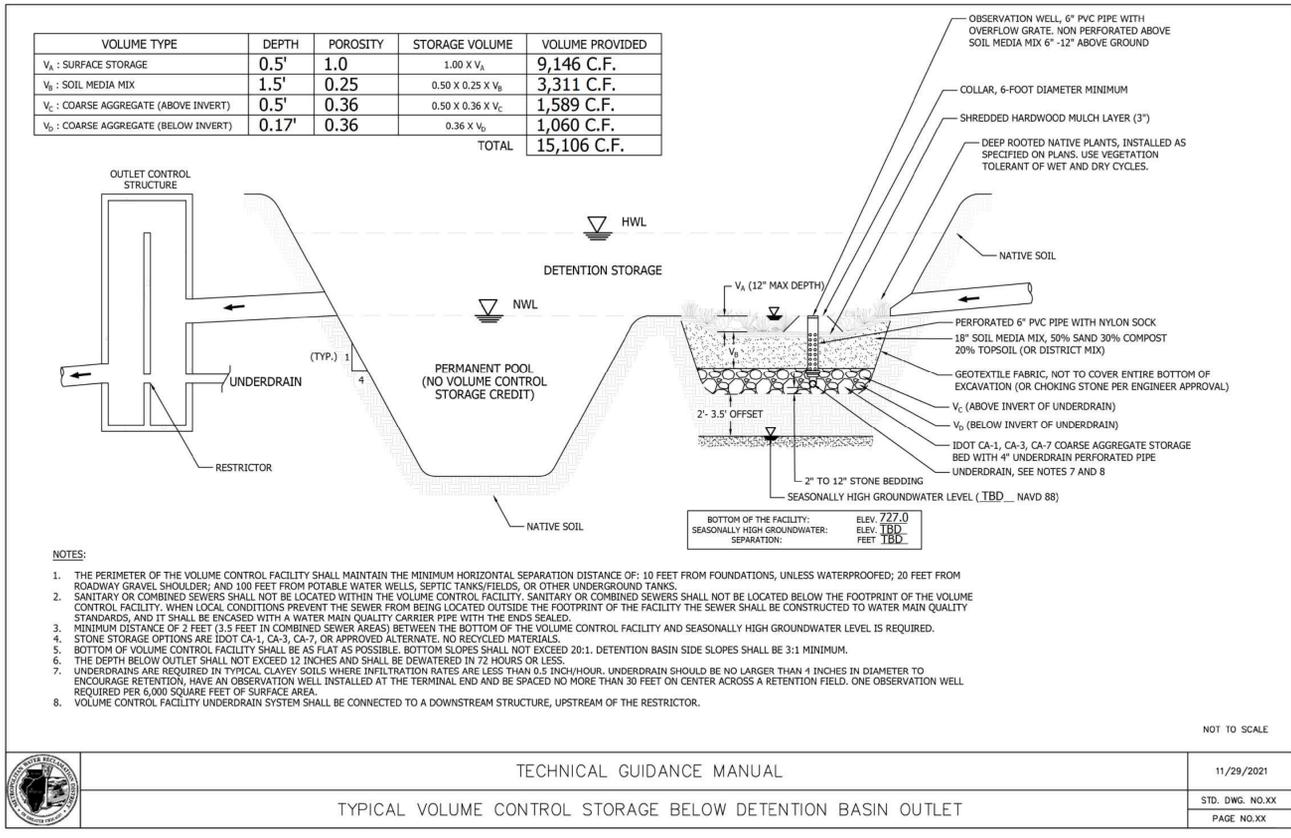
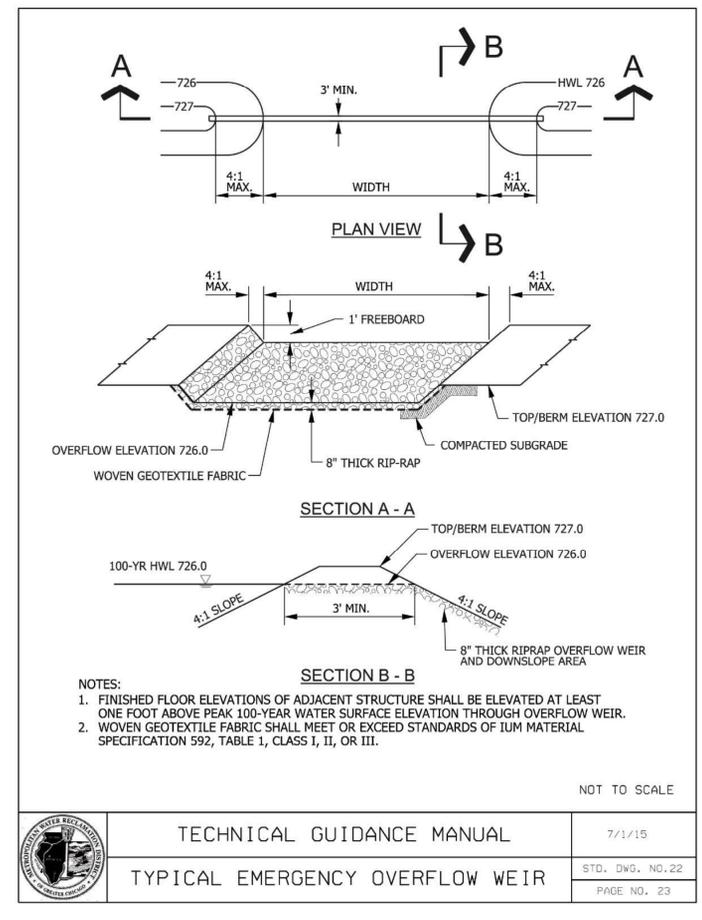
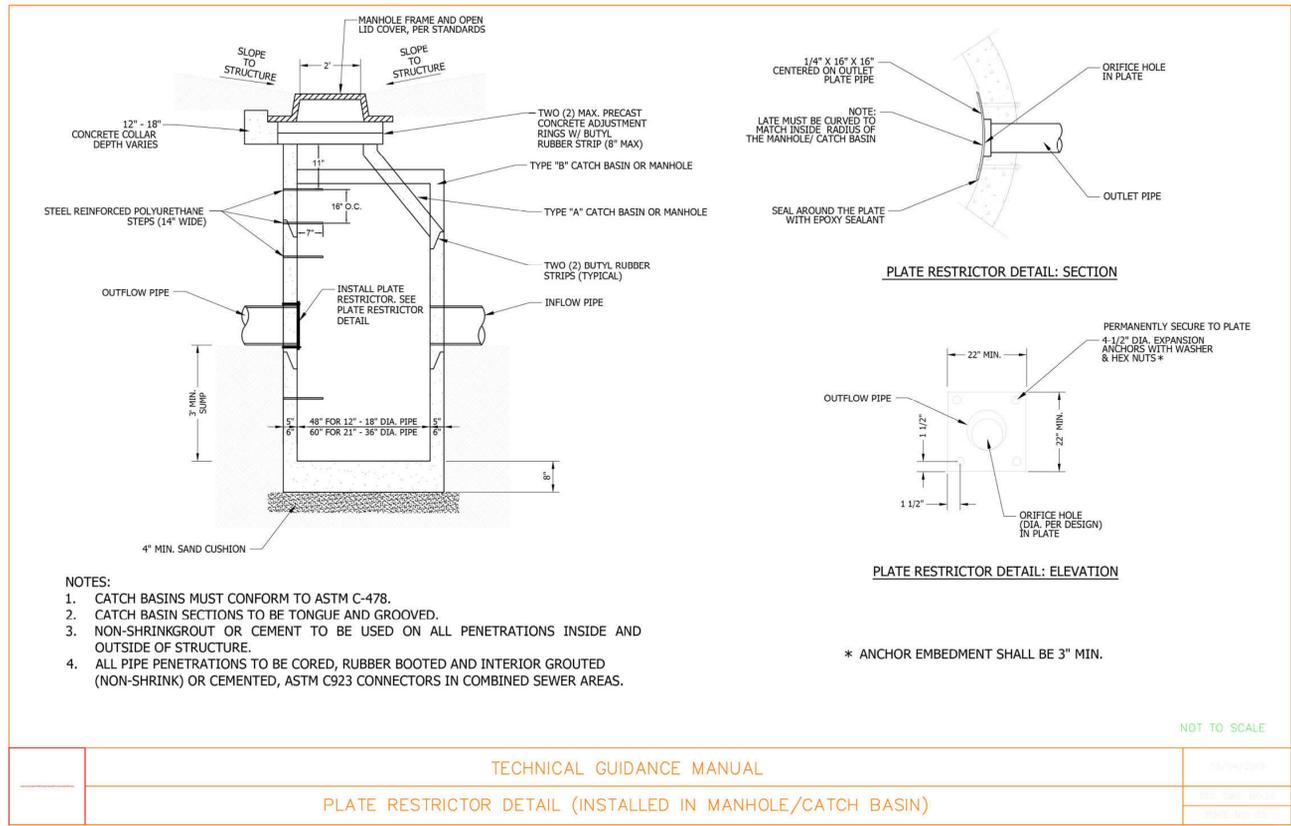
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PROJECT # : W242323.00
DESIGNED BY : KF
DRAWN BY : KF
CHECKED BY : NAV

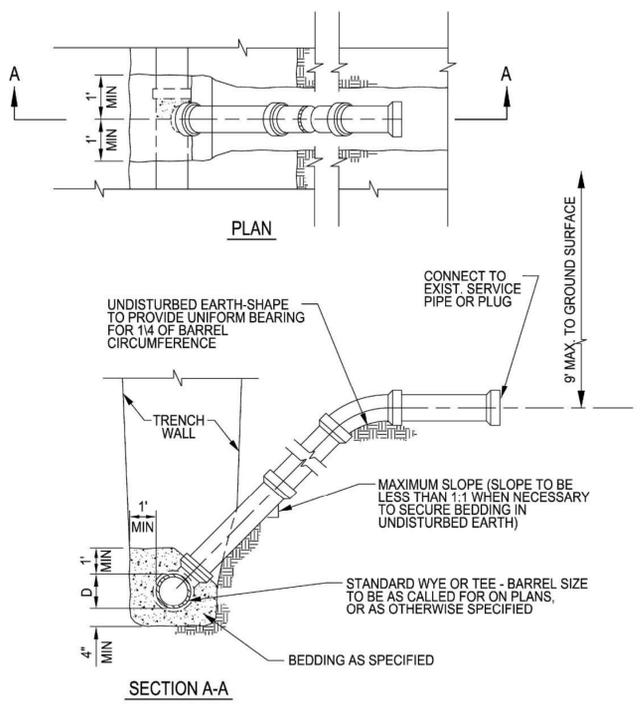
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09-08-2025 (IF PER VILLAGE COMMENTS)
07-30-2025 (IF PER VILLAGE COMMENTS)
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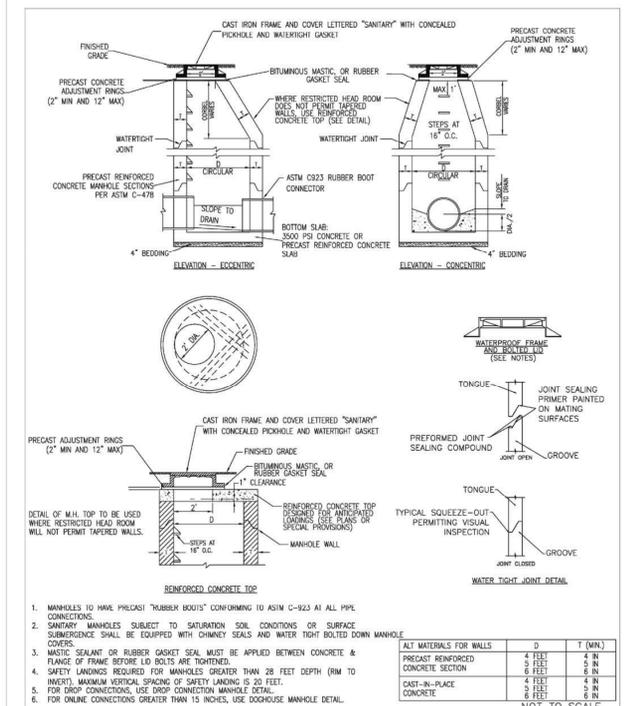
C-8.0
SHEET



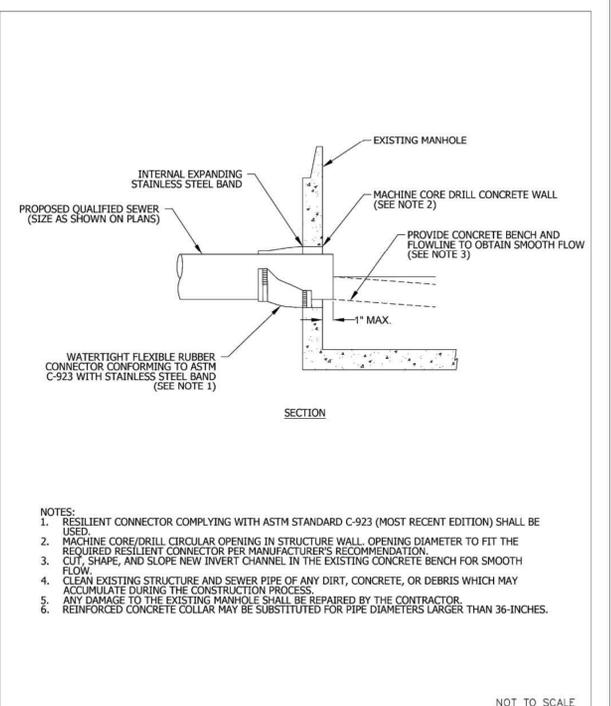




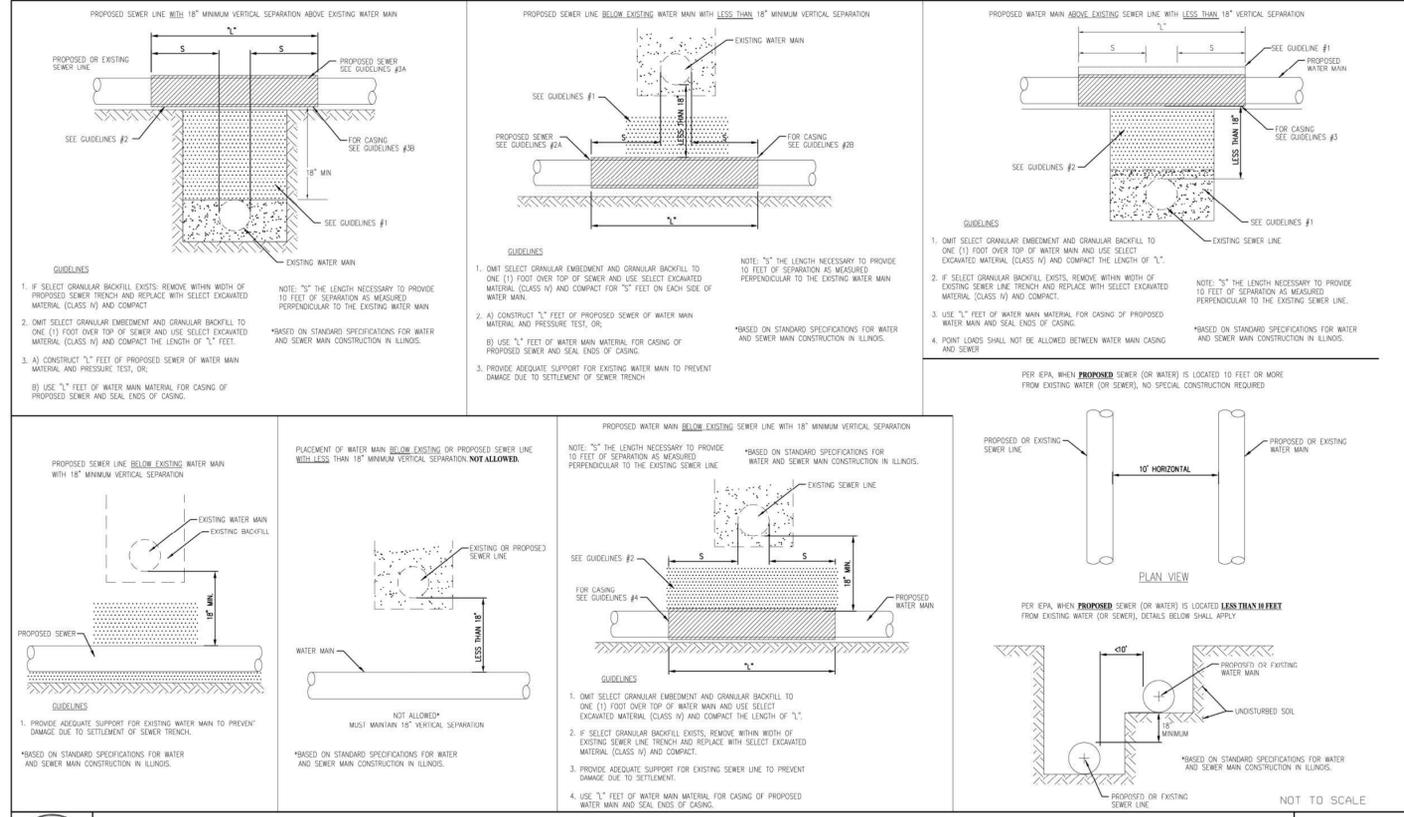
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	TYPICAL RISER SANITARY SERVICE LATERAL	STD. DWG. NO. 38
		PAGE NO. 39



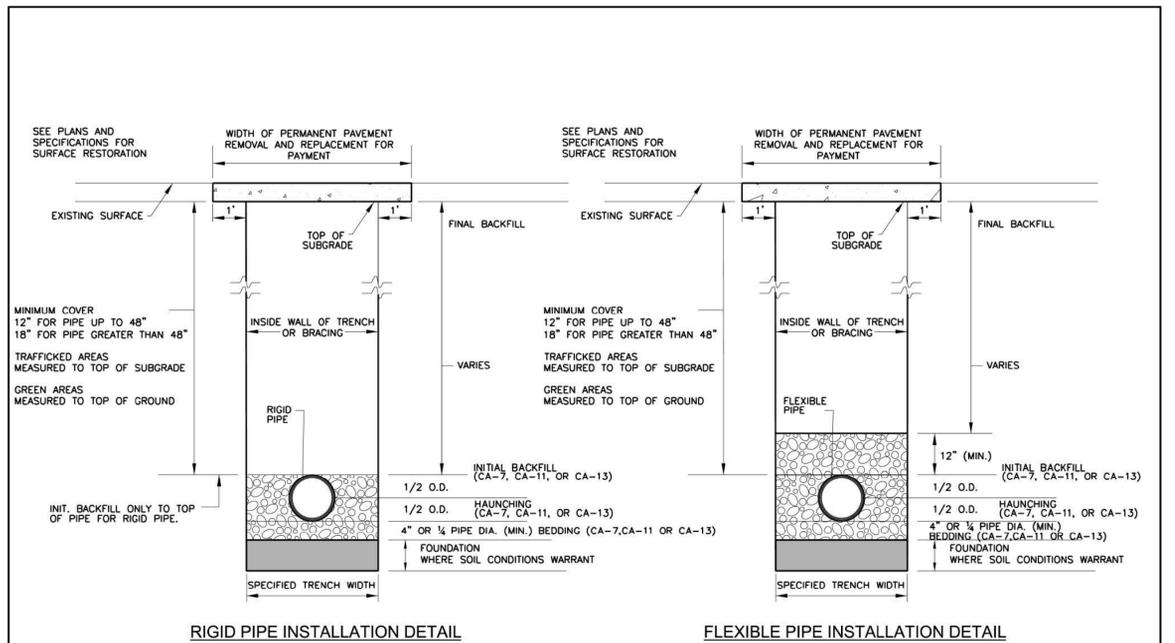
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	TYPICAL SANITARY MANHOLE "A" AND "B" DETAIL	STD. DWG. NO. 39
		PAGE NO. 40



	TECHNICAL GUIDANCE MANUAL	10/02/18
	PIPE TO EXISTING MANHOLE CONNECTION DETAIL	STD. DWG. NO. 42
		PAGE NO. 43

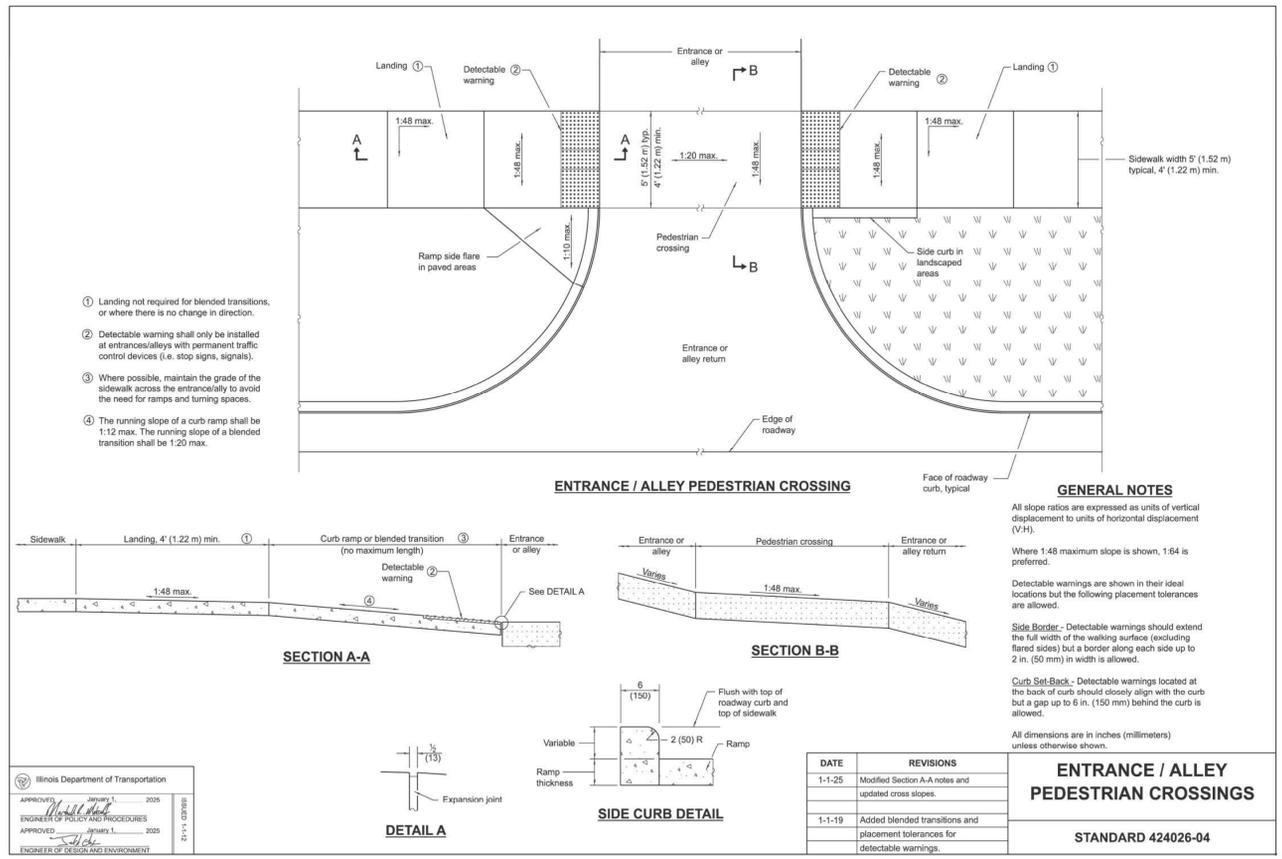
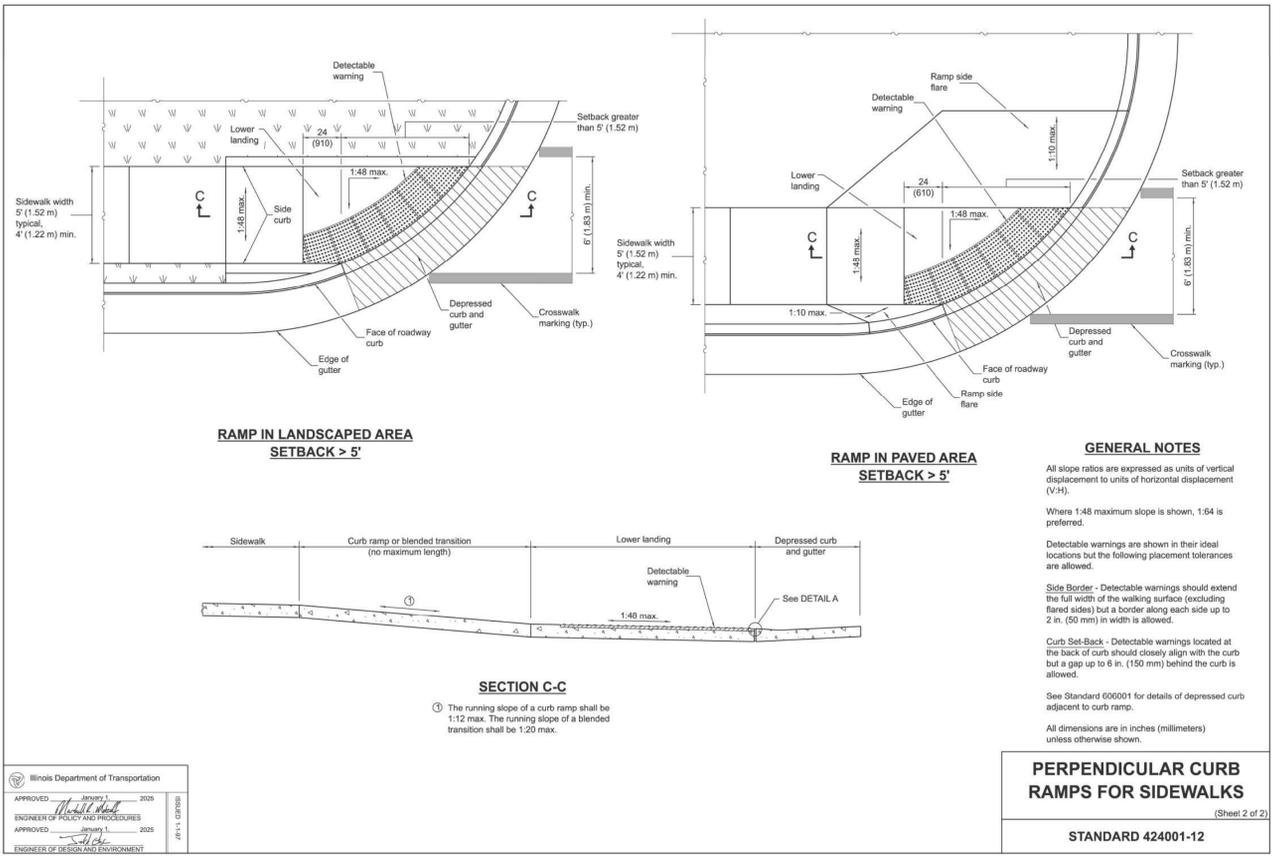
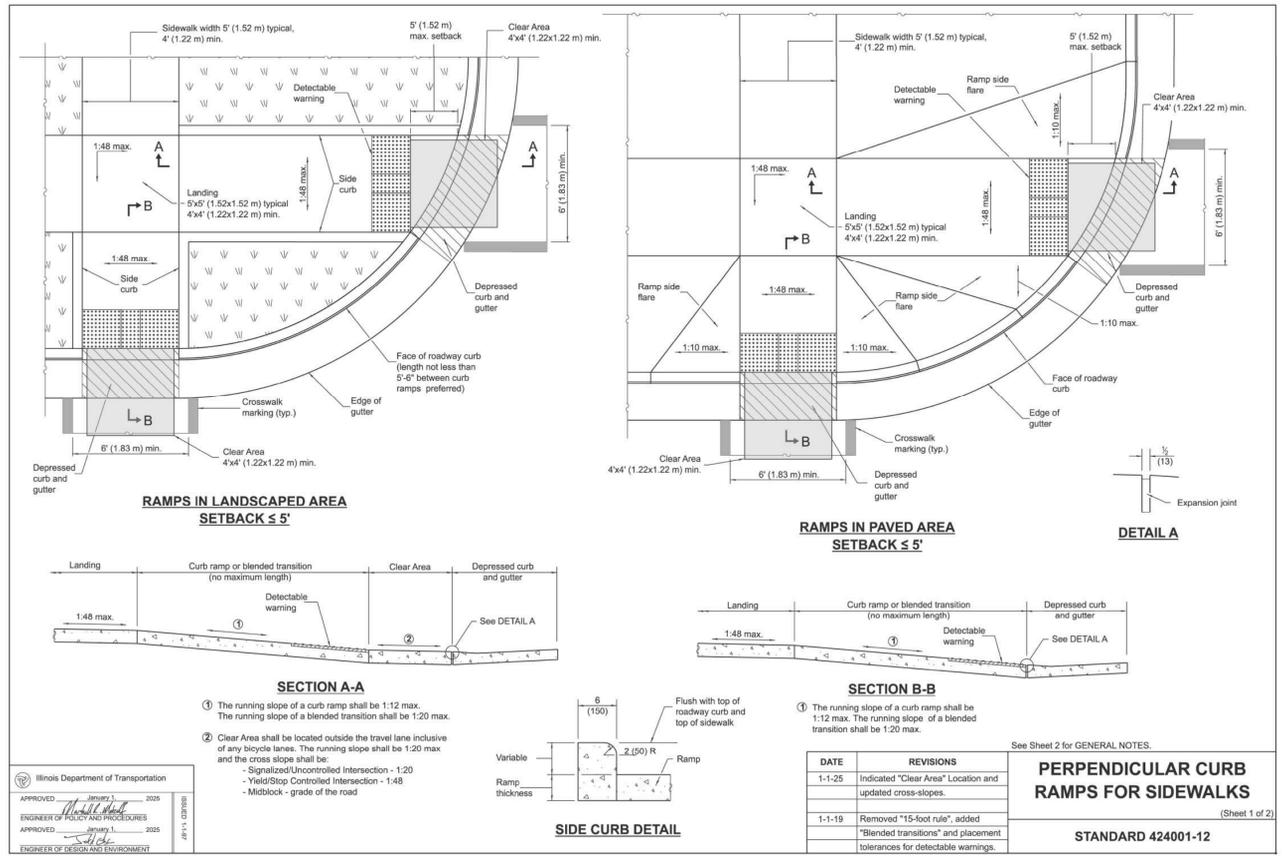


	TECHNICAL GUIDANCE MANUAL	7/1/15
	WATER AND SEWER SEPARATION REQUIREMENTS (PER IEPA)	STD. DWG. NO. 41
		PAGE NO. 42



	TECHNICAL GUIDANCE MANUAL	7/1/15
	RIGID AND FLEXIBLE PIPE INSTALLATION DETAIL	STD. DWG. NO. 34
		PAGE NO. 35





ENGINEERING RESOURCE ASSOCIATES
 35701 WEST AVENUE SUITE 150
 BOSTON, MA 02124
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 1965 BRENTWOOD RD. NORTHBROOK, IL 60062
 (847) 863-8888

BRIDLEWOOD SUBDIVISION
 14137 S 108TH AVE, ORLAND PARK, IL

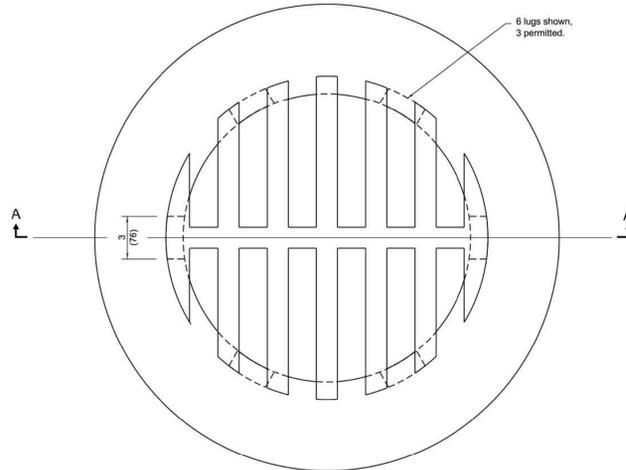
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 PROJECT # : W24232.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV

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 09-08-2025 UP PER VILLAGE COMMENTS
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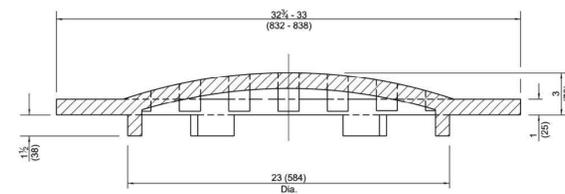
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CONSTRUCTION DETAILS

C-9.3
 SHEET



CAST GRATE

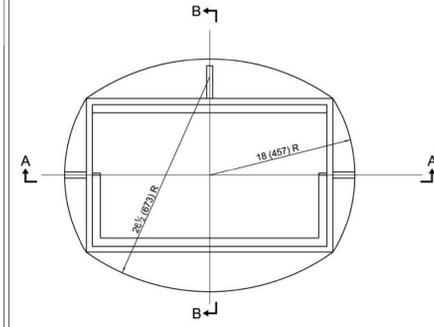


SECTION A-A

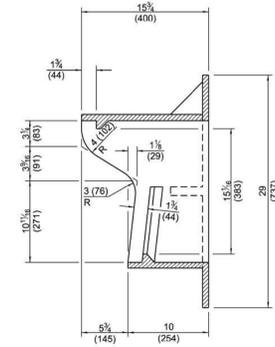
All dimensions are in inches (millimeters) unless otherwise shown.

DATE	REVISIONS	STANDARD
1-1-15	Revised dimensions.	GRATE TYPE 8
1-1-09	Switched units to English (metric).	STANDARD 604036-03

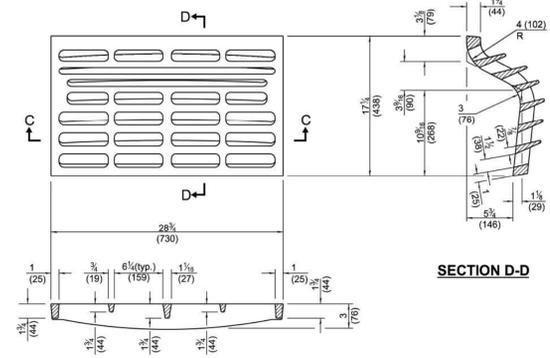
Illinois Department of Transportation
 APPROVED: [Signature] January 1, 2015
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED: [Signature] January 1, 2015
 ENGINEER OF DESIGN AND ENVIRONMENT



SECTION A-A



SECTION B-B



SECTION C-C

SECTION D-D

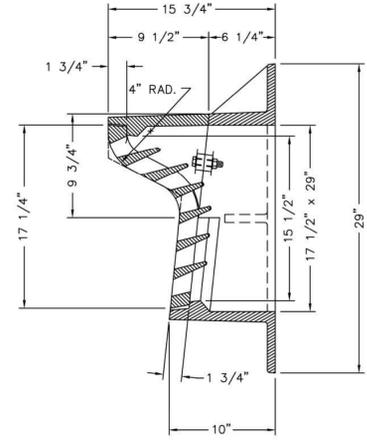
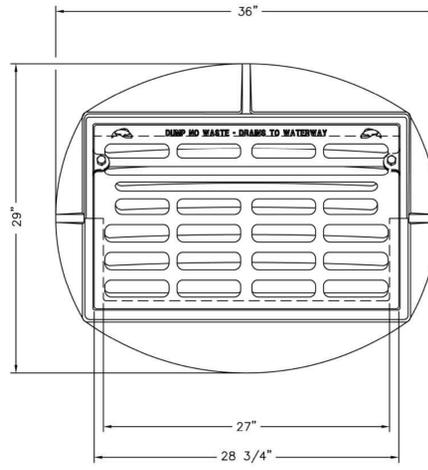
CAST GRATE

CAST FRAME

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

DATE	REVISIONS	STANDARD
1-1-15	Revised dimensions of frame and grate.	FRAME AND GRATE TYPE 12
1-1-09	Switched units to English (metric).	STANDARD 604061-03

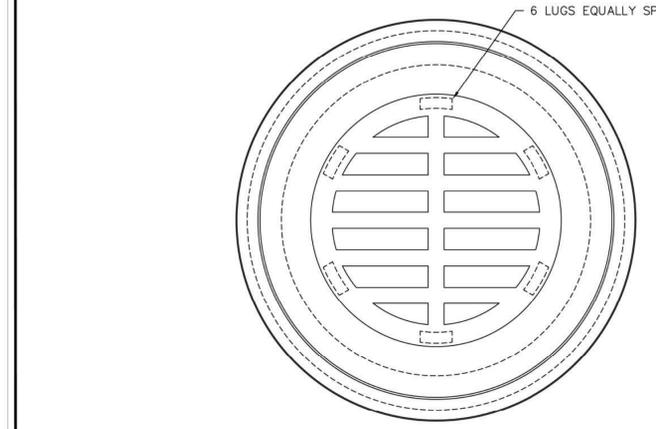
Illinois Department of Transportation
 APPROVED: [Signature] January 1, 2015
 ENGINEER OF POLICY AND PROCEDURES
 APPROVED: [Signature] January 1, 2015
 ENGINEER OF DESIGN AND ENVIRONMENT



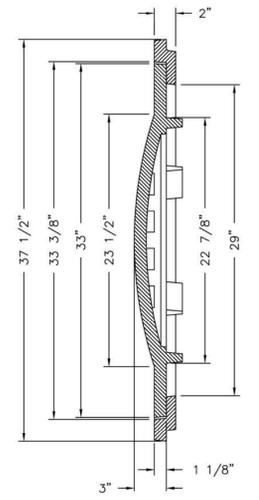
- NOTES:
 - ALL DIMENSIONS SHOWN ARE IN ENGLISH.
 - COMP. NO'S: GR. 3503-3303, LOWER FR. 3503-0004, UPPER FR. 3503-0005
 - MATERIAL: CAST GRAY IRON, ASTM A48, CLASS 35B
 - FINISH: NO PAINT
 - WEIGHT: GRATE \approx 146#, LOWER FRAME \approx 249#, UPPER FRAME \approx 91#

DR.	SCALE	TITLE
E. NIVER	1/8"=1"	R-3503-B
RKB		ROLL FRAME AND GRATE
APP. HSH		NEENAH FOUNDRY
DATE 01-31-2022		NEENAH WISCONSIN 54956 PHONE 800-558-5075
		LINCOLN, NEBRASKA 68529 PHONE 800-234-7466

CAD DWG. REF: 3503455.DWG- 1



6 LUGS EQUALLY SPACED



- NOTE: FREE OPEN AREA = APPROX. 156 SQ. IN.
 COMPONENTS: FRAME 4340-0550 GRATE 4340-0450
 MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 35B
 FINISH: NO PAINT
 WEIGHT: 321#/SET

DR.	SCALE	TITLE
E. REMME	1/8"=1"	R-4340-B
CH.		FRAME AND GRATE
APP.		NEENAH FOUNDRY COMPANY
DATE 9/28/88		NEENAH WISCONSIN 54956

CAD DWG. REF: 4340 200.DWG- 2

ENGINEERING RESOURCE ASSOCIATES
 35701 WEST AVENUE SUITE 150
 FORT COLLINS, CO 80504
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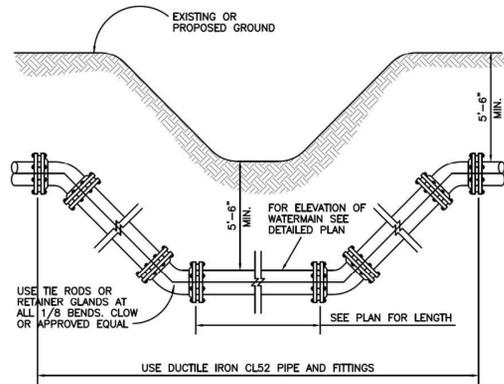
RT/MGR, LLC
 1965 BRENTWOOD RD. NORTHBROOK, IL 60062
 (847) 863-8808

BRIDLEWOOD SUBDIVISION
 14137 S 108TH AVE, ORLAND PARK, IL

DATE : 03-11-2025
 PROJECT # : W24323.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV
 DESCRIPTION: 11-10-2025 UP PER PLAN CHANGES
 09-08-2023 UP PER VILLAGE COMMENTS
 07-30-2025 UP PER VILLAGE COMMENTS

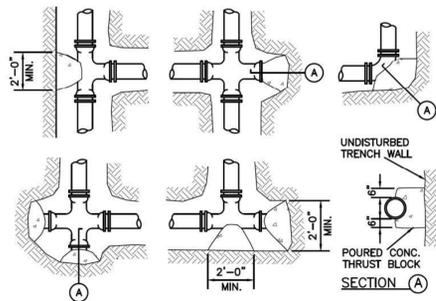
CONSTRUCTION DETAILS

C-9.4
 SHEET



NOTE:
1. POLYETHYLENE ENCASEMENT - ENTIRE LENGTH OF WATERMAIN, AS REQUIRED.

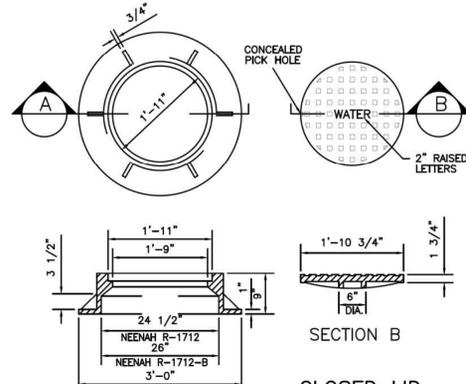
TYPICAL WATERMAIN
NOT TO SCALE



SIZE (DIA. IN INCH)	DEAD END OR TEE (SQ. FT.)	1/4 BEND 90° (SQ. FT.)	1/8 BEND 45° (SQ. FT.)	1/16 BEND 22.5° (SQ. FT.)	1/32 BEND 11.25° (SQ. FT.)
6	3.9	5.5	3.0	1.5	1.5
8	6.7	9.4	5.1	2.6	2.6
10	10.9	15.4	8.4	4.3	4.3
12	15.5	21.8	11.9	6.1	6.1
14	21.0	29.6	16.1	8.2	8.2
16	28.5	37.9	20.6	12.5	12.5
18	38.6	54.4	29.7	14.9	14.9
20	47.8	67.4	36.7	18.6	18.6
24	69.0	97.2	52.9	26.8	26.8

NOTES:
1. THE ABOVE TABLE IS BASED ON 2,000 PSF SOIL BEARING AGAINST THE UNDISTURBED TRENCH WALL AND ARE TO REPRESENT THE MINIMUM VERTICAL AREA OF THE THRUST BLOCK PERPENDICULAR TO THE FITTING INCLUDING THE ANGLE OF THE FITTING.
2. THRUST BLOCKING TO PREVENT MOVEMENT OF LINES UNDER PRESSURE AT BENDS, TEES, CAPS, VALVES, HYDRANTS AND AT POINTS SPECIFIED SHALL BE CLASS "SI" CONCRETE, A MIN. OF 12" THICK, PLACED BETWEEN SOLID GROUND AND FITTING, AND SHALL BE ANCHORED IN SUCH A MANNER THAT PIPE AND FITTING WILL BE ACCESSIBLE FOR REPAIRS. THRUST BLOCK SHALL BE PLACED AT BENDS OF 11 1/4 OR MORE. RETAINER GLANDS MAY BE USED IN PLACE OF THRUST BLOCKS. THE COST OF THRUST BLOCKS OR RETAINER GLANDS SHALL BE INCLUDED IN THE COST OF THE FITTING.
3. PROVIDE POLYETHYLENE ENCASEMENT THROUGHOUT THE ENTIRE LENGTH OF THE WATERMAIN, AS REQUIRED.

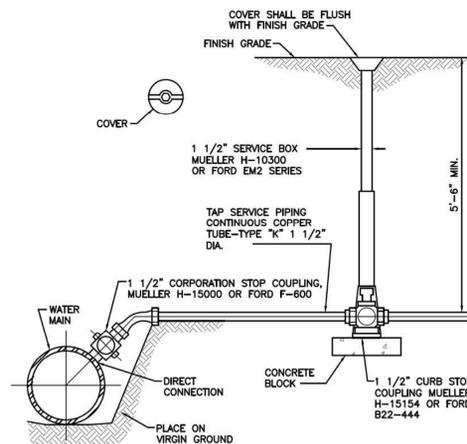
THRUST BLOCK DETAIL
NOT TO SCALE



CLOSED LID TYPE-B

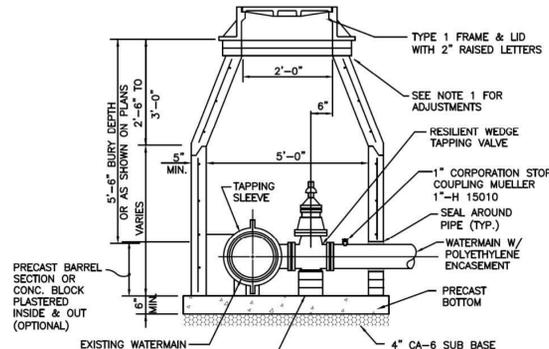
NOTES:
1. DUCTILE IRON CASTING SHALL BE GRADE 60-40-18 AND SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
2. ALL FRAMES AND LIDS SHALL BE MACHINED.
3. THE MANHOLE LIDS SHALL HAVE RAISED LETTERS AS SHOWN.
4. ALTERNATIVE TO DUCTILE IRON LID, GRAY IRON LID MAY BE USED.
5. FRAME AND LID TO BE NEEHAH R-1712 (540 LBS. WT.) FOR PAVEMENTS AND NEEHAH R-1712-B (415 LBS. WT.) FOR PARKWAYS.
6. CLOSED LID SHALL HAVE A CONCEALED PICK HOLE.
7. LID SHALL BE IMPRINTED WITH THE DESIGNATION "WATER".

VALVE VAULT FRAME & LID, TYPE-1
NOT TO SCALE



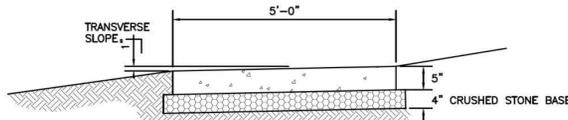
NOTE:
1. WATER SERVICE SHALL BE LOCATED A MINIMUM OF 10 FEET FROM THE SANITARY SEWER SERVICE.

WATER SERVICE TAP
NOT TO SCALE



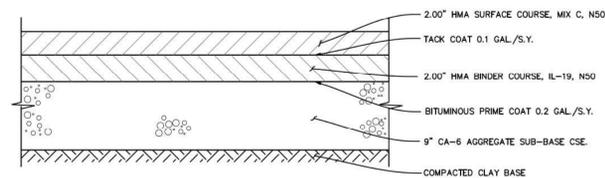
NOTES:
1. PRECAST-REINFORCED CONCRETE RISER RINGS AND CONES SHALL COMPLY WITH TEST STRENGTH - A.S.T.M. C-39. ADJUSTMENT RINGS SHALL NOT EXCEED 8" IN HEIGHT.
2. WALL THICKNESS SHALL BE - 5" FOR 4' DIA. & 6" FOR 5' DIA. MANHOLE. MINIMUM CIRCULAR REINFORCEMENT SHALL BE 0.18 SQUARE INCH PER FOOT.
3. PRECAST ADJUSTMENT RINGS WILL BE REQUIRED FOR ALL ADJUSTMENTS WITH MAX. ADJUSTMENT EQUAL TO 1 1/2".
4. ALL VALVES SHALL BE ENCLOSED IN A VAULT UNLESS OTHERWISE SPECIFIED.
5. VALVE WITH VAULT INCLUDING FRAME AND LID SHALL BE PAID FOR AS ITEM "VALVE AND VAULT" OF THE SIZE SPECIFIED IN THE PLANS AND SHALL INCLUDE CORPORATION STOP AS SHOWN.
6. ALL JOINTS BETWEEN PRE-CAST ELEMENTS, ADJUSTING RINGS AND MANHOLE FRAMES ON ALL UNDERGROUND STRUCTURES, SHALL BE SET IN PLACE WITH ONE OF THE FOLLOWING: BUTYL RUBBER JOINT SEALANTS AS MANUFACTURED BY CONCRETE PRODUCTS SUPPLY CO. - EZ STIK STB, HAMILTON-KENT GASKET CO. - (KENT SEAL), OR EQUAL, AS APPROVED BY THE VILLAGE ENGINEER, AND ALL JOINTS TO BE TUCKPOINTED W/ANTI-HYDRAULIC CEMENT.

PRESSURE CONNECTION VALVE VAULT
NOT TO SCALE

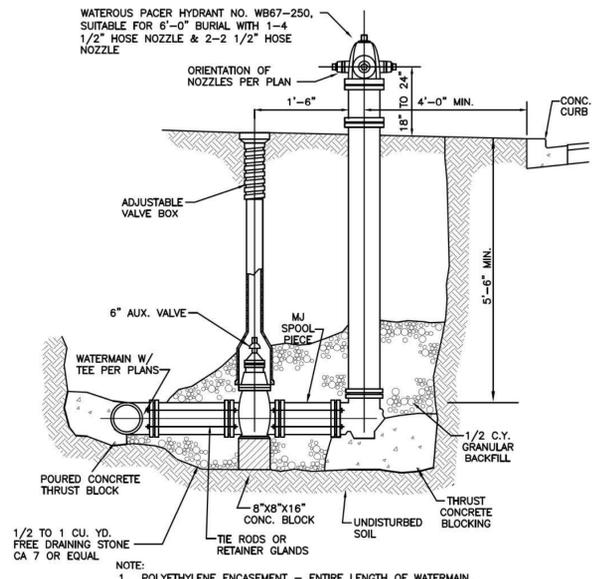


NOTES:
1. THE CONCRETE SIDEWALK SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 424 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.
2. THE CONCRETE SHALL CONFORM TO SECTION 1020 AND SHALL BE A SIX (6) BAG MIXTURE WITH A 5-INCH SLUMP AND SHALL DEVELOP A MINIMUM OF 3,500 PSI COMPRESSIVE STRENGTH AT 14 DAYS.
3. THE SIDEWALK PORTION OF THE DRIVEWAY SHALL BE 5-INCHES THICK AND SHALL BE REINFORCED WITH FIBER MESH ADDITIVE.
4. PLACEMENT WILL NOT BE PERMITTED UNLESS THE TEMPERATURE IS 28° AND RISING. NO CHLORIDE ADDITIVE WILL BE PERMITTED IN THE CONCRETE.
5. SIDEWALK AT INTERSECTIONS SHALL BE DEPRESSED AND TEXTURED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT. THE MAXIMUM ALLOWABLE SLOPE IS 1:20.
6. CONTROL JOINTS SHALL BE INSTALLED AT 5 FOOT CENTERS.
7. PREMOULDED FIBER EXPANSION JOINTS SHALL BE INSTALLED AT 100 FOOT CENTERS MAXIMUM OR WHERE THE SIDEWALK ABUTS CURB OR OTHER SIDEWALK, OR AT THE END OF EACH POUR.
8. THE SIDEWALK SHALL HAVE A BROOM FINISH.

CONCRETE SIDEWALK DETAIL
NOT TO SCALE

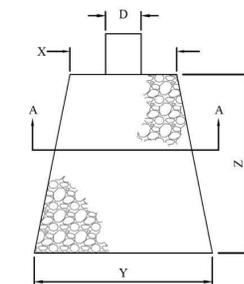


BITUMINOUS PAVEMENT DETAIL
N.T.S.



NOTE:
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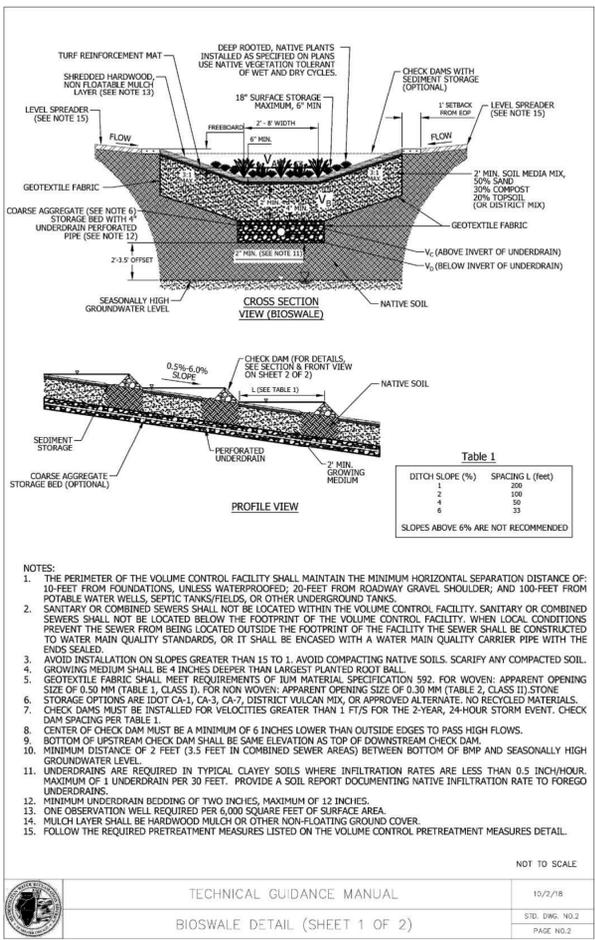
FIRE HYDRANT
NOT TO SCALE



D (INCHES)	X (FEET)	Y (FEET)	Z (FEET)
12	3	5	5
15	4	6	6
18	5	6	8
21	5	7	8
24	6	8	9
27	7	9	11
30	8	10	12
33	8	11	13
36	9	12	14
42	11	15	17

RIP RAP DETAIL
NOT TO SCALE



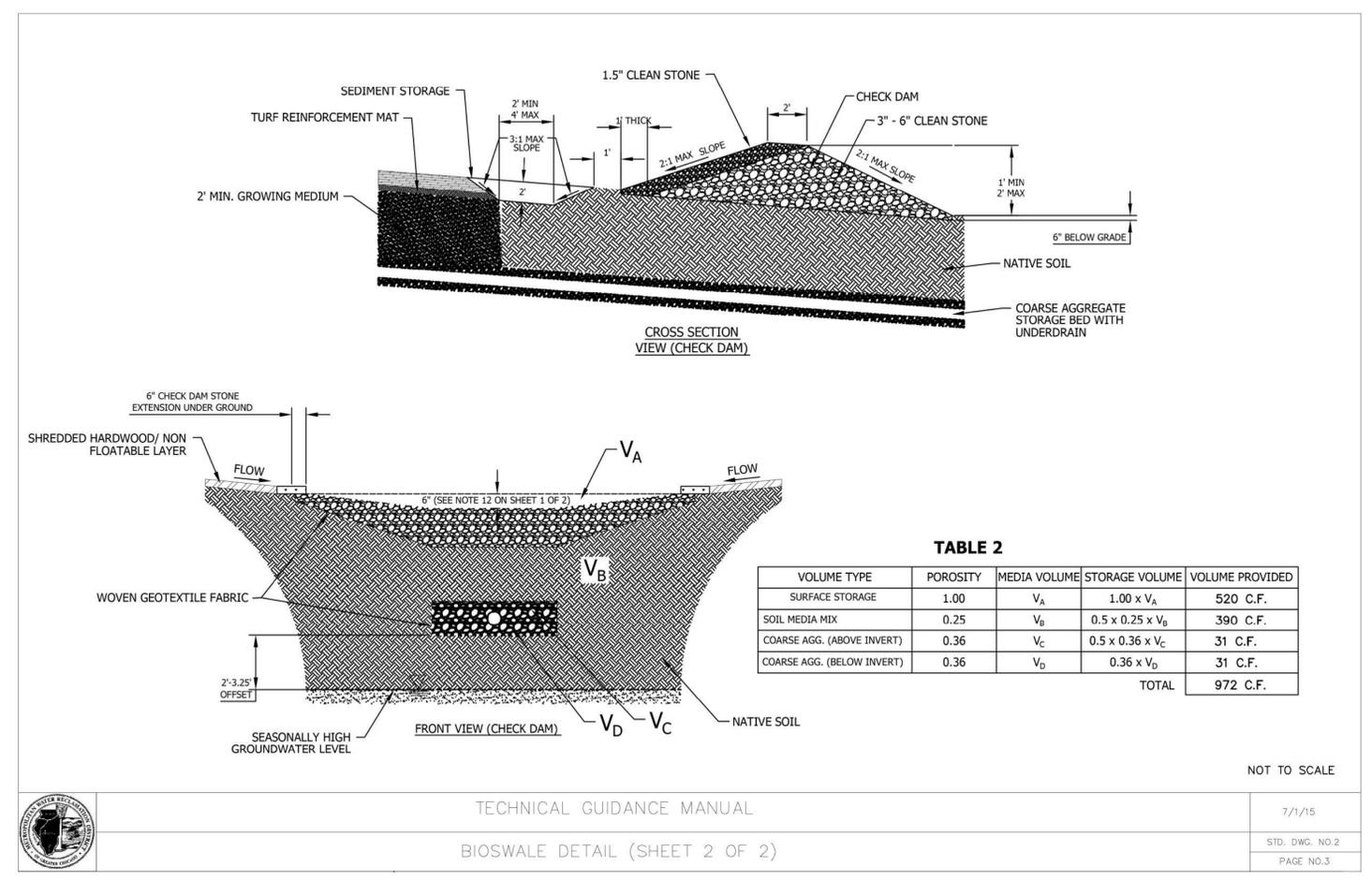


NOTES:

1. THE PERIMETER OF THE VOLUME CONTROL FACILITY SHALL MAINTAIN THE MINIMUM HORIZONTAL SEPARATION DISTANCE OF: 10- FEET FROM FOUNDATIONS, UNLESS WATERPROOFED; 20- FEET FROM ROADWAY GRAVEL SHOULDER; AND 100- FEET FROM POTABLE WATER WELLS, SEPTIC TANKS/FIELDS, OR OTHER UNDERGROUND TANKS.
2. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED WITHIN THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED BELOW THE FOOTPRINT OF THE VOLUME CONTROL FACILITY. WHEN LOCAL CONDITIONS PREVENT THE SEWER FROM BEING LOCATED OUTSIDE THE FOOTPRINT OF THE FACILITY THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN QUALITY STANDARDS, OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
3. AVOID INSTALLATION ON SLOPES GREATER THAN 15 TO 1. AVOID COMPACTING NATIVE SOILS. SCARIFY ANY COMPACTED SOIL.
4. GROWING MEDIUM SHALL BE 4 INCHES DEEPER THAN LARGEST PLANTED ROOT BALL.
5. GEOTEXTILE FABRIC SHALL MEET REQUIREMENTS OF RUM MATERIAL SPECIFICATION 592. FOR WOVEN: APPARENT OPENING SIZE OF 0.50 MM (TABLE 1, CLASS 1). FOR NON WOVEN: APPARENT OPENING SIZE OF 0.30 MM (TABLE 2, CLASS 1). STONE STORAGE OPTIONS ARE IDOT CA-1, CA-3, CA-7, DISTRICT VULCAN MIX, OR APPROVED ALTERNATE. NO RECYCLED MATERIALS.
6. CHECK DAMS MUST BE INSTALLED FOR VELOCITIES GREATER THAN 1 FT/S FOR THE 2-YEAR, 24-HOUR STORM EVENT. CHECK DAM SPACING PER TABLE 1.
7. CENTER OF CHECK DAM MUST BE A MINIMUM OF 6 INCHES LOWER THAN OUTSIDE EDGES TO PASS HIGH FLOWS.
8. BOTTOM OF UPSTREAM CHECK DAM SHALL BE SAME ELEVATION AS TOP OF DOWNSTREAM CHECK DAM.
9. MINIMUM DISTANCE OF 2 FEET (3.5 FEET IN COMBINED SEWER AREAS) BETWEEN BOTTOM OF BMP AND SEASONALLY HIGH GROUNDWATER LEVEL.
10. UNDERDRAINS ARE REQUIRED IN TYPICAL CLAYEY SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.5 INCH/HOUR, MAXIMUM OF 1 UNDERDRAIN PER 30 FEET. PROVIDE A SOIL REPORT DOCUMENTING NATIVE INFILTRATION RATE TO FOREGO UNDERDRAINS.
11. MINIMUM UNDERDRAIN BEDDING OF TWO INCHES, MAXIMUM OF 12 INCHES.
12. ONE OBSERVATION WELL REQUIRED PER 6,000 SQUARE FEET OF SURFACE AREA.
13. MULCH LAYER SHALL BE HARDWOOD MULCH OR OTHER NON-FLOATING GROUND COVER.
14. FOLLOW THE REQUIRED PRETREATMENT MEASURES LISTED ON THE VOLUME CONTROL PRETREATMENT MEASURES DETAIL.

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL	12/2/18
BIOSWALE DETAIL (SHEET 1 OF 2)	STD. DWG. NO.2
	PAGE NO.2



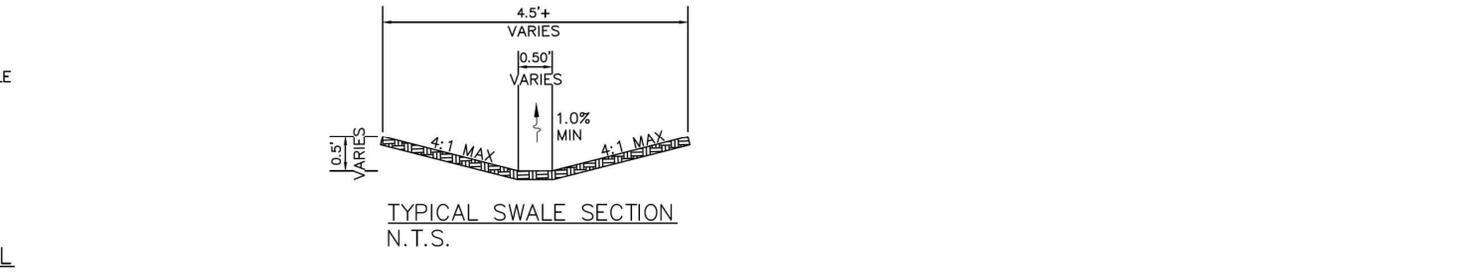
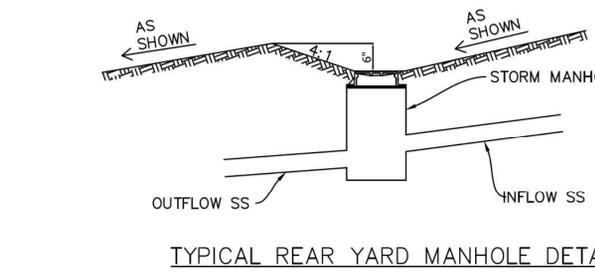
TECHNICAL GUIDANCE MANUAL

BIOSWALE DETAIL (SHEET 2 OF 2)

7/1/15

STD. DWG. NO.2

PAGE NO.3



DATE	03-11-2025
PROJECT #	W24323.00
DESIGNED BY	KF
DRAWN BY	KF
CHECKED BY	NAV

DESCRIPTION	CONSTRUCTION DETAILS
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DOYLE COURT

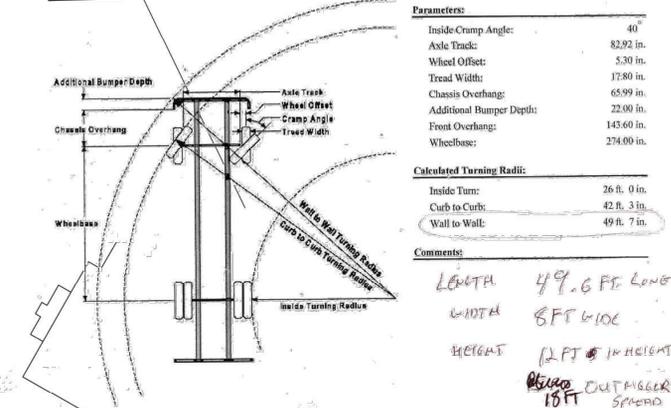
108TH AVENUE

WEST 142ND STREET

625
TOWER LADDER 7
77,000 LBS - 36,000 LBS FULLY LOADED

Pierce
Turning Performance Analysis
2/6/2008

Bid Number: ORLAND FIRE PROTECTION DISTRICT-NWM
Department: 5159
Chassis: Lance-2000 Chassis, PAPI/SkyArm/Midmount
Body: Aerial, Platform 100', Alum Body



Parameters:

Inside Cramp Angle:	40
Asse Track:	82.92 in.
Wheel Offset:	5.30 in.
Tread Width:	17.80 in.
Chassis Overhang:	65.99 in.
Additional Bumper Depth:	22.00 in.
Front Overhang:	143.60 in.
Wheelbase:	274.00 in.

Calculated Turning Radii:

Inside Turn:	26 ft. 0 in.
Curb to Curb:	42 ft. 3 in.
Wall to Wall:	49 ft. 7 in.

Comments:

LENGTH 49.6 FT LONG
WIDTH 8 FT WIDE
HEIGHT 12 FT 10 IN HEIGHT
18 FT OUTRIGGER SPREAD

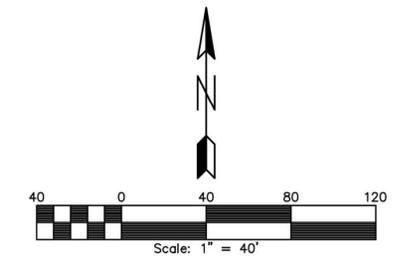
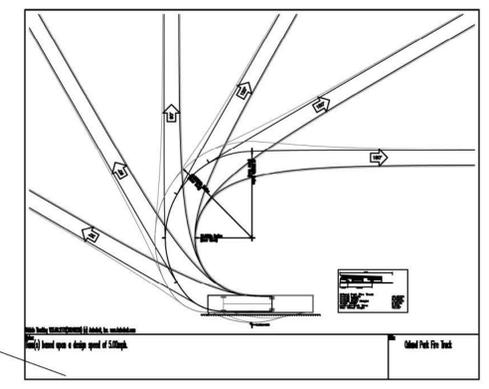
Components:

PRIDE #	Description
0012246	Bumper, 22" extend - all chassis
0022160	Aerial, 100' Pierce Platform
0019618	Wheels, Frt, Alum, Alcoa, 22.50" x 13.00" (425/445)
0090913	Asse, Front, Custom, Oshkosh TAK-4, Non Drive, 24,000 lb, DLX/Qm/AXIT
0078245	Tires, Michelin, 445/65R22.5 20 ply-XZY 3 tread (24,000 TAK 4)

Notes:

Actual Inside Cramp Angle may be less due to highly specialized options.
Curb-to-Curb turning radius calculated for a 9.00 inch curb.

Trace 4 65,500 LBS
22-6-5 36,500 LBS



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BRIDLEWOOD
SUBDIVISION
14137 S 108TH AVE, ORLAND PARK, IL

DATE : 03-11-2005
PROJECT # : W24323.00
DESIGNED BY : KF
DRAWN BY : KF
CHECKED BY : NAV

AUTOTURN
ANALYSIS

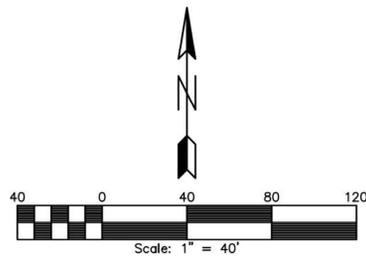
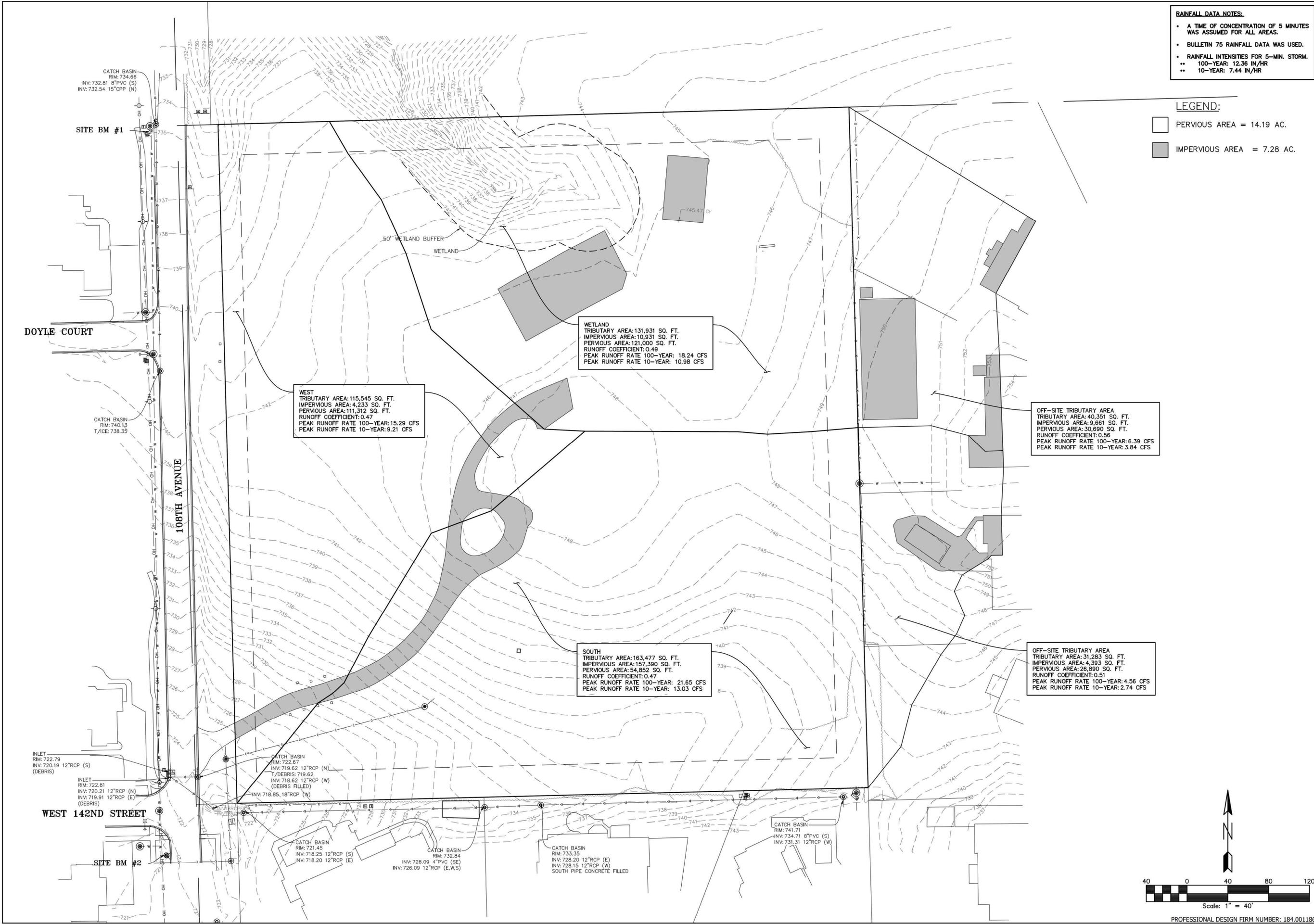
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RAINFALL DATA NOTES:

- A TIME OF CONCENTRATION OF 5 MINUTES WAS ASSUMED FOR ALL AREAS.
- BULLETIN 75 RAINFALL DATA WAS USED.
- RAINFALL INTENSITIES FOR 5-MIN. STORM.
 - ** 100-YEAR: 12.36 IN/HR
 - ** 10-YEAR: 7.44 IN/HR

LEGEND:

- PERVIOUS AREA = 14.19 AC.
- IMPERVIOUS AREA = 7.28 AC.



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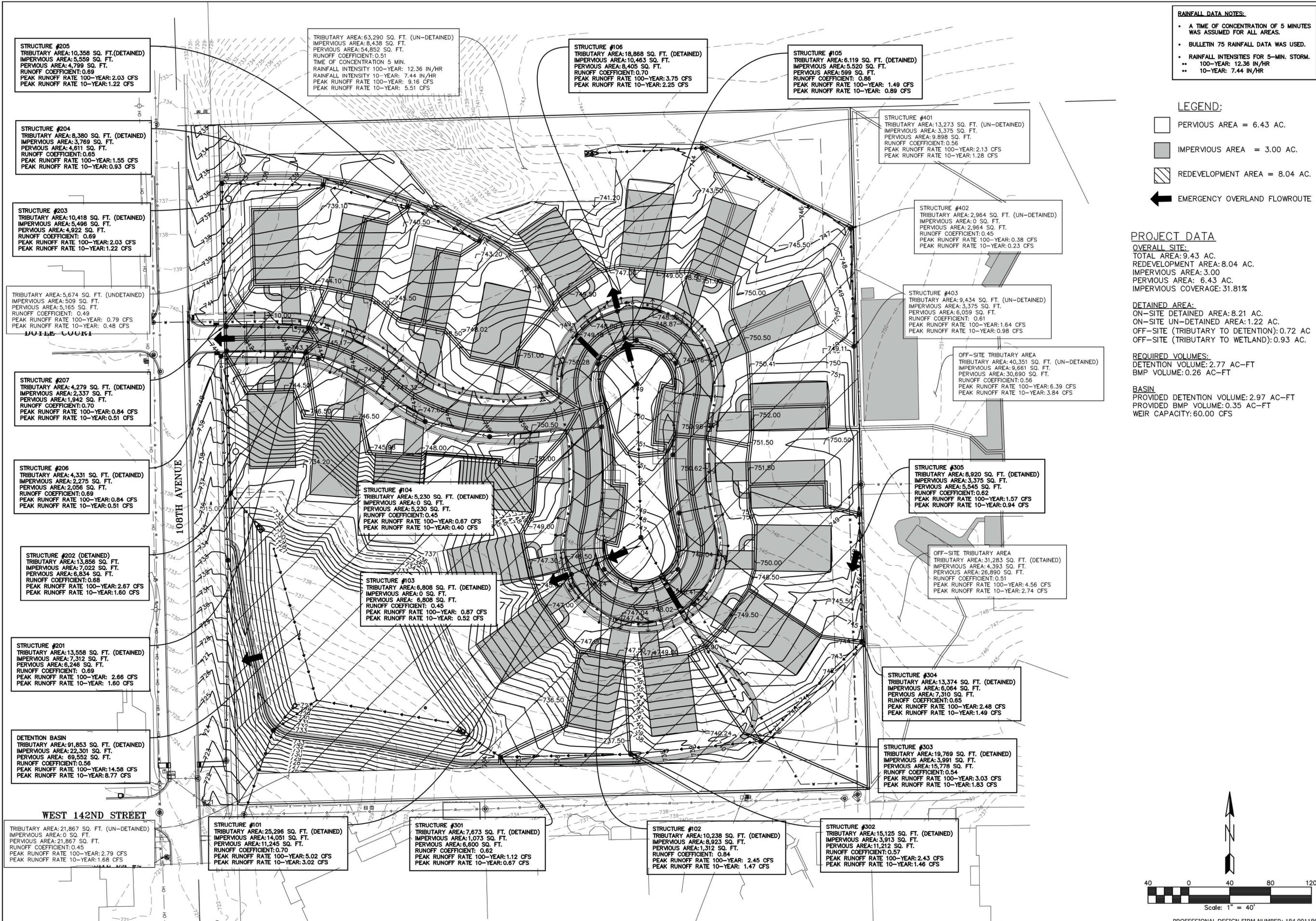
BRIDLEWOOD SUBDIVISION
 14137 S 108TH AVE, ORLAND PARK, IL

DATE : 03-11-2025
 PROJECT # : W24232.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : NAV
 DESCRIPTION: EXISTING DRAINAGE PLAN

11-10-2025 (IF PER PLAN CHANGES)
 09-08-2025 (IF PER VILLAGE COMMENTS)
 07-30-2025 (IF PER VILLAGE COMMENTS)

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G:\PROJECTS\RT-MGR, LLC\W24232.00_14137 S 108th Ave Orland Park Bridlewood\CAADD\SHR\1 SITE DEVELOPMENT\W24232 SHEET Prelim Engineering.dwg



RAINFALL DATA NOTES:

- A TIME OF CONCENTRATION OF 5 MINUTES WAS ASSUMED FOR ALL AREAS.
- BULLETIN 75 RAINFALL DATA WAS USED.
- RAINFALL INTENSITIES FOR 5-MIN. STORM.
 - ** 100-YEAR: 12.36 IN/HR
 - ** 10-YEAR: 7.44 IN/HR

LEGEND:

- PVIOUS AREA = 6.43 AC.
- IMPERVIOUS AREA = 3.00 AC.
- ▨ REDEVELOPMENT AREA = 8.04 AC.
- ← EMERGENCY OVERLAND FLOWROUTE

PROJECT DATA

OVERALL SITE:
 TOTAL AREA: 9.43 AC.
 REDEVELOPMENT AREA: 8.04 AC.
 IMPERVIOUS AREA: 3.00 AC.
 PVIOUS AREA: 6.43 AC.
 IMPVIOUS COVERAGE: 31.81%

DETAINED AREA:
 ON-SITE DETAINED AREA: 8.21 AC.
 ON-SITE UN-DETAINED AREA: 1.22 AC.
 OFF-SITE (TRIBUTARY TO DETENTION): 0.72 AC
 OFF-SITE (TRIBUTARY TO WETLAND): 0.93 AC.

REQUIRED VOLUMES:
 DETENTION VOLUME: 2.77 AC-FT
 BMP VOLUME: 0.26 AC-FT

Basin
 PROVIDED DETENTION VOLUME: 2.97 AC-FT
 PROVIDED BMP VOLUME: 0.35 AC-FT
 WEIR CAPACITY: 60.00 CFS

STRUCTURE #205
 TRIBUTARY AREA: 10,358 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 5,559 SQ. FT.
 PVIOUS AREA: 4,799 SQ. FT.
 RUNOFF COEFFICIENT: 0.69
 PEAK RUNOFF RATE 100-YEAR: 2.03 CFS
 PEAK RUNOFF RATE 10-YEAR: 1.22 CFS

TRIBUTARY AREA: 63,290 SQ. FT. (UN-DETAINED)
 IMPERVIOUS AREA: 8,438 SQ. FT.
 PVIOUS AREA: 54,852 SQ. FT.
 RUNOFF COEFFICIENT: 0.51
 TIME OF CONCENTRATION 5 MIN.
 RAINFALL INTENSITY 100-YEAR: 12.36 IN/HR
 RAINFALL INTENSITY 10-YEAR: 7.44 IN/HR
 PEAK RUNOFF RATE 100-YEAR: 9.16 CFS
 PEAK RUNOFF RATE 10-YEAR: 5.51 CFS

STRUCTURE #106
 TRIBUTARY AREA: 18,868 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 10,463 SQ. FT.
 PVIOUS AREA: 8,405 SQ. FT.
 RUNOFF COEFFICIENT: 0.70
 PEAK RUNOFF RATE 100-YEAR: 3.75 CFS
 PEAK RUNOFF RATE 10-YEAR: 2.25 CFS

STRUCTURE #105
 TRIBUTARY AREA: 6,119 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 5,520 SQ. FT.
 PVIOUS AREA: 599 SQ. FT.
 RUNOFF COEFFICIENT: 0.88
 PEAK RUNOFF RATE 100-YEAR: 1.49 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.89 CFS

STRUCTURE #401
 TRIBUTARY AREA: 13,273 SQ. FT. (UN-DETAINED)
 IMPERVIOUS AREA: 3,375 SQ. FT.
 PVIOUS AREA: 9,898 SQ. FT.
 RUNOFF COEFFICIENT: 0.56
 PEAK RUNOFF RATE 100-YEAR: 2.13 CFS
 PEAK RUNOFF RATE 10-YEAR: 1.28 CFS

STRUCTURE #402
 TRIBUTARY AREA: 2,964 SQ. FT. (UN-DETAINED)
 IMPERVIOUS AREA: 0 SQ. FT.
 PVIOUS AREA: 2,964 SQ. FT.
 RUNOFF COEFFICIENT: 0.45
 PEAK RUNOFF RATE 100-YEAR: 0.39 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.23 CFS

STRUCTURE #403
 TRIBUTARY AREA: 9,434 SQ. FT. (UN-DETAINED)
 IMPERVIOUS AREA: 3,375 SQ. FT.
 PVIOUS AREA: 6,059 SQ. FT.
 RUNOFF COEFFICIENT: 0.61
 PEAK RUNOFF RATE 100-YEAR: 1.64 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.98 CFS

OFF-SITE TRIBUTARY AREA
 TRIBUTARY AREA: 40,351 SQ. FT. (UN-DETAINED)
 IMPERVIOUS AREA: 9,661 SQ. FT.
 PVIOUS AREA: 30,690 SQ. FT.
 RUNOFF COEFFICIENT: 0.56
 PEAK RUNOFF RATE 100-YEAR: 6.39 CFS
 PEAK RUNOFF RATE 10-YEAR: 3.84 CFS

STRUCTURE #305
 TRIBUTARY AREA: 8,920 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 3,375 SQ. FT.
 PVIOUS AREA: 5,545 SQ. FT.
 RUNOFF COEFFICIENT: 0.62
 PEAK RUNOFF RATE 100-YEAR: 1.57 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.94 CFS

OFF-SITE TRIBUTARY AREA
 TRIBUTARY AREA: 31,283 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 4,393 SQ. FT.
 PVIOUS AREA: 26,890 SQ. FT.
 RUNOFF COEFFICIENT: 0.51
 PEAK RUNOFF RATE 100-YEAR: 4.56 CFS
 PEAK RUNOFF RATE 10-YEAR: 2.74 CFS

STRUCTURE #304
 TRIBUTARY AREA: 13,374 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 6,064 SQ. FT.
 PVIOUS AREA: 7,310 SQ. FT.
 RUNOFF COEFFICIENT: 0.65
 PEAK RUNOFF RATE 100-YEAR: 2.48 CFS
 PEAK RUNOFF RATE 10-YEAR: 1.49 CFS

STRUCTURE #303
 TRIBUTARY AREA: 19,769 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 3,991 SQ. FT.
 PVIOUS AREA: 15,778 SQ. FT.
 RUNOFF COEFFICIENT: 0.54
 PEAK RUNOFF RATE 100-YEAR: 3.03 CFS
 PEAK RUNOFF RATE 10-YEAR: 1.83 CFS

STRUCTURE #204
 TRIBUTARY AREA: 8,380 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 3,769 SQ. FT.
 PVIOUS AREA: 4,611 SQ. FT.
 RUNOFF COEFFICIENT: 0.65
 PEAK RUNOFF RATE 100-YEAR: 1.55 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.93 CFS

STRUCTURE #203
 TRIBUTARY AREA: 10,418 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 5,496 SQ. FT.
 PVIOUS AREA: 4,922 SQ. FT.
 RUNOFF COEFFICIENT: 0.69
 PEAK RUNOFF RATE 100-YEAR: 2.03 CFS
 PEAK RUNOFF RATE 10-YEAR: 1.22 CFS

TRIBUTARY AREA: 5,674 SQ. FT. (UNDETAINED)
 IMPERVIOUS AREA: 509 SQ. FT.
 PVIOUS AREA: 5,165 SQ. FT.
 RUNOFF COEFFICIENT: 0.49
 PEAK RUNOFF RATE 100-YEAR: 0.79 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.48 CFS

STRUCTURE #207
 TRIBUTARY AREA: 4,279 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 2,337 SQ. FT.
 PVIOUS AREA: 1,942 SQ. FT.
 RUNOFF COEFFICIENT: 0.70
 PEAK RUNOFF RATE 100-YEAR: 0.84 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.51 CFS

STRUCTURE #206
 TRIBUTARY AREA: 4,331 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 2,275 SQ. FT.
 PVIOUS AREA: 2,056 SQ. FT.
 RUNOFF COEFFICIENT: 0.69
 PEAK RUNOFF RATE 100-YEAR: 0.84 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.51 CFS

STRUCTURE #104
 TRIBUTARY AREA: 5,230 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 0 SQ. FT.
 PVIOUS AREA: 5,230 SQ. FT.
 RUNOFF COEFFICIENT: 0.45
 PEAK RUNOFF RATE 100-YEAR: 0.67 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.40 CFS

STRUCTURE #103
 TRIBUTARY AREA: 6,808 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 0 SQ. FT.
 PVIOUS AREA: 6,808 SQ. FT.
 RUNOFF COEFFICIENT: 0.45
 PEAK RUNOFF RATE 100-YEAR: 0.87 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.52 CFS

STRUCTURE #202 (DETAINED)
 TRIBUTARY AREA: 13,856 SQ. FT.
 IMPERVIOUS AREA: 7,022 SQ. FT.
 PVIOUS AREA: 6,834 SQ. FT.
 RUNOFF COEFFICIENT: 0.68
 PEAK RUNOFF RATE 100-YEAR: 2.67 CFS
 PEAK RUNOFF RATE 10-YEAR: 1.60 CFS

STRUCTURE #201
 TRIBUTARY AREA: 13,558 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 7,312 SQ. FT.
 PVIOUS AREA: 6,246 SQ. FT.
 RUNOFF COEFFICIENT: 0.69
 PEAK RUNOFF RATE 100-YEAR: 2.66 CFS
 PEAK RUNOFF RATE 10-YEAR: 1.60 CFS

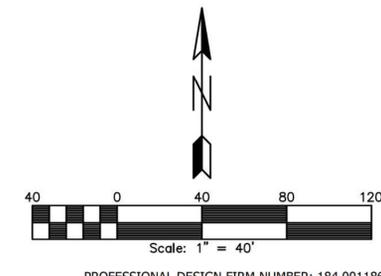
DETENTION BASIN
 TRIBUTARY AREA: 91,853 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 22,301 SQ. FT.
 PVIOUS AREA: 69,552 SQ. FT.
 RUNOFF COEFFICIENT: 0.56
 PEAK RUNOFF RATE 100-YEAR: 14.58 CFS
 PEAK RUNOFF RATE 10-YEAR: 8.77 CFS

STRUCTURE #101
 TRIBUTARY AREA: 25,296 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 14,051 SQ. FT.
 PVIOUS AREA: 11,245 SQ. FT.
 RUNOFF COEFFICIENT: 0.70
 PEAK RUNOFF RATE 100-YEAR: 5.02 CFS
 PEAK RUNOFF RATE 10-YEAR: 3.02 CFS

STRUCTURE #301
 TRIBUTARY AREA: 7,673 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 1,073 SQ. FT.
 PVIOUS AREA: 6,600 SQ. FT.
 RUNOFF COEFFICIENT: 0.62
 PEAK RUNOFF RATE 100-YEAR: 1.12 CFS
 PEAK RUNOFF RATE 10-YEAR: 0.67 CFS

STRUCTURE #102
 TRIBUTARY AREA: 10,238 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 8,923 SQ. FT.
 PVIOUS AREA: 1,312 SQ. FT.
 RUNOFF COEFFICIENT: 0.84
 PEAK RUNOFF RATE 100-YEAR: 2.45 CFS
 PEAK RUNOFF RATE 10-YEAR: 1.47 CFS

STRUCTURE #302
 TRIBUTARY AREA: 15,125 SQ. FT. (DETAINED)
 IMPERVIOUS AREA: 3,913 SQ. FT.
 PVIOUS AREA: 11,212 SQ. FT.
 RUNOFF COEFFICIENT: 0.57
 PEAK RUNOFF RATE 100-YEAR: 2.43 CFS
 PEAK RUNOFF RATE 10-YEAR: 1.46 CFS



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BRIDLEWOOD SUBDIVISION
 14137 S 108TH AVE, ORLAND PARK, IL

DATE : 03-11-2025
 PROJECT # : W24323.00
 DESIGNED BY : KF
 DRAWN BY : KF
 CHECKED BY : MAV

DESCRIPTION: 6:\PROJECTS\RT-MGR, LLC\W24323.00_14137 S 108th Ave Orland Park Bridlewood\CAD\DRAINAGE\DEVELOPMENT\W24323 SHEET Prelim Engineering.dwg

PROPOSED DRAINAGE PLAN

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PROFESSIONAL DESIGN FIRM NUMBER: 184.001186