FINAL SITE DEVELOPMENT PLANS
FOR

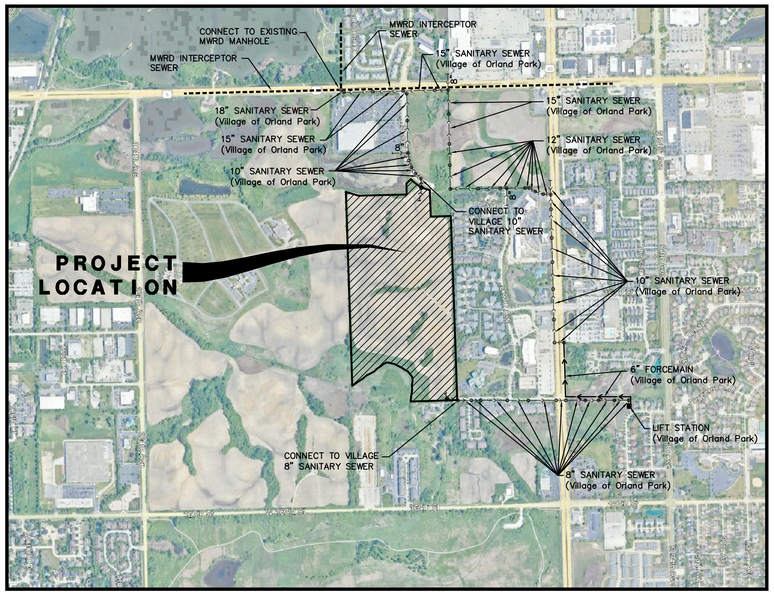
ESTATES AT RAVINIA MEADOW

ORLAND PARK, ILLINOIS

WATERMAIN-SANITARY SEWER-STREET-STREET LIGHTING AND DRAINAGE IMPROVEMENTS

LEGEND

EXISTING	PROPOSED	DESCRIPTION
◎	◉	MANHOLE
○	●	CATCH BASIN
□	■	INLET
	⬢	CLEANOUT
	▭	SLOPE INLET BOX
⊢	⊣	HEADWALL
◁	◀	END SECTION
-C-	-C-	STORM SEWER
-C-C-	-C-C-	SANITARY SEWER
W	W	WATERMAIN
⊗	◉	VALVE & BOX
◎	◉	WATER VALVE IN VAULT
☼	☼	FIRE HYDRANT
		CONTOURS
(ELEV)	ELEV	ELEVATIONS
☼	✦	STREET LIGHT
	▨	WATERMAIN PROTECTION
	▣	INLET PROTECTOR
	◠	TEMPORARY DITCH CHECK
		SILT FENCE DITCH CHECK
		RENO MATTRESS
	➡	OVERFLOW ROUTE



LOCATION MAP/SANITARY ROUTING MAP

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VILLAGE CONTACTS:

ENGINEERING INSPECTOR	(708) 403–5003
PUBLIC WORKS UTILITIES	(708) 403–6350

FOR UNDERGROUND UTILITY LOCATIONS, CALL
J.U.L.I.E.
TOLL FREE
TEL. 1-800-892-0123 or 811

DATE: _____

RELEASED FOR PLAN REVIEW AND PERMIT PROCESSING ONLY.

IF USED FOR BIDDING PURPOSES, THOSE PARTIES CONCERNED SHALL BE ADVISED THAT REVISIONS MAY BE REQUIRED PRIOR TO PLAN APPROVAL.

NOT ISSUED FOR CONSTRUCTION UNTIL APPROVED BY THE VILLAGE OF ORLAND PARK AND PERMITTED AS REQUIRED.

BENCHMARK/CONTROL POINTS

ELEVATION REFERENCE MARK:

NGS MONUMENT DK 2006 (PID DN4691): MONUMENT IS 39 FT WEST OF THE CENTERLINE OF WILL/COOK ROAD, 54 FT SOUTH OF THE CENTERLINE OF 167TH STREET, 10 FT WEST OF A TRAFFIC SIGNAL HAND HOLE AND 1 FT NORTHEAST OF AN ORANGE CARSONITE MARKER. NOTE–ACCESS TO THE DATUM POINT IS THROUGH A 6–INCH LOGO CAP AND THE ROD (DATUM POINT) IS SURROUNDED BY A FLOATING BRONZE DISK TO AID IN IDENTIFICATION
ELEVATION: 751.92 NAVD 88

CONTROL POINTS:

CP #100:
SET '+' ON NORTH SIDE OF CURB LINE OF LANDSCAPE MEDIAN AT EAST END OF RAVINIA AVENUE.
NORTHING: 1796395.13
EASTING: 1114132.92
ELEVATION: 695.77 NAVD 88

CP #2178:
FOUND '+' ON A CURBED NOSE OF PARKING LOT APPROXIMATELY 201 NORTH OF THE NORTH LINE OF 165TH STREET AND 85 FEET EAST OF THE EAST LINE OF THE SUBJECT SITE.
NORTHING: 1793913.97
EASTING: 1114556.24
ELEVATION: 711.83 NAVD 88

PROFESSIONAL ENGINEER'S CERTIFICATION

STATE OF ILLINOIS)
SS.
COUNTY OF DU PAGE)

I, CHRISTOPHER R. MORGART , A LICENSED PROFESSIONAL ENGINEER OF ILLINOIS, HEREBY CERTIFY THAT THIS TECHNICAL SUBMISSION WAS PREPARED ON BEHALF OF PULTE HOME COMPANY, LLC, BY CEMCON, LTD. UNDER MY PERSONAL DIRECTION. THIS TECHNICAL SUBMISSION IS INTENDED TO BE USED AS AN INTEGRAL PART OF AND IN CONJUNCTION WITH THE PROJECT SPECIFICATIONS AND CONTRACT DOCUMENTS.

DATED THIS 3RD DAY OF SEPTEMBER, A.D., 2025.

CHRISTOPHER R. MORGART 062-055788 LICENSED PROFESSIONAL ENGINEER OF ILLINOIS

ILLINOIS LICENSED PROFESSIONAL ENGINEER NO. 062–055788
MY LICENSE EXPIRES ON NOVEMBER 30, 2025

PROFESSIONAL DESIGN FIRM LICENSE NUMBER 184–002937
EXPIRES APRIL 30, 2027

NOTE : UNLESS THIS DOCUMENT BEARS THE ORIGINAL SIGNATURE AND IMPRESSED SEAL OF THE DESIGN PROFESSIONAL ENGINEER, IT IS NOT A VALID TECHNICAL SUBMISSION.

Contact the Metropolitan Water Reclamation District of Greater Chicago 2 days before starting work.
P (708) 588-4055
E WMOJobStart@mwrd.org

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REVISIONS

NO.	DATE	SHEETS	NO.	DATE	SHEETS
1	04–23–25/LAL	5,7,10,13–15,26,28,30,ER01–ER03,SWM01&SWM02			
2	05–16–25/LAL	1,2,5–20,23–25,27,29–37,39 & ER01–ER04			
3	06–26–25/LAL	5–7,10–12,14,23,25,33–34,39 & ER01–ER03			
4	07–22–25/LAL	5, 10–12, 23–25, 33 & 39			
5	08–13–25/LAL	5, 7, 13–15, 28, 39, SWM01&02, & ER01			
6	09–03–25/LAL	1, 5, 27–28 & 35–37			

JOB NO. 402.170
COMPLETION DATE :
APRIL 4, 2025
SHEET 1 OF 39

ESTATES AT RAVINIA MEADOW – FINAL ENGINEERING – 402.170 – REVISION 6: 09–03–25/LAL

CONSTRUCTION SPECIFICATIONS – GENERAL NOTES

OTHER GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND HEALTHFUL WORKING CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.

2. IF THE ENGINEER IS RETAINED FOR CONSTRUCTION STAKING SERVICES, THE ENGINEER WILL BE GIVEN SEVENTY–TWO (72) HOURS NOTICE FOR ANY STAKING THAT IS TO BE DONE. IF ENGINEER IS CONTRACTED BY OWNER OR CONTRACTOR FOR CONSTRUCTION STAKING SERVICES, EACH OF THE VARIOUS ITEMS OF WORK COVERED BY THIS CONTRACT WILL BE STAKED ONCE. ADDITIONAL STAKING REQUIRED DUE TO CONTRACTOR NEGLIGENCE SHALL BE PAID FOR BY THE CONTRACTOR AT THE CURRENT HOURLY RATE.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING EACH OF THE UTILITY COMPANIES BEFORE ANY WORK IS STARTED. ALL UTILITIES MUST BE STAKED PRIOR TO CONSTRUCTION.

4. THE CONTRACTOR SHALL INFORM THE VILLAGE OF ORLAND PARK ENGINEERING DEPARTMENT BEFORE WORK COMMENCES ON EACH CATEGORY OF CONSTRUCTION, I.E. WATERMAIN, SANITARY, STREET AND DRAINAGE IMPROVEMENT. A FORTY EIGHT (48) HOUR NOTICE SHALL BE GIVEN FOR ANY ITEM THAT REQUIRE FINAL TESTING AND INSPECTION SUCH AS WATERMAINS OR SANITARY SEWERS. ADDITIONALLY, CONTRACTOR SHALL PROVIDE THE VILLAGE WITH A SCHEDULE OF CONSTRUCTION ACTIVITIES.

5. AFTER CONSTRUCTION STAKING IS PERFORMED, BUT PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL CALL THE ATTENTION OF THE OWNER'S REPRESENTATIVE TO ANY ERRORS OR DISCREPANCIES WHICH MAY BE SUSPECTED IN LINES AND GRADES WHICH ARE ESTABLISHED BY THE OWNER, AND SHALL NOT PROCEED WITH THE WORK UNTIL ANY LINES AND GRADES WHICH ARE BELIEVED TO BE IN ERROR HAVE BEEN VERIFIED OR CORRECTED BY THE OWNER'S REPRESENTATIVE.

6. THE UNDERGROUND CONTRACTOR SHALL BE RESPONSIBLE TO PLACE ON GRADE AND COORDINATE WITH OTHER CONTRACTORS ALL UNDERGROUND STRUCTURE FRAMES SUCH AS CATCH BASINS, INLETS, MANHOLES, HYDRANTS, BUFFALO BOXES, VALVES, ETC. NO ADDITIONAL COMPENSATION WILL BE PAID AND SAID ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS OF CONSTRUCTION.

7. CONTRACTORS SHALL KEEP PUBLIC STREET PAVEMENTS CLEAN OF DIRT AND DEBRIS AND, WHEN NECESSARY, CLEAN PAVEMENTS ON A DAILY BASIS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING EXISTING CONDITIONS (INCLUDING UTILITY LOCATIONS) PRIOR TO THE INSTALLATION OR FABRICATION OF ANY MATERIALS. REPORT ANY DISCREPANCIES IMMEDIATELY TO THE ENGINEER.

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

10. ALL CONTRACTORS DOING WORK IN THE PUBLIC RIGHT–OF–WAY MUST BE LICENSED (WHEN APPLICABLE) TO MAKE PUBLIC IMPROVEMENTS WITHIN THE CORPORATE LIMITS OF ORLAND PARK.

11. THE CONTRACTOR/DEVELOPER ASSUMES ALL RESPONSIBILITY AND LIABILITY FOR ANY ACTION RESULTING FROM THEIR WORK WITHIN THE PUBLIC RIGHT–OF–WAY.

12. PRIOR TO COMMENCEMENT OF ANY OFF–SITE CONSTRUCTION, THE CONTRACTOR SHALL SECURE WRITTEN AUTHORIZATION THAT ALL OFF–SITE EASEMENTS HAVE BEEN SECURED AND THAT PERMISSION HAS BEEN GRANTED TO ENTER ONTO PRIVATE PROPERTY.

13. THE CONTRACTOR AND THEIR ON–SITE REPRESENTATIVES WILL BE REQUIRED TO ATTEND A PRE–CONSTRUCTION MEETING WITH THE VILLAGE OF ORLAND PARK.

14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ADEQUATELY IDENTIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION. BEFORE STARTING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT JULIE FOR THE LOCATION OF ANY AND ALL UTILITIES. THE TOLL–FREE NUMBER IS 800–892–0123. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ANY PRIVATE FACILITIES OR NON–JULIE MEMBER FACILITIES.

15. ANY EXISTING UTILITY STRUCTURES REQUIRING ADJUSTMENT OR RECONSTRUCTION SHALL BE COMPLETED BY THE CONTRACTOR TO THE SATISFACTION OF THE UTILITY OWNER. ADJUSTMENTS AND/OR RECONSTRUCTIONS NOT CALLED FOR ON THE PLANS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. ALL STRUCTURE FRAMES SHALL BE FLUSH WITH FINAL GRADE.

16. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION.

17. THE CONTRACTOR SHALL BEWARE OF POTENTIAL CONFLICTS WITH EXISTING UTILITIES AS INDICATED ON THE PLANS. THE CONTRACTOR SHALL EXCAVATE AROUND UTILITIES TO DETERMINE ELEVATIONS BEFORE BEGINNING CONSTRUCTION.

18. CONNECTIONS TO EXISTING SYSTEMS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

19. THE COST OF PIPE BEDDING WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE CONTRACT UNIT PRICES OF THE VARIOUS SEWER ITEMS.

USE OF THE ELECTRONIC MEDIA VERSION OF FINAL SITE DEVELOPMENT PLANS AND SPECIFICATIONS

THESE FINAL SITE DEVELOPMENT PLANS AND SPECIFICATIONS ARE COPYRIGHTED INSTRUMENTS OF SERVICE WITH RESPECT TO THIS PARTICULAR PROJECT AND TO WHICH INSTRUMENTS OF SERVICE CEMCON, LTD. RETAINS A PROPRIETARY INTEREST SUBJECT ONLY TO CERTAIN RIGHTS GRANTED UNDER CONTRACT BY CEMCON, LTD. FOR THE PARTICULAR PROJECT AND PARTICULAR CLIENT IDENTIFIED ON THE COVER SHEET. ONLY THE PRINTED OR HARD COPIES OF SAID INSTRUMENTS OF SERVICE BEARING THE ORIGINAL SIGNATURE AND IMPRESSED SEAL OF THE PROFESSIONAL ENGINEER IN THE EMPLOY OF CEMCON, LTD. MAY BE RELIED UPON. THE ELECTRONIC MEDIA VERSION OF THESE INSTRUMENTS OF SERVICE ACQUIRED BY THIRD PARTIES WITH NO CONTRACTUAL RELATIONSHIP TO CEMCON, LTD. ARE FOR CONVENIENCE ONLY AND ANY CONCLUSION OR INFORMATION DERIVED FROM SUCH ELECTRONIC FILES IS AND SHALL BE AT USER'S SOLE RISK. BECAUSE DATA STORED IN ELECTRONIC MEDIA FORMAT CAN DETERIORATE, BE SUBSEQUENTLY MODIFIED INADVERTENTLY OR OTHERWISE WITHOUT THE AUTHORIZATION OR KNOWLEDGE OF CEMCON, LTD., ANY ENTITY RECEIVING OR UTILIZING SAID ELECTRONIC FILES SHALL CAREFULLY COMPARE AND VERIFY THAT THE TEXT, DATA, GRAPHICS OR DESIGN INFORMATION IMPARTED ON SAID ELECTRONIC MEDIA FILES ARE CONSISTENT WITH THE PRINTED OR HARD COPIES OF SAID INSTRUMENTS OF SERVICE AND ADVISEDLY THE LATEST MOST UP–TO–DATE AND OPERATIVE VERSION OF SAID INSTRUMENTS OF SERVICE. IN PARTICULAR, THE ACQUISITION OF DATA POINTS IN EITHER THE HORIZONTAL AND / OR VERTICAL PLANES MUST BE COMPARED AND CORROBORATED WITH THAT LATEST OPERATIVE PRINTED OR HARD COPY OF SAID INSTRUMENTS OF SERVICE, OR ERRORS AND MISINFORMATION MAY BE INTRODUCED. WHEN TRANSFERRING THE ELECTRONIC MEDIA VERSION OF SAID INSTRUMENTS OF SERVICE EITHER BY CEMCON, LTD. OR THIRD PARTIES, CEMCON, LTD. MAKES NO REPRESENTATION AS TO THE LONG TERM COMPATIBILITY, USABILITY, OR READABILITY OF SAID INSTRUMENTS OF SERVICE RESULTING FROM THE USE OF SOFTWARE APPLICATION PACKAGES, OPERATING SYSTEMS OR COMPUTER HARDWARE DIFFERING FROM THOSE USED BY CEMCON, LTD.

WATER/WASTEWATER GENERAL NOTES

1. THE CONTRACTOR SHALL ROTATE AND/OR ADJUST ANY EXISTING AND/OR NEW HYDRANT TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC UTILITIES.

2. ALL VALVE BOXES, VAULTS, HYDRANTS, AND MANHOLES SHALL NOT BE COVERED WITH CONSTRUCTION DEBRIS AND SHALL REMAIN ACCESSIBLE TO THE RESPECTIVE UTILITY COMPANY.

3. PLUMBING CONTRACTOR TO MAKE ALL CONNECTIONS WITH BUILDING SERVICES CONSTRUCTED BY UTILITY CONTRACTOR. SITE UTILITY CONTRACTOR TO CONSTRUCT SERVICES TO 5–FEET BEYOUND RIGHT OF WAY LINE UNLESS OTHERWISE SHOWN ON THE PLANS.

PROTECTION OF WATERMAIN AND WATER SERVICE

WATER MAINS AND WATER SERVICE LINES SHALL BE PROTECTED FROM SANITARY SEWERS, STORM SEWERS, COMBINED SEWERS, HOUSE SEWER SERVICE CONNECTIONS AND DRAINS AS FOLLOWS:

1.) HORIZONTAL AND VERTICAL SEPARATION

A) WHENEVER POSSIBLE, A SEWER MUST BE AT LEAST TEN FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN.

B) SHOULD LOCAL CONDITIONS EXIST WHICH WOULD PREVENT A LATERAL SEPARATION OF TEN FEET, A SEWER MAY BE CLOSER THAN TEN FEET TO A WATER MAIN PROVIDED THAT THE WATER MAIN INVERT IS AT LEAST EIGHTEEN INCHES ABOVE THE CROWN OF THE SEWER, AND IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER.

C) IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL AND VERTICAL SEPARATION AS DESCRIBED ABOVE, BOTH THE WATER MAIN AND SEWER MUST BE CONSTRUCTED WITH WATER MAIN QUALITY PIPE AND JOINTS THAT COMPLY WITH 35 ILL. ADM. CODE 653.119 AND SHALL BE PRESSURE TESTED IN ACCORDANCE WITH "AWWA STANDARD FOR INSTALLATION OF DUCTILE–IRON WATER MAINS AND THEIR APPURTENANCES, "ANSI/AWWA C600–93 (1994)(NO LATER EDITIONS OR AMENDMENTS) FOR A WORKING PRESSURE EQUAL TO OR GREATER THAN THE MAXIMUM POSSIBLE SURCHARGE HEAD TO ASSURE WATERTIGHTNESS BEFORE BACKFILLING.

2.) WATER–SEWER LINE CROSSINGS

A) WHENEVER POSSIBLE, SEWERS CROSSING WATER MAINS SHALL BE LAID WITH THE SEWER BELOW THE WATER MAIN WITH THE CROWN OF THE SEWER A MINIMUM OF 18 INCHES BELOW THE INVERT OF THE WATER MAIN. THE VERTICAL SEPARATION SHALL BE MAINTAINED ON EACH SIDE OF THE CROSSING UNTIL THE PERPENDICULAR DISTANCE FROM THE WATER MAIN TO THE SEWER IS AT LEAST 10 FEET. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS. ADEQUATE SUPPORT SHALL BE PROVIDED FOR THE WATER MAINS TO PREVENT DAMAGE DUE TO SETTLING OF THE SEWER TRENCH.

B) WHERE A SEWER CROSSES UNDER A WATER MAIN AND IT IS NOT POSSIBLE TO PROVIDE AN 18–INCH VERTICAL SEPARATION, THE FOLLOWING SPECIAL CONSTRUCTION METHODS SHALL BE SPECIFIED:

i) THE SEWER SHALL EITHER BE CONSTRUCTED WITH WATER MAIN PIPE AND JOINTS THAT COMPLY WITH 35 ILL. ADM. CODE 653.119 AND SHALL BE PRESSURE TESTED IN ACCORDANCE WITH "AWWA STANDARD FOR INSTALLATION OF DUCTILE–IRON WATER MAINS AND THEIR APPURTENANCES," ANSI/AWWA C600–93 (1994)(NO LATER EDITIONS OR AMENDMENTS) FOR A WORKING PRESSURE EQUAL TO OR GREATER THAN THE MAXIMUM POSSIBLE SURCHARGE HEAD OR SHALL BE ENCASED IN A CARRIER PIPE WITH THE ENDS SEALED, THAT, ALONG WITH THE JOINTS, COMPLIES WITH 35 ILL. ADM CODE 653.119.

ii) THE WATER MAIN QUALITY SEWER OR CARRIER PIPE SHALL EXTEND ON EACH SIDE OF THE CROSSING TO A POINT WHERE THE PERPENDICULAR DISTANCE FROM THE WATER MAIN TO THE SEWER IS AT LEAST 10 FEET.

iii) FOR THE REQUIRED LENGTH OF THE WATER MAIN QUALITY SEWER OR CARRIER PIPE, OMIT THE SELECT GRANULAR CRADLE AND GRANULAR BACKFILL TO ONE FOOT OVER THE CROWN OF THE SEWER AND USE SELECTED EXCAVATED MATERIAL (CLASS IV) AND COMPACT TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY.

iv) POINT LOADS BETWEEN THE SEWER OR SEWER CASING AND THE WATER MAIN ARE PROHIBITED.

v) ADEQUATE SUPPORT SHALL BE PROVIDED FOR THE WATER MAIN TO PREVENT DAMAGE DUE TO SETTLING OF THE SEWER TRENCH.

C) WHERE IT IS NOT POSSIBLE FOR A PROPOSED SEWER TO CROSS UNDER AN EXISTING WATER MAIN, THE SPECIFICATIONS SHALL REQUIRE THE CONSTRUCTION METHODS SET OUT IN SUBSECTION (c)(2)(B) ABOVE AND SHALL REQUIRE THAT ANY SELECT GRANULAR BACKFILL ABOVE THE CROWN OF THE WATER MAIN BE REMOVED WITHIN THE WIDTH OF THE PROPOSED SEWER TRENCH AND BE REPLACED WITH SELECT EXCAVATED MATERIAL (CLASS IV) COMPACTED TO 95% OF STANDARD PROCTOR MAXIMUM DENSITY. WHERE A PROPOSED SEWER MUST CROSS OVER A PROPOSED WATER MAIN, AN 18–INCH VERTICAL SEPARATION SHALL BE MAINTAINED.

3.) SEWER MANHOLE SEPARATION FROM WATER MAIN

NO WATER PIPE SHALL PASS THROUGH OR COME INTO CONTACT WITH ANY PART OF A SEWER MANHOLE.

STORM SEWER NOTES

1. ALL STORM WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE VILLAGE DESIGN MANUAL AND STANDARD SPECIFICATIONS (CURRENT EDITION) AND WITH THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" (CURRENT EDITION).

2. ALL PIPE SHALL BE LAID TRUE TO LINE AND GRADE. DIRT AND OTHER FOREIGN MATERIAL SHALL BE PREVENTED FROM ENTERING THE PIPE OR PIPE JOINT DURING HANDLING OR LAYING OPERATIONS. ALL STORM SEWER PIPE TO PIPE CONNECTIONS SHALL BE SEALED WITH BUTYL MASTIC TO ENSURE WATER TIGHTNESS. LIFT HOLES TO BE SEALED USING BUTYL MASTIC AND CONCRETE PLUGS. AT NO TIME SHALL CONNECTIONS BETWEEN THE STORM SEWER AND SANITARY SEWER BE ALLOWED.

3. FOR STRUCTURES LOCATED IN PAVED AREAS, A MINIMUM OF FOUR, 2–INCH DIAMETER HOLES SHALL BE DRILLED OR PRECAST INTO THE STRUCTURE WITHIN 1 FOOT OF THE LOWEST PIPE INVERT. THE HOLES SHALL BE DISTRIBUTED EQUIDISTANT AROUND THE PERIMETER OF THE STRUCTURE. A 1–FOOT BY 1–FOOT SECTION OF UNDERDRAIN FILTER CLOTH MATERIAL SHALL BE SUFFICIENTLY FIXED TO THE OUTSIDE OF THE MANHOLE WITH MASTIC MATERIAL TO PREVENT SLIPPAGE DURING BACKFILLING.

EROSION CONTROL AND DRAINAGE NOTES

1. SEE STORMWATER POLLUTION PREVENTION PLAN FOR OTHER EROSION CONTROL NOTES.

GEOMETRIC AND PAVING NOTES

1. THE DEVELOPER AND CONTRACTOR SHALL HAVE THE RESPONSIBILITY TO ADEQUATELY PROTECT THE PAVEMENT AND PROPERTY, CURB AND GUTTER AND OTHER RIGHT–OF–WAY IMPROVEMENTS, WHETHER NEWLY CONSTRUCTED OR EXISTING, FROM ANY AND ALL DAMAGE. SUFFICIENT MEANS SHALL BE EMPLOYED BY THE CONTRACTOR TO PROTECT AGAINST SUCH DAMAGE TO THE SATISFACTION OF THE VILLAGE ENGINEER.

2. ANY NEW OR EXISTING IMPROVEMENTS THAT ARE DAMAGED SHALL BE REPAIRED OR REPLACED IN A MANNER THAT IS SATISFACTORY TO THE VILLAGE ENGINEER.

3. THE CONTRACTOR AND/OR DEVELOPER SHALL SECURE ALL NECESSARY RIGHTS AND PERMISSIONS TO PERFORM ANY WORK ON PRIVATE PROPERTY NOT WITHIN THE OWNERSHIP RIGHTS OF THE DEVELOPER. THE DEVELOPER SHALL BEAR THE SOLE RESPONSIBILITY FOR DAMAGES THAT MAY OCCUR AS A RESULT OF WORK PERFORMED UNDER CONTRACTS THEY INITIATE.

GEOMETRIC AND PAVING AND EARTHWORK NOTES

1. WORK UNDER THIS SECTION SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

A. CLEARING AND REMOVAL OF ALL UNDESIRABLE TREES AND OTHER VEGETATIVE GROWTH WITHIN THE CONSTRUCTION AREA. TREE REMOVAL SHALL BE DESIGNATED BY THE OWNER AND SHALL BE KEPT TO A MINIMUM.

B. STRIPPING OF TOPSOIL FROM ALL STREET, DRIVEWAY, PARKING LOT, RIGHT–OF–WAY, BUILDING PAD AND OTHER DESIGNATED STRUCTURAL AREAS.

C. STOCKPILING OF TOPSOIL AT LOCATIONS AS DIRECTED BY THE OWNER. TOPSOIL STOCKPILED FOR FUTURE USE SHALL BE RELATIVELY FREE FROM LARGE ROOTS, STICKS, WEEDS, BRUSH, STONES LARGER THAN ONE (1) INCH DIAMETER, OR OTHER LITTER AND WASTE PRODUCTS INCLUDING EXTRANEOUS MATERIALS NOT CONDUCIVE TO PLANT GROWTH. TOPSOIL SHALL BE STOCKPILED IN SEQUENCE TO ELIMINATE ANY REHANDLING OR DOUBLE MOVEMENTS BY THE CONTRACTOR. FAILURE TO PROPERLY SEQUENCE THE STOCKPILING OPERATIONS SHALL NOT CONSTITUTE A CLAIM FOR ADDITIONAL COMPENSATION. NO MATERIAL SHALL BE STOCKPILED IN FRONT YARDS, OVERLAND DRAINAGE SWALES (FLOOD ROUTING AREAS), IN PROPOSED UTILITY LOCATIONS, IN UTILITY EASEMENTS OR IN THE RIGHT–OF–WAY.

D. REMOVAL OF UNSUITABLE MATERIALS AS SPECIFIED FROM ROADWAY, DRIVEWAY/PARKING, BUILDING PAD AND OTHER DESIGNATED AREAS. OWNER TO VALIDATE UNSUITABLE AREAS BY ON–SITE MEASURING.

E. CLAY CUT AND CLAY FILL WITH COMPACTION WITHIN ROADWAY, DRIVEWAY/PARKING, BUILDING PAD AND OTHER DESIGNATED AREAS.

F. EXCAVATION AND GRADING OF THE OPEN SPACE, AND/OR YARD AREAS PER PLAN INCLUDING CONSTRUCTION OF BERMS, ETC.

G. PLACEMENT AND COMPACTION OF STRUCTURAL MATERIAL TO THE DESIGN SUBGRADE ELEVATIONS AS REQUIRED BY THE STANDARDS AND DETAILS ON THE CONSTRUCTION PLANS. THE CONTRACTOR WILL NOTE THAT THE ELEVATIONS SHOWN ON THE CONSTRUCTION PLANS ARE FINISHED GRADE ELEVATIONS AND THAT PAVEMENT AND/OR TOPSOIL REPLACEMENT THICKNESS MUST BE SUBTRACTED TO DETERMINE SUBGRADE ELEVATIONS.

H. IF REQUIRED, BORROW PIT EXCAVATION OF STRUCTURAL MATERIAL AND REFILL OF PIT WITH NON–STRUCTURAL MATERIAL.

I. PLACEMENT AND COMPACTION OF NON–STRUCTURAL FILLS.

J. MOVEMENT AND COMPACTION OF SPOIL MATERIAL FROM THE CONSTRUCTION OF UNDERGROUND UTILITIES.

K. BACKFILLING OF CURBS AND/OR PAVEMENT AND SIDEWALK AFTER INSTALLATION OF SAME BY THE PAVING CONTRACTOR.

L. FINAL SHAPING AND TRIMMING TO THE LINES, GRADES, AND CROSS–SECTIONS SHOWN IN THESE PLANS; AND TOPSOIL PLACEMENT TO DESIGN FINISHED GRADE ELEVATIONS.

M. SOIL EROSION CONTROL MEASURES IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS.

2. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PLANS AND SHALL NOTIFY THE ENGINEER AT ONCE OF ANY DISCREPANCIES. THE CONTRACTOR SHALL EXAMINE THE DRAINAGE PATTERNS SHOWN ON THE PLANS AND MAKE CERTAIN THAT ALL GUTTER FLAGS AND PAVEMENTS ARE PITCHED PROPERLY TO ACHIEVE THIS DRAINAGE PATTERN.

3. MATERIALS TESTING, IF REQUIRED BY THE MUNICIPALITY, SHALL BE PROVIDED BY THE CONTRACTOR, THIS ITEM WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE VARIOUS ITEMS OF WORK.

OTHER GEOMETRIC AND PAVING AND EARTHWORK NOTES

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

5. IT SHALL BE THE RESPONSIBILITY OF EACH RESPECTIVE CONTRACTOR TO REMOVE FROM THE SITE ANY AND ALL MATERIALS AND DEBRIS WHICH RESULT FROM HIS CONSTRUCTION OPERATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.

6. THE GRADING OPERATIONS ARE TO BE CLOSELY SUPERVISED AND INSPECTED, PARTICULARLY DURING THE REMOVAL OF UNSUITABLE MATERIAL AND THE CONSTRUCTION OF EMBANKMENTS OR BUILDING PADS, BY THE SOILS ENGINEER OR HIS REPRESENTATIVE. ALL TESTING, INSPECTION AND SUPERVISION OF SOIL QUALITY, UNSUITABLE REMOVAL AND ITS REPLACEMENT AND OTHER SOILS RELATED OPERATIONS SHALL BE ENTIRELY THE RESPONSIBILITY OF THE SOILS ENGINEER. NO UNDERCUT SHALL BE PERFORMED WITHOUT AUTHORIZATION FROM OWNER AND ASSIGNMENT OF AN EWO NUMBER.

7. THE GRADING AND CONSTRUCTION OF THE SITE IMPROVEMENTS SHALL NOT CAUSE PONDING OF STORM WATER. ALL AREAS SHALL BE GRADED TO ALLOW POSITIVE DRAINAGE.

8. THE PROPOSED GRADING ELEVATIONS SHOWN ON THE PLANS ARE FINISH GRADE. A MINIMUM OF SIX INCHES (6") OF TOPSOIL IS TO BE PLACED BEFORE FINISH GRADE ELEVATIONS ARE ACHIEVED.

9. THE SELECTED STRUCTURAL FILL MATERIAL SHALL BE PLACED IN LEVEL UNIFORM LAYERS SO THAT THE COMPACTED THICKNESS IS APPROXIMATELY SIX INCHES (6"); IF COMPACTION EQUIPMENT DEMONSTRATES THE ABILITY TO COMPACT GREATER THICKNESSES, THEN A GREATER THICKNESS MAY BE SPECIFIED. EACH LAYER SHALL BE THOROUGHLY MIXED DURING SPREADING TO INSURE UNIFORMITY.

10. EMBANKMENT MATERIAL WITHIN ROADWAY, DRIVEWAY, AND OTHER STRUCTURAL CLAY FILL AREAS SHALL BE COMPACTED TO A MINIMUM OF NINETY–THREE PERCENT (93%) OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM SPECIFICATION D–1557 (MODIFIED PROCTOR METHOD), OR TO SUCH OTHER DENSITY AS MAY BE DETERMINED APPROPRIATE BY THE SOILS ENGINEER. EMBANKMENT MATERIAL FOR BUILDING PADS SHALL BE COMPACTED TO A MINIMUM OF NINETY–FIVE PERCENT (95%) OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM DESIGNATION D–1557 (MODIFIED PROCTOR METHOD) OR TO SUCH OTHER DENSITY AS MAY BE DETERMINED APPROPRIATE BY THE SOILS ENGINEER.

11. THE SURFACE VEGETATION, TOPSOIL AND ANY OBVIOUSLY SOFT UNDERLYING SOIL SHOULD BE STRIPPED FROM ALL AREAS TO RECEIVE STRUCTURAL FILL. IF THE UNDERLYING SUBGRADE SOILS RUT DEEPER THAN ONE INCH UNDER THE CONSTRUCTION EQUIPMENT OR IF THE MOISTURE CONTENT EXCEEDS THAT NEEDED FOR PROPER COMPACTION, THE SOIL SHALL BE SCARIFIED, DRIED AND RECOMPACTED TO THE REQUIRED SPECIFICATIONS (SEE SECTION 301.03 OF THE IDOT SPECIFICATIONS).

12. COMPLETED GRADING (FINISHED FINE GRADE) FOR PROPOSED PAVEMENT SUBGRADE AREAS, BUILDING PADS, AND YARD/OPEN SPACE AREAS SHALL BE WITHIN A TOLERANCE OF PLUS OR MINUS ONE–TENTH OF A FOOT (0.1') OF DESIGN SUBGRADE ELEVATIONS.

13. THE SUBGRADE FOR PROPOSED STREET AND PAVEMENT AREAS SHALL BE PROOF–ROLLED BY THE CONTRACTOR IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE AND THE VILLAGE OF SCHAUMBURG AND ANY UNSTABLE AREAS ENCOUNTERED SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE ENGINEER AND SOILS ENGINEER. ANY UNDERCUT AND REPLACE NECESSARY WILL BE MEASURED FOR PAVEMENT AT THE CONTRACT UNIT PRICE.

⚠2 14. THE GRANULAR SOIL SHOULD BE REMOVED FROM THE SIDE SLOPES OF EXCAVATIONS FOR DETENTION FACILITIES. THEY SHOULD BE REPLACED WITH COHESIVE MATERIALS FOR A DISTANCE OF AT LEAST 2.0 FEET PERPENDICULAR TO THE CUT, AS GRANULAR STRATA MAY BECOME A POTENTIAL SOURCE OF LEAKAGE. REPLACEMENT MATERIALS AS WELL AS THOSE USED TO CONSTRUCT BERMS AROUND THE PERIMETER OF THE DETENTION BASINS SHOULD CONSIST OF CLAY SOIL TYPES OF MEDIUM TO HIGH PLASTICITY, IDEALLY CONTAINING LESS THAN 35 PERCENT SAND AND GRAVEL SIZE PARTICLES. THE LINER/EMBANKMENT SHOULD BE DESIGNED AS PER THE NARRATIVE IN THE PROJECT GEOTECHNICAL REPORT.

NOTE: ANY CONFLICTS BETWEEN CEMCON GENERAL NOTES AND THE MUNICIPALITY, THE MUNICIPALITY SPECIFICATIONS TAKE PRECEDENCE.

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
⚠2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			

CONSTRUCTION SPECIFICATIONS – GENERAL NOTES

ESTATES AT RAVINIA MEADOW

FILE NAME: GENNOTES	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: ----	SHEET NO. 02 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = N/A	

PLOT FILE CREATED: 9/3/2025 7:20 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 5/15/2025 8:50 AM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAWINGS\FINAL DRAFTING\GENNOTES.DWG

CONSTRUCTION SPECIFICATIONS – GENERAL NOTES

SANITARY SEWER, STORM SEWER, WATERMAIN

1. ALL SANITARY SEWER AND WATERMAIN WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE VILLAGE OF ORLAND PARK STANDARD SPECIFICATIONS AND THE APPLICABLE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, CURRENT EDITION.

2. WATERMAIN SERVICES SHALL HAVE A MINIMUM OF 5.0 FEET OF COVER AND SHALL BE RUN IN STRAIGHT ALIGNMENT UNLESS SPECIFICALLY SHOWN ON THE PLANS.

3. ALL EXISTING UTILITIES OR IMPROVEMENTS, INCLUDING WALKS, CURBS, PAVEMENT AND PARKWAYS DAMAGED OR REMOVED DURING CONSTRUCTION SHALL BE PROMPTLY RESTORED TO THEIR RESPECTIVE ORIGINAL CONDITION.

4. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO VERIFY IN THE FIELD ALL EXISTING AND UNDERGROUND UTILITIES ADJACENT TO THE PROJECT, AND BE RESPONSIBLE FOR PROTECTION OF SAME. THE CONTRACTOR SHALL ALSO NOTIFY THE VILLAGE OF ORLAND PARK ENGINEERING DEPARTMENT AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION.

5. ALL STORM MANHOLE, VALVE VAULT, OR CATCH BASIN ADJUSTMENT OF FRAMES SHALL BE MADE WITH PRECAST CONCRETE ADJUSTING RINGS SET IN PREFORMED BUTYL MASTIC RUB-R-NEK OR APPROVED EQUAL, AND NO MORE THAN 6" OF ADJUSTING RINGS WILL BE PERMITTED, 2 RINGS MAXIMUM, 2" MINIMUM RING SIZE.

6. ALL DRAINAGE STRUCTURES TO HAVE POURED INVERTS CONFORMING TO THE SHAPE OF THE PIPE.

7. THE CONTRACTOR SHALL BEWARE OF POTENTIAL CONFLICTS WITH EXISTING UTILITIES AS INDICATED ON THE PLANS. THE CONTRACTOR SHALL EXCAVATE AROUND UTILITIES TO DETERMINE ELEVATIONS BEFORE BEGINNING CONSTRUCTION.

8. "BAND-SEAL" OR SIMILAR COUPLINGS SHALL BE USED WHEN JOINING SEWER PIPES OF DISSIMILAR MATERIALS.

9. ALL NEW SANITARY SEWERS SHALL HAVE WYES FOR PROPOSED BUILDING SERVICES. ALL CONNECTIONS TO EXISTING SANITARY SEWERS NOT HAVING WYES SHALL BE MADE WITH A "SEWER TAP" FOR BUILDING SERVICES AND WITH A MANHOLE FOR SEWER EXTENSIONS. ALL TAPS SHALL INCLUDE A PROPERLY INSTALLED HUB WYE SADDLE.

10. ALL SANITARY SEWERS SHALL PASS INFILTRATION, EXFILTRATION, AIR TESTS, AND DEFLECTION TESTING MEETING THE APPROVAL OF THE VILLAGE OF ORLAND PARK.

11. AT THE COMPLETION OF THIS PROJECT ONE SET OF RECORD DRAWINGS IS TO BE SUBMITTED TO THE ENGINEER SHOWING THE LOCATION OF ALL OF THE SERVICES, PIPES, STRUCTURES, GRADING AND UTILITIES. A STATEMENT SHALL BE ATTACHED TO THE RECORD MYLAR DRAWINGS THAT "ALL CONSTRUCTION WAS IN SUBSTANTIAL CONFORMANCE WITH THE ENGINEERING PLANS AND SPECIFICATIONS." RECORD DRAWINGS MUST MEET THE REQUIREMENTS OF THE VILLAGE OF ORLAND PARK.

12. ALL SANITARY SEWERS AND SANITARY SEWER SERVICES SHALL BE PVC DR 18, SDR 21 OR SDR 26 PIPE AS SHOWN ON THE PLANS (OR DUCTILE IRON WHEN SO NOTED) CONFORMING TO ASTM D-2241-00 WITH ELASTOMERIC JOINTS PER ASTM D-3139.

13. CONNECTIONS TO EXISTING SANITARY, STORM AND WATER SYSTEMS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

14. ALL WATERMAINS SHALL BE CEMENT LINED DUCTILE IRON PIPE, CLASS 52 CONFORMING TO AWWA C-151 WITH PUSH-ON OR MECHANICAL JOINTS AND SHALL HAVE A MINIMUM OF 5.0 FEET OF COVER.

15. WATER SERVICES SHALL INCLUDE THE NECESSARY LENGTH OF TYPE "K" COPPER WATER TUBE OF THE SIZE SHOWN ON THE PLANS, CORPORATION STOP, CURB STOP, AND SERVICE BOX, ALL AS REQUIRED BY THE MUNICIPALITY, AND ALL NECESSARY LABOR, TOOLS, EQUIPMENT, EXCAVATION & BACKFILL, FOR A COMPLETE INSTALLATION AS SHOWN ON THE PLANS. TRENCH BACKFILL WILL BE PAID FOR SEPARATELY, WHEN REQUIRED.

16. SANITARY SEWER STRUCTURES SHALL BE ASSEMBLED AND ADJUSTED USING MASTIC MATERIAL SHOWN ON THE PLANS AND MEETING THE APPROVAL OF THE MUNICIPALITY. ALL SANITARY SEWERS MUST HAVE AN EXTERNAL SEALING SYSTEM OR MANHOLE ENCAPSULATION SYSTEM AS APPROVED BY THE VILLAGE.

17. FIRE HYDRANTS SHALL BE CONSTRUCTED PER THE VILLAGE OF ORLAND PARK STANDARDS.

18. WATERMAINS SHALL BE SUBJECTED TO A HYDROSTATIC / LEAKAGE TEST AND DISINFECTED IN ACCORDANCE WITH ORLAND PARK STANDARDS AND SPECIFICATIONS. TEST PRESSURE SHALL BE NO LESS THAN 150 psi FOR A PERIOD OF NOT LESS THAN 2 HOURS AND NOT VARY BY MORE THAN ±5 psi DURING THE TEST. THE TEST GAUGE SHALL BE APPROVED BY THE VILLAGE AND SHALL BE GLYCERIN OR OIL FILLED, WITH A RANGE OF NOT MORE THAN 200 psi AND INCREMENTS NOT GREATER THAN 5 psi, 4" MINIMUM DIAL SIZE. WATER VELOCITY TEST SHALL BE EXPECTED AT THE END OF THE TEST PERIOD TO SHOW ACTUAL LEAKING AND THAT THE WATERMAIN DID NOT HAVE TO MUCH AIR IN THE TESTED SECTION.

19. GRANULAR TRENCH BACKFILL SHALL BE USED IN ALL LOCATIONS WHERE THE PROPOSED UNDERGROUND UTILITY IS TO BE CONSTRUCTED UNDER PERMANENT TYPE PAVEMENTS, DRIVEWAYS, OR SIDEWALKS; IN ANY UTILITY TRENCH OVER WHICH ANOTHER UTILITY WILL PASS; OR AS DIRECTED BY THE ENGINEER. TRENCH BACKFILL SHALL BE EXTENDED TWO (2) FEET ON EACH SIDE OF THE PERMANENT TYPE SURFACE.

20. ALL SANITARY SEWER SHALL BE CONSTRUCTED WITH STONE BEDDING IN ACCORDANCE WITH ASTM D-2321-89 CLASS IA. INTIAL BACKFILL SHALL BE A MINIMUM OF 12 INCHES.

21. THE COST OF PIPE BEDDING WILL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE CONTRACT UNIT PRICES OF THE VARIOUS SEWER ITEMS.

22. ALL WATER SERVICE LINE CONNECTIONS TO EXISTING WATER MAINS SHALL BE PRESSURE TAPS IN ACCORDANCE WITH THE VILLAGE OF ORLAND PARK STANDARDS.

SANITARY SEWER, STORM SEWER, WATERMAIN (CONT'D.)

23. NEW WATERMAIN VALVES, INCLUDING PRESSURE TAP VALVES, ADJACENT TO AN EXISTING WATERMAIN, AND EXISTING WATERMAIN VALVES SHALL ONLY BE OPERATED BY THE VILLAGE OF ORLAND PARK DEPARTMENT OF PUBLIC WORKS PERSONNEL WITH 48-HOUR NOTICE (MONDAY-FRIDAY).

24. TREES SHALL BE INSTALLED A MINIMUM OF FIVE (5) FEET HORIZONTALLY FROM SANITARY SEWERS, SANITARY SERVICES, WATERMAINS, AND WATER SERVICES. TREES SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET HORIZONTALLY FROM UTILITY STRUCTURES AND APPURTENANCES, INCLUDING BUT NOT LIMITED TO MANHOLES, VALVE VAULTS, VALVE BOXES AND FIRE HYDRANTS.

25. THE EXISTING WELL AND SEPTIC TANK MUST BE CAPPED (WELL), FILLED AND ABANDONED IN ACCORDANCE WITH COOK COUNTY AND ILLINOIS DEPARTMENT OF HEALTH REGULATIONS.

26. DEFLECTION TESTING OF SANITARY SEWER SHALL BE PERFORMED IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS".

27. ALL RETAINER GLANDS WHEN REQUIRED TO RESTRAIN VALVES, FITTINGS, HYDRANTS, AND PIPE JOINTS SHALL BE MECHANICAL JOINT WEDGE ACTION TYPE MEGALUG 1100 SERIES AS MANUFACTURED BY EBBA IRON INC. OR UNI-FLANGE BLOCKBUSTER 1400 SERIES AS MANUFACTURED BY FORD METER BOX CO. AND SHALL BE FOR USE ON DUCTILE IRON PIPE CONFORMING TO ANSI/AWWA C151/A21.51, FOR NOMINAL PIPE SIZES 3" THROUGH 48".

28. DEFLECTION TESTING FOR FLEXIBLE THERMOPLASTIC PIPE:

    A.) THE PIPELINE SHALL BE TESTED FOR EXCESS DEFLECTION BY PULLING A "GO-NO GO" MANDREL THROUGH THE PIPE FROM MANHOLE TO MANHOLE. THE MANDREL SHALL BE SIZED IN ACCORDANCE WITH SECTION 31-1.11 C (4), AND AS SPECIFIED IN THE SPECIAL PROVISIONS. A "DEFLECTOMETER" MAY ALSO BE USED TO CHECK AND RECORD DEFLECTION.

    B.) WHEREVER POSSIBLE AND PRACTICAL, THE TESTING SHALL INITIATE AT THE DOWNSTREAM LINES AND PROCEED TOWARDS THE UPSTREAM LINES.

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

29. DEFLECTION LIMITS FOR FLEXIBLE THERMOPLASTIC PIPE:

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

    AVG ID =AVG OD – 2 (1.06)t
    TOLERANCE PACKAGE = $(A^2 + B^2 + B^2 + C^2)^{1/2}$
    WHERE:
    A = OD TOLERANCE (ASTM D3034)
    B = EXCESS WALL THICKNESS TOLERANCE = 0.06t
    C = OUT-OF-ROUNDNESS TOLERANCE = 0.15(AVG OD)
    t = MINIMUM WALL THICKNESS (ASTM D-2241)

    BASE ID = AVG. ID – TOLERANCE PACKAGE

30. HYDRANTS SHALL BE PAINTED SAFETY YELLOW PRIOR TO THE HYDRANTS BEING PLACED IN SERVICE.

31. ALL CHAINS AND CHAIN HOOKS MUST BE REMOVED FROM THE HYDRANTS PRIOR TO THE HYDRANTS BEING PLACED IN SERVICE.

32. THE CONTRACTOR SHALL ROTATE AND/OR ADJUST ANY EXISTING AND/OR NEW HYDRANT TO THE SATISFACTION OF THE DEPARTMENT OF PUBLIC UTILITIES.

33. ALL WATERMAIN JOINTS SHALL BE RESTRAINED WITH MEG-A-LUG RETAINER GLANDS OR APPROVED EQUAL FOR A DISTANCE OF 20 FEET FROM THE PROPOSED VALVE VAULT ON THE LIVE SIDE TO THE STUB END.

34. <u>VACUUM TESTING:</u>

    VACUUM TESTING SHALL BE CARRIED OUT IMMEDIATELY AFTER ASSEMBLY AND PRIOR TO BACKFILLING OF MANHOLES THAT ARE UP TO SEVENTY-TWO (72) INCHES IN DIAMETER. THIS TESTING SHALL BE COMPLETED BEFORE BACKFILLING SO THAT ANY LEAKS CAN BE FOUND AND FIXED EXTERNALLY. ALL LIFT HOLES SHALL BE PLUGGED WITH A NON-SHRINK GROUT, OR RUBBER PLUG. THE MANHOLE FRAME AND ADJUSTING RINGS SHALL BE SET TO PROPOSED GRADE AND BE IN PLACE BEFORE TESTING. ANY CHIMNEY SEAL INSTALLED BY THE CONTRACTOR SHALL BE AN EXTERIOR TYPE, NO INTERIOR CHIMNEY SEALS ALLOWED. NO GROUT SHALL BE PLACED IN THE HORIZONTAL JOINTS. STUBOUTS, MANHOLE BOOTS AND PIPE PLUGS SHALL BE SECURED TO PREVENT MOVEMENT WHILE THE VACUUM IS DRAWN. VACUUM TESTING SHALL TEST ALL MANHOLES FOR LEAKAGE. A VACUUM OF TEN (10) INCHES OF MERCURY SHALL BE PLACED ON THE MANHOLE AND THE TIME MEASURED FOR THE VACUUM TO DROP TO NINE (9) INCHES OF MERCURY. THE VACUUM SHALL NOT DROP BELOW NINE (9) INCHES OF MERCURY FOR THE FOLLOWING TIME PERIODS FOR EACH SIZE MANHOLE:

    FORTY-EIGHT (48) INCHES DIAMETER – SIXTY (60) SECONDS
    SIXTY (60) INCHES DIAMETER – SEVENTY-FIVE (75) SECONDS
    SEVENTY-TWO (72) INCHES DIAMETER – NINETY (90) SECONDS

35. STAINLESS STEEL NUTS, BOLTS/T-BOLTS, AND WASHERS, TYPE 304 OR BETTER, WILL BE REQUIRED ON ALL WATER MAIN INSTALLATIONS. THIS WOULD APPLY TO HYDRANTS, TAPPING SLEEVES, VALVE, FITTINGS, RESTRAINT, AND OTHER APPURTENANCES BURIED OR IN VALVE VAULTS. MECHANICAL JOINTS AND RESTRAINT GLANDS REQUIRE 304 STAINLESS STEEL T-BOLTS. AN ANTI-SEIZE COMPOUND SHALL BE FACTORY APPLIED TO NUTS OR BOLTS – ANY DAMAGE TO THIS COATING SHALL BE REPAIRED WITH FIELD APPLIED APPROVED ANTI-SEIZE COMPOUND THAT IS A MOLYBDENUM-BASE LUBRICANT, BOSTIK NEVER-SEEZ OR APPROVED EQUAL.

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

CONSTRUCTION SPECIFICATIONS – GENERAL NOTES

ESTATES AT RAVINIA MEADOW

FILE NAME: GENNOTES	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: ----	SHEET NO. 03 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = N/A	

PLOT FILE CREATED: 9/3/2025 7:20 AM BY: LESLIE LUNDBERG DRAWING LAST SAVED: 5/15/2025 8:50 AM BY: LESLIE DRAWING PATH: P:\402170\DWGS\ENG\DRAWINGS\FINAL DRAFTING\GENNOTES.DWG

A. REFERENCED SPECIFICATIONS

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

B. NOTIFICATIONS

1. THE MWRD LOCAL SEWER SYSTEMS SECTION FIELD OFFICE MUST BE NOTIFIED AT LEAST TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF ANY WORK (CALL 708-588-4055 OR SEND EMAIL NOTIFICATION WITH PROJECT NAME, LOCATION AND PERMIT NUMBER TO WMOJOBSTART@MWRD.ORG).

2. THE VILLAGE OF ORLAND PARK ENGINEERING DEPARTMENT AND PUBLIC MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO THE START OF CONSTRUCTION AND PRIOR TO EACH PHASE OF WORK. CONTRACTOR SHALL DETERMINE ITEMS REQUIRING INSPECTION PRIOR TO START OF CONSTRUCTION OR EACH WORK PHASE.

3. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION FOR THE EXACT LOCATIONS OF UTILITIES AND FOR THEIR PROTECTION DURING CONSTRUCTION. IF EXISTING UTILITIES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED. CALL J.U.L.I.E. AT 1-800-892-0123.

C. GENERAL NOTES

1. ALL ELEVATIONS SHOWN ON PLANS REFERENCE THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

2. MWRD, THE MUNICIPALITY AND THE OWNER OR OWNER'S REPRESENTATIVE SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE, AND REJECT THE CONSTRUCTION IMPROVEMENTS.

3. THE CONTRACTOR(S) SHALL INDEMNIFY THE OWNER, ENGINEER, MUNICIPALITY, MWRD, AND THEIR AGENTS, ETC., FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, OR TESTING OF THIS WORK ON THE PROJECT.

4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY MWRD AND THE MUNICIPALITY UNLESS CHANGES ARE APPROVED BY MWRD, THE MUNICIPALITY, OR AUTHORIZED AGENT. THE CONSTRUCTION DETAILS, AS PRESENTED ON THE PLANS, MUST BE FOLLOWED. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED ON THE IMPROVEMENTS INDICATED ON THE PLANS.

5. THE LOCATION OF VARIOUS UNDERGROUND UTILITIES WHICH ARE SHOWN ON THE PLANS ARE FOR INFORMATION ONLY AND REPRESENT THE BEST KNOWLEDGE OF THE ENGINEER. VERIFY LOCATIONS AND ELEVATIONS PRIOR TO BEGINNING THE CONSTRUCTION OPERATIONS.

6. ANY EXISTING PAVEMENT, SIDEWALK, DRIVEWAY, ETC., DAMAGED DURING CONSTRUCTION OPERATIONS AND NOT CALLED FOR TO BE REMOVED SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

7. MATERIAL AND COMPACTION TESTING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MUNICIPALITY, MWRD, AND OWNER.

8. THE UNDERGROUND CONTRACTOR SHALL MAKE ALL NECESSARY ARRANGEMENTS TO NOTIFY ALL INSPECTION AGENCIES.

9. ALL NEW AND EXISTING UTILITY STRUCTURES ON SITE AND IN AREAS DISTURBED DURING CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADE PRIOR TO FINAL INSPECTION.

10. RECORD DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER AS SOON AS UNDERGROUND IMPROVEMENTS ARE COMPLETED. FINAL PAYMENTS TO THE CONTRACTOR SHALL BE HELD UNTIL THEY ARE RECEIVED. ANY CHANGES IN LENGTH, LOCATION OR ALIGNMENT SHALL BE SHOWN IN RED. ALL WYES OR BENDS SHALL BE LOCATED FROM THE DOWNSTREAM MANHOLE. ALL VALVES, B-BOXES, TEES OR BENDS SHALL BE TIED TO A FIRE HYDRANT.

D. SANITARY SEWER

1. THE CONTRACTOR SHALL TAKE MEASURES TO PREVENT ANY POLLUTED WATER, SUCH AS GROUND AND SURFACE WATER, FROM ENTERING THE EXISTING SANITARY SEWERS.

2. A WATER-TIGHT PLUG SHALL BE INSTALLED IN THE DOWNSTREAM SEWER PIPE AT THE POINT OF SEWER CONNECTION PRIOR TO COMMENCING ANY SEWER CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL REMOVAL IS AUTHORIZED BY THE MUNICIPALITY AND/OR MWRD AFTER THE SEWERS HAVE BEEN TESTED AND ACCEPTED.

3. DISCHARGING ANY UNPOLLUTED WATER INTO THE SANITARY SEWER SYSTEM FOR THE PURPOSE OF SEWER FLUSHING OF LINES FOR THE DEFLECTION TEST SHALL BE PROHIBITED WITHOUT PRIOR APPROVAL FROM THE MUNICIPALITY OR MWRD.

4. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS (LATEST EDITION).

5. ALL FLOOR DRAINS SHALL DISCHARGE TO THE SANITARY SEWER SYSTEM.

6. ALL DOWNSPOUTS AND FOOTING DRAINS SHALL DISCHARGE TO THE STORM SEWER SYSTEM.

7. ALL SANITARY SEWER PIPE MATERIALS AND JOINTS (AND STORM SEWER PIPE MATERIALS AND JOINTS IN A COMBINED SEWER AREA) SHALL CONFORM TO THE FOLLOWING:

PIPE MATERIAL	PIPE SPECIFICATIONS	JOINT SPECIFICATIONS
VITRIFIED CLAY PIPE	ASTM C-700	ASTM C-425
REINFORCED CONCRETE SEWER PIPE	ASTM C-76	ASTM C-443
CAST IRON SOIL PIPE	ASTM A-74	ASTM C-564
DUCTILE IRON PIPE	ANSI A21.51	ANSI A21.11
POLYVINYL CHLORIDE (PVC) PIPE		
6-INCH TO 15-INCH DIAMETER SDR 26	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-3035	ASTM D-3261,F-2620 (HEAT FUSION) 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

8. ALL SANITARY SEWER CONSTRUCTION (AND STORM SEWER CONSTRUCTION IN COMBINED SEWER AREAS), REQUIRES STONE BEDDING WITH STONE ¼ " TO 1" IN SIZE, WITH MINIMUM BEDDING THICKNESS EQUAL TO ¼ THE OUTSIDE DIAMETER OF THE SEWER PIPE, BUT NOT LESS THAN FOUR (4) INCHES NOR MORE THAN EIGHT (8) INCHES. MATERIAL SHALL BE CA-7, CA-11 OR CA-13 AND SHALL BE EXTENDED AT LEAST 12" ABOVE THE TOP OF THE PIPE WHEN USING PVC.

9. NON-SHEAR FLEXIBLE-TYPE COUPLINGS SHALL BE USED IN THE CONNECTION OF SEWER PIPES OF DISSIMILAR PIPE MATERIALS.

10. ALL MANHOLES SHALL BE PROVIDED WITH BOLTED, WATERTIGHT COVERS. SANITARY LIDS SHALL BE CONSTRUCTED WITH A CONCEALED PICKHOLE AND WATERTIGHT GASKET WITH THE WORD "SANITARY" CAST INTO THE LID.

11. WHEN CONNECTING TO AN EXISTING SEWER MAIN BY MEANS OTHER THAN AN EXISTING WYE, TEE, OR AN EXISTING MANHOLE, ONE OF THE FOLLOWING METHODS SHALL BE USED:
    a) A CIRCULAR SAW-CUT OF SEWER MAIN BY PROPER TOOLS ("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.

12. WHENEVER A SANITARY/COMBINED SEWER CROSSES UNDER A WATERMAIN, THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE SEWER TO THE BOTTOM OF THE WATERMAIN SHALL BE 18 INCHES. FURTHERMORE, A MINIMUM HORIZONTAL DISTANCE OF 10 FEET BETWEEN SANITARY/COMBINED SEWERS AND WATERMAINS SHALL BE MAINTAINED UNLESS: THE SEWER IS LAID IN A SEPARATE TRENCH, KEEPING A MINIMUM 18" VERTICAL SEPARATION; OR THE SEWER IS LAID IN THE SAME TRENCH WITH THE WATERMAIN LOCATED AT THE OPPOSITE SIDE ON A BENCH OF UNDISTURBED EARTH, KEEPING A MINIMUM 18" VERTICAL SEPARATION. IF EITHER THE VERTICAL OR HORIZONTAL DISTANCES DESCRIBED CANNOT BE MAINTAINED, OR THE SEWER CROSSES ABOVE THE WATER MAIN, THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN STANDARDS OR IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.

13. ALL EXISTING SEPTIC SYSTEMS SHALL BE ABANDONED. ABANDONED TANKS SHALL BE FILLED WITH GRANULAR MATERIAL OR REMOVED.

14. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE A MINIMUM INSIDE DIAMETER OF 48 INCHES, AND SHALL BE CAST IN PLACE OR PRE-CAST REINFORCED CONCRETE.

15. ALL SANITARY MANHOLES, (AND STORM MANHOLES IN COMBINED SEWER AREAS), SHALL HAVE PRECAST "RUBBER BOOTS" THAT CONFORM TO ASTM C-923 FOR ALL PIPE CONNECTIONS. PRECAST SECTIONS SHALL CONSIST OF MODIFIED GROOVE TONGUE AND RUBBER GASKET TYPE JOINTS.

16. ALL ABANDONED SANITARY SEWERS SHALL BE PLUGGED AT BOTH ENDS WITH AT LEAST 2 FEET LONG NON-SHRINK CONCRETE OR MORTAR PLUG.

17. EXCEPT FOR FOUNDATION/FOOTING DRAINS PROVIDED TO PROTECT BUILDINGS, OR PERFORATED PIPES ASSOCIATED WITH VOLUME CONTROL FACILITIES, DRAIN TILES/FIELD TILES/UNDERDRAINS/PERFORATED PIPES ARE NOT ALLOWED TO BE CONNECTED TO OR TRIBUTARY TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS IN COMBINED SEWER AREAS. CONSTRUCTION OF NEW FACILITIES OF THIS TYPE IS PROHIBITED; AND ALL EXISTING DRAIN TILES AND PERFORATED PIPES ENCOUNTERED WITHIN THE PROJECT AREA SHALL BE PLUGGED OR REMOVED, AND SHALL NOT BE CONNECTED TO COMBINED SEWERS, SANITARY SEWERS, OR STORM SEWERS TRIBUTARY TO COMBINED SEWERS.

18. A BACKFLOW PREVENTER IS REQUIRED FOR ALL DETENTION BASINS TRIBUTARY TO COMBINED SEWERS. REQUIRED BACKFLOW PREVENTERS SHALL BE INSPECTED AND EXERCISED ANNUALLY BY THE PROPERTY OWNER TO ENSURE PROPER OPERATION, AND ANY NECESSARY MAINTENANCES SHALL BE PERFORMED TO ENSURE FUNCTIONALITY. IN THE EVENT OF A SEWER SURCHARGE INTO AN OPEN DETENTION BASIN TRIBUTARY TO COMBINED SEWERS, THE PERMITTEE SHALL ENSURE THAT CLEAN UP AND WASH OUT OF SEWAGE TAKES PLACE WITHIN 48 HOURS OF THE STORM EVENT.

E. EROSION AND SEDIMENT CONTROL

1. THE CONTRACTOR SHALL INSTALL THE EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.

2. EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE FUNCTIONAL PRIOR TO HYDROLOGIC DISTURBANCE OF THE SITE.

3. ALL DESIGN CRITERIA, SPECIFICATIONS, AND INSTALLATION OF EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL.

4. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

5. INSPECTIONS AND DOCUMENTATION SHALL BE PERFORMED, AT A MINIMUM:
    a) UPON COMPLETION OF INITIAL EROSION AND SEDIMENT CONTROL MEASURES, PRIOR TO ANY SOIL DISTURBANCE.
    b) ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM EVENT WITH GREATER THAN 0.5 INCH OF RAINFALL OR LIQUID EQUIVALENT PRECIPITATION.

6. SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. IF STRIPPING, CLEARING, GRADING, OR LANDSCAPING ARE TO BE DONE IN PHASES, THE CO-PERMITTEE SHALL PLAN FOR APPROPRIATE SOIL EROSION AND SEDIMENT CONTROL MEASURES.

7. A STABILIZED MAT OF CRUSHED STONE MEETING THE STANDARDS OF THE ILLINOIS URBAN MANUAL SHALL BE INSTALLED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE. SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

8. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE ILLINOIS URBAN MANUAL AND SHALL BE INSTALLED PRIOR TO ANY ON SITE CONSTRUCTION ACTIVITIES INVOLVING CONCRETE.

9. MORTAR WASHOUT FACILITIES SHALL BE CONSTRUCTED IN ADDITION TO CONCRETE WASHOUT FACILITIES FOR ANY BRICK AND MORTAR BUILDING ENVELOPE CONSTRUCTION ACTIVITIES.

10. TEMPORARY DIVERSIONS SHALL BE CONSTRUCTED AS NECESSARY TO DIRECT ALL RUNOFF FROM HYDROLOGICALLY DISTURBED AREAS TO AN APPROPRIATE SEDIMENT TRAP OR BASIN. VOLUME CONTROL FACILITIES SHALL NOT BE USED AS TEMPORARY SEDIMENT BASINS.

11. 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.

12. ALL FLOOD PROTECTION AREAS AND VOLUME CONTROL FACILITIES SHALL, AT A MINIMUM, BE PROTECTED WITH A DOUBLE-ROW OF SILT FENCE (OR EQUIVALENT).

13. VOLUME CONTROL FACILITIES SHALL NOT BE CONSTRUCTED UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

14. 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.

15. EARTHEN EMBANKMENT SIDE SLOPES SHALL BE STABILIZED WITH APPROPRIATE EROSION CONTROL BLANKET.

16. STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY APPROPRIATE SEDIMENT CONTROL MEASURES.

17. 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.

18. 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.

19. THE CONTRCTOR SHALL BE RESPONSIBLE FOR TRENCH DEWATERING AND EXCAVATION FOR THE INSTALLATION OF SANITARY SEWERS, STORM SEWERS, WATERMAINS AS WELL AS THEIR SERVICES AND OTHER APPURTENANCES. ANY TRENCH DEWATERING, WHICH CONTAINS SEDIMENT SHALL PASS THROUGH A SEDIMENT SETTLING POND OR EQUALLY EFFECTIVE SEDIMENT CONTROL DEVICE. ALTERNATIVES MAY INCLUDE DEWATERING INTO A SUMP PIT, FILTER BAG OR EXISTING VEGETATED UPSLOPE AREA. SEDIMENT LADEN WATERS SHALL NOT BE DISCHARGE TO WATERWAYS, FLOOD PROTECTION AREAS OR THE COMBINED SEWER SYSTEM.

20. ALL PERMANENT EROSION CONTROL PRACTICES SHALL BE INITIATED WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF SOIL DISTURBING ACTIVITIES.

21. 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.

22. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER PERMANENT SITE STABILIZATION.

23. 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

10/13/2022

MWRD GENERAL NOTES

STD. DWG. NO.18

PAGE NO. 19

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

MWRD CONSTRUCTION SPECIFICATIONS – GENERAL NOTES

ESTATES AT RAVINIA MEADOW

FILE NAME: GENNOTES	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: ----	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = N/A	04 of 39

PLOT FILE CREATED: 9/3/2025 7:20 AM BY: LESLIE LUNDBERG DRAWING LAST SAVED: 5/15/2025 8:50 AM BY: LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\GENNOTES.DWG

APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO

APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K

APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

N

100 50 0 100

SCALE: 1 INCH = 100 FEET

NECK DOWN ROADWAY FOR TRAFFIC CALMING (4)

LEGEND

EXISTING	PROPOSED	DESCRIPTION
◎	◉	MANHOLE
○	●	CATCH BASIN
□	■	INLET
	●	CLEANOUT
◁	◀	END SECTION
		STORM SEWER
		SANITARY SEWER
		WATERMAIN
⊗	⊗	VALVE & BOX
⊗	⊗	WATER VALVE IN VAULT
		FIRE HYDRANT
		CONTOURS
		STREET LIGHT
		WATERMAIN PROTECTION
		RENO MATRESS
		OBSERVATION WELL
		PIPE UNDERDRAIN

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	04-23-25/LAL	REVISED PER IN-HOUSE REVIEW			
2	05-16-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
3	06-26-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			
4	07-22-25/LAL	REVISED PER VILLAGE COMMENTS DATED 7/17/25			
5	08-13-25/LAL	REVISED PER CLIENT			
6	09-03-25/LAL	REVISED PER VILLAGE COMMENTS DATED 8/22/25			

OVERALL SITE PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRSITE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: ----	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = 100'	05 of 39

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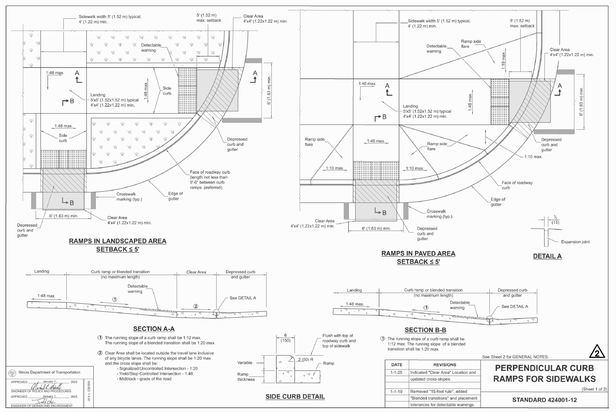
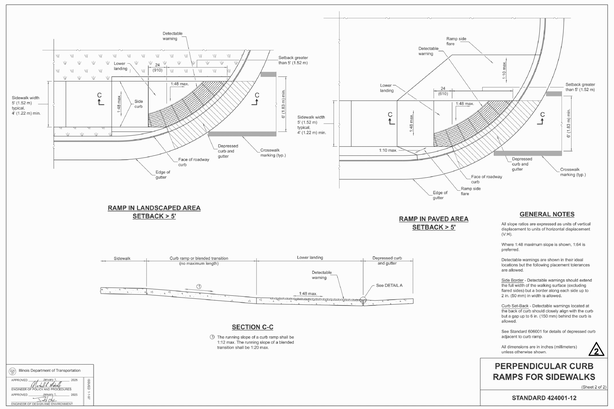
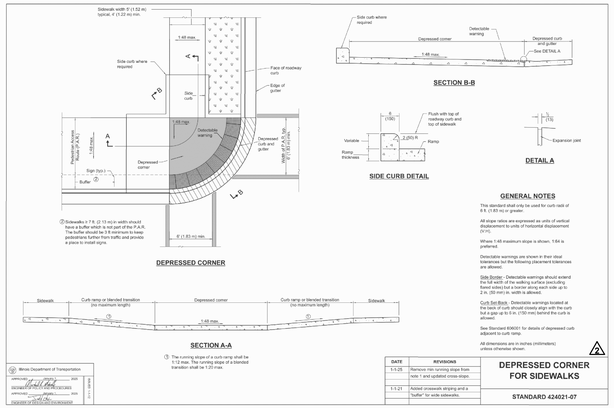
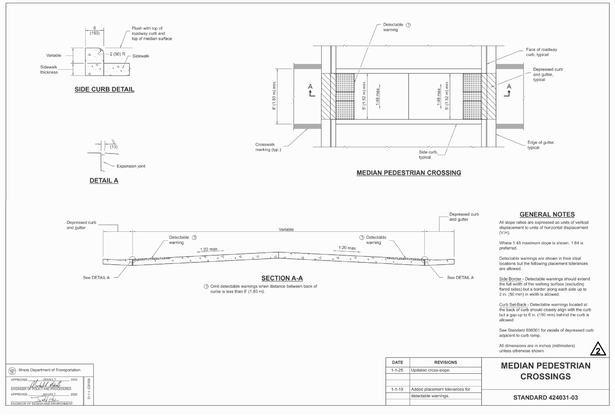
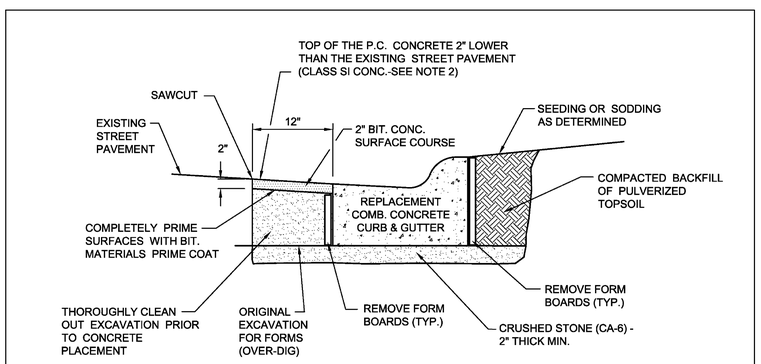






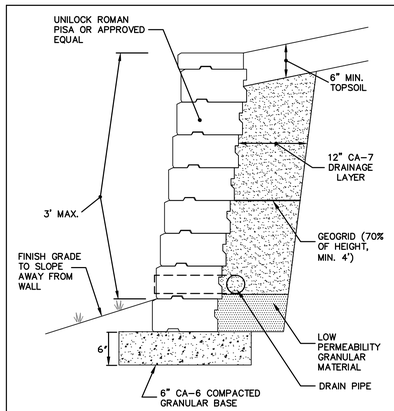




NOTES:

1. THE COMPLETE REPAIR OF PAVEMENTS ADJACENT TO THE REPLACEMENT CONCRETECURB AND GUTTER IS INCLUDED IN THE COST OF THE NEW CURB AND GUTTER.
2. CLASS SI CONCRETE SHALL BE POURED SEPARATELY FROM THE CURB ONCE THE FORM BOARDS HAVE BEEN REMOVED.
3. NEW CURB TO BE DOWELLED INTO THE EXISTING CURB.

CURB REPLACEMENT

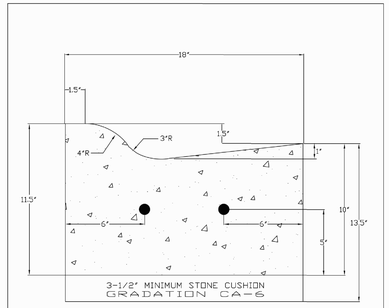


NOTES:

1. ALLOWABLE BEARING CAPACITY = 3,000 PSF.
2. INFILL SOIL TO BE INORGANIC CLAY SOIL FROM SUITABLE ONSITE MATERIAL WITH A FRICTION ANGLE LESS THAN 28 DEGREES AND A PLASTICITY INDEX (PI) BETWEEN 6 AND 10 AND A LIQUID LIMIT (LL) BETWEEN 30 AND 40.
3. BEARING SOIL AND REINFORCED INFILL SOILS TO BE COMPACTED IN A MAXIMUM OF ONE (1) FOOT LIFTS TO A 95 PERCENT STANDARD PROCTOR DENSITY.
4. ONLY HAND-OPERATED COMPACTION EQUIPMENT SHALL BE ALLOWED WITHIN THREE (3) FEET BEHIND THE WALL.
5. ONSITE QUALIFIED SOILS ENGINEER SHALL FIELD TEST BEARING, INFILL SOILS AND RETAINED SOILS.
6. CONTRACTOR SHALL FOLLOW ALL BLOCK AND GEOGRID MANUFACTURER'S SPECIFICATIONS.
7. GEOGRID DEPTHS ARE MEASURED FROM FRONT FACE OF WALL AND ARE MINIMUM DEPTHS.
8. WALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH MANUFACTURER'S SPECIFICATIONS.
9. CONTRACTOR TO PROVIDE SEALED STRUCTURAL PLANS AND CALCULATIONS FOR ALL RETAINING WALLS PRIOR TO CONSTRUCTION.

TYPICAL SECTION FOR RETAINING WALL ⚠3

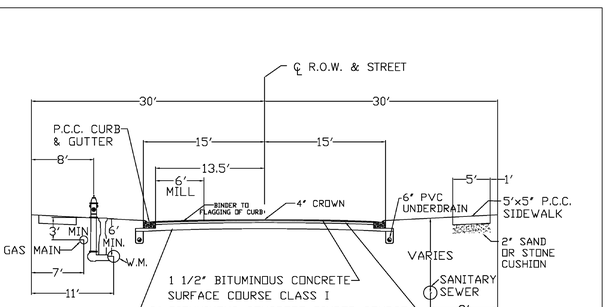
(N.T.S.)



NOTES:

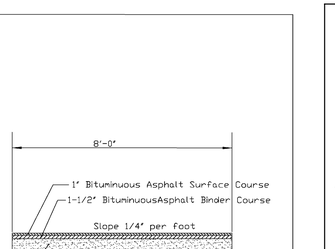
1. REINFORCEMENT- PROVIDE TWO (2) #4 REINFORCING BARS CONTINUOUS BETWEEN EXPANSION JOINTS, WITH LOCATION SPACING AS INDICATED ABOVE.
2. EXPANSION JOINT- 3/4" THICK BITUMINOUS FILLER MATERIAL- PROVIDE TWO (2) #6 X 24" SMOOTH BARS WITH EXPANSION CAPS AT EACH EXPANSION JOINT. INSTALL AT ENDS OF ALL RADII AND NO FURTHER THAN SIXTY (60') FEET APART.
3. SAW THREE (3) EQUALLY SPACED CONTRACTION JOINTS AT TWENTY (20') FEET INTERVALS BETWEEN EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW-CUT IN THE UPPER ONE-THIRD OF CURB AND GUTTER WITHIN 3 DAYS OF PLACEMENT.
4. COST OF BARS SHALL BE INCLUDED IN THE UNIT PRICE (PER LINEAL FOOT) FOR CURB AND GUTTER.

CURB AND GUTTER DETAIL (RESIDENTIAL)		
CURBING	STREET & PAVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRYSTAL LAKE		REVISED: 2/1/18 SF
		REVISED: 8/27/19 MS
Engineering Department		DRAWING NO. STR-03

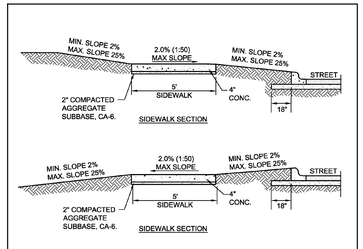


Binder Course The binder course on all public roadways shall be initially constructed flush with the top of the front of the curb. The finished grade of the binder cross-section will allow water to flow unobstructed from the asphalt to the gutter of the curb. The additional binder placed along the front of curb will be removed by milling before placement of the final surface course.

TYPICAL STREET SECTION (RESIDENTIAL)		
Street_Section-Rev1.dwg	STREET & PAVEMENT	DATE:
DRAWN BY:		REVISED: 11/25/08
Village of CRYSTAL LAKE		REVISED:
		REVISED:
Engineering Department		DRAWING NO. STR-01



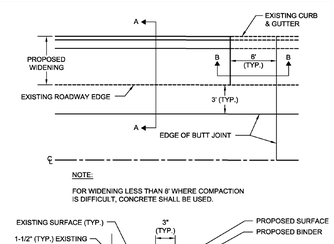
Pedestrian Bike Path		
PLAT NAME (Rev. Prelim./Fin.)	Street Improvement	DATE:
DRAWN BY:		REVISED:
Village of CRYSTAL LAKE		REVISED:
Engineering Department		DRAWING NO.



NOTES:

1. CONCRETE SHALL BE IDOT CLASS SI.
2. MINIMUM SIDEWALK THICKNESS SHALL BE 4".
3. SIDEWALK THICKNESS ACROSS DRIVEWAYS SHALL BE AT A MINIMUM 6" FOR RESIDENTIAL DRIVEWAYS AND 8" FOR COMMERCIAL DRIVEWAYS.
4. MAXIMUM LONGITUDINAL SLOPE SHALL NOT EXCEED 5% (20:1). FOR ANY SLOPE IN EXCESS OF 5%, ALL REQUIREMENTS OF THE ILLINOIS ACCESSIBILITY CODE (LATEST EDITION) SHALL BE MET.
5. MINIMUM TRANSVERSE SLOPE SHALL BE 1.0% (1:100). MAXIMUM TRANSVERSE SLOPE SHALL BE 2.0% (1:50).
6. A MINIMUM 2" AGGREGATE SUBBASE (CA-6) SHALL BE PROVIDED. (4" THROUGH COMMERCIAL DRIVEWAYS).
7. AGGREGATE SUBBASE SHALL BE MECHANICALLY COMPACTED.
8. ALL SIDEWALKS SHALL BE PROMPTLY BACKFILLED AND PROTECTED FROM DAMAGE.
9. SIDEWALK CONSTRUCTION SHALL FOLLOW APPLICABLE IDOT STANDARDS.
10. SIDEWALKS SHALL FOLLOW CURRENT ADA GUIDELINES.

SIDEWALK



BUTT JOINT DETAIL

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REVISIONS

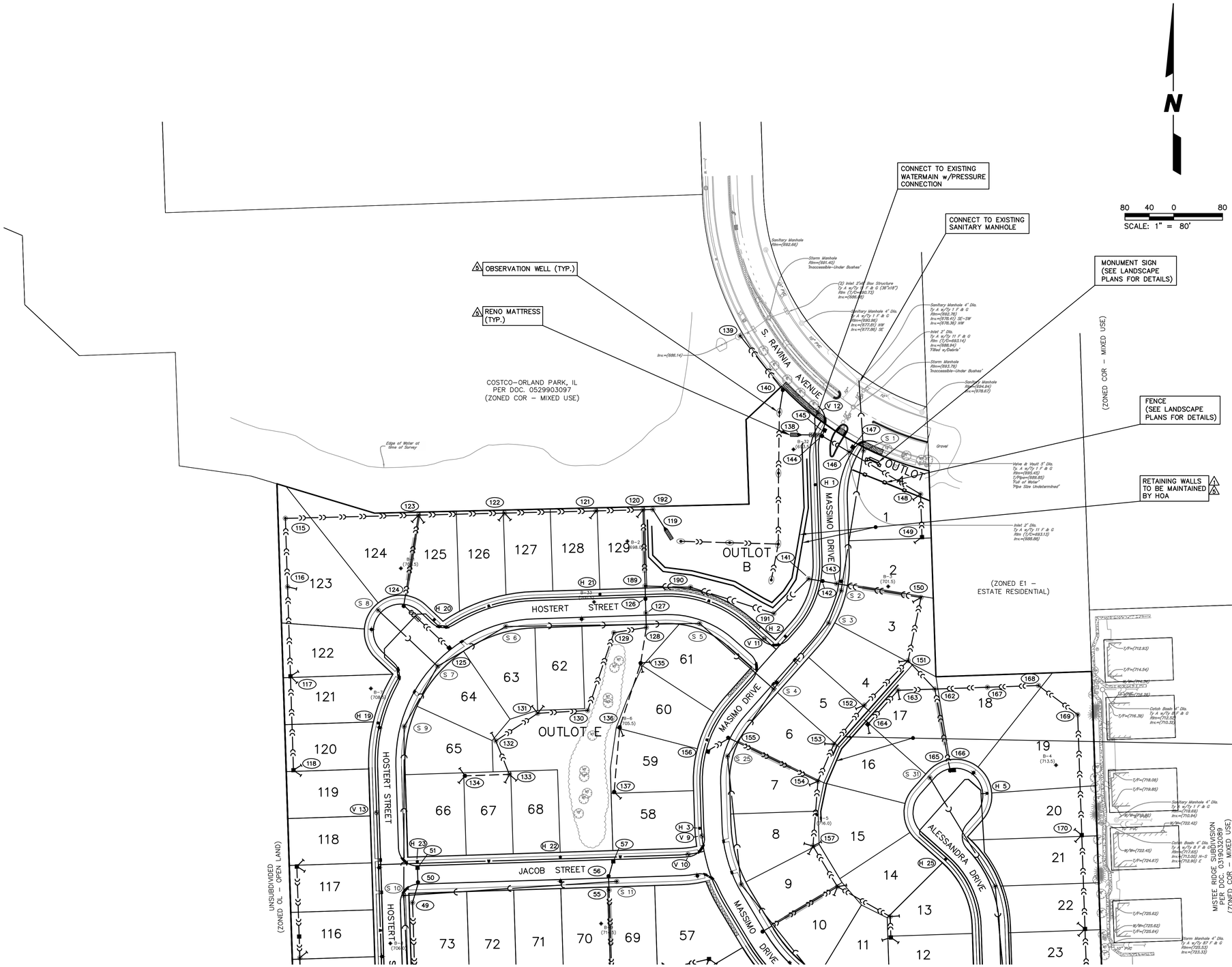
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
⚠2	05-16-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
⚠3	06-26-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			

STREET PAVEMENT DESIGN AND DETAILS

ESTATES AT RAVINIA MEADOW

FILE NAME: DETAILS	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: ----	SHEET NO. 06 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = N.T.S.	

PLOT FILE CREATED: 9/2/2025 7:19 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/13/2025 3:49 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\DETAILS.DWG



LEGEND

PROPOSED	DESCRIPTION
	STORM SEWER
	CLAY COLLAR
	STORM MANHOLE
	CATCH BASIN
	INLET
	SLOPE INLET BOX
	END SECTION
	SUMP DRAIN CONDUIT
	SANITARY SEWER
	SANITARY MANHOLE
	WATERMAIN
	WATER VALVE IN VAULT
	FIRE HYDRANT
	STREET LIGHT
	BOLLARD LIGHT
	DRAIN TILE
	SOIL BORING LOCATION w/NUMBER
	BIKE PATH
	OBSERVATION WELL
	UNDERDRAIN
	RENO MATTRESS
No.	NUMBERING SYSTEM USED ON PLANS FOR DRAINAGE STRUCTURE IDENTIFICATION
S No.	NUMBERING SYSTEM USED ON PLANS FOR SANITARY MANHOLE IDENTIFICATION
H No.	NUMBERING SYSTEM USED ON PLANS FOR FIRE HYDRANT IDENTIFICATION
V No.	NUMBERING SYSTEM USED ON PLANS FOR VALVE VAULT IDENTIFICATION

NOTE: ALL SANITARY SEWER SHALL BE 8 INCH DIA. UNLESS OTHERWISE NOTED.

ALL WATERMAIN SHALL BE 8 INCH DIA. UNLESS OTHERWISE NOTED.

SEE SHEET 08

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PREPARED FOR:
PULTE HOME COMPANY, LLC
1900 E. GOLF ROAD, SUITE 300
SCHAUMBURG, IL 60173
(847) 230-5400

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60502-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: info@cemcon.com Website: www.cemcon.com

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	04-23-25/LAL	REVISED PER IN-HOUSE REVIEW			
2	05-16-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
3	06-26-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			
5	08-13-25/LAL	REVISED PER CLIENT			

MASTER UTILITY PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRUTIL	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70-71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = 80'	07 of 39

PLOT FILE CREATED: 9/3/2025 7:29 AM BY: LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:51 PM BY: LESLIE DRAWING PATH: P:\402170\CIVIL\ENG\DRAWINGS\FINAL DRAFTING\OVRUTIL.DWG

N

80 40 0 80

SCALE: 1" = 80'

LEGEND

PROPOSED	DESCRIPTION
	STORM SEWER
	CLAY COLLAR
	STORM MANHOLE
	CATCH BASIN
	INLET
	SLOPE INLET BOX
	END SECTION
	SUMP DRAIN CONDUIT
	SANITARY SEWER
	SANITARY MANHOLE
	WATERMAIN
	WATER VALVE IN VAULT
	FIRE HYDRANT
	STREET LIGHT
	BOLLARD LIGHT
	DRAIN TILE
	SOIL BORING LOCATION w/NUMBER
	BIKE PATH
	OBSERVATION WELL
	UNDERDRAIN
	RENO MATTRESS
No.	NUMBERING SYSTEM USED ON PLANS FOR DRAINAGE STRUCTURE IDENTIFICATION
S No.	NUMBERING SYSTEM USED ON PLANS FOR SANITARY MANHOLE IDENTIFICATION
H No.	NUMBERING SYSTEM USED ON PLANS FOR FIRE HYDRANT IDENTIFICATION
V No.	NUMBERING SYSTEM USED ON PLANS FOR VALVE VAULT IDENTIFICATION

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MASTER UTILITY PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRUTIL	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70-71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = 80'	08 of 39

PLOT FILE CREATED: 9/3/2025 7:29 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:51 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRUTIL.DWG

SEE SHEET 08

OBSERVATION WELL (TYP.)

8' ASPHALT PATH (Typ.)

RENO MATTRESS (TYP.)

RESTRICTOR STRUCTURE

SEDGWICK AVENUE

OUTLOT D

(UNSUBDIVIDED) (ZONED OR – OPEN LAND)

50' WETLAND BUFFER (TYP.)

RETAINING WALLS TO BE MAINTAINED BY HOA

SEDGWICK AVENUE

SARATOGA LAKES SUBDIVISION PER DOC. 9408 3527 (ZONED COR – MIXED USE)

NECK DOWN ROADWAY FOR TRAFFIC CALMING

RETAINING WALLS TO BE MAINTAINED BY HOA

UNSUBDIVIDED (ZONED COR – MIXED USE)

CONNECT EXISTING 4" DRAIN TILE TO STORM SEWER

NOTE: EXISTING 4" CLAY DRAIN TILE CONTINUES TO SERVICE UPLAND WATERSHED AS A MUTUAL DRAIN.

165TH STREET

UNSUBDIVIDED (ZONED R4 – MULTIPLE FAMILY) (ORLAND HILLS)

APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K

APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO

APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

UNSUBDIVIDED (ZONED R4 – MULTIPLE FAMILY) (ORLAND HILLS)

UNSUBDIVIDED

LIBERTY SQUARE P.U.D. PER DOC. 0420439064 (ZONED PARKS/OPEN SPACE) (ORLAND HILLS)

SOUTH HILL P.U.D. PER DOC. 0536318064 (ZONED R4 – MULTIPLE FAMILY) (ORLAND HILLS)

TIARA GLEN PER DOC. 0313418074

PROPOSED CONNECTION FOR EXISTING DRIVEWAY

CONNECT TO EXISTING WATERMAIN. REPLACE EXISTING VALVE.

CONNECT TO EXISTING SANITARY MANHOLE

EXISTING FIRE HYDRANT

SCALE: 1" = 80'

LEGEND

PROPOSED	DESCRIPTION
	STORM SEWER
	CLAY COLLAR
	STORM MANHOLE
	CATCH BASIN
	INLET
	SLOPE INLET BOX
	END SECTION
	SUMP DRAIN CONDUIT
	SANITARY SEWER
	SANITARY MANHOLE
	WATERMAIN
	WATER VALVE IN VAULT
	FIRE HYDRANT
	STREET LIGHT
	BOLLARD LIGHT
	DRAIN TILE
	SOIL BORING LOCATION w/NUMBER
	BIKE PATH
	OBSERVATION WELL
	UNDERDRAIN
	RENO MATTRESS
No.	NUMBERING SYSTEM USED ON PLANS FOR DRAINAGE STRUCTURE IDENTIFICATION
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H No.	NUMBERING SYSTEM USED ON PLANS FOR FIRE HYDRANT IDENTIFICATION
V No.	NUMBERING SYSTEM USED ON PLANS FOR VALVE VAULT IDENTIFICATION

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NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	05-16-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			

MASTER UTILITY PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRUTIL	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70-71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = 80'	09 of 39

PLOT FILE CREATED: 9/3/2025 7:29 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:51 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRUTIL.DWG

SEE SHEET 11

N

80 40 0 80

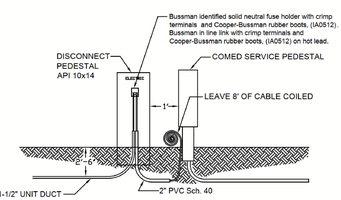
SCALE: 1" = 80'

LEGEND △3△4

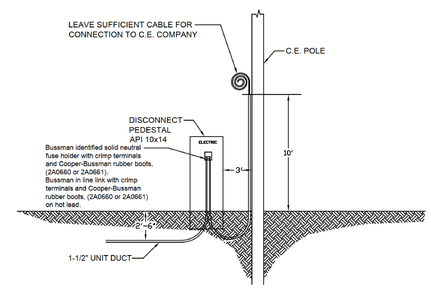
SYMBOL	DESCRIPTION
	SIGN
	58W LED STREET LIGHT (SEE PHOTOMETRIC PLAN FOR DETAILS)
	58W LED STREET LIGHT W/ STREET SIGN
	BOLLARD LIGHT (SEE PHOTOMETRIC PLAN FOR DETAILS)
NO.	NUMBERING SYSTEM USED FOR LIGHT POLE/STREET LIGHT IDENTIFICATION.
	APPROXIMATE LOCATION OF PEDESTAL PROVIDED BY COMED.
– – –	ELECTRICAL CONDUIT
	RIGID GALVANIZED STEEL CONDUIT (2 1/2")

△2△3 **NOTE:**
CONTRACTOR TO COORDINATE WITH VILLAGE FOR DETAIL OF TYPICAL RESIDENTIAL LED STREET LIGHT AND SUBMIT CUT SHEETS OF THE PROPOSED LUMINAIRES PRIOR TO PURCHASE. CONTRACTOR TO ALSO PROVIDE CONDUIT AND WIRE SIZES TO VILLAGE FOR APPROVAL.

RESIDENTIAL STREET LIGHT
ELECTRICAL SUPPLY CONNECTION



PEDESTAL



POWER POLE

△3

RESIDENTIAL STREET LIGHT CONNECTION		
Life_Connection.DWG	STREET & PAVEMENT	DATE: 08-16-06
DRAWN BY:		REVISED:
Village of ORLAND PARK		REVISED:
Engineering Department		REVISED: DRAWING NO. STR-07

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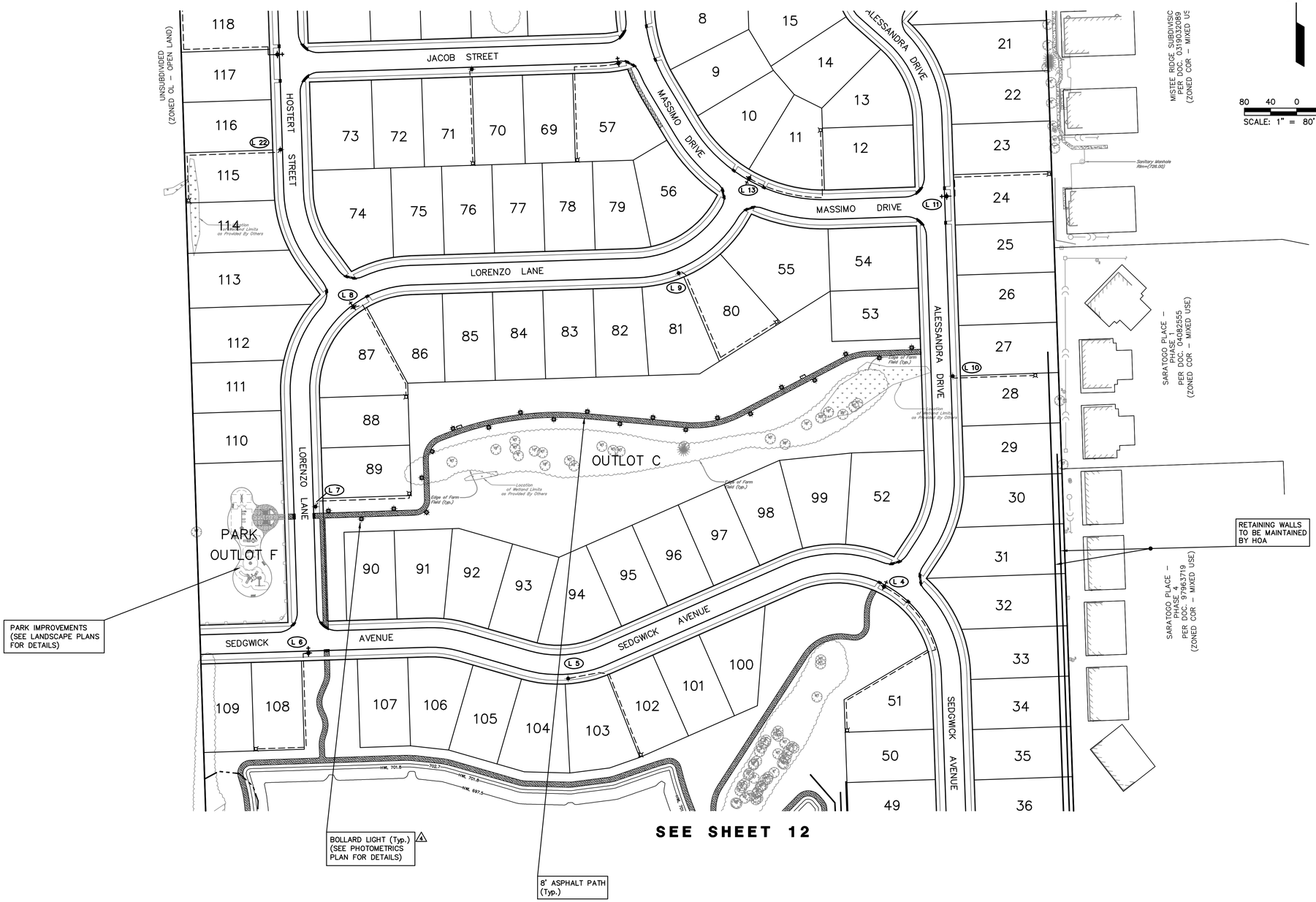
4	07-22-25/LAL	REVISED PER VILLAGE COMMENTS DATED 7/17/25			

STREET LIGHTING STRIPING AND SIGNAGE PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRUTIL	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70-71	SHEET NO. 10 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = 80'	

PLOT FILE CREATED: 9/3/2025 7:29 AM BY: LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:51 PM BY: LESLIE DRAWING PATH: P:\402170\OWS\ENG\DRAWINGS\FINAL DRAFTING\OVRUTIL.DWG



N

80 40 0 80

SCALE: 1" = 80'

LEGEND

SYMBOL	DESCRIPTION
	SIGN
	58W LED STREET LIGHT (SEE PHOTOMETRIC PLAN FOR DETAILS)
	58W LED STREET LIGHT W/ STREET SIGN
	BOLLARD LIGHT (SEE PHOTOMETRIC PLAN FOR DETAILS)
NO.	NUMBERING SYSTEM USED FOR LIGHT POLE/STREET LIGHT IDENTIFICATION.
	APPROXIMATE LOCATION OF PEDESTAL PROVIDED BY COMED.
	ELECTRICAL CONDUIT
	RIGID GALVANIZED STEEL CONDUIT (2 1/2")

△△ **NOTE:**
CONTRACTOR TO COORDINATE WITH VILLAGE FOR DETAIL OF TYPICAL RESIDENTIAL LED STREET LIGHT AND SUBMIT CUT SHEETS OF THE PROPOSED LUMINAIRES PRIOR TO PURCHASE. CONTRACTOR TO ALSO PROVIDE CONDUIT AND WIRE SIZES TO VILLAGE FOR APPROVAL.

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3	06-26-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			
4	07-22-25/LAL	REVISED PER VILLAGE COMMENTS DATED 7/17/25			

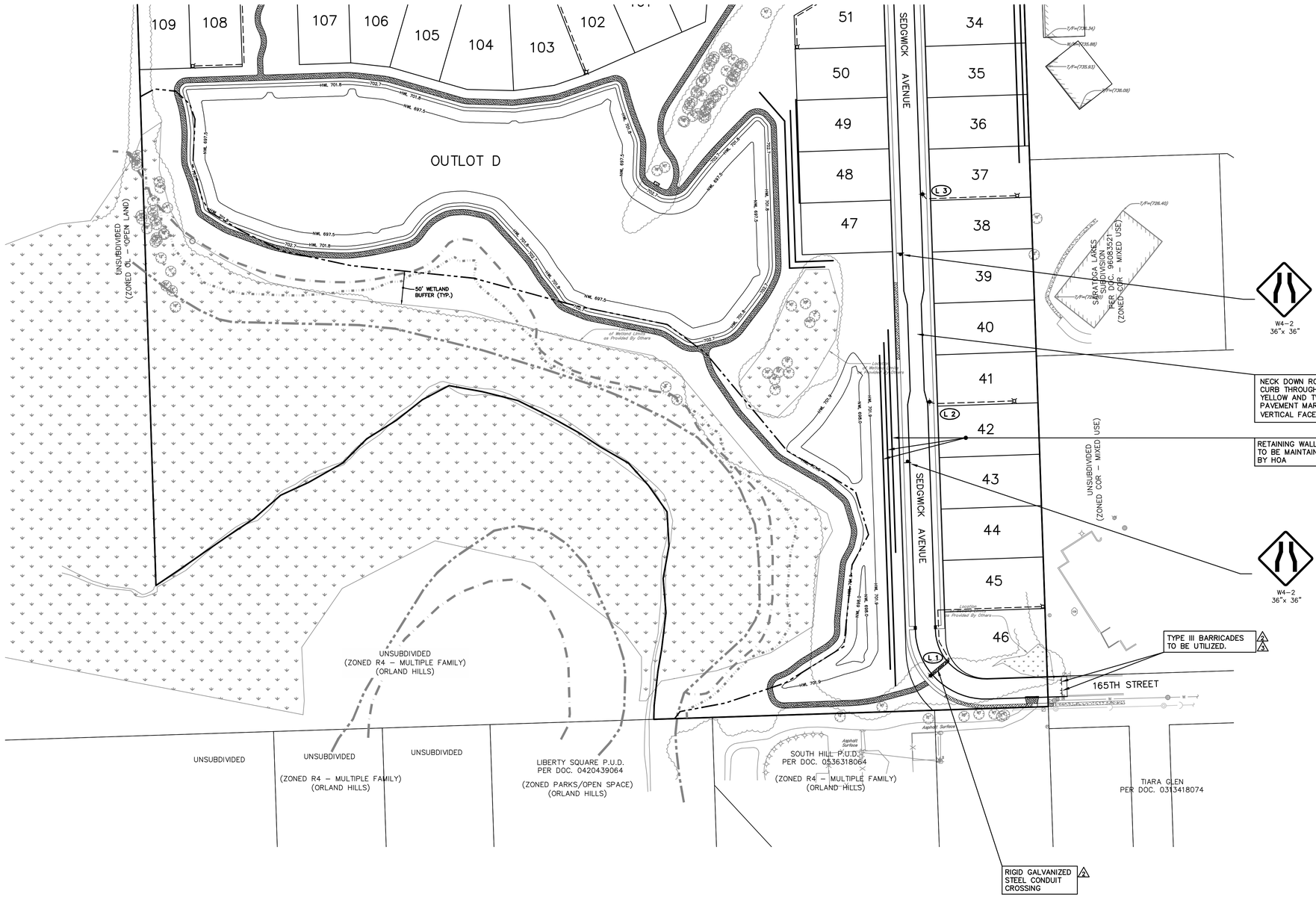
STREET LIGHTING STRIPING AND SIGNAGE PLAN

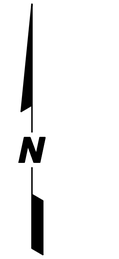
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRUTIL	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70-71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = 80'	11 of 39

PLOT FILE CREATED: 9/3/2025 7:29 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:51 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRUTIL.DWG

SEE SHEET 11



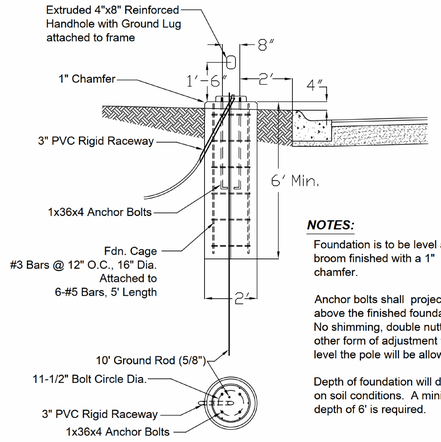


LEGEND △2△3△4

SYMBOL	DESCRIPTION
	SIGN
	58W LED STREET LIGHT (SEE PHOTOMETRIC PLAN FOR DETAILS)
	58W LED STREET LIGHT W/ STREET SIGN
	BOLLARD LIGHT (SEE PHOTOMETRIC PLAN FOR DETAILS)
NO.	NUMBERING SYSTEM USED FOR LIGHT POLE/STREET LIGHT IDENTIFICATION.
	APPROXIMATE LOCATION OF PEDESTAL PROVIDED BY COMED.
– – –	ELECTRICAL CONDUIT
	RIGID GALVANIZED STEEL CONDUIT (2 1/2")

△2△3 **NOTE:**
CONTRACTOR TO COORDINATE WITH VILLAGE FOR DETAIL OF TYPICAL RESIDENTIAL LED STREET LIGHT AND SUBMIT CUT SHEETS OF THE PROPOSED LUMINAIRES PRIOR TO PURCHASE. CONTRACTOR TO ALSO PROVIDE CONDUIT AND WIRE SIZES TO VILLAGE FOR APPROVAL.

RESIDENTIAL STREET LIGHT
CONCRETE FOUNDATION DETAIL



NOTES:

Foundation is to be level and broom finished with a 1" chamfer.

Anchor bolts shall project 2.75" above the finished foundation. No shimming, double nutting or other form of adjustment to level the pole will be allowed.

Depth of foundation will depend on soil conditions. A minimum depth of 6' is required.

△3

RESIDENTIAL STREET LIGHT FOUNDATION		
Concrete Foundation.dwg	STREET & PAVEMENT	DATE: 10/10/2007
Drawn By:		REVISED:
Village of ORLAND PARK		REVISED:
Public Works & Engineering Department		DRAWING No. STR–06–F

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△1	07–22–25/LAL	REVISED PER VILLAGE COMMENTS DATED 7/17/25			

STREET LIGHTING STRIPING AND SIGNAGE PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRUTIL	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 12 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 80'	

PLOT FILE CREATED: 9/3/2025 7:29 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:51 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRUTIL.DWG

149 L.F.–12" R.C.P. TY. 1 @ 4.09%

STM. MH. NO.123 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 699.1
INV. = 693.90 S
693.70 W
693.50 E

STM. MH. NO.122 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 697.1
INV. = 692.10

STM. MH. NO.120 7'ø
TY. A w/TY. I FR. & C.L.
RIM = 696.2
INV. = 687.82 E
688.30 S
690.10 W

16 L.F.–48" R.C.P. TY. 1 @ 0.25%

STM. MH. NO.192 8'ø
TY. A w/TY. I FR. & C.L.
RIM = 696.0
INV. = 687.78

STA. 32+83.4, 90.8' LT. (B/C)
CATCH BASIN NO.124 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 707.2
INV. = 703.00 SE
700.00 N

141 L.F.–18" R.C.P. TY. 1 @ 0.99%

150 L.F.–18" R.C.P. TY. 1 @ 0.80%

77 L.F.–18" R.C.P. TY. 1 @ 1.04%

STM. MH. NO.121 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 697.2
INV. = 690.90

40 L.F.–48" R.C.P. TY. 1 @ 0.20%

STA. 36+70.2, 123.5' LT.
FLARED END SECTION NO. 119
48" R.C.P. w/GRATE
F.L. = 687.70
(w/ 6'x18' RENO MATTRESS)

125 L.F.–36" R.C.P. TY. 1 @ 0.48%

218 L.F.–15" R.C.P. TY. 1 @ 0.41%

STA. 36+35.1, 33.0' LT.
STM. MH. NO.189 6'ø
TY. A w/TY. I FR. & C.L.
RIM = 702.4
INV. = 688.90 N
689.10 E
690.70 S

19 L.F.–21" R.C.P. TY. 1 @ 2.11%

STM. MH. NO.115 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 698.0
INV. = 694.80 S
694.60 E

STA. 36+35.0, 15.0' LT. (B/C)
CATCH BASIN NO.126 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 702.1
INV. = 693.40 S
691.10 N

112 L.F.–12" R.C.P. TY. 1 @ 5.54%

28 L.F.–21" R.C.P. TY. 1 @ 0.89%

STM. MH. NO.116 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 707.0
INV. = 701.00

STA. 36+35.0, 15.0' RT. (B/C) 4'ø
STM. MH. NO.127
TY. A w/EJW 7525 FR. & GR.
RIM =(T/C) 702.1
INV. = 693.85 S
693.65 N

147 L.F.–12" R.C.P. TY. 1 @ 2.11%

21 L.F.–18" R.C.P. TY. 1 @ 1.19%

INLET NO.117 2'ø
TY. A w/TY. B GR.
INV. = 704.10

STA. 36+35.0, 35.0' RT.
STM. MH. NO.128 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 702.5
INV. = 694.10 W,N
700.00 S

54 L.F.–18" R.C.P. TY. 1 @ 1.30%

104 L.F.–12" R.C.P. TY. 1 @ 0.58%

STA. 35+81.5, 42.0' RT.
STM. MH. NO.129 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 701.4
INV. = 695.80 S
694.80 E

STA. 32+93.7, 15.0' RT. (B/C)
INLET NO.125 2'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 707.8
INV. = 703.60

134 L.F.–15" R.C.P. TY. 1 @ 1.64%

154 L.F.–12" R.C.P. TY. 1 @ 2.60%

INLET NO.118 2'ø
TY. A w/TY. B GR.
RIM = 712.3
INV. = 708.10

STM. MH. NO.132 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 709.0
INV. = 704.80 NE
705.95 SE

CLEANOUT STRUCTURE NO.134
RIM = 711.1
INV. = 708.60

73 L.F.– 8" P.V.C. SDR 35 @ 1.00%

60 L.F.–12" R.C.P. TY. 1 @ 3.20%

82 L.F.–12" R.C.P. TY. 1 @ 5.73%

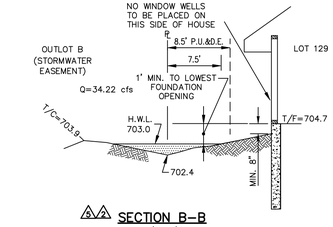
STM. MH. NO.130 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 705.0
INV. = 698.00

STM. MH. NO.133 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 712.0
INV. = 707.87

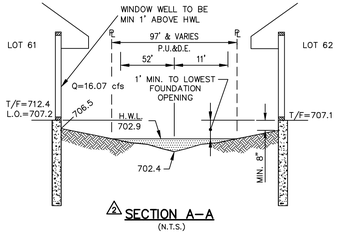
STM. MH. NO.131 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 704.2
INV. = 700.10

82 L.F.–12" R.C.P. TY. 1 @ 2.56%

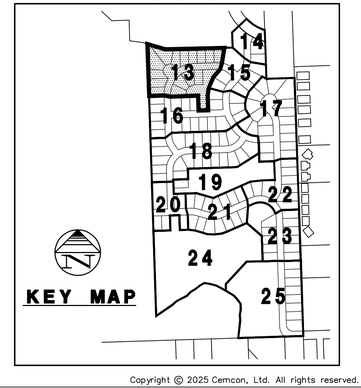
OUTLOT B
(STORMWATER EASEMENT)



SECTION B–B
(N.T.S.)



SECTION A–A
(N.T.S.)



DRAINAGE & GRADING NOTES

1. ELEVATIONS SHOWN FOR ALL CURB INLETS, CATCH BASINS, AND MANHOLES ARE TOP OF CURB.
2. ALL CURBS SHALL BE BACKFILLED TO WITHIN 6 INCHES OF THE TOP OF CURB.
3. ALL BACK YARD SWALES SHALL BE CUT OR FILLED 6 INCHES BELOW FINISHED GRADE.
4. ALL ON–SITE FIELD TILES NEED TO BE REMOVED COMPLETELY. ANY EXISTING DRAINAGE TILES ENCOUNTERED DURING CONSTRUCTION SERVING UPSTREAM PROPERTIES SHALL BE PRESERVED AND TIED INTO THE PROPOSED STORM SEWER. ANY FIELD TILES EXITING THE SITE MUST BE PLUGGED AT THE UPSTREAM END.
5. T/F – INDICATES PROPOSED TOP OF FOUNDATION ELEVATIONS.
6. THE TOP OF WINDOW WELLS SHALL BE CONSTRUCTED NO LOWER THAN 0.3 FEET BELOW THE TOP OF FOUNDATION ELEVATION (T/F) UNLESS OTHERWISE NOTED ON OVERFLOW CROSS–SECTIONS. ANY WINDOW WELLS ADJACENT TO DETENTION BASINS OR OVERFLOW ROUTES MUST BE MINIMUM 12" ABOVE H.W.L.
7. THE FINISHED TOPSOIL ELEVATION AT THE FOUNDATION SHOULD GENERALLY BE 0.7 FEET BELOW THE TOP OF FOUNDATION ELEVATION UNLESS INDICATED OTHERWISE.
8. D.S. – INDICATES DROP SIDING IS SUGGESTED TO MINIMIZE REAR YARD SLOPES. DROP SIDING MAY OR MAY NOT BE NECESSARY ALONG THE SIDE YARDS OF THE HOMES DEPENDING ON PLACEMENT OF HOME AND CHOICE OF MODEL. INDIVIDUAL SITE PLANS MUST HAVE A MAXIMUM OF 4:1 SIDE SLOPE FROM FINISHED GRADE AT FOUNDATION TO SIDE LOT LINE. DROP SIDING CAN BE MODIFIED AS NECESSARY AS LONG AS POSITIVE DRAINAGE IS ACHIEVED.
9. – INDICATES AN AVERAGE BUILDING PRODUCT ENVELOPE. (SEE MASS EARTHWORK SECTION FOR BUILDING PAD DETAILS.)
10. – ACCENTED SIDES OF PROPOSED HOUSE FOUNDATIONS ARE INTENDED TO INDICATE THE APPROXIMATE LOCATION WHERE A LOOK–OUT OR WALK–OUT BASEMENT MAY BE CONSTRUCTED OR TO INDICATE THAT SPECIAL CONSTRUCTION MEASURES MUST BE EMPLOYED IN ORDER TO MINIMIZE SIDE YARD, REAR YARD AND / OR FRONT YARD GRADIENTS (E.G. DROPPED SIDING, STEPPED FOUNDATION, RETAINING WALL, ETC.) – SEE NOTES ABOVE FOR FURTHER DETAILS.
11. – WATERMAIN PROTECTION (SEE "CONSTRUCTION SPECIFICATIONS–GENERAL NOTES" SHEETS FOR DETAILS.)
12. – INDICATES THE LOCATION AND DIRECTION OF OVERLAND DRAINAGE; ASSUMING STORM SEWER IS FULL OR IS BLOCKED, THAT MUST BE RESPECTED IN ALL FINAL GRADING OPERATIONS (SEE DETAIL).
13. – DENOTES AREA WHERE GRANULAR TRENCH BACKFILL IS REQUIRED.
14. +XXX.X – INDICATES EXISTING ELEVATION.
15. – INDICATES DRIVEWAY LOCATION.
16. – INDICATES PVC SUMP DRAIN CONDUIT FOR BASEMENT FOUNDATIONS.
17. – INDICATES 8' BITUMINOUS PATH (UNLESS OTHERWISE SHOWN)
18. – INDICATES REVERSE PITCH GUTTER FLAG.
19. – INDICATES DEPRESSED CURB.
20. – INDICATES M3.12 CURB & GUTTER
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22. – EXISTING DRAIN TILE
23. – INDICATES TREES TO BE PRESERVED IF IN GOOD CONDITION; SEE LANDSCAPE PLANS FOR FURTHER INFORMATION.
24. MAXIMUM SIDE SLOPE OF A LANDSCAPE BERM SHALL BE 4:1
25. – DENOTES DETECTABLE WARNING STRIP
26. XX' / MIN. – MAXIMUM DRIVEWAY SLOPE IS 8%. SOME BUILDINGS WILL NEED TO BE MOVED BACK FROM R.O.W. THE INDICATED AMOUNT TO MEET THE SLOPE REQUIREMENTS
27. – DENOTES WHERE SIDEWALK IS LOWER THAN CURB
28. – CLAY COLLAR BULKHEAD REQUIRED FOR ALL SIDEYARD STORM SEWER. (SEE "DRAINAGE STRUCTURE DETAILS" SHEET)
29. ALL SIDEWALK RAMPS ARE REQUIRED TO BE CONSTRUCTED TO MEET AMERICAN DISABILITY ACT GUIDELINES. IT IS THE RESPONSIBILITY OF THE CURB CONTRACTOR TO ENSURE THIS IS MET. ANY RAMPS OUT OF TOLERANCE WILL HAVE TO BE REMOVED AND REPLACED.
30. – 50' WETLAND BUFFER
31. – APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K
32. – APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO
33. – APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

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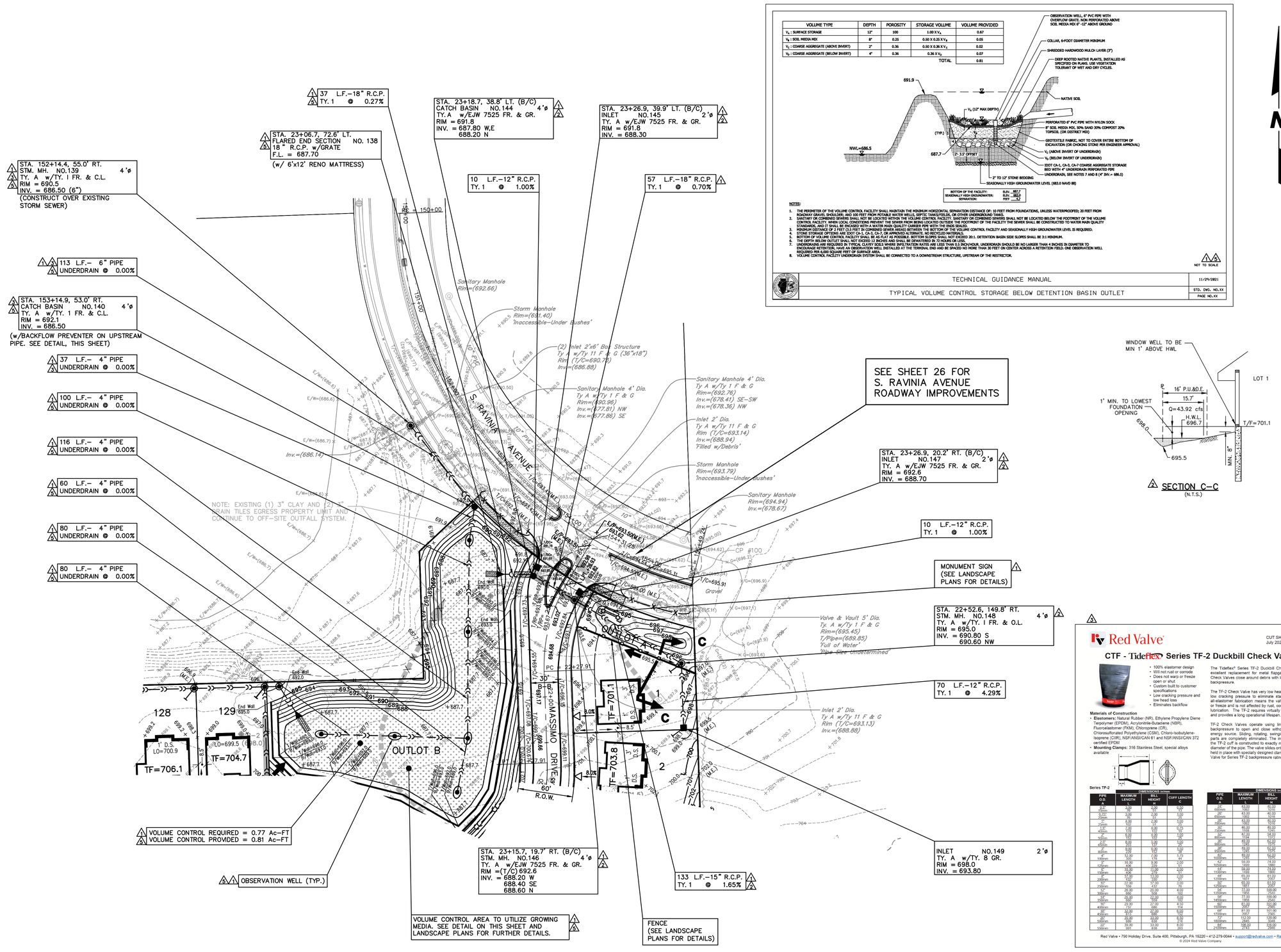
3	08–13–25/LAL	REVISED PER CLIENT			

DRAINAGE AND GRADING PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRGRADE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	13 of 39

PLOT FILE CREATED: 9/3/2025 7:22 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:00 PM BY LESLIE DRAWING PATH: P:\402170\ENGS\DRAWINGS\FINAL DRAFTING\OVRGRADE.DWG



VOLUME TYPE	DEPTH	POROSITY	STORAGE VOLUME	VOLUME PROVIDED
V_A : SURFACE STORAGE	12"	100	$1.00 \times V_A$	0.67
V_B : SOIL MEDIA MIX	8"	0.25	$0.50 \times 0.25 \times V_B$	0.05
V_C : COARSE AGGREGATE (ABOVE INVERT)	2"	0.36	$0.50 \times 0.36 \times V_C$	0.02
V_D : COARSE AGGREGATE (BELOW INVERT)	4"	0.36	$0.36 \times V_D$	0.07
			TOTAL	0.81

BOTTOM OF THE FACILITY:	ELEV. 687.7
SEASONALLY HIGH GROUNDWATER:	ELEV. 683
SEPARATION:	FEET 4.7

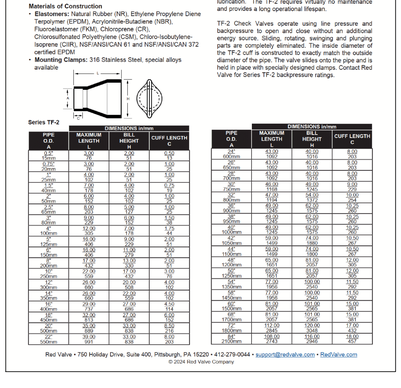
NOTES:
1. THE PERIMETER OF THE VOLUME CONTROL FACILITY SHALL MAINTAIN THE MINIMUM HORIZONTAL SEPARATION DISTANCE OF: 10 FEET FROM FOUNDATIONS, UNLESS WATERPROOFED; 20 FEET FROM ROADWAY GRAVEL SHOULDERS; AND 100 FEET FROM POTABLE WATER WELLS, SEPTIC TANKS/FIELDS, OR OTHER UNDERGROUND TANKS.
2. SANITARY SEWERS CROSSING A FACILITY SHALL NOT BE ALIGNED TO RUN THROUGH THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWERS SHALL NOT BE LOCATED BELOW THE FOOTPRINT OF THE VOLUME CONTROL FACILITY UNLESS LOCATED WITHIN A WATERTIGHT CONDUIT. IF SUCH SEWERS ENTER OR EXIT THE FOOTPRINT OF THE FACILITY THE SEWER SHALL BE CONSTRUCTED TO WATER MAIN QUALITY STANDARDS, AND IT SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
3. MINIMUM DISTANCE OF 2 FEET (3.5 FEET IN COMBINED SEWER AREAS) BETWEEN THE BOTTOM OF THE VOLUME CONTROL FACILITY AND SEASONALLY HIGH GROUNDWATER LEVEL IS REQUIRED.
4. STONE STORAGE OPTIONS ARE IDOT CA-1, CA-3, CA-7, OR APPROVED ALTERNATE. NO RECYCLED MATERIALS.
5. BOTTOM OF VOLUME CONTROL FACILITY SHALL BE AS FLAT AS POSSIBLE. BOTTOM SLOPES SHALL NOT EXCEED 20:1. DETENTION BASIN SIDE SLOPES SHALL BE 3:1 MINIMUM.
6. THE DEPTH BELOW OUTLET SHALL NOT EXCEED 12 INCHES AND SHALL BE DEWATERED IN 72 HOURS OR LESS.
7. UNDERDRAIN PIPE SHALL BE PERFORATED PIPE WITH HOLES NO LARGER THAN 3/8 INCH DIAMETER. UNDERDRAIN SHOULD BE NO LARGER THAN 4 INCHES IN DIAMETER TO ENCOURAGE RETENTION. HAVE AN OBSERVATION WELL INSTALLED AT THE TERMINAL END AND BE SPACED NO MORE THAN 30 FEET ON CENTER ACROSS A RETENTION FIELD. ONE OBSERVATION WELL REQUIRED PER 6,000 SQUARE FEET OF SURFACE AREA.
8. VOLUME CONTROL FACILITY UNDERDRAIN SYSTEM SHALL BE CONNECTED TO A DOWNSTREAM STRUCTURE, UPSTREAM OF THE RESTRICTOR.

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL — 11/29/2021

TYPICAL VOLUME CONTROL STORAGE BELOW DETENTION BASIN OUTLET — STD. DWG. NO.XX — PAGE NO.XX

SECTION C–C (N.T.S.)



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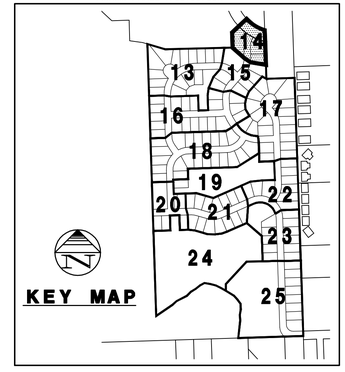

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DRAINAGE AND GRADING PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRGRADE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 14 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	

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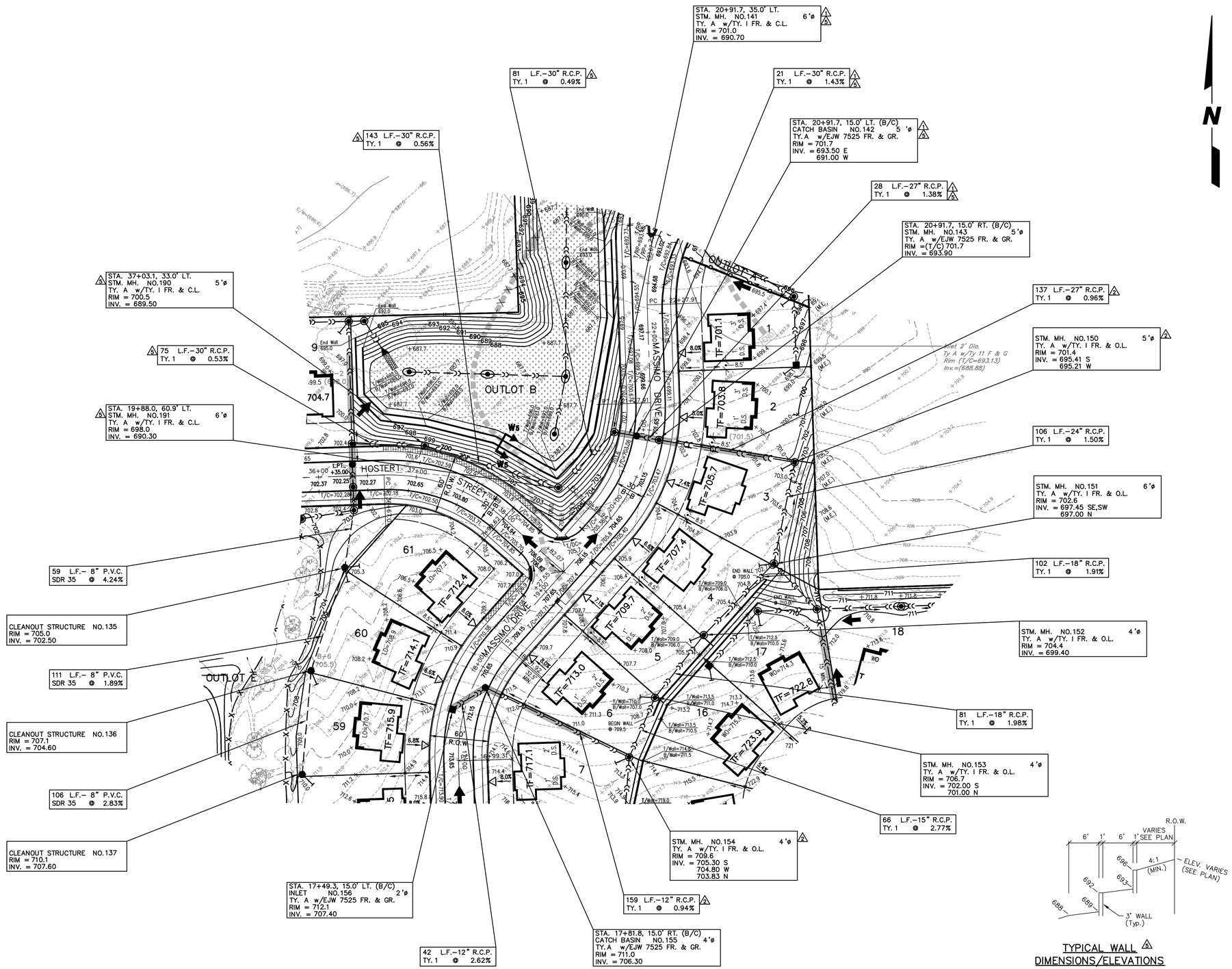

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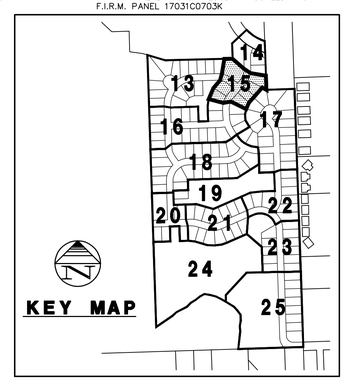
TYPICAL WALL 5
DIMENSIONS/ELEVATIONS
SECTION W5– W5
(N.T.S.)
(SEE SHEET 6 FOR "TYPICAL SECTION FOR RETAINING WALL" DETAIL)



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28 L.F.–12" R.C.P.
TY. 1 @ 0.71%

STA. 43+57.6, 15.0' RT. (B/C)
CATCH BASIN NO.56 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 715.1
INV. = 710.30

STA. 43+66.1, 15.0' LT. (B/C)
INLET NO.57 2'ø
TY. A w/E.JW 7525 FR. & GR.
RIM = 715.2
INV. = 710.50

STA. 40+45.0, 15.0' LT. (B/C)
INLET NO.51 2'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 711.4
INV. = 706.90

21 L.F.–12" R.C.P.
TY. 1 @ 0.95%

STA. 43+57.6, 35.0' RT.
STM. MH. NO.55 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 715.6
INV. = 710.10

28 L.F.–12" R.C.P.
TY. 1 @ 0.71%

STM. MH. NO.157 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 718.0
INV. = 713.80 S
709.00 N

106 L.F.–12" R.C.P.
TY. 1 @ 3.49%

STA. 40+45.0, 15.0' RT. (B/C)
CATCH BASIN NO.50 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 711.4
INV. = 706.70

33 L.F.–12" R.C.P.
TY. 1 @ 1.82%

INLET NO.21 2'ø
TY. A w/TY. 8 GR.
RIM = 707.9
INV. = 703.70

STA. 28+36.1, 35.0' RT.
STM. MH. NO.49 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 711.9
INV. = 706.10

115 L.F.–12" R.C.P.
TY. 1 @ 2.97%
(DESIGNED TO CONVEY 100YR FLOW)

INLET NO.20 3'ø
TY. B w/TY. 8 GR.
RIM = 702.8
INV. = 700.29 N
700.09 S

35 L.F.–15" R.C.P.
TY. 1 @ 0.37%
(DESIGNED TO CONVEY 100YR FLOW)

STM. MH. NO.19 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 703.0
INV. = 699.96

77 L.F.–18" R.C.P.
TY. 1 @ 0.25%
(DESIGNED TO CONVEY 100YR FLOW)

STM. MH. NO.18 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 703.0
INV. = 699.77

78 L.F.–12" R.C.P.
TY. 1 @ 2.95%

STM. MH. NO.158 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 720.5
INV. = 716.10

140 L.F.–12" R.C.P.
TY. 1 @ 0.50%

STA. 14+34.0, 15.0' RT. (B/C)
CATCH BASIN NO.159 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 721.5
INV. = 716.80

INLET NO.59 2'ø
TY. A w/TY. 8 GR.
RIM = 716.7
INV. = 712.50

87 L.F.–12" R.C.P.
TY. 1 @ 0.92%

INLET NO.58 2'ø
TY. A w/TY. 8 GR.
RIM = 715.9
INV. = 711.70

132 L.F.–15" R.C.P.
TY. 1 @ 1.40%

135 L.F.–12" R.C.P.
TY. 1 @ 0.52%

125 L.F.–15" R.C.P.
TY. 1 @ 0.56%

113 L.F.–21" R.C.P.
TY. 1 @ 0.71%

STM. MH. NO.53 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 711.6
INV. = 706.85 W
707.05 E

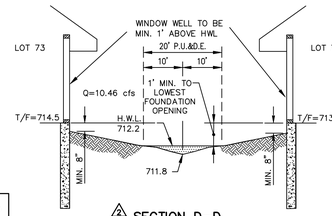
75 L.F.–12" R.C.P.
TY. 1 @ 1.33%

STA. 27+11.1, 35.0' RT.
STM. MH. NO.48 5'ø
TY. A w/TY. I FR. & C.L.
RIM = 710.5
INV. = 705.40 N
705.05 E,S

STM. MH. NO.52 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 710.8
INV. = 706.05 E
705.85 W

78 L.F.–18" R.C.P.
TY. 1 @ 1.03%

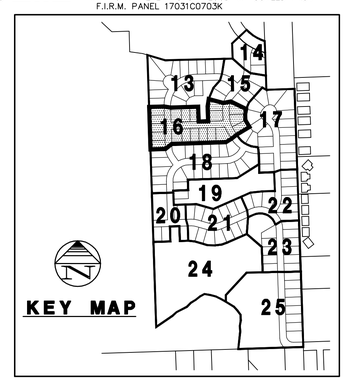
STM. MH. NO.54 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 714.9
INV. = 709.40 N
710.70 E
708.90 W



SECTION D–D
(N.T.S.)

DRAINAGE & GRADING NOTES

1. ELEVATIONS SHOWN FOR ALL CURB INLETS, CATCH BASINS, AND MANHOLES ARE TOP OF CURB.
2. ALL CURBS SHALL BE BACKFILLED TO WITHIN 6 INCHES OF THE TOP OF CURB.
3. ALL BACK YARD SWALES SHALL BE CUT OR FILLED 6 INCHES BELOW FINISHED GRADE.
4. ALL ON–SITE FIELD TILES NEED TO BE REMOVED COMPLETELY. ANY EXISTING DRAINAGE TILES ENCOUNTERED DURING CONSTRUCTION SERVING UPSTREAM PROPERTIES SHALL BE PRESERVED AND TIED INTO THE PROPOSED STORM SEWER. ANY FIELD TILES EXITING THE SITE MUST BE PLUGGED AT THE UPSTREAM END.
5. T/F – INDICATES PROPOSED TOP OF FOUNDATION ELEVATIONS.
6. THE TOP OF WINDOW WELLS SHALL BE CONSTRUCTED NO LOWER THAN 0.3 FEET BELOW THE TOP OF FOUNDATION ELEVATION (T/F) UNLESS OTHERWISE NOTED ON OVERFLOW CROSS–SECTIONS. ANY WINDOW WELLS ADJACENT TO DETENTION BASINS OR OVERFLOW ROUTES MUST BE MINIMUM 12" ABOVE H.W.L.
7. THE FINISHED TOPSOIL ELEVATION AT THE FOUNDATION SHOULD GENERALLY BE 0.7 FEET BELOW THE TOP OF FOUNDATION ELEVATION UNLESS INDICATED OTHERWISE.
8. D.S. – INDICATES DROP SIDING IS SUGGESTED TO MINIMIZE REAR YARD SLOPES. DROP SIDING MAY OR MAY NOT BE NECESSARY ALONG THE SIDE YARDS OF THE HOMES DEPENDING ON PLACEMENT OF HOME AND CHOICE OF MODEL. INDIVIDUAL SITE PLANS MUST HAVE A MAXIMUM OF 4:1 SIDE SLOPE FROM FINISHED GRADE AT FOUNDATION TO SIDE LOT LINE. DROP SIDING CAN BE MODIFIED AS NECESSARY AS LONG AS POSITIVE DRAINAGE IS ACHIEVED.
9. – INDICATES AN AVERAGE BUILDING PRODUCT ENVELOPE. (SEE MASS EARTHWORK SECTION FOR BUILDING PAD DETAILS.)
10. – ACCENTED SIDES OF PROPOSED HOUSE FOUNDATIONS ARE INTENDED TO INDICATE THE APPROXIMATE LOCATION WHERE A LOOK–OUT OR WALK–OUT BASEMENT MAY BE CONSTRUCTED OR TO INDICATE THAT SPECIAL CONSTRUCTION MEASURES MUST BE EMPLOYED IN ORDER TO MINIMIZE SIDE YARD, REAR YARD AND / OR FRONT YARD GRADIENTS (E.G. DROPPED SIDING, STEPPED FOUNDATION, RETAINING WALL, ETC.) – SEE NOTES ABOVE FOR FURTHER DETAILS.
11. – WATERMAIN PROTECTION (SEE "CONSTRUCTION SPECIFICATIONS–GENERAL NOTES" SHEETS FOR DETAILS.)
12. – INDICATES THE LOCATION AND DIRECTION OF OVERLAND DRAINAGE, ASSUMING STORM SEWER IS FULL OR IS BLOCKED. THAT MUST BE RESPECTED IN ALL FINAL GRADING OPERATIONS (SEE DETAIL).
13. – DENOTES AREA WHERE GRANULAR TRENCH BACKFILL IS REQUIRED.
14. +XXX.X – INDICATES EXISTING ELEVATION.
15. – INDICATES DRIVEWAY LOCATION.
16. – INDICATES PVC SUMP DRAIN CONDUIT FOR BASEMENT FOUNDATIONS.
17. – INDICATES 8' BITUMINOUS PATH (UNLESS OTHERWISE SHOWN)
18. – INDICATES REVERSE PITCH GUTTER FLAG.
19. – INDICATES DEPRESSED CURB.
20. – INDICATES M3.12 CURB & GUTTER
21. – INDICATES B–6.12 CURB & GUTTER.
22. – EXISTING DRAIN TILE
23. – INDICATES TREES TO BE PRESERVED IF IN GOOD CONDITION; SEE LANDSCAPE PLANS FOR FURTHER INFORMATION.
24. MAXIMUM SIDE SLOPE OF A LANDSCAPE BERM SHALL BE 4:1
25. – DENOTES DETECTABLE WARNING STRIP
26. XX' MIN. – MAXIMUM DRIVEWAY SLOPE IS 8%. SOME BUILDINGS WILL NEED TO BE MOVED BACK FROM R.O.W. THE INDICATED AMOUNT TO MEET THE SLOPE REQUIREMENTS
27. – DENOTES WHERE SIDEWALK IS LOWER THAN CURB
28. – CLAY COLLAR BULKHEAD REQUIRED FOR ALL SIDEYARD STORM SEWER. (SEE "DRAINAGE STRUCTURE DETAILS" SHEET)
29. ALL SIDEWALK RAMPS ARE REQUIRED TO BE CONSTRUCTED TO MEET AMERICAN DISABILITY ACT GUIDELINES. IT IS THE RESPONSIBILITY OF THE CURB CONTRACTOR TO ENSURE THIS IS MET. ANY RAMPS OUT OF TOLERANCE WILL HAVE TO BE REMOVED AND REPLACED.
30. – 50' WETLAND BUFFER
31. – APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K
32. – APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO
33. – APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K



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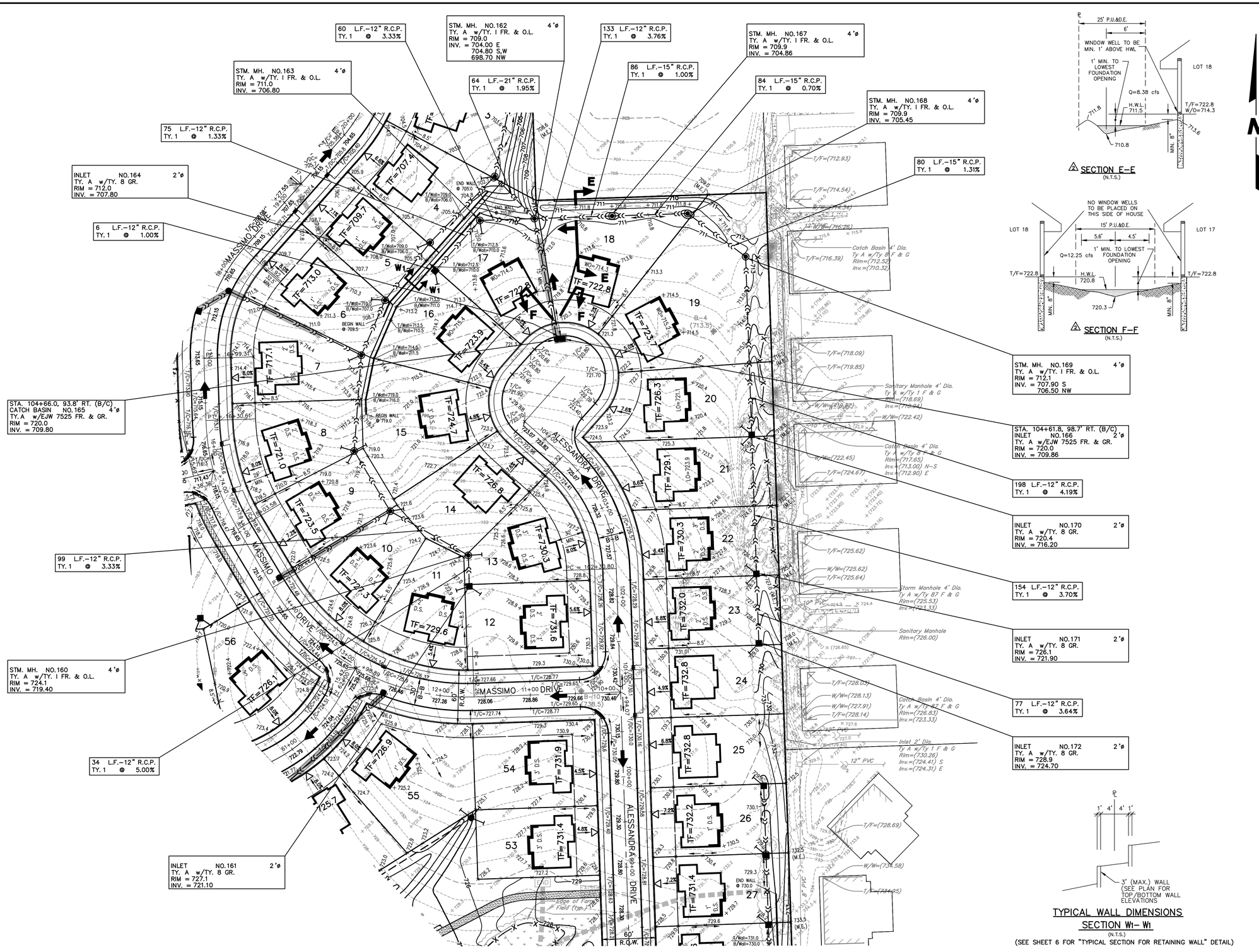
REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			

DRAINAGE AND GRADING PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRGRADE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 16 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	

PLOT FILE CREATED: 9/3/2025 7:22 AM BY: LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:00 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRGRADE.DWG



SECTION E–E
(N.T.S.)

SECTION F–F
(N.T.S.)

TYPICAL WALL DIMENSIONS
SECTION W1– W1
(N.T.S.)

(SEE SHEET 6 FOR "TYPICAL SECTION FOR RETAINING WALL" DETAIL)

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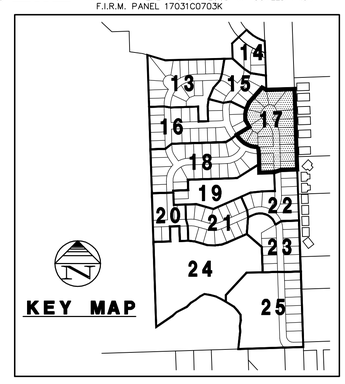

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NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
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ESTATES AT RAVINIA MEADOW

FILE NAME: OVRGRADE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 17 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	

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STA. 25+50.0, 15.0' RT. (B/C)
CATCH BASIN NO.45 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 708.6
INV. = 703.60

21 L.F.–15" R.C.P.
TY. 1 @ 1.67%

54 L.F.–21" R.C.P.
TY. 1 @ 0.93%

85 L.F.–21" R.C.P.
TY. 1 @ 0.88%

STA. 25+50.0, 35.0' RT.
STM. MH. NO.44 5'ø
TY. A w/TY. I FR. & C.L.
RIM = 709.2
INV. = 703.25 SW
703.80 SE,NW

68 L.F.–24" R.C.P.
TY. 1 @ 1.01%

164 L.F.–12" R.C.P.
TY. 1 @ 2.32%

STA. 12+60.6, 15.0' LT. (B/C)
CATCH BASIN NO.39 2'ø
TY.C w/EJW 7525 FR. & GR.
RIM = 726.2
INV. = 722.00

STA. 26+50.0, 35.0' RT.
STM. MH. NO.47 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 710.0
INV. = 704.55

77 L.F.–21" R.C.P.
TY. 1 @ 0.21%
(DESIGNED TO CONVEY 100YR FLOW)

STM. MH. NO.17 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 703.0
INV. = 699.61

84 L.F.–21" R.C.P.
TY. 1 @ 0.20%
(DESIGNED TO CONVEY 100YR FLOW)

STM. MH. NO.16 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 703.0
INV. = 699.44 N
699.24 S

88 L.F.–24" R.C.P.
TY. 1 @ 0.10%
(DESIGNED TO CONVEY 100YR FLOW)

STM. MH. NO.15 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 703.0
INV. = 699.15

154 L.F.–24" R.C.P.
TY. 1 @ 0.10%
(DESIGNED TO CONVEY 100YR FLOW)

28 L.F.–15" R.C.P.
TY. 1 @ 0.36%

153 L.F.–24" R.C.P.
TY. 1 @ 1.18%

135 L.F.–12" R.C.P.
TY. 1 @ 1.41%

138 L.F.–12" R.C.P.
TY. 1 @ 2.39%

STA. 60+61.2, 35.0' RT.
STM. MH. NO.38 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 722.4
INV. = 718.20

STA. 59+34.7, 15.0' RT. (B/C)
CATCH BASIN NO.36 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 718.5
INV. = 713.60

STA. 25+50.0, 15.0' LT. (B/C)
INLET NO.46 3'ø
TY. B w/EJW 7525 FR. & GR.
RIM = 708.6
INV. = 703.70

STA. 55+84.9, 15.0' RT. (B/C)
CATCH BASIN NO.43 5'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 709.8
INV. = 703.11

28 L.F.–12" R.C.P.
TY. 1 @ 0.71%

STA. 59+34.7, 15.0' LT. (B/C)
INLET NO.37 2'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 718.5
INV. = 713.80

21 L.F.–12" R.C.P.
TY. 1 @ 0.95%

STA. 59+34.7, 35.0' RT.
STM. MH. NO.35 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 719.1
INV. = 713.40 N,S
714.90 E

LORENZO LANE
MASSIMO DRIVE
OUTLOT C
SHERIDAN ROAD
LORENZO

DRAINAGE & GRADING NOTES

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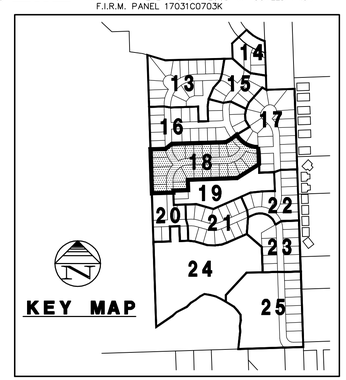

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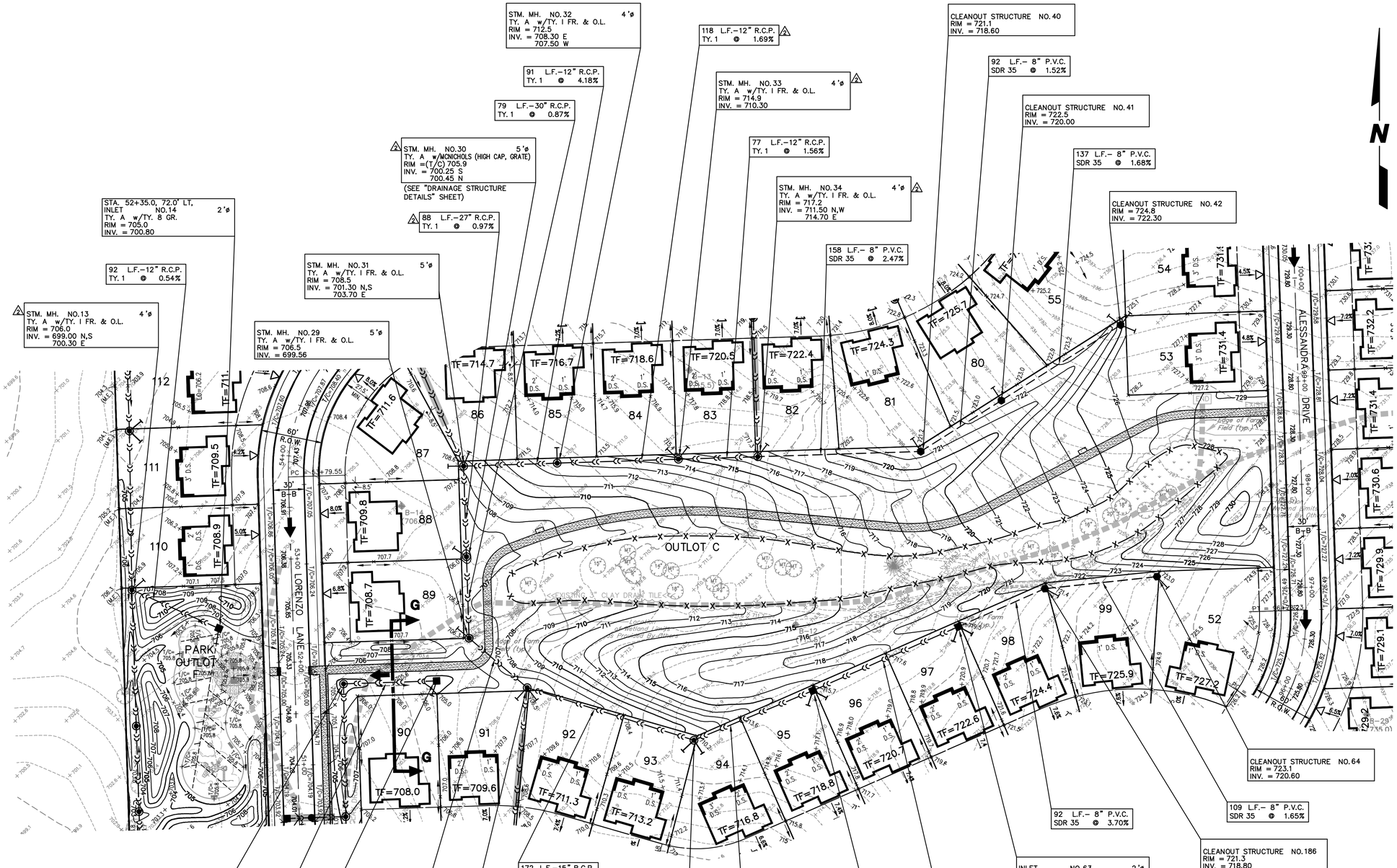
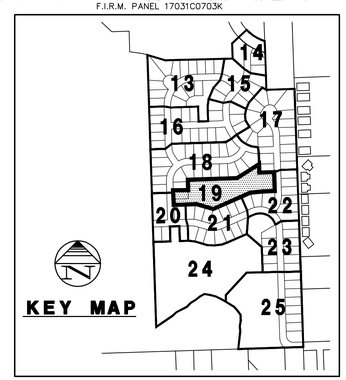
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	18 of 39

PLOT FILE CREATED: 9/3/2025 7:22 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 6/25/2025 2:00 PM BY LESLIE DRAWING PATH: P:\402170\DWGS\ENG\DRAWINGS\FINAL DRAFTING\OVRGRADE.DWG



WINDOW WELL TO BE MIN. 1' ABOVE HWL
NO WINDOW WELLS TO BE PLACED ON THIS SIDE OF HOUSE
LOT 89
LOT 90
OUTLOT C
52.77' P.U.&D.E.
10' P.U.&D.E.
13.1'
32.4'
Q=43.68 cfs
1' MIN. TO LOWEST FOUNDATION OPENING
T/F=708.7
T/F=708.0
H.W.L. 706.5
705.6
MIN. 8'
MIN. 8'

SECTION G–G
(N.T.S.)



DRAINAGE & GRADING NOTES

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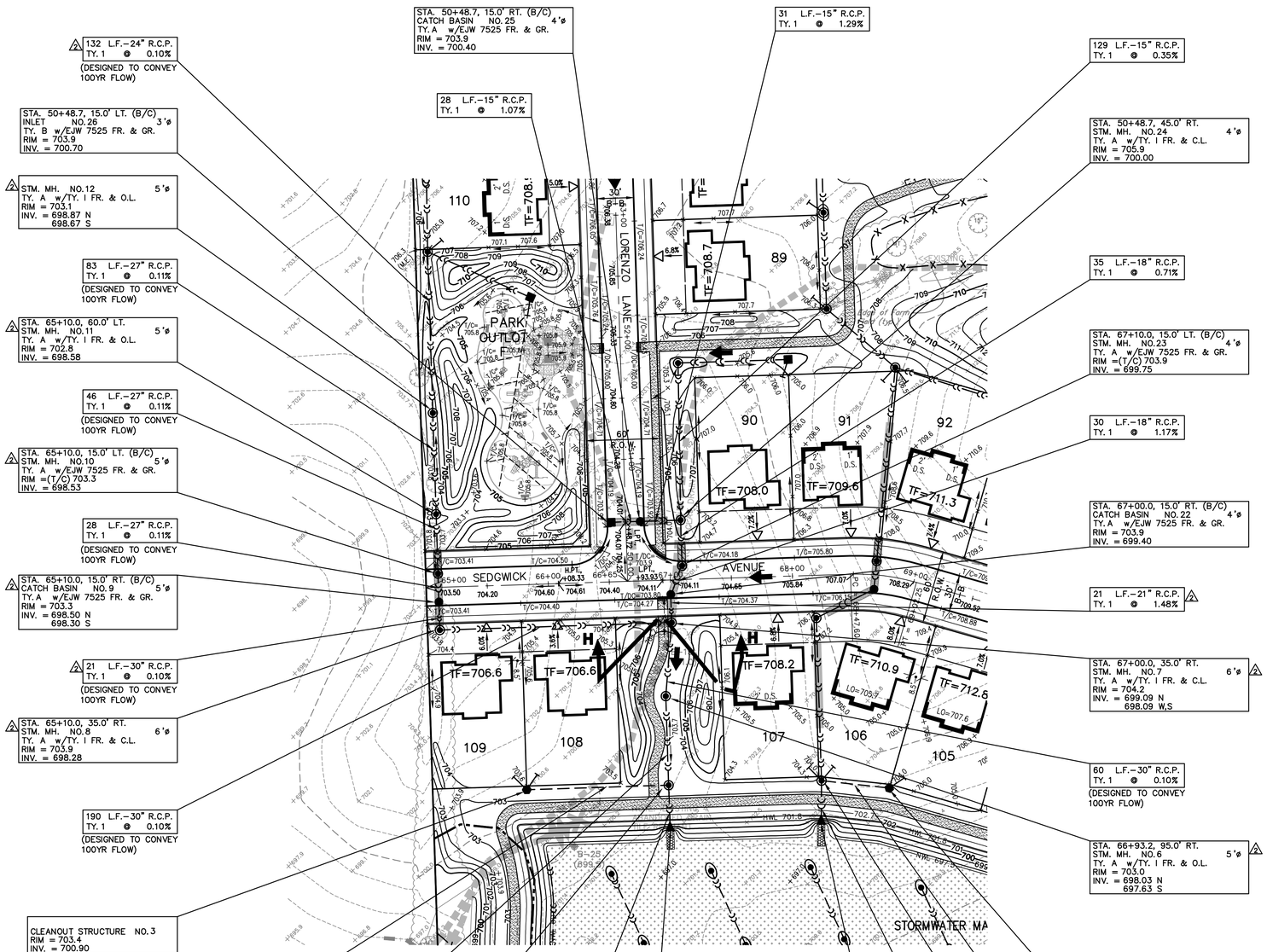
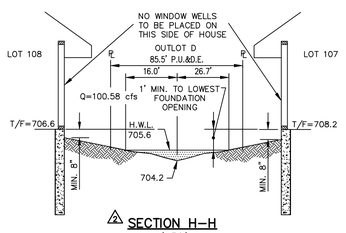
REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			

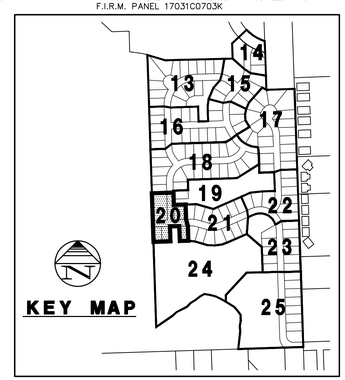
DRAINAGE AND GRADING PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRGRADE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	19 of 39





SECTION H–H
(N.T.S.)



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DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	20 of 39

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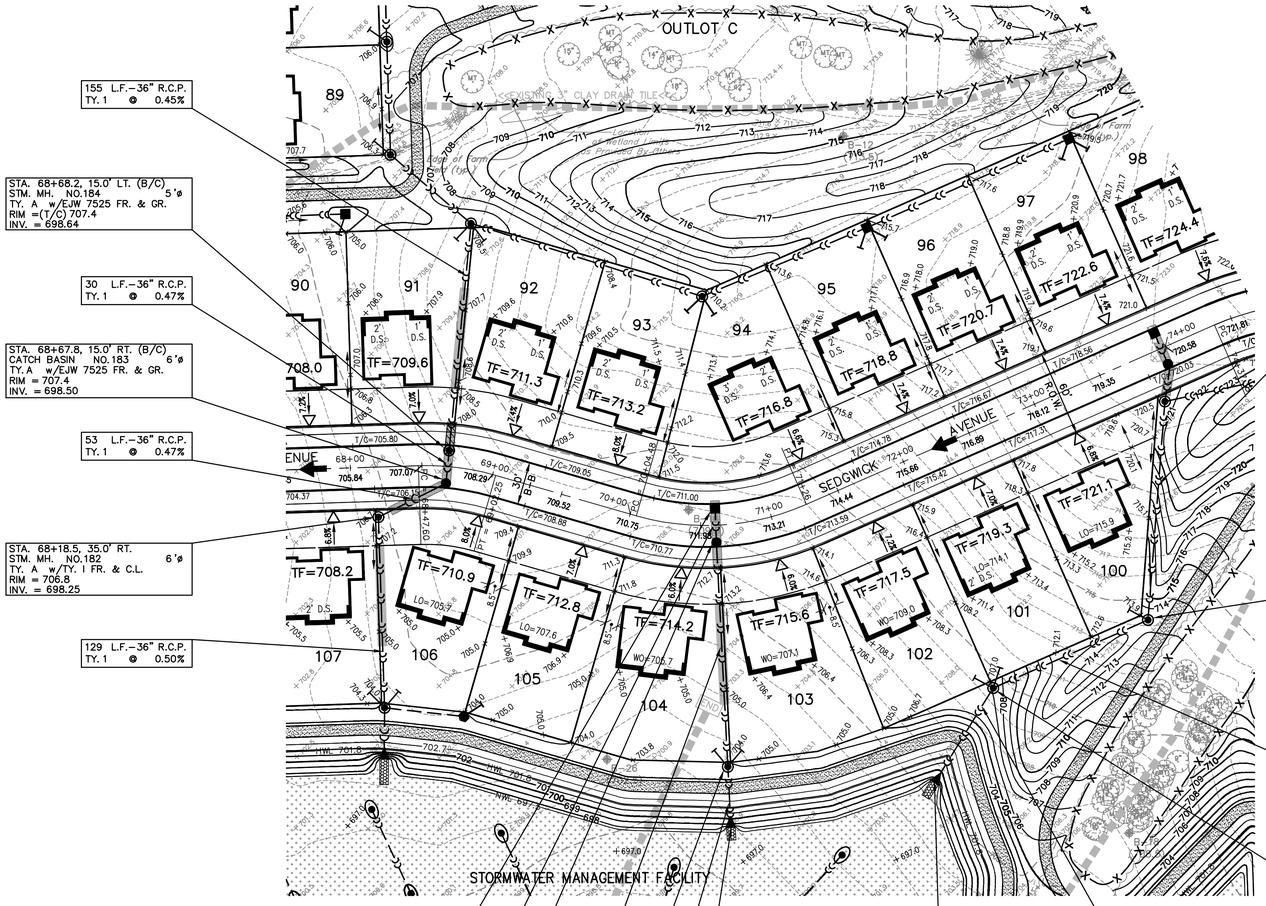

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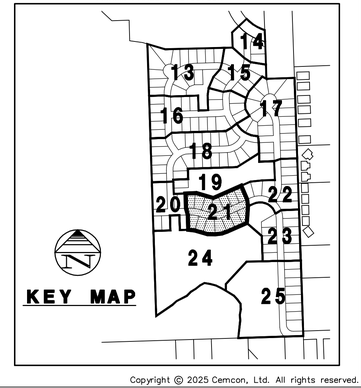

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DRAINAGE AND GRADING PLAN

ESTATES AT RAVINIA MEADOW

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DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	21 of 39

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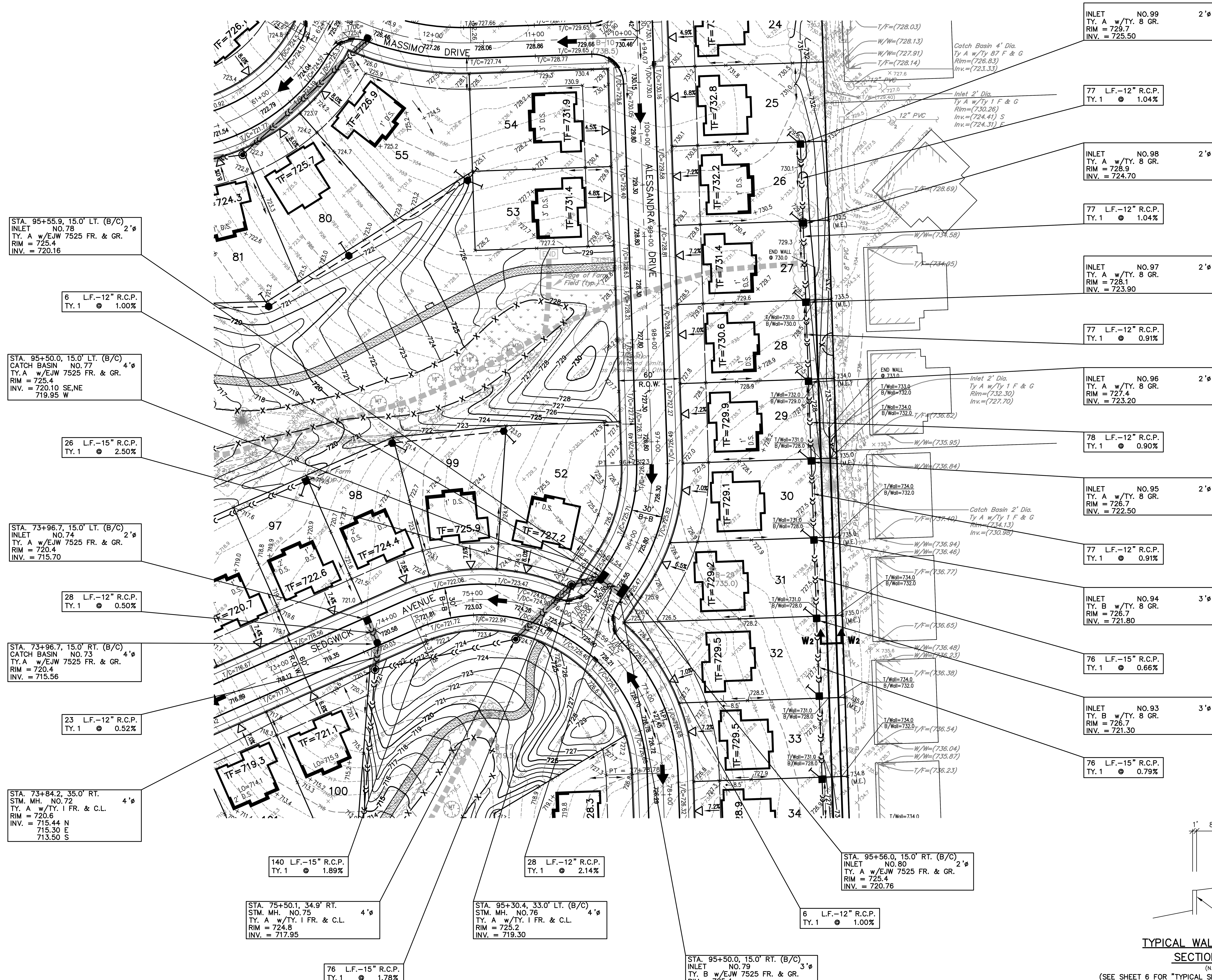

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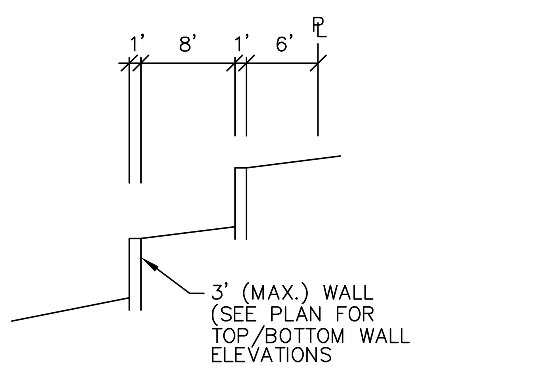
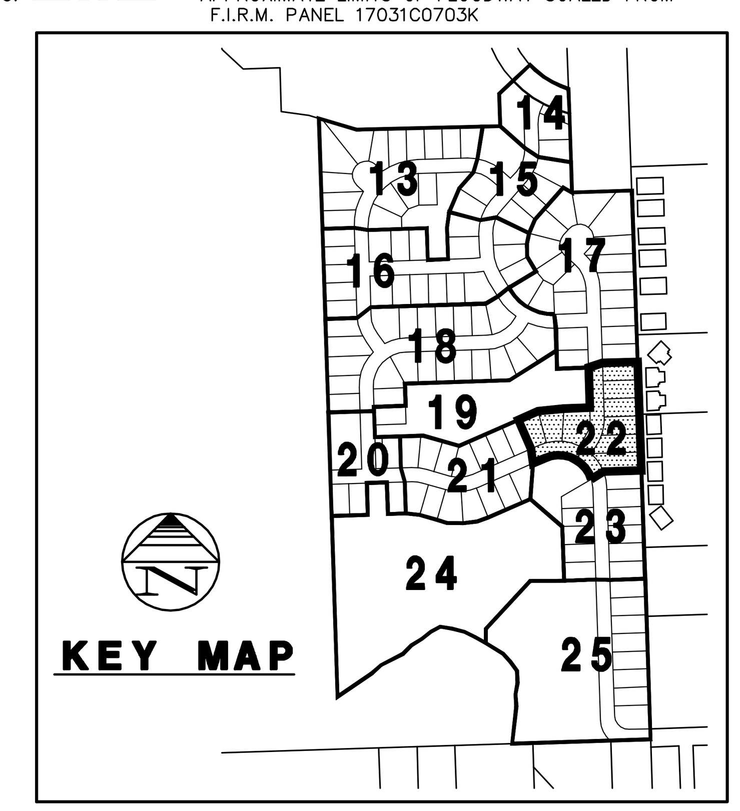


TYPICAL WALL DIMENSIONS
SECTION W2– W2
(N.T.S.)
(SEE SHEET 6 FOR "TYPICAL SECTION FOR RETAINING WALL" DETAIL)



KEY MAP

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PREPARED FOR:
PULTE HOME COMPANY, LLC
1900 E. GOLF ROAD, SUITE 300
SCHAUMBURG, IL 60173
(847) 230–5400

PREPARED BY:
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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

DRAINAGE AND GRADING PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRGRADE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 22 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	

PLOT FILE CREATED: 9/3/2025 7:23 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:00 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRGRADE.DWG

INLET NO. 92 3'ø
TY. B w/TY. 8 GR.
RIM = 726.7
INV. = 720.70

81 L.F.–15" R.C.P.
TY. 1 @ 1.17%

INLET NO. 91 3'ø
TY. B w/TY. 8 GR.
RIM = 726.5
INV. = 719.75

77 L.F.–15" R.C.P.
TY. 1 @ 1.49%

INLET NO. 90 3'ø
TY. B w/TY. 8 GR.
RIM = 725.7
INV. = 718.60

154 L.F.–15" R.C.P. (2)
TY. 1 @ 1.56%

STM. MH. NO. 89 4'ø (2)
TY. A w/TY. I FR. & O.L.
RIM = 722.5
INV. = 716.20 N
716.00 S

150 L.F.–18" R.C.P.
TY. 1 @ 1.07%

STM. MH. NO. 88 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 719.5
INV. = 714.40

CLEANOUT STRUCTURE NO. 85
RIM = 717.3
INV. = 714.80

154 L.F.– 8" P.V.C.
SDR 35 @ 1.43%

(2) STM. MH. NO. 84 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 715.1
INV. = 712.60

(2) 150 L.F.–12" R.C.P.
TY. 1 @ 1.33%

(2) 125 L.F.–12" R.C.P.
TY. 1 @ 1.00%

(2) STM. MH. NO. 83 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 713.1
INV. = 710.60

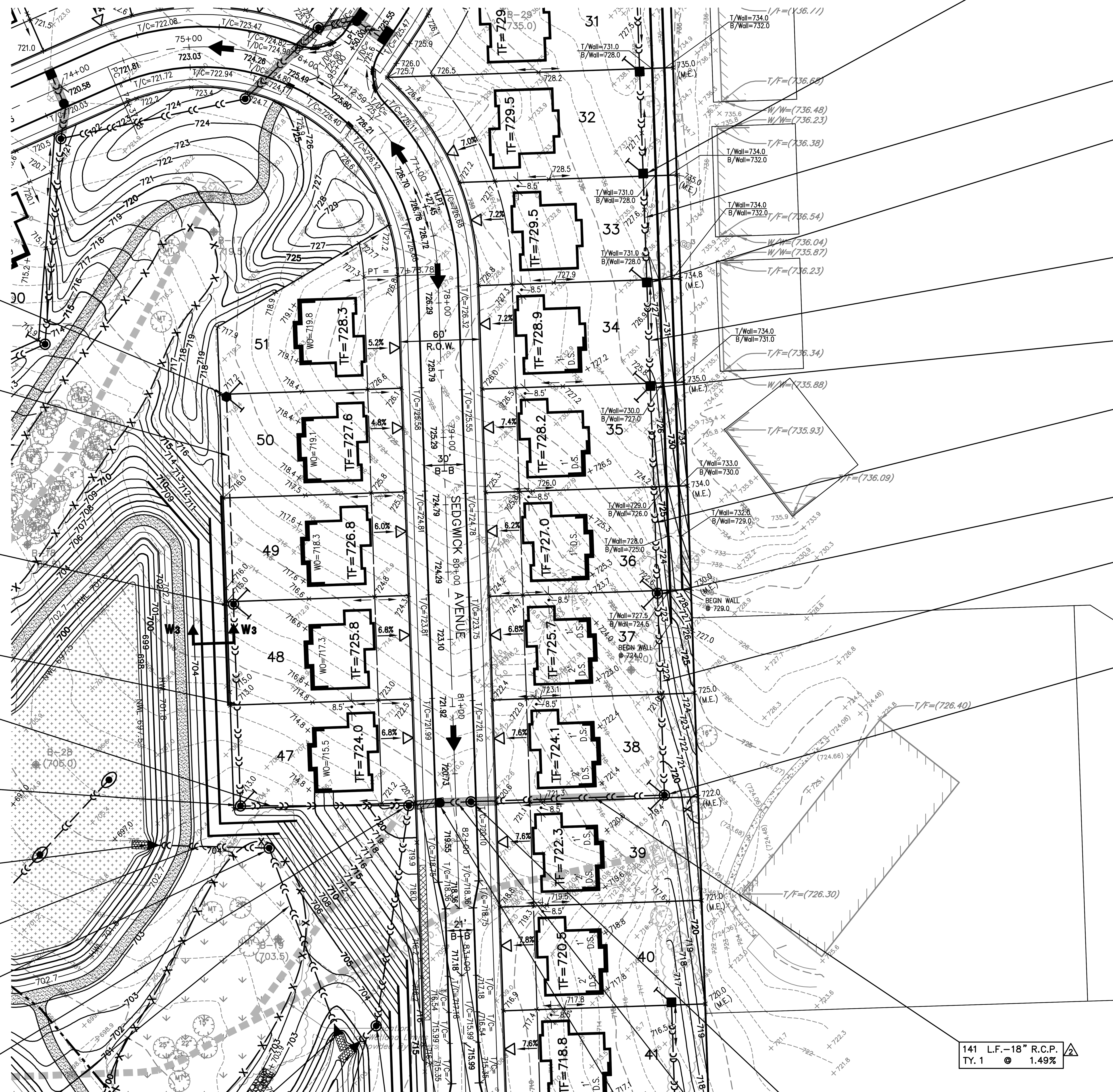
STA. 81+95.0, 229.6' RT.
FLARED END SECTION NO. 176
21" R.C.P. w/GRATE
F.L. = 697.50
(w/ 6'x12' RENO MATTRESS)

90 L.F.–21" R.C.P.
TY. 1 @ 0.21%

STA. 82+00.4, 139.8' RT.
STM. MH. NO. 177 5'ø
TY. A w/TY. I FR. & C.L.
RIM = 705.1
INV. = 697.69

STA. 81+72.4, 35.0' RT.
STM. MH. NO. 82 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 720.8
INV. = 711.50 E
700.50 S
709.35 W

148 L.F.–21" R.C.P.
TY. 1 @ 0.21%



STA. 83+40.7, 93.2' RT.
FLARED END SECTION NO. 178
21" R.C.P. w/GRATE
F.L. = 698.0
(w/ 6'x12' RENO MATTRESS)

STA. 83+51.6, 83.1' RT.
FLARED END SECTION NO. 179
21" R.C.P. w/GRATE
F.L. = 698.00
(w/ 6'x12' RENO MATTRESS)

25 L.F.–21" R.C.P.
TY. 1 @ 1.40%

STA. 83+35.0, 64.9' RT.
STM. MH. NO. 81 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 703.0
INV. = 698.35

165 L.F.–21" R.C.P.
TY. 1 @ 1.30%

21 L.F.–21" R.C.P.
TY. 1 @ 1.43%

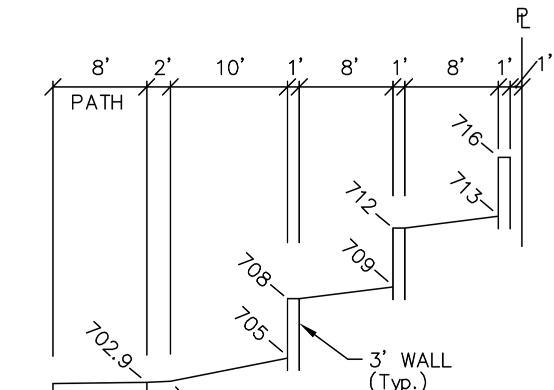
(3)(4) NECK DOWN ROADWAY FOR TRAFFIC CALMING

28 L.F.–21" R.C.P.
TY. 1 @ 1.07%

STA. 81+71.1, 15.0' RT. (B/C)
CATCH BASIN NO. 86 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 720.1
INV. = 711.80

STA. 81+71.1, 15.0' LT. (B/C) (2)
STM. MH. NO. 87 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM = (T/C) 720.1
INV. = 712.30 E
712.10 W

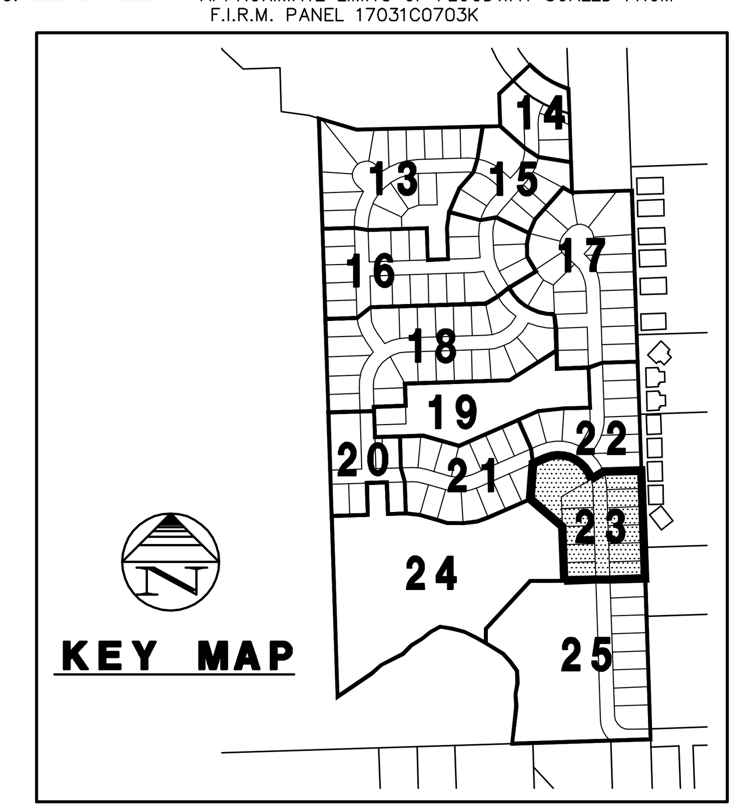
141 L.F.–18" R.C.P. (2)
TY. 1 @ 1.49%



TYPICAL WALL DIMENSIONS/ELEVATIONS SECTION W3–W3
(N.T.S.)
(SEE SHEET 6 FOR "TYPICAL SECTION FOR RETAINING WALL" DETAIL)

DRAINAGE & GRADING NOTES

1. ELEVATIONS SHOWN FOR ALL CURB INLETS, CATCH BASINS, AND MANHOLES ARE TOP OF CURB.
2. ALL CURBS SHALL BE BACKFILLED TO WITHIN 6 INCHES OF THE TOP OF CURB.
3. ALL BACK YARD SWALES SHALL BE CUT OR FILLED 6 INCHES BELOW FINISHED GRADE.
4. ALL ON-SITE FIELD TILES NEED TO BE REMOVED COMPLETELY. ANY EXISTING DRAINAGE TILES ENCOUNTERED DURING CONSTRUCTION SERVING UPSTREAM PROPERTIES SHALL BE PRESERVED AND TIED INTO THE PROPOSED STORM SEWER. ANY FIELD TILES EXITING THE SITE MUST BE PLUGGED AT THE UPSTREAM END.
5. T/F – INDICATES PROPOSED TOP OF FOUNDATION ELEVATIONS.
6. THE TOP OF WINDOW WELLS SHALL BE CONSTRUCTED NO LOWER THAN 0.3 FEET BELOW THE TOP OF FOUNDATION ELEVATION (T/F) UNLESS OTHERWISE NOTED ON OVERFLOW CROSS-SECTIONS. ANY WINDOW WELLS ADJACENT TO DETENTION BASINS OR OVERFLOW ROUTES MUST BE MINIMUM 12" ABOVE H.W.L.
7. THE FINISHED TOPSOIL ELEVATION AT THE FOUNDATION SHOULD GENERALLY BE 0.7 FEET BELOW THE TOP OF FOUNDATION ELEVATION UNLESS INDICATED OTHERWISE.
8. D.S. – INDICATES DROP SIDING IS SUGGESTED TO MINIMIZE REAR YARD SLOPES. DROP SIDING MAY OR MAY NOT BE NECESSARY ALONG THE SIDE YARDS OF THE HOMES DEPENDING ON PLACEMENT OF HOME AND CHOICE OF MODEL. INDIVIDUAL SITE PLANS MUST HAVE A MAXIMUM OF 4:1 SIDE SLOPE FROM FINISHED GRADE AT FOUNDATION TO SIDE LOT LINE. DROP SIDING CAN BE MODIFIED AS NECESSARY AS LONG AS POSITIVE DRAINAGE IS ACHIEVED.
9. – INDICATES AN AVERAGE BUILDING PRODUCT ENVELOPE. (SEE MASS EARTHWORK SECTION FOR BUILDING PAD DETAILS.)
10. – ACCENTED SIDES OF PROPOSED HOUSE FOUNDATIONS ARE INTENDED TO INDICATE THE APPROXIMATE LOCATION WHERE A LOOK-OUT OR WALK-OUT BASEMENT MAY BE CONSTRUCTED OR TO INDICATE THAT SPECIAL CONSTRUCTION MEASURES MUST BE EMPLOYED IN ORDER TO MINIMIZE SIDE YARD, REAR YARD AND / OR FRONT YARD GRADIENTS (E.G. DROPPED SIDING, STEPPED FOUNDATION, RETAINING WALL, ETC.) – SEE NOTES ABOVE FOR FURTHER DETAILS.
11. – WATERMAIN PROTECTION (SEE "CONSTRUCTION SPECIFICATIONS–GENERAL NOTES" SHEETS FOR DETAILS.)
12. – INDICATES THE LOCATION AND DIRECTION OF OVERLAND DRAINAGE, ASSUMING STORM SEWER IS FULL OR IS BLOCKED, THAT MUST BE RESPECTED IN ALL FINAL GRADING OPERATIONS (SEE DETAIL).
13. – DENOTES AREA WHERE GRANULAR TRENCH BACKFILL IS REQUIRED.
14. XXX.X – INDICATES EXISTING ELEVATION.
15. – INDICATES DRIVEWAY LOCATION.
16. – INDICATES PVC SUMP DRAIN CONDUIT FOR BASEMENT FOUNDATIONS.
17. – INDICATES 8' BITUMINOUS PATH (UNLESS OTHERWISE SHOWN)
18. – INDICATES REVERSE PITCH GUTTER FLAG.
19. – INDICATES DEPRESSED CURB.
20. – INDICATES M3.12 CURB & GUTTER
21. – INDICATES B–6.12 CURB & GUTTER.
22. – EXISTING DRAIN TILE
23. – INDICATES TREES TO BE PRESERVED IF IN GOOD CONDITION; SEE LANDSCAPE PLANS FOR FURTHER INFORMATION.
24. MAXIMUM SIDE SLOPE OF A LANDSCAPE BERM SHALL BE 4:1
25. – DENOTES DETECTABLE WARNING STRIP
26. XX' MIN. – MAXIMUM DRIVEWAY SLOPE IS 8%. SOME BUILDINGS WILL NEED TO BE MOVED BACK FROM R.O.W. THE INDICATED AMOUNT TO MEET THE SLOPE REQUIREMENTS
27. – DENOTES WHERE SIDEWALK IS LOWER THAN CURB
28. – CLAY COLLAR BULKHEAD REQUIRED FOR ALL SIDEYARD STORM SEWER. (SEE "DRAINAGE STRUCTURE DETAILS" SHEET)
29. ALL SIDEWALK RAMPS ARE REQUIRED TO BE CONSTRUCTED TO MEET AMERICAN DISABILITY ACT GUIDELINES. IT IS THE RESPONSIBILITY OF THE CURB CONTRACTOR TO ENSURE THIS IS MET. ANY RAMPS OUT OF TOLERANCE WILL HAVE TO BE REMOVED AND REPLACED.
30. – 50' WETLAND BUFFER
31. – APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K
32. – APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO
33. – APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K



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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
3	06–26–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			
4	07–22–25/LAL	REVISED PER VILLAGE COMMENTS DATED 7/17/25			

DRAINAGE AND GRADING PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRGRADE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	23 of 39

PLOT FILE CREATED: 9/3/2025 7:23 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:00 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRGRADE.DWG

82 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

139 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

150 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

OBSERVATION WELL (TYP.)

116 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

196 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

200 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

188 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

NOTE: EXISTING 5" CLAY DRAIN TILE EGRESSES PROPERTY LIMIT AND CONTINUES TO OFF-SITE OUTFALL SYSTEM.

412 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

FLARED END SECTION NO. 173
15" R.C.P. w/GRATE
F.L. = 697.50
(w/ 6'x12' RENO MATTRESS)

39 L.F.–15" R.C.P.
TY. 1 @ 3.85%

CATCH BASIN NO.174 6'ø
TY. A w/7"&11" RESTRICTOR
w/TY. 1 FR. & C.L.
RIM = 703.9
INV. = 696.00 N
695.50 S
695.50 E,W (4")
(SEE DRAINAGE STRUCTURE DETAILS)

41 L.F.–15" R.C.P.
TY. 1 @ 1.22%

FLARED END SECTION NO. 175
15" R.C.P. w/GRATE
F.L. = 695.00
(w/ 6'x12' RENO MATTRESS)

STORMWATER MANAGEMENT FACILITY
OUTLOT D

50' WETLAND BUFFER (TYP.)

EXISTING DRAIN TILE SYSTEMS DISCHARGE TO CREEK

STONE RIP RAP
SEE "DETENTION BASIN OVERFLOW SWALE" DETAIL ON DRAINAGE STRUCTURE DETAILS SHEET.

APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO

APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K

VOLUME CONTROL AREA TO UTILIZE 12" OF GROWING MEDIA. SEE DETAIL ON "DRAINAGE STRUCTURE DETAILS" SHEET AND LANDSCAPE PLANS FOR FURTHER DETAILS.

STORMWATER MANAGEMENT FACILITY NO. 001
N.W.L. = 697.5
H.W.L. = 701.8
STORMWATER STORAGE REQUIRED = 16.53 Ac-FT
STORMWATER STORAGE PROVIDED @ 702.5 = 19.87 Ac-FT

557 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

151 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

147 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

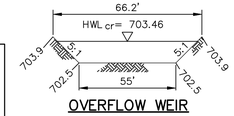
133 L.F.– 4" PIPE UNDERDRAIN @ 0.00%

VOLUME CONTROL REQUIRED = 1.34 Ac-FT
VOLUME CONTROL PROVIDED = 1.84 Ac-FT

SEDGWICK 89+00 AVENUE

91+00

Q_{cr}=139.96 cfs
Q_{ca}=245.99 cfs (@ ELEV.=703.9)



OVERFLOW WEIR SECTION *A1–A1*
(N.T.S.)

* WEIR NOT ACCESSED BY 100 YEAR STORM
Q_{cr} – INDICATES PEAK TRIBUTARY FLOW ASSUMING FULL POND AND/OR BLOCKED RESTRICTOR.

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7. THE FINISHED TOPSOIL ELEVATION AT THE FOUNDATION SHOULD GENERALLY BE 0.7 FEET BELOW THE TOP OF FOUNDATION ELEVATION UNLESS INDICATED OTHERWISE.
8. D.S. – INDICATES DROP SIDING IS SUGGESTED TO MINIMIZE REAR YARD SLOPES. DROP SIDING MAY OR MAY NOT BE NECESSARY ALONG THE SIDE YARDS OF THE HOMES DEPENDING ON PLACEMENT OF HOME AND CHOICE OF MODEL. INDIVIDUAL SITE PLANS MUST HAVE A MAXIMUM OF 4:1 SIDE SLOPE FROM FINISHED GRADE AT FOUNDATION TO SIDE LOT LINE. DROP SIDING CAN BE MODIFIED AS NECESSARY AS LONG AS POSITIVE DRAINAGE IS ACHIEVED.
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13. – DENOTES AREA WHERE GRANULAR TRENCH BACKFILL IS REQUIRED.
14. +XXX.X – INDICATES EXISTING ELEVATION.
15. – INDICATES DRIVEWAY LOCATION.
16. – INDICATES PVC SUMP DRAIN CONDUIT FOR BASEMENT FOUNDATIONS.
17. – INDICATES 8' BITUMINOUS PATH (UNLESS OTHERWISE SHOWN)
18. – INDICATES REVERSE PITCH GUTTER FLAG.
19. – INDICATES DEPRESSED CURB.
20. – INDICATES M3.12 CURB & GUTTER
21. – INDICATES B-6.12 CURB & GUTTER.
22. – EXISTING DRAIN TILE
23. – INDICATES TREES TO BE PRESERVED IF IN GOOD CONDITION; SEE LANDSCAPE PLANS FOR FURTHER INFORMATION.
24. MAXIMUM SIDE SLOPE OF A LANDSCAPE BERM SHALL BE 4:1
25. – DENOTES DETECTABLE WARNING STRIP
26. XX' / MIN. – MAXIMUM DRIVEWAY SLOPE IS 8%. SOME BUILDINGS WILL NEED TO BE MOVED BACK FROM R.O.W. THE INDICATED AMOUNT TO MEET THE SLOPE REQUIREMENTS
27. – DENOTES WHERE SIDEWALK IS LOWER THAN CURB
28. CC – CLAY COLLAR BULKHEAD REQUIRED FOR ALL SIDEYARD STORM SEWER. (SEE "DRAINAGE STRUCTURE DETAILS" SHEET)
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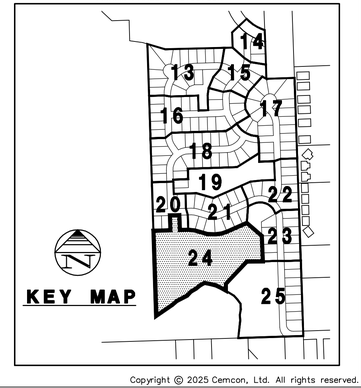
30. – 50' WETLAND BUFFER
31. – APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K
32. – APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO
33. – APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

KEY MAP



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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	05-16-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
1	07-22-25/LAL	REVISED PER VILLAGE COMMENTS DATED 7/17/25			

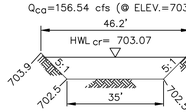
DRAINAGE AND GRADING PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRGRADE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70-71	SHEET NO. 24 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = 50'	

PLOT FILE CREATED: 9/3/2025 7:23 AM BY: LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:00 PM BY: LESLIE DRAWING PATH: P:\402170\ENGS\ENG\DRAWINGS\FINAL DRAFTING\OVRGRADE.DWG

STORMWATER MANAGEMENT FACILITY NO. 002B
N.W.L. = 698.0
H.W.L. = 701.9
STORMWATER STORAGE REQUIRED = 1.00 Ac-FT
STORMWATER STORAGE PROVIDED @ 702.5 = 1.28 Ac-FT

Q_{cr} =40.26 cfs
Q_{co}=156.54 cfs (@ ELEV.=703.9)



OVERFLOW WEIR SECTION B_1–B_1
(N.T.S.)

* WEIR NOT ACCESSED BY 100 YEAR STORM
Q_{cr} – INDICATES PEAK TRIBUTARY FLOW ASSUMING FULL POND AND/OR BLOCKED RESTRICTOR.

NECK DOWN ROADWAY FOR TRAFFIC CALMING

INLET NO.113 2'ø
TY. A w/TY. 8 GR.
RIM = 716.1
INV. = 711.90

81 L.F.–12" R.C.P.
TY. 1 @ 1.11%

INLET NO.112 2'ø
TY. A w/TY. 8 GR.
RIM = 715.2
INV. = 711.00

73 L.F.–12" R.C.P.
TY. 1 @ 1.92%

INLET NO.111 3'ø
TY. B w/TY. 8 GR.
RIM = 714.4
INV. = 709.60

77 L.F.–15" R.C.P.
TY. 1 @ 0.91%

INLET NO.110 3'ø
TY. B w/TY. 8 GR.
RIM = 713.7
INV. = 708.90

77 L.F.–15" R.C.P.
TY. 1 @ 1.17%

STA. 87+09.1, 15.0' LT.(B/C)
INLET NO.188 2'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 712.1
INV. = 708.10

5 L.F.–12" R.C.P.
TY. 1 @ 2.00%

STM. MH. NO.109 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 713.1
INV. = 708.00

STA. 87+14.1, 15.0' LT. (B/C)
STM. MH. NO.104 4'ø
TY. A w/EJW 7525 FR. & GR.
RIM =(T/C) 712.1
INV. = 705.80 E,W
708.00 N

81 L.F.–18" R.C.P.
TY. 1 @ 1.23%

141 L.F.–21" R.C.P.
TY. 1 @ 0.71%
(DESIGNED TO CONVEY 100YR FLOW)

STM. MH. NO.105 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 712.9
INV. = 707.20 S
707.00 N
706.80 W

67 L.F.–15" R.C.P.
TY. 1 @ 0.45%
(DESIGNED TO CONVEY 100YR FLOW)

STA. 89+67.9, 54.2' LT.
STM. MH. NO.107 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 711.8
INV. = 707.96

13 L.F.–12" R.C.P.
TY. 1 @ 0.54%
(DESIGNED TO CONVEY 100YR FLOW)

STA. 89+67.9, 41.2' LT.
INLET NO.108 2'ø
TY. A w/TY. 8 GR.
RIM = 712.0
INV. = 708.03
CONNECT TO EXISTING 4" DRAIN TILE – INV.=708.5± (CONTRACTOR TO VERIFY)

STONE RIP RAP
SEE "DETENTION BASIN OVERFLOW SWALE" DETAIL ON DRAINAGE STRUCTURE DETAILS SHEET.

APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K

STA. 85+15.4, 98.8' RT.
FLARED END SECTION NO. 180
21 " R.C.P. w/GRATE
F.L. = 698.00
(w/ 6'x12' RENO MATTRESS)

124 L.F.–21" R.C.P.
TY. 1 @ 0.00%
(EQUALIZER PIPE)

STA. 86+38.8, 88.6' RT.
FLARED END SECTION NO. 181
21 " R.C.P. w/GRATE
F.L. = 698.00
(w/ 6'x12' RENO MATTRESS)

APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO

STA. 87+09.1, 15.0' RT.(B/C)
INLET NO.187 2'ø
TY. A w/EJW 7525 FR. & GR.
RIM = 712.1
INV. = 708.10

APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

STA. 87+14.1, 35.0' RT.
STM. MH. NO.102 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 712.3
INV. = 705.30 E
703.30 S

STORMWATER MANAGEMENT FACILITY NO. 002A
N.W.L. = 698.0
H.W.L. = 701.9
STORMWATER STORAGE REQUIRED = 0.51 Ac-FT
STORMWATER STORAGE PROVIDED @ 702.5 = 0.70 Ac-FT

STA. 87+59.9, 99.0' RT.
FLARED END SECTION NO. 100
21 " R.C.P. w/GRATE
F.L. = 698.00
(w/ 6'x12' RENO MATTRESS)

86 L.F.–21" R.C.P.
TY. 1 @ 1.06%
(DESIGNED TO CONVEY 100YR FLOW)

21 L.F.–21" R.C.P.
TY. 1 @ 1.19%
(DESIGNED TO CONVEY 100YR FLOW)

5 L.F.–12" R.C.P.
TY. 1 @ 2.00%

130 L.F.–21" R.C.P.
TY. 1 @ 1.07%
(DESIGNED TO CONVEY 100YR FLOW)

STA. 88+02.1, 72.7' RT.
STM. MH. NO.101 4'ø
TY. A w/TY. I FR. & C.L.
RIM = 711.0
INV. = 701.91 N
698.91 NW

28 L.F.–21" R.C.P.
TY. 1 @ 0.89%
(DESIGNED TO CONVEY 100YR FLOW)

STA. 87+14.1, 15.0' RT. (B/C)
CATCH BASIN NO.103 4'ø
TY.A w/EJW 7525 FR. & GR.
RIM = 712.1
INV. = 705.55 E,W
708.00 N

23 L.F.–12" R.C.P.
TY. 1 @ 1.13%
(DESIGNED TO CONVEY 100YR FLOW)

STA. 89+45.9, 48.7' LT.
STM. MH. NO.106 4'ø
TY. A w/TY. I FR. & O.L.
RIM = 713.4
INV. = 707.50 N
707.70 E

50' WETLAND BUFFER (TYP.)

EXISTING DRAIN TILE SYSTEM DISCHARGE TO CREEK

EXISTING 4" CLAY DRAIN TILE

NOTE: EXISTING 4" CLAY DRAIN TILE CONTINUES INTO SERVICE UPLAND WATERSHED AS A MUTUAL DRAIN.

STORMWATER MANAGEMENT FACILITY

SEDGWICK AVENUE

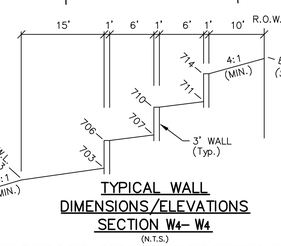
165TH STREET

Asphalt Surface

Sanitary Manhole Rim=(716.06)

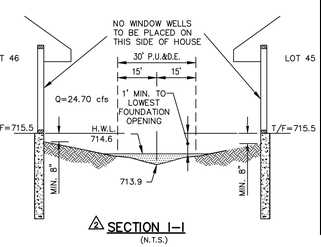
Valve & Vault 4' Dia. Ty A w/Ty I F & G Rim=(714.62) T/Pipe=(708.82)

Sanitary Manhole 4' Dia. Ty A w/Ty I F & G Rim=(715.01) Inv.=(697.86)



TYPICAL WALL DIMENSIONS/ELEVATIONS SECTION W4– W4
(N.T.S.)

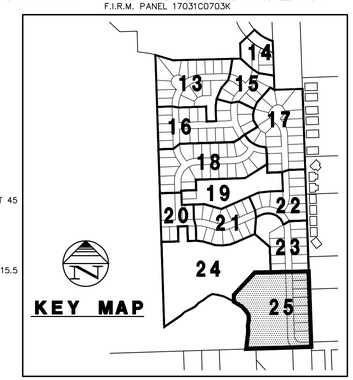
(SEE SHEET 6 FOR "TYPICAL SECTION FOR RETAINING WALL" DETAIL)



SECTION I–I
(N.T.S.)

DRAINAGE & GRADING NOTES

1. ELEVATIONS SHOWN FOR ALL CURB INLETS, CATCH BASINS, AND MANHOLES ARE TOP OF CURB.
2. ALL CURBS SHALL BE BACKFILLED TO WITHIN 6 INCHES OF THE TOP OF CURB.
3. ALL BACK YARD SWALES SHALL BE CUT OR FILLED 6 INCHES BELOW FINISHED GRADE.
4. ALL ON–SITE FIELD TILES NEED TO BE REMOVED COMPLETELY. ANY EXISTING DRAINAGE TILES ENCOUNTERED DURING CONSTRUCTION SERVING UPSTREAM PROPERTIES SHALL BE PRESERVED AND TIED INTO THE PROPOSED STORM SEWER. ANY FIELD TILES EXITING THE SITE MUST BE PLUGGED AT THE UPSTREAM END.
5. T/F – INDICATES PROPOSED TOP OF FOUNDATION ELEVATIONS.
6. THE TOP OF WINDOW WELLS SHALL BE CONSTRUCTED NO LOWER THAN 0.3 FEET BELOW THE TOP OF FOUNDATION ELEVATION (T/F) UNLESS OTHERWISE NOTED ON OVERFLOW CROSS–SECTIONS. ANY WINDOW WELLS ADJACENT TO DETENTION BASINS OR OVERFLOW ROUTES MUST BE MINIMUM 12" ABOVE H.W.L.
7. THE FINISHED TOPSOIL ELEVATION AT THE FOUNDATION SHOULD GENERALLY BE 0.7 FEET BELOW THE TOP OF FOUNDATION ELEVATION UNLESS INDICATED OTHERWISE.
8. D.S. – INDICATES DROP SIDING IS SUGGESTED TO MINIMIZE REAR YARD SLOPES. DROP SIDING MAY OR MAY NOT BE NECESSARY ALONG THE SIDE YARDS OF THE HOMES DEPENDING ON PLACEMENT OF HOME AND CHOICE OF MODEL. INDIVIDUAL SITE PLANS MUST HAVE A MAXIMUM OF 4:1 SIDE SLOPE FROM FINISHED GRADE AT FOUNDATION TO SIDE LOT LINE. DROP SIDING CAN BE MODIFIED AS NECESSARY AS LONG AS POSITIVE DRAINAGE IS ACHIEVED.
9. – INDICATES AN AVERAGE BUILDING PRODUCT ENVELOPE. (SEE MASS EARTHWORK SECTION FOR BUILDING PAD DETAILS.)
10. – ACCENTED SIDES OF PROPOSED HOUSE FOUNDATIONS ARE INTENDED TO INDICATE THE APPROXIMATE LOCATION WHERE A LOOK–OUT OR WALK–OUT BASEMENT MAY BE CONSTRUCTED OR TO INDICATE THAT SPECIAL CONSTRUCTION MEASURES MUST BE EMPLOYED IN ORDER TO MINIMIZE SIDE YARD, REAR YARD AND / OR FRONT YARD GRADIENTS (E.G. DROPPED SIDING, STEPPED FOUNDATION, RETAINING WALL, ETC.) – SEE NOTES ABOVE FOR FURTHER DETAILS.
11. – WATERMAIN PROTECTION (SEE "CONSTRUCTION SPECIFICATIONS–GENERAL NOTES" SHEETS FOR DETAILS.)
12. – INDICATES THE LOCATION AND DIRECTION OF OVERLAND DRAINAGE, ASSUMING STORM SEWER IS FULL OR IS BLOCKED, THAT MUST BE RESPECTED IN ALL FINAL GRADING OPERATIONS (SEE DETAIL).
13. – DENOTES AREA WHERE GRANULAR TRENCH BACKFILL IS REQUIRED.
14. +XXX.X – INDICATES EXISTING ELEVATION.
15. – INDICATES DRIVEWAY LOCATION.
16. – INDICATES PVC SUMP DRAIN CONDUIT FOR BASEMENT FOUNDATIONS.
17. – INDICATES 8' BITUMINOUS PATH (UNLESS OTHERWISE SHOWN)
18. – INDICATES REVERSE PITCH GUTTER FLAG.
19. – INDICATES DEPRESSED CURB.
20. – INDICATES M3.12 CURB & GUTTER
21. – INDICATES B–6.12 CURB & GUTTER.
22. – EXISTING DRAIN TILE
23. – INDICATES TREES TO BE PRESERVED IF IN GOOD CONDITION; SEE LANDSCAPE PLANS FOR FURTHER INFORMATION.
24. MAXIMUM SIDE SLOPE OF A LANDSCAPE BERM SHALL BE 4:1
25. – DENOTES DETECTABLE WARNING STRIP
26. XX' MIN. – MAXIMUM DRIVEWAY SLOPE IS 8% SOME BUILDINGS WILL NEED TO BE MOVED BACK FROM R.O.W. THE INDICATED AMOUNT TO MEET THE SLOPE REQUIREMENTS
27. – DENOTES WHERE SIDEWALK IS LOWER THAN CURB
28. CC – CLAY COLLAR BULKHEAD REQUIRED FOR ALL SIDEYARD STORM SEWER. (SEE "DRAINAGE STRUCTURE DETAILS" SHEET)
29. ALL SIDEWALK RAMPS ARE REQUIRED TO BE CONSTRUCTED TO MEET AMERICAN DISABILITY ACT GUIDELINES. IT IS THE RESPONSIBILITY OF THE CURB CONTRACTOR TO ENSURE THIS IS MET. ANY RAMPS OUT OF TOLERANCE WILL HAVE TO BE REMOVED AND REPLACED.
30. – 50' WETLAND BUFFER
31. – APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K
32. – APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO
33. – APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K



KEY MAP

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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
3	06–26–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			
4	07–22–25/LAL	REVISED PER VILLAGE COMMENTS DATED 7/17/25			

DRAINAGE AND GRADING PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRGRADE	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'	25 of 39

PLOT FILE CREATED: 9/3/2025 7:23 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:00 PM BY LESLIE DRAWING PATH: P:\402170\DWGS\ENG\DRAWINGS\FINAL DRAFTING\OVRGRADE.DWG

END S. RAVINIA AVENUE IMPROVEMENTS

LEGEND

FULL DEPATH ASPHALT OR CONCRETE SURFACE TO BE REMOVED

2" MILL AND OVERLAY

EXISTING DRAIN TILE

UTILITY TO BE REMOVED

EXISTING TREE TO BE REMOVED (SEE LANDSCAPE PLANS FOR FURTHER DETAILS)

N

Sanitary Manhole
Rim=(692.66)

2" MILL AND OVERLAY
16,140 S.F. (TOTAL)

Storm Manhole
Rim=(691.40)
'Inaccessible–Under Bushes'

(2) Inlet 2'x6' Box Structure
Ty A w/Ty 11 F & G (36"x18")
Rim (T/C=690.73)
Inv.=(686.88)

END S. RAVINIA AVENUE IMPROVEMENTS

Sanitary Manhole 4' Dia.
Ty A w/Ty 1 F & G
Rim=(690.96)
Inv.=(677.81) NW
Inv.=(677.86) SE

Sanitary Manhole 4' Dia.
Ty A w/Ty 1 F & G
Rim=(692.76)
Inv.=(678.41) SE–SW
Inv.=(678.36) NW

Inlet 2' Dia.
Ty A w/Ty 11 F & G
Rim (T/C=693.14)
Inv.=(688.94)
'Filled w/Debris'

Storm Manhole
Rim=(693.79)
'Inaccessible–Under Bushes'

ADJUST RIM TO 693.40

Sanitary Manhole
Rim=(694.94)
Inv.=(678.67)

354 S.F. – EXISTING BRICK PAVER REMOVAL

77 L.F. – EXISTING CURB REMOVAL

1,571 S.F. – EXISTING PATH REMOVAL

113 L.F. – EXISTING CURB REMOVAL

1,353 S.F. – EXISTING PAVEMENT REMOVAL

337 S.F. – EXISTING BRICK PAVER REMOVAL

166 L.F. – EXISTING CURB REMOVAL

Valve & Vault 5' Dia.
Ty. A w/Ty 1 F & G
Rim=(695.45)
T/Pipe=(689.85)
'Full of Water'
'Pipe Size Undetermined'

Inlet 2' Dia.
Ty A w/Ty 11 F & G
Rim (T/C=693.13)
Inv.=(688.88)

REPLACE GRATE TO BE FLUSH w/PAVEMENT

S. RAVINIA AVENUE – EXISTING PLAN

END S. RAVINIA AVENUE IMPROVEMENTS

INDICATES MOUNTABLE CURB & GUTTER (M-3.12)
INDICATES BARRIER CURB & GUTTER (B-6.12)
INDICATES DEPRESSED CURB & GUTTER
INDICATES REVERSE PITCHED GUTTER FLAG
INDICATES ADA DETECTABLE WARNING STRIP
INDICATES WATER MAIN PROTECTION
INDICATES TRENCH BACKFILL
ASPHALT PATH
FULL DEPTH PAVEMENT

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	153+70.35	33.35' RT.	692.46 (M.E.)
B	153+80.71	6.63' RT.	693.42 (M.E.)
C	153+81.14	6.45' LT.	693.42 (M.E.)
D	154+56.48	5.45' RT.	694.30
E	154+56.48	6.45' RT.	694.30 (M.E.)
F	154+74.99	33.48' RT.	694.00 (M.E.)
G	155+49.42	5.24' RT.	695.91

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 18	549.24'	430.00'	512.66'	S 38°31'26" E	73°11'04"

BRICK PAVERS
(2' BEHIND CURB)
REUSE REMOVED PAVERS

END S. RAVINIA AVENUE IMPROVEMENTS

STA. 23+84.50 ℄ – MASSIMO DRIVE
STA. 154+31.25 ℄ – S. RAVINIA AVENUE

1' SAWCUT

FULL DEPTH PAVEMENT
3,553 S.F.

1' SAWCUT

OUTLOT

S. RAVINIA AVENUE – PROPOSED PLAN

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REVISIONS

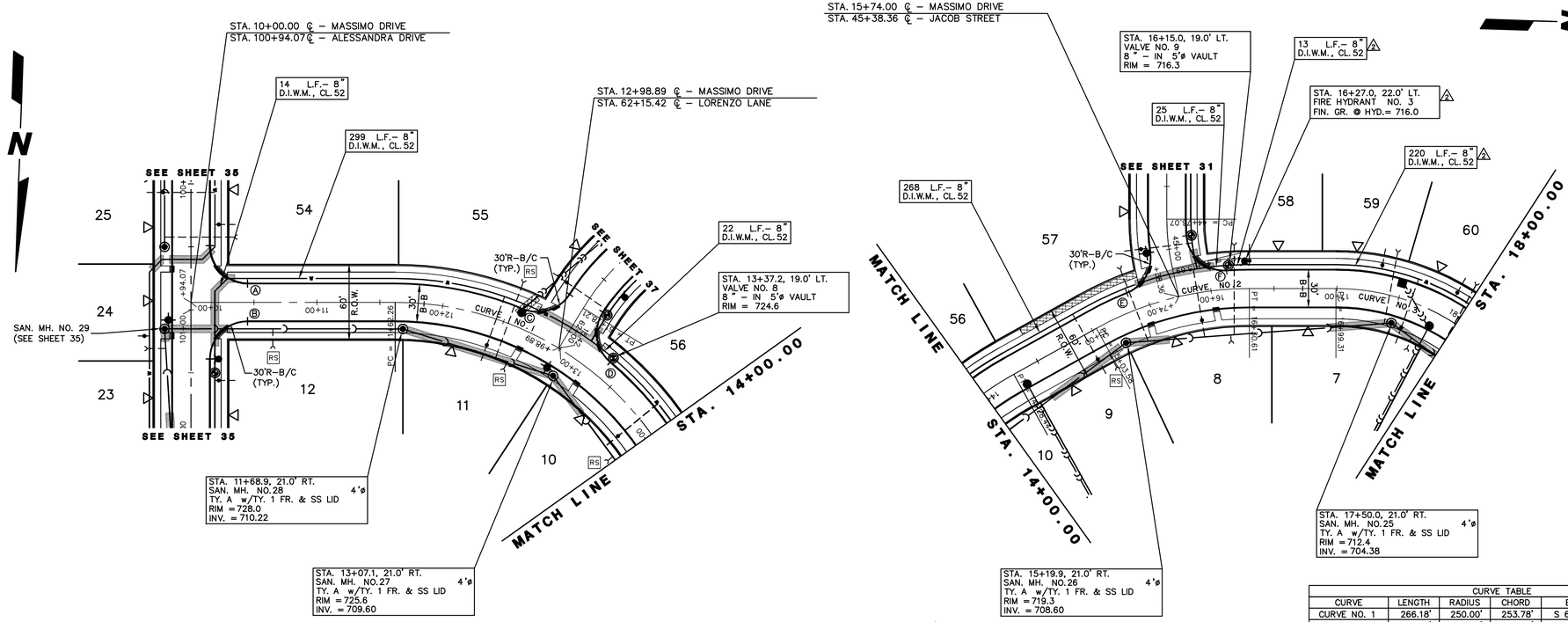
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	04–23–25/LAL	REVISED PER IN–HOUSE REVIEW			

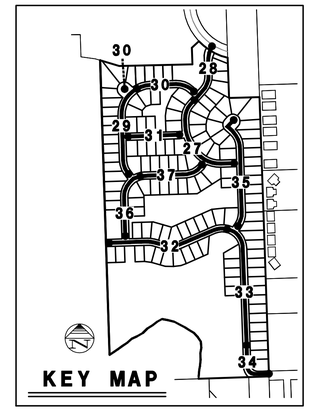
S. RAVINIA AVENUE – ROADWAY IMPROVEMENT PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: RAVINA IMPRV	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 26 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 30'	

PLOT FILE CREATED: 9/3/2025 7:30 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:52 PM BY LESLIE DRAWING PATH: P:\402170\ENGS\ENGINEERING\FINAL DRAFTING\RAVINA IMPRV.DWG





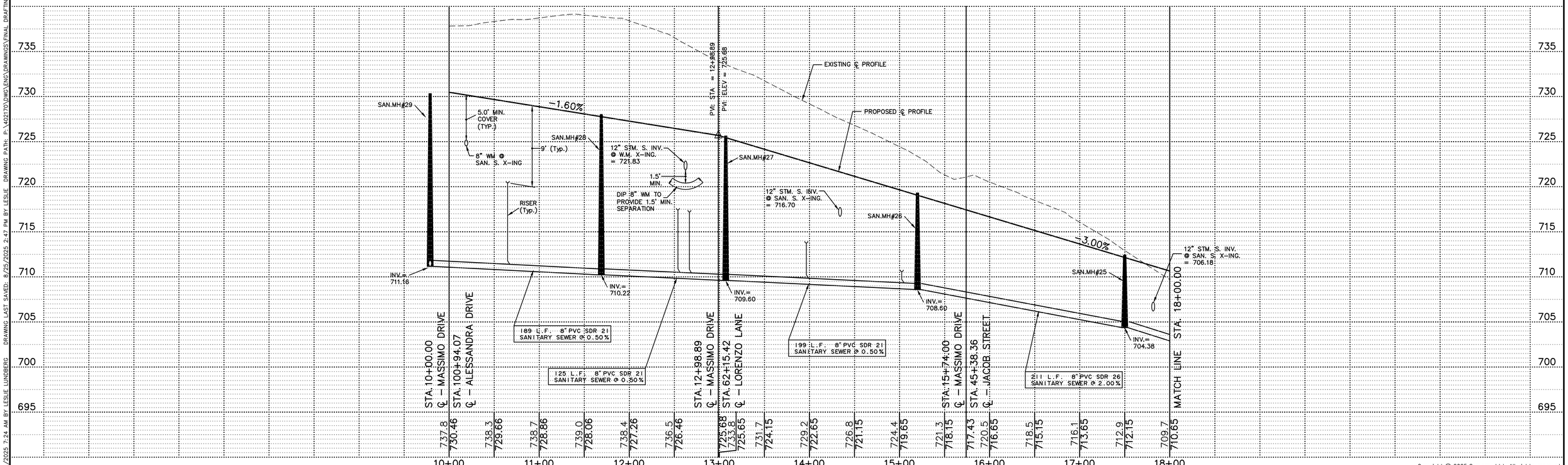
INDICATES MOUNTABLE CURB & GUTTER (M-3.12)
INDICATES BARRIER CURB & GUTTER (B-6.12)
INDICATES DEPRESSED CURB & GUTTER
INDICATES REVERSE PITCHED GUTTER FLAG
INDICATES ADA DETECTABLE WARNING STRIP
INDICATES WATER MAIN PROTECTION
INDICATES TRENCH BACKFILL
INDICATES WHERE SIDEWALK/PATH LOWER THAN CURB
RS INDICATES RISER REQUIRED
A INDICATES CURB RETURN
INDICATES DRIVEWAY LOCATION

CURVE TABLE

CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 1	266.18'	250.00'	253.78'	S 61°27'19" E	61°00'14"
CURVE NO. 2	127.03'	250.00'	125.66'	S 16°23'50" E	29°06'43"
CURVE NO. 3	132.61'	175.00'	129.46'	S 19°52'04" W	43°25'05"

CURB RETURN TABLE

I.D.	STATION	OFFSET	T/C ELEV.
A	10+45.00	15.00' LT.	729.65
B	10+45.00	15.00' RT.	729.65
C	12+60.64	15.00' LT.	R=726.2
D	13+37.23	15.00' LT.	724.44
E	15+36.42	15.00' LT.	718.47
F	16+13.44	15.00' LT.	716.16



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REVISIONS

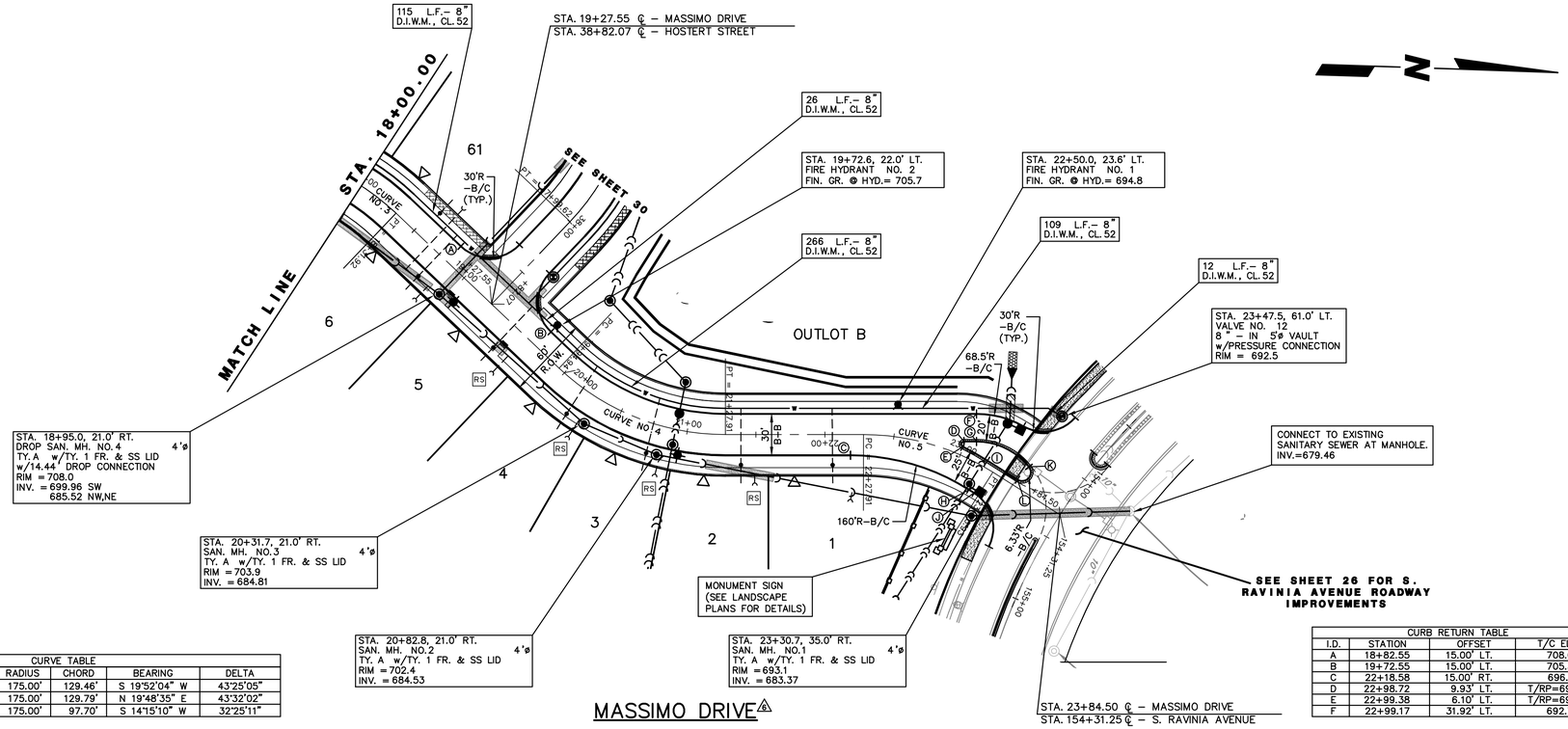
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
△5	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
△6	09–03–25/LAL	REVISED PER VILLAGE COMMENTS DATED 8/22/25			

MASSIMO DRIVE – STA. 10+00.00 TO STA. 18+00.00

ESTATES AT RAVINIA MEADOW

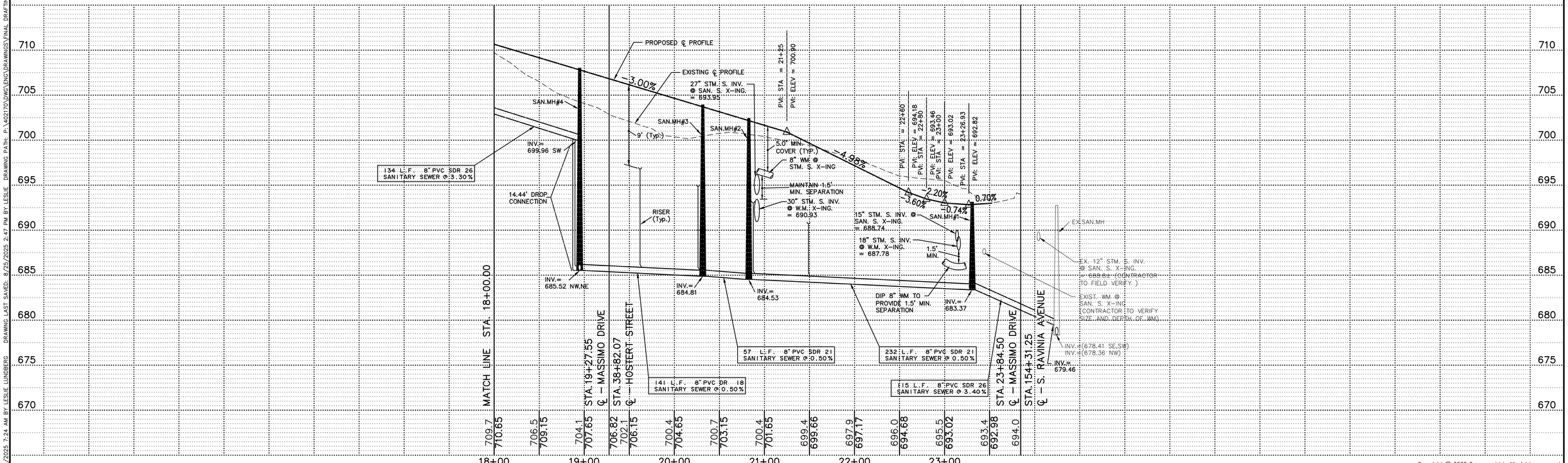
FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	27 of 39

PLOT FILE CREATED: 9/3/2025 7:24 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/29/2025 2:47 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRPP.DWG



CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 3	132.61'	175.00'	129.46'	S 19°52'04" W	43°25'05"
CURVE NO. 4	132.97'	175.00'	129.79'	N 19°48'35" E	43°32'02"
CURVE NO. 5	99.02'	175.00'	97.70'	S 14°15'10" W	32°25'11"

CURB RETURN TABLE				CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.	I.D.	STATION	OFFSET	T/C ELEV.
A	18+82.55	15.00' LT.	708.08	G	23+06.52	13.72' LT.	T/RP=693.48
B	19+72.55	15.00' LT.	705.38	H	23+18.05	19.80' RT.	R=692.6
C	22+18.58	15.00' RT.	696.15	I	23+19.28	5.17' LT.	693.51
D	22+98.72	9.93' LT.	T/RP=693.67	J	23+22.99	19.96' RT.	R=692.6
E	22+99.38	6.10' LT.	T/RP=693.67	K	23+46.90	17.31' LT.	693.67
F	22+99.17	31.92' LT.	692.73	L	23+44.82	5.00' LT.	693.67



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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	04–23–25/LAL	REVISED PER IN–HOUSE REVIEW			
2	08–13–25/LAL	REVISED PER CLIENT			
3	09–03–25/LAL	REVISED PER VILLAGE COMMENTS DATED 8/22/25			

MASSIMO DRIVE – STA. 18+00.00 TO STA. 23+84.50

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 28 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	

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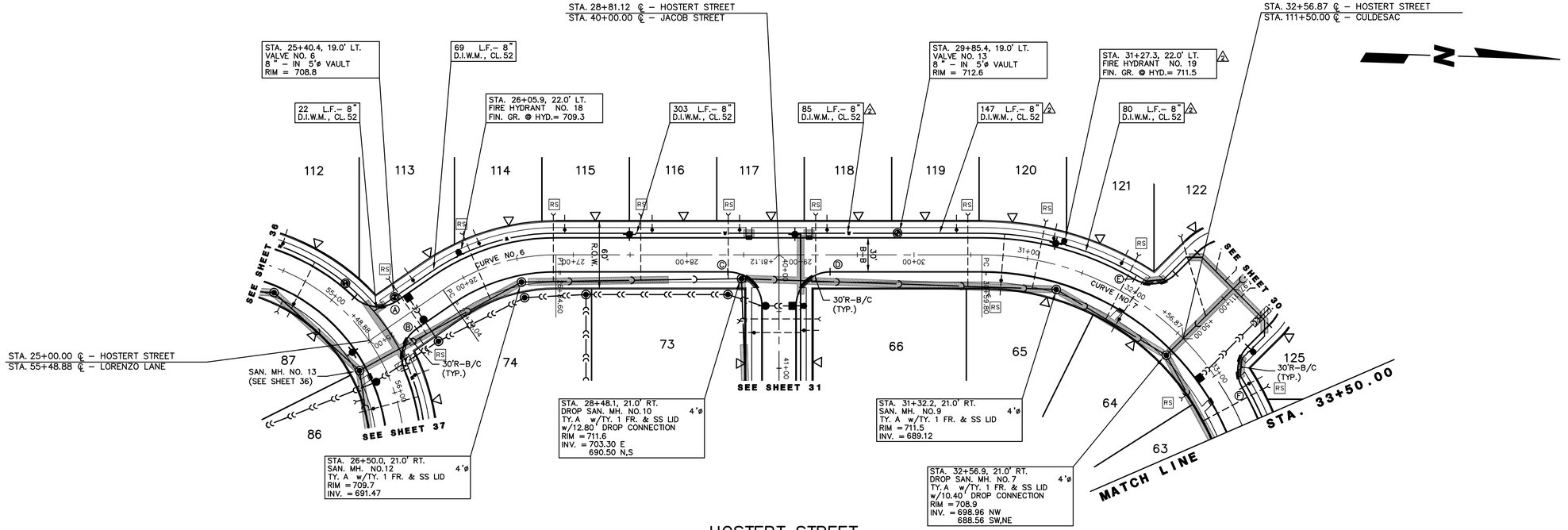
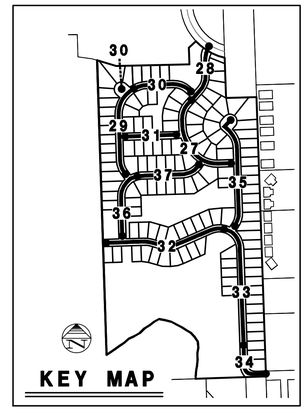


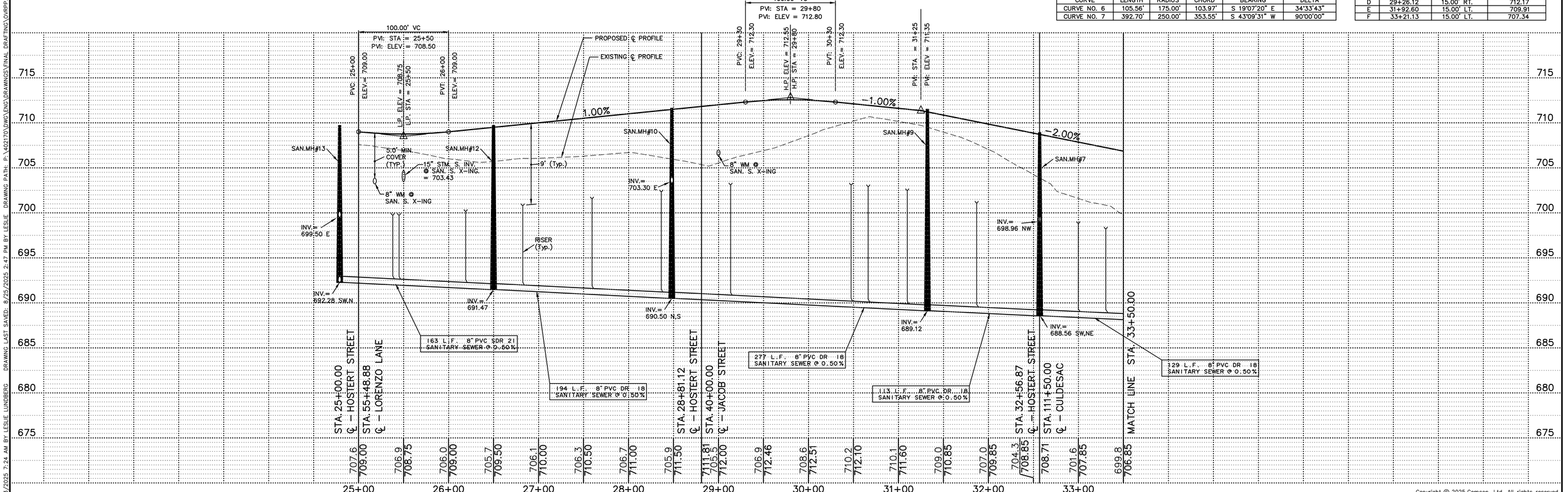


INDICATES MOUNTABLE CURB & GUTTER (M-3.12)
INDICATES BARRIER CURB & GUTTER (B-6.12)
INDICATES DEPRESSED CURB & GUTTER
INDICATES REVERSE PITCHED GUTTER FLAG
INDICATES ADA DETECTABLE WARNING STRIP
INDICATES WATER MAIN PROTECTION
INDICATES TRENCH BACKFILL
INDICATES WHERE SIDEWALK/PATH LOWER THAN CURB
RS INDICATES RISER REQUIRED
A INDICATES CURB RETURN
INDICATES DRIVEWAY LOCATION

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	25+40.35	15.00' LT.	708.67
B	25+40.35	15.00' RT.	708.67
C	28+36.12	15.00' RT.	711.27
D	29+26.12	15.00' RT.	712.17
E	31+92.60	15.00' LT.	709.91
F	33+21.13	15.00' LT.	707.34

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 6	105.56'	175.00'	103.97'	S 19°07'20" E	34°33'43"
CURVE NO. 7	392.70'	250.00'	353.55'	S 43°09'31" W	90°00'00"

HOSTERT STREET



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PULTE HOME COMPANY, LLC
1900 E. GOLF ROAD, SUITE 300
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(847) 230–5400

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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			

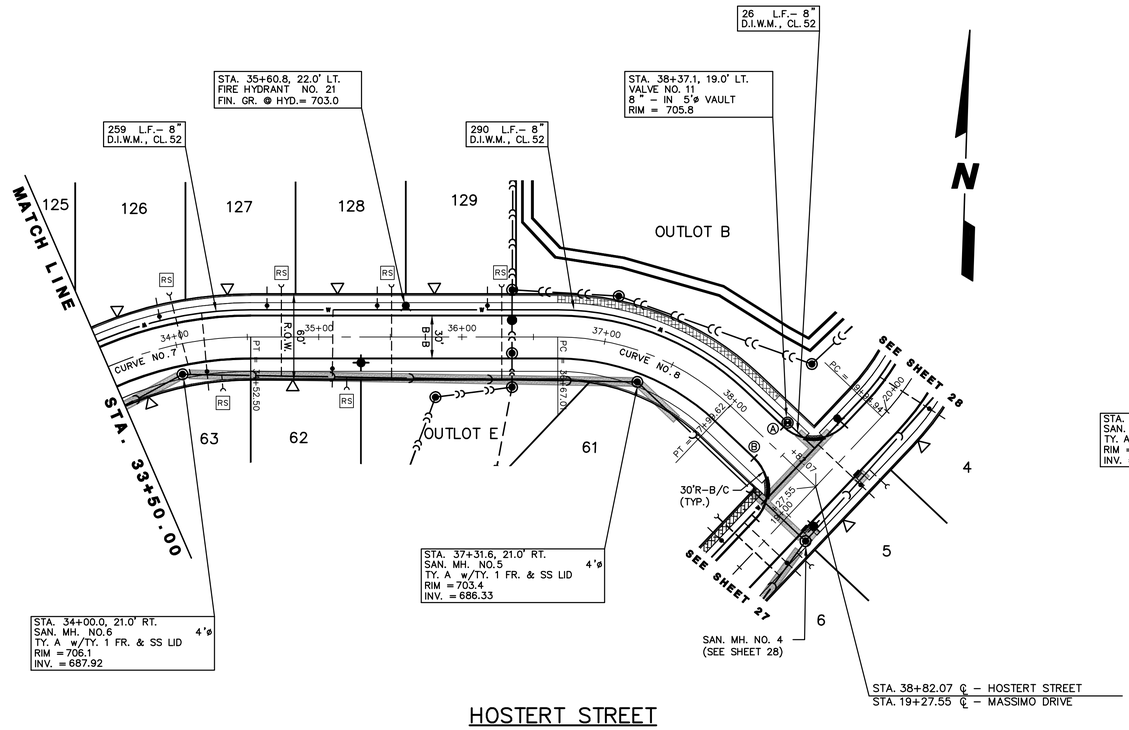
HOSTERT STREET – STA. 25+00.00 TO STA. 33+50.00

ESTATES AT RAVINIA MEADOW

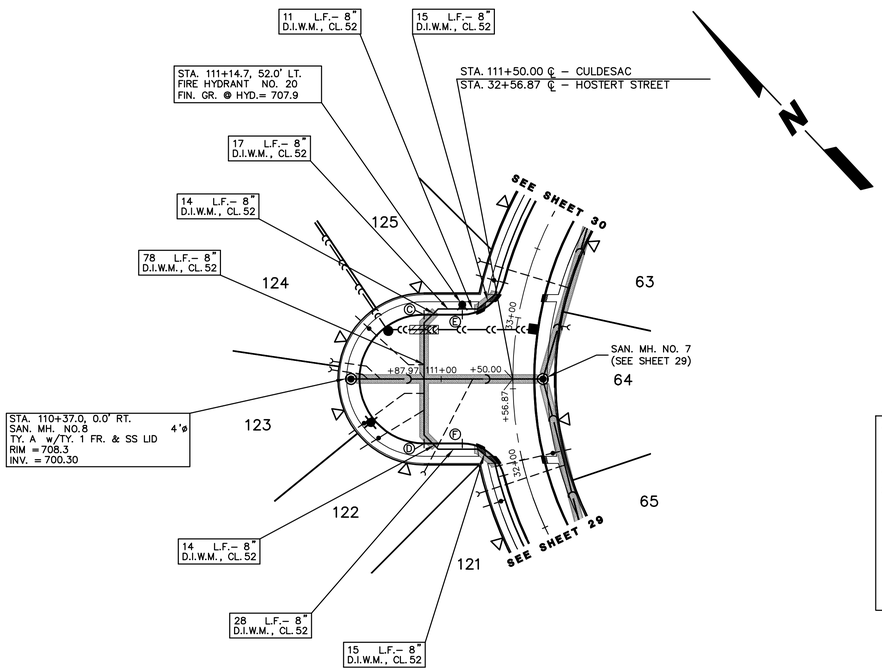
FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V

SHEET NO. 29 of 39

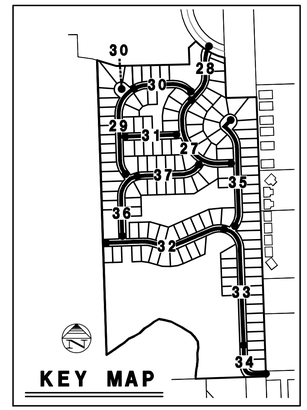
PLOT FILE CREATED: 9/3/2025 7:24 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:47 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRPP.DWG



HOSTERT STREET



CULDESAC



INDICATES MOUNTABLE CURB & GUTTER (M-3.12)
INDICATES BARRIER CURB & GUTTER (B-6.12)
INDICATES DEPRESSED CURB & GUTTER
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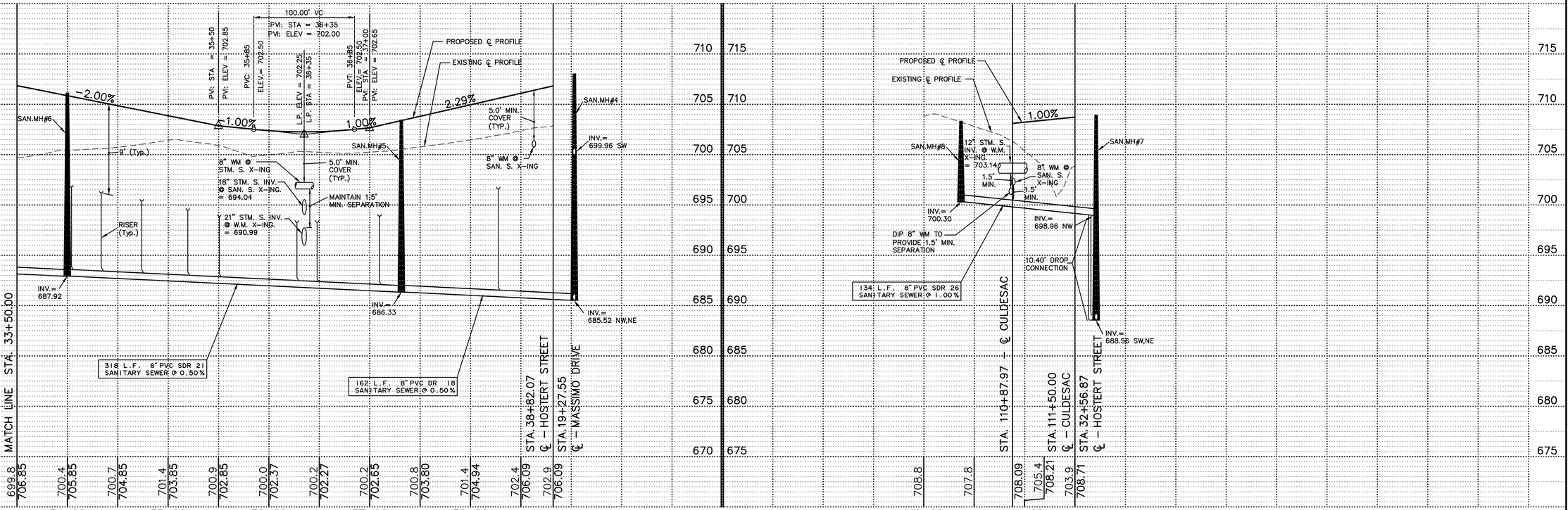
INDICATES TRENCH BACKFILL
INDICATES WHERE SIDEWALK/PATH LOWER THAN CURB
RS INDICATES RISER REQUIRED
A INDICATES CURB RETURN
INDICATES DRIVEWAY LOCATION

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	38+37.07	15.00' LT.	705.70
B	38+37.07	15.00' RT.	705.70
C	110+87.97	45.00' LT.	707.50
D	110+87.97	45.00' RT.	708.70
E	111+14.69	45.00' LT.	707.75
F	111+14.69	45.00' RT.	708.95

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 7	392.70'	250.00'	353.55'	S 43°09'31" W	90°00'00"
CURVE NO. 8	132.61'	175.00'	129.46'	N 70°07'56" W	43°25'05"



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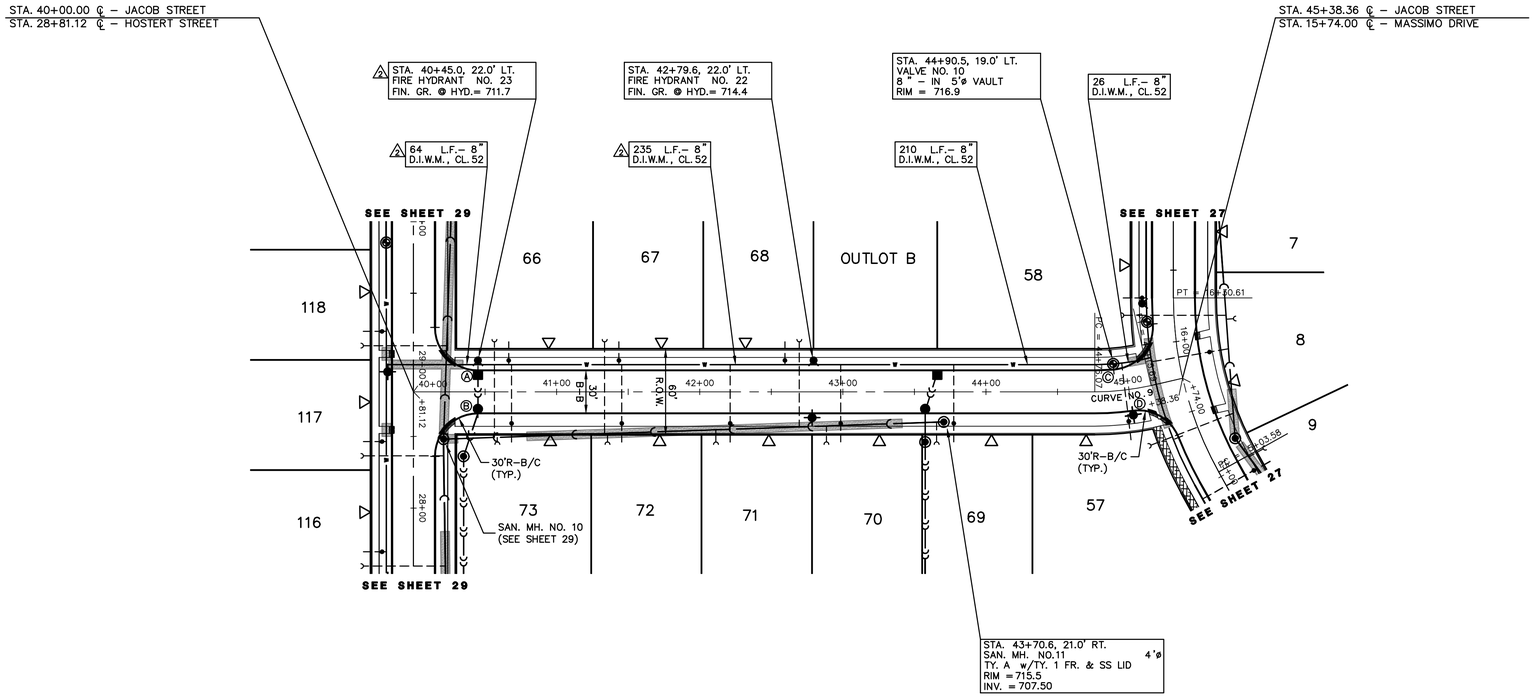
REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	04–23–25/LAL	REVISED PER IN–HOUSE REVIEW			
2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
3	08–13–25/LAL	REVISED PER CLIENT			

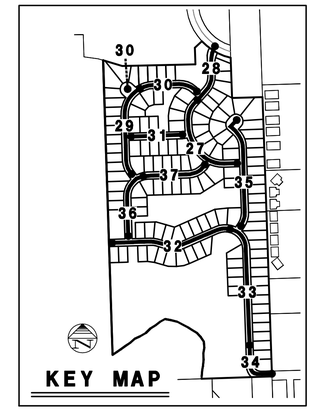
HOSTERT STREET – STA. 33+50.00 TO STA. 38+82.07

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 30 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	

PLOT FILE CREATED: 9/3/2025 7:25 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:47 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRPP.DWG





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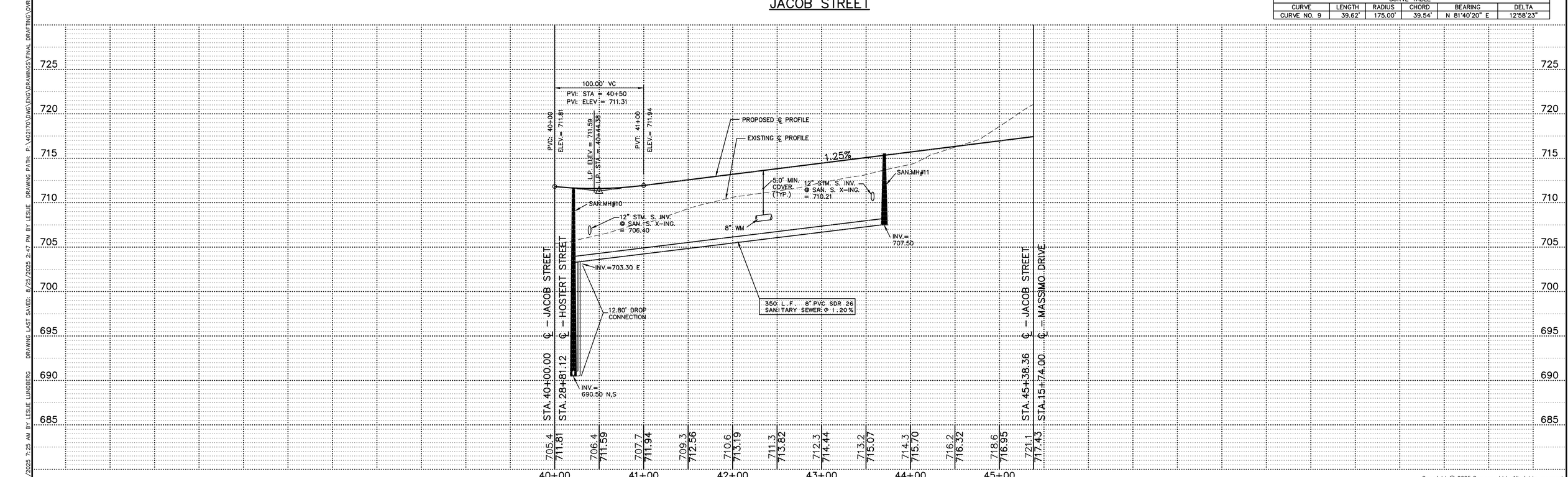
- RS INDICATES RISER REQUIRED
- (A) INDICATES CURB RETURN
- △ INDICATES DRIVEWAY LOCATION

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	40+45.00	15.00' LT.	R=711.4
B	40+45.00	15.00' RT.	R=711.4
C	44+90.48	15.00' LT.	716.74
D	45+00.56	15.00' RT.	716.87

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 9	39.62'	175.00'	39.54'	N 81°40'20" E	12°58'23"



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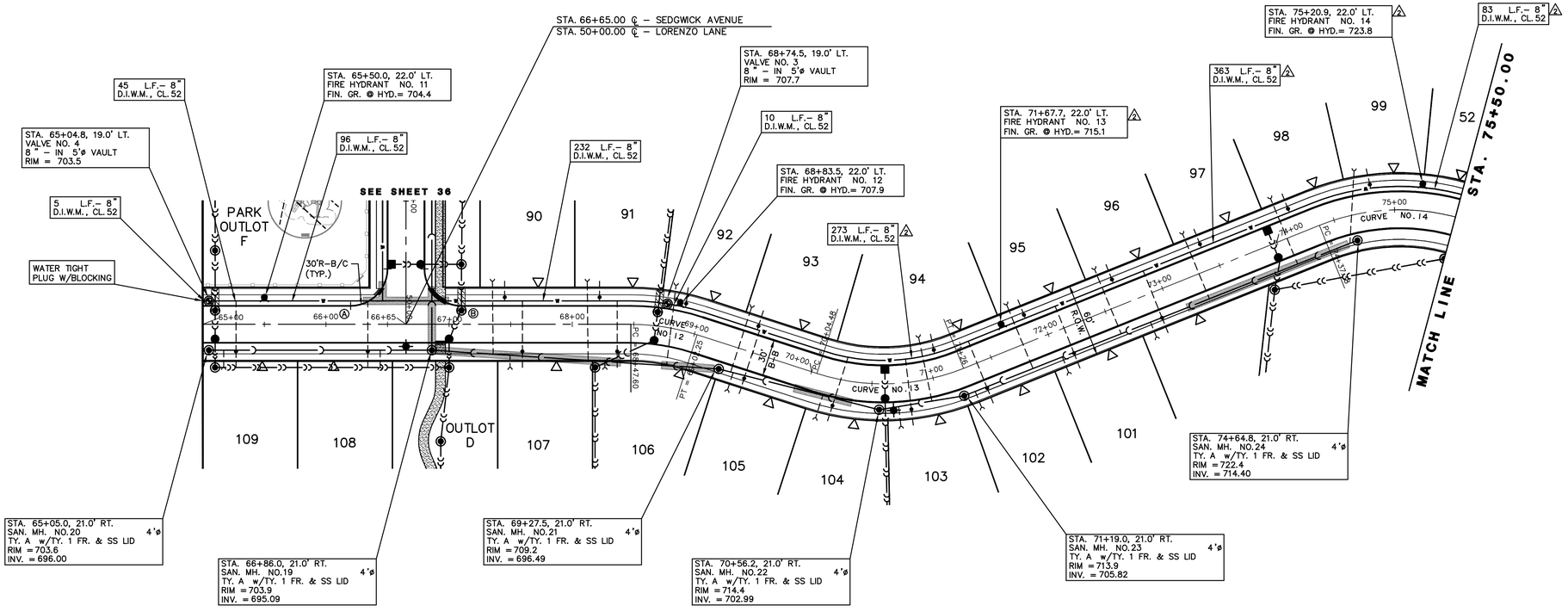
REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			

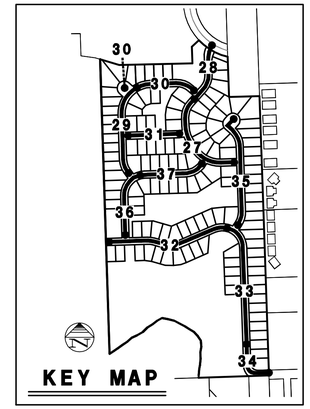
JACOB STREET
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 31 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	

PLOT FILE CREATED: 9/3/2025 7:25 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:47 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRPP.DWG



SEDGWICK AVENUE



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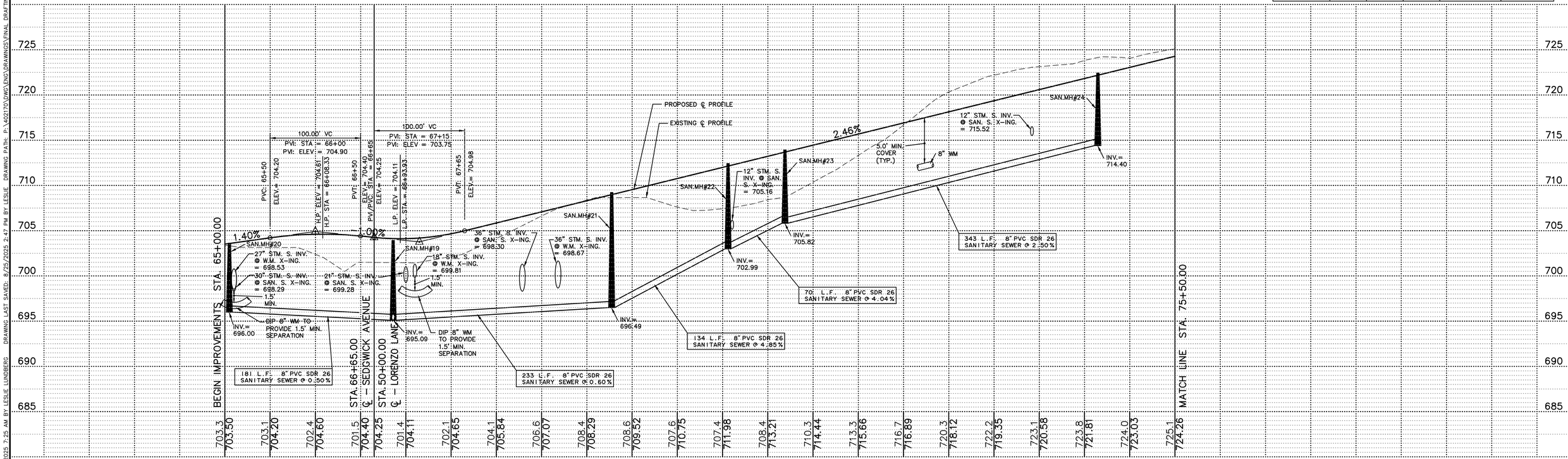
CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	66+20.00	15.00' LT.	704.50
B	66+20.00	15.00' LT.	R=703.9

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 12	54.66'	175.00'	54.44'	N 82°53'38" W	17°53'42"
CURVE NO. 13	121.53'	175.00'	119.10'	N 86°09'34" E	39°47'18"
CURVE NO. 14	341.40'	175.00'	289.78'	N 57°50'50" W	111°46'29"



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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			

SEDGWICK AVENUE – STA. 65+00.00 TO STA. 75+50.00

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 32 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	

PLOT FILE CREATED: 9/3/2025 7:25 AM BY: LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:47 PM BY: LESLIE DRAWING PATH: P:\402170\CIVIL\ENG\DRAWINGS\FINAL DRAFTING\OVRPP.DWG

STA. 76+12.59 ℄ – SEDGWICK AVENUE
STA. 95+00.00 ℄ – ALESSANDRA DRIVE

SAN. MH. NO. 38
(SEE SHEET 35)

SEE SHEET 35

STA. 77+76.4, 21.0' LT.
SAN. MH. NO.37
TY. A w/TY. 1 FR. & SS LID
RIM = 726.7
INV. = 716.60
4'ø

STA. 80+96.1, 21.0' LT.
SAN. MH. NO.36
TY. A w/TY. 1 FR. & SS LID
RIM = 722.2
INV. = 711.24
4'ø

STA. 84+04.1, 21.0' LT.
SAN. MH. NO.35
TY. A w/TY. 1 FR. & SS LID
RIM = 715.3
INV. = 706.93
4'ø

3,4 NECK DOWN ROADWAY FOR TRAFFIC CALMING

30'R-B/C (TYP.)

MATCH LINE STA. 75+50.00

MATCH LINE STA. 86+00.00

OUTLOT D

OUTLOT D

HWL 701.9

NWL 698.0

279 L.F.– 8" D.I.W.M., CL. 52

274 L.F.– 8" D.I.W.M., CL. 52

350 L.F.– 8" D.I.W.M., CL. 52

116 L.F.– 8" D.I.W.M., CL. 52

10 L.F.– 8" D.I.W.M., CL. 52

STA. 77+32.7, 22.0' RT.
FIRE HYDRANT NO. 8
FIN. GR. @ HYD.= 727.0

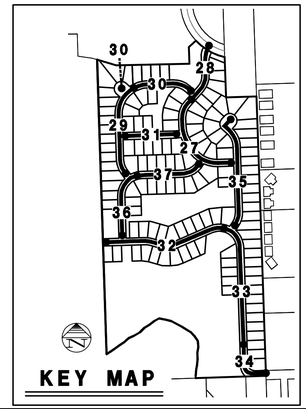
STA. 80+16.4, 22.0' RT.
FIRE HYDRANT NO. 8
FIN. GR. @ HYD.= 724.1

STA. 82+90.0, 22.0' RT.
FIRE HYDRANT NO. 9
FIN. GR. @ HYD.= 717.4

STA. 83+00.0, 19.0' RT.
VALVE NO. 1
8" – IN 5'ø VAULT
RIM = 717.2

SEDGWICK AVENUE

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 14	341.40'	175.00'	289.78'	N 57°50'50" W	111°46'29"



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RS INDICATES RISER REQUIRED
A INDICATES CURB RETURN
INDICATES DRIVEWAY LOCATION

3,4,A

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	75+76.54	15.00' LT.	724.82
B	76+48.64	15.00' LT.	726.11
C	82+30.00	15.00' RT.	718.75
D	82+30.00	15.00' LT.	718.75
E	82+50.00	10.50' RT.	718.36
F	82+50.00	10.50' LT.	718.36
G	83+80.00	10.50' RT.	715.35
H	83+80.00	10.50' LT.	715.35
I	84+00.00	15.00' RT.	715.06
J	84+00.00	15.00' LT.	715.06

100.00' VC
PVI STA = 77+25
PVI ELEV = 727.04
PVC: 76+75
ELEV= 726.49
H.P. ELEV = 726.78
H.P. STA = 77+27.45
PVT: 77+75
ELEV= 726.54
PVI: STA = 76+12.59
PVI: ELEV = 725.80
PVI: STA = 80+00
PVI: ELEV = 724.29
PVI: STA = 83+75
PVI: ELEV = 715.49
1.10%
-1.00%
-2.37%
-1.00%
PROPOSED ℄ PROFILE
EXISTING ℄ PROFILE
15" STM. S. INV. @ W.M. X-ING. = 719.03
1.5' MIN.
DIP 8" WM TO PROVIDE 1.5' MIN. SEPARATION
SAN.MH#38
SAN.MH#37
SAN.MH#36
SAN.MH#35
INV.= 717.50
INV.= 716.60
INV.= 711.24
INV.= 706.93
5.0' MIN. COVER (TYP.)
8" WM
18" STM. S. INV. @ SAN. S. X-ING. = 712.40
21" STM. S. INV. @ W.M. X-ING. = 711.73
1.5' MIN.
DIP 8" WM TO PROVIDE 1.5' MIN. SEPARATION
179 L.F. 8" PVC SDR 26 SANITARY SEWER @ 0.50%
320 L.F. 8" PVC SDR 26 SANITARY SEWER @ 1.68%
308 L.F. 8" PVC SDR 26 SANITARY SEWER @ 1.40%
296 L.F. 8" PVC SDR 26 SANITARY SEWER @ 0.82%
MATCH LINE STA. 75+50.00
STA. 76+12.59 ℄ – SEDGWICK AVENUE
STA. 95+00.00 ℄ – ALESSANDRA DRIVE
MATCH LINE STA. 86+00.00

735 730 725 720 715 710 705 700 695

725.1 724.26 | 725.6 725.49 | 725.80 | 725.0 726.21 | 727.7 726.70 | 726.9 726.72 | 728.2 726.29 | 729.4 725.79 | 727.5 725.29 | 723.5 724.79 | 719.4 724.29 | 716.6 723.10 | 713.6 721.92 | 710.3 720.73 | 709.7 719.55 | 707.2 718.36 | 707.0 717.18 | 707.1 715.99 | 707.2 715.15 | 706.7 714.65 | 705.8 714.15 | 704.5 713.65 | 703.8 713.15

76+00 77+00 78+00 79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00

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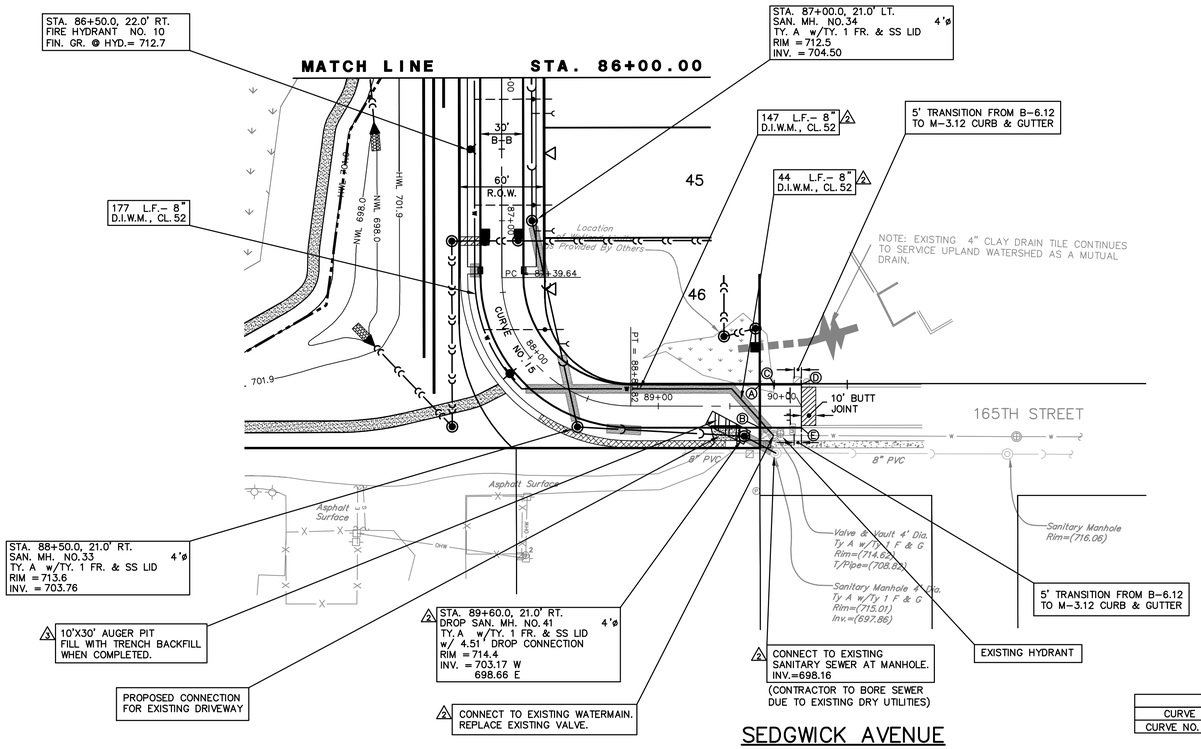
REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
A	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
3	06–26–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			
4	07–22–25/LAL	REVISED PER VILLAGE COMMENTS DATED 7/17/25			

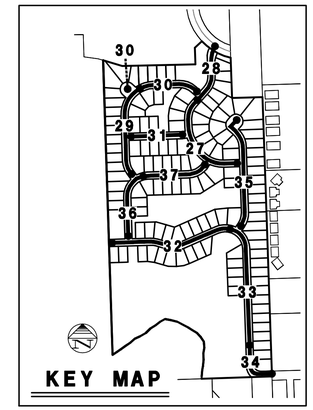
SEDGWICK AVENUE – STA. 75+50.00 TO STA. 86+00.00

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	33 of 39

PLOT FILE CREATED: 9/3/2025 7:25 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:47 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRPP.DWG





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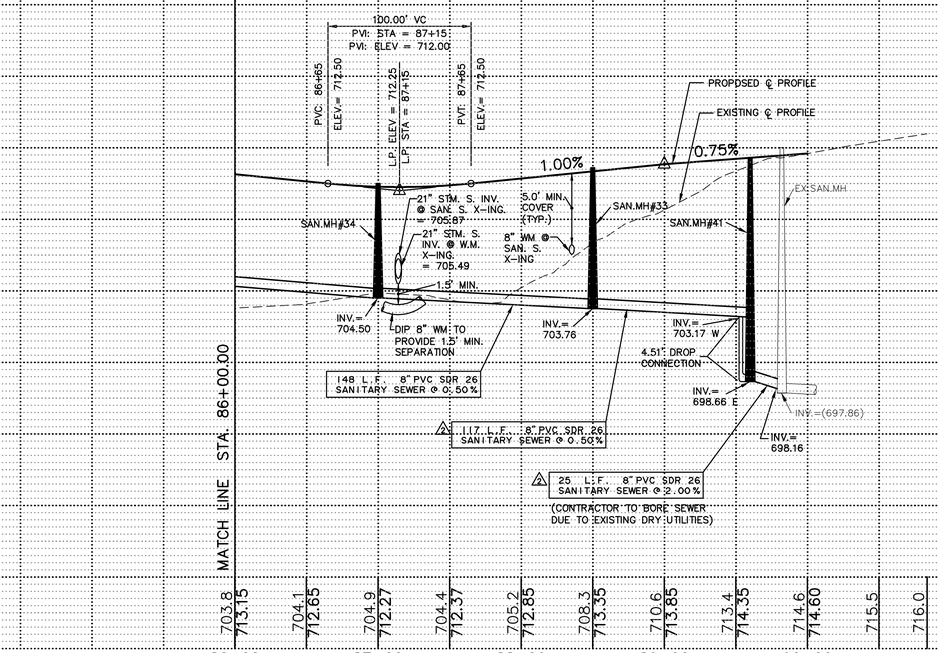
- (A) INDICATES CURB RETURN
- △ INDICATES DRIVEWAY LOCATION

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 15	141.18'	90.00'	127.14'	S 46°53'55" E	89°52'39"

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	89+70.98	15.00' LT.	714.29
B	89+71.04	15.00' RT.	714.29
C	89+80.98	15.06' LT.	714.36
D	90+00.00	15.06' LT.	714.75 (M.E.)
E	90+00.00	15.06' RT.	714.75 (M.E.)



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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
1	06–26–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			

SEDGWICK AVENUE – STA. 86+00.00 TO STA. 90+00.00

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	34 of 39

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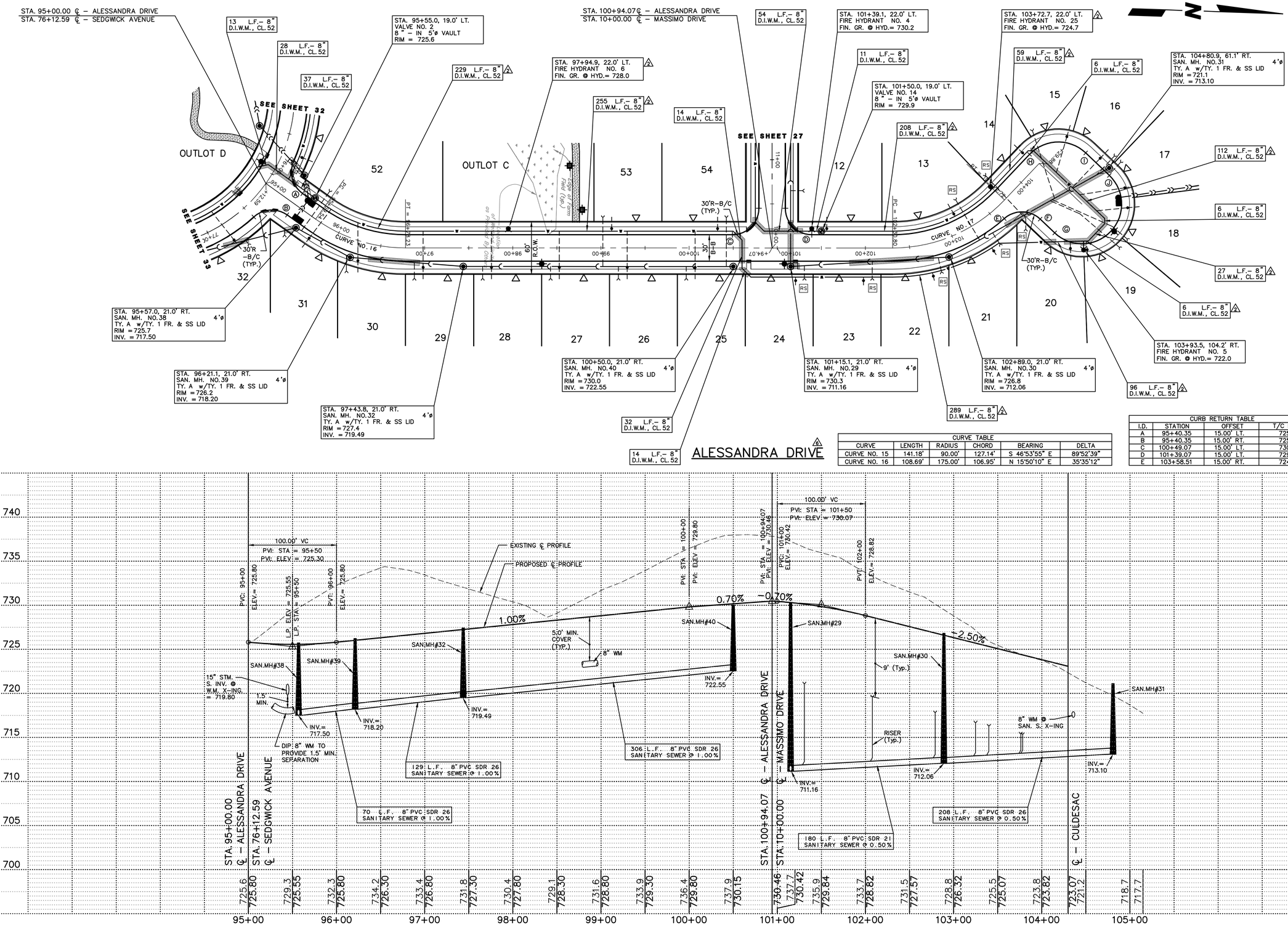

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 15	141.18'	90.00'	127.14'	S 46°53'55" E	89°52'39"
CURVE NO. 16	108.69'	175.00'	106.95'	N 15°50'10" E	35°35'12"

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	95+40.35	15.00' LT.	725.47
B	95+40.35	15.00' RT.	725.47
C	100+49.07	15.00' LT.	730.05
D	101+39.07	15.00' LT.	729.92
E	103+58.51	15.00' RT.	724.98

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
F	103+84.88	44.28' RT.	723.40
G	103+84.88	66.99' RT.	722.70
H	104+29.88	15.00' LT.	722.98
I	104+74.88	30.00' RT.	721.46
J	104+74.88	66.99' RT.	720.66

- INDICATES MOUNTABLE CURB & GUTTER (M-3.12)
- INDICATES BARRIER CURB & GUTTER (B-6.12)
- INDICATES DEPRESSED CURB & GUTTER
- INDICATES REVERSE PITCHED GUTTER FLAG
- INDICATES ADA DETECTABLE WARNING STRIP
- INDICATES WATER MAIN PROTECTION
- INDICATES TRENCH BACKFILL
- INDICATES WHERE SIDEWALK/PATH LOWER THAN CURB
- RS INDICATES RISER REQUIRED
- (A) INDICATES CURB RETURN
- △ INDICATES DRIVEWAY LOCATION

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PREPARED FOR:
PULTE HOME COMPANY, LLC
1900 E. GOLF ROAD, SUITE 300
SCHAUMBURG, IL 60173
(847) 230–5400

PREPARED BY:
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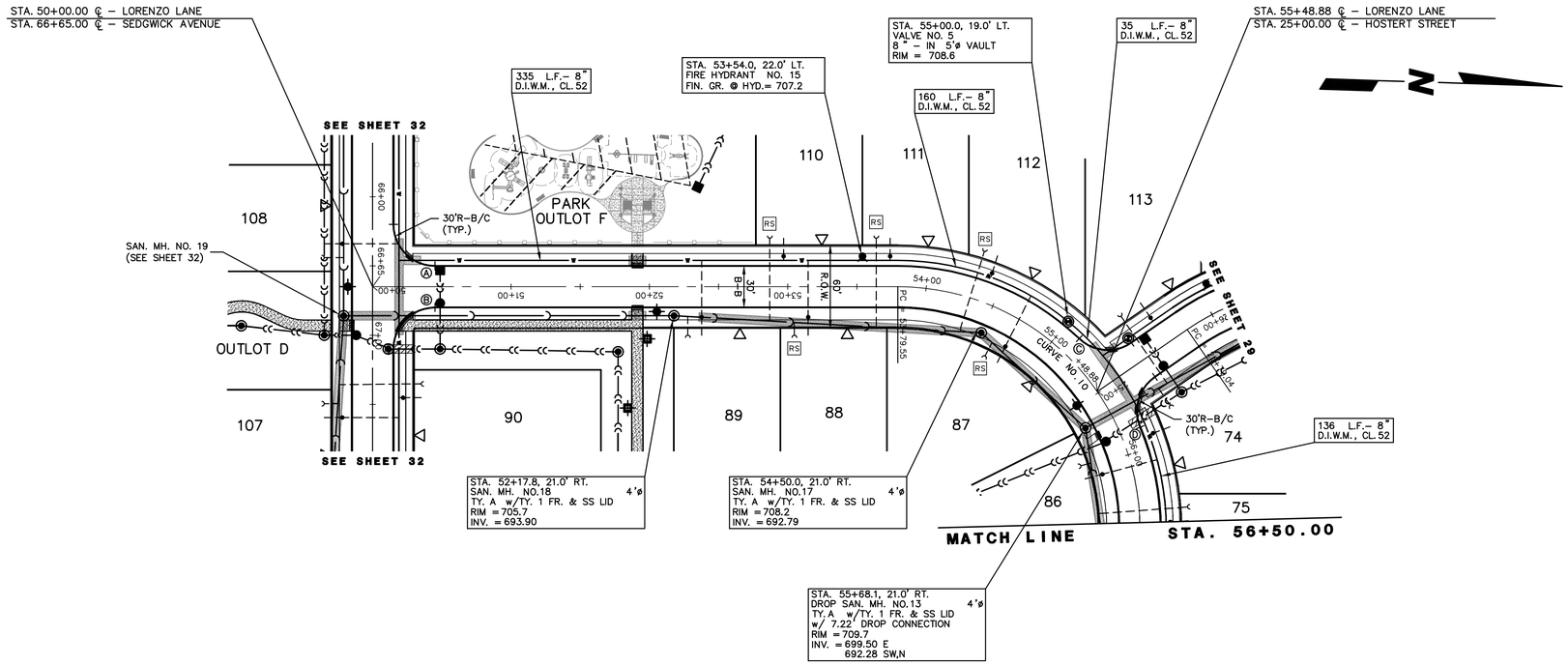
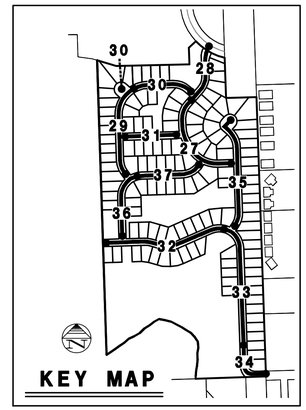
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
2	09–03–25/LAL	REVISED PER VILLAGE COMMENTS DATED 8/22/25			

ALESSANDRA DRIVE
ESTATES AT RAVINIA MEADOW

FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 35 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	

PLOT FILE CREATED: 9/3/2025 7:25 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/29/2025 2:47 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\OVRPP.DWG





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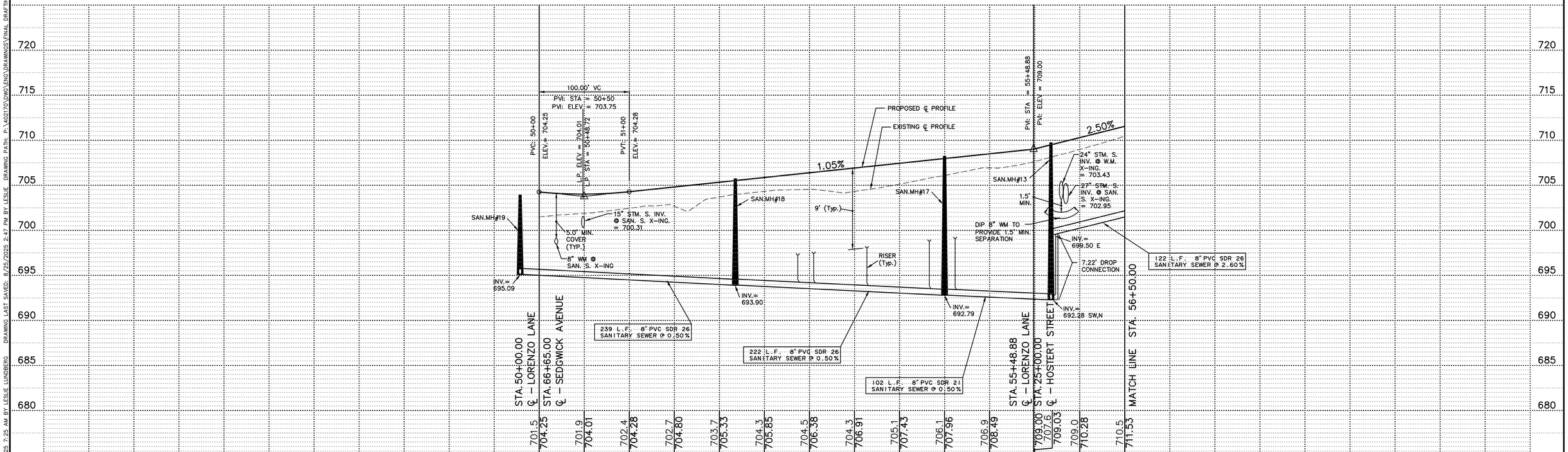
- (A) INDICATES CURB RETURN
- △ INDICATES DRIVEWAY LOCATION

LORENZO LANE ⚠2 ⚠1

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 10	274.89'	175.00'	247.49'	S 43°09'31" W	90°00'00"

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	50+45.00	15.00' LT.	703.92
B	50+45.00	15.00' RT.	703.92
C	55+12.83	15.00' LT.	708.53
D	55+84.93	15.00' LT.	709.81



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⚠1	09–03–25/LAL	REVISED PER VILLAGE COMMENTS DATED 8/22/25			

LORENZO LANE – STA. 50+00.00 TO STA. 56+50.00

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 36 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	

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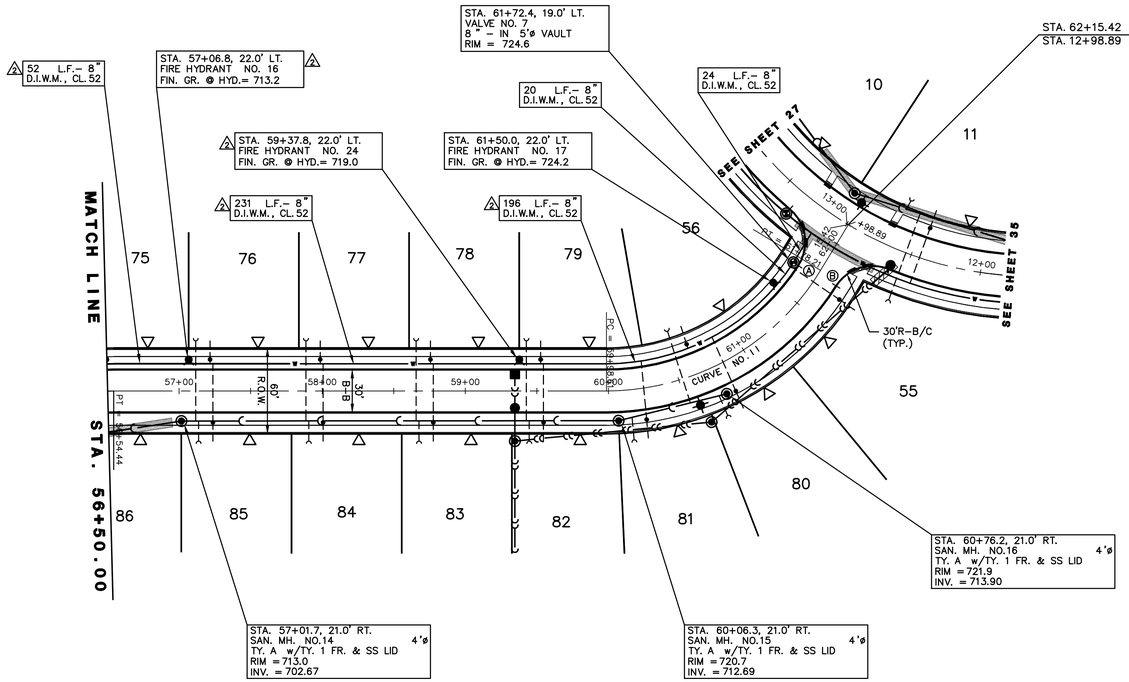
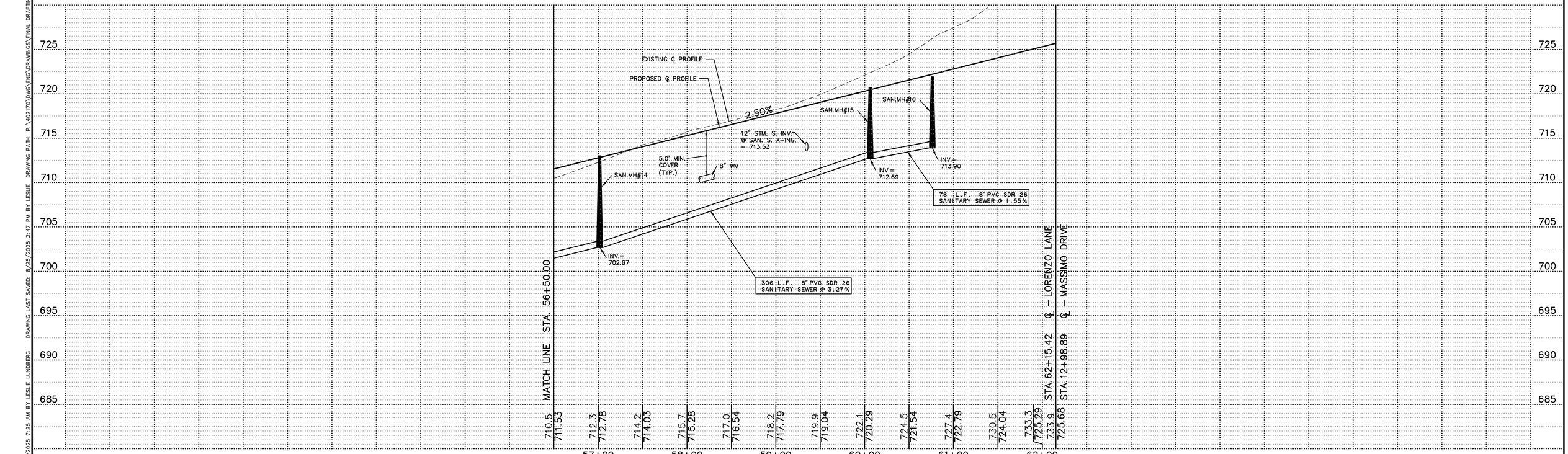
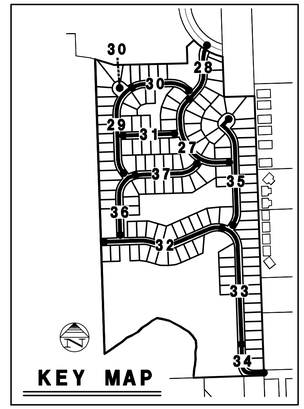


LORENZO LANE





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- (A) INDICATES CURB RETURN
- △ INDICATES DRIVEWAY LOCATION

CURB RETURN TABLE			
I.D.	STATION	OFFSET	T/C ELEV.
A	61+72.38	15.00' LT.	724.51
B	61+74.75	15.00' RT.	724.57

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
CURVE NO. 11	179.60'	175.00'	171.82'	N 58°45'26" E	58°48'11"

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LORENZO LANE – STA. 56+50.00 TO STA. 62+15.42

ESTATES AT RAVINIA MEADOW

FILE NAME: OVRPP	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: D81\70–71	SHEET NO. 37 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 50'H, 5'V	

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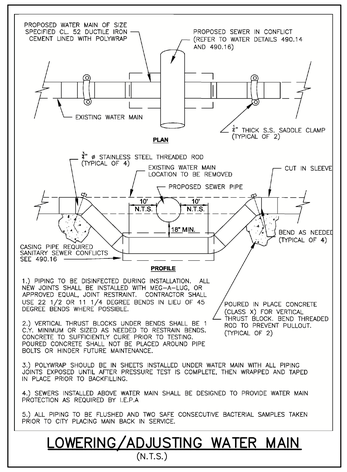
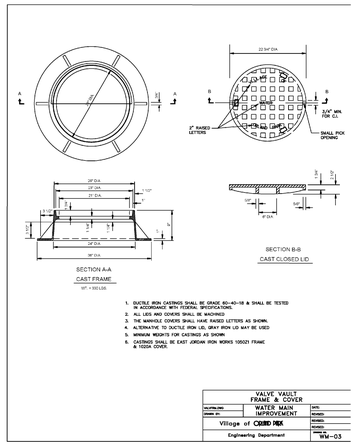
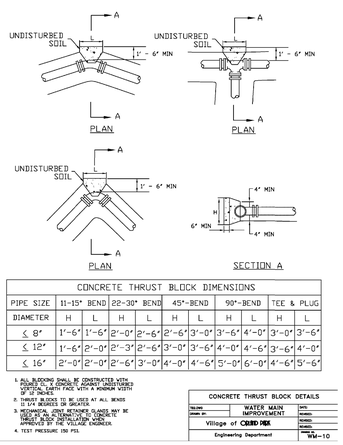


LOWERING/ADJUSTING WATER MAIN
(N.T.S.)



1. DUCTILE IRON CASTINGS SHALL BE GRADE 80-40-18 & SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
2. ALL LIDS AND COVERS SHALL BE MACHINED
3. THE MANHOLE COVERS SHALL HAVE RAISED LETTERS AS SHOWN.
4. ALTERNATIVE TO DUCTILE IRON LID, GRAY IRON LID MAY BE USED
5. MINIMUM WEIGHTS FOR CASTINGS AS SHOWN.
6. CASTINGS SHALL BE EAST JORDAN IRON WORKS 105521 FRAME & 102324 COVER.

VALVE VAULT FRAME & COVER		
VILLAGE ENGINEER	WATER MAIN IMPROVEMENT	DATE:
CHANG BY:		REVISED:
Village of CRETED PEAK		REVISED:
Engineering Department		DRAWING NO. WM-03

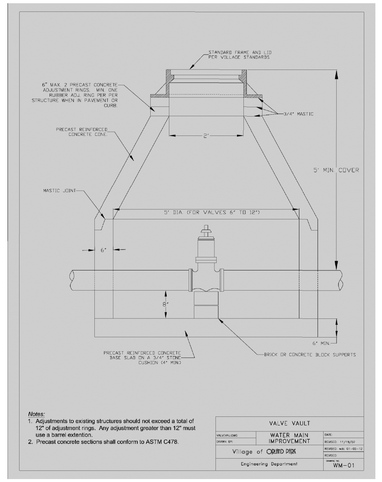


CONCRETE THRUST BLOCK DIMENSIONS

PIPE SIZE	11-15° BEND		22-30° BEND		45°-BEND		90°-BEND		TEE & PLUG	
DIAMETER	H	L	H	L	H	L	H	L	H	L
≤ 8"	1'-6"	1'-6"	2'-0"	2'-6"	2'-6"	3'-0"	3'-6"	4'-0"	3'-0"	3'-6"
≤ 12"	1'-6"	2'-0"	2'-3"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	3'-6"	4'-0"
≤ 16"	2'-0"	2'-0"	2'-6"	3'-0"	4'-0"	4'-6"	5'-0"	6'-0"	4'-6"	5'-6"

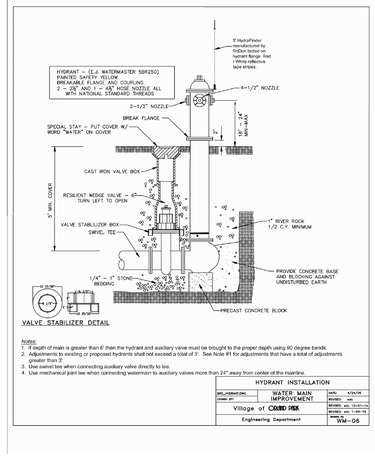
1. ALL BLOCKING SHALL BE CONSTRUCTED WITH CLASS "A" CONCRETE. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH SURFACES. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED EARTH SURFACES.
2. THRUST BLOCKS TO BE USED AT ALL BENDS 11 1/4 DEGREES OR GREATER.
3. MECHANICAL JOINT RETAINER GLANDS MAY BE USED IN LIEU OF CONCRETE THRUST BLOCKING WHERE APPROVED BY THE VILLAGE ENGINEER.
4. TEST PRESSURE: 150 PSI.

CONCRETE THRUST BLOCK DETAILS		
VILLAGE ENGINEER	WATER MAIN IMPROVEMENT	DATE:
CHANG BY:		REVISED:
Village of CRETED PEAK		REVISED:
Engineering Department		DRAWING NO. WM-10



Notes:
1. Adjustments to existing structures should not exceed a total of 12" of adjustment rings. Any adjustment greater than 12" must use a barrel extention.
2. Precast concrete sections shall conform to ASTM C478.

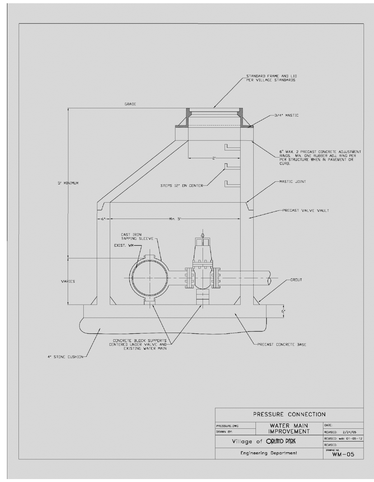
VALVE VAULT		
VILLAGE ENGINEER	WATER MAIN IMPROVEMENT	DATE: 11/16/09
CHANG BY:		REVISED: MIN. 60-08-12
Village of CRETED PEAK		REVISED:
Engineering Department		DRAWING NO. WM-01



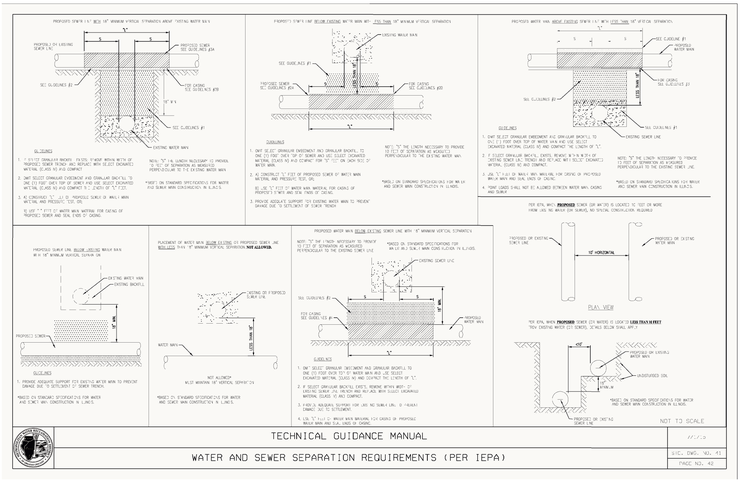
VALVE STABILIZER DETAIL

Notes:
1. If depth of main is greater than 8' then the hydrant and auxiliary valve must be brought to the proper depth using 90 degree bends.
2. Adjustments to existing or proposed hydrants shall not exceed a total of 3'. See Note #1 for adjustments that have a total of adjustments greater than 3'.
3. Use swivel tee when connecting auxiliary valves directly to tee.
4. Use mechanical joint tee when connecting watermain to auxiliary valves more than 24" away from center of the mainline.

HYDRANT INSTALLATION		
VILLAGE ENGINEER	WATER MAIN IMPROVEMENT	DATE: 6/25/09
CHANG BY:		REVISED: MIN.
Village of CRETED PEAK		REVISED: MIN. 12-09-09
Engineering Department		REVISED: MIN. 11-08-10
		DRAWING NO. WM-06

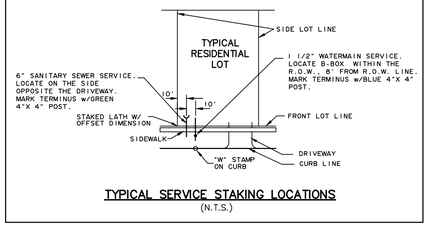


PRESSURE CONNECTION		
VILLAGE ENGINEER	WATER MAIN IMPROVEMENT	DATE:
CHANG BY:		REVISED:
Village of CRETED PEAK		REVISED: MIN. 01-08-12
Engineering Department		DRAWING NO. WM-05

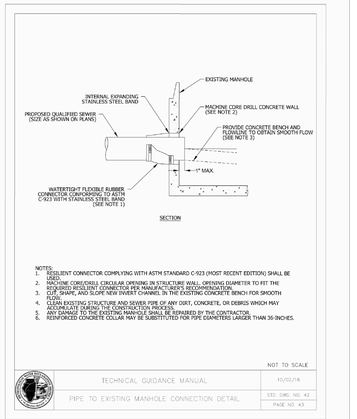


TECHNICAL GUIDANCE MANUAL	7/1/15
WATER AND SEWER SEPARATION REQUIREMENTS (PER IEPA)	STD. DWG. NO. 41
	PAGE NO. 42

NOTES:
1). VERIFY LOCATION w/ PLANS; SOME SERVICES NOT DEPICTED AS SHOWN DUE TO LOCALIZED CONSTRAINTS. NO B-BOXES IN DRIVEWAYS OR SIDEWALKS.
2). PROVIDE MINIMUM 10' BETWEEN WATERMAIN AND SANITARY.

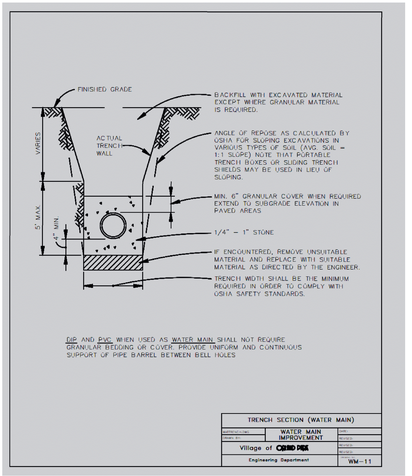


TYPICAL SERVICE STAKING LOCATIONS
(N.T.S.)



NOTES:
1. RESILIENT CONNECTOR COMPLYING WITH ASTM STANDARD C-923 (MOST RECENT EDITION) SHALL BE USED.
2. MACHINE CORE/DRILL CIRCULAR OPENING IN STRUCTURE WALL, OPENING DIAMETER TO FIT THE OUTSIDE DIAMETER OF THE RESILIENT CONNECTOR PLUS 1" MAXIMUM ALL AROUND.
3. CUT, SHAPE, AND SLOPE NEW INVERT CHANNEL IN THE EXISTING CONCRETE BENCH FOR SMOOTH FLOW.
4. CLEAN EXISTING STRUCTURE AND SEWER PIPE OF ANY DIRT, CONCRETE, OR DEBRIS WHICH MAY ACCUMULATE DURING THE CONSTRUCTION PROCESS.
5. ANY DAMAGE TO THE EXISTING MANHOLE SHALL BE REPAIRED BY THE CONTRACTOR.
6. REINFORCED CONCRETE COLLAR MAY BE SUBSTITUTED FOR PIPE DIAMETERS LARGER THAN 36-INCHES.

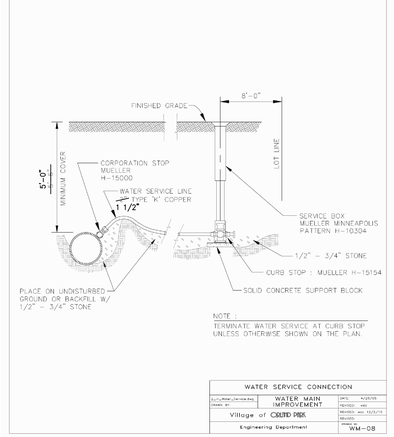
TECHNICAL GUIDANCE MANUAL	10/02/18
PIPE TO EXISTING MANHOLE CONNECTION DETAIL	STD. DWG. NO. 42
	PAGE NO. 43



TRENCH SECTION (WATER MAIN)

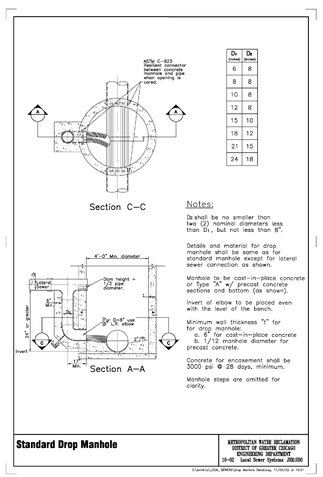
For PVC and DIPC when used as water main, shall not require granular bedding or cover. Provide uniform and continuous support of pipe barrel between bell holes

TRENCH SECTION (WATER MAIN)		
VILLAGE ENGINEER	WATER MAIN IMPROVEMENT	DATE:
CHANG BY:		REVISED:
Village of CRETED PEAK		REVISED:
Engineering Department		DRAWING NO. WM-11

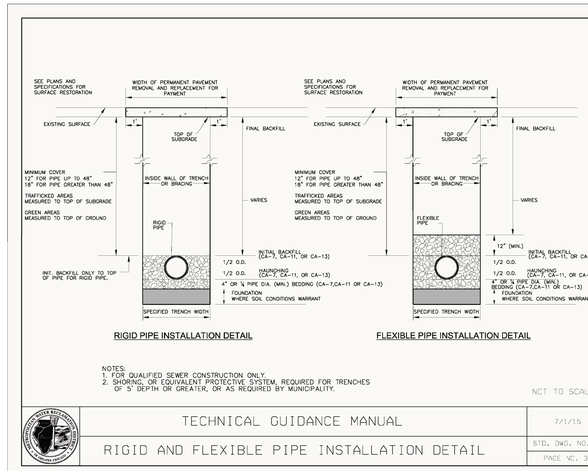


NOTE :
TERMINATE WATER SERVICE AT CURB STOP UNLESS OTHERWISE SHOWN ON THE PLAN.

WATER SERVICE CONNECTION		
VILLAGE ENGINEER	WATER MAIN IMPROVEMENT	DATE: 1/15/2008
CHANG BY: MG		REVISED: 11/30/11 MG
Village of CRETED PEAK		REVISED:
Engineering Department		DRAWING NO. WM-08



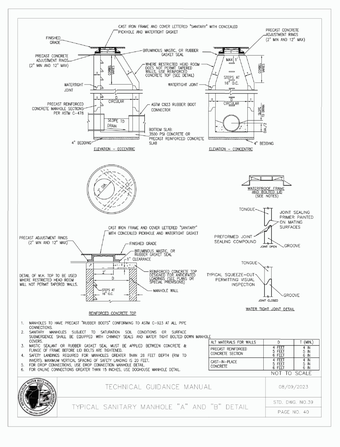
D_i (mm)	D_o (mm)
6	8
8	8
10	8
12	8
15	10
18	12
21	15
24	18



NOTES:
1. FOR QUALIFIED SEWER CONSTRUCTION ONLY.
2. SHORING, OR EQUIVALENT PROTECTIVE SYSTEM, REQUIRED FOR TRENCHES OF 5' DEPTH OR GREATER, OR AS REQUIRED BY MUNICIPALITY.

NOT TO SCALE

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

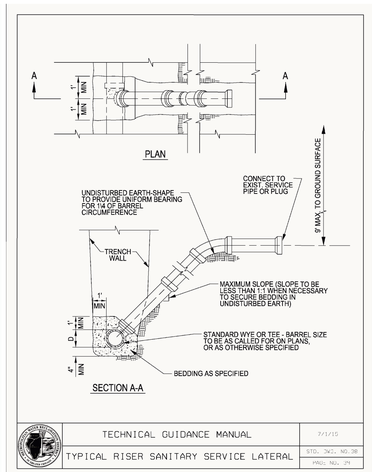


1. MANHOLES TO MAKE PRECAST "RUBBER BOOTS" CONFORMING TO ASTM C-923 AT ALL PIPE CONNECTIONS.
2. SANITARY MANHOLES SUBJECT TO SATURATION SOIL CONDITIONS OR SURFACE DRAINAGEWAYS SHALL BE EQUIPPED WITH CONCRETE SEALS AND WATER TIGHT BOLTED COVERS WHERE REQUIRED.
3. WATER TIGHT OR RUBBER GASKET SEAL MUST BE APPLIED BETWEEN CONCRETE & FLANGE OF FRAME BEFORE LID BOLTS ARE TIGHTENED.
4. FOR DROP CONNECTIONS, USE DROP CONNECTION WHERE 28 FEET DEPTH (DFN) TO INVERT, MINIMUM NOTICED, SPACING OF SEATS CASHING IS 22 FEET.
5. FOR DROP CONNECTIONS, USE DROP CONNECTION WHERE DETAIL.
6. FOR ONLINE CONNECTIONS GREATER THAN 15 INCHES, USE DOGHOUSE MANHOLE DETAIL.

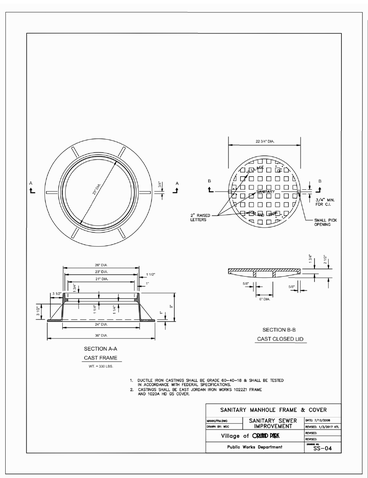
ALL MATERIALS FOR WALLS	n	f (MPa)
PRECAST REINFORCED CONCRETE	0.013	4 in.
CAST IN PLACE CONCRETE	0.013	4 in.
CONCRETE BRICK	0.015	4 in.
	0.013	4 in.

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL	08/09/2023
TYPICAL SANITARY MANHOLE "A" AND "B" DETAIL	STD. DWG. NO.39
	PAGE NO. 40



TECHNICAL GUIDANCE MANUAL	7/1/15
TYPICAL RISER SANITARY SERVICE LATERAL	STD. DWG. NO. 38
	PAGE NO. 39



1. DUCTILE IRON CASTINGS SHALL BE GRADE 80-40-18 & SHALL BE TESTED IN ACCORDANCE WITH FEDERAL SPECIFICATIONS.
2. CASTINGS SHALL BE EAST JORDAN IRON WORKS 105221 FRAME AND 102324 NE SD COVER.

SANITARY MANHOLE FRAME & COVER		
VILLAGE ENGINEER	SANITARY SEWER IMPROVEMENT	DATE: 1/15/2008
CHANG BY: MG		REVISED: 11/30/11 MG
Village of CRETED PEAK		REVISED:
Public Works Department		DRAWING NO. SS-04

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PREPARED FOR:
PULTE HOME COMPANY, LLC
1900 E. GOLF ROAD, SUITE 300
SCHAUMBURG, IL 60173
(847) 230-5400

PREPARED BY:
CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
Aurora, Illinois 60502-9675
Ph: 630.862.2100 Fax: 630.862.2199
E-Mail: info@cemcon.com Website: www.cemcon.com

REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

SANITARY SEWER AND WATERMAIN CONSTRUCTION DETAILS

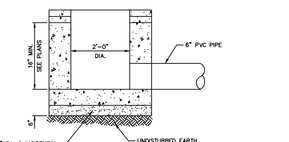
ESTATES AT RAVINIA MEADOW

FILE NAME: DETAILS	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: ----	SHEET NO. 38 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = N.T.S.	

PLOT FILE CREATED: 9/5/2025 7:19 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/13/2025 3:49 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\DETAILS.DWG

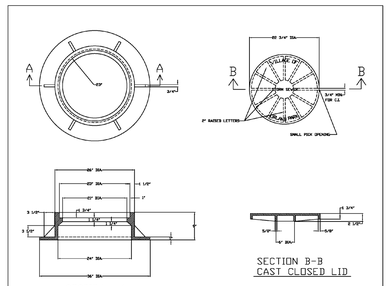
HEAVY DUTY
TOTAL WEIGHT 230 POUNDS
IF APPLICATION REQUIRES FLANGE AT TOP FOR SLAB-TYPE INSTALLATION, ORDER AS R-1706-1S

R-1706-1 MANHOLE FRAME, SOLID LID



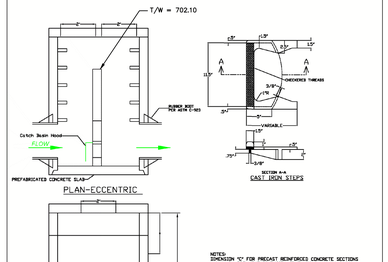
NOTE:
SUMPS TO CONNECT 2' BELOW RIM OF STORM STRUCTURE WHERE POSSIBLE.

CLEANOUT STRUCTURE



NOTES:
1. DUCTILE IRON CASTINGS SHALL BE GRADE 65-45-12 AND SHALL BE TESTED IN ACCORDANCE WITH ASTM A536 SPECIFICATIONS.
2. ALL CASTINGS SHALL HAVE CAST IN RAISED LETTERS AS SHOWN.
3. ALL CASTINGS TO MEET CURRENT I.D.O.T. STANDARDS.
4. ALL CASTINGS SHALL BE MACHINED AS SHOWN.
5. CONTRACTOR SHALL FIELD ADJUST CASTINGS AS NEEDED TO MATCH PROPOSED GRADE.

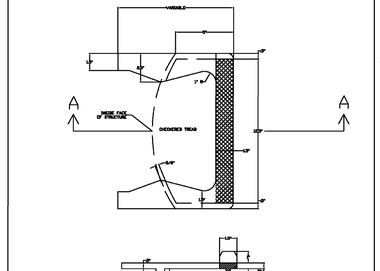
STORM SEWER FRAME & COVER		
ENGINEERING DATA	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-14



NOTES:
1. SECTION "C" FOR PRECAST REINFORCED CONCRETE SECTIONS MAY VARY FROM THE DIMENSION GIVEN TO PLUS 6 INCHES.
2. THE CAST IRON STEPS AS DETAILED HERE ON ARE TYPICAL. STEPS OF OTHER DESIGN AND MATERIAL THAT WILL CONFORM TO THE MINIMUM REQUIREMENTS OF THE STEPS SHOWN, MAY BE USED WHEN APPROVED BY THE ENGINEER.
3. CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ART. 716.17 OF THE STANDARD SPECIFICATIONS.
4. STEPS SHALL BE ENCASED INTO THE WALL A MINIMUM OF 3 INCHES. STEPS SHALL NOT BE EXTENDED IN THE OUTSIDE.

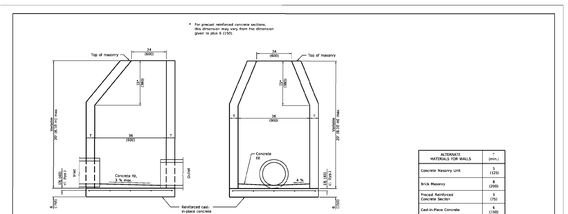
PRECAST REINFORCED CONCRETE SECTIONS	A	B	C	THICKNESS
	5'	3'-9"	5'	

OUTLET CONTROL STRUCTURE		
ENGINEERING DATA	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-15



NOTES:
1. STEPS SHALL BE REMOVED DUE TO WALL'S MINIMUM HEIGHT REQUIREMENTS SHALL NOT BE INSTALLED.
2. CAST IRON STEPS SHALL BE GRAY IRON CONFORMING TO THE REQUIREMENTS OF ARTICLE 716.17 OF THE STANDARD SPECIFICATIONS.
3. STEEL REINFORCED PLASTIC, DUCTILE IRON STEPS SHALL BE ALLOWED AS AN ALTERNATE TO CAST IRON STEPS AS LONG AS THEY ARE INSTALLED WITH THE MANUFACTURER'S RECOMMENDED EMBEDMENT DEPTH AND SPACING AND IN ACCORDANCE WITH I.D.O.T. STANDARD 602306. THE MANUFACTURER'S SPECIFICATIONS SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION.

CATCH BASIN-TYPE A STEP DETAIL		
ENGINEERING DATA	STORM SEWER	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-03



* For precast reinforced concrete sections, this dimension may vary from the dimension given in plan & (2.02).

ALTERNATE MATERIALS FOR WALLS	(min.)
Concrete Masonry Unit	12 (300)
Brick Masonry	8 (200)
Precast Reinforced Concrete Section	5 (130)
Cast-in-Place Concrete	6 (150)

GENERAL NOTES
Bottom slab may be reinforced with a minimum of 0.20 sq. in./ft. (420) sq. mm/m in both directions with a maximum spacing of 12 (300).

Bottom slab may be connected to the riser as shown in detail, or may be poured with a single use of reinforcement around the perimeter may be utilized.

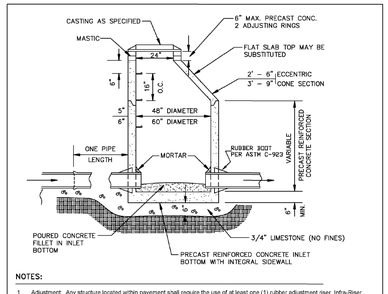
See Standard 602601 for optional Precast Reinforced Concrete Flat Slab Top.

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

DATE	REVISIONS
1-1-11	Detailed spec. in details
	Added reference to height
	Revised general notes
1-1-09	Switched units to English (metric)

INLET - TYPE B
STANDARD 602306-03

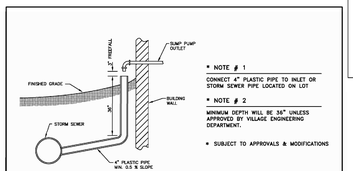
NOTE:
SUMPS TO CONNECT 2' BELOW RIM OF STORM STRUCTURE WHERE POSSIBLE.



NOTES:
1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
2. Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
3. Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.
4. All bottom sections shall be monolithically precast including bases and invert flowlines.
5. Provide CA-6 aggregate backfill around manhole to subgrade elevation in paved areas for subgrade.

NOTE:
SUMPS TO CONNECT 2' BELOW RIM OF STORM STRUCTURE WHERE POSSIBLE.

STORM MANHOLE		
ENGINEERING DATA	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-01

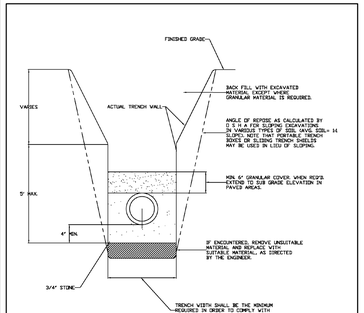


* NOTE # 1
CONNECT 4" PLASTIC PIPE TO INLET OR STORM SEWER PIPE LOCATED ON LOT

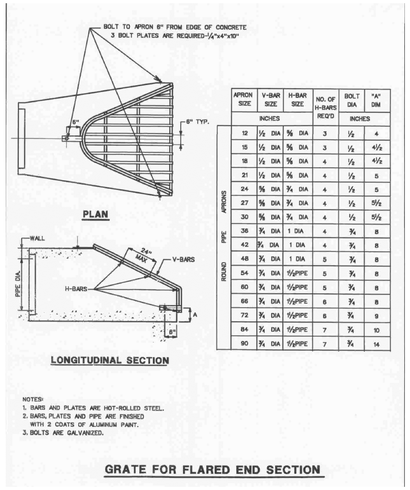
* NOTE # 2
MINIMUM DEPTH WILL BE 36" UNLESS APPROVED BY VILLAGE ENGINEERING DEPARTMENT.

* SUBJECT TO APPROVALS & MODIFICATIONS

SUMP PUMP DRAIN		
ENGINEERING DATA	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-12



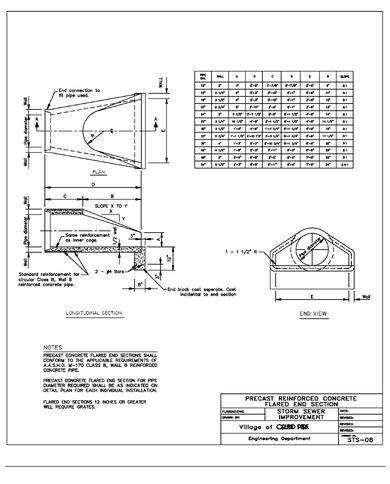
TRENCH SECTION (STORM SEWER)		
ENGINEERING DATA	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-11



APRON SIZE	V-BAR SIZE	H-BAR SIZE	NO. OF H-BARS REQ'D	BOLT DIA.	"A" DIM
	INCHES			INCHES	
12	½ DIA	⅜ DIA	3	½	4
15	½ DIA	⅜ DIA	3	½	4½
18	½ DIA	⅜ DIA	4	½	4½
21	½ DIA	⅜ DIA	4	½	5
24	⅝ DIA	¾ DIA	4	½	5
27	⅝ DIA	¾ DIA	4	½	5½
30	⅝ DIA	¾ DIA	4	½	5½
36	¾ DIA	1 DIA	4	¾	8
42	¾ DIA	1 DIA	4	¾	8
48	¾ DIA	1 DIA	5	¾	8
54	¾ DIA	⅞ PIPE	5	¾	8
60	¾ DIA	⅞ PIPE	5	¾	8
66	¾ DIA	⅞ PIPE	6	¾	8
72	¾ DIA	⅞ PIPE	6	¾	9
84	¾ DIA	⅞ PIPE	7	¾	10
90	¾ DIA	⅞ PIPE	7	¾	14

NOTES:
1. BARS AND PLATES ARE HOT-ROLLED STEEL.
2. BARS, PLATES AND PIPE ARE FINISHED WITH 2 COATS OF ALUMINUM PAINT.
3. BOLTS ARE GALVANIZED.

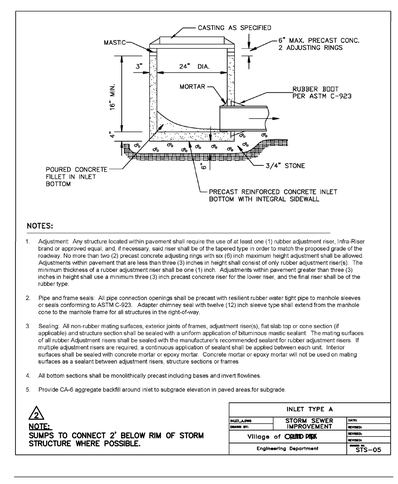
GRATE FOR FLARED END SECTION



MH No.	A	B	C	D	E	Slope
18"	2'-0"	4"	2'-0"	4'-0"	2'-0"	8:1
24"	2'-0"	4"	2'-0"	4'-0"	2'-0"	8:1
30"	2'-0"	4"	2'-0"	4'-0"	2'-0"	8:1
36"	2'-0"	4"	2'-0"	4'-0"	2'-0"	8:1
42"	2'-6"	4"	2'-6"	5'-0"	2'-6"	8:1
48"	2'-6"	4"	2'-6"	5'-0"	2'-6"	8:1
54"	2'-6"	4"	2'-6"	5'-0"	2'-6"	8:1
60"	2'-6"	4"	2'-6"	5'-0"	2'-6"	8:1
66"	2'-6"	4"	2'-6"	5'-0"	2'-6"	8:1
72"	2'-6"	4"	2'-6"	5'-0"	2'-6"	8:1
84"	2'-6"	4"	2'-6"	5'-0"	2'-6"	8:1
90"	2'-6"	4"	2'-6"	5'-0"	2'-6"	8:1

NOTES
PRECAST CONCRETE FLARED END SECTIONS SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF A.A.S.H.O. M-170 CLASS II, WALL B REINFORCED CONCRETE PIPE.
PRECAST CONCRETE FLARED END SECTION FOR PIPE DIAMETER REQUIRED SHALL BE AS INDICATED ON DETAIL PLAN FOR EACH INDIVIDUAL INSTALLATION.
FLARED END SECTIONS 12 INCHES OR GREATER WILL REQUIRE GRATES.

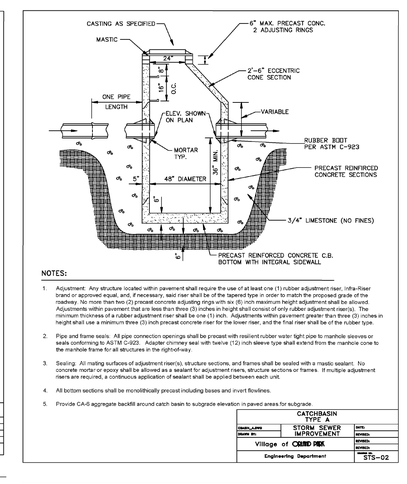
PRECAST REINFORCED CONCRETE FLARED END SECTION		
CURB/GUTTER	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-08



NOTES:
1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
2. Pipe and frame seals: All pipe connection openings shall be precast with resilient rubber water tight pipe to manhole sleeves or seals conforming to ASTM C-923. Adapter chimney seal with twelve (12) inch sleeve type shall extend from the manhole cone to the manhole frame for all structures in the right-of-way.
3. Sealing: All non-rubber mating surfaces, exterior joints of frames, adjustment riser(s), flat slab top or cone section (if applicable) and structure section shall be sealed with a uniform application of bituminous mastic sealant. The mating surfaces of all rubber adjustment risers shall be sealed with the manufacturer's recommended sealant for rubber adjustment risers. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Interior surfaces shall be sealed with concrete mortar or epoxy mortar. Concrete mortar or epoxy mortar will not be used on mating surfaces as a sealant between adjustment risers, structure sections or frames.
4. All bottom sections shall be monolithically precast including bases and invert flowlines.
5. Provide CA-6 aggregate backfill around inlet to subgrade elevation in paved areas for subgrade.

NOTE:
SUMPS TO CONNECT 2' BELOW RIM OF STORM STRUCTURE WHERE POSSIBLE.

INLET TYPE A		
MUDSLAB/APRON	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-05



NOTES:
1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
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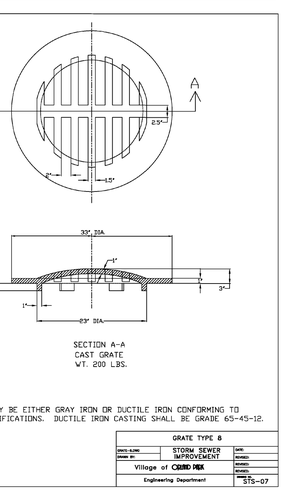
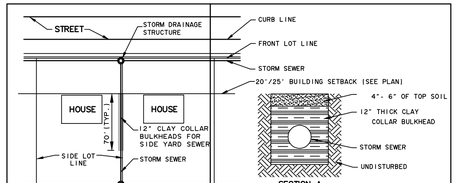
3. Sealing: All mating surfaces of adjustment riser(s), structure sections, and frames shall be sealed with a mastic sealant. No concrete mortar or epoxy shall be allowed as a sealant for adjustment risers, structure sections or frames. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit.
4. All bottom sections shall be monolithically precast including bases and invert flowlines.
5. Provide CA-6 aggregate backfill around catch basin to subgrade elevation in paved areas for subgrade.

CATCHBASIN TYPE A		
CURB/GUTTER	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-02

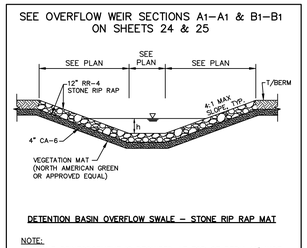


THE CAST GRATE MAY BE EITHER GRAY IRON OR DUCTILE IRON CONFORMING TO THE STANDARD SPECIFICATIONS. DUCTILE IRON CASTING SHALL BE GRADE 65-45-12.

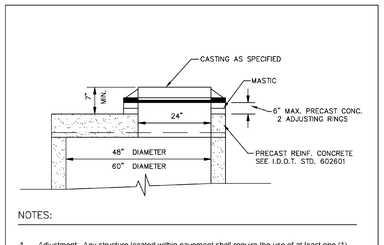
GRATE TYPE B		
CURB/GUTTER	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-07



CLAY COLLAR BULKHEADS FOR SIDE YARD SEWER
NOT TO SCALE



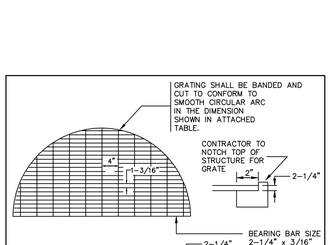
DETENTION BASIN OVERFLOW SWALE
NOT TO SCALE



NOTES:

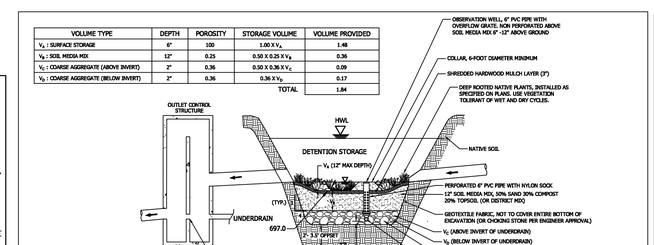
1. Adjustment: Any structure located within pavement shall require the use of at least one (1) rubber adjustment riser, Infra-Riser brand or approved equal, and, if necessary, said riser shall be of the tapered type in order to match the proposed grade of the roadway. No more than two (2) precast concrete adjusting rings with six (6) inch maximum height adjustment shall be allowed. Adjustments within pavement that are less than three (3) inches in height shall consist of only rubber adjustment riser(s). The minimum thickness of a rubber adjustment riser shall be one (1) inch. Adjustments within pavement greater than three (3) inches in height shall use a minimum three (3) inch precast concrete riser for the lower riser, and the final riser shall be of the rubber type.
2. Sealing: All non-rubber mating surfaces, exterior joints of frames, adjustment riser(s), flat slab top or cone section (if applicable) and structure section shall be sealed with a uniform application of bituminous mastic sealant. The mating surfaces of all rubber adjustment risers shall be sealed with the manufacturer's recommended sealant for rubber adjustment risers. If multiple adjustment risers are required, a continuous application of sealant shall be applied between each unit. Interior surfaces shall be sealed with concrete mortar or epoxy mortar. Concrete mortar or epoxy mortar will not be used on mating surfaces as a sealant between adjustment risers, structure sections or frames.

FLAT SLAB TOP		
TOTAL NO.BARS	STORM SEWER IMPROVEMENT	DATE:
DRAWN BY:		REVISED:
Village of CRESTED BUTTE		REVISED:
Engineering Department		REVISED: STS-06



STORM STRUCTURE DIAMETER	ARC RADIUS
5'-0"	2'-8"

STORM MANHOLE NO. 30 HIGH CAPACITY STEEL BAR GRATING DETAIL
N.T.S.



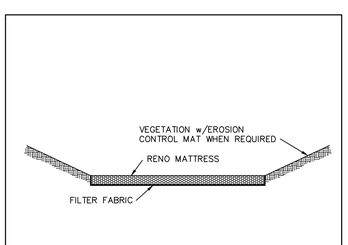
VOLUME TYPE	DEPTH	POROSITY	STORAGE VOLUME	VOLUME PROVIDED
V_4 : SURFACE STORAGE	6"	100	$1.00 \times V_4$	1.48
V_B : SOIL MEDIA MIX	12"	0.25	$0.30 \times 0.25 \times V_B$	0.36
V_C : COARSE AGGREGATE (ABOVE INVERT)	2"	0.36	$0.30 \times 0.36 \times V_C$	0.09
V_D : COARSE AGGREGATE (BELOW INVERT)	2"	0.36	$0.36 \times V_D$	0.17
			TOTAL	1.84

BOTTOM OF THE FACILITY: ELEV. 697.0
SEASONALLY HIGH GROUNDWATER: ELEV. 690.0
SEPARATION: FEET 7.0

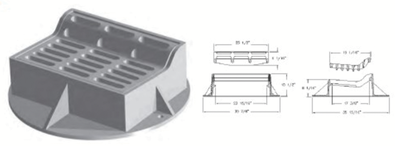
NOTES:
1. THE PERIMETER OF THE VOLUME CONTROL FACILITY SHALL MAINTAIN THE MINIMUM HORIZONTAL SEPARATION DISTANCE OF: 10 FEET FROM FOUNDATIONS, UNLESS WATERPROOFED; 20 FEET FROM ROADWAY GRAVEL SHOULDERS; AND 100 FEET FROM POTABLE WATER WELLS, SEPTIC TANKS/FIELDS, OR OTHER UNDERGROUND TANKS.
2. SANITARY 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 AND PRESSURE TESTED TO ENSURE WATER TIGHTNESS PRIOR TO BACKFILLING.
3. MINIMUM DISTANCE OF 2 FEET (0.5 FEET IN COMBINED SEWER AREAS) BETWEEN THE BOTTOM OF THE VOLUME CONTROL FACILITY AND SEASONALLY HIGH GROUNDWATER LEVEL IS REQUIRED.
4. STONE STORAGE OPTIONS ARE IDOT CA-1, CA-3, CA-7, OR APPROVED ALTERNATE. NO RECYCLED MATERIALS.
5. BOTTOM OF VOLUME CONTROL FACILITY SHALL BE AS FLAT AS POSSIBLE. BOTTOM SLOPES SHALL NOT EXCEED 20:1. DETENTION BASIN SIDE SLOPES SHALL BE 3:1 MINIMUM.
6. THE DEPTH BELOW OUTLET SHALL NOT EXCEED 12 INCHES AND SHALL BE DEWATERED IN 72 HOURS OR LESS.
7. UNDERDRAINS ARE REQUIRED IN TYPICAL CLAYEY SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.3 INCH/HOUR. UNDERDRAIN SHOULD BE NO LARGER THAN 4 INCHES IN DIAMETER TO ENSURE SLOW RELEASE. IF UNDERDRAIN IS INSTALLED AT THE TERMINAL END AND BE SPACED NO MORE THAN 30 FEET ON CENTER ACROSS A RETENTION FIELD. ONE OBSERVATION WELL REQUIRED PER 5,000 SQUARE FEET OF SURFACE AREA.
8. VOLUME CONTROL FACILITY UNDERDRAIN SYSTEM SHALL BE CONNECTED TO A DOWNSTREAM STRUCTURE, UPSTREAM OF THE RESTRICTOR.

SWMF #001
NOT TO SCALE

TECHNICAL GUIDANCE MANUAL	11/29/2021
TYPICAL VOLUME CONTROL STORAGE BELOW DETENTION BASIN OUTLET	STD. DWG. NO.XX
	PAGE NO.XX



7525 CATCH BASIN CURB INLET
Heavy duty
Approximate 220 sq. in. open area
"DUMP NO WASTE!" lettering and fish image



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E-Mail: info@cemcon.com Website: www.cemcon.com

REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	05-16-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
2	06-26-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			
3	07-22-25/LAL	REVISED PER VILLAGE COMMENTS DATED 7/17/25			
4	08-13-25/LAL	REVISED PER CLIENT			

DRAINAGE STRUCTURE DETAILS
ESTATES AT RAVINIA MEADOW

FILE NAME: DETAILS	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: ----	SHEET NO. 39 of 39
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = N.T.S.	

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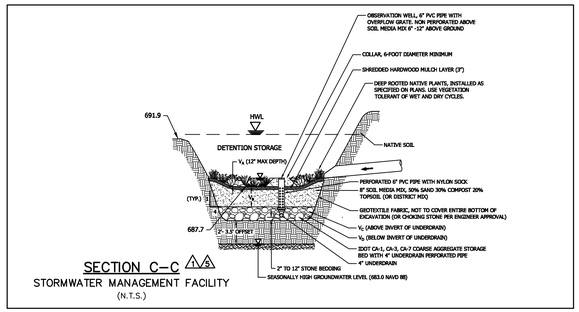
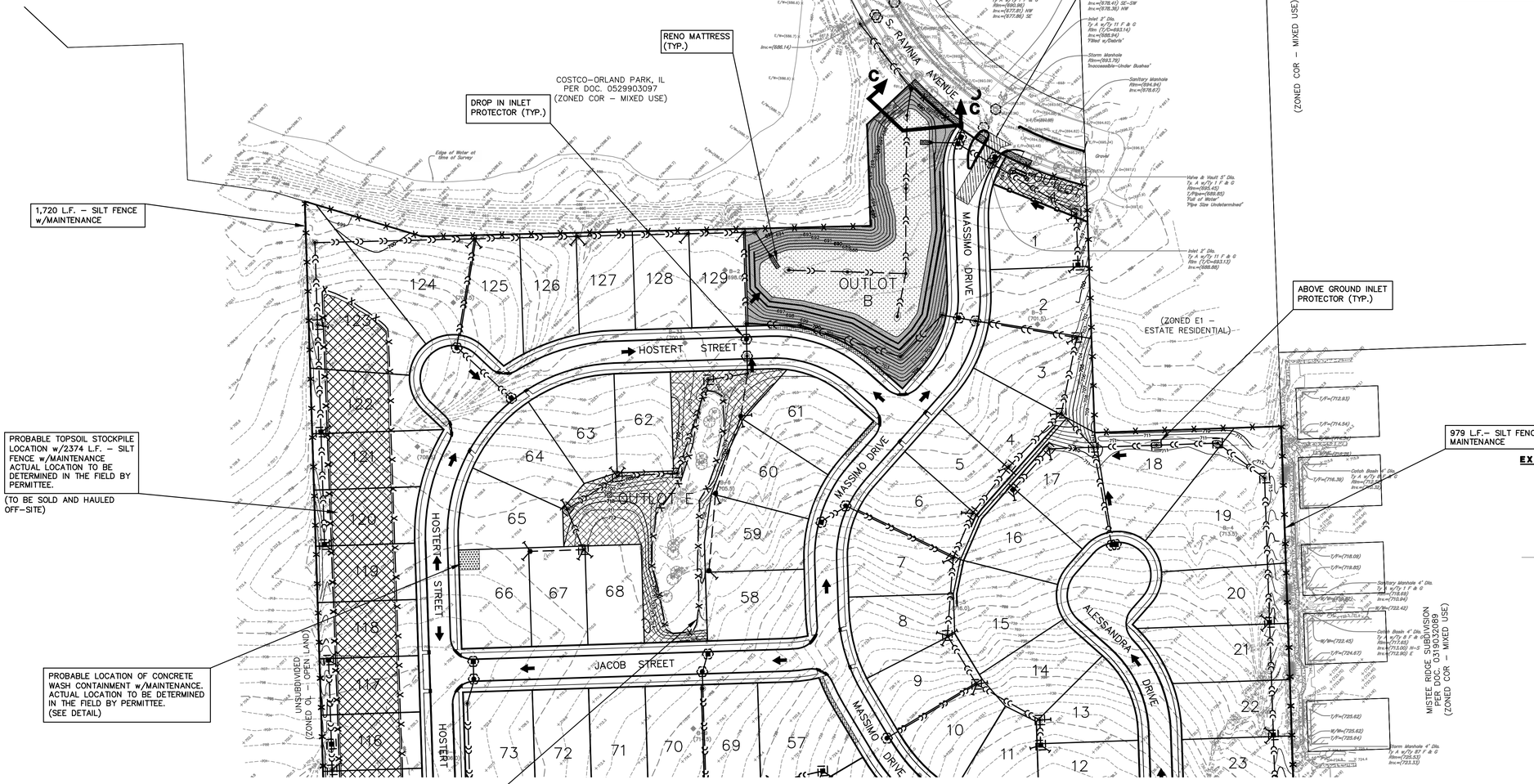


SECTION C–C
STORMWATER MANAGEMENT FACILITY
(N.T.S.)

NOTE: DETENTION BASIN SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION IN PERPETUITY.

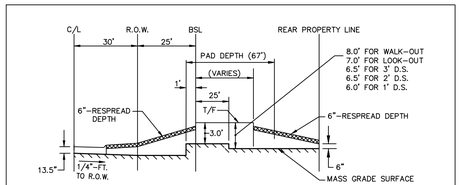


SEE SHEET ER02

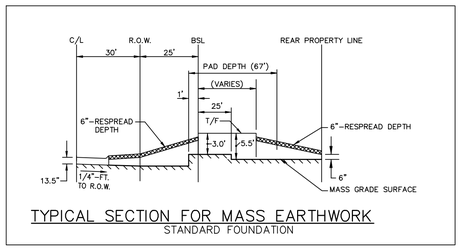
N

80 40 0 80
SCALE: 1" = 80'

TOTAL SITE AREA: 72.56 Ac.
TOTAL DISTURBED AREA: 63.59 Ac.



TYPICAL SECTION FOR MASS EARTHWORK
DROP SIDING/LOOK–OUT/WALK–OUT



TYPICAL SECTION FOR MASS EARTHWORK
STANDARD FOUNDATION

LEGEND

EXISTING	PROPOSED	DESCRIPTION
○	●	MANHOLE
○	●	CATCH BASIN
□	■	INLET
	●	CLEANOUT
	▭	SLOPE INLET BOX
	—	HEADWALL
	◀	END SECTION WITH RIP-RAP
		STORM SEWER
		CATCH ALL FILTER BASKET INLET PROTECTOR (OR APPROVED EQUAL) - PAVED AREAS
		ABOVE GROUND INLET PROTECTOR w/FILTER BASKET - NON PAVED AREAS
		SILT FENCE WITH MAINTENANCE
		DITCH CHECK
		RENO MATTRESS
		TEMPORARY DEWATERING DEVICE
		PROBABLE TOPSOIL STOCKPILE LOCATIONS
		EROSION CONTROL BLANKET NAG T5 (TOTAL AREA = 33,004 S.Y.)
		EROSION CONTROL BLANKET NAG S75BN (TOTAL AREA = 21,863 S.Y.)
		EROSION CONTROL BLANKET NAG SC150BN (TOTAL AREA = 1,116 S.Y.)
		VOLUME CONTROL GROWING MEDIA
		APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K
		APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO
		APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

NOTE: FOR STORM STRUCTURE NUMBERING, SEE "MASTER UTILITY PLAN"

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	04–23–25/LAL	REVISED PER IN–HOUSE REVIEW			
2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
3	06–26–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			
4	08–13–25/LAL	REVISED PER CLIENT			

SOIL EROSION AND SEDIMENTATION CONTROL PLAN
ESTATES AT RAVINIA MEADOW

FILE NAME: SOILERO	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.:	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 80'	ER01 of ER05

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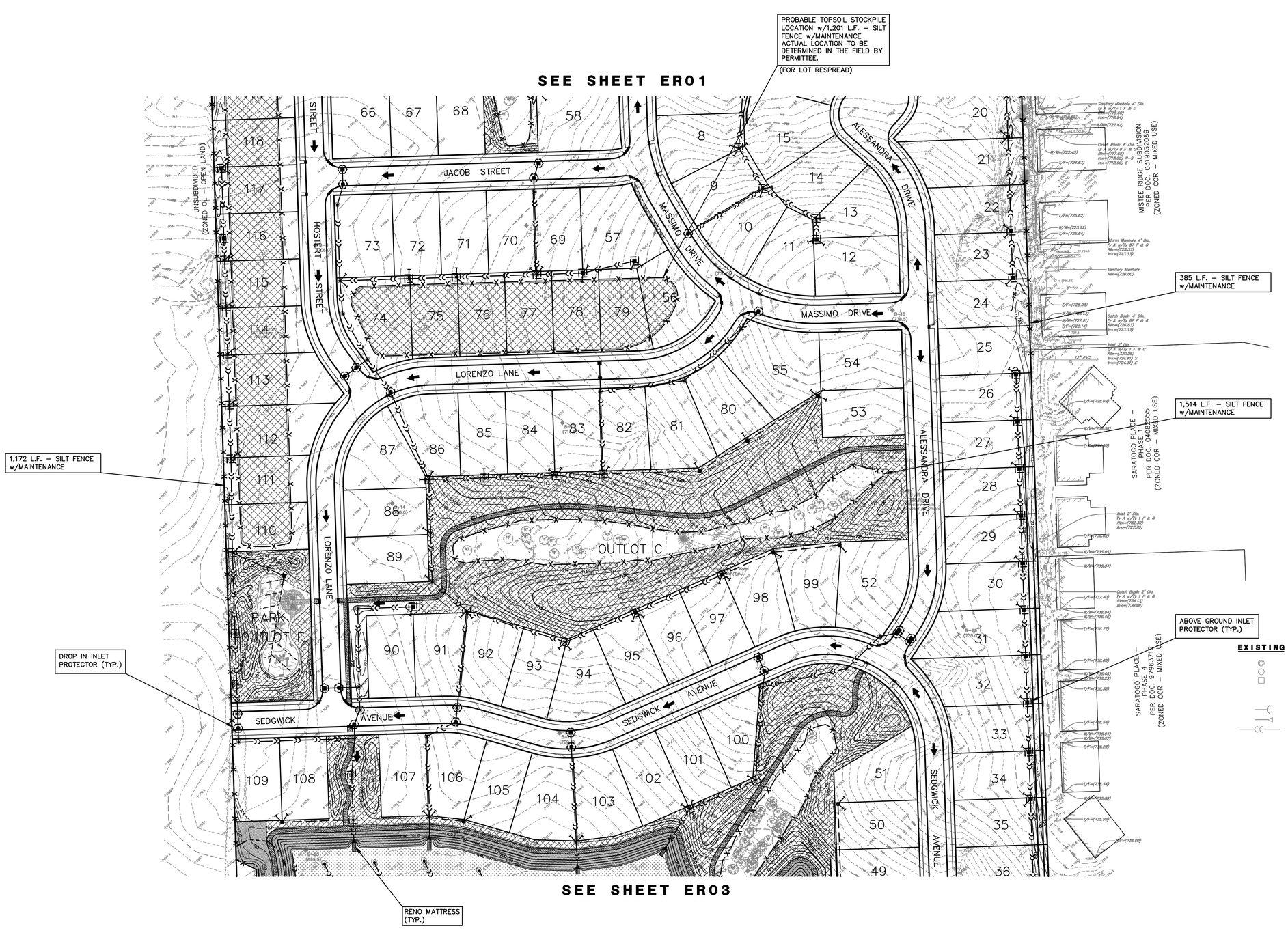

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		MANHOLE
		CATCH BASIN
		INLET
		CLEANOUT
		SLOPE INLET BOX
		HEADWALL
		END SECTION WITH RIP-RAP
		STORM SEWER
		CATCH ALL FILTER BASKET INLET PROTECTOR (OR APPROVED EQUAL) - PAVED AREAS
		ABOVE GROUND INLET PROTECTOR w/FILTER BASKET - NON PAVED AREAS
		SILT FENCE WITH MAINTENANCE
		DITCH CHECK
		RENO MATTRESS
		TEMPORARY DEWATERING DEVICE
		PROBABLE TOPSOIL STOCKPILE LOCATIONS
		EROSION CONTROL BLANKET NAG S75 (TOTAL AREA = 33,004 S.Y.)
		EROSION CONTROL BLANKET NAG S75BN (TOTAL AREA = 21,863 S.Y.)
		EROSION CONTROL BLANKET NAG SC150BN (TOTAL AREA = 1,115 S.Y.)
		VOLUME CONTROL GROWING MEDIA
		APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K
		APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO
		APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

NOTE: FOR STORM STRUCTURE NUMBERING, SEE "MASTER UTILITY PLAN"

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
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2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
3	06–26–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			

SOIL EROSION AND SEDIMENTATION CONTROL PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: SOILERO	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.:	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 80'	ER02 of ER05

PLOT FILE CREATED: 9/3/2025 7:31 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 3:02 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\SOILERO.DWG

SEE SHEET ER02

VOLUME CONTROL GROWING MEDIA

150 L.F. – SILT FENCE w/MAINTENANCE

700 L.F. – SILT FENCE w/MAINTENANCE

DROP IN INLET PROTECTOR (TYP.)

RENO MATTRESS (TYP.)

1,639 L.F. – DUAL ROW SILT FENCE w/ONE BEING HIGHLY VISIBLE MATERIAL w/MAINTENANCE 3,278 L.F. TOTAL)

SEDIMENT BASIN DEWATERING DEVICE (SEE DETAIL)

ABOVE GROUND INLET PROTECTOR (TYP.)

595 L.F. – SILT FENCE w/MAINTENANCE

256 L.F. – SILT FENCE w/MAINTENANCE

445 L.F. – SILT FENCE w/MAINTENANCE

SEDGWICK AVENUE

OUTLOT D

50' WETLAND BUFFER (TYP.)

UNSUBDIVIDED (ZONED R4 – MULTIPLE FAMILY) (ORLAND HILLS)

UNSUBDIVIDED (ZONED PARKS/OPEN SPACE) (ORLAND HILLS)

LIBERTY SQUARE P.U.D. PER DOC. 0420439064

SOUTH HILL P.U.D. PER DOC. 0536318064 (ZONED R4 – MULTIPLE FAMILY) (ORLAND HILLS)

SARATOGA PLACE – PHASE 4 PER DOC. 1707963719 (ZONED COR – MIXED USE)

SARATOGA LAKES SUBDIVISION PER DOC. 0803613527 (ZONED COR – MIXED USE)

UNSUBDIVIDED (ZONED COR – MIXED USE)

TIARA GLEN PER DOC. 0313418074

165TH STREET

APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO

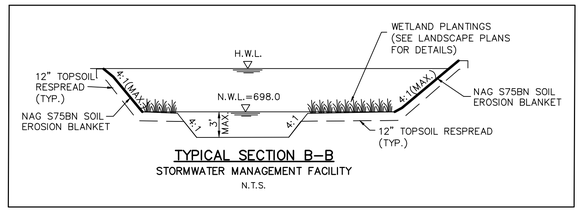
APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K

APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

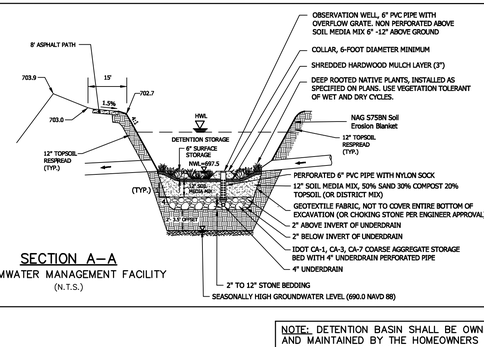
N

80 40 0 80

SCALE: 1" = 80'



TYPICAL SECTION B–B
STORMWATER MANAGEMENT FACILITY
N.T.S.



SECTION A–A
STORMWATER MANAGEMENT FACILITY
(N.T.S.)

NOTE: DETENTION BASIN SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION IN PERPETUITY.

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		MANHOLE
		CATCH BASIN
		INLET
		CLEANOUT
		SLOPE INLET BOX
		HEADWALL
		END SECTION WITH RIP-RAP
		STORM SEWER
		CATCH ALL FILTER BASKET INLET PROTECTOR (OR APPROVED EQUAL) - PAVED AREAS
		ABOVE GROUND INLET PROTECTOR w/FILTER BASKET - NON PAVED AREAS
		SILT FENCE WITH MAINTENANCE
		DITCH CHECK
		RENO MATTRESS
		TEMPORARY DEWATERING DEVICE
		PROBABLE TOPSOIL STOCKPILE LOCATIONS
		EROSION CONTROL BLANKET NAG 75 (TOTAL AREA = 33,004 S.Y.)
		EROSION CONTROL BLANKET NAG S75BN (TOTAL AREA = 21,863 S.Y.)
		EROSION CONTROL BLANKET NAG SC150BN (TOTAL AREA = 1,116 S.Y.)
		VOLUME CONTROL GROWING MEDIA
		APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K
		APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO
		APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

NOTE: FOR STORM STRUCTURE NUMBERING, SEE "MASTER UTILITY PLAN"

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REVISIONS

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2	05–16–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			
3	06–26–25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 6/13/25			

SOIL EROSION AND SEDIMENTATION CONTROL PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: SOILERO	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.:	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04–04–25	SCALE: 1" = 80'	ER03 of ER05

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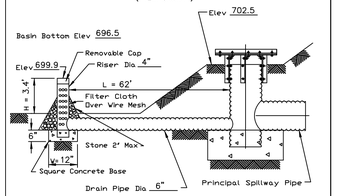
PLOT FILE CREATED: 9/3/2025 7:31 AM BY: LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 3:02 PM BY: LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\SOILERO.DWG

SEDIMENT BASIN DEWATERING DEVICE (SWMF 01)

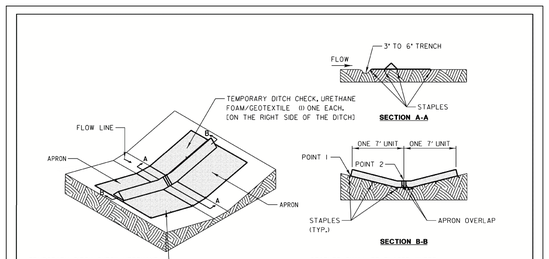
(TEMPORARY)



SECTION ON CENTERLINE

NOTES:
Slotted inlets shall be fabricated from corrugated metal or smooth steel.
Slots shall be cut cleanly and deburred. Ends of slots may be round or square.
Gravel filter, if used, shall be pit run sand and gravel with a maximum particle diameter of 2".
Fabricated or standard elbow, fabricated or standard tee with the pipe or plug in upstream end, or standard tee with one end embedded in concrete.
Thirty 1" diameter holes per foot of riser may be substituted for the 1"x 4" slots for 6" diameter risers.
Drain pipe shall be the same material and gauge as the principle spillway pipe.
Slot spacing and size shall be as shown on standard drawing IL-580.
Coupling bands shall be as shown on standard drawing IL-580.

REFERENCE		STANDARD DVG. NO.
Project		IL-615
Designed ____ Date ____	NRCS Natural Resources Conservation Service	SHEET 1 OF 1
Checked ____ Date ____		DATE 9-22-93
Approved ____ Date ____		



SILT DIKE UNIT ISOMETRIC

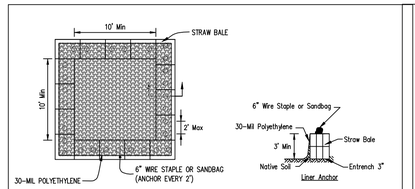
STAPLES SHALL BE PLACED WHERE THE UNITS OVERLAP AND IN THE CENTER OF THE 7' UNIT AS SHOWN ON THE DIAGRAM.

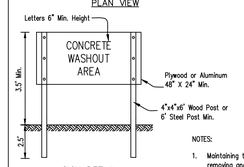
POINT 1 MUST BE HIGHER THAN POINT 2 TO INSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

NOTE:
THE INSTALLATION SHOWN ABOVE WILL BE MEASURED AS TWO (2) EACH TEMPORARY DITCH CHECK, URETHANE FOAM/GEOTEXTILE.

SCALE: 1" = 5'

REVISIONS	DATE	
		APPROVED BY: N. G. ZEMAITIS DATE: APRIL 4, 2007
		TRIANGULAR SILT DIKE INSTALLATION FOR ROADWAY DITCH OR DRAINAGE DITCH

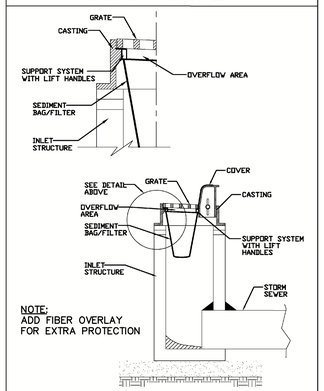




NOTES:
1. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and/or slurry and returning the facilities to a functional condition.
2. Facility shall be cleaned or reconstructed in a new area once washout becomes two-thirds full.
3. Each straw bale is to be staked in place using (2) 2"x2"x4' wooden stakes.

REVISIONS	DATE	
		Designed: ____ Date: ____
		Drawn By: CRM/DPL ____ Date: ____
		Checked: ____ Date: ____
		Approved: ____ Date: ____
		TEMPORARY CONCRETE WASHOUT FACILITY – STRAW BALE

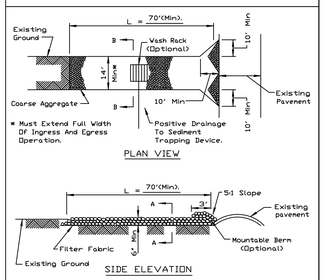
INLET PROTECTION - PAVED AREAS DROP-IN PROTECTION



NOTE:
ADD FIBER OVERLAY FOR EXTRA PROTECTION

REFERENCE		STANDARD DVG. NO.
Project		IUM-561D
Designed ____ Date ____		SHEET 1 OF 1
Checked ____ Date ____		DATE 02-03-11
Approved ____ Date ____		

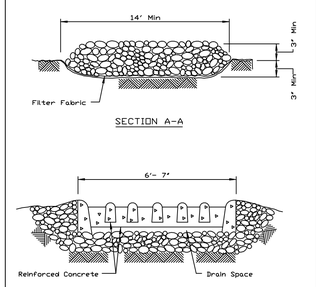
STABILIZED CONSTRUCTION ENTRANCE PLAN



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

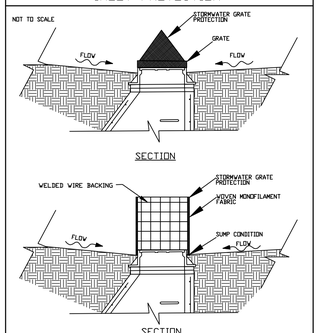
REFERENCE		STANDARD DVG. NO.
Project		IL-630
Designed ____ Date ____	NRCS Natural Resources Conservation Service	SHEET 1 OF 2
Checked ____ Date ____		DATE 8-28-94
Approved ____ Date ____		

STABILIZED CONSTRUCTION ENTRANCE PLAN



REFERENCE		STANDARD DVG. NO.
Project		IL-630
Designed ____ Date ____	NRCS Natural Resources Conservation Service	SHEET 2 OF 2
Checked ____ Date ____		DATE 8-28-94
Approved ____ Date ____		

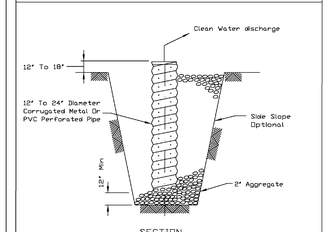
MANUFACTURED ABOVE GRADE INLET PROTECTION



NOTES:
1. A maintenance schedule must maintain a sediment accumulation of less than 50% of the height of the inlet protection.
2. Device should be supported.
3. Fabric type should be IUM 592 Standard Table 1 Class 4.

REFERENCE		STANDARD DVG. NO.
Project		IUM-531
Designed ____ Date ____		SHEET 1 OF 1
Checked ____ Date ____		DATE 03-27-2017
Approved ____ Date ____		

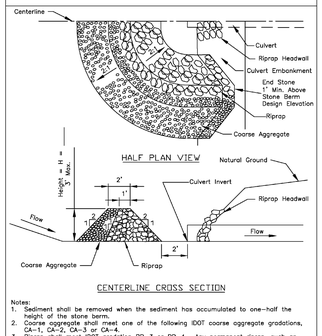
SUMP PIT PLAN



NOTES:
1. Pit dimensions are optional.
2. The standpipe will be constructed by perforating a 12"-24" diameter corrugated metal or PVC pipe.
3. A base of 2" aggregate will be placed in the pit to a minimum depth of 12". After installing the standpipe, the pit surrounding the standpipe will then be backfilled with 2" aggregate.
4. The standpipe will extend 12" to 18" above the lip of the pit.
5. If discharge will be pumped directly to a storm drainage system, the standpipe will be wrapped with Filter Fabric before installation.
6. If desired, 1/4"-1/2" hardware cloth may be placed around the standpipe prior to attaching the Filter fabric. This will increase the rate of water seepage into the pipe.

REFERENCE		STANDARD DVG. NO.
Project		IL-653
Designed ____ Date ____	NRCS Natural Resources Conservation Service	SHEET 1 OF 1
Checked ____ Date ____		DATE 8-11-94
Approved ____ Date ____		

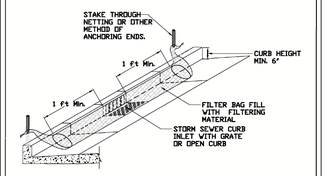
CULVERT INLET PROTECTION - STONE



Notes:
1. Sediment shall be removed when the sediment has accumulated to one-half the height of the stone berm.
2. Coarse aggregate shall meet one of the following IDOT coarse aggregate gradations, CA-1, CA-2, CA-3 or CA-4.
3. Riprap shall meet IDOT gradation RR-3 or RR-4. Any permanent riprap, such as for the culvert headwall, shall meet IDOT Quality Designation A.
4. Coarse aggregate and riprap shall be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
5. The maximum drainage area to the culvert being protected is 3 acres.
6. See plans for H dimension.
7. Tie the stone berm into the culvert embankment a minimum of 1 foot above the design elevation of the stone berm.

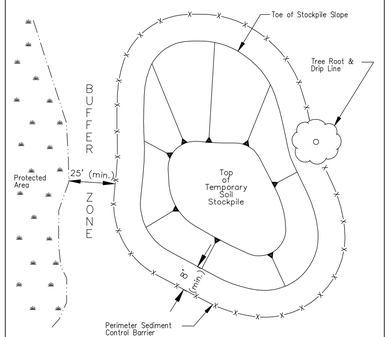
REFERENCE		STANDARD DVG. NO.
Project		IL-508ST
Designed ____ Date ____	NRCS Natural Resources Conservation Service	SHEET 1 OF 1
Checked ____ Date ____		DATE 1-29-99
Approved ____ Date ____		

INLET PROTECTION - PAVED AREAS CURB PROTECTION



REFERENCE		STANDARD DVG. NO.
Project		IUM-561C
Designed ____ Date ____		SHEET 1 OF 1
Checked ____ Date ____		DATE 02-03-11
Approved ____ Date ____		

TEMPORARY SOIL STOCKPILE DETAIL

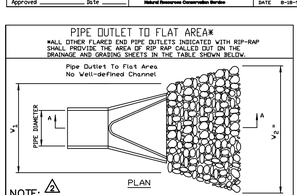


NOTES:
1. Stockpile slopes should be based on angle of repose of the soil material to avoid potential sloughing of the slope.
2. Soil stockpile to be stabilized in accordance with practical standards.
3. Do not locate stockpile within overland drainage flow path, designated floodways, drip line or over the root crown of adjacent trees.
4. Provisions for sediment control practices may be required along haul roads and entrance/exit locations for access to the soil stockpile that can create flow path for stormwater runoff.
5. Installation of benches, terraces, or slope interrupters should be considered.
6. Avoid building soil stockpiles on impervious surfaces.
7. Linear sediment trap surrounding the stockpile base may be used to control sediment.

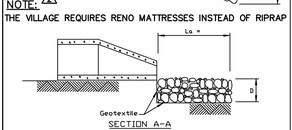
REFERENCE		STANDARD DVG. NO.
Project		IUM-627
Designed ____ Date ____		SHEET 1 OF 1
Checked ____ Date ____		DATE JANUARY 2017
Approved ____ Date ____		

PIPE OUTLET TO FLAT AREA

WALL, OTHER FLARED END PIPE OUTLETS INDICATED WITH RIP-RAP SHALL PROVIDE THE AREA OF RIP RAP CALLED OUT ON THE DRAINAGE AND GRADING SHEETS IN THE TABLE SHOWN BELOW.



NOTE:
THE VILLAGE REQUIRES RENO MATTRESSES INSTEAD OF RIPRAP

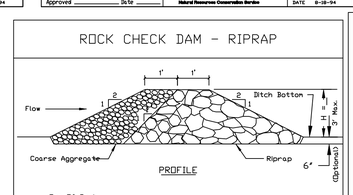


PIPE OUTLET DIAMETER (IN)	LENGTH La (FT)	WIDTH W1 (FT)	WIDTH W2 (FT)	DEPTH d (IN)	ROCK GRADATION
12	10	3.0	7.0	15	RR-3
15	12	3.5	8.5	15	RR-3
18	14	4.0	9.0	15	RR-3
21	15	5.5	10.5	15	RR-3
24	16	6.0	11.0	15	RR-3
27	17	6.5	12.5	15	RR-3
30	18	7.5	13.5	20	RR-4
36	20	9.0	15.0	20	RR-3
42	22	10.5	16.7	20	RR-4
48	24	12.0	18.4	20	RR-4
54	28	13.5	21.5	20	RR-4

NOTES:
1. The filter fabric shall meet the requirements in material specifications 592 GEOTEXTILE Table 1 or 2, class I, II or III.
2. The rock riprap shall shall meet the IDOT requirements for the following gradation: RR, quality stone dumped riprap.
3. The riprap shall be placed according to construction specification 61 LOOSE ROCK RIPRAP. The rock may be equipment placed.

REFERENCE		STANDARD DVG. NO.
Project		IL-610
Designed ____ Date ____	NRCS Natural Resources Conservation Service	SHEET 1 OF 1
Checked ____ Date ____		DATE 9-25-99
Approved ____ Date ____		

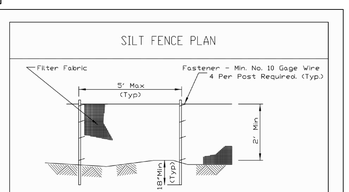
ROCK CHECK DAM - RIPRAP



NOTES:
1. Filter fabric shall meet the requirements of material specification 592 GEOTEXTILE, Table 1 or 2, Class I, II, or IV and shall be placed over the cleared area prior to the placing of rock.
2. Coarse aggregate shall meet one of the following IDOT gradations, CA-1, CA-2, CA-3, or CA-4.
3. Riprap shall meet IDOT gradation RR-3 or RR-4 and meet Quality Designation A.
4. Coarse aggregate and riprap shall be placed according to construction specification 25 ROCKFILL using placement Method 1 and Class III compaction.
5. For added stability, the base of the dam may be keyed 6 inches into the soil.
6. See plans for spacing of dams and H dimensions.
7. Maximum drainage area to each dam is 10 acres.
8. ROCK CHECK DAM-COARSE AGGREGATE IL-605CA may be used for drainage areas under 2 acres.

REFERENCE		STANDARD DVG. NO.
Project		IL-605R
Designed ____ Date ____	NRCS Natural Resources Conservation Service	SHEET 1 OF 1
Checked ____ Date ____		DATE 1-29-99
Approved ____ Date ____		

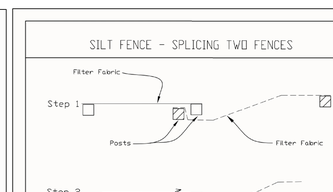
SILT FENCE PLAN



NOTES:
1. Temporary sediment fence shall be installed prior to any grading work in the area to be protected. They shall be maintained throughout the construction period and removed in conjunction with the final grading and site stabilization.
2. Filter fabric shall meet the requirements of material specification 592 Geotextile Table 1 or 2, Class I with equivalent opening size of at least 30 For nonwoven and 40 For woven.
3. Fence posts shall be either standard steel post or wood post with a minimum cross-sectional area of 3.0 sq. in.

REFERENCE		STANDARD DVG. NO.
Project		IUM-620A
Designed ____ Date ____		SHEET 1 OF 2
Checked ____ Date ____		DATE 3-16-12
Approved ____ Date ____		

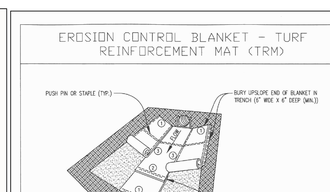
SILT FENCE - SPLICING TWO FENCES



1. Place the end post of the second fence inside the end post of the first fence.
2. Rotate both posts at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.
3. Cut the fabric near the bottom of the stakes to accomodate the 6" flap.
4. Drive both posts a minimum of 18 inches into the ground and bury the flap.
5. Compact backfill (particularly at splices) completely to prevent stormwater piping.

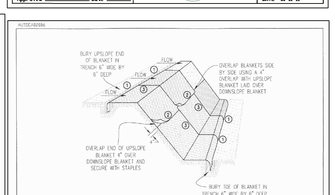
REFERENCE		STANDARD DVG. NO.
Project		IUM-620R(W)
Designed ____ Date ____		SHEET 1 OF 1
Checked ____ Date ____		DATE 3-16-2012
Approved ____ Date ____		

EROSION CONTROL BLANKET - TURF REINFORCEMENT MAT (TRM)



Notes:
1. For sandy soil conditions, staple or push pin shall be a minimum 8 inches.

REFERENCE		STANDARD DVG. NO.
Project		IUM-531
Designed ____ Date ____		SHEET 1 OF 1
Checked ____ Date ____		DATE 03-27-2017
Approved ____ Date ____		



NOTES:
1. Staples shall be placed in a diamond pattern at 3 per s.y. for stitched blankets. Non-stitched shall use 4 staples per s.y. of material. This equates to 200 staples with stitched blanket and 450 staples with non-stitched blanket per 100 s.y. of material.
2. Staple or push pin lengths shall be selected based on soil type and conditions. (minimum staple length is 8").
3. Erosion control material shall be placed in contact with the soil over a prepared seedbed.
4. All anchor slots shall be stapled at approximately 12" intervals.

REVISIONS	DATE	
		Designed: ____ Date: ____
		Drawn By: CRM/DPL ____ Date: ____
		Checked: ____ Date: ____
		Approved: ____ Date: ____
		EROSION CONTROL BLANKET INSTALLATION DETAILS

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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	05-16-25/LAL	REVISED PER VILLAGE REVIEW LETTER DATED 4/30/25			

SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

ESTATES AT RAVINIA MEADOW

FILE NAME: SOILERO	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: FILE	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = N.T.S.	ER04 of ER05

STORMWATER POLLUTION PREVENTION PLAN

1. SOIL EROSION AND SEDIMENT CONTROL (SESC) FEATURES MUST BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF UPLAND DISTURBANCE. SOIL DISTURBANCE MUST BE PHASED OR ENACTED IN SUCH A MANNER AS TO MINIMIZE EROSION SOIL STABILIZATION MEASURES MUST CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY AND/OR PERMANENT MEASURES.

2. THE EROSION AND SEDIMENT CONTROLS SHOWN ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED AS DIRECTED BY PULTE OR THE MUNICIPALITY'S AUTHORIZED REPRESENTATIVE. ALL ADDITIONAL MEASURES MUST BE IN PLACE WITHIN 3 DAYS OF DISTURBANCE AND ANY EMERGENCY SESC MEASURES MUST BE INSTALLED IMMEDIATELY.

3. THE CONTRACTOR MUST CLEAN UP, GRADE THE WORK AREAS AS THE PROJECT PROGRESSES, AND INSTALL EROSION PROTECTION TO ELIMINATE THE CONCENTRATION OF RUNOFF, OR MUST INSTALL APPROPRIATE SEDIMENT CONTROL DEVICES TO TRAP SEDIMENT. PAVEMENT MUST BE CLEANED DAILY OR AS NECESSARY TO REMOVE TRACK-OUT MATERIAL.

4. AFTER ALL PERIMETER EROSION BARRIER IS REMOVED, THE AREAS DAMAGED BY THE PERIMETER EROSION BARRIER MUST BE RESTORED.

5. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DIVERT ALL WATER (GROUND, STORM, AND CONSTRUCTION) DURING CONSTRUCTION IN ORDER TO KEEP THE CONSTRUCTION AREAS FREED OF WATER, BYPASS PUMPING, INCLUDING SILT BAGS AND AN ENERGY DISSIPATION SURFACE FOR THE PUMPS, SHALL NOT BE MEASURED AND PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCIDENTAL TO THE COST OF WEIR STRUCTURE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SIZE THE PUMPS APPROPRIATELY.

6. DURING DE-WATERING/PUMPING OPERATIONS, ONLY UNCONTAMINATED WATER SHOULD BE ALLOWED TO DISCHARGE TO PROTECTED NATURAL AREAS, WATERS OF THE STATE, OR TO A STORM SEWER SYSTEM (IN ACCORDANCE WITH LOCAL PERMITS). INLET HOSES SHOULD BE PLACED IN A STABILIZED SUMP PIT OR FLOATED AT THE SURFACE OF THE WATER IN ORDER TO LIMIT THE AMOUNT OF SEDIMENT INTAKE. PUMPING OPERATIONS MAY BE DISCHARGED TO A STABILIZED AREA THAT CONSISTS OF AN ENERGY DISSIPATING DEVICE (E.G., STONE), SEDIMENT FILTER BAG, OR BOTH. ADEQUATE EROSION AND SEDIMENT CONTROLS SHOULD BE USED DURING DE-WATERING OPERATIONS AS NECESSARY. DEWATERING SEDIMENT LADEN WATER DIRECTLY INTO FIELD TILES, STORM WATER STRUCTURES, OR "WATERS OF THE US" IS PROHIBITED.

7. TEMPORARY CONSTRUCTION ENTRANCES WILL BE CONSTRUCTED AT ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC ENTERS OF LEAVES THE SITE. THESE LOCATIONS SHALL BE DETERMINED IN THE FIELD, AS NEEDED. GRAVELED ROADS, ACCESS DRIVES, PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH, AND VEHICLE WASH DOWN FACILITIES IF NECESSARY, MUST BE PROVIDED TO PREVENT THE DEPOSIT OF SOIL FROM BEING TRACKED ONTO PUBLIC OR PRIVATE ROADWAYS. ANY SOIL REACHING PUBLIC OR PRIVATE ROADWAY MUST BE REMOVED IMMEDIATELY.

8. STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION WORK IN AN AREA. EXCEPTIONS TO THESE TIME FRAMES ARE SPECIFIED AS FOLLOWS:

   WHERE THE INITIATION OF STABILIZATION MEASURES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.

   ON AREAS WHERE CONSTRUCTION ACTIVITY CEASED AND WILL RESUME AFTER 14 DAYS, A TEMPORARY STABILIZATION METHOD CAN BE USED.

9. STOCK PILES OR SOIL MUST NOT BE LOCATED IN FLOOD PLAINS, RIPARIAN AREAS (VEGETATED FLOOD PLAINS), WETLANDS AND WATERS OF THE U.S., UNLESS OTHERWISE AUTHORIZED BY THE RELEVANT PERMITTING AUTHORITY. IF A STOCKPILE IS TO REMAIN IN PLACE FOR MORE THAN THREE DAYS, PERIMETER EROSION BARRIER MUST BE PROVIDED. ALL STOCKPILES LOCATIONS MUST BE APPROVED BY PULTE.

10. CONTRACTOR MUST INSTALL PERIMETER EROSION BARRIER AT ANY LOCATION IN WHICH SHEET FLOWS MAY RESULT IN SEDIMENT RUNOFF OUTSIDE THE CONSTRUCTION LIMITS. THE CONTRACTOR MAY USE OTHER METHODS TO CONTROL RUNOFF, INCLUDING, BUT NOT LIMITED TO, TEMPORARY DIVERSION SWALES, TEMPORARY SEDIMENT TRAPS, SHAPED DITCHES TO CONVEY WATER, ETC.

11. PULTE SHALL PROVIDE A QUALIFIED PERSON WHO WILL BE RESPONSIBLE FOR CONDUCTING SITE INSPECTIONS IN COMPLIANCE WITH THE ILR10 NPDES PERMIT. AFTER EACH INSPECTION, A REPORT SHOULD BE PREPARED BY THE PERSON WHO PERFORMED THE INSPECTION. THE INSPECTION REPORT SHOULD BE MAINTAINED ON SITE AS PART OF THE PLAN. INSPECTIONS SHOULD BE CONDUCTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM, OR BY THE END OF THE FOLLOWING BUSINESS OR WORK DAY, THAT IS 0.5 INCHES OR GREATER.

   INSPECTIONS MAY BE REDUCED TO ONCE PER MONTH WHEN CONSTRUCTION ACTIVITIES HAVE CEASED DUE TO FROZEN CONDITIONS. INSPECTIONS MUST COMMENCE WHEN CONSTRUCTION ACTIVITIES ARE CONDUCTED, OR IF THERE IS A 0.5" OR GREATER RAIN EVENT, OR DISCHARGE DUE TO SNOWMELT OCCURS.

12. ALL STORM SEWER INLET STRUCTURES (INCLUDING INLETS LOCATED WITHIN THE HAUL ROUTES) MUST BE PROTECTED WITH STORM SEWER INLET PROTECTION (I.E. INLET FILTERS) PER INLET PROTECTION DETAILS IN THE PLANS.

13. WINTER SHUTDOWN SHALL BE ADDRESSED EARLY IN THE FALL GROWING SEASON SO THE SLOPES AND OTHER BARE EARTH AREAS MAY BE STABILIZED WITH TEMPORARY AND/OR PERMANENT VEGETATIVE COVER FOR PROPER EROSION AND SEDIMENT CONTROL.

14. COMPLETED SLOPES SHALL BE SEEDED AND MULCHED [OR BLANKETED, IF APPLICABLE] AS THE EXCAVATION PROCEEDS TO THE EXTENT CONSIDERED DESIRABLE AND PRACTICAL. PERMANENT SEEDING SHALL BE USED WHENEVER POSSIBLE. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PROLONG FINAL GRADING AND SHAPING SO THAT THE ENTIRE PROJECT CAN BE PERMANENTLY SEEDED AT ONE TIME.

15. THE SITE SHOULD BE PHASED IN A WAY THAT REDUCES THE AMOUNT OF STRIPPED, UNSTABILIZED AREAS WITHIN THE SITE AT ANY ONE TIME. MASS GRADING THE ENTIRE SITE SHOULD BE AVOIDED AS TO PREVENT EROSION ONSITE AND SEDIMENTATION ISSUES DOWNSTREAM.

16. ONCE THE CONTRIBUTING AREA IS STABILIZED, THE BASIN NEEDS TO BE CLEANED OUT AND THE FINAL PROPOSED GRADE MUST BE ACHIEVED.

17. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL LATEST EDITION.

18. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

19. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO, ADDITIONAL PHASES OF DEVELOPMENT AND OFF-SITE BORROW OR WASTE AREAS) A SUPPLEMENTARY EROSION CONTROL PLAN SHALL BE SUBMITTED FOR REVIEW BY THE MUNICIPALITY.

20. IT IS THE RESPONSIBILITY OF THE LANDOWNER AND/OR GENERAL CONTRACTOR TO INFORM ANY SUB-CONTRACTOR(S) WHO MAY PERFORM WORK ON THE PROJECT, OF THE REQUIREMENTS IN IMPLEMENTING AND MAINTAINING THESE EROSION CONTROL PLANS AND ASSURE COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS.

21. THE PRIMARY PURPOSE OF ALL SOIL EROSION AND SEDIMENT CONTROL BMP'S (BEST MANAGEMENT PRACTICES) IS TO PREVENT SEDIMENT FROM LEAVING THE SITE. ALL STORMWATER DISCHARGE LOCATIONS WITH A DIRECT CONNECTION TO THE SITE SHOULD BE MONITORED CLOSELY FOR EVIDENCE OF SEDIMENT. THE MUNICIPALITY MAY REQUEST THAT ADDITIONAL BMP'S BE INSTALLED IN THE EVENT OF OFF-SITE SEDIMENT DISCHARGE OR HIGH POTENTIAL FOR DISCHARGE.

22. ANY AREA IMPACTED BY CONSTRUCTION SHALL BE RESTORED TO MATCH EXISTING CONDITIONS OR AS SPECIFIED ON THE PLANS.

23. CONCRETE WASHOUT SHOULD BE CONTAINED AT ALL TIMES. WASHOUT MATERIAL SHOULD NOT BE ALLOWED TO ENTER WATER BODIES, STORM SEWERS OR LEACH INTO THE SOIL UNDER ANY CIRCUMSTANCES. ANY WASTE SHOULD BE DISPOSED OF PROPERLY AND THE LOCATION OF THE WASHOUT SHOULD BE DESIGNATED WITH PROPER SIGNAGE. FAILURE TO COMPLY COULD RESULT IN AN INCIDENCE OF NONCOMPLIANCE (ION).

24. SEE LANDSCAPE PLAN FOR DETENTION BASIN SEED MIX

25. IT IS IMPORTANT FOR THE CONTRACTOR TO MONITOR AND CLEAN THE INLET PROTECTORS TO ENSURE SEDIMENT DOES NOT LEAVE THE SITE THROUGH THE STORM SEWER.

26. WHEN INSTALLING OUTLETS INTO EXISTING DETENTION BASINS, WORK SHOULD BE PERFORMED IN DRY CONDITIONS. ONCE WORK IN THE AREA BEGINS, PRIORITY SHALL BE GIVEN TO THE COMPLETION OF THE WORK AND FINAL STABILIZATION OF ALL DISTURBED AREAS IN OR NEAR THE DETENTION AREA. EVERY EFFORT SHOULD BE MADE TO ENSURE THAT SEDIMENT DOES NOT ENTER THE DETENTION BASIN DURING THIS TIME.

27. THE PRIMARY PURPOSE OF ALL SOIL EROSION AND SEDIMENT CONTROL BMP'S (BEST MANAGEMENT PRACTICES) IS TO PREVENT SEDIMENT FROM LEAVING THE SITE. ALL STORMWATER OUTFALLS WITH A DIRECT CONNECTION TO THE SITE SHOULD BE MONITORED CLOSELY FOR DISCHARGE OF ANY SEDIMENT. SITE PERIMETERS SHOULD ALSO BE MONITORED CLOSELY FOR ANY POTENTIAL SEDIMENT RELEASE OFF-SITE. THE MUNICIPALITY MAY REQUEST THAT ADDITIONAL BMP'S BE INSTALLED UPSTREAM OF STORMWATER RELEASE IN THE EVENT OF OFF-SITE SEDIMENT DISCHARGE OF HIGH POTENTIAL FOR DISCHARGE.

28. EROSION CONTROL BLANKET (DEPENDING ON SLOPE, SLOPE LENGTH, AND FLOW RATES) SHALL BE INSTALLED ON ALL SLOPES AND IN CRITICAL AREAS (I.E. DETENTION BASIN PERIMETERS, BERMS, ETC.) IMMEDIATELY UPON FINAL GRADING.

29. PRIORITY SHALL BE GIVEN TO THE COMPLETION AND STABILIZATION OF THE DETENTION AREAS. WORK IN THESE AREAS SHALL NOT BE PROLONGED IN ATTEMPT THAT ALL FINAL GRADING AND STABILIZATION CAN TAKE PLACE AT ONE TIME.

30. ALL NPDES RELATED INSPECTION REPORTS AND CORRESPONDENCE SHOULD BE SENT TO THE MUNICIPALITY.

INSPECTIONS

THE OWNER OR ITS DESIGNATED REPRESENTATIVE SHALL PROVIDE QUALIFIED PERSONNEL TO INSPECT DISTURBED AREAS OF THE CONSTRUCTION SITE WHICH HAVE NOT BEEN STABILIZED WITH TEMPORARY OR PERMANENT VEGETATIVE STABILIZATION, PROTECTED WITH STRUCTURAL CONTROL MEASURES, OR LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. SUCH INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES OR GREATER OF EQUIVALENT SNOWFALL.

A. DISTURBED AREAS AND AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM. EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. WHILE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATERS. LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFF SITE SEDIMENT TRACKING.

B. BASED ON THE RESULTS OF THE INSPECTION, THE DESCRIPTION OF POTENTIAL POLLUTANT SOURCES IDENTIFIED IN SECTION 1 ABOVE AND POLLUTION PREVENTION MEASURES IDENTIFIED IN SECTION 2 ABOVE SHALL BE REVISED AS APPROPRIATE AS SOON AS PRACTICABLE AFTER SUCH INSPECTION. ANY CHANGES TO THIS PLAN RESULTING FROM THE REQUIRED INSPECTIONS SHALL BE IMPLEMENTED WITHIN 7 CALENDAR DAYS FOLLOWING THE INSPECTION.

C. A REPORT SUMMARIZING THE SCOPE OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, THE DATE(S) OF THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THIS STORMWATER POLLUTION PREVENTION PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH SECTION 4.B SHALL BE MADE AND RETAINED AS PART OF THE PLAN FOR AT LEAST THREE (3) YEARS AFTER THE DATE OF THE INSPECTION. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART VI. G OF THE GENERAL PERMIT.

D. IF ANY VIOLATION OF THE PROVISIONS OF THIS PLAN IS IDENTIFIED DURING THE CONDUCT OF THE CONSTRUCTION WORK COVERED BY THIS PLAN, THE RESIDENT ENGINEER OR RESIDENT TECHNICIAN SHALL COMPLETE AND FILE AN "INCIDENCE OF NONCOMPLIANCE (ION_ REPORT FOR THE IDENTIFIED VIOLATION. THE RESIDENT ENGINEER OR RESIDENT TECHNICIAN SHALL USE FORMS PROVIDED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY AND SHALL INCLUDE SPECIFIC INFORMATION ON THE CAUSE OF NONCOMPLIANCE, ACTIONS WHICH WERE TAKEN TO PREVENT ANY FURTHER CAUSE OF NONCOMPLIANCE, AND A STATEMENT DETAILING ANY ENVIRONMENTAL IMPACT WHICH MAY HAVE RESULTED FROM THE NONCOMPLIANCE. ALL REPORTS OF NONCOMPLIANCE SHALL BE SIGNED BY A RESPONSIBLE AUTHORITY IN ACCORDANCE WITH PART VI. G OF THE GENERAL PERMIT. THE REPORT OF NONCOMPLIANCE SHALL BE MAILED TO THE FOLLOWING ADDRESS:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF WATER POLLUTION CONTROL
ATTN: COMPLIANCE ASSURANCE SECTION
1021 NORTH GRAND EAST
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

5. NON-STORMWATER DISCHARGES

EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORMWATER THAT MAY BE COMBINED WITH STORMWATER DISCHARGES ASSOCIATED WITH THE INDUSTRIAL ACTIVITY ADDRESSED IN THIS PLAN, ARE DESCRIBED BELOW:

1. WATERMAIN FLUSHING
2. FIRE HYDRANT FLUSHING
3. WATERING FOR DUST CONTROL
4. IRRIGATION DRAINAGE FOR VEGETATIVE GROWTH FOR SEEDING, ETC.

THE POLLUTION PREVENTION MEASURES AS DESCRIBED BELOW, WILL BE IMPLEMENTED FOR NON-STORMWATER COMPONENTS OF THE DISCHARGE:

THE FIRE HYDRANT AND WATERMAIN SHALL NOT BE FLUSHED DIRECTLY ON THE EXPOSED AREA OR SUBGRADE OF THE PAVEMENT. HOSES SHALL BE USED TO DIRECT THE FLOW INTO THE STORM SEWER SYSTEM, IF AVAILABLE.

THE EROSION DUE TO IRRIGATION OF SEEDING AND DUST CONTROL SHALL BE COLLECTED AND RE-SPREAD ONSITE. TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES SHALL BE IMPLEMENTED AS NECESSARY TO CONTROL FUTURE EROSION FROM AREAS PREVIOUSLY ERODED DUE TO IRRIGATION OF SEEDING AND DUST CONTROL.

ALL SITE DE-WATERING, INCLUDING PUMP DISCHARGE, MUST PASS THROUGH THE PROPER STRUCTURAL PRE-SEDIMENTATION BASINS OR EQUAL STRUCTURAL CONTROLS BEFORE LEAVING THE SITE.

6. PLAN REVIEW

THE PERMITEE SHALL MAKE PLANS AVAILABLE UPON REQUEST FROM THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) OR A LOCAL AGENCY APPROVING SEDIMENT AND EROSION PLANS, GRADING PLANS, OR STORM WATER MANAGEMENT PLANS; OR IN THE CASE OF A STORM SEWER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY WHICH DISCHARGES THROUGH A MUNICIPAL SEPARATE STORM SYSTEM WITH AN NPDES PERMIT, TO THE MUNICIPAL OPERATOR OF THE SYSTEM.

THE IEPA MAY NOTIFY THE PERMITEE AT ANY TIME THAT THE PLAN DOES NOT MEET ONE OR MORE OF THE MINIMUM REQUIREMENTS OF PART IV. OF THE GENERAL PERMIT. SUCH NOTIFICATION SHALL IDENTIFY THOSE PROVISIONS OF THE PERMIT WHICH ARE NOT BEING MET BY THE PLAN, AND IDENTIFY WHICH PROVISIONS OF THE PLAN REQUIRES MODIFICATIONS IN ORDER TO MEET THE MINIMUM REQUIREMENTS OF PART IV. OF THE GENERAL PERMIT. WITHIN SEVEN (7) DAYS FROM THE RECEIPT OF THE NOTIFICATION FROM THE IEPA, THE PERMITEE SHALL MAKE THE REQUIRED CHANGES TO THE PLAN AND SHALL SUBMIT TO THE IEPA A WRITTEN CERTIFICATION THAT THE REQUESTED CHANGES HAVE BEEN MADE. FAILURE TO COMPLY SHALL TERMINATE AUTHORIZATION UNDER THE GENERAL PERMIT.

7. AMENDMENTS

THE PERMITEE SHALL AMEND THE PLAN WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE, WHICH HAS SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE PLAN OR IF THE PLAN PROVES TO BE INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM THE SOURCES IDENTIFIED UNDER 2. (CONTROLS) ABOVE, OR OTHERWISE ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION SITE ACTIVITY. IN ADDITION, THE PLAN SHALL BE AMENDED TO IDENTIFY ANY NEW CONTRACTOR AND/OR SUBCONTRACTOR THAT WILL IMPLEMENT A MEASURE OF THE PLAN. AMENDMENTS TO THE PLAN MAY BE REVIEWED BY THE IEPA IN THE SAME MANNER AS 6. (PLAN REVIEW) ABOVE.

8. RECORDS

THE PERMITEE SHALL RETAIN COPIES OF THE PLAN AND ALL REPORTS AND NOTICES REQUIRED BY THE GENERAL PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THE GENERAL PERMIT, FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE SITE IS FINALLY STABILIZED. THE PERIOD MAY BE EXTENDED BY THE REQUEST OF THE IEPA AT ANY TIME.

THE PERMITEE SHALL RETAIN A COPY OF THE PLAN REQUIRED BY THE GENERAL PERMIT AT THE CONSTRUCTION SITE FROM THE DATE OF THE PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION.

9. CONTRACTORS

THIS PLAN REQUIRES IDENTIFICATION FOR EACH MEASURE IN THE PLAN, THE CONTRACTOR(S) OR SUBCONTRACTOR(S) THAT WILL IMPLEMENT THE IDENTIFIED MEASURE:

CONTRACTOR(S): _____
ADDRESS: _____
_____
PHONE: _____

MEASURES IMPLEMENTED: _____
_____

SUB-CONTRACTOR(S): _____
ADDRESS: _____

PHONE: _____

MEASURES IMPLEMENTED: _____
_____

SUB-CONTRACTOR(S): _____
ADDRESS: _____

PHONE: _____

MEASURES IMPLEMENTED: _____
_____

THE OWNER AND SUB-CONTRACTORS IDENTIFIED ABOVE SHALL SIGN THE FOLLOWING CERTIFICATION STATEMENT BEFORE CONDUCTING ANY PROFESSIONAL SERVICE AT THE IDENTIFIED SITE. SIGNATURES SHALL BE PROVIDED BY A RESPONSIBLE CORPORATE OFFICER:

CERTIFICATION STATEMENT: I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR100000) THAT AUTHORIZES THE STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

OWNER: PULTE HOME COMPANY, LLC

SIGNATURE: _____ DATE: _____

CONTRACTOR: _____
SIGNATURE: _____ DATE: _____

SUB-CONTRACTOR: _____
SIGNATURE: _____ DATE: _____

SUB-CONTRACTOR: _____
SIGNATURE: _____ DATE: _____

SUB-CONTRACTOR: _____
SIGNATURE: _____ DATE: _____

SEQUENCE/PHASING OF SESC MEASURES

1. INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.
   A. SILT FENCE INSTALLATION;
   B. INSTALLATION OF STABILIZED CONSTRUCTION ENTRANCE(S);
   C. INSTALL INLET PROTECTION IN EXISTING STORM SEWER STRUCTURES.
2. DESIGNATE STABILIZED VEHICLE, EQUIPMENT, AND MATERIAL STORAGE AREAS.
3. DEMOLITION AND TREE CLEARING.
4. MASS GRADING, STORM WATER FACILITY EXCAVATION, AND SOIL STOCKPILING.
5. CONSTRUCT AND PERMANENTLY STABILIZE STORM WATER FACILITY AND INSTALL SEDIMENT CONTROL DEVICE(S).
6. INSTALL STORM SEWER AND ASSOCIATED INLET AND OUTLET PROTECTION.
7. CONSTRUCT CONCRETE AND CONSTRUCTION WASHOUT CONTAINMENT FACILITIES.
8. ROAD CONSTRUCTION AND PAVING.
9. INITIATE TEMPORARILY STABILIZE AREAS THAT WILL REMAIN IDLE FOR 14 DAYS WITHIN 1 DAY OF LAST CONSTRUCTION ACTIVITY IN THAT AREA (INCLUDING TOPSOIL STOCKPILES).
10. VERTICAL CONSTRUCTION.
11. TOPSOIL RE-SPREAD.
12. INSTALL PERMANENT OR TEMPORARY SOIL STABILIZATION AND VEGETATIVE ENHANCEMENTS.
13. REMOVE ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES AFTER THE SITE IS STABILIZED WITH VEGETATION.

MAINTENANCE SCHEDULE

ALL SEDIMENT BASINS TO BE INSPECTED REGULARLY AND SEDIMENT PLUMES TO BE REMOVED ON AN AS NEEDED BASIS AND AT PROJECT CLOSE OUT.

SIDE SLOPES OF THE BASINS TO BE INSPECTED REGULARLY AND ANY GULLY OR OTHER EROSION TO BE REPAIRED ON AN AS NEEDED BASIS.

SCOUR PROTECTION AT THE FLARED END SECTIONS SHALL BE INSPECTED REGULARLY AND REPAIRED AS NECESSARY.

THE BASINS SHALL BE AS-BUILT PRIOR TO PROJECT CLOSE OUT TO ENSURE PROPER STORAGE VOLUME.

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT SEEDING			A									
DORMANT SEEDING	B										B	
TEMPORARY SEEDING			C			D						
SODDING			E**									
MULCHING	F											

A KENTUCKY BLUEGRASS 100 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 60 LBS/ACRE AND CREEPING RED FESCUE 40 LBS/ACRE + 2 TONS STRAW MULCH/ACRE.

B KENTUCKY BLUEGRASS 135 LBS/ACRE MIXED WITH PERENNIAL RYEGRASS 70 LBS/ACRE + 2 TONS STRAW MULCH/ACRE.

C SPRING OATS 100 LBS/ACRE

D WHEAT OR CEREAL RYE 150 LBS/ACRE.

E SOD

F STRAW MULCH 2 TONS/ACRE.

* IRRIGATION NEEDED DURING JUNE AND JULY.

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

SOIL PROTECTION CHART

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

STORMWATER POLLUTION PREVENTION PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: SOILERO	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: FILE	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = N.T.S.	ER05 of ER05

PLOT FILE CREATED: 9/5/2025 7:31 AM BY: LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 3:02 PM BY LESLIE DRAWING PATH: P:\402170\ENGS\ENGS\DRAWINGS\FINAL DRAFTING\SOILERO.DWG

MAINTENANCE PLAN:

The Owner of Estates at Ravinia Meadow, with facilities as shown on this exhibit, shall assume responsibility for the following perpetual maintenance activities:

1. General

Regular inspections and routine maintenance of general areas shall be performed on a monthly or as-needed basis. Specific items of concern include:

___ Litter and debris shall be controlled
___ Landscaped areas shall be maintained with regular mowing and restored with appropriate seeding/vegetation as necessary
___ Accumulated sediment shall be disposed of properly, along with any wastes generated during maintenance operations
___ Riprap areas shall be repaired with the addition of new riprap, as necessary, of similar size and shape
___ Roads shall be swept, vacuumed and/or washed on a regular basis

2. Stormwater Management Facilities

All components of the stormwater management facilities shall be checked monthly between March and November and maintained as necessary to ensure proper performance. It is critical that all inflows and outflows to the detention facility are clean and performing as designed. In addition, the design volume of the detention facility shall also be maintained. Inspections for the following specific items should be conducted monthly between March and November:

Side Slopes/Embankment/Emergency Overflow Structure
___ Inspect embankments for settlement and erosion
___ Remove woody growth from the embankment
___ Any breaks, hire Registered Professional Engineer for design resolution
___ Seed and sod any eroded areas
___ Signs of piping (leakage) or seepage, repair
___ Stabilize emergency overflow structure if erosion observed
___ Remove obstructions blocking emergency overflow spillway

Vegetated Areas
___ Regular mowing to control vegetation, no cutting of native vegetation
___ Need for planting, reseeding or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area). Reseed with alternative grass species if original grass cover has not successfully established.
___ Evidence of grazing, motorbikes or other vehicles, repair
___ Check for invasive vegetation, remove where possible
___ All vegetation must be maintained per the approved planting plan

Outlet Control Structure
___ Inspect restrictor and remove debris if clogged or discharge reduced
___ Remove accumulated sediment at outlet
___ Scour and erosion at outlet, repair and reseed
___ Any ice damage to outlet of pipe, repair if necessary
___ Condition of trash tracks, remove debris
___ Outlet channel conditions downstream

Access for Maintenance Equipment
___ Remove any obstructions placed in maintenance easements

Safety Features
___ Access controls to hazardous areas
___ Fences
___ Loose or damaged posts
___ Loose or broken wires
___ Condition of gates
___ Signs

Detention Volume
___ Inspect all stormwater detention facilities to ensure that the constructed volume for detention is maintained. No sediment, topsoil, or other dumping into the facility shall be allowed. Specific locations in the stormwater management system, designed to accumulate sediment, shall be dredged as necessary to prevent sediment from reaching the invert of any gravity outlet pipe.

3. Volume Control Facility

Routine inspections and maintenance of volume control facilities shall be performed by the Owner on a yearly or as-needed basis. Specific items of concern include:

___ Facility shall be inspected yearly using the monitoring well to verify the system is functioning properly.
___ Surface of permeable pavement shall be cleaned with low-pressure power washer.
___ Accumulated sediment from surface shall be vacuumed out and disposed of properly.
___ Appropriate signage shall be repaired if damaged or illegible.

4. Stormwater Collection System

The Owner shall perform monthly inspections of all components of the stormwater collection system. The monthly inspection shall occur between March and November and include the following specific areas of concern:

Storm Inlets/Manholes
___ Remove accumulated leaves and other debris from grates
___ Reset covers/lids on as-needed basis
___ Remove accumulated sediment from manhole bottom when 50% of sump is filled

Storm Sewers/Culverts
___ Visually inspect pipes by removing manhole lids, make repairs as necessary
___ Storm sewers and culverts shall be checked for siltation deposits at inlets, outlets, and within the conduit, clean out as necessary
___ Restore riprap at outfalls if erosion observed
___ Restore riprap at outfalls
___ Replant and reseed any eroded areas

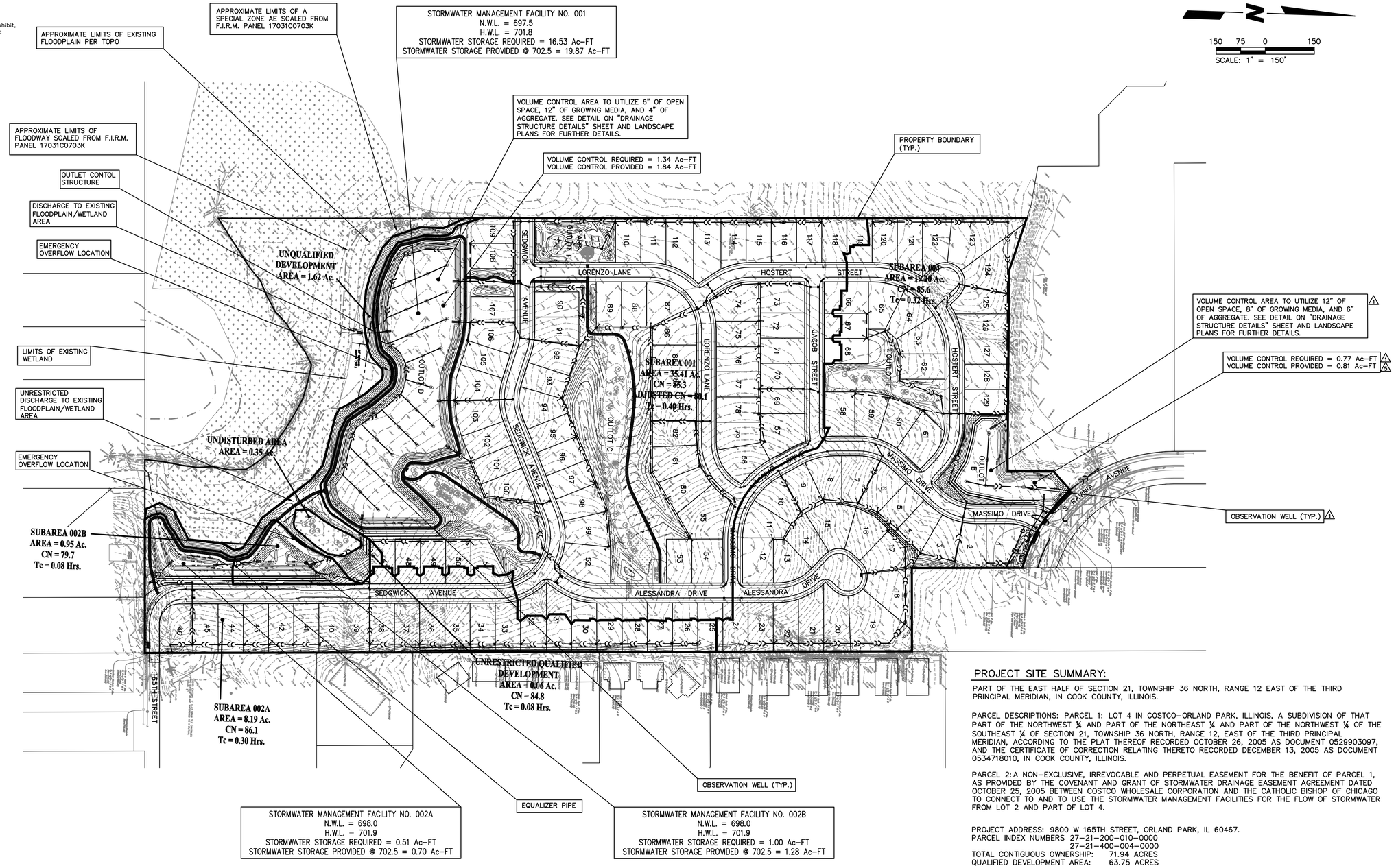
Overland Flow Routes (Ditches/Swales)
___ Annual visual inspections shall be performed that verify the design capacity of the overland flow routes is maintained. The slope and cross-sectional area of the ditch/swale shall be verified during this inspection.
___ Remove any obstructions that have been placed in the drainage path
___ Seed and sod any eroded areas
___ Restore riprap as necessary
___ Regrade to provide positive drainage as necessary
___ Regular mowing to control vegetation

5. Vegetated Areas

___ Need for planting, reseeding, or sodding. Supplement alternative native vegetation if a significant portion has not established (50% of the surface area after second growing season). Reseed with alternative native grass species if original grass cover has not successfully established.
___ Evidence of grazing, motorbikes, or other vehicles, repair.
___ Check for invasive vegetation, remove when possible.
___ Regular mowing to control vegetation; it is recommended that native vegetation remain uncut.
___ Dead or damaged non-native grassy areas – repair with seeding with fertilization or seeding with mulch.
___ Compensatory storage area shall be reseeded with appropriate vegetation according to the approved planting plan.

6. Qualified Sewer Construction

___ Perform manhole inspections once every five years, make repairs as necessary.
___ Perform sewer inspections once every five years, make repairs as necessary.
___ Perform regular cleaning so that each sewer segment is cleaned once every 5 years.
___ Remove any obstructions placed in maintenance easements that may impede maintenance equipment access.



PROJECT SITE SUMMARY:

PART OF THE EAST HALF OF SECTION 21, TOWNSHIP 36 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

PARCEL DESCRIPTIONS: PARCEL 1: LOT 4 IN COSTCO-ORLAND PARK, ILLINOIS, A SUBDIVISION OF THAT PART OF THE NORTHWEST ¼ AND PART OF THE NORTHEAST ¼ AND PART OF THE NORTHWEST ¼ OF THE SOUTHEAST ¼ OF SECTION 21, TOWNSHIP 36 NORTH, RANGE 12, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED OCTOBER 26, 2005 AS DOCUMENT 0529903097, AND THE CERTIFICATE OF CORRECTION RELATING THERETO RECORDED DECEMBER 13, 2005 AS DOCUMENT 0534718010, IN COOK COUNTY, ILLINOIS.

PARCEL 2: A NON-EXCLUSIVE, IRREVOCABLE AND PERPETUAL EASEMENT FOR THE BENEFIT OF PARCEL 1, AS PROVIDED BY THE COVENANT AND GRANT OF STORMWATER DRAINAGE EASEMENT AGREEMENT DATED OCTOBER 25, 2005 BETWEEN COSTCO WHOLESALE CORPORATION AND THE CATHOLIC BISHOP OF CHICAGO TO CONNECT TO AND TO USE THE STORMWATER MANAGEMENT FACILITIES FOR THE FLOW OF STORMWATER FROM LOT 2 AND PART OF LOT 4.

PROJECT ADDRESS: 9800 W 165TH STREET, ORLAND PARK, IL 60467.
PARCEL INDEX NUMBERS 27-21-200-010-0000
27-21-400-004-0000
TOTAL CONTIGUOUS OWNERSHIP: 71.94 ACRES
QUALIFIED DEVELOPMENT AREA: 63.75 ACRES

STORMWATER SUMMARY:

	REQUIRED (Acre-Feet)	PROVIDED (Acre-Feet)
VOLUME CONTROL:	1.34	1.84
DETENTION VOLUME:	18.04	21.85

LEGEND

WATERSHED BOUNDARY

OVERLAND DRAINAGE ARROW

TIME OF CONCENTRATION FLOWPATH

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REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	04-23-25/LAL	REVISED PER IN-HOUSE REVIEW			
2	08-13-25/LAL	REVISED PER CLIENT			

SCHEDULE R

ESTATES AT RAVINIA MEADOW

FILE NAME: SCHEDULE R	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: ----	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = 150'	SWM01 of SWM02

PLOT FILE CREATED: 9/3/2025 7:32 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 2:57 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\SCHEDULE R.DWG

APPROXIMATE LIMITS OF EXISTING FLOODPLAIN PER TOPO

APPROXIMATE LIMITS OF A SPECIAL ZONE AE SCALED FROM F.I.R.M. PANEL 17031C0703K

STORMWATER MANAGEMENT FACILITY NO. 001
N.W.L. = 697.5
H.W.L. = 701.8
STORMWATER STORAGE REQUIRED = 16.53 Ac-FT
STORMWATER STORAGE PROVIDED @ 702.5 = 19.87 Ac-FT

VOLUME CONTROL AREA TO UTILIZE GROWING MEDIA. SEE DETAIL ON THIS SHEET AND LANDSCAPE PLANS FOR FURTHER DETAILS.

APPROXIMATE LIMITS OF FLOODWAY SCALED FROM F.I.R.M. PANEL 17031C0703K

VOLUME CONTROL REQUIRED = 1.34 Ac-FT
VOLUME CONTROL PROVIDED = 1.84 Ac-FT

PROPERTY BOUNDARY (TYP.)

OUTLET CONTOL STRUCTURE

DISCHARGE TO EXISTING FLOODPLAIN/WETLAND AREA

EMERGENCY OVERFLOW LOCATION

LIMITS OF EXISTING WETLAND

UNRESTRICTED DISCHARGE TO EXISTING FLOODPLAIN/WETLAND AREA

EMERGENCY OVERFLOW LOCATION

SUBAREA 002B
AREA = 0.95 Ac.
CN = 79.7
Tc = 0.08 Hrs.

UNQUALIFIED DEVELOPMENT AREA = 1.62 Ac.

UNDISTURBED AREA
AREA = 0.35 Ac.

SUBAREA 001
AREA = 35.91 Ac.
IMPERVIOUS AREA = 12.83 Ac.
PERVIOUS AREA = 22.58 Ac.
CN = 85.3
ADJUSTED CN = 80.1
Tc = 0.40 Hrs.

SUBAREA 003
AREA = 19.20 Ac.
IMPERVIOUS AREA = 9.27 Ac.
PERVIOUS AREA = 9.93 Ac.
CN = 85.6
Tc = 0.32 Hrs.

UNRESTRICTED QUALIFIED DEVELOPMENT
AREA = 0.06 Ac.
CN = 84.8
Tc = 0.08 Hrs.

SUBAREA 002A
AREA = 8.19 Ac.
IMPERVIOUS AREA = 3.91 Ac.
PERVIOUS AREA = 4.28 Ac.
CN = 86.1
Tc = 0.30 Hrs.

OBSERVATION WELL (TYP.)

STORMWATER MANAGEMENT FACILITY NO. 002B
N.W.L. = 698.0
H.W.L. = 701.9
STORMWATER STORAGE REQUIRED = 1.00 Ac-FT
STORMWATER STORAGE PROVIDED @ 702.5 = 1.28 Ac-FT

EQUALIZER PIPE

STORMWATER MANAGEMENT FACILITY NO. 002A
N.W.L. = 698.0
H.W.L. = 701.9
STORMWATER STORAGE REQUIRED = 0.51 Ac-FT
STORMWATER STORAGE PROVIDED @ 702.5 = 0.70 Ac-FT

OBSERVATION WELL (TYP.)

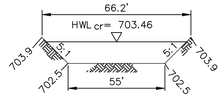
VOLUME CONTROL REQUIRED = 0.77 Ac-FT (1)
VOLUME CONTROL PROVIDED = 0.81 Ac-FT (2)

VOLUME CONTROL AREA TO UTILIZE GROWING MEDIA. SEE DETAIL ON THIS SHEET AND LANDSCAPE PLANS FOR FURTHER DETAILS. (1)

SEDGWICK AVENUE
LORENZO LANE
HOSTERT STREET
JACOB STREET
MASSIMO DRIVE
ALESSANDRA DRIVE
SAVANNA AVENUE
OUTLOT A
OUTLOT B
OUTLOT C
OUTLOT D
OUTLOT E
OUTLOT F
165TH STREET

150 75 0 150
SCALE: 1" = 150'

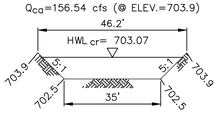
Q_{cr}=139.96 cfs
Q_{ca}=245.99 cfs (@ ELEV.=703.9)



OVERFLOW WEIR SECTION A_1–A_1
(N.T.S.)

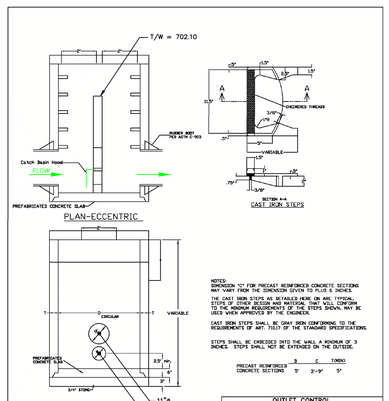
* WEIR NOT ACCESSED BY 100 YEAR STORM
Q_{cr} – INDICATES PEAK TRIBUTARY FLOW ASSUMING FULL POND AND/OR BLOCKED RESTRICTOR.

Q_{cr}=40.26 cfs
Q_{ca}=156.54 cfs (@ ELEV.=703.9)

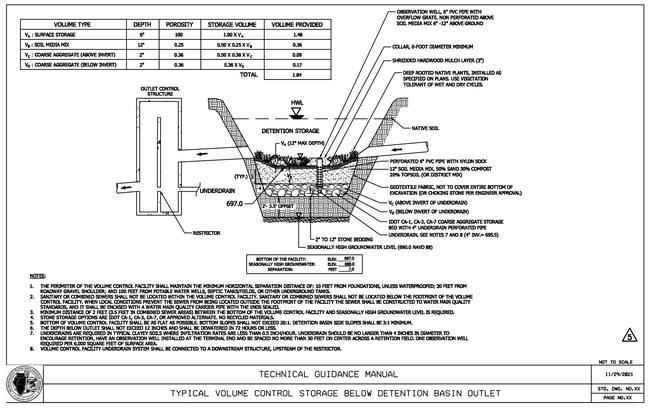


OVERFLOW WEIR SECTION B_1–B_1
(N.T.S.)

* WEIR NOT ACCESSED BY 100 YEAR STORM
Q_{cr} – INDICATES PEAK TRIBUTARY FLOW ASSUMING FULL POND AND/OR BLOCKED RESTRICTOR.



OUTLET CONTROL STRUCTURE		
RESTRICTIONS	STORM SEWER IMPROVEMENT	DATE:
DESIGN BY:		REVISED:
Village of CRETED MEA		REVISED:
Engineering Department		STS-15



VOLUME TYPE	DEPTH	POROSITY	STORAGE VOLUME	VOLUME PROVIDED
V_4 : SURFACE STORAGE	6"	100	1.00 X V_4	1.48
V_B : SOIL MEDIA MIX	12"	0.25	0.50 X 0.25 X V_B	0.36
V_C : COARSE AGGREGATE (ABOVE INVERT)	2"	0.36	0.50 X 0.36 X V_C	0.09
V_D : COARSE AGGREGATE (BELOW INVERT)	2"	0.36	0.36 X V_D	0.17
			TOTAL	1.84

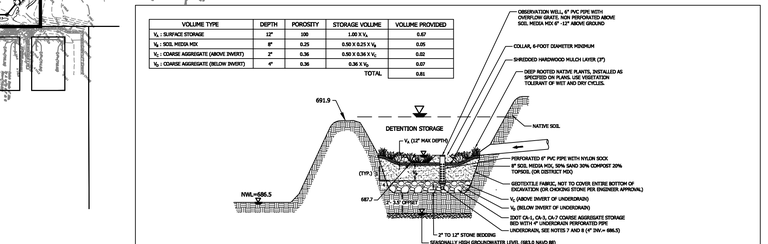
BOTTOM OF THE FACILITY:	ELEV.: 697.0
SEASONALLY HIGH GROUNDWATER:	ELEV.: 695.0
SEPARATION:	FEET: 2

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 SEWER SHALL NOT BE LOCATED WITHIN THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWER 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, AND ST SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
3. MINIMUM DISTANCE OF 2 FEET (0.5 FEET IN CONFINED SPACE) AREAS) BETWEEN THE BOTTOM OF THE VOLUME CONTROL FACILITY AND SEASONALLY HIGH GROUNDWATER LEVEL IS REQUIRED.
4. SOME STORAGE OPTIONS ARE DRY (CA-1, CA-3, CA-7, OR APPROVED ESTIMATE) OR RECYCLED WATER.
5. BOTTOM OF VOLUME CONTROL FACILITY SHALL BE AT/-1 AS POSSIBLE. BOTTOM SLOPES SHALL NOT EXCEED 20:1. DETENTION BASIN SIDE SLOPES SHALL BE 3:1 MINIMUM.
6. THE DEPTH BELOW OUTLET SHALL NOT EXCEED 12 INCHES AND SHALL BE DRAWNDOWN IN 72 HOURS OR LESS.
7. UNDERDRAINS ARE REQUIRED IN TYPICAL CLAYEY SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.5 INCH/HOUR. UNDERDRAIN SHOULD BE NO LARGER THAN 4 INCHES IN DIAMETER TO ENCOURAGE RESTRICTION, HAVE AN OBSERVATION WELL INSTALLED AT THE TERMINAL END AND BE SPACED NO MORE THAN 30 FEET ON CENTER ACROSS A RETENTION FIELD. ONE OBSERVATION WELL REQUIRED PER 6,000 SQUARE FEET OF SURFACE AREA.
8. VOLUME CONTROL FACILITY UNDERDRAIN SYSTEM SHALL BE CONNECTED TO A DOWNSTREAM STRUCTURE, UPSTREAM OF THE RESTRICTOR.

(2)

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL	11/29/2021
TYPICAL VOLUME CONTROL STORAGE BELOW DETENTION BASIN OUTLET	STD. DWG. NO.XX
	PAGE NO.XX



VOLUME TYPE	DEPTH	POROSITY	STORAGE VOLUME	VOLUME PROVIDED
V_4 : SURFACE STORAGE	12"	100	1.00 X V_4	0.67
V_B : SOIL MEDIA MIX	6"	0.25	0.50 X 0.25 X V_B	0.05
V_C : COARSE AGGREGATE (ABOVE INVERT)	2"	0.36	0.50 X 0.36 X V_C	0.02
V_D : COARSE AGGREGATE (BELOW INVERT)	4"	0.36	0.36 X V_D	0.07
			TOTAL	0.81

BOTTOM OF THE FACILITY:	ELEV.: 667.7
SEASONALLY HIGH GROUNDWATER:	ELEV.: 693.5
SEPARATION:	FEET: 25.8

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 SEWER SHALL NOT BE LOCATED WITHIN THE VOLUME CONTROL FACILITY. SANITARY OR COMBINED SEWER 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, AND ST SHALL BE ENCASED WITH A WATER MAIN QUALITY CARRIER PIPE WITH THE ENDS SEALED.
3. MINIMUM DISTANCE OF 2 FEET (0.5 FEET IN CONFINED SPACE) AREAS) BETWEEN THE BOTTOM OF THE VOLUME CONTROL FACILITY AND SEASONALLY HIGH GROUNDWATER LEVEL IS REQUIRED.
4. SOME STORAGE OPTIONS ARE DRY (CA-1, CA-3, CA-7, OR APPROVED ESTIMATE) OR RECYCLED WATER.
5. BOTTOM OF VOLUME CONTROL FACILITY SHALL BE AT/-1 AS POSSIBLE. BOTTOM SLOPES SHALL NOT EXCEED 20:1. DETENTION BASIN SIDE SLOPES SHALL BE 3:1 MINIMUM.
6. THE DEPTH BELOW OUTLET SHALL NOT EXCEED 12 INCHES AND SHALL BE DRAWNDOWN IN 72 HOURS OR LESS.
7. UNDERDRAINS ARE REQUIRED IN TYPICAL CLAYEY SOILS WHERE INFILTRATION RATES ARE LESS THAN 0.5 INCH/HOUR. UNDERDRAIN SHOULD BE NO LARGER THAN 4 INCHES IN DIAMETER TO ENCOURAGE RESTRICTION, HAVE AN OBSERVATION WELL INSTALLED AT THE TERMINAL END AND BE SPACED NO MORE THAN 30 FEET ON CENTER ACROSS A RETENTION FIELD. ONE OBSERVATION WELL REQUIRED PER 6,000 SQUARE FEET OF SURFACE AREA.
8. VOLUME CONTROL FACILITY UNDERDRAIN SYSTEM SHALL BE CONNECTED TO A DOWNSTREAM STRUCTURE, UPSTREAM OF THE RESTRICTOR.

(1)

NOT TO SCALE

TECHNICAL GUIDANCE MANUAL	11/29/2021
TYPICAL VOLUME CONTROL STORAGE BELOW DETENTION BASIN OUTLET	STD. DWG. NO.XX
	PAGE NO.XX

LEGEND

WATERSHED BOUNDARY

OVERLAND DRAINAGE ARROW

TIME OF CONCENTRATION FLOWPATH

VOLUME CONTROL GROWING MEDIA

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PREPARED FOR:
PULTE HOME COMPANY, LLC
1900 E. GOLF ROAD, SUITE 300
SCHAUMBURG, IL 60173
(847) 230-5400

PREPARED BY:
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Consulting Engineers, Land Surveyors & Planners
2280 White Oak Circle, Suite 100
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REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION
1	04-23-25/LAL	REVISED PER IN-HOUSE REVIEW			
2	08-13-25/LAL	REVISED PER CLIENT			

STORMWATER MANAGEMENT PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME: STMWM PLAN	DSGN. BY: CRM	JOB NO.: 402.170	FLD. BK./PG.: ----	SHEET NO.
DIR: 402170	DRN. BY: LAL	DATE: 04-04-25	SCALE: 1" = 150'	SWM02 of SWM02

PLOT FILE CREATED: 9/3/2025 7:33 AM BY LESLIE LUNDBERG DRAWING LAST SAVED: 8/25/2025 3:06 PM BY LESLIE DRAWING PATH: P:\402170\DWG\ENG\DRAWINGS\FINAL DRAFTING\STMWM PLAN.DWG

Legend

Native Planting Plan

- Mesic Prairie Seed (9.95 acres)
- Wet Prairie Seed (0.52 acres)
- Bioretention Seed & Plugs (4.14 acres)
- Emergent Plugs (0.09 acres)
- Aquatic Tuber (0.08 acres)
- Existing Vegetation (1.96 acres)
- Turf (1.24 acres)

N
W E
S

50 0 50 100 Feet

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REVISIONS

NO.	DATE	DESCRIPTION

BASE LAYER:
COOK COUNTY
AERIAL IMAGERY
(2024)

PROJECT NO.: 240548	PROJECT MANAGER: SJB
DATE: 08/15/2025	DESIGNED BY: DJJ
SCALE: SCALE	DRAWN BY: DJJ

BUFFER RESTORATION AND NATIVE PLANTING PLAN - SEED, PLUGS & TUBERS

ESTATES AT RAVINIA MEADOW
ORLAND PARK, COOK COUNTY, ILLINOIS

DRAWING NO.: C.0

J:\2024\240548\NR\Wetland\Permit\24x36\2025 0814\FIGC1plant240548_24x36_2025 0814.mxd

1- QuBi

9- PtTr

1- QuBi

N

W E

S

15 0 15 30 Feet

Legend

Native Tree & Shrub

- ClOc - Celtis occidentalis (5)
- GyDi - Gymnocladus dioicus (6)
- PlOc - Platanus occidentalis (6)
- QuBi - Quercus bicolor (9)
- QuMa - Quercus macrocarpa (9)
- TiAm - Tilia americana (4)
- CaCa - Carpinus caroliniana (3)
- CeCa - Cercis canadensis (6)
- CrCr - Crataegus crusgalli (3)
- Malo - Malus ioensis (6)
- OsVi - Ostrya virginiana (2)
- CeAm - Ceanothus americanus (44)
- CeOc - Cephalanthus occidentalis (16)
- CoOb - Cornus obliqua (26)
- CoSe - Cornus sericea (24)
- CoAm - Corylus americana (14)
- PhOp - Physocarpus opulifolius (17)
- PrVi - Prunus virginiana (14)
- PtTr - Ptelea trifoliata (14)
- SpAl - Spiraea alba (43)
- ViLe - Viburnum lentago (20)

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REVISIONS

NO.	DATE	DESCRIPTION

BASE LAYER: *Cook County Aerial Imagery (2024)*

PROJECT NO.: 240548	PROJECT MANAGER: SJB
DATE: 08/15/2025	DESIGNED BY: DJJ
SCALE: SCALE	DRAWN BY: DJJ

Estates at Ravinia Meadow
Orland Park, Cook County, Illinois

Buffer Restoration and Native Planting Plan - Trees & Shrubs

DRAWING NO. C.1

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REVISIONS

NO.	DATE	DESCRIPTION

BASE LAYER: Cook County Aerial Imagery (2024)

PROJECT NO.: 240548	PROJECT MANAGER: SJB
DATE: 08/15/2025	DESIGNED BY: DJJ
SCALE: SCALE	DRAWN BY: DJJ

Estates at Ravinia Meadow
Orland Park, Cook County, Illinois

Buffer Restoration and Native Planting Plan - Trees & Shrubs

DRAWING NO. C.2

J:\2024\240548\NR\Wetland\Permit\24x36\2025 0814\FIGC2planttree240548_24x36_2025 0814.mxd

MESIC PRAIRIE SEED MIX (9.95 acres)			
Type	Species	Common Name	Seeding Rate (lbs/ac)
Forbs	*Asclepias tuberosa*	Butterfly Weed	0.32281
	Aster laevis	Smooth Blue Aster	0.06456
	Aster novae-angliae	New England Aster	0.06456
	Astragalus canadensis	Canadian Milk Vetch	0.25825
	Baptisia leucantha	White Wild Indigo	0.51651
	Cassia fasciculata	Partridge Pea	0.25825
	Coreopsis lanceolata	Sand Coreopsis	0.12913
	Coreopsis palmata	Prairie Coreopsis	0.12913
	Coreopsis tripteris	Tall Coreopsis	0.12913
	Dalea candidum	White Prairie Clover	0.06456
	Dalea purpureum	Purple Prairie Clover	0.12913
	Desmodium illinoense	Illinois Tick-Trefoil	0.25825
	Echinacea pallida	Pale Purple Coneflower	0.25825
	Echinacea purpurea	Broad-leaved Pur. Coneflower	0.32281
	Eryngium yuccifolium	Rattlesnake Master	0.19369
	Euthamia graminifolia	Grass-Leaved Goldenrod	0.03228
	Heliopsis helianthoides	False Sunflower	0.19369
	Lespedeza capitata	Round-Headed Bush Clover	0.19369
	Monarda fistulosa	Wild Bergamot	0.12913
	Parthenium integrafolium	Wild Quinine	0.19369
	Penstemon digitalis	Foxglove Beard Tongue	0.12913
	Potentilla arguta	Prairie Cinquifoil	0.03228
	Pycnanthemum virginianum	Mountain Mint	0.03228
	Ratibida pinnata	Yellow Coneflower	0.25825
	Rudbeckia hirta	Black-eyed Susan	0.25825
	Rudbeckia subtomentosa	Sweet Black-eyed Susan	0.25825
	Silphium integrifolium	Rosin Weed	0.32281
	Solidago speciosa	Showy Goldenrod	0.06456
	Tradescantia ohiensis	Ohio Spiderwort	0.19369
	Verbena stricta	Hoary Vervain	0.12913
	Vernonia fasciculata	Ironweed	0.12913
	Zizia aurea	Golden Alexanders	0.19369
		sub total	5.84295
Grasses & Sedges	*Andropogon gerardii*	Big Bluestem	0.517
	Bouteloua curtipendula	Side-oats Grama	6.120
	Carex bicknellii	Bicknells Sedge	0.129
	Carex brevior	Shorter Sedge	0.129
	Carex molesta	Field Oval Sedge	0.129
	Carex vulpinoidea	Fox Sedge	0.258
	Elymus canadensis	Canada Wild Rye	3.099
	Elymus virginicus	Virginia Wild Rye	2.066
	Panicum virgatum	Switch Grass	1.033
	Schizachyrium scoparius	Little Bluestem	6.125
		sub total	19.605
		Total Permanent Species:	25.448
Cover	*Avena sativa*	Seed Oats	32.000

BIORETENTION SEED & PLUG MIX (4.14 acres) (~2,000 plugs per acre)				
Type	Species	Common Name	Seeding Rate (lbs/ac)	Plug Quantity
Forbs	Acorus americanus	Sweet Flag	~~0.000000~~	540
	Alisma subcordatum	Mud Plantian	0.074568	540
	Asclepias incarnata	Swamp Milkweed	0.372839	
	Bidens cernua	Nodding Bur Marigold	0.161023	
	Boltonia asteroides	False Aster	0.074568	
	Euthamia graminifolia	Grass-Leaved Goldenrod	0.037284	
	Helenium autumnale	Sneezeweed	0.074568	
	Hibiscus laevis	Rose Mallow	~~0.000000~~	540
	Lobelia cardinalis	Cardinal Flower	0.037284	
	Lythrum alatum	Winged Loosetrife	0.007457	
	Mimulus ringens	Monkey Flower	0.007457	
	Oligoneuron riddellii	Riddell's Goldenrod	0.161023	
	Physostegia virginiana	Obedient Plant	0.29827	
	Pycnanthemum virginianum	Mountain Mint	0.037284	
	Sagittaria latifolia	Common Arrowhead	0.074568	576
	Verbena hastata	Blue Vervain	0.074568	
	Veronia fasciculata	Common Ironweed	0.074568	
		sub total	1.567329	2,196
Grasses & Sedges	*Calamagrostis canadensis*	Blue Joint Grass	0.037284	
	Carex comosa	Bristley Sedge	0.161023	540
	Carex lacustris	Common Lake Sedge	~~0.000000~~	540
	Juncus dudleyi	Dudley's Rush	0.007457	
	Juncus torreyi	Torrey's Rush	0.018642	
	Leersia oryziodes	Rice Cut Grass	0.596542	
	Panicum virgatum	Switch Grass	1.193084	540
	Scirpus acutus	Hardstem Bulrush	0.161023	540
	Scirpus atrovirens	Dark-Green Bulrush	0.037284	540
	Scirpus cyperinus	Wool Grass	0.0186419	612
	Scirpus pendulus	Rufous Bulrush	0.074568	
	Scirpus pungens	Chairmaker's Rush	0.387752	540
	Scirpus validus	Great Bulrush	0.161023	540
	Schoenoplectus fluviatilis	River Bulrush	0.387752	576
	Sparganium eurycarpum	Great Bur Reed	~~0.000000~~	540
	Spartina pectinata	Prairie Cord Grass	0.596542	612
		sub total	3.838618	6,120
		Total Permanent Species:	5.405947	8,316
Cover	*Avena sativa*	Seed Oats	32.000	

NATIVE TREE & SHRUB MIX FOR STORMWATER MANAGEMENT AREAS				
Total Linear Feet of HWL = 3,737'				
Type	Species	Common Name	Quantity	Size Requirement
Canopy	*Celtis occidentalis*	Hackberry	5	≥1.5" caliper
	Gymnocladus dioicus	Kentucky Coffee	6	≥1.5" caliper
	Platanus occidentalis	Sycamore	6	≥1.5" caliper
	Quercus bicolor	Swamp White Oak	9	≥1.5" caliper
	Quercus macrocarpa	Bur Oak	9	≥1.5" caliper
	Tilia americana	American Linden	4	≥1.5" caliper
		sub total	**39**	
Understory	*Carpinus caroliniana*	Blue Beech	3	≥6' height or ≥1.5" caliper
	Cercis canadensis	Eastern Redbud	6	≥6' height or ≥1.5" caliper
	Crataegus crusgalli	Cockspur Hawthorn	3	≥6' height or ≥1.5" caliper
	Malus ioensis	Prairie Crab	6	≥6' height or ≥1.5" caliper
	Ostrya virginiana	Ironwood	2	≥6' height or ≥1.5" caliper
		sub total	**20**	
Shrub	*Ceanothus americanus*	New Jersey Tea	44	≥ 24" height & ≥ 5 gallon
	Cephalanthus occidentalis	Buttonbush	16	≥ 24" height & ≥ 5 gallon
	Cornus obliqua	Blue-fruited Dogwood	26	≥ 24" height & ≥ 5 gallon
	Cornus sericea	Red-twig Dogwood	24	≥ 24" height & ≥ 5 gallon
	Corylus americana	American Filbert	14	≥ 24" height & ≥ 5 gallon
	Physocarpus opulifolius	Ninebark	17	≥ 24" height & ≥ 5 gallon
	Prunus virginiana	Chokecherry	14	≥ 24" height & ≥ 5 gallon
	Ptelea trifoliata	Wafer Ash	14	≥ 24" height & ≥ 5 gallon
	Spiraea alba	Meadowsweet	43	≥ 24" height & ≥ 5 gallon
	Viburnum lentago	Nannyberry Viburnum	20	≥ 24" height & ≥ 5 gallon
		sub total	**232**	
		Total:	**291**	

WET PRAIRIE SEED MIX (0.52 acres)			
Type	Species	Common Name	Seeding Rate (lbs/ac)
Forbs	*Asclepias incarnata*	Swamp Milkweed	0.429688
	Bidens cernua	Nodding Bur Marigold	0.171875
	Boltonia asteroides	False Aster	0.085937
	Epilobium coloratum	Cinnamon Willow Herb	0.042968
	Euthamia graminifolia	Grass-Leaved Goldenrod	0.042968
	Eutrochium maculatum	Joe Pye Weed	0.085937
	Helenium autumnale	Sneezeweed	0.171875
	Liatris pycnostachya	Prairie Blazing Star	0.343750
	Lobelia cardinalis	Cardinal Flower	0.042968
	Lobelia siphilitica	Blue Lobelia	0.042968
	Lythrum alatum	Winged Loosetrife	0.006875
	Mimulus ringens	Monkey Flower	0.021480
	Oligoneuron riddellii	Riddell's Goldenrod	0.171875
	Physostegia virginiana	Obedient Plant	0.343750
	Pycnanthemum virginianum	Mountain Mint	0.085937
	Senna hebecarpa	Wild Senna	0.687500
	Symphyotrichum novae-angliae	New Endland Aster	0.171875
	Verbena hastata	Blue Vervain	0.257810
	Veronia fasciculata	Common Ironweed	0.171875
	Veronicastrum virginicum	Culvers Root	0.042968
		sub total	3.422879
Grasses & Sedges	*Calamagrostis canadensis*	Blue Joint Grass	0.085937
	Carex cristatella	Crested Oval Sedge	0.171875
	Carex scoparia	Lance-Fruited Oval Sedge	0.171875
	Carex tribuloides	Awl-Fruited Oval Sedge	0.171875
	Elymus riparius	Riverbank Rye	2.750000
	Elymus virginicus	Virginia Wild Rye	4.125000
	Glyceria striata	Fowl Manna Grass	0.085937
	Leersia oryziodes	Rice Cut Grass	0.687500
	Panicum virgatum	Switch Grass	1.375000
	Scirpus atrovirens	Dark-Green Bulrush	0.085937
	Scirpus cyperinus	Wool Grass	0.042968
	Scirpus pendulus	Rufous Bulrush	0.171875
	Spartina pectinata	Prairie Cord Grass	0.687500
		sub total	10.61328
		Total Permanent Species:	14.03616
Cover	*Avena sativa*	Seed Oats	32.000

SHALLOW EMERGENT PLUG MIX (0.09 acres) (~5,000 plugs per acre)		
Species	Common Name	Quantity
Juncus effusus	Soft Rush	36
Pontederia cordata	Pickerelweed	72
Sagittaria latifolia	Common Arrowhead	36
Schoenoplectus fluviatilis	River Bulrush	72
Scirpus acutus	Hardstem Bulrush	36
Scirpus pungens	Chairmaker's Rush	36
Scirpus validus creber	Great Bulrush	72
Sparganium eurycarpum	Bur Reed	72
	Total:	**432**

AQUATIC TUBER MIX (0.08 acres) (~1,500 tubers per acre)		
Species	Common Name	Quantity
Nymphaea odorata	Fragrant Water Lily	150
	Total:	**150**

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REVISIONS		
NO.	DATE	DESCRIPTION

BASE LAYER: N/A

PROJECT NO.: 240548 | PROJECT MANAGER: SJB
DATE: 08/15/2025 | DESIGNED BY: DJJ
SCALE: N/A | DRAWN BY: DJJ

Estates at Ravinia Meadow
Orland Park, Cook County, Illinois

Buffer Restoration and Native Planting Plan - Seed,Plug,Tree & Shrub Mixes

DRAWING NO.: C.3

J:\2024\240548\NR\Wetland\Permit\24x36\2025 0814\FigC3PlantMixes240548_24x36_2025 0814.mxd

CONTACT INFORMATION

Pulte Home Corporation will be responsible for the timely execution of all near-term (0-3 years) maintenance activities within the naturalized landscape, unless otherwise noted, as set forth in this Plan for the naturalized landscape areas located within the Estates of Ravina Meadows subdivision. Long-term maintenance activities for the naturalized landscape shall be the responsibility of the Estates of Ravinia Meadow Homeowners Association following initial sign-off from the Village. The following party should be contacted regarding management activities and is the party responsible for compliance with this Plan:

Names, addresses, contacts, and telephone numbers of the property owner(s):

Pulte Home Corporation

1900 E. Golf Road, Suite 1700

Schaumburg, Illinois 60173

847-230-5400

Names, addresses, contacts, and telephone numbers of the party or parties legally responsible for operations and maintenance:

V3 Companies Ltd.

7325 Janes Avenue

Woodridge, Illinois 60517

INTRODUCTION

This BMP and Wetland Buffer Plan Summary and Management & Monitoring Plan (MMP) has been prepared on behalf of Pulte Home Corporation for the proposed naturalized stormwater management facilities associated with the proposed Estates of Ravinia Meadows development. The MMP satisfies all requirements set forth in section 6-305 of the Village of Orland Park Village Code. The site is located north of Marley Creek, south of W. 159th Street, east of 104th Avenue, and west of S. LaGrange Road in Orland Park, Cook County, Illinois (Section 21, T36N, R12E; 41.596501°N, –87.858788°W; Tinley Park Quadrangle).

The proposed naturalized plantings are shown on the Buffer Restoration and Native Planting Plan (Plan) provided in **Appendix I**. As the Plan indicates, two naturalized stormwater basin complexes are proposed in the southern portion of the site as well as wetland buffer mitigation associated with buffer impacts to the existing wetland complex to the south. Additionally, a BMP basin in the northeast will provide additional stormwater detention and water quality benefits. The naturalized areas will be established with native wetland vegetation that is tolerant of large hydrologic fluctuations in the bottom and prairie vegetation on the basin slopes.

The purpose of establishing native vegetation in these stormwater basins is to provide an aesthetically pleasing and environmentally beneficial alternative to riprap and turf grass stormwater areas. Native vegetation aids in sediment and toxicant retention/removal, and provides cover for wildlife. Besides providing cover and a food source for wildlife, prairie vegetation greatly reduces or eliminates the need for irrigation, aeration, fertilization, and use of many of chemicals (i.e. herbicides, fungicides, etc.) typically required by maintained turf grass. Prairie vegetation also provides better soil stabilization than turf grass (i.e., bluegrass, etc.) due to extensive root systems, many reaching depths of ten feet below the soil surface. These extensive root systems allow prairie vegetation to withstand drought and nutrient deficiencies in the soil. The extensive root systems also allow rainwater to percolate into the soil, aiding in groundwater recharge, instead of direct runoff typical of conventional basin designs.

CONSTRUCTION AND REVEGETATION

This section of the plan details construction and revegetation of the naturalized stormwater facilities.

CONSTRUCTION, SOILS AND TOPDRESSING SPECIFICATIONS

Grading and excavation of the stormwater facilities shall be completed in accordance with the engineering plans in order to achieve the requisite storage volumes.

The following specifications shall be followed to minimize impacts to the stormwater facilities and provide a suitable medium for vegetation establishment:

1. All areas to be planted or seeded with native vegetation shall be over-excavated a minimum of 1 foot below final grade to allow for the placement of topdress material, unless a one-foot thick topsoil layer is present following excavation to proposed final grade.
2. Topdress material for the proposed naturalized vegetation areas can originate from on-site. These soils are adequate to promote native vegetation establishment. If additional topdress material is needed, the topdress material shall contain an organic matter content of 3% or more and a clay content of 27% or less. Due to underdrains being installed in the basins and the bioretention facility bottoms, an engineered soil mix shall be installed per the engineering plans.
3. Wheel-based vehicles (scrapers, endloaders, etc.) shall not be used for topdressing work. Only low ground pressure wide-track equipment (quadtrack tractor, wide track dozer, backhoe, or approved by Engineer) shall haul, move and spread topdress material.
4. Following the 1-foot of topdress placement, the surface shall be thoroughly disked using a small farm type disc (not a large construction disc) and/or Harley rake for all native seeding areas. Topdress material shall not be handled or the surface disked when wet.
5. No wheeled traffic shall occur in the naturalized seeding areas after the final disking is complete, with the exception of a small farm type tractor if used for seeding.
6. All construction activities in the naturalized areas must be done under dry conditions.

PRE-SEEDING AND PLANTING WEED CONTROL

If any areas identified on the Plan are not disturbed as a result of grading or lie fallow long enough following final grading to allow non-native/invasive species to germinate a pre seeding/plug planting weed control event shall take place using a non-selective aquatic safe herbicide. All herbicide shall be applied according to manufacturer's specifications to ensure that the treatment is successful. All treated areas shall allow 14 days to pass after treatment to allow the chemicals to work and break down prior to seeding or planting. More than one application may be needed to successfully treat an area as well as areas may need to be mowed between events or prior to seeding.

SEEDING SPECIFICATIONS

1. The restoration contractor shall furnish, transport, and install the native seed mixes as specified for the respective areas shown on the Plan.
2. Seeding activities of the permanent matrices shall be performed after the seed bed has been properly prepared, as applicable, between November 1 after the first frost and ending when snow cover exceeds 2-inches in depth or areas are covered with ice and June 15th of the following year.
3. If construction activities are finished outside the permanent seeding window, the area can be stabilized with a temporary cover crop or permanent seeded with a supplemental seeding during the prescribed window the following year if needed to achieve standards.
4. Seed shall be surface sown with a broadcast seeder and lightly raked in or with a native drop seeder.
5. All seed sources shall be within a 200-mile radius of the project site and be true to name and variety.
6. Seeding shall only occur in areas that will receive erosion blanket installation within 48 hours (see section below).

WETLAND PLANTING SPECIFICATIONS

1. The restoration contractor shall furnish, transport and install all container grown plants for all planting zones as specified on plans.
2. Herbaceous planting activities shall be performed no earlier than May 15th and no later than July 15th under favorable conditions (i.e., proper hydrology). Planting outside this window may be feasible, however additional measures may need to be implemented to ensure successful establishment of the plant plugs.
3. All plugs shall be container grown in open bottom pots with the following minimum dimensions: 2 3/8 inches square by 3-inches deep or a minimum root area of 11 cubic inches. At time of planting, all plant plugs shall have minimum shoot heights of 14-inches and well-developed root systems that hold planting soil together when removed from the container. Soil saturation shall be maintained for all container plants until installation.
4. Plant material shall not be provided as dormant (i.e., sprouted tubers, sprouted rhizomes or bare root) unless specified in the plans.

TREE & SHRUB SPECIFICATIONS

1. The restoration contractor shall furnish, transport, and install all tree and shrubs as shown on the Plan.
2. Installation of trees and shrubs shall be conducted between March 15 and May 31 or September 15 and October 31 following construction activities.
3. Trees and shrubs shall be well branched, well formed, sound, vigorous, healthy planting material free from disease, sunscald, windburn, abrasion, and harmful insects or insect eggs and having healthy, normal, and undamaged root systems.
4. All trees and shrubs shall be thoroughly watered following installation, to eliminate air pockets around roots, settling, and to soak the surrounding soil.
5. All trees and shrubs shall be properly mulched to beyond the plant's dripline.
6. All trees and shrubs shall be transported to the site in a covered trailer and/or covered by a landscape tarp to prevent windburn.
7. Planting holes shall be over excavated to reduce soil compaction around the root ball to promote root growth.
8. Trees and shrubs shall be properly planted with the trunk/root flare slightly above grade.
9. Trees and shrubs shall be irrigated throughout the first establishment year. Tree diapers may be used in conjunction with mulch to reduce irrigation needs.
10. Trees and shrubs shall be true to species (not hybrid cultivars) and the size specified on the tree and shrub list (**Appendix II**) or greater.
11. If post construction conditions are not conducive for locations identified on the Plan, and as-build shall be submitted with the monitoring report identifying any altered locations or species.

PLANTING ZONES

Selection of the plant species in the stormwater facilities are based on their suitability to the anticipated soil and hydrologic conditions following construction. The hydrographs (**Appendix III**) indicate a normal drawdown to the Normal Water Line (NWL) within approximately three days for any given modeled precipitation event. As the Plan indicates, the main southern stormwater basin and northern stormwater basin have an underdrain system running below the basin bottom to promote ground water infiltration which provides additional water quality benefits. The basin bottom in the south is approximately two feet below the outlet elevation, and the basin bottom in the north is approximately one foot below the outlet elevation. This will result in shallow inundation during periods of frequent precipitation in the wetter spring and fall months and saturated soil conditions during the summer months when frequency is less allowing greater time for groundwater infiltration to the underdrains.

A variety of native wetland plant plugs tolerant of large hydraulic fluctuations shall be installed in the basin bottoms. Plug installations shall be conducted only under suitable hydrologic conditions. If suitable hydrologic conditions are not established during the plant installation window, plant installation may be postponed until the subsequent growing season when appropriate hydrology is established. Depending on nursery stock, water levels may need to be manipulated during installation and the establishment window to ensure that at least twenty-five percent of each plant is above the water line. Due to the unpredictable nature of infiltration rates associated with underdrains it is recommended that basin hydrology is monitored following rain events prior to plant installation to ensure the system is operating as designed. If standing water greater than six inches deep persists for greater than five days, then the seed and plug mix for this zone may need to be altered to ensure vegetation establishment and to achieve standards.

A broad-spectrum low profile mesic prairie seed mix comprised of native grasses, sedges and forbs shall be installed on the stormwater basin slopes and around the buffer of the existing wetland. Additionally, a wet prairie seed mix designed to better tolerate the hydrologic bounce of the basins shall be installed as indicated on the Plan.

In accordance with Section 6-305 of the Village of Orland Park Village Code native trees and shrubs shall be installed within the naturalized stormwater management areas to provide additional species diversity, habitat and provide shading. See **Appendix II** for the seed, plug, tuber, tree and shrub mixes. These mixes are described below.

Mesic Prairie Seed Mix (9.95 acres). A broad-spectrum native seed mix, a mix that contains native grasses, sedges and forbs, shall be installed on the slopes of the stormwater basins and wetland buffer area. Seed on the basin slopes shall be sown all the way down to the wet prairie zone and overlapped by a foot or two. Overlapping the seed mixes will increase diversity and create a transition between the two different hydrologic zones. Following seeding activities, a biodegradable erosion blanket (i.e. North American Green S75) shall be installed to stabilize the seed prior to cover crop germination and establishment of the permanent plant species. Blanket shall be secured with staples according to the manufacture's specifications.

Wet Prairie Seed (0.52 acres). A wet prairie seed mix, a mix that contains native grasses, sedges, rushes, and forbs shall be installed at the NWL of all stormwater basins up the slope side as depicted on the Plan to accommodate hydraulic bounce following precipitation events. As with the mesic prairie seed mix this mix shall overlap by a foot for two. Following seeding activities erosion control blanket (i.e. North American Green S75BN or comparable) shall be installed to stabilize the seed prior to cover crop germination and establishment of the permanent plant species. Blanket shall be secured with staples according to the manufacture's specifications.

Bioretention Seed and Plug Mix (4.14 acres). A broad-spectrum native seed mix, a mix that contains native grasses, sedges, rushes and forbs, shall be installed in the bottom of the main basin and BMP facilities located in the southeast and northeast corners or the project. Seed shall be sown right after final grading and topsoil respread takes place. If seeds are broadcast sown, a drag harrow with the tines facing up shall be used to lightly incorporate the seed into the soil to prevent seeds from floating when inundated. If a drop/brillion seeder is used this step is not necessary. The bioretention zone is anticipated to experience shallow inundation following a precipitation event and draw down to a dry/saturated bottom facility through the underdrain. To provide additional stabilization and help with establishment, native plant plugs shall be installed in this zone. Plugs shall be installed at random or in small species drifts throughout the basin bottoms under suitable hydrologic conditions. The species selected for this area can tolerate the large fluctuations in hydrology.

Emergent Plug Mix (0.09 acres). The emergent plug mix shall be installed in the areas shown on the Plan. The emergent zone is designed twelve inches below the normal water level and will likely be inundated throughout the growing season. A total of 5,000 plugs per acre shall be installed at random or in small species drifts throughout the basin bottom under suitable hydrologic conditions

Aquatic Tubers (0.08 acres). In zones too deep for emergent wetland vegetation to establish white-water lily tubers (150 in total) shall be installed to help reduce wave action, shade out any open water areas to reduce algal growth and help water quality. Lilies shall be in tuber form. The tubers shall be placed 3-5 per biodegradable cheese cloth/muslin bag along with a few rocks and tied up. The rocks will ensure that the tubers contact the basin bottom. Each bag shall then be gently tossed at random into the aquatic tuber zone.

Native Trees (59) and Shrubs (232). Trees and shrubs shall be installed as identified on the Plan. Species were selected based on their suitability to anticipated soil and hydrologic conditions as well as are aesthetically pleasing native species. Following construction, the contractor may need to adjust the planting location based on as-built conditions. Care shall be taken to make sure all plantings are adequately spaced out and in locations that will foster long-term success of each plant. Quantities of each species and plant type are based on the requirements set forth in Section 6-305 of the Village of Orland Park Village Code.

Turf Seed (1.24 acres). All pedestrian paths and sidewalks that are going through or abutting native areas shall have a turf grass buffer of four feet. This buffer is to maintain a finished look along all paths and to prevent any native vegetation from drooping over into the path of pedestrians or obstruct sight lines. All turf seeds shall be the same mix specified in the traditional landscape plans.

Existing Vegetation (1.96 acres). Aside from the large wetland complex to the south associated with Marley Creek, the Plan identifies four zones in which the existing vegetation is being preserved. If selective clearing of understory vegetation is to take place in these areas it is recommended that a shortgrass native seed mix (the mesic prairie seed mix omitting forbs) be planted following clearing to help stabilize the soil and tie into the surrounding restoration plan. A grass only seed mix will help with long-term maintenance of these areas as a broadleaf selective herbicide can be utilized for control woody resprouts.

EROSION CONTROL BLANKET INSTALLATION SPECIFICATIONS

North American Green (NAG) S75 BioNet (or comparable) shall be installed over all seeding areas (mesic and wet prairie seed mixes) as shown on the Plan. The blanket shall be installed within 48 hours and/or prior to forecasted rain, so no seeded area remains unprotected. Therefore, the area seeded shall be based on whatever can be blanketed within 48 hours. Installation of all erosion control materials shall be in accordance with the manufacturer's specifications

PREDATOR CONTROL

A predator control system shall be installed to help achieve the site goals and performance standards by discouraging herbivores such as but not limited to geese, ducks and muskrats from consuming and uprooting newly planted native plugs.

1. The materials shall include: 1-inch X 1-inch X 4-foot wood stakes with one end pointed, chicken wire fencing fabric or wire hardware cloth with mesh openings not to exceed 2-inches, 6-inch wire landscape staples, masons string and UV rated zip ties.
2. All areas receiving native plant plugs shall be protected by predator control fence. The fence, consisting of three-foot-high chicken wire fence mounted securely on 1-inch X 1-inch X 4-foot wood stakes in such a manner that one foot of wood stake with pointed end will extend below the fence fabric. The wood stakes will be no greater than 6 feet apart and installed approximately one foot deep into the soil so that the bottom of the fence fabric rests firmly on the soil surface. This fence shall be installed in conjunction with site seeding and native plug installation.
3. Fencing shall be installed above the NWL of all areas receiving plugs to make a protective perimeter. Wooden stakes shall be installed within the basin bottoms in a manner to allow masons twin to be strung across the top of the planted surface to deter geese and ducks from landing in the newly planted areas.
4. It is the responsibility of the contractor to remove the predator control fencing once the vegetation is established or the performance standards are met/sign off is achieved.

Following removal of the predator control system if muskrats or beavers continue to adversely impact the naturalized environment in a manner that compromises the function and structural integrity of the naturalized stormwater systems or in a manner preventing the site from meeting its goals trapping may need to be implemented to keep populations at a sustainable level.

IRRIGATION

It is the responsibility of the restoration contractor to monitor the site during and after the plant plugs are installed. Due to the unpredictable nature of precipitation events and underdrains drawing down the water level in the stormwater basins the contractor shall monitor site hydrology and implement an irrigation schedule if necessary to ensure proper hydrology during the first growing season to ensure the plants establish. Additionally, if water levels are too high during or after plant installation pumps may need to be implemented to draw down the water levels temporarily to ensure the success of the plant plugs. The restoration contractor shall monitor all trees and shrubs for irrigation needs to ensure they establish and meet the standards set forth in this document.

MANAGEMENT & MONITORING PLAN

This MMP for the Estates of Ravinia Meadows development establishes a means by which the stormwater and bioretention facilities may be evaluated relative to pre-established goals and performance standards.

The duration of the monitoring program is three years, beginning the first spring following seeding and plant plug installation, regardless of when the native seeding and planting was completed the previous year. The three-year management and monitoring program will be the responsibility of Pulte Home Corporation. Long-term maintenance (**Appendix V**) of the naturalized areas shall be the responsibility of the Estates of Ravinia Meadows Homeowners Association (HOA) to maintain all naturalized areas in perpetuity. It is the responsibility of the HOA to allocate appropriate resources annually to achieve and ensure long term maintenance and compliance of the naturalized areas. Pulte will provide the Village codes, covenants and restrictions documents outlining HOA responsibilities and funding obligations prior to the closing of the first home.

STORMWATER BASIN AND BMP MANAGEMENT

Proper management is critical for successful establishment of the proposed plant communities. Irrigation, periodic mowing, selective herbicide application and prescribed burning are commonly used as management techniques for natural plant communities.

The invasive species that require control include, but are not limited to, the following species provided in Table 1.

Table 1: Non-Native and Invasive Species (from Appendix "B" of the 2017 ICA)

American Silver-Berry (*Elaeagnus commutata)*	Eurasian Water-Milfoil (*Myriophyllum spicatum*)	Nodding Plumeless-Thistle (*Carduus nutans)*
Ash-Leaf Maple (*Acer negundo*)	European Barberry (*Berberis vulgaris*)	Privet *(Ligustrum* spp.)
Asian Bittersweet (*Celastrus orbiculatus*)	European Buckthorn (*Rhamnus cathartica*)	Purple Loosestrife (*Lythrum salicaria*)
Garden Bird's-Foot-Trefoil (*Lotus corniculatus*)	Garlic-Mustard (*Alliaria petiolata*)	Ragweed (*Ambrosia* spp.)
Black Locust (*Robinia pseudoacacia*)	Giant Hogweed (*Heracleum mantegazzianum*)	Rambler Rose (*Rosa multiflora*)
Bull Thistle *(Cirsium vulgare)*	Glossy False Buckthorn (*Frangula alnus*)	Reed Canary Grass *(Phalaris arundinacea*)
Lesser Burrdock (*Arctium minus*)	Greater Flowering-Rush (*Butomus umbellatus*)	Russian Olive (*Elaeagnus angustifolia)*
Canadian Goldenrod (*Solidago canadensis*)	Japanese Barberry (*Berberis thunbergii*)	Sandbar Willow (*Salix interior*)
Canadian Thistle (*Cirsium arvense*)	Japanese Bristle Grass (*Setaria faberi*)	Seaside Goldenrod (*Solidago sempevirens*)
Cat-Tail (*Typha* spp.)	Japanese Honeysuckle (*Lonicera japonica*)	Showy Fly-Honeysuckle (*Lonicera x bella*)

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REVISIONS

NO.	DATE	DESCRIPTION

BASE LAYER: N/A

PROJECT NO.: 240548	PROJECT MANAGER: SJB
DATE: 08/15/2025	DESIGNED BY: DJJ
SCALE: N/A	DRAWN BY: DJJ

Estates at Ravinia Meadow
Orland Park, Cook County, Illinois

Buffer Restoration and Native Planting Plan - Management and Monitoring Plan

DRAWING NO: C.4

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Chinese Yam (*Discorea oppositifolia*)	Japanese Hop (*Humulus japonica*)	Spotted knapweed (*Centaurea stoebe* subsp. *micranthos*)
Common Reed (*Phragmites australis)*	Japanese-Knotweed (*Reynoutria japonica*)	Tall Goldenrod (*Solidago altissima*)
Crack Willow (*Salix fragilis*)	Japanese Stilt Grass (*Microstegium vimineum*)	Teasel (*Dipsacus* spp.*)*
Creeping-Jenny (*Lysimachia nummularia*)	Jetbead (*Rhodotypos scandens*)	Twinsisters (*Lonicera tatarica*)
Crownvetch (*Securigera varia)*	Leafy Spurge (*Euphorbia esula*)	Watercress (*Nasturtium officinale*)
Curly Pondweed (*Potamageton crispus*)	Littleleaf Linden (*Tilia cordata*)	Wild Parsnip (*Pastinaca sativa*)
Eurasian-Buttercup (*Ficaria verna*)	Morrow's Honeysuckle (*Lonicera morrowii*)	Yellow Sweet-Clover (*Melilotus officinalis*)

First and Second Year Mowing. During the first two growing seasons after seeding, mowing or selective weed whipping the vegetation on the mesic and wet prairie slopes (under dry conditions) shall occur as needed to maintain a plant height of no greater than 18 to 20 inches. To accomplish this, high-mowing the vegetation to a height of 6 to 9 inches several times during the growing season will be needed. Mowing will aid new plant growth as to allow more sunlight to reach young prairie seedlings. Mowing will aid in the control of annual weeds, which can undermine seeding efforts. Additionally, weed whipping around trees and shrubs may need to take place periodically throughout the growing season to ensure that the prairie vegetation does not out compete the planted material and ensure a proper growth form.

Herbicide Application. Management of the vegetation in all areas should include selective application of herbicide to control aggressive plant species, such as, but not limited to, reed canary grass (*Phalaris arundinacea*), cattails (*Typha spp*), purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), thistles (*Cirsium spp.*), teasel (*Dipsacus spp.*), and sweet clover (*Melilotus spp.*). These species, including others, can displace desirable species, thereby reducing floristic diversity in the naturalized areas. Controlling these species will be required to achieve the performance standards for the project.

Natural regeneration of cattails, common reed and reed canary grass in the stormwater basins will likely occur following construction. A pre-planting control shall be conducted if any of these species or other weeds are present. Hand pulling cattails can be conducted when the cattails are small enough to ensure that the entire root is removed. Off-site disposal of cattails will be required. Larger cattails will require herbicide applications. Cattail and common reed coverage shall be no greater than 5% in aggregate prior to plant installation. Aggressive control of these species will be required after planting and throughout the management period to ensure native plant establishment. After planting, the hand-wick/bar-wick application method to control these species will likely be required.

A determination regarding the type of herbicide to be used should be made when it is known which nuisance species are present on the site. Depending on the target weed species, a selective herbicide may be available. The choice of herbicide and timing of herbicide application shall be made by a trained, licensed professional based on the target weed species and conditions. Care should be taken to monitor site weather conditions to limit herbicide drift, overspray, and ensure it is rainfast.

It is recommended that a minimum of four annual weed control events are conducted throughout the three-year period. Below is a general guideline on the suggested schedule and target species for the application periods. See **Appendix IV** for a detailed schedule of maintenance and monitoring activities.

- Application Period One (early spring – April/May): problematic species such as, but not limited to, reed canary grass, red/white clover, cool season adventive grasses.
- Application Period Two (late spring to early summer – May/June): problematic species such as, but not limited to, teasel, white/yellow sweet clover, thistle.
- Application Period Three (mid to late summer – July/August): problematic species such as, but not limited to, tall goldenrod, hairy aster, ragweed, cattails, purple loosestrife.
- Application Period Four (late summer and fall – September/October): problematic species such as, but not limited to, reed canary grass, thistle, common reed, red/white clover, cool season grasses.

General Site Maintenance. The owner shall remove debris and litter from the site on a monthly basis between March and October and dispose of appropriately. The owner will inspect all water control structures quarterly and within 24 hours of each major rainstorm (>1 inch rainfall). Inspections shall include an evaluation on the stability of the outlet, embankments, and inlets. Observations will be made on the presence and extent of erosion, lack of vegetation, or other problems such as soil cracking, the outlet/inlet structure degradation, sink holes, or wet areas on the slopes. Any compromised structure shall be reported to the Village in a timely manner.

Capture of sediment and pollutants eventually results in a decrease in pool volume and/or water quality in a stormwater facility and sediments need to be removed. Because each facility is different, there are no set timeframes for sediment/pollutant removal. The need for sediment removal is expected when the pool volume is reduced by 15 to 20 percent of the design volume.

Prescribed Burning. One prescribed burn may be conducted in the naturalized area during the three-year period. If deemed safe by the contractor and owner, the prescribed burn should be scheduled in the spring or fall of the third full growing season. Prescribed burning can reduce exotic weed species that may establish from seeds or rootstock material in the topsoil that is in situ or placed in these areas. Additionally, burning encourages the growth of native plant species from the established mixes and inhibits the growth of certain non-native vegetation. Prior to burning the contractor shall obtain an Illinois Environmental Protection Agency Open Burn permit, Cook County Burn Permit and Village permit. All burns shall be carried out by a qualified contractor with licensed and trained personnel.

Long-Term Mowing in Lieu of Prescribed Burning. If burning is deemed unsafe, end of growing season mowing can be conducted instead. Mowing the vegetation at the end of the growing season around November would be conducted annually after the vegetation has established (after year 2). This end of growing season mowing will partially replace some of the benefits provided by fire, in an area where prescribed burning is not feasible, mowing will be to a height of 6-9 inches. The mowing will only occur under dry or frozen ground conditions, so that soil disturbance from wheel ruts is avoided.

Prohibited Activities. Activities within the naturalized landscape shall be restricted or prohibited to those needed to maintain the naturalized landscape consistent with the Plan and to achieve the performance standards set forth in this document. The following actives such as, but not limited to shall be restricted or prohibited.

- Dumping of yard waste or debris
- Replacement of approved vegetation with non-approved materials
- Application of pesticide, fertilizer or herbicide not necessary to maintain the native vegetation
- Mowing or weed whipping not necessary to maintain the native vegetation and meet the site standards
- Installation of permanent or temporary commercial, industrial, agricultural, residential developments, buildings or structures
- Removal or destruction of trees or plants, mowing, draining, tilling, removal of topsoil sand rock, gravel or other materials
- Operation of snowmobiles, dune buggies, motorcycle, all-terrain vehicle or any other type of motorized vehicle not necessary for vegetation maintenance.

Any amendment to the MMP or Plan that alters the site beyond the original condition set forth in this document must have prior Village approval.

PERFORMANCE STANDARDS

Performance standards are established for proposed projects involving naturalized areas so that the relative success may be evaluated. If the performance standards are not achieved by the end of the three-year management and monitoring program, the permittee is responsible for correction of any deficiencies through further management activities, which may include replanting.

1. Within 3 months of seed installation (or three months into the growing season if dormant seeded), at least 90% of the seeded areas (mesic prairie and bioretention), as measured by aerial coverage, shall be vegetated. A minimum 90% vegetative coverage shall be achieved in the second year and maintained throughout, and at the end of the three-year period for this area.
2. At the end of the second growing season, relative coverage of non-native species in the mesic prairie and bioretention area cannot exceed 50%. As such, relative coverage of natives shall be 50% or greater at the end of the second growing season. The coefficient of conservatism (Mean-C) shall be 2 or greater.
3. At the end of the third growing season, relative coverage of non-native species in the mesic prairie, wet prairie and bioretention area cannot exceed 25%. As such, relative coverage of natives shall be 75% or greater at the end of the third growing season. The cumulative plant list, across all vegetative communities shall have a minimum native floristic quality index (FQI) of 20 and a (C-) value of 3.5 or greater.
4. At the end of the third growing season, the top three most dominant species based on relative coverage in the naturalized area shall not be non-native. These species shall include, but not be limited to, the following: reed canary grass (*Phalaris arundinacea*); common reed (*Phragmites australis*); field thistle (*Cirsium arvense*); buckthorn (*Rhamnus spp.*); cattails (*Typha spp.*); teasel (*Dipsacus spp.*); purple loosestrife (*Lythrum salicaria*); clover (*Trifolium spp.*); and sweet clover (*Melilotus spp.*).

APPROVAL

VILLAGE OF ORLAND PARK

Approved By:_____

Printed Name:_____

Title:_____

Date:_____

PETITIONER/OWNER

Submitted By:_____

Printed Name:_____

Property Address:_____

Contact Phone:_____

Contact Email:_____

Date:_____

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REVISIONS

NO.	DATE	DESCRIPTION

BASE LAYER: N/A

PROJECT NO.: 240548	PROJECT MANAGER: SJB
DATE: 08/15/2025	DESIGNED BY: DJJ
SCALE: N/A	DRAWN BY: DJJ

Estates at Ravinia Meadow
Orland Park, Cook County, Illinois

Buffer Restoration and Native Planting Plan - Management and Monitoring Plan

DRAWING NO.: C.5

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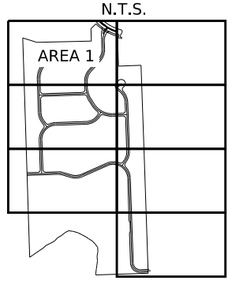
SITE LIGHTING FIXTURE SCHEDULE							
SYMBOL	DESCRIPTION	QUANTITY	LLF	COLOR	MOUNTING	CONFIG.	CATALOG NO. & NOTES
SL-1	EVOLVE LIGHTING, LUMINAIRE POWER PACKAGE 8, 58W, TYPE III DISTRIBUTION	23	0.90	4000K	30'-0" POLE 30'-6" MOUNTING HEIGHT	1 FIXTURE	ERLC-0-8-C6-40-GRAY
SL-2	BEGA SYSTEM BOLLARD HEAD	21	0.90	4000K	2'-6" BEGA SYSTEM BOLARD TUBE, BLACK	1 FIXTURE	LIGHT: 99862-K4-BLACK POLE: 99622-BLACK

CALCULATED LIGHTING LEVELS (FOOT CANDLES)					
	AVERAGE	MAX	MIN	AVG/MIN	MAX/MIN
RESIDENTIAL AREA	0.34	2.5	0.0	N/A	N/A
PATHWAY AREA	0.48	9.0	0.0	N/A	N/A

NOTES:

1. THE LIGHT POLE LOCATIONS ON THIS PLAN SHOW THE RECOMMENDED PLACEMENT. ADJUSTMENTS TO THESE LOCATIONS MAY BE REQUIRED TO ACCOMMODATE SITE CONDITIONS.
2. PAVEMENT CALCULATION AREAS ARE TAKEN WITHIN THE LIMITS OF PAVEMENT AREAS IDENTIFIED ON THIS PLAN.
3. THE PHOTOMETRIC PLAN WAS PREPARED CONSIDERING THE FIXTURES IN THE SCHEDULE ON THIS SHEET.

KEY PLAN
N.T.S.



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(847) 230-5400

REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

PHOTOMETRIC PLAN

ESTATES AT RAVINIA MEADOW

FILE NAME:	DSGN. BY: AM	JOB NO.:		SHEET NO.
DIR: 250365	DRN. BY: AM	DATE: 04-28-25	SCALE: 1" = 40'	L1

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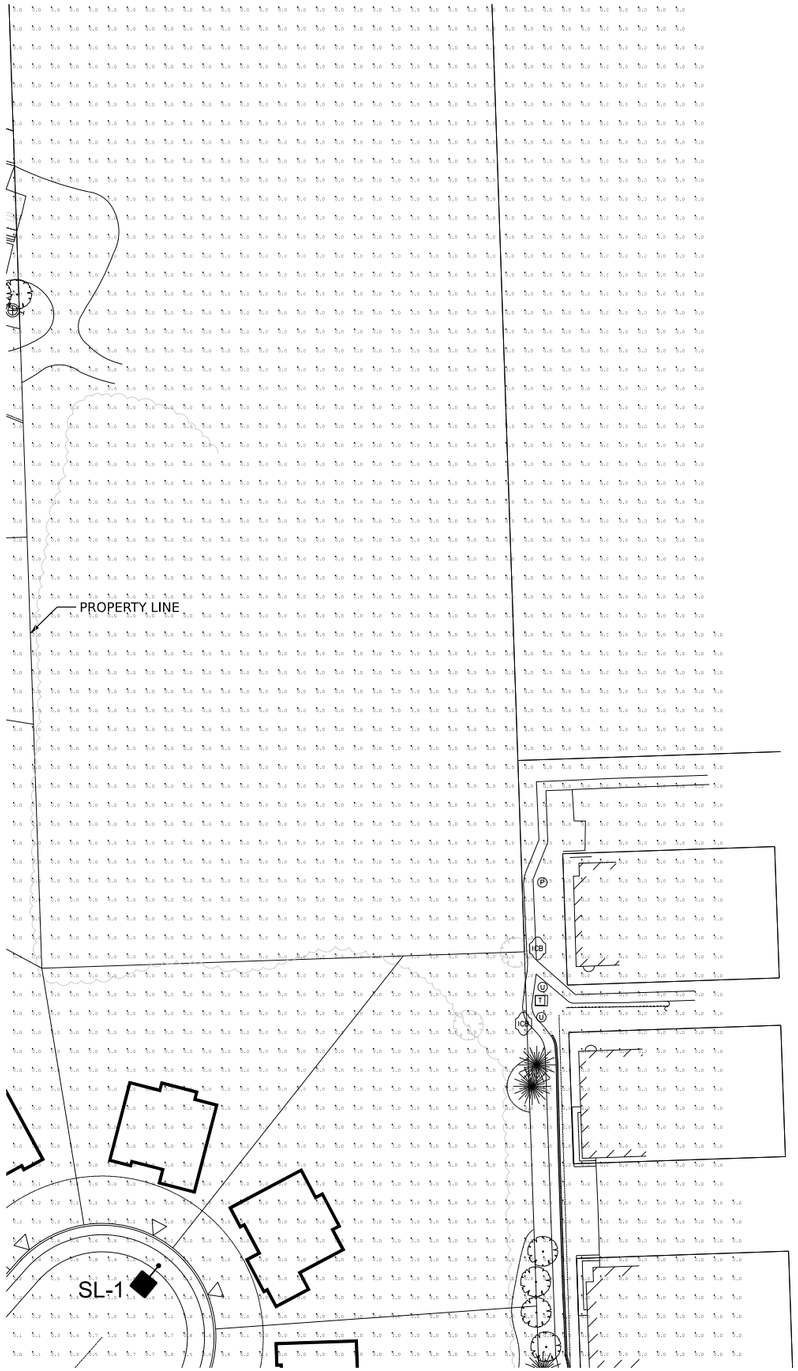
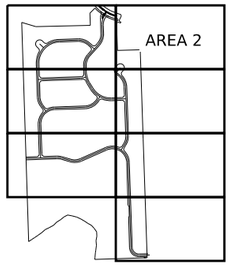


NOTES:

1. SEE SHEET 1 FOR LEGENDS AND NOTES

KEY PLAN
N.T.S.



System bollard tube · With access door

BEGA

Type:
BEGA Product:
Project:
Modified:

Application
BEGA system bollard luminaire tube without components. BEGA system bollard tubes are designed for easy attachment to system bollard heads using an interlocking mechanism. An accompanying bollard head must be selected for proper installation.

Materials
Marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
Extruded aluminum
Die-cast aluminum
Mechanically captive stainless steel fasteners
Interlocking stainless steel mounting mechanism for attachment of head and tube
Pre-wired with 5-pole plug-in connectors for ease of installation
Galvanized steel anchorage

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65

Weight: 13.0 lbs.

Finish
All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL and custom color finishes provided in either polyester powder or liquid paint..

Available colors
☒ Black (BLK) ☐ Bronze (BRZ)
☐ Silver (SLV) ☐ White (WHT)
☐ RAL: ☐ CUS:

Available options
☐ 70896 Direct burial anchorage (replaces included anchorage kit, pre-shippable)
☐ CUS Custom finish
☐ MGU Marine grade undercoat
☐ RAL RAL finish

Included (available for pre-shipment)
☑ B79818 Anchorage kit

System bollard tube · With access door

	A	B
B99622	7½	32

BEGA 1000 BEGA Way, Carpinteria, CA 93013 (805) 684-0533 info@bega-us.com

Due to the dynamic nature of lighting products and the associated technologies, luminaire data on this sheet is subject to change at the discretion of BEGA North America. For the most current technical data, please refer to bega-us .com
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System bollard head · Shielded · 360°

BEGA

Type:
BEGA Product:
Project:
Modified:

Application
BEGA system bollard head with shielded 360° light distribution. Simply order the bollard head and also the required bollard tube in various heights and options. Both modules can be joined together easily and quickly during the installation.

Materials
Clear safety glass
Marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy
High temperature silicone gasket
Mechanically captive stainless steel fasteners
Pure anodized aluminum reflector surface

NRTL listed to North American Standards, suitable for wet locations
Protection class IP 65

Weight: 8.4 lbs.

Electrical

Operating voltage	120-277 VAC
Minimum start temperature	-30° C
LED module wattage	16.5 W
System wattage	19.8 W
Controllability	0-10V dimmable
Color rendering index	Ra > 80
Luminaire lumens	1286 lm
LED service life (L70)	60000 hrs

LED color temperature
☒ 4000K (K4)
☐ 3500K (K35)
☐ 3000K (K3)
☐ 2700K (K27)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish
All BEGA standard finishes are matte, textured powder coat with minimum 3 mil thickness. BEGA Unidure® finish provides superior fade protection in Black, Bronze, and Silver. BEGA standard White is a super durable polyester powder. Optionally available RAL and custom color finishes provided in either polyester powder or liquid paint.

Available colors
☒ Black (BLK) ☐ Bronze (BRZ)
☐ Silver (SLV) ☐ White (WHT)
☐ RAL: ☐ CUS:

Available options
☐ CUS Custom finish
☐ DALI-2 DALI dimming (IEC62386 tube only)
☐ MGU Marine grade undercoat
☐ RAL RAL finish

System bollard head · Shielded · 360°

	LED	A	B
B99662	16.5 W	7½	5½

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EVOLVE

ERLC Cobra Head
LED Roadway Lighting

CUSTOMER NAME _____
PROJECT NAME _____
DATE _____ TYPE _____
CATALOG NUMBER _____

The Evolve® LED Roadway ERLC Luminaire is optimized utilizing advanced LED reflective optical system for local, collector and major roadways. The modern design incorporates the heat sink directly into the unit for heat transfer to prolong LED life.

Construction

Housing:	Aluminum die cast enclosure casting integral heat sink for maximum heat transfer
Lens:	Impact resistant tempered glass
Paint:	Corrosion resistant powder paint, ≥ 2.0 mil thickness (RAL & custom colors available) Standard = Black, Dark Bronze, Gray, White Optional = Coastal Finish
Weight:	8.5 lbs (5.6 kgs)

Optical System

Lumens:	2,000 - 7,000
Distribution:	Type II Narrow, II/III², III, V
Efficacy:	110-143 LPW
CCT:	2700K, 3000K, 4000K & 5000K
CRI:	≥ 70

Electrical

Input Voltage:	120-277V (no 347-480V)
Input Frequency:	50/60Hz
Power Factor:	≥ 90% at rated watts
Total Harmonic Distortion:	≤ 20% at rated watts

Surge Protection*

STANDARD	OPTIONAL
☐ 10kV/5kA	☐ Secondary 10kV/5kA (R Option) or ☐ Secondary 20kV/10kA (T Option)

*Per ANSI C136.2-2018

Lumen Maintenance

Projected Lxx per IES TM-21-11 at 25°C

LUMEN CODES	DISTRIBUTIONS	LXX/10(K) @ HOURS 25,000 HR	50,000 HR	60,000 HR
02 ,03, 04, 05	A5, B5, C5	L97	L93	L92
06	A5, B5, C5	L96	L91	L89

LUMEN CODES	DISTRIBUTIONS	LXX/10(K) @ HOURS 25,000 HR	50,000 HR	60,000 HR
02 ,03, 04, 05	V4	L96	L93	L93
06	V4	L94	L90	L88

Ratings

Operating Temperature:	-40°C to 50°C
Vibration:	3G per ANSI C136.31-2018
LM-79:	Testing in accordance with IES Standards
EMI:	Title 47 CFR Part 15 Class A
RoHS:	Complies with the material restrictions of RoHS

Controls

Dimming:	Standard - 0-10V ☐ Optional - DALI (Option U) ☐
Sensors:	Photo Electric Sensors (PE) available LightGrid Compatible

Warranty

☐ 5 Year (Standard) ☐ 10 Year (Optional)

Not all product variations listed on this page are DLC qualified. Visit www.designlights.org/search to confirm qualifications.

Current by ZG

LED.com

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BEB

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ESTATES AT RAVINIA MEADOW

FILE NAME:	DSGN. BY: AM	JOB NO.:		SHEET NO.
DIR: 250365	DRN. BY: AM	DATE: 04-28-25	SCALE: 1" = 40'	L2

NOTES:

1. SEE SHEET 1 FOR LEGENDS AND NOTES

KEY PLAN
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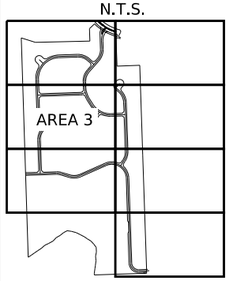

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DIR: 250365	DRN. BY: AM	DATE: 04-28-25	SCALE: 1" = 40'	L3

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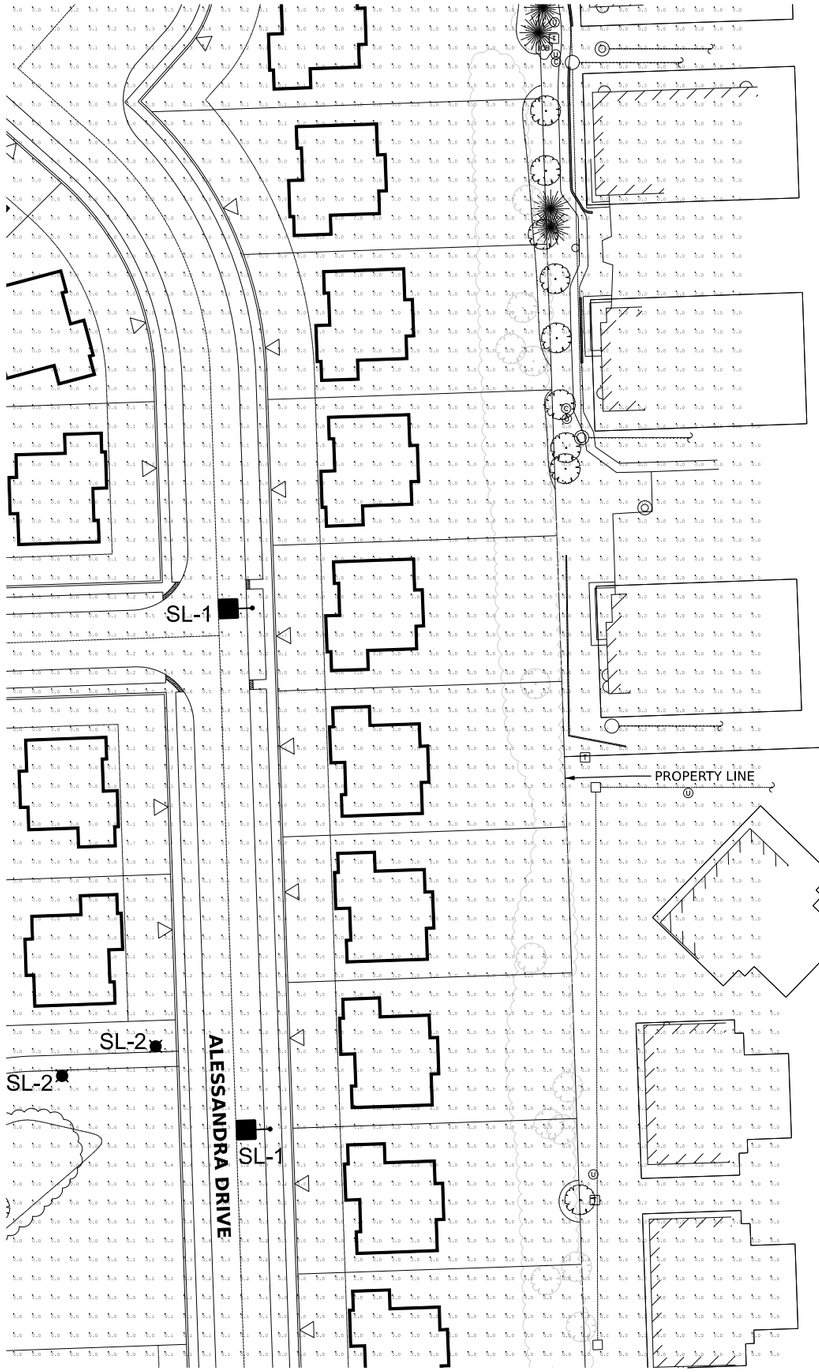

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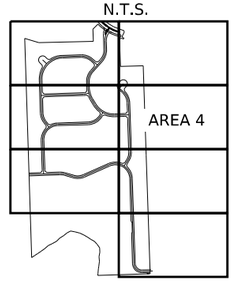

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DIR: 250365	DRN. BY: AM	DATE: 04-28-25	SCALE: 1" = 40'	L4

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KEY PLAN
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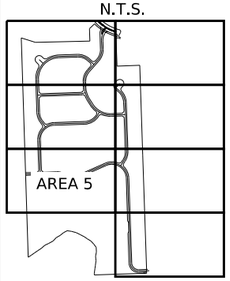

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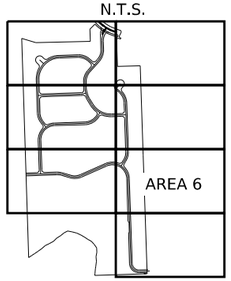

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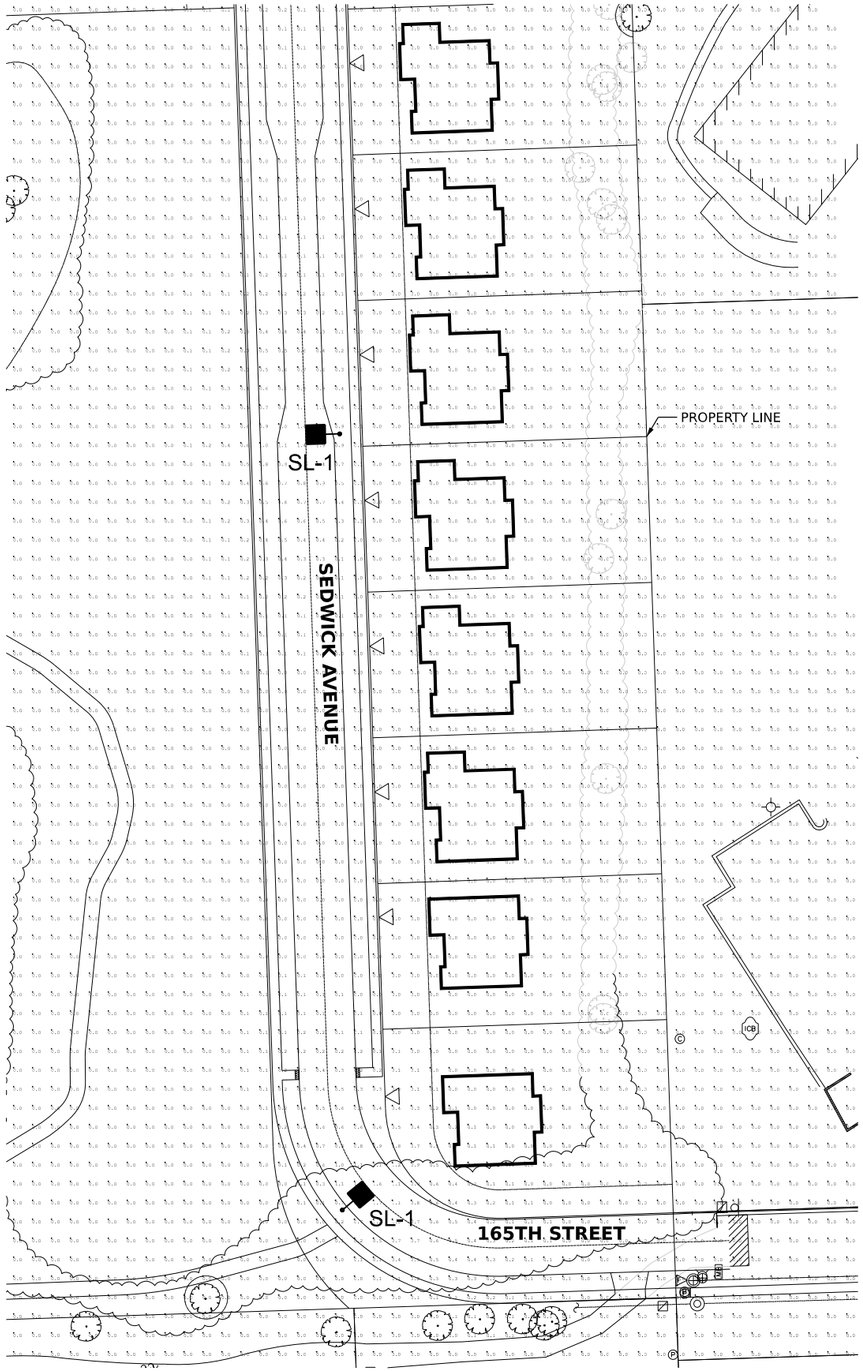

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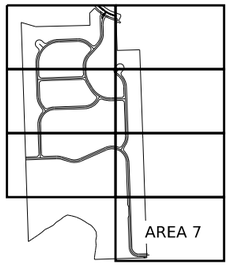

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DIR: 250365	DRN. BY: AM	DATE: 04-28-25	SCALE: 1" = 40'	L7

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