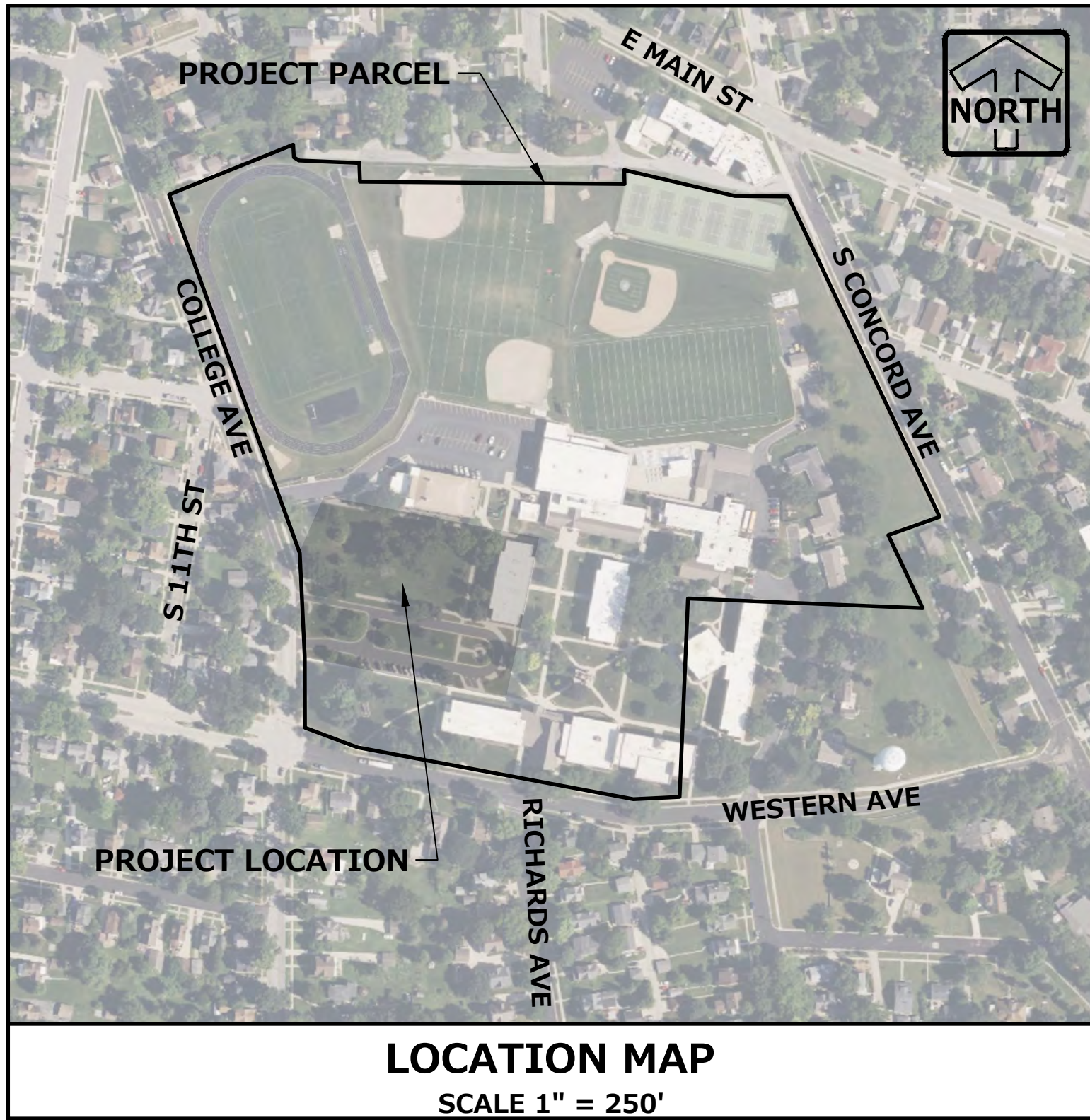


| LEGEND                             |          |          |
|------------------------------------|----------|----------|
|                                    | EXISTING | PROPOSED |
| SANITARY MANHOLE                   | ⊗        | ⊗        |
| STORM MANHOLE                      | ⊙        | ⊙        |
| CATCH BASIN                        | □        | ■        |
| INLET                              | ◁        | ▷        |
| PRECAST FLARED END SECTION         | ◁        | ▷        |
| CONCRETE HEADWALL                  | ◁        | ▷        |
| VALVE VAULT                        | ⊗        | ⊗        |
| VALVE BOX                          | ⊗        | ⊗        |
| FIRE HYDRANT                       | ⊗        | ⊗        |
| BUFFALO BOX                        | ⊗        | ⊗        |
| CLEANOUT                           | ⊗        | ⊗        |
| SANITARY SEWER                     | —        | —        |
| FORCE MAIN                         | —        | —        |
| STORM SEWER                        | —        | —        |
| WATER MAIN                         | —        | —        |
| UTILITY CROSSING                   | —        | —        |
| GRANULAR TRENCH BACKFILL           | —        | —        |
| LIGHTING                           | —        | —        |
| ELECTRICAL CABLE                   | —        | —        |
| ELECTRICAL TRANSFORMER OR PEDestal | —        | —        |
| POWER POLE                         | —        | —        |
| POWER POLE WITH LIGHT              | —        | —        |
| GUY WIRE                           | —        | —        |
| STREET SIGN                        | —        | —        |
| GAS MAIN                           | —        | —        |
| TELEPHONE LINE                     | —        | —        |
| CONTOUR                            | —        | —        |
| SPOT ELEVATION                     | —        | —        |
| WETLANDS                           | —        | —        |
| FLOODWAY                           | —        | —        |
| FLOODPLAIN                         | —        | —        |
| HIGH WATER LEVEL (HWL)             | —        | —        |
| NORMAL WATER LEVEL (NWL)           | —        | —        |
| DIRECTION OF SURFACE FLOW          | —        | —        |
| DITCH OR SWALE                     | —        | —        |
| DIVERSION SWALE                    | —        | —        |
| OVERFLOW RELIEF ROUTING            | —        | —        |
| TREE WITH TRUNK SIZE               | —        | —        |
| SOIL BORING                        | —        | —        |
| TOPSOIL PROBE                      | —        | —        |
| FENCE LINE, TEMPORARY SILT         | —        | —        |
| FENCE LINE, WIRE                   | —        | —        |
| FENCE LINE, CHAIN LINK OR IRON     | —        | —        |
| FENCE LINE, WOOD OR PLASTIC        | —        | —        |
| CONCRETE SIDEWALK                  | —        | —        |
| CURB AND GUTTER                    | —        | —        |
| DEPRESSED CURB                     | —        | —        |
| REVERSE PITCH CURB & GUTTER        | —        | —        |
| EASEMENT LINE                      | —        | —        |
| PROPERTY LINE                      | —        | —        |

| ABBREVIATIONS |                     |     |                                |
|---------------|---------------------|-----|--------------------------------|
| BL            | BASE LINE           | NSI | NATIVE SOIL INTERFACE          |
| C             | LONG CHORD OF CURVE | NWL | NORMAL WATER LEVEL             |
| C & G         | CURB AND GUTTER     | PC  | POINT OF CURVATURE             |
| CB            | CATCH BASIN         | PT  | POINT OF TANGENCY              |
| CL            | CENTERLINE          | PVI | POINT OF VERTICAL INTERSECTION |
| D             | DEGREE OF CURVE     | R   | RADIUS                         |
| EP            | EDGE OF PAVEMENT    | ROW | RIGHT-OF-WAY                   |
| FF            | FINISHED FLOOR      | SAN | SANITARY SEWER                 |
| FG            | FINISHED GRADE      | ST  | STORM SEWER                    |
| FL            | FLOW LINE           | T   | TANGENCY OF CURVE              |
| FP            | FLOODPLAIN          | TB  | TOP OF BANK                    |
| FR            | FRAME               | TC  | TOP OF CURB                    |
| FW            | FLOODWAY            | TF  | TOP OF FOUNDATION              |
| HWL           | HIGH WATER LEVEL    | TS  | TOP OF SIDEWALK                |
| INV           | INVERT              | TW  | TOP OF WALK                    |
| L             | LENGTH OF CURVE     | WM  | WATER MAIN                     |
| MH            | MANHOLE             | Δ   | INTERSECTION ANGLE             |

| BENCHMARKS |                                                                                                                                                                                                                                                                                                                                 |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|            | <p><b>NOTE</b><br/>VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988 (12), (NAV88)</p> <p><b>REFERENCE BENCHMARK</b><br/>DURANAIL AT THE NORTHWEST CORNER OF THE NORTHWEST 1/4 SECTION 3, TOWN 5 NORTH, RANGE 15 EAST, ELEV = 825.55</p> <p><b>SITE BENCHMARKS</b><br/>RAILROAD SPIKE IN UTILITY POLE<br/>ELEV = 858.21</p> |

# ONSITE CIVIL ENGINEERING INFRASTRUCTURE PLANS FOR LUTHER PREPARATORY SCHOOL EXPANSION WATERTOWN, WI PLANS PREPARED FOR STRANG 811 EAST WASHINGTON AVE, SUITE 200 MADISON, WI, 53703



| GENERAL NOTES                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO SET FORTH PERFORMANCE AND CONSTRUCTION MATERIAL STANDARDS FOR THE PROPER EXECUTION OF WORK. ALL WORKS CONTAINED WITHIN THE PLANS AND SPECIFICATIONS SHALL BE COMPLETED IN ACCORDANCE WITH ALL REQUIREMENTS FROM LOCAL, STATE, FEDERAL OR OTHER GOVERNING AGENCY'S LAWS, REGULATIONS, JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., AND THE OWNER'S DIRECTION.                                                                                                                                                                                                                                                                                                             | 8. COMMENCEMENT OF CONSTRUCTION SHALL EXPLICITLY CONFIRM THAT THE CONTRACTOR HAS REVIEWED THE PLANS AND SPECIFICATIONS IN ENTIRETY AND CERTIFIES THAT THEIR SUBMITTED BID PROPOSAL CONTAINS PROVISIONS TO COMPLETE THE PROJECT, WITH THE EXCEPTION OF UNFORESEEN FIELD CONDITIONS, ALL APPLICABLE PERMITS HAVE BEEN OBTAINED, AND CONTRACTOR UNDERSTANDS ALL OF THE REQUIREMENTS OF THE PROJECT.                                                                                                       |
| 2. A GEOTECHNICAL REPORT FOR THIS SITE <b>HAS NOT BEEN PREPARED AT THIS TIME</b> . THE DATA ON SUB-SURFACE SOIL CONDITIONS IS NOT INTENDED AS A REPRESENTATION OR WARRANTY OF THE CONTINUITY OF SUCH CONDITIONS BETWEEN BORINGS OR INDICATED SAMPLING LOCATIONS. IT SHALL BE EXPRESSLY UNDERSTOOD THAT OWNER WILL NOT BE RESPONSIBLE FOR ANY INTERPRETATIONS OR CONCLUSIONS DRAWN THERE FROM BY THE CONTRACTOR. DATA IS MADE AVAILABLE FOR THE CONVENIENCE OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ANY ADDITIONAL SOILS INVESTIGATIONS THEY FEEL IS NECESSARY FOR THE PROPER EVALUATION OF THE SITE FOR PURPOSES OF PLANNING, BIDDING, OR CONSTRUCTING THE PROJECT AT NO ADDITIONAL COST TO THE OWNER. | 9. SHOULD ANY DISCREPANCIES OR CONFLICTS IN THE PLANS OR SPECIFICATIONS BE DISCOVERED AFTER THE AWARD OF CONTRACT, ENGINEER SHALL BE NOTIFIED IN WRITING IMMEDIATELY AND CONSTRUCTION OF ITEMS AFFECTED BY THE DISCREPANCIES/CONFLICTS SHALL NOT COMMENCE, OR CONTINUE, UNTIL A WRITTEN RESPONSE FROM ENGINEER/OWNER IS DISTRIBUTED. IN THE EVENT OF A CONFLICT BETWEEN REFERENCED CODES, STANDARDS, SPECIFICATIONS AND PLANS, THE ONE ESTABLISHING THE MOST STRINGENT REQUIREMENTS SHALL BE FOLLOWED. |
| 3. THE CONTRACTOR IS RESPONSIBLE TO REVIEW AND UNDERSTAND ALL COMPONENTS OF THE PLANS AND SPECIFICATIONS, INCLUDING FIELD VERIFYING SOIL CONDITIONS, PRIOR TO SUBMISSION OF A BID PROPOSAL.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 10. THE CONTRACTOR SHALL, AT ITS OWN EXPENSE, OBTAIN ALL NECESSARY PERMITS AND LICENSES TO COMPLETE THE PROJECT. OBTAINING PERMITS, OR DELAYS, IS NOT CAUSE FOR DELAY OF THE CONTRACT OR SCHEDULE. CONTRACTOR SHALL COMPLY WITH ALL PERMIT REQUIREMENTS.                                                                                                                                                                                                                                               |
| 4. THE CONTRACTOR SHALL PROMPTLY REPORT ANY ERRORS OR AMBIGUITIES LEARNED AS PART OF THEIR REVIEW OF PLANS, SPECIFICATIONS, REPORTS AND FIELD INVESTIGATIONS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 11. THE CONTRACTOR SHALL NOTIFY ALL INTERESTED GOVERNING AGENCIES, UTILITY COMPANIES AFFECTED BY THIS CONSTRUCTION PROJECT, AND DIGGERS HOTLINE IN ADVANCE OF CONSTRUCTION TO COMPLY WITH ALL JURISDICTIONAL ORDINANCES/CODES/RULES/ETC., PERMIT STIPULATIONS, AND OTHER APPLICABLE STANDARDS.                                                                                                                                                                                                         |
| 5. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE COMPUTATION OF QUANTITIES AND WORK REQUIRED TO COMPLETE THIS PROJECT. THE CONTRACTOR'S BID SHALL BE BASED ON ITS OWN COMPUTATIONS AND IN NO SUCH INSTANCE RELY ON THE ENGINEER'S ESTIMATE.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 12. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO INITIATE, INSTITUTE, ENFORCE, MAINTAIN, AND SUPERVISE ALL SAFETY PRECAUTIONS AND JOB SITE SAFETY PROGRAMS IN CONNECTION WITH THE WORK.                                                                                                                                                                                                                                                                 |
| 6. QUESTIONS/CLARIFICATIONS WILL BE INTERPRETED BY ENGINEER/OWNER PRIOR TO THE AWARD OF CONTRACT. ENGINEER/OWNER WILL SUBMIT OFFICIAL RESPONSES IN WRITING. INTERPRETATIONS PRESENTED IN OFFICIAL RESPONSES SHALL BE BINDING ON ALL PARTIES ASSOCIATED WITH THE CONTRACT. IN NO WAY SHALL WORD-OF-MOUTH DIALOGS CONSTITUTE AN OFFICIAL RESPONSE.                                                                                                                                                                                                                                                                                                                                                                               | 13. CONTRACTOR SHALL KEEP THE JOBSITE CLEAN AND ORDERLY AT ALL TIMES. ALL LOCATIONS OF THE SITE SHALL BE KEPT IN A WORKING MANNER SUCH THAT DEBRIS IS REMOVED CONTINUOUSLY AND ALL RESPECTIVE CONTRACTORS OPERATE UNDER GENERAL "GOOD HOUSEKEEPING."                                                                                                                                                                                                                                                   |
| 7. PRIOR TO START OF WORK, CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH ALL CONDITIONS OF THE SITE, AND SHALL ACCOUNT FOR CONDITIONS THAT AFFECT, OR MAY AFFECT CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, LIMITATIONS OF WORK ACCESS, SPACE, LIMITATIONS, OVERHEAD OBSTRUCTIONS, TRAFFIC PATTERNS, LOCAL REQUIREMENTS, ADJACENT ACTIVITIES, ETC. FAILURE TO CONSIDER SITE CONDITIONS SHALL NOT BE CAUSE FOR CLAIM OR JOB EXTRAS.                                                                                                                                                                                                                                                                                             | 14. THE CONTRACTOR SHALL INDEMNIFY THE CITY, CITY ENGINEER, CITY BUILDING INSPECTOR, OWNER, ENGINEER, AND THEIR AGENTS FROM ALL LIABILITY INVOLVED WITH THE CONSTRUCTION, INSTALLATION, AND TESTING OF THE WORK ON THIS PROJECT.                                                                                                                                                                                                                                                                       |

| INDEX OF SHEETS |                                       |
|-----------------|---------------------------------------|
| C-1             | COVER SHEET                           |
| C-2             | GENERAL NOTES                         |
| C-3             | EXISTING CONDITIONS & DEMOLITION PLAN |
| C-4             | SITE DIMENSIONAL & PAVING PLAN        |
| C-5             | GRADING PLAN                          |
| C-6             | EROSION CONTROL PLAN                  |
| C-7             | UTILITY PLAN                          |
| C-8             | CONSTRUCTION DETAILS                  |
| C-9             | CONSTRUCTION DETAILS                  |
| L-1             | LANDSCAPE PLAN                        |
| L-2             | LANDSCAPE NOTES & DETAILS             |

| REQUIRED SUBMITTALS FOR APPROVAL |                               |
|----------------------------------|-------------------------------|
| 1.                               | ASPHALT PAVEMENTS             |
| 2.                               | CONCRETE PAVEMENTS (EXTERIOR) |
| 3.                               | STONE BASE COURSE             |
| 4.                               | TRENCH BACKFILL               |
| 5.                               | PIPE BEDDING                  |
| 6.                               | TIE BARS                      |
| 7.                               | DOWEL BARS                    |
| 8.                               | DOWEL BAR BASKETS             |

| REQUIRED SUBMITTALS FOR RECORDS |                                        |
|---------------------------------|----------------------------------------|
| 1.                              | WATER MAIN PIPE FITTINGS               |
| 2.                              | SANITARY SEWER                         |
| 3.                              | STORM SEWER                            |
| 4.                              | SUBGRADE STABILIZATION (IF APPLICABLE) |

| PROJECT TEAM CONTACTS                                                                                                                                                                     |                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>CIVIL ENGINEER:</b><br>MARK SEIDL, P.E.<br>PINNACLE ENGINEERING GROUP<br>20725 WATERTOWN ROAD, SUITE 100<br>BROOKFIELD, WI 53186<br>(262) 754-0888<br>mseidl@pinnacle-engr.com         | <b>ARCHITECT:</b><br>JEFF TREDO<br>TREDOG GROUP<br>507 S. 2ND ST, SUITE 140<br>MILWAUKEE, WI 53204<br>(414) 254-0488<br>jeff.tredo@tredogroup.com |
| <b>SURVEYOR:</b><br>JOHN KONOPACKI, P.L.S.<br>PINNACLE ENGINEERING GROUP<br>20725 WATERTOWN ROAD, SUITE 100<br>BROOKFIELD, WI 53186<br>(262) 754-0888<br>John.Konopacki@pinnacle-engr.com | <b>APPLICANT:</b><br>TIM CRUM<br>STRANG<br>811 EAST WASHINGTON AVE, SUITE 200<br>MADISON, WI 53703<br>(608) 960-7187<br>tcrum@strang-inc.com      |

|                        |            |
|------------------------|------------|
| COPYRIGHT STRANG, INC. | 2025       |
| DRAWING SET            | DD         |
| DATE                   | 08/08/2025 |
| PROJECT NO.            | 2025038    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| PROJECT TITLE<br>LUTHER PREP MUSIC CENTER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |
| EXPIRATION DATE: JULY 31, 2026                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| <br>Toll Free (800) 242-8511<br>Milwaukee Area (414) 259-1181<br>Hearing Impaired TDD (800) 542-2289<br>www.DiggersHotline.com                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| <b>PINNACLE ENGINEERING GROUP, LLC</b><br>ENGINEER'S LIMITATION<br>PINNACLE ENGINEERING GROUP, LLC AND THEIR CONSULTANTS DO NOT WARRANT OR GUARANTEE THE ACCURACY AND COMPLETENESS OF THE DELIVERABLES HEREIN BEYOND A REASONABLE DILIGENCE. IF ANY MISTAKES, OMISSIONS, OR DISCREPANCIES ARE FOUND TO EXIST WITHIN THE DELIVERABLES, THE ENGINEER SHALL BE PROMPTLY NOTIFIED PRIOR TO BID SO THAT HE MAY HAVE THE OPPORTUNITY TO TAKE WHATEVER STEPS NECESSARY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ENGINEER OF SUCH CONDITIONS SHALL ABSOLVE THE ENGINEER FROM ANY RESPONSIBILITY FOR THE CONSEQUENCES OF SUCH FAILURE. ACTIONS TAKEN WITHOUT THE KNOWLEDGE AND CONSENT TO THE ENGINEER, OR IN CONTRADICTION TO THE ENGINEER'S DELIVERABLES OR RECOMMENDATIONS, SHALL BECOME THE RESPONSIBILITY NOT OF THE ENGINEER BUT OF THE PARTIES RESPONSIBLE FOR TAKING SUCH ACTION.<br>FURTHERMORE, PINNACLE ENGINEERING GROUP, LLC IS NOT RESPONSIBLE FOR CONSTRUCTION SAFETY OR THE MEANS AND METHODS OF CONSTRUCTION. |  |

ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI

PINNACLE ENGINEERING GROUP  
PEG: 5834.10 - PROJECT PM: MTS

DESIGN  
DEVELOPMENT SET

NOT FOR  
CONSTRUCTION

SHEET NAME  
COVER SHEET

SHEET NO.

| SITE AND DIMENSIONAL PLAN NOTES |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.                              | ALL DIMENSIONS ARE EDGE OF PAVEMENT, FACE OF CURB, SHOULDER, OR CENTER OF LANE LINE UNLESS NOTED OTHERWISE. ALL UTILITY DIMENSIONS ARE TO OUTSIDE OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.                                                                                                                                                                                                                                                                        |
| 2.                              | ALL PROPOSED CURB AND GUTTER SHALL BE 18" STANDARD CURB AND GUTTER (SEE DETAIL). UNLESS OTHERWISE NOTED, CURB AND GUTTER DRAINING AWAY FROM THE FACE OF CURB IS NOTED AS REVERSE CURB AND GUTTER.                                                                                                                                                                                                                                                                               |
| 3.                              | BUILDING DIMENSIONS AND ADJACENT PARKING AND UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.                                                             |
| 4.                              | THE CONTRACTOR SHALL CONTACT DIGGERS HOTLINE (1-800-242-8511) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.                                                                                                                                                                                                                                                                        |
| 5.                              | IMPROVEMENTS ADJACENT TO BUILDING IF SHOWN, SUCH AS TRUCK DOCK, RETAINING WALLS, SIDEWALKS, CURBING, FENCES, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS, AND TRANSFORMERS ETC., HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS, AND DETAILS.                                                                                                                                                        |
| 6.                              | REFER TO ELECTRICAL PLANS FOR LIGHTING LOCATIONS, SPECIFICATIONS, AND DETAILS.                                                                                                                                                                                                                                                                                                                                                                                                  |
| 7.                              | SEE ADDITIONAL NOTES AND DETAILS ON CONSTRUCTION DETAILS.                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 8.                              | ALL PAVING SHALL CONFORM TO STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY & STRUCTURE CONSTRUCTION, LATEST EDITION AND APPLICABLE CITY OF WATERTOWN ORDINANCES AND SPECIFICATIONS CONTAINED WITHIN THIS PLAN SET.                                                                                                                                                                                                                                                      |
| 9.                              | PAVEMENT DESIGN SHALL BE AS INDICATED ON TEMPLATE EXHIBIT DRAWINGS. TENANTS PAVEMENT DESIGN GUIDELINES, AND PROTOTYPICAL DETAILS PROVIDED. CONTRACTOR SHALL USE WHITE EPOXY STRIPING ON ASPHALT AND YELLOW EPOXY STRIPING ON CONCRETE.                                                                                                                                                                                                                                          |
| 10.                             | PROVIDE CONTRACTOR GRADE ACRYLIC, STRIPING EPOXY FOR NEW ASPHALT OR COATED ASPHALT. APPLY MARKING EPOXY AT A RATE OF ONE (1) GALLON PER THREE TO FOUR HUNDRED (300-400) LINEAL FEET OF FOUR (4) INCH WIDE STRIPES OR TO MANUFACTURER'S SPECIFICATION, WHICHEVER IS GREATER.                                                                                                                                                                                                     |
| 11.                             | THOROUGHLY CLEAN SURFACES FREE OF DIRT, SAND, GRAVEL, OIL AND OTHER FOREIGN MATTER. CONTRACTOR RESPONSIBLE TO INSPECT EXISTING PAVEMENT SURFACES FOR CONDITIONS AND DEFECTS THAT WILL ADVERSELY AFFECT QUALITY OF WORK, AND WHICH CANNOT BE PUT INTO AN ACCEPTABLE CONDITION THROUGH NORMAL PREPARATORY WORK AS SPECIFIED.                                                                                                                                                      |
| 12.                             | DO NOT PLACE MARKING OVER UNSOUND PAVEMENTS. IF THESE CONDITIONS EXIST, NOTIFY OWNER. STARTING INSTALLATION CONSTITUTES CONTRACTOR'S ACCEPTANCE OF SURFACE AS SUITABLE FOR INSTALLATION.                                                                                                                                                                                                                                                                                        |
| 13.                             | LAYOUT MARKINGS USING GUIDE LINES, TEMPLATES AND FORMS, STENCILS AND TEMPLATES SHALL BE PROFESSIONALLY MADE TO INDUSTRY STANDARDS. "TREE HAND" PAINTING OF ARROWS, SYMBOLS, OR WORDING SHALL NOT BE ALLOWED. APPLY STRIPES STRAIGHT AND EVEN.                                                                                                                                                                                                                                   |
| 14.                             | PROTECT ADJACENT CURBS, WALKS, FENCES, AND OTHER ITEMS FROM RECEIVING PAINT.                                                                                                                                                                                                                                                                                                                                                                                                    |
| 15.                             | BARRICADE MARKED AREAS DURING INSTALLATION AND UNTIL THE MARKING PAINT IS DRIED AND READY FOR TRAFFIC.                                                                                                                                                                                                                                                                                                                                                                          |
| 16.                             | ASPHALTIC CONCRETE PAVING SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 16.1.                           | CODICES AND STANDARDS: THE PLACING, CONSTRUCTION AND COMPOSITION OF THE ASPHALTIC BASE COURSE AND ASPHALTIC CONCRETE SURFACING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTIONS 450, 455, 460 AND 465 OF THE STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, LATEST EDITION. HEREAFTER THIS PUBLICATION WILL BE REFERRED TO AS THE STATE HIGHWAY SPECIFICATIONS.                                                                     |
| 16.2.                           | WEATHER LIMITATIONS: APPLY TACK COATS WHEN AMBIENT TEMPERATURE IS ABOVE 50° F (10° C) AND WHEN TEMPERATURE HAS NOT BEEN BELOW 35°F (1° C) FOR 12 HOURS IMMEDIATELY PRIOR TO APPLICATION. DO NOT APPLY WHEN BASE IS WET OR CONTAINS EXCESS OF MOISTURE. CONSTRUCT ASPHALTIC CONCRETE SURFACE COURSE WHEN ATMOSPHERIC TEMPERATURE IS ABOVE 40°F (4° C) AND WHEN BASE IS DRY AND WHEN WEATHER IS NOT RAINY. BASE COURSE MAY BE PLACED WHEN AIR TEMPERATURE IS ABOVE 30° F (-1° C). |
| 16.3.                           | GRADE CONTROL: ESTABLISH AND MAINTAIN REQUIRED LINES AND ELEVATIONS FOR EACH COURSE DURING CONSTRUCTION.                                                                                                                                                                                                                                                                                                                                                                        |
| 16.4.                           | CRUSHED AGGREGATE BASE COURSE: THE TOP LAYER OF BASE COURSE SHALL CONFORM TO SECTIONS 301 AND 305, STATE HIGHWAY SPECIFICATIONS.                                                                                                                                                                                                                                                                                                                                                |
| 16.5.                           | BINDER COURSE AGGREGATE: THE AGGREGATE FOR THE BINDER COURSE SHALL CONFORM TO SECTIONS 460.2.7 AND 315, STATE HIGHWAY SPECIFICATIONS.                                                                                                                                                                                                                                                                                                                                           |
| 16.6.                           | SURFACE COURSE AGGREGATE: THE AGGREGATE FOR THE SURFACE COURSE SHALL CONFORM TO SECTIONS 460.2.7 AND 465, STATE HIGHWAY SPECIFICATIONS.                                                                                                                                                                                                                                                                                                                                         |
| 16.7.                           | ASPHALTIC MATERIALS: THE ASPHALTIC MATERIALS SHALL CONFORM TO SECTION 455 AND 460, STATE HIGHWAY SPECIFICATIONS.                                                                                                                                                                                                                                                                                                                                                                |
| 16.8.                           | SURFACE PREPARATION: NOTIFY CONTRACTOR OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.                                                                                                                                                                                                                                                                                                |
| 17.                             | TRAFFIC CONTROL SHALL BE PER M.U.T.C.D.                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 18.                             | PUBLIC CURB & GUTTER REPLACEMENT SHALL BE TIED TO EXISTING CURB & GUTTER WITH #4 TIE BARS. PUBLIC CURB & GUTTER SHALL BE A 6-BAG MIX.                                                                                                                                                                                                                                                                                                                                           |
| 19.                             | TIE BARS: PLACE AT ALL LONGITUDINAL JOINTS IN ENTRANCE AREAS/ROADS PER WISDOT 13C01. PLACE IN CURB AND GUTTER PER WISDOT 8D01.                                                                                                                                                                                                                                                                                                                                                  |

| GRADING NOTES |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.            | CONTRACTOR SHALL VERIFY ALL GRADES, ENSURE ALL AREAS DRAIN PROPERLY AND REPORT ANY DISCREPANCIES TO PINNACLE ENGINEERING GROUP PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 2.            | ALL EXISTING CONTOURS REPRESENT EXISTING SURFACE GRADES UNLESS OTHERWISE NOTED. ALL PROPOSED GRADES SHOWN ARE FINISH SURFACE GRADES UNLESS OTHERWISE NOTED.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3.            | SPOT ELEVATIONS REPRESENT THE GRADE ALONG THE CURB AND GUTTER FLANGELINE UNLESS OTHERWISE NOTED.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4.            | ALL EXCAVATIONS AND MATERIAL PLACEMENT SHALL BE COMPLETED TO DESIGN ELEVATIONS AS DEPICTED IN THE PLANS.<br>4.1. CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE COMPUTATION(S) OF ALL GRADING QUANTITIES. WHILE PEG ATTEMPTS TO PROVIDE A COST EFFECTIVE APPROACH TO BALANCE EARTHWORK, GRADING DESIGN IS BASED ON MANY FACTORS, INCLUDING SAFETY, AESTHETICS, AND COMMON ENGINEERING STANDARD OF CARE. THEREFORE NO GUARANTEE CAN BE MADE FOR A BALANCED SITE. THE CONTRACTOR MAY SOLICIT APPROVAL FROM ENGINEER/OWNER TO ADJUST FINAL GRADES FROM DESIGN GRADES TO PROVIDE AN OVERALL SITE BALANCE AS A RESULT OF FIELD CONDITIONS. |
| 5.            | GRADING ACTIVITIES SHALL BE IN A MANNER TO ALLOW POSITIVE DRAINAGE ACROSS DISTURBED SOILS, WHICH MAY INCLUDE EXCAVATION OF TEMPORARY DITCHES TO PREVENT PONDING, AND IF NECESSARY PUMPING TO ALEVATE PONDING. CONTRACTOR SHALL PREVENT SURFACE WATER FROM ENTERING INTO EXCAVATIONS. IN NO WAY SHALL OWNER BE RESPONSIBLE FOR REMEDIATION OF UNSUITABLE SOILS CREATED/ORIGINATED AS A RESULT OF IMPROPER SITE GRADING OR SEQUENCING. CONTRACTOR SHALL SEQUENCE GRADING ACTIVITIES TO LIMIT EXPOSURE OF DISTURBED SOILS DUE TO WEATHER.                                                                                                     |
| 6.            | THE CONTRACTOR IS RESPONSIBLE FOR MEETING MINIMUM COMPACTION STANDARDS. THE CONTRACTOR SHALL NOTIFY ENGINEER/OWNER IF PROPER COMPACTION CANNOT BE OBTAINED. THE PROJECT'S GEOTECHNICAL CONSULTANT SHALL DETERMINE WHICH IN-SITU SOILS ARE TO BE CONSIDERED UNSUITABLE SOILS. THE ENGINEER/OWNER AND GEOTECHNICAL TESTING CONSULTANT WILL DETERMINE IF REMEDIAL MEASURES WILL BE NECESSARY.                                                                                                                                                                                                                                                 |
| 7.            | IN THE EVENT THAT ANY MOISTURE-DENSITY TEST(S) FAIL TO MEET SPECIFICATION REQUIREMENTS, THE CONTRACTOR SHALL PERFORM CORRECTIVE WORK AS NECESSARY TO BRING THE MATERIAL INTO COMPLIANCE AND RETEST THE FAILED AREA AT NO COST TO THE OWNER.                                                                                                                                                                                                                                                                                                                                                                                                |
| 8.            | WITH THE AUTHORIZATION OF THE ENGINEER/OWNER, MATERIAL THAT IS TOO WET TO PERMIT PROPER COMPACTION MAY BE SPREAD ON FILL AREAS IN AN EFFORT TO DRY. CONTRACTOR SHALL CLEARLY FIELD MARK THE EXTERIOR LIMITS OF SPREAD MATERIAL WITH PAINTED LATH AND SUBMIT A PLAN TO THE ENGINEER/OWNER THAT IDENTIFIES THE LIMITS. UNDER NO CONDITION SHALL THE SPREAD MATERIAL DEPTH EXCEED THE MOST RESTRICTIVE OF: THE EFFECTIVE TREATMENT DEPTH OF MACHINERY THAT WILL BE USED TO TURNOVER THE SPREAD MATERIAL; OR THE MAXIMUM COMPACTION LIFT DEPTH.                                                                                                |
| 9.            | THE CONTRACTOR SHALL IMMEDIATELY NOTIFY ENGINEER/OWNER IF GROUNDWATER IS ENCOUNTERED DURING EXCAVATION. CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ADEQUATE AND SAFE TEMPORARY SHORING, BRACING, RETENTION STRUCTURES, AND EXCAVATIONS.                                                                                                                                                                                                                                                                                                                                                                           |
| 10.           | THE SITE SHALL BE COMPLETED TO WITHIN 0.10-FT (+/-) OF THE PROPOSED GRADES AS INDICATED WITHIN THE PLANS PRIOR TO PLACEMENT OF TOPSOIL OR STONE. CONTRACTOR IS ENCOURAGED TO SEQUENCE CONSTRUCTION SUCH THAT THE SITE IS DIVIDED INTO SMALLER AREAS TO ALLOW STABILIZATION OF DISTURBED SOILS IMMEDIATELY UPON COMPLETION OF INDIVIDUAL SMALLER AREAS.                                                                                                                                                                                                                                                                                     |
| 11.           | CONTRACTOR SHALL CONTACT "DIGGERS HOTLINE" FOR LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES AND SHALL BE RESPONSIBLE FOR PROTECTING SAID UTILITIES FROM ANY DAMAGE DURING CONSTRUCTION.                                                                                                                                                                                                                                                                                                                                                                                                        |
| 12.           | CONTRACTOR SHALL PROTECT INLETS AND ADJACENT PROPERTIES WITH SILT FENCING OR APPROVED EROSION CONTROL METHODS UNTIL CONSTRUCTION IS COMPLETED. CONTRACTOR SHALL PLACE SILT FENCING AT DOWN SLOPE SIDE OF GRADING LIMITS.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 13.           | CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING FACILITIES OR UTILITIES. ANY DAMAGE SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE EXPENSE OF THE CONTRACTOR.                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 14.           | WORK WITHIN ANY ROADWAY RIGHT-OF-WAY SHALL BE COORDINATED WITH THE APPROPRIATE MUNICIPAL OFFICIALS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FEES. GRADING WITHIN RIGHT-OF-WAY IS SUBJECT TO APPROVAL BY SAID OFFICIALS. RESTORATION OF RIGHT-OF-WAY IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE COST OF GRADING. RESTORATION SHALL INCLUDE ALL ITEMS NECESSARY TO RESTORE RIGHT-OF-WAY IN-KIND INCLUDING LANDSCAPING.                                                                                                                       |
| 15.           | CONTRACTOR SHALL COMPLY WITH ALL CITY OF WATERTOWN CONSTRUCTION STANDARDS/ORDINANCES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 16.           | LANDSCAPE AND TURF AREAS SHALL HAVE A MINIMUM OF 4-INCH TOPSOIL REPLACEMENT, UNLESS OTHERWISE SPECIFIED ON THE LANDSCAPE PLANS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 17.           | TOPSOIL BERMING SHALL ACHIEVE 90% STANDARD PROCTOR DENSITY AT 3%(+/-) OPTIMUM MOISTURE CONTENT.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 18.           | SURVEY BENCHMARKS AND MAPPING HAS BEEN PROVIDED BY PINNACLE ENGINEERING GROUP. IN NO WAY DOES PEG WARRANT THE BASEMAP IS ALL INCLUSIVE OR REPRESENTATIVE OF ACTUAL CONDITIONS. CONTRACTOR SHALL PROVIDE CHECKS AS NECESSARY TO VERIFY THE BASEMAP CONTENT AND ACCURACY.                                                                                                                                                                                                                                                                                                                                                                    |

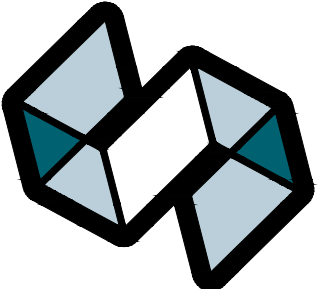
| GENERAL UTILITY NOTES |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.                    | EXISTING UTILITIES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE TYPE, LOCATION, SIZE AND ELEVATION OF UNDERGROUND UTILITIES AS THEY DEEM NECESSARY FOR PROPOSED UTILITY CONNECTIONS AND/OR TO AVOID DAMAGE THERETO. CONTRACTOR SHALL CALL "DIGGERS HOTLINE" PRIOR TO ANY CONSTRUCTION.                                                                                                                                                    |
| 2.                    | ALL UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (LATEST EDITION AND ADDENDUM) AND ALL STATE AND LOCAL CODES AND SPECIFICATIONS. IT IS THE CONTRACTORS RESPONSIBILITY TO DETERMINE WHICH SPECIFICATIONS AND CODES APPLY AND TO COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE APPROPRIATE LOCAL AND STATE AUTHORITIES.                                                                                                                                         |
| 3.                    | UTILITY CONSTRUCTION AND SPECIFICATIONS SHALL COMPLY WITH THE CITY OF WATERTOWN STANDARDS AND SPECIFICATIONS AND WISCONSIN DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES SPS 382.                                                                                                                                                                                                                                                                                                                                                         |
| 4.                    | LENGTHS OF PROPOSED UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS ARE SHOWN FOR CONTRACTOR CONVENIENCE ONLY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPUTATIONS OF MATERIALS REQUIRED TO COMPLETE WORK. LENGTHS SHALL BE FIELD VERIFIED DURING CONSTRUCTION.                                                                                                                                                                                                                                   |
| 5.                    | CONTRACTOR SHALL ADJUST AND/OR RECONSTRUCT EXISTING UTILITY COVERS (SUCH AS MANHOLE COVERS, VALVE BOX COVERS, ETC.) TO MATCH FINISHED GRADES OF THE AREAS DISTURBED DURING CONSTRUCTION.                                                                                                                                                                                                                                                                                                                                                   |
| 6.                    | CONTRACTOR SHALL FIELD VERIFY LOCATIONS, ELEVATIONS, AND SIZES OF PROPOSED UTILITIES AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS PRIOR TO ATTEMPTING CONNECTIONS AND BEGINNING UTILITY CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.                                                                                                                                                                                                                                                                              |
| 7.                    | ALL NEW ON-SITE SANITARY, STORM AND WATER UTILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE PROPERTY OWNER, EXCEPT FOR THOSE UTILITIES IDENTIFIED AS PUBLIC.                                                                                                                                                                                                                                                                                                                                                                        |
| 8.                    | THE CONTRACTOR SHALL CONTACT THE CITY OF WATERTOWN PUBLIC WORKS DEPARTMENT 48-HOURS IN ADVANCE OF SANITARY, WATER AND STORM CONNECTIONS TO THE CITY-OWNED SYSTEM TO SCHEDULE INSPECTIONS.                                                                                                                                                                                                                                                                                                                                                  |
| 9.                    | ROUTING OF GAS, ELECTRIC AND TELEPHONE SERVICES ARE SHOWN ON THE ARCHITECTURAL PLANS AND SUBJECT TO CHANGE BASED UPON FINAL REVIEW AND APPROVAL BY RESPECTIVE UTILITY COMPANIES AND OWNER. CONTRACTOR SHALL CONTACT EACH UTILITY COMPANY AND COORDINATE FINAL LOCATIONS FOR ALL UTILITY SERVICES PRIOR TO START OF CONSTRUCTION.                                                                                                                                                                                                           |
| 10.                   | IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE PROPER AUTHORITIES FOR ANY REQUIRED PERMITS, AUTHORIZATIONS, TRAFFIC CONTROL AND ANY PERMIT FEES REQUIRED.                                                                                                                                                                                                                                                                                                                                                                    |
| 11.                   | FIELD TILE CONNECTION - ALL FIELD TILE ENCOUNTERED DURING CONSTRUCTION SHALL BE INCLUDED IN THE UNIT PRICE(S) FOR STORM SEWER. TILE LINES CROSSED BY THE TRENCH SHALL BE REPLACED WITH THE SAME MATERIAL AS THE STORM SEWER.                                                                                                                                                                                                                                                                                                               |
| 12.                   | THE CONTRACTOR IS RESPONSIBLE FOR THE SIZE, TYPE AND NUMBER OF WATER MAIN BENDS, HORIZONTAL AND VERTICAL, REQUIRED TO COMPLETE CONSTRUCTION. COST FOR BENDS, HORIZONTAL AND VERTICAL, SHALL BE INCIDENTAL AND INCLUDED IN THE OVERALL COST OF THE CONTRACT.                                                                                                                                                                                                                                                                                |
| 13.                   | TRACER WIRE, COPPERHEAD TRACER WIRE #10 SOLID CCS SUPERFLEX (BLUE). WIRE CONNECTORS SHALL BE SNAKEBITE (BLUE) MADE BY COPPERHEAD INDUSTRIES, LLC. THE TRACER WIRE FOR THE SANITARY SEWER LATERAL (GREEN) SHALL BE CONTINUOUS AND SHALL BE EXTENDED ABOVE GRADE VIA A 4-INCH PVC PIPE WITH SCREW-ON CAP ADJACENT TO THE PROPOSED TERMINATION POINT OF THE LATERAL FOR THE PROPOSED BUILDING. TRACER WIRE FOR WATER MAIN SHALL BE INSTALLED WITH #12-GAUGE TRACER WIRE AND SHALL TERMINATE IN TRACER WIRE ACCESS BOXES AT ALL FIRE HYDRANTS. |
| 14.                   | WATER MAIN AND SANITARY SEWER SHALL BE INSULATED WHEREVER THE DEPTH OF COVER IS LESS THAN 6.5 FEET. INSULATION AND PLACING OF INSULATION SHALL CONFORM TO CHAPTER 4.17.0 "INSULATION" OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN 6TH EDITION UPDATED WITH ITS LATEST ADDENDUM (TYP.).                                                                                                                                                                                                                    |
| 15.                   | SEE UTILITY PLANS AND CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

| STORM SEWER NOTES |                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.                | PIPE - REINFORCED CONCRETE PIPE (RCP) SHALL MEET THE REQUIREMENTS OF ASTM CLASS C-76 WITH RUBBER GASKET JOINTS CONFORMING TO ASTM C-443. STRENGTH CLASSIFICATIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING:<br>HEIGHT OF COVER (FEET):                    0-2   2-3   3-6   6-15   15-25   25+<br>MINIMUM CONCRETE PIPE CLASSIFICATION:   IV   III   II   III   IV   ENGINEER TO SPECIFY |
| 2.                | HIGH DENSITY DUAL-WALL POLYETHYLENE N-12 CORRUGATED PIPE (HDPE) SHALL BE AS MANUFACTURED BY ADS OR EQUAL WITH WATER TIGHT JOINTS, AND SHALL MEET THE REQUIREMENTS OF AASHTO DESIGNATION M-294 TYPE "S", OR POLYVINYL CHLORIDE (PVC) - CLASS PS46 MEETING AASHTO M278, AS NOTED.                                                                                                           |
| 3.                | INLETS - INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH FILE NO. 25 OF THE "STANDARD SPECIFICATIONS" WITH A 1'-8" X 2'-6" MAXIMUM OPENING. SEE CONSTRUCTION DETAILS FOR FRAME AND GRATE TYPES. STRUCTURE SHOP DRAWINGS SHALL BE SUBMITTED TO PINNACLE ENGINEERING GROUP FOR REVIEW AND APPROVAL PRIOR TO MANUFACTURING AND INSTALLATION.                                                  |
| 4.                | BACKFILL AND BEDDING - STORM SEWER SHALL BE CONSTRUCTED WITH GRAVEL BACKFILL AND CLASS "B" BEDDING IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL.                                                                                                  |
| 5.                | SLURRY BACKFILL UNDER PUBLIC ROAD PAVEMENT. SLURRY LIMITS: FROM TOP OF COVER STONE TO PAVEMENT. SLURRY TO BE 1-BAG PORTLAND MIX.                                                                                                                                                                                                                                                          |
| 6.                | LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS".                                                                                                                                                                                                                                                           |
| 7.                | MANHOLE FRAMES AND COVERS - SEE CONSTRUCTION DETAILS.                                                                                                                                                                                                                                                                                                                                     |
| 8.                | TRACER WIRE SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THESE CODE SECTIONS AS PER 182.0715(2R) OF THE STATUTES.                                                                                                                                                                                                                                                              |

| WATER MAIN NOTES |                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.               | PIPE - WATER MAIN SHALL BE POLYVINYL CHLORIDE (PVC) PIPE MEETING THE REQUIREMENTS OF AWWA STANDARD C-900, CLASS 235, DR-18, WITH CAST IRON O.D. AND INTEGRAL ELASTOMERIC BELL AND SPIGOT JOINTS.                                                                                                                                                                                                                           |
| 2.               | VALVES AND VALVE BOXES - GATE VALVES SHALL BE AWWA GATE VALVES MEETING THE REQUIREMENTS OF AWWA C-500 AND CHAPTER 8.27.0 OF THE "STANDARD SPECIFICATIONS". GATE VALVES AND VALVE BOXES SHALL CONFORM TO LOCAL PLUMBING ORDINANCES.                                                                                                                                                                                         |
| 3.               | HYDRANTS - HYDRANTS SHALL CONFORM TO THE CITY OF WATERTOWN STANDARDS AND SPECIFICATIONS AND IN ACCORDANCE WITH FILE NO. 38 OF THE "STANDARD SPECIFICATIONS." THE DISTANCE FROM THE GROUND LINE TO THE CENTERLINE OF THE LOWEST NOZZLE AND THE LOWEST CONNECTION OF THE FIRE DEPARTMENT SHALL BE NO LESS THAN 18-INCHES AND NO GREATER THAN 24-INCHES. HYDRANT MANUFACTURER: WATERIOUS PACER WITH WATER SERIES 2500 VALVES. |
| 4.               | BEDDING AND COVER MATERIAL - PIPE BEDDING AND COVER MATERIAL SHALL BE SAND, CRUSHED STONE CHIPS OR CRUSHED STONE SCREENINGS CONFORMING TO CHAPTER 8.43.2 OF THE "STANDARD SPECIFICATIONS".                                                                                                                                                                                                                                 |
| 5.               | ALL DUCTILE FITTINGS, VALVES, AND VALVE BOXES SHALL CONFORM WITH ALL CITY OF WATERTOWN STANDARD SPECIFICATIONS FOR DEVELOPMENT AND SHALL BE TRIPLE WRAPPED AND SECURELY TAPED AROUND WITH POLYETHYLENE AS SPECIFIED IN CHAPTER 4.4.4 AND 8.21.0 OF THE "STANDARD SPECIFICATIONS".                                                                                                                                          |
| 6.               | BACKFILL - BACKFILL MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE WITH CHAPTER 2.6.0 OF THE "STANDARD SPECIFICATIONS".                                                                                                                                                                                                                                                                                                  |
| 7.               | GRAVEL BACKFILL IS REQUIRED IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL.                                                                                                                                                                                                          |
| 8.               | SLURRY BACKFILL UNDER PUBLIC ROAD PAVEMENT. SLURRY LIMITS: FROM TOP OF COVER STONE TO PAVEMENT. SLURRY TO BE 1-BAG PORTLAND MIX.                                                                                                                                                                                                                                                                                           |
| 9.               | LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS".                                                                                                                                                                                                                                                                                            |

| EROSION & SEDIMENT CONTROL NOTES |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.                               | ALL CONSTRUCTION SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN EPA'S NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER GENERAL PERMIT ("WPDES" PERMIT NO. WI-S067831-4) FOR CONSTRUCTION SITE LAND DISTURBANCE ACTIVITIES. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL TECHNICAL STANDARDS AND PROVISIONS IN EFFECT AT THE TIME OF CONSTRUCTION. THESE PROCEDURES AND STANDARDS SHALL BE REFERRED TO AS BEST MANAGEMENT PRACTICES (BMPs). IT IS THE RESPONSIBILITY OF ALL CONTRACTORS ASSOCIATED WITH THE PROJECT TO OBTAIN A COPY OF, AND UNDERSTAND, THE BMP'S PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. |
| 2.                               | THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL CONTROL MEASURES AS DIRECTED BY OWNER/ENGINEER OR GOVERNING AGENCIES SHALL BE INSTALLED WITHIN 24 HOURS OF REQUEST.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3.                               | MODIFICATIONS TO THE APPROVED SWPPP IN ORDER TO MEET UNFORESEEN FIELD CONDITIONS ARE ALLOWED IF MODIFICATIONS CONFORM TO BMP'S. ALL MODIFICATIONS MUST BE APPROVED BY OWNER/ENGINEER/GOVERNING AGENCY PRIOR TO DEVIATION OF THE APPROVED PLAN.                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4.                               | INSTALL PERIMETER EROSION CONTROL MEASURES (SUCH AS CONSTRUCTION ENTRANCES, SILT FENCE AND EXISTING INLET PROTECTION) PRIOR TO ANY SITE WORK, INCLUDING GRADING OR DISTURBANCE OF EXISTING SURFACE COVER, AS SHOWN ON PLAN IN ORDER TO PROTECT ADJACENT PROPERTIES/STORM SEWER SYSTEMS FROM SEDIMENT TRANSPORT.                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5.                               | CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT ALL LOCATIONS OF VEHICLE INGRESSEGRESS POINTS. CONTRACTOR IS RESPONSIBLE TO COORDINATE LOCATIONS) WITH THE PROPER AUTHORITIES, PROVIDE NECESSARY FEES AND OBTAIN ALL REQUIRED APPROVALS OR PERMITS. ADDITIONAL CONSTRUCTION ENTRANCES OTHER THAN AS SHOWN ON THE PLANS MUST BE APPROVED BY THE APPLICABLE GOVERNING AGENCIES PRIOR TO INSTALLATION.                                                                                                                                                                                                                                                                                                                |
| 6.                               | PAVED SURFACES ADJACENT TO CONSTRUCTION ENTRANCES SHALL BE SWEEP AND/OR SCRAPED TO REMOVE ACCUMULATED SOIL, DIRT AND/OR DUST IMMEDIATELY AND AS REQUESTED BY THE GOVERNING AGENCIES.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 7.                               | ALL EXISTING STORM SEWER FACILITIES THAT WILL COLLECT RUNOFF FROM DISTURBED AREAS SHALL BE PROTECTED TO TO PREVENT SEDIMENT DEPOSITION WITHIN STORM SEWER SYSTEMS. INLET PROTECTION SHALL BE IMMEDIATELY FITTED AT THE INLET OF ALL INSTALLED STORM SEWER AND SILT FENCE SHALL BE IMMEDIATELY FITTED AT ALL INSTALLED CULVERT INLETS . ALL INLETS, STRUCTURES, PIPES, AND SWALES SHALL BE KEPT CLEAN AND FREE OF SEDIMENTATION AND DEBRIS.                                                                                                                                                                                                                                                                      |
| 8.                               | EROSION CONTROL FOR UTILITY CONSTRUCTION (STORM SEWER, WATER MAIN, ETC.) OUTSIDE OF THE PERIMETER CONTROLS SHALL INCORPORATE THE FOLLOWING:<br>8.1. PLACE EXCAVATED TRENCH MATERIAL ON THE HIGH SIDE OF THE TRENCH.<br>8.2. BACKFILL, COMPACT AND STABILIZE THE TRENCH IMMEDIATELY AFTER PIPE CONSTRUCTION.<br>8.3. DISCHARGE TRENCH WATER INTO A SEDIMENTATION BASIN OR FILTERING TANK IN ACCORDANCE WITH BMP'S PRIOR TO RELEASE INTO STORM SEWER OR DITCHES.                                                                                                                                                                                                                                                  |
| 9.                               | AT A MINIMUM, SEDIMENT BASINS AND NECESSARY TEMPORARY DRAINAGE PROVISIONS SHALL BE CONSTRUCTED AND OPERATIONAL BEFORE BEGINNING OF SIGNIFICANT MASS GRADING OPERATIONS TO PREVENT OFFSITE DISCHARGE OF UNTREATED RUNOFF.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 10.                              | ALL WATERCOURSES AND WETLANDS SHALL BE PROTECTED WITH SILT FENCE TO PREVENT ANY DIRECT DISCHARGE FROM DISTURBED SOILS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

| SANITARY SEWER NOTES |                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.                   | PIPE - SANITARY SEWER PIPE MATERIAL SHALL BE POLYVINYL CHLORIDE (PVC) MEETING REQUIREMENTS OF ASTM D-3034, SDR-35 (UP TO 15' OF COVER) & SDR-26 (GREATER THAN 15'), WITH INTEGRAL BELL TYPE FLEXIBLE ELASTOMERIC JOINTS, MEETING THE REQUIREMENTS OF ASTM D-3212.                                                                                                    |
| 2.                   | BEDDING AND COVER MATERIAL - BEDDING AND COVER MATERIAL SHALL CONFORM TO THE APPROPRIATE SECTIONS OF THE "STANDARD SPECIFICATION" WITH THE FOLLOWING MODIFICATION: "COVER MATERIAL SHALL BE THE SAME AS USED FOR BEDDING AND SHALL CONFORM TO SECTION 8.43.2 (A).                                                                                                    |
| 3.                   | BEDDING AND COVER MATERIAL SHALL BE PLACED IN A MINIMUM OF THREE SEPARATE LIFTS, OR AS REQUIRED TO INSURE ADEQUATE COMPACTING OF THESE MATERIALS, WITH ONE LIFT OF BEDDING MATERIAL ENDING AT OR NEAR THE SPRINGLINE OF THE PIPE. THE CONTRACTOR SHALL TAKE CARE TO COMPLETELY WORK BEDDING MATERIAL UNDER THE HAUNCH OF THE PIPE TO PROVIDE ADEQUATE SIDE SUPPORT." |
| 4.                   | BACKFILL - BACKFILL MATERIAL AND INSTALLATION SHALL BE IN ACCORDANCE CHAPTER 2.6.0 OF THE "STANDARD SPECIFICATIONS."                                                                                                                                                                                                                                                 |
| 5.                   | SLURRY BACKFILL UNDER PUBLIC ROAD PAVEMENT. SLURRY LIMITS: FROM TOP OF COVER STONE TO PAVEMENT. SLURRY TO BE 1-BAG PORTLAND MIX.                                                                                                                                                                                                                                     |
| 6.                   | GRAVEL BACKFILL IS REQUIRED IN ALL PAVED AREAS AND TO A POINT 5 FEET BEYOND THE EDGE OF PAVEMENT. TRENCHES RUNNING PARALLEL TO AND LESS THAN 5 FEET FROM THE EDGE OF PAVEMENT SHALL ALSO REQUIRE GRAVEL BACKFILL.                                                                                                                                                    |
| 7.                   | LANDSCAPED AREAS MAY BE BACKFILLED WITH EXCAVATED MATERIAL IN CONFORMANCE WITH SECTION 8.43.5 OF THE "STANDARD SPECIFICATIONS".                                                                                                                                                                                                                                      |
| 8.                   | MANHOLES - MANHOLES SHALL BE CONSTRUCTED IN ACCORDANCE WITH FILE NOS. 12, 13 AND 15 OF THE "STANDARD SPECIFICATIONS" AND ALL STANDARDS AND SPECIFICATIONS OF THE CITY OF WATERTOWN. STRUCTURE SHOP DRAWINGS SHALL BE SUBMITTED TO PINNACLE ENGINEERING GROUP FOR REVIEW AND APPROVAL PRIOR TO MANUFACTURING AND INSTALLATION.                                        |
| 9.                   | MANHOLE FRAMES AND COVERS - MANHOLE FRAMES AND COVERS SHALL BE NEENAH R-1661.                                                                                                                                                                                                                                                                                        |



**STRANG**

ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



tredogroup



PINNACLE ENGINEERING GROUP  
PEG: 5834.10 - PROJECT PM-MTS

DESIGN  
DEVELOPMENT SET

NOT FOR  
CONSTRUCTION

|                        |            |
|------------------------|------------|
| COPYRIGHT STRANG, INC. | 2025       |
| DRAWING SET            | DD         |
| DATE                   | 08/08/2025 |
| PROJECT NO.            | 2025038    |

PROJECT TITLE

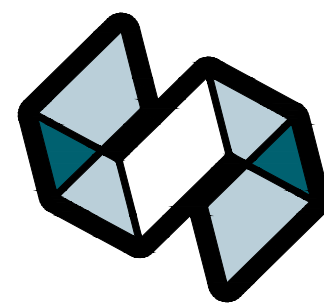
LUTHER PREP MUSIC  
CENTER

1300 WESTERN AVE  
WATERTOWN, WI 53094

SHEET NAME

GENERAL NOTES

SHEET NO.



STRANG

ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



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DESIGN  
DEVELOPMENT SET

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CONSTRUCTION

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DATE 08/08/2025

PROJECT NO. 2025038

PROJECT TITLE

LUTHER PREP MUSIC  
CENTER

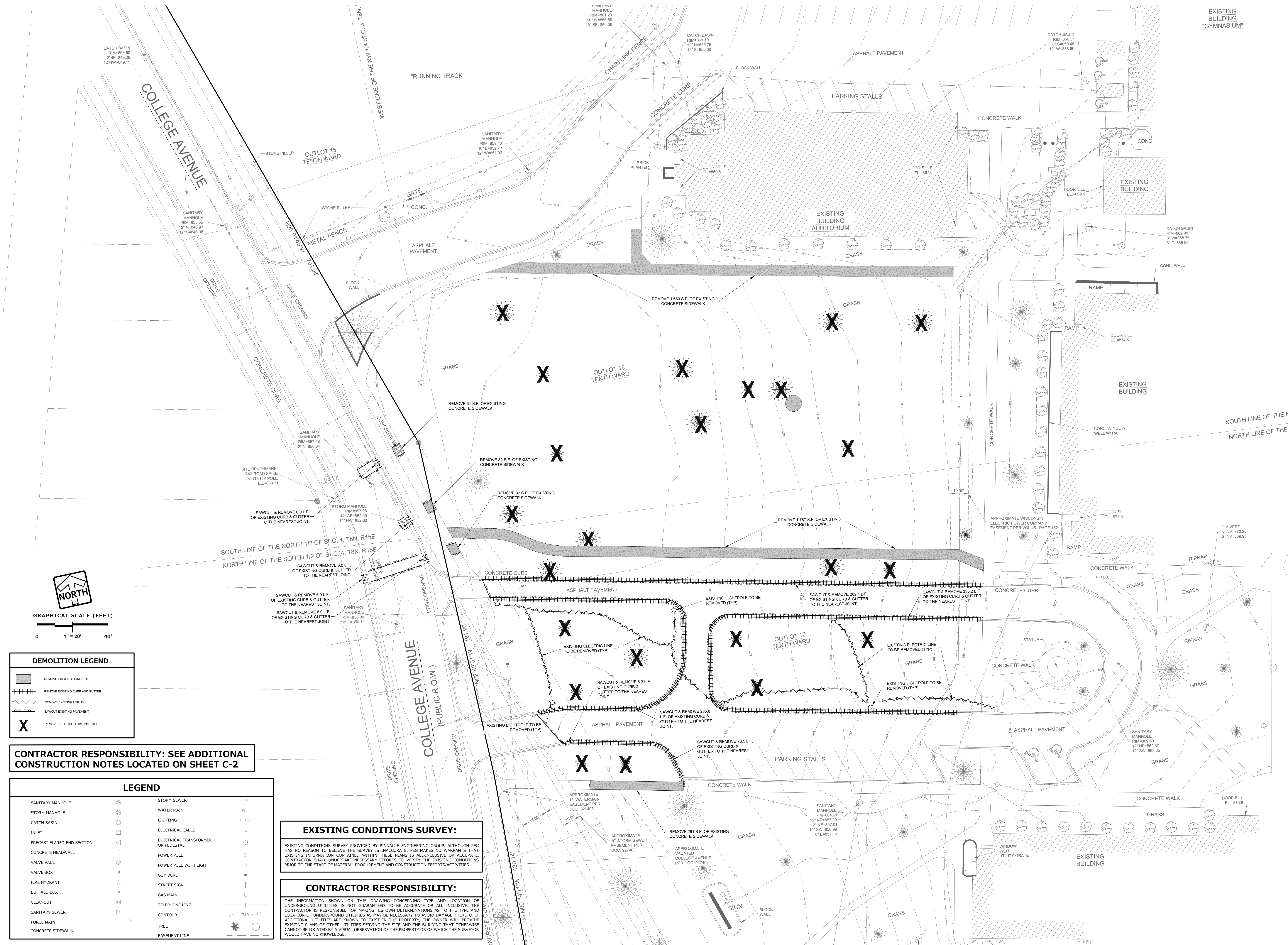
1300 WESTERN AVE  
WATERTOWN, WI 53094

SHEET NAME

EXISTING CONDITIONS  
& DEMOLITION PLAN

SHEET NO.

C-3



GRAPHICAL SCALE (FEET)

0 1" = 20' 40'

DEMOLITION LEGEND

|  |                                 |
|--|---------------------------------|
|  | REMOVE EXISTING CONCRETE        |
|  | REMOVE EXISTING CURB AND GUTTER |
|  | REMOVE EXISTING UTILITY         |
|  | SAWCUT EXISTING PAVEMENT        |
|  | REMOVE/RELOCATE EXISTING TREE   |

CONTRACTOR RESPONSIBILITY: SEE ADDITIONAL  
CONSTRUCTION NOTES LOCATED ON SHEET C-2

LEGEND

|                            |  |                                    |  |
|----------------------------|--|------------------------------------|--|
| SANITARY MANHOLE           |  | STORM SEWER                        |  |
| STORM MANHOLE              |  | WATER MAIN                         |  |
| CATCH BASIN                |  | LIGHTING                           |  |
| INLET                      |  | ELECTRICAL CABLE                   |  |
| PRECAST FLARED END SECTION |  | ELECTRICAL TRANSFORMER OR PEDESTAL |  |
| CONCRETE HEADWALL          |  | POWER POLE                         |  |
| VALVE VAULT                |  | POWER POLE WITH LIGHT              |  |
| VALVE BOX                  |  | GUY WIRE                           |  |
| FIRE HYDRANT               |  | STREET SIGN                        |  |
| BUFFALO BOX                |  | GAS MAIN                           |  |
| CLEANOUT                   |  | TELEPHONE LINE                     |  |
| SANITARY SEWER             |  | CONTOUR                            |  |
| FORCE MAIN                 |  | TREE                               |  |
| CONCRETE SIDEWALK          |  | EASEMENT LINE                      |  |

EXISTING CONDITIONS SURVEY:

EXISTING CONDITIONS SURVEY PROVIDED BY PINNACLE ENGINEERING GROUP. ALTHOUGH PEG HAS NO REASON TO BELIEVE THE SURVEY IS INACCURATE, PEG MAKES NO WARRANTIES THAT EXISTING INFORMATION CONTAINED WITHIN THESE PLANS IS ALL-INCLUSIVE OR ACCURATE. CONTRACTOR SHALL UNDERTAKE NECESSARY EFFORTS TO VERIFY THE EXISTING CONDITIONS PRIOR TO THE START OF MATERIAL PROCUREMENT AND CONSTRUCTION EFFORTS/ACTIVITIES.

CONTRACTOR RESPONSIBILITY:

THE INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO. IF ADDITIONAL UTILITIES ARE KNOWN TO EXIST IN THE PROPERTY, THE OWNER WILL PROVIDE EXISTING PLANS OF OTHER UTILITIES SERVING THE SITE AND THE BUILDING THAT OTHERWISE CANNOT BE LOCATED BY A VISUAL OBSERVATION OF THE PROPERTY OR OF WHICH THE SURVEYOR WOULD HAVE NO KNOWLEDGE.

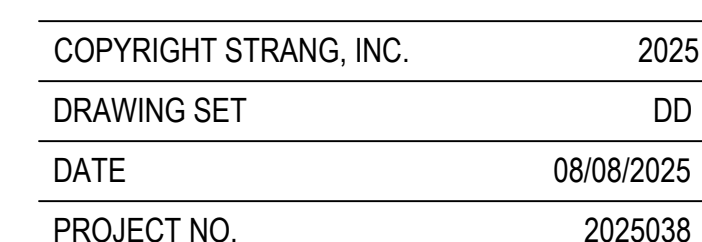


MADISON WI | WAUKESHA WI



**DESIGN  
DEVELOPMENT SET**

**NOT FOR  
CONSTRUCTION**



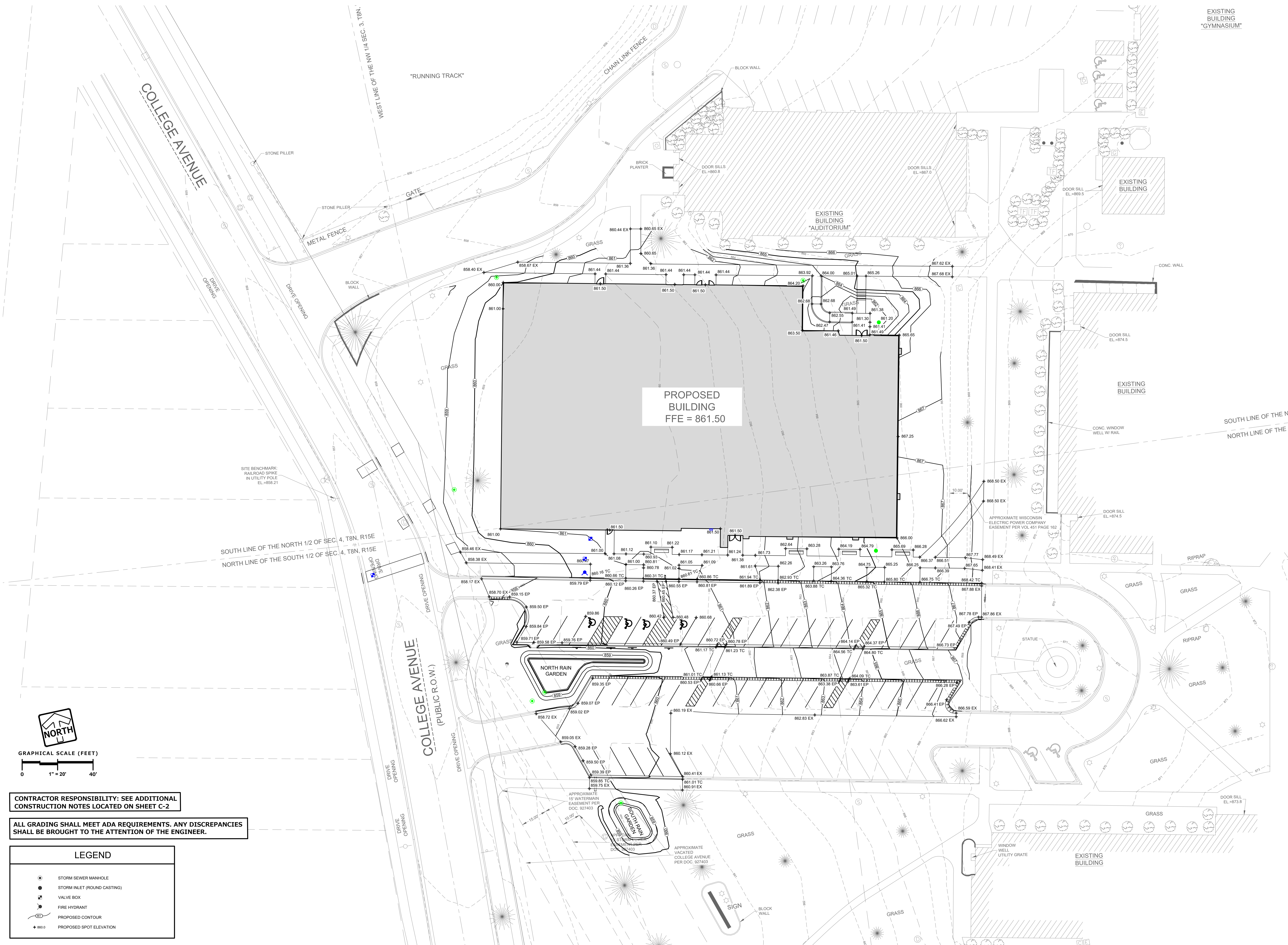
PROJECT TITLE  
LUTHER PREP MUSIC  
CENTER

1300 WESTERN AVE  
WATERTOWN, WI 53094

SHEET NAME

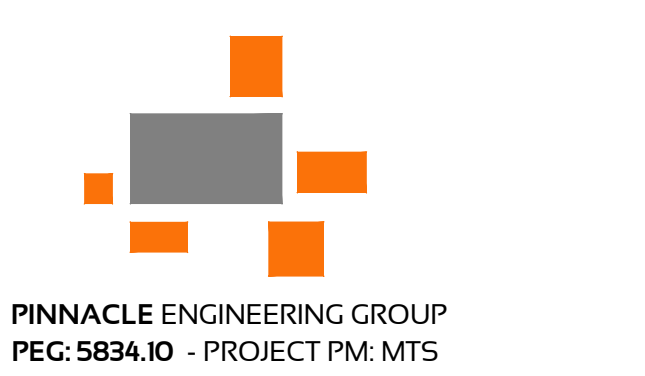
**SITE DIMENSIONAL &  
PAVING PLAN**

SHEET NO.



ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



DESIGN  
DEVELOPMENT SET

NOT FOR  
CONSTRUCTION

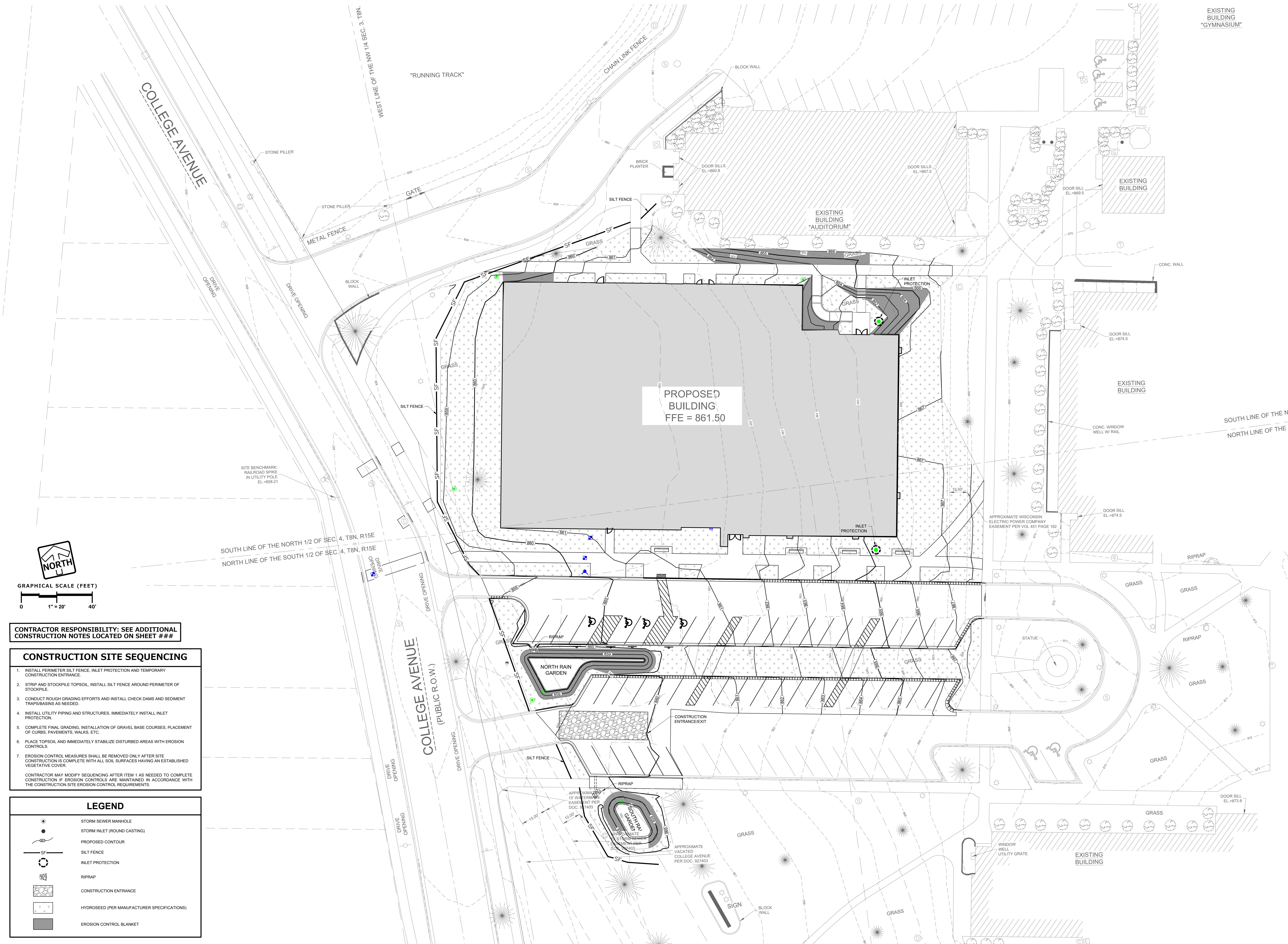
COPYRIGHT STRANG, INC. 2025  
DRAWING SET DD  
DATE 08/08/2025  
PROJECT NO. 2025038  
PROJECT TITLE  
LUTHER PREP MUSIC  
CENTER

1300 WESTERN AVE  
WATERTOWN, WI 53094

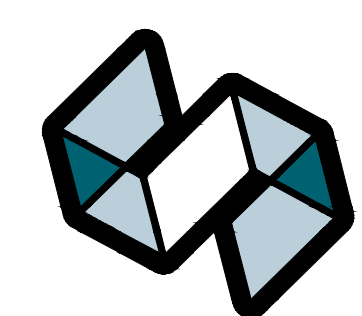
SHEET NAME  
GRADING PLAN

SHEET NO.

C-5



EXISTING BUILDING  
"GYMNASIUM"



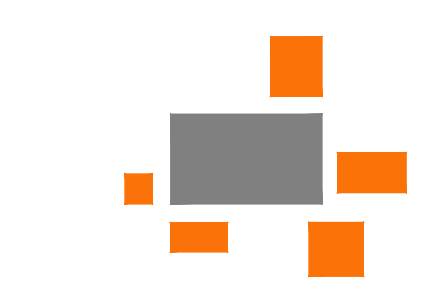
STRANG

ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



tredogroup



PINNACLE ENGINEERING GROUP  
PEC: 5834.10 - PROJECT PM: MTS

DESIGN  
DEVELOPMENT SET

NOT FOR  
CONSTRUCTION



GRAPHICAL SCALE (FEET)  
0 1" = 20' 40'

CONTRACTOR RESPONSIBILITY: SEE ADDITIONAL  
CONSTRUCTION NOTES LOCATED ON SHEET ###

CONSTRUCTION SITE SEQUENCING

1. INSTALL PERIMETER SILT FENCE, INLET PROTECTION AND TEMPORARY CONSTRUCTION ENTRANCE.
  2. STRIP AND STOCKPILE TOPSOIL, INSTALL SILT FENCE AROUND PERIMETER OF STOCKPILE.
  3. CONDUCT ROUGH GRADING EFFORTS AND INSTALL CHECK DAMS AND SEDIMENT TRAPS/BASINS AS NEEDED.
  4. INSTALL UTILITY PIPING AND STRUCTURES, IMMEDIATELY INSTALL INLET PROTECTION.
  5. COMPLETE FINAL GRADING, INSTALLATION OF GRAVEL BASE COURSES, PLACEMENT OF CURBS, PAVEMENTS, WALKS, ETC.
  6. PLACE TOPSOIL AND IMMEDIATELY STABILIZE DISTURBED AREAS WITH EROSION CONTROLS.
  7. EROSION CONTROL MEASURES SHALL BE REMOVED ONLY AFTER SITE CONSTRUCTION IS COMPLETE WITH ALL SOIL SURFACES HAVING AN ESTABLISHED VEGETATIVE COVER.
- CONTRACTOR MAY MODIFY SEQUENCING AFTER ITEM 1 AS NEEDED TO COMPLETE CONSTRUCTION IF EROSION CONTROLS ARE MAINTAINED IN ACCORDANCE WITH THE CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS.

LEGEND

- STORM SEWER MANHOLE
- STORM INLET (ROUND CASTING)
- PROPOSED CONTOUR
- SILT FENCE
- INLET PROTECTION
- RIPRAP
- CONSTRUCTION ENTRANCE
- HYDROSEED (PER MANUFACTURER SPECIFICATIONS)
- EROSION CONTROL BLANKET

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PROJECT TITLE  
LUTHER PREP MUSIC  
CENTER

1300 WESTERN AVE  
WATERTOWN, WI 53094

SHEET NAME

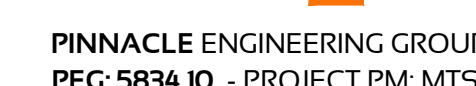
EROSION CONTROL  
PLAN

SHEET NO.

C-6



MADISON, WI | WAUKESHA, WI

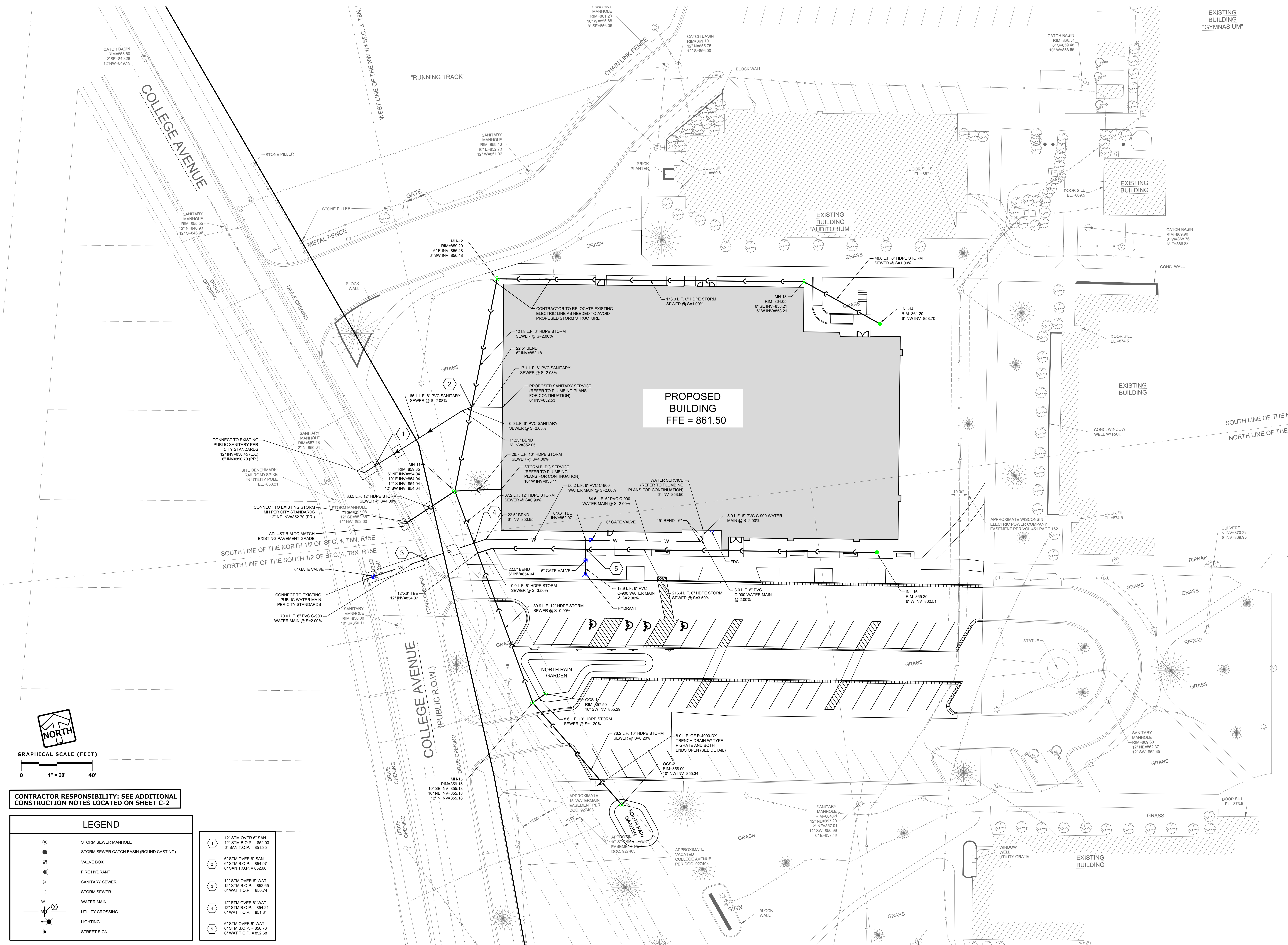


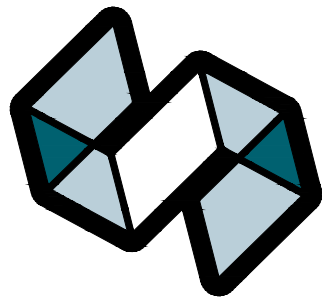
**NOT FOR  
CONSTRUCTION**

PROJECT TITLE  
LUTHER PREP MUSIC  
CENTER

SHEET NAME  
UTILITY PLAN

C-7





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INTERIOR DESIGN

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PEG: 5834.10 - PROJECT PM: MTS

DESIGN  
DEVELOPMENT SET

NOT FOR  
CONSTRUCTION

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DATE 08/08/2025  
PROJECT NO. 2025038

PROJECT TITLE  
LUTHER PREP MUSIC  
CENTER

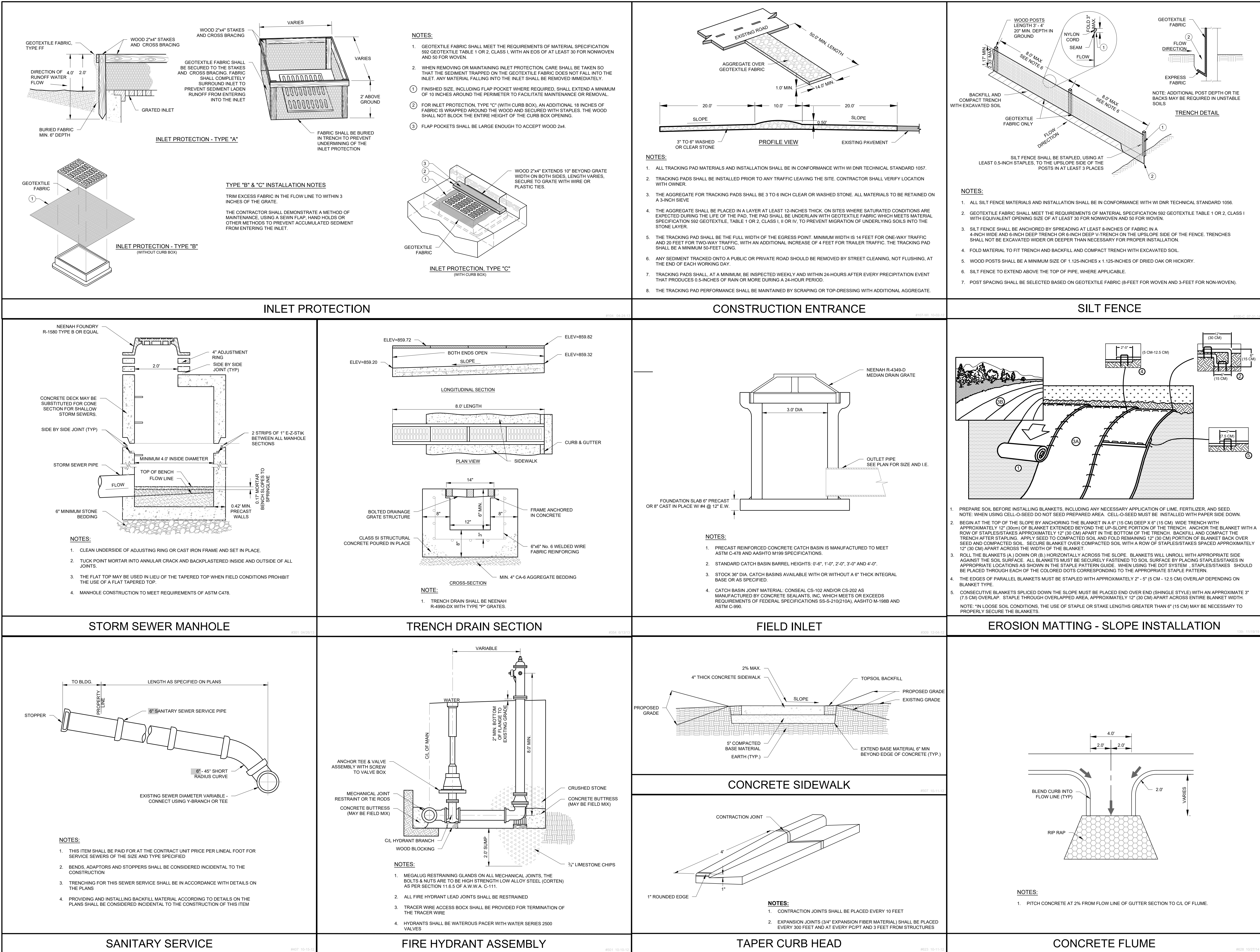
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WATERTOWN, WI 53094

SHEET NAME

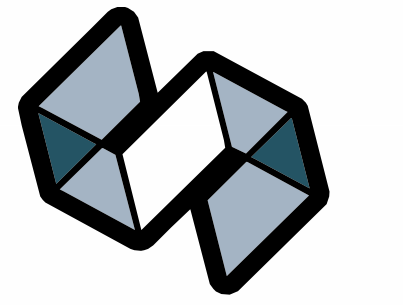
CONSTRUCTION  
DETAILS

SHEET NO.

C-8







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ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



SCHEMATIC DESIGN  
SET

NOT FOR  
CONSTRUCTION

|                        |            |
|------------------------|------------|
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| DRAWING SET            | DD         |
| DATE                   | 08/08/2025 |
| PROJECT NO.            | 2025038    |

PROJECT TITLE  
LUTHER PREP MUSIC  
CENTER

1300 WESTERN AVE  
WATERTOWN, WI 53094

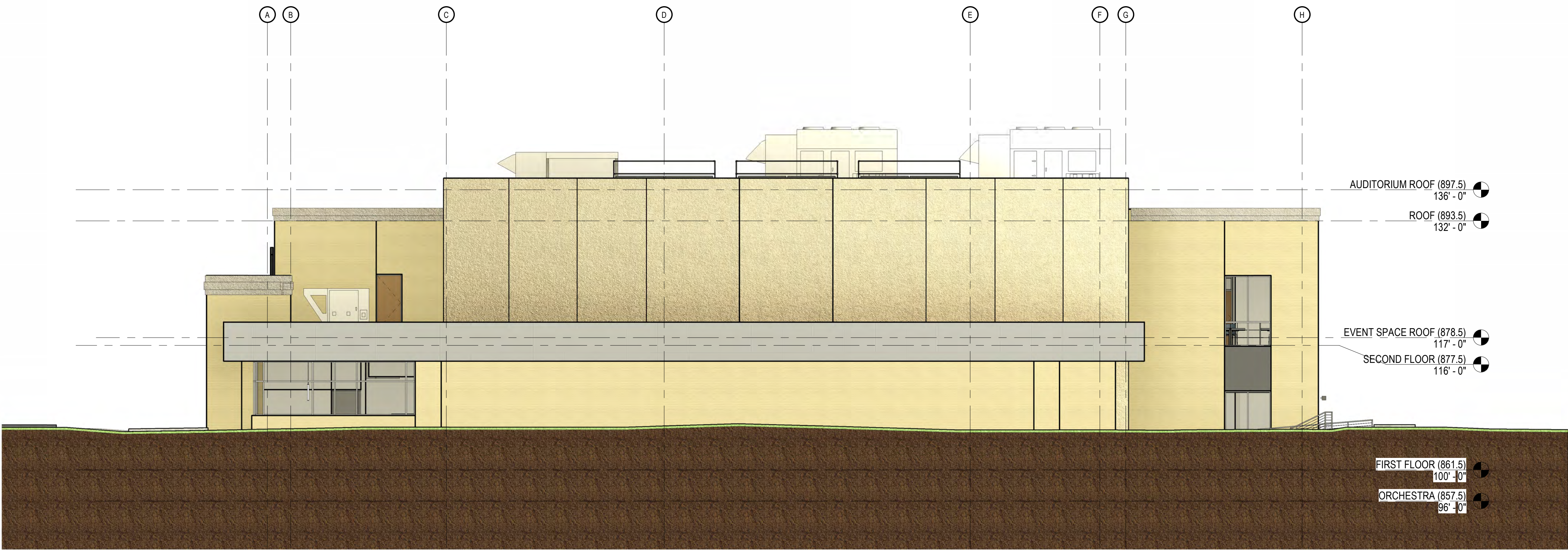
SHEET NAME  
EXTERIOR  
ELEVATIONS COLOR

SHEET NO.

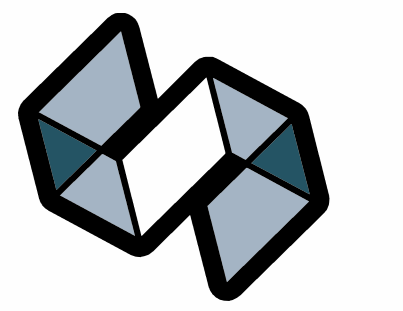
A401



1 NORTH ELEVATION  
SCALE: 1/8" = 1'-0"



2 EAST ELEVATION  
SCALE: 1/8" = 1'-0"



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ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



SCHEMATIC DESIGN  
SET

NOT FOR  
CONSTRUCTION

|                        |            |
|------------------------|------------|
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| DATE                   | 08/08/2025 |
| PROJECT NO.            | 2025038    |

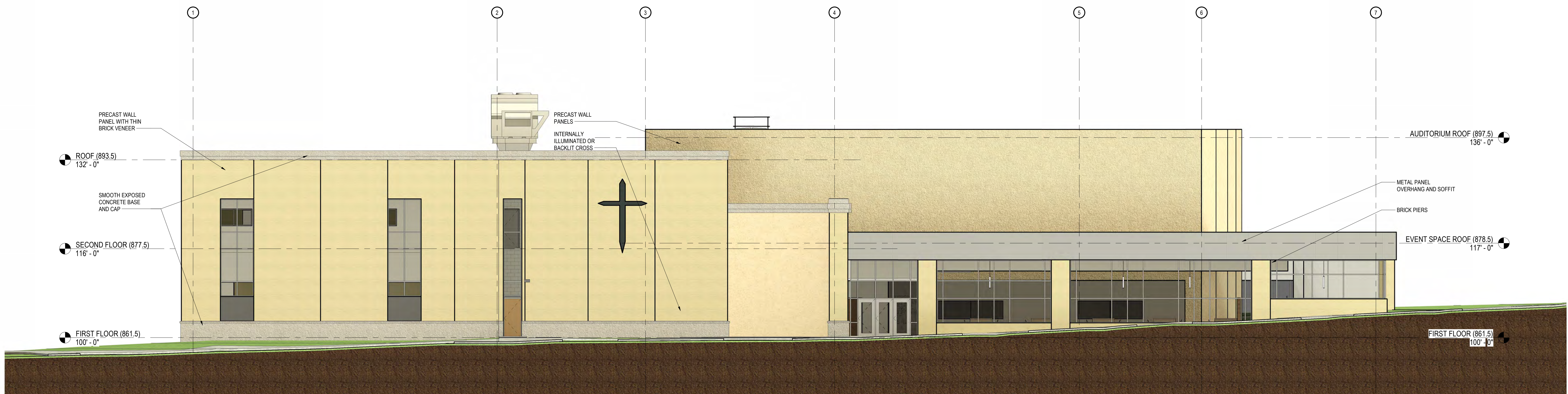
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LUTHER PREP MUSIC  
CENTER

1300 WESTERN AVE  
WATERTOWN, WI 53094

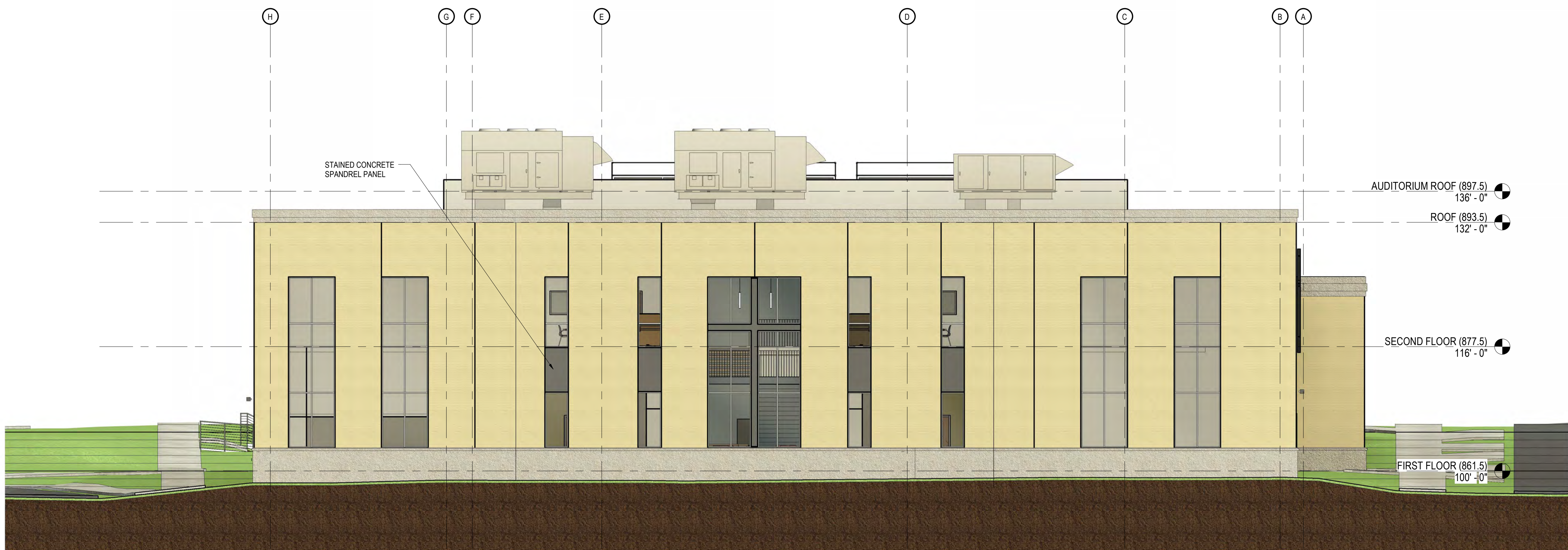
SHEET NAME  
EXTERIOR  
ELEVATIONS COLOR

SHEET NO.

A402



1 SOUTH ELEVATION  
SCALE: 1/8" = 1'-0"



2 WEST ELEVATION  
SCALE: 1/8" = 1'-0"



MADISON WI | WAUKESHA WI

**NOT FOR  
CONSTRUCTION**

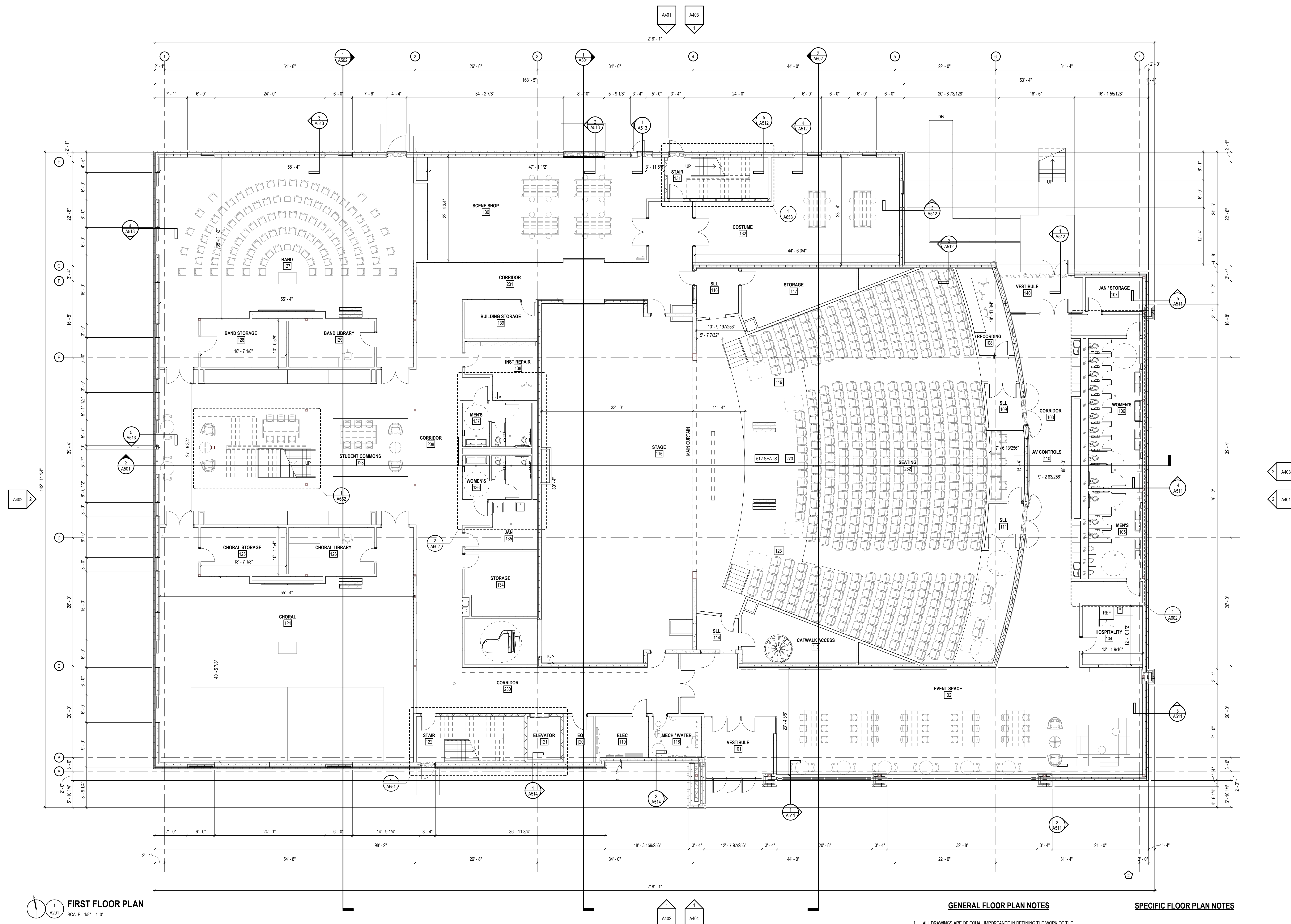
PROJECT TITLE

1300 WESTERN AVE  
WATERTOWN, WI 53094

SHEET NAME

SHEET NO.

A201

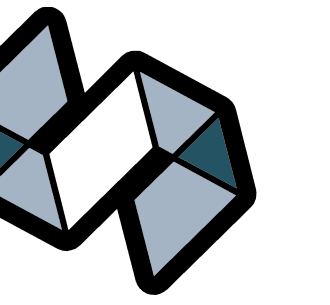


### GENERAL FLOOR PLAN NOTES

**SPECIFIC FLOOR PLAN NOTES**

- 1 ALL DRAWINGS ARE OF EQUAL IMPORTANCE IN DEFINING THE WORK OF THE CONTRACT DOCUMENT. REVIEW ALL DRAWINGS DURING THE BIDDING PERIOD AND BEFORE INSTALLATION OF WORK. PROMPTLY REPORT INCONSISTENCIES IN THE DRAWINGS TO THE ARCHITECT FOR CLARIFICATION.
- 2 IF ANY DRAWING IS UNUSUALLY NECESSARILY TO SCALE, VERIFY ALL GIVEN DIMENSIONS, VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. ANY INCONSISTENCIES DISCOVERED BY THE CONTRACTOR SHALL BE REPORTED PRIOR TO THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING WITH THE WORK. DIMENSIONS ARE GIVEN FROM FACE TO FACE OF WALLS. SEE WALL SECTIONS AND PARTITION TYPES FOR DETAILS.
- 3 WHEN SPECIFIC DIMENSIONS, DETAILS, OR DESIGN INTENT CANNOT BE DETERMINED FROM DOCUMENTS, CONTACT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
- 4 PATCH, PREPARE, AND/OR RESTORE WORK SCHEDULED TO REMAIN THAT IS DAMAGED AS A RESULT OF DEMOLITION WORK. RESTORATION AND PATCHING WORK SHALL BE DONE IN A MANNER THAT MATCHES ADJACENT MATERIALS AND FINISHES. FIRE RATED WALLS TO BE RESTORED TO MAINTAIN REQUIRED FIRE RATING.
- 5 PROTECT WORK IN PLACE DURING CONSTRUCTION.
- 6 COORDINATE THE AVAILABILITY OF AREAS REQUIRING WORK WITH THE OWNER.
- 7 REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL WORK AND MODIFICATIONS REQUIRED FOR HVAC, PLUMBING, ELECTRICAL, AND FIRE PROTECTION.

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ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



SCHEMATIC DESIGN  
SET

NOT FOR  
CONSTRUCTION

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DRAWING SET DD

DATE 08/08/2025

PROJECT NO. 2025038

PROJECT TITLE

LUTHER PREP MUSIC  
CENTER

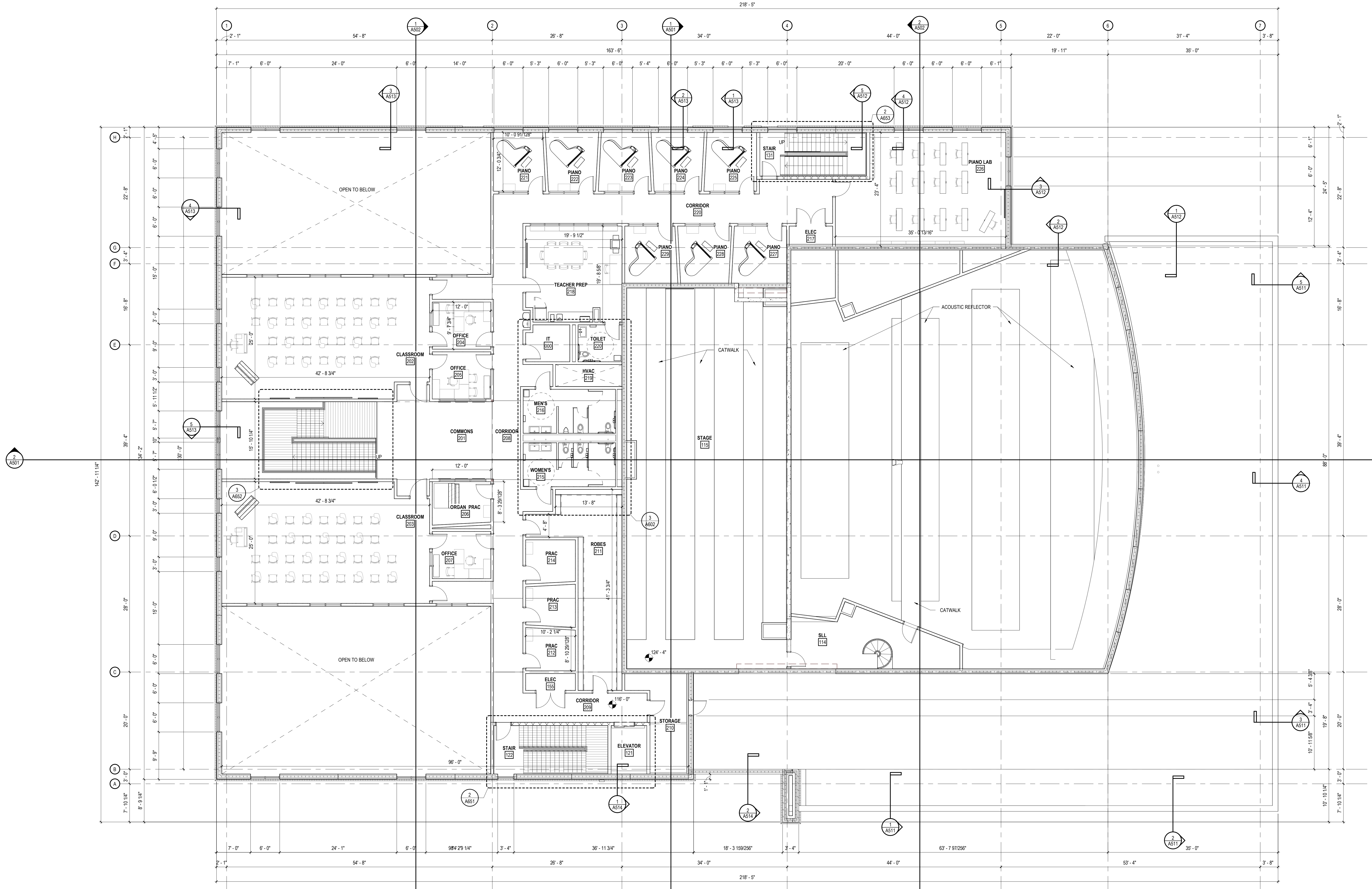
1300 WESTERN AVE  
WATERTOWN, WI 53094

SHEET NAME

SECOND FLOOR PLAN

SHEET NO.

A202



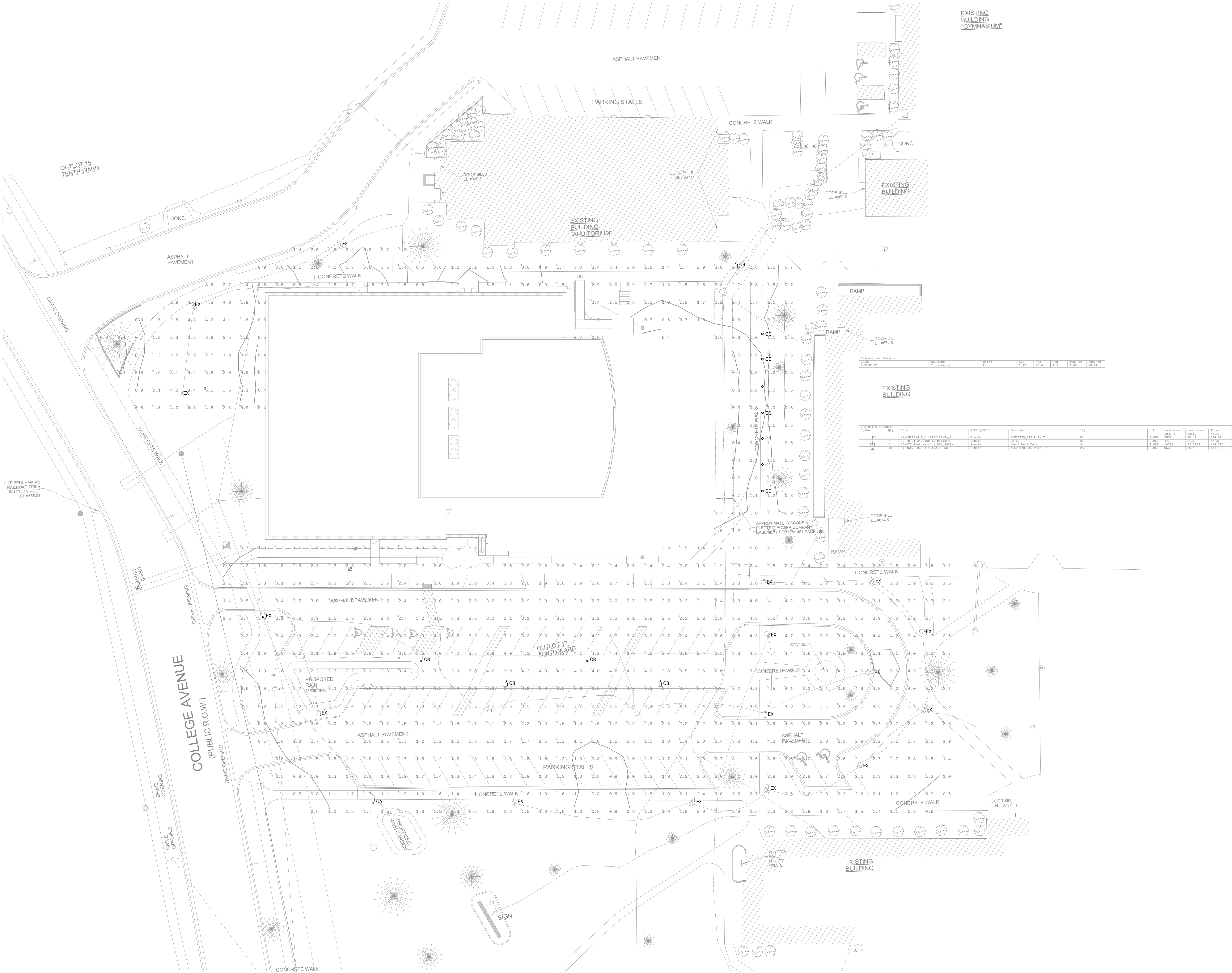
1 SECOND FLOOR PLAN  
SCALE: 1/8" = 1'-0"

GENERAL FLOOR PLAN NOTES

- 1 ALL DRAWINGS ARE OF EQUAL IMPORTANCE IN DEFINING THE WORK OF THE CONTRACT DOCUMENTS. REVIEW ALL DRAWINGS DURING THE BIDDING PERIOD AND BEFORE INSTALLATION OF WORK. PROMPTLY REPORT INCONSISTENCIES IN THE DRAWINGS TO THE ARCHITECT FOR CLARIFICATION.
- 2 DO NOT SCALE DRAWINGS. THE DRAWINGS ARE NOT NECESSARILY TO SCALE - USE GIVEN DIMENSIONS. VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO THE START OF CONSTRUCTION. ANY INCONSISTENCIES DISCOVERED BY THE CONTRACTOR SHALL BE REPORTED PROMPTLY TO THE ARCHITECT FOR CLARIFICATION BEFORE COMMENCING THE WORK. DIMENSIONS ARE GIVEN FROM FACE TO FACE OF WALLS. SEE WALL SECTIONS AND PARTITION TYPES FOR DETAILS.
- 3 WHERE SPECIFIC DIMENSIONS, DETAILS, OR DESIGN INTENT CANNOT BE DETERMINED FROM DOCUMENTS, CONSULT THE ARCHITECT BEFORE PROCEEDING WITH WORK.
- 4 PATCH, PREPARE, AND/ OR RESTORE WORK SCHEDULED TO REMAIN THAT IS DAMAGED AS A RESULT OF DEMOLITION WORK, RESTORATION AND PATCHING WORK SHALL BE DONE IN A MANNER THAT MATCHES ADJACENT MATERIALS AND FINISHES. FIRE RATED WALLS TO BE RESTORED TO MAINTAIN REQUIRED FIRE RATING.
- 5 PROTECT WORK IN PLACE DURING CONSTRUCTION.
- 6 COORDINATE THE AVAILABILITY OF AREAS REQUIRING WORK WITH THE OWNER.
- 7 REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND FIRE PROTECTION DRAWINGS FOR ADDITIONAL WORK AND MODIFICATIONS REQUIRED FOR HVAC, ELECTRICAL, PLUMBING, AND FIRE PROTECTION SYSTEMS.

SPECIFIC FLOOR PLAN NOTES

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EXISTING  
BUILDING  
"GYMNASIUM"

| Calculation Summary |             |       |      |      |     |         |
|---------------------|-------------|-------|------|------|-----|---------|
| OUTLOT 17           | CAST TYPE   | UNITS | AVE  | MAX  | MIN | AVG/REL |
|                     | ILLUM/DANCE | FC    | 2.37 | 11.8 | 0.3 | 7.06    |

| Calculation Summary | REV | DATE       | DESCRIPTION    | BY | APP | DATE       | DESCRIPTION    | BY | APP |
|---------------------|-----|------------|----------------|----|-----|------------|----------------|----|-----|
| 1                   | 1   | 08/08/2025 | Initial Design | DD | DD  | 08/08/2025 | Initial Design | DD | DD  |
| 2                   | 2   | 08/08/2025 | Revised Design | DD | DD  | 08/08/2025 | Revised Design | DD | DD  |
| 3                   | 3   | 08/08/2025 | Final Design   | DD | DD  | 08/08/2025 | Final Design   | DD | DD  |



CONDITIONAL USE  
SUBMITTAL

NOT FOR  
CONSTRUCTION

KEYPLAN (NOT TO SCALE)

|                        |            |
|------------------------|------------|
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| DRAWING SET            | DD         |
| DATE                   | 08/08/2025 |
| PROJECT NO.            | 2025038    |

PROJECT TITLE  
LUTHER PREP MUSIC  
CENTER

STREET ADDRESS  
CITY, ST ZIP

SHEET NAME  
SITE PHOTOMETRIC  
PLAN

SHEET NO.

ALED5T78

RAB



High output LED pole top area light with IE5 type V circular distribution. Wide and uniform 360 degree pattern ideal for large outdoor areas such as parking lots, corporate parks, and retail settings.

Color: Bronze

Weight: 23.0 lbs

|              |       |
|--------------|-------|
| Project:     | Type: |
| Prepared By: | Date: |

| Driver Info | LED Info         |                |               |
|-------------|------------------|----------------|---------------|
| Type        | Constant Current | Watts          | 78W           |
| 120V        | 0.68A            | Color Temp     | 5000K (Cool)  |
| 208V        | 0.39A            | Color Accuracy | 70 CRI        |
| 240V        | 0.34A            | L70 Lifespan   | 100,000 Hours |
| 277V        | 0.30A            | Lumens         | 9,530 lm      |
| Input Watts | 80.4W            | Efficacy       | 118.5 lm/W    |

### Technical Specifications

#### Compliance

**UL Listed:**  
Suitable for wet locations.

**IP Rating:**  
Ingress protection rating of IP66 for dust and water.

**IESNA LM-79 & LM-80 Testing:**  
RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

**Trade Agreements Act Compliant:**  
This product is a product of Cambodia and a "designated country" and product that complies with the Trade Agreements Act.

**DLC Listed:**  
This product is on the Design Lights Consortium (DLC) Qualified Products List and is eligible for rebates from DLC Member Utilities. Designed to meet DLC S1 requirements.  
DLC Product Code: PHNG2920B

**LED Characteristics**

**LEDs:**  
6x13W High-output, long-life LEDs

**Color Consistency:**  
7-step BlackDelta Ellipse binning to achieve consistent fixture-to-fixture color.

**Color Stability:**  
LED color temperature is warranted to shift no more than 200K in color temperature over a 5-year period.

**Color Uniformity:**  
RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifying (ANSI) Products: ANSI C78.377-2017.

**Performance**

**Lifespan:**  
100,000 Hour LED lifespan based on B5/LM-80 results and TM-21 calculations.

**Wattage Equivalency:**  
Equivalent to 250W Metal Halide

**Construction**

**Cold Weather Starting:**  
The minimum starting temperature is -40°C (-40°F).

**Maximum Ambient Temperature:**  
Suitable for use in up to 40°C (104°F).

**Effective Projected Area:**  
EPA = 1.2

**Housing:**  
Precision die-cast aluminum. Type V distribution.

**Support Arms:**  
Extruded aluminum.

**Lens:**  
Clear tempered glass lens.

**Reflector:**  
Specular vacuum metallized polycarbonate. Type V distribution.

**Gaskets:**  
High-temperature silicone.

**Finish:**  
Formulated for high durability and long-lasting color.

**Green Technology:**  
Mercury and UV free. RoHS compliant components.

**Optical**

**BUG Rating:**  
B3 U0-G2

SAGE: LINDEN Landscape Lighting

RAB

SA-LWP  
Wall Sconce



SA-LB  
Bollard



PROJECT:

DATE:

TYPE:

PREPARED BY:

5 Year Limited Warranty

certified

### KEY FEATURES

- DALI (DALI2) is available in select models.
- SA-LWP: Wall Pack.
- SA-LB: Bollard.
- CCT: 3000K.
- Voltage Rating: 120-277V.
- IP65 rated.
- 5-year limited warranty.

### TECHNICAL SPECIFICATIONS

#### CONSTRUCTION

**Housing:**  
Die-cast aluminum.

**Mounting:**  
SA-LWP: Octagonal J-Box or bracket for the wall-mount (J-Box not provided).  
SA-LB: Uses anchor bolts for mounting.

**Lens:**  
Polycarbonate.

**Gaskets:**  
Silicone.

**Green Technology:**  
Mercury and UV free. RoHS-compliant components.

**Finish:**  
Formulated for high durability and long-lasting color. Available in matte bronze finish.

**IP Rating:**  
Ingress protection of IP65 for dust and water.

#### COMPLIANCE

**UL Listed:**  
Suitable for wet locations.

### PERFORMANCE

| SA-L           | 3000K    |             |
|----------------|----------|-------------|
| Type           | Bollard  | Wall Sconce |
| Input Watts    | 8.18W    | 8.11W       |
| Lumens         | 441      | 453         |
| lm/W           | 53.9     | 55.9        |
| CRI            | 84       | 85          |
| Voltage Rating | 120-277V |             |

**Lifespan:**  
100,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations.

### TECHNICAL SPECIFICATIONS

#### CONSTRUCTION

**Cold Weather Starting:**  
Minimum starting temperature is -40°C (-40°F).

**Maximum Ambient Temperature:**  
Suitable for use in up to 45°C (113°F).

SAICO: NUVO

Picture Review

Comments

Preparation



**NUVO 65-673**  
ROW FULL CUTOFF WALL PACK

Notes

### General

Status: Active

Fixture Type: Wall Pack

Finish: Bronze

Wattage: 60W

Lumen Output: 8000-10000L

CCT (Kauv): 3000K-4000K/5000K

Temperature: Warm to Cool White

IP Rating: IP65

Indoor or Outdoor Fixture: Outdoor

### Specifications

Technology: LED

CR: 80+

Voltage: 120V-277V

Beam Angle: 90x180

Rated Hours: 50000

Operating Temperature: -40C (-40F) to +40C (+104F)

Dimmable: Yes, Dimmable

Dimming Note: 0-10V Dimming Only

Lens Material: Impact Resistant PC

Surge Protection: Built-in surge protection -40V

Weight (lb.): 5.73

Material: Die-Cast Aluminum

### Dimensions

Height (in.): 5.3

Width (in.): 12.61

Extension (in.): 6.86

### Compliance

Safety Listing: ULListed - Certified

Location Rating: Wet

Energy Star: No

DLC Approved: Yes

DLC ID: PLNIPQ05T2A

ADA Compliant: No

B.U.G. Rating: B2-U2-G1

California Status: Lawful for sale in California

Title 20 (24 Status): Lawful for sale

California Prop 65: Lead

RoHS Compliant: Yes

FCC Compliant: Yes

SOS Sheet: LED Fixture

### Additional Information

Warranty: 5 Year Limited - Fixtures

Need help? Tech help line: (888) 722-1000 Email: [techsupport@rablighting.com](mailto:techsupport@rablighting.com) Website: [www.rablighting.com](http://www.rablighting.com)  
Copyright © 2025 RAB Lighting All Rights Reserved Note: Specifications are subject to change at any time without notice.

Page 1 of 3

1  
E012

TYPE OA & OB - SITE LIGHT

SCALE: 12" = 1'-0"

2  
E012

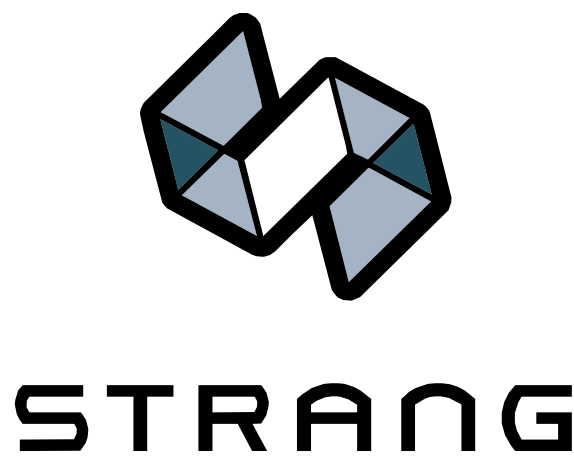
TYPE OC BOLLARD

SCALE: 12" = 1'-0"

3  
E012

TYPE W1 - EXTERIOR WALL PACK

SCALE: 12" = 1'-0"



ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



CONDITIONAL USE  
SUBMITTAL

NOT FOR  
CONSTRUCTION

KEYPLAN (NOT TO SCALE)

|                        |            |
|------------------------|------------|
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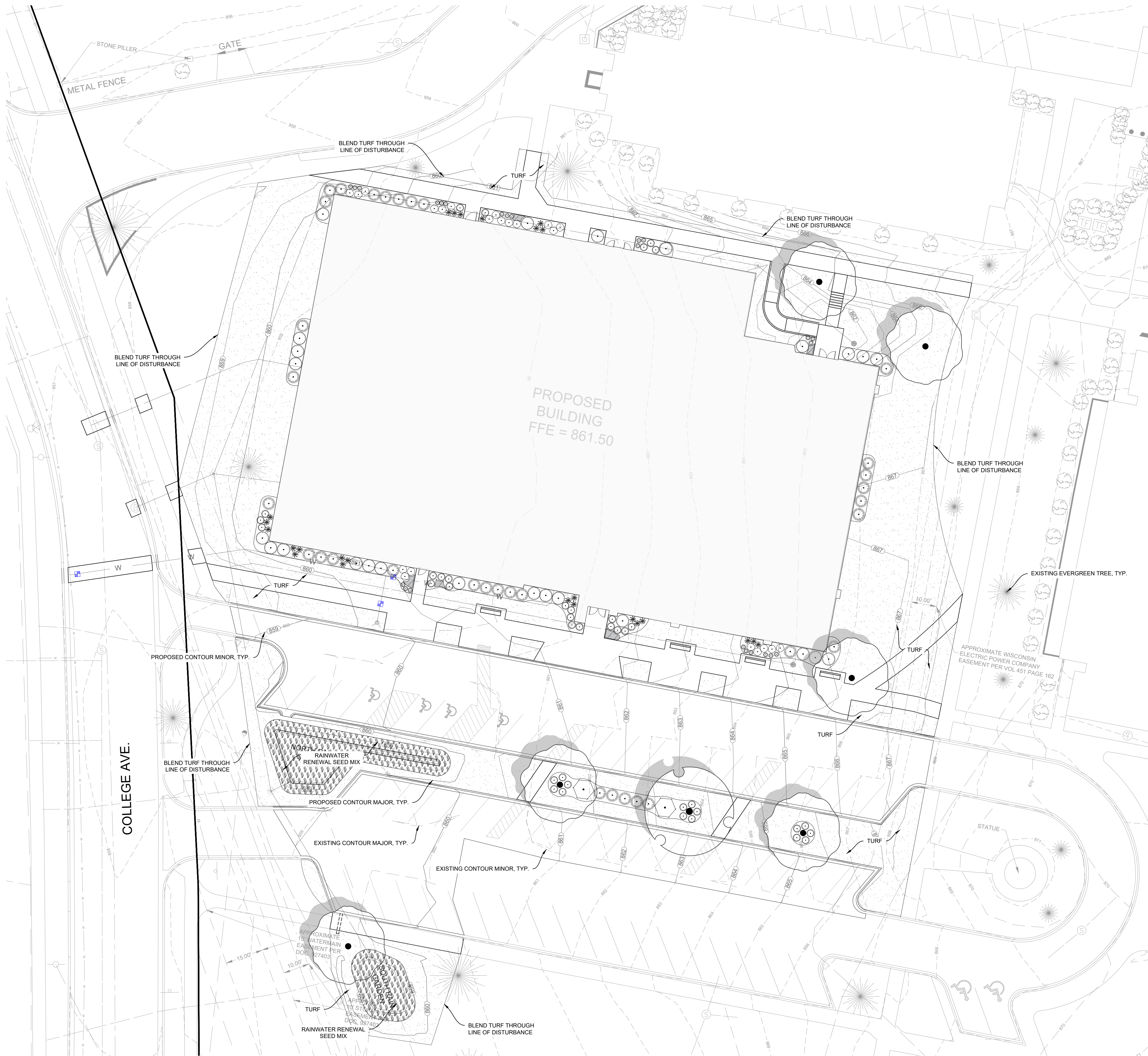
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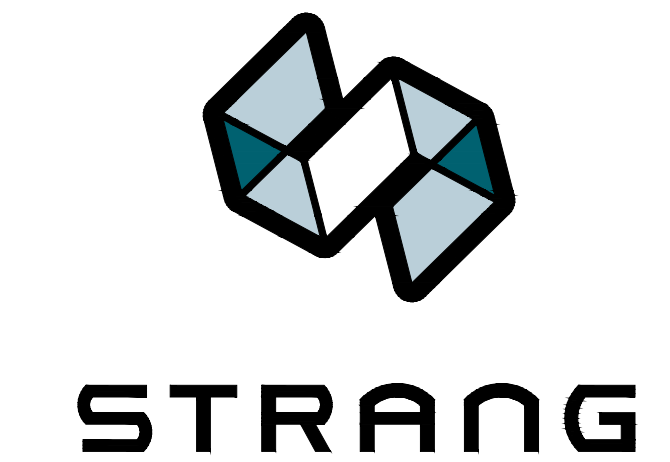
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CONCEPT PLANT SCHEDULE

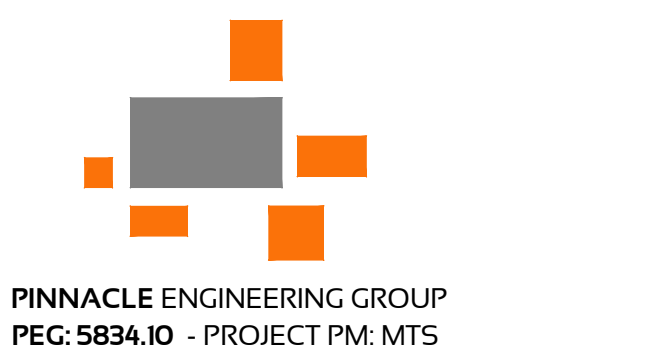
| SYMBOL        | QTY       | BOTANICAL NAME                             | COMMON NAME                      | SIZE       | REMARKS       |
|---------------|-----------|--------------------------------------------|----------------------------------|------------|---------------|
| TREES         |           |                                            |                                  |            |               |
|               | 1         | CLIMAX TREE 75 PTS                         |                                  |            |               |
|               |           | Acer saccharum 'Legacy'                    | Legacy Sugar Maple               | 2" Cal.    | 60' T x 50' W |
|               |           | Quercus rubra                              | Red Oak                          | 2" Cal.    | 65' T x 65' W |
|               | 6         | TALL TREE 30 PTS                           |                                  |            |               |
|               |           | Acer rubrum 'Northwood'                    | Northwood Maple                  | 2" Cal.    | 50' T x 35' W |
|               |           | Thuja cordata 'Greenspire'                 | Greenspire Littleleaf Linden     | 2" Cal.    | 45' T x 35' W |
| SHRUBS        |           |                                            |                                  |            |               |
|               | 2         | TALL DECIDUOUS SHRUB 5 PTS                 |                                  |            |               |
|               |           | Cotinus coggygria 'Royal Purple'           | Royal Purple Smokebush           | 36" Ht.    | 12' T x 12' W |
|               |           | Syringa vulgaris 'Sensation'               | Sensation Lilac                  | 36" Ht.    | 11' T x 8' W  |
|               | 33        | MEDIUM EVERGREEN SHRUB 5 PTS               |                                  |            |               |
|               |           | Juniperus chinensis 'Blue Vase'            | Blue Vase Juniper                | 18" Ht.    | 4' T x 3' W   |
|               |           | Picea abies 'Nidiformis'                   | Nest Spruce                      | 18" Ht.    | 3' T x 5' W   |
|               |           | Picea abies 'Pumila'                       | Pumila Spruce                    | 18" Ht.    | 4' T x 5' W   |
|               |           | Thuja occidentalis 'Filips Magic Moment'   | Filips Magic Moment Arborvitae   | 18" Ht.    | 6' T x 3' W   |
|               | 25        | MEDIUM DECIDUOUS SHRUB 3 PTS               |                                  |            |               |
|               |           | Cotinus coggygria 'Lilla'                  | Lilla Dwarf Smoke Tree           | 24" Ht.    | 4' T x 4' W   |
|               |           | Hydrangea paniculata 'Vanilla Strawberry'  | Vanilla Strawberry Hydrangea     | 24" Ht.    | 7' T x 5' W   |
|               |           | Itea virginica 'Henry's Garnet'            | Henry's Garnet Sweetspire        | 24" Ht.    | 5' T x 5' W   |
|               |           | Syringa meyeri 'Pallidin'                  | Dwarf Korean Lilac               | 24" Ht.    | 5' T x 5' W   |
|               |           | Weigela florida 'Bokrasopin'               | Sonic Bloom® Pink Weigela        | 24" Ht.    | 5' T x 5' W   |
|               | 38        | LOW EVERGREEN SHRUB 3 PTS                  |                                  |            |               |
|               |           | Juniperus horizontalis 'Blue Forest'       | Blue Forest Creeping Juniper     | 18" W      | 1' T x 4' W   |
|               |           | Pinus strobus 'Blue Shag'                  | Blue Shag White Pine             | 18" Ht.    | 4' T x 3' W   |
|               |           | Taxus x media 'SMNTHDB'                    | Stonehenge Dark Druid® Yew       | 18" Ht.    | 3' T x 3' W   |
|               |           | Thuja occidentalis 'Bobozam' TM            | Mr. Bowling Ball Arborvitae      | 18" Ht.    | 2' T x 2' W   |
|               |           | Thuja occidentalis 'Hetz Midget'           | Hetz Midget Arborvitae           | 18" Ht.    | 4' T x 4' W   |
|               | 22        | LOW DECIDUOUS SHRUB 1 PT                   |                                  |            |               |
|               |           | Hydrangea paniculata 'SMHPS'               | Razzleberry™ Hydrangea           | 18" Ht.    | 3' T x 3' W   |
|               |           | Itea virginica 'SMNIVM'                    | Fuzzy Muzzy® Sweetspire          | 18" Ht.    | 3' T x 3' W   |
|               |           | Syringa x 'SMSJBPT'                        | Bloomerang Dwarf Purple Lilac    | 18" Ht.    | 4' T x 3' W   |
|               |           | Weigela florida 'Bokrasopi'                | Spilled Wine Weigela             | 18" Ht.    | 3' T x 3' W   |
|               | 25        | TALL ORNAMENTAL GRASS                      |                                  |            |               |
|               |           | Andropogon gerardii 'Blackhawks'           | Blackhawks Big Bluestem          | 1 gal.     | 48" T x 30" W |
|               |           | Panicum virgatum 'Heavy Metal'             | Blue Switch Grass                | 1 gal.     | 4' T x 3' W   |
|               |           | Panicum virgatum 'Prairie Sky'             | Prairie Sky Switch Grass         | 1 gal.     | 4' T x 3' W   |
|               |           | Schizachyrium scoparium 'Standing Ovation' | Standing Ovation Little Bluestem | 1 gal.     | 4' T x 2' W   |
|               | 24        | SHORT ORNAMENTAL GRASS                     |                                  |            |               |
|               |           | Miscanthus sinensis 'Little Kitten'        | Little Kitten Eulalia Grass      | 1 gal.     | 24" T x 15" W |
| SYMBOL        |           |                                            |                                  |            |               |
| SHRUB AREAS   |           |                                            |                                  |            |               |
|               | 49 sf     | PERENNIALS                                 |                                  |            |               |
|               |           | Allium x 'Millenium'                       | Millenium Ornamental Onion       | 4.5" Cont. | 15" T x 12" W |
|               |           | Astilbe chinensis 'Visions'                | Visions Astilbe                  | 4.5" Cont. | 13" T x 15" W |
|               |           | Astilbe x 'Chocolate Cherry'               | Mighty® Chocolate Cherry Astilbe | 4.5" Cont. | 40" T x 28" W |
|               |           | Heuchera micrantha 'Palace Purple'         | Palace Purple Coral Bells        | 4.5" Cont. | 18" T x 18" W |
|               |           | Nepeta x faassenii 'Cat's Meow'            | Cat's Meow Catmint               | 4.5" Cont. | 18" T x 30" W |
|               |           | Salvia nemorosa 'May Night'                | May Night Sage                   | 4.5" Cont. | 18" T x 18" W |
| SYMBOL        |           |                                            |                                  |            |               |
| GROUND COVERS |           |                                            |                                  |            |               |
|               | 1,713 sf  | RAINWATER RENEWAL SEED MIX                 |                                  |            |               |
|               | 19,957 sf | TURF                                       |                                  |            |               |

|          | LANDSCAPE IMPROVEMENT TABLE                      | POINTS REQUIRED | POINTS PROPOSED |
|----------|--------------------------------------------------|-----------------|-----------------|
| 550-96 A | BUILDING FOUNDATIONS<br>• 40 POINTS/100'         | 305             | 306             |
| 550-96 B | DEVELOPED LOTS<br>• 15 POINTS / 1,000 SQ FT BLDG | 450             | 450             |
| 550-96 C | PAVED AREAS<br>• 50 POINTS / 10,000 SF           | 215             | 245             |



ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



DESIGN  
DEVELOPMENT SET

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PROJECT TITLE  
LUTHER PREP MUSIC  
CENTER

1300 WESTERN AVE  
WATERTOWN, WI 53094

SHEET NAME  
LANDSCAPE PLAN

SHEET NO.

GENERAL PLANTING NOTES

- THE LAYOUT OF ALL PLANTING BEDS AND INDIVIDUAL TREES AND SHRUBS SHALL BE STAKED BY THE CONTRACTOR IN ADVANCE OF INSTALLATION. FLAGGING, STAKES, OR PAINT MAY BE USED TO DELINEATE LOCATIONS AS SCALED FROM THE PLANS. AN APPROVED REPRESENTATIVE WILL REVIEW THESE LOCATIONS WITH THE CONTRACTOR AND MAKE MINOR ADJUSTMENTS AS NECESSARY. BED LAYOUT SHALL ALSO INCLUDE PERENNIAL GROUPINGS BY SPECIES.
- THE CONTRACTOR IS RESPONSIBLE FOR INDEPENDENTLY DETERMINING THE PLANT MATERIAL QUANTITIES REQUIRED BY THE LANDSCAPE PLANS. REPORT ANY DISCREPANCIES TO THE LANDSCAPE ARCHITECT.
- NO PLANT MATERIAL OR PLANT SIZE SUBSTITUTIONS WILL BE ACCEPTED WITHOUT APPROVAL BY THE LANDSCAPE ARCHITECT. ANY CHANGES SHALL BE SUBMITTED TO THE LANDSCAPE ARCHITECT IN WRITING PRIOR TO INSTALLATION.
- ALL BNB STOCK SHALL BE NURSERY GROWN IN A CLAY LOAM SOIL FOR A MINIMUM OF THREE GROWING SEASONS WITHIN 200 MILES OF PROJECT LOCATION, IN A ZONE COMPATIBLE WITH USDA HARDINESS ZONE 5A. SEED SHALL BE PROVIDED FROM A NURSERY (WITHIN 200 MILES) WITH A SIMILAR PLANT HARDINESS ZONE AS PROJECT LOCATION. EXISTING SOIL SHALL BE AMENDED PER SOIL ANALYSIS REPORT TO ENSURE A PROPER GROWING MEDIUM IS ACHIEVED.
- ALL PLANT MATERIAL SHALL COMPLY WITH STANDARDS DESCRIBED IN AMERICAN STANDARD OF NURSERY STOCK - Z60.1 ANSI. LANDSCAPE ARCHITECT OR OWNERS AUTHORIZED REPRESENTATIVE RESERVES THE RIGHT TO INSPECT AND POTENTIALLY REJECT ANY PLANT MATERIAL DEEMED TO NOT MEET THE REQUIRED STANDARDS.
- ALL STOCK SHALL BE FREE OF DISEASES AND HARMFUL INSECTS, DAMAGE, DISORDERS AND DEFORMITIES.
- TREES SHALL HAVE SINGLE, STRAIGHT TRUNKS AND WELL BALANCED BRANCH SYSTEMS. MULTI-STEM TREES SHALL HAVE 3-4 STRAIGHT TRUNKS AND WELL BALANCED BRANCH SYSTEMS. HEIGHT-TO-CALIPER RATIOS SHALL BE CONSISTENT WITH THE LATEST EDITION OF ANSI Z60.1.
- ROOT SYSTEMS SHALL BE LARGE ENOUGH TO ALLOW FOR FULL RECOVERY OF THE TREE, AND SHALL CONFORM TO STANDARDS AS THEY APPEAR IN THE MOST CURRENT REVISION OF THE AMERICAN ASSOCIATION OF NURSERYMEN'S AMERICAN STANDARD OF NURSERY STOCK ANSI Z60.1.
- BNB TREES SHALL BE DUG WITH A BALL OF SOIL, NOT SOFT BALLED OR POTTED AND SHALL BE FIRM IN THEIR ROOTBALL. ROOT BALL SHALL BE WRAPPED (WITH BIODEGRADABLE MATERIAL). THE TREE ROOT FLARE, OR COLLAR, SHALL BE AT OR WITHIN THE TOP THREE INCHES OF GRADE.
- ALL SPRING TREES MUST BE FRESHLY DUG IN THE MOST RECENT SPRING.
- ALL AUTUMN TREES MUST BE FRESHLY DUG IN THE MOST RECENT AUTUMN.
- TREES SHALL BE ALIVE, HEALTHY AND APPROPRIATELY MOIST, AT TIME OF DELIVERY. TREES SHALL BE SUBJECT TO INSPECTION FOR CONFORMITY TO SPECIFICATION REQUIREMENTS AND APPROVAL BY THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE. THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY TREES THAT DO NOT MEET THE SPECIFICATIONS OR THAT HAVE BEEN DAMAGED DURING SHIPMENT. THE LANDSCAPE INSTALLER MUST RECEIVE APPROVAL FROM LANDSCAPE ARCHITECT FOR ANY SUBSTITUTIONS OR ALTERATIONS.
- ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH PLANTING DETAILS.
- ALL PLANTING BEDS SHALL HAVE A MINIMUM 10" DEPTH OF PREPARED SOIL. WITH APPROVAL, EXISTING SOIL MAY BE UTILIZED PROVIDED THE PROPER SOIL AMENDMENTS ARE TILLED THOROUGHLY INTO THE TOP 10" OF SOIL. REFER TO SOIL PLACEMENT NOTES.
- WHILE PLANTING TREES AND SHRUBS, BACKFILL ¾ OF PLANTING HOLE AND WATER TREE THOROUGHLY BEFORE INSTALLING THE REMAINDER OF SOIL MIXTURE. AFTER ALL SOIL HAS BEEN PLACED INTO THE PLANTING HOLE WATER THOROUGHLY AGAIN.
- THE CONTRACTOR MUST LABEL ALL TREES WITH THE COMMON AND BOTANICAL NAMES PRIOR TO FINAL INSPECTION.
- OAK TREES SHALL BE TREATED FOR TWO-LINE CHESTNUT BORER BOTH AT THE TIME OF INSTALLATION AND DURING THE SECOND GROWING SEASON.
- ALL PLANTING BEDS SHALL BE MULCHED WITH 3" DEEP SHREDDED HARDWOOD MULCH, AND ALL TREES PLANTED IN TURF AREAS SHALL RECEIVE A 3" DEEP SHREDDED HARDWOOD MULCHED RING AS SHOWN IN PLANTING DETAILS.
- ALL PLANTING BEDS AND TREE RINGS SHALL HAVE A 4" DEEP TRENCHED BED EDGE CREATED BY EITHER A FLAT LANDSCAPE SPADE OR MECHANICAL EDGER. BED EDGES ARE TO BE CUT CLEAN AND SMOOTH AS SHOWN ON LANDSCAPE PLANS WITH A CLEAN DEFINITION BETWEEN TURF AND PLANTING AREAS.
- ALL TURF SEED AREAS SHALL RECEIVE A MINIMUM OF 6" DEPTH OF TOPSOIL. WITH APPROVAL, EXISTING SOIL MAY BE UTILIZED PROVIDED THE PROPER SOIL AMENDMENTS ARE TILLED THOROUGHLY INTO THE TOP 6" OF SOIL AS INDICATED IN THE SOIL PLACEMENT NOTES. REQUIRED AMENDMENTS SHALL BE DETERMINED BASED ON A SOIL ANALYSIS TO BE PERFORMED. ALL TOPSOIL AMENDMENT SHALL BE AGED WEED FREE MANURE OR CLASS 1 ORGANIC MATTER.
- FOR LAWN SEEDING, APPLY A STARTER FERTILIZER AND SEED UNIFORMLY AT THE RATE RECOMMENDED BY MANUFACTURER, AND PROVIDE A MULCH COVERING THAT IS SUITABLE TO PROMOTE SEED GERMINATION AND TURF ESTABLISHMENT. CONTRACTOR TO PROVIDE FERTILIZER, SEED, AND MULCH SPECIFICATIONS TO THE LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION. EROSION CONTROL MEASURES ARE TO BE INSTALLED IN THOSE AREAS REQUIRING STABILIZATION ( SWALES, SLOPES EXCEEDING 1:3, AND THOSE LOCATIONS INDICATED IN CIVIL DRAWINGS).
- THE CONTRACTOR TO ENSURE A SMOOTH, UNIFORM QUALITY TURF IS ACHIEVED WITH NO BARE SPOTS LARGER THAN 6" X 6". ANY BARE SPOTS LARGER THAN 6" X6" AT THE END OF ESTABLISHMENT PERIOD SHALL BE RESEEDD AT THE CONTRACTORS EXPENSE TO OBTAIN A DENSE, UNIFORM LAWN.
- ALL FINISH GRADING AND LAWN AREAS TO BE INSTALLED BY LANDSCAPE CONTRACTOR.
- ALL DISTURBED AREAS WITHIN THE PROJECT SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
- ALL DISTURBED AREAS OUTSIDE THE LIMITS OF WORK SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE OWNER.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES, INCLUDING ANY IRRIGATION LINES, PRIOR TO DIGGING. CONSULT DIGGERS HOTLINE.
- TREES SHALL BE INSTALLED NO CLOSER THAN:
  - 10 FEET FROM ANY FIRE HYDRANT
  - 7 FEET FROM STORM SEWER, SANITARY SEWER LATERALS, AND WATER SERVICE
- THE CONTRACTOR SHALL ENSURE THAT SOIL CONDITIONS AND COMPACTION ARE ADEQUATE TO ALLOW FOR PROPER DRAINAGE AROUND THE CONSTRUCTION SITE. UNDESIRABLE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING OF WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE PROPER SURFACE AND SUBSURFACE DRAINAGE IN ALL AREAS
- THE CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS, FEES, AND LICENSES NECESSARY FOR THE INSTALLATION OF THIS PLAN.
- THE CONTRACTOR IS TO REVIEW ALL SITE ENGINEERING DOCUMENTS PRIOR TO INSTALLATION. ANY CONFLICTS MUST BE REPORTED TO THE LANDSCAPE ARCHITECT. THESE LANDSCAPE DRAWINGS ARE FOR THE INSTALLATION OF PLANT MATERIALS ONLY UNLESS OTHERWISE STATED.
- THE CONTRACTOR SHALL PROVIDE WATERING AND MAINTENANCE SERVICES FOR A PERIOD OF 60 DAYS TO ENSURE VEGETATIVE ESTABLISHMENT. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL SUPPLY THE OWNER IN WRITING WITH ONGOING WATERING AND MAINTENANCE INSTRUCTIONS.
- PLANT MATERIALS SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR FROM TIME OF OWNER ACCEPTANCE. ONLY ONE REPLACEMENT PER PLANT WILL BE REQUIRED DURING THE WARRANTY PERIOD EXCEPT IN THE EVENT OF FAILURE TO COMPLY WITH THE SPECIFIED REQUIREMENTS.
- THE CONTRACTOR IS RESPONSIBLE TO CONDUCT A FINAL WALK THROUGH WITH THE LANDSCAPE ARCHITECT AND OR OWNERS REPRESENTATIVE TO ANSWER QUESTIONS, PROVIDE INSTRUCTIONS, AND ENSURE THAT PROJECT REQUIREMENTS HAVE BEEN MET.

SOIL PLACEMENT NOTES

- LOOSEN SUBGRADE TO A MINIMUM DEPTH INDICATED IN PLANTING NOTES USING A CULTI-MULCHER OR SIMILAR EQUIPMENT, AND REMOVE STONES MEASURING OVER 1-1/2 INCHES IN ANY DIMENSION. STICKS, RUBBISH AND OTHER EXTRANEIOUS MATTER. AREAS ADJACENT TO WALKS AND PAVEMENT SHALL BE FREE OF EXCESS STONE AND PAVING MATERIALS SO AS TO PROVIDE AN UNINTERRUPTED CROSS SECTION OF SOIL. INTERNAL PARKING ISLANDS SHALL BE LOOSENEED TO A DEPTH OF 30".
- THOROUGHLY BLEND PLANTING SOIL MIX FOR PLANTING BED AREAS. (1 PART EXISTING SOIL, 1 PART TOPSOIL, 1 PART ORGANIC SOIL AMENDMENT, 2.9 POUNDS PER CUBIC YARD OF 4-4-4 ANALYSIS SLOW-RELEASE FERTILIZER)
- TREE AND SHRUB HOLES SHALL BE FILLED WITH A PREPARED PLANTING MIXTURE OF 1 PART TOPSOIL, 2 PARTS PLANTING SOIL MIX.
- SPREAD SOIL AND SOIL AMENDMENTS TO DEPTH INDICATED ON DRAWINGS, BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER NATURAL SETTLEMENT. (FINISH GRADE OF PLANTING BEDS SHALL BE 3" BELOW ALL ADJACENT SURFACES. FINISH GRADE OF TURF SEEDING AREAS SHALL BE 1" BELOW ALL ADJACENT HARD SURFACES, WALKS, AND CURBS.)
- PLACE APPROXIMATELY 1/2 OF TOTAL AMOUNT OF SOIL REQUIRED, WORK INTO TOP OF LOOSENEED SUBGRADE TO CREATE A TRANSITION LAYER, THEN PLACE REMAINDER OF THE SOIL. SOIL TRANSITION LAYER SHALL BE TILLED TO A MINIMUM DEPTH OF 6" BELOW THE DEPTH OF NEWLY PLACED SOIL. PARKING LOT ISLANDS SHALL BE CROWNED TO A HEIGHT OF 6" TO PROVIDE PROPER DRAINAGE UNLESS OTHERWISE NOTED.
- DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET.
- FINISH GRADING: GRADE SOIL TO A SMOOTH, UNIFORM SURFACE PLANE WITH A LOOSE, UNIFORMLY FINE TEXTURE.
- ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES.
- RESTORE PLANTING BEDS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING AND BEFORE PLANTING.

NATIVE SEEDING

ESTABLISHMENT OF A VIABLE VEGETATION COMMUNITY WILL BE COMPLETED BY HAND-BROADCASTING OF PRE-DESIGNED SEED MIXES TO CREATE A DYNAMIC PLANTING.

PRIOR TO SEEDING:

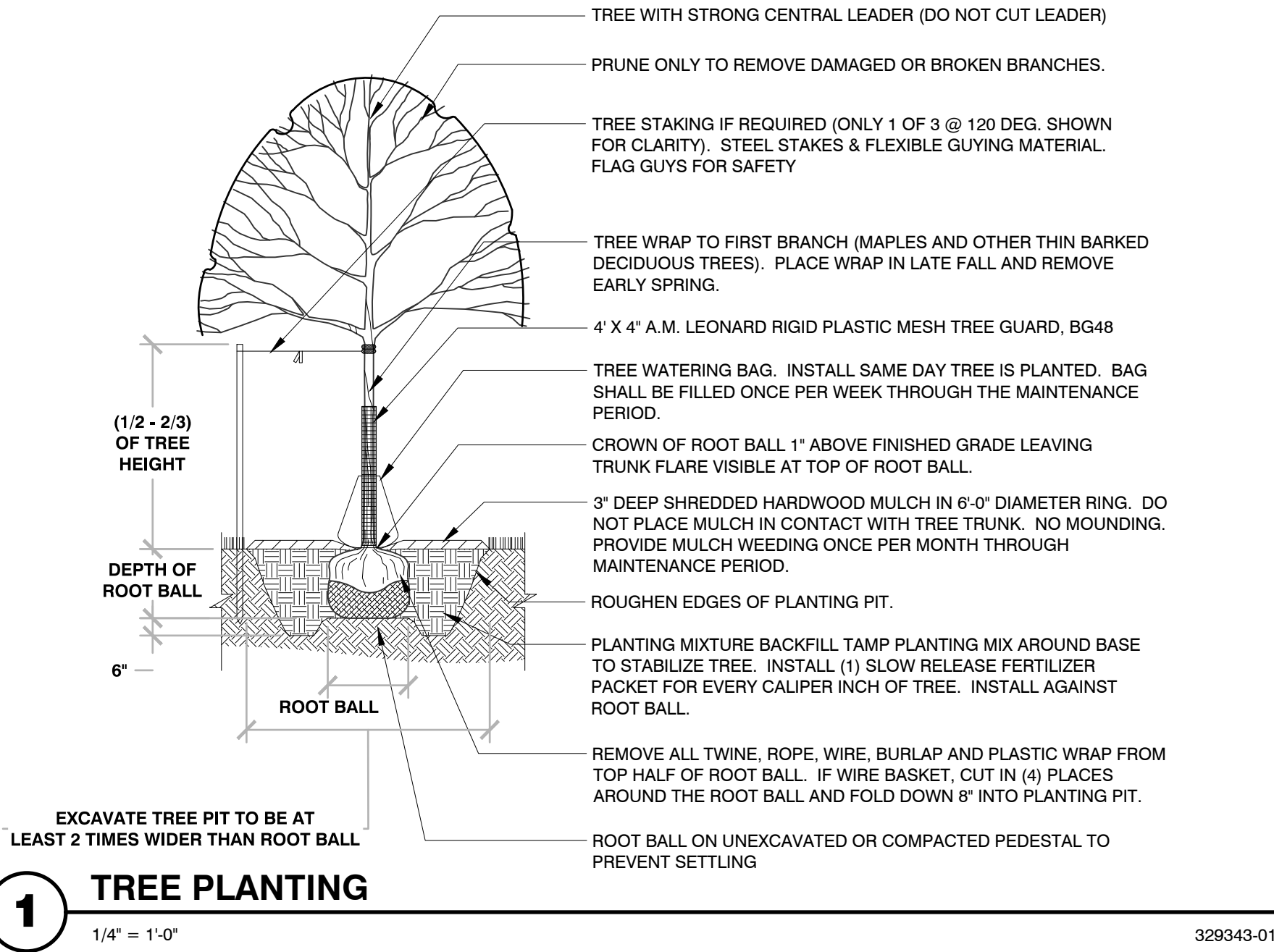
- ALL WEEDS AND EXISTING VEGETATION SHALL BE REMOVED. EXISTING VEGETATION SHALL BE TREATED WITH GLYPHOSATE OR SIMILAR HERBICIDE BY A LICENSED PROFESSIONAL. TREATMENT SHALL OCCUR A MINIMUM OF 10 DAYS PRIOR TO SEEDING/PLANTING. VEGETATION STILL ALIVE AFTER INITIAL HERBICIDE TREATMENT SHALL BE TREATED A SECOND TIME PRIOR TO TILLING INTO THE SOIL. TREATED VEGETATION SHALL BE TILLED INTO THE SOIL NO EARLIER THAN 1 DAY PRIOR TO SEEDING.
- PREPARATION OF SOIL PRIOR TO SEEDING
  - REFER TO CIVIL PLANS FOR SOIL MIXTURE.
  - ALL FOREIGN MATERIALS LARGER THAN 1-INCH SHALL BE REMOVED FROM THE SOIL PRIOR TO SEEDING OR PLANTING.
  - AREA SHOULD BE FREE FROM UNSIGHTLY VARIATIONS, RIDGES, AND DEPRESSIONS.
  - AVOID DRIVING OVER THE SPECIFIED AREA WITH MACHINERY.

SPECIFICATIONS FOR HAND BROADCASTING:

SEEDING SHALL BE CONDUCTED IN LATE FALL (SEPTEMBER 1- SOIL FREEZE) SO THAT SEEDS MAY LIE DORMANT DURING THE WINTER, ALLOWING FOR STRATIFICATION, OR SPRING (MARCH 1-JUNE 1) TO ALLOW A COMPLETE GROWING SEASON TO BECOME ESTABLISHED.

- COVER CROP
  - ANNUAL RYE SHALL BE SPREAD AT A DENSITY OF 20 POUNDS PER ACRE DURING THE PLANTING OR SEEDING OF THE NATIVE PLANT SPECIES TO STABILIZE THE SOIL AND REDUCE THE GROWTH OF UNWANTED VEGETATION. THIS ANNUAL GRASS GROWS RAPIDLY WITHOUT COMPETING WITH THE WILDFLOWERS AND GRASSES THAT ARE PLANTED IN THE TARGET AREAS.
  - WINTER WHEAT OR PERENNIAL RYE SHALL NOT BE USED AS A COVER CROP. THESE GRASSES MAY OUT COMPETE PRAIRIE SEEDLINGS, LEADING TO A REDUCTION IN THE SUCCESS OF THE PLANTINGS.
- SEED MIX:
  - MIX ALL NATIVE SEED WITH VERMICULITE ACCORDING TO AGRECOL RECOMMENDATIONS AND INSTALLATION GUIDELINES.
  - BROADCAST HALF THE SEED OVER THE ENTIRE SITE OR TARGET AREA.
  - BROADCAST THE OTHER HALF OF SEED PERPENDICULAR TO THE DIRECTION THAT THE FIRST HALF OF THE SEED WAS BROADCAST.
  - COVER SEED WITH ¼-INCH TO ½-INCH OF SOIL (USE ANY EXCESS SOIL FROM THE SITE) WITH RAKE OR DRAG.
  - ROLL SITE TO ENSURE FIRM SEED-TO-GROUND CONTACT.
  - KEEP SEED CONSTANTLY WET THROUGH GERMINATION PERIOD. GENERALLY 3 WEEKS.

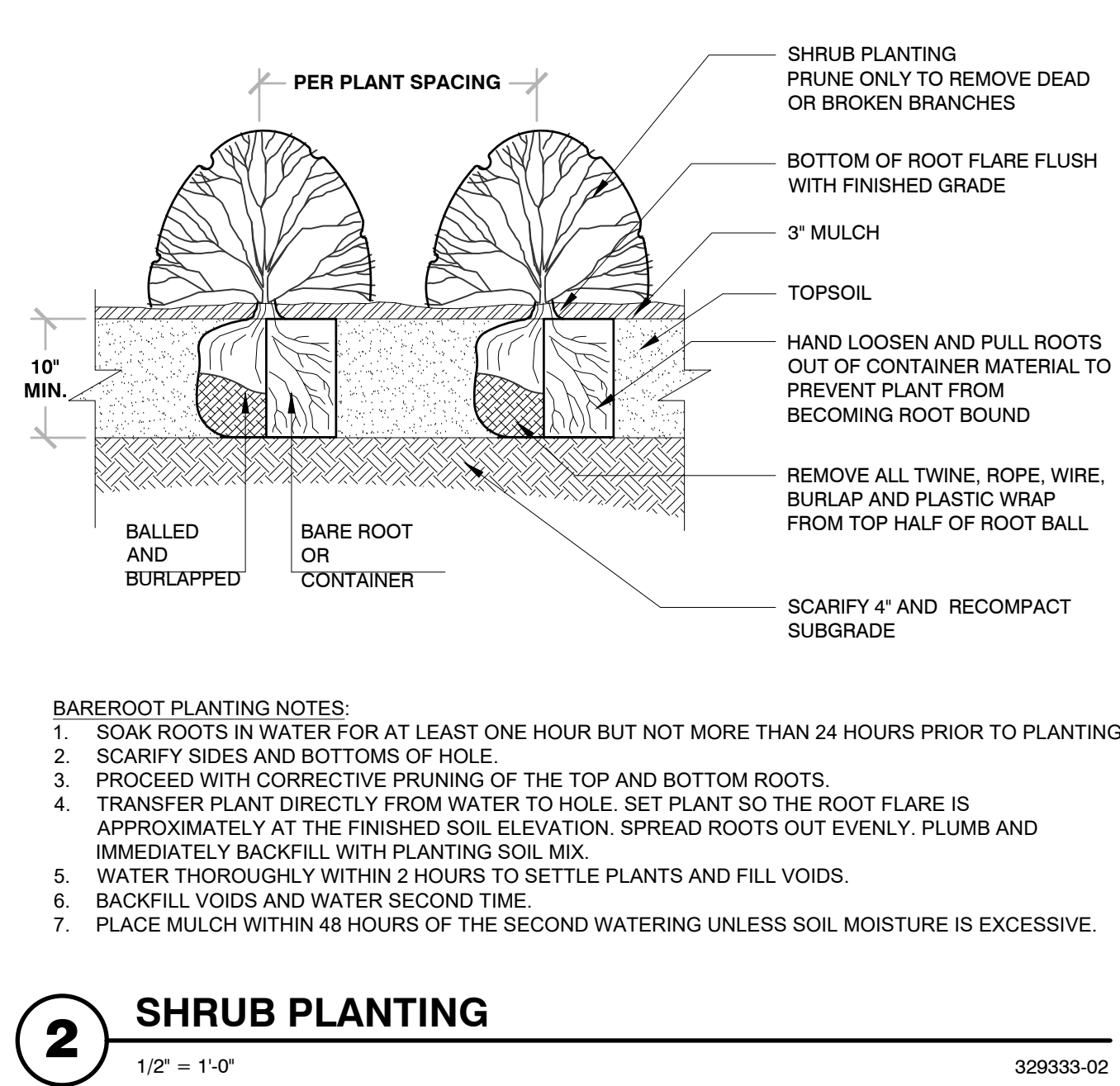
ALL SEEDING SHALL BE COVERED WITH 1-INCH OF CLEAN, NON-INVASIVE STRAW (NO MARSH HAY, OR REED CANARY GRASS) WITHOUT SEEDS, WITHIN SEVEN DAYS. WHEAT, RYE, OATS, OR BARLEY ARE ACCEPTABLE FORMS OF STRAW. THOSE AREAS OF SLOPES STEEPER THAN 8:1 (EIGHT FEET HORIZONTAL TO ONE FOOT VERTICAL) SHALL BE PLANTED NO LATER THAN OCTOBER 1 AND STAKED WITH AN EROSION CONTROL BLANKET TO PREVENT EROSION.



1 TREE PLANTING

1/4\"/>

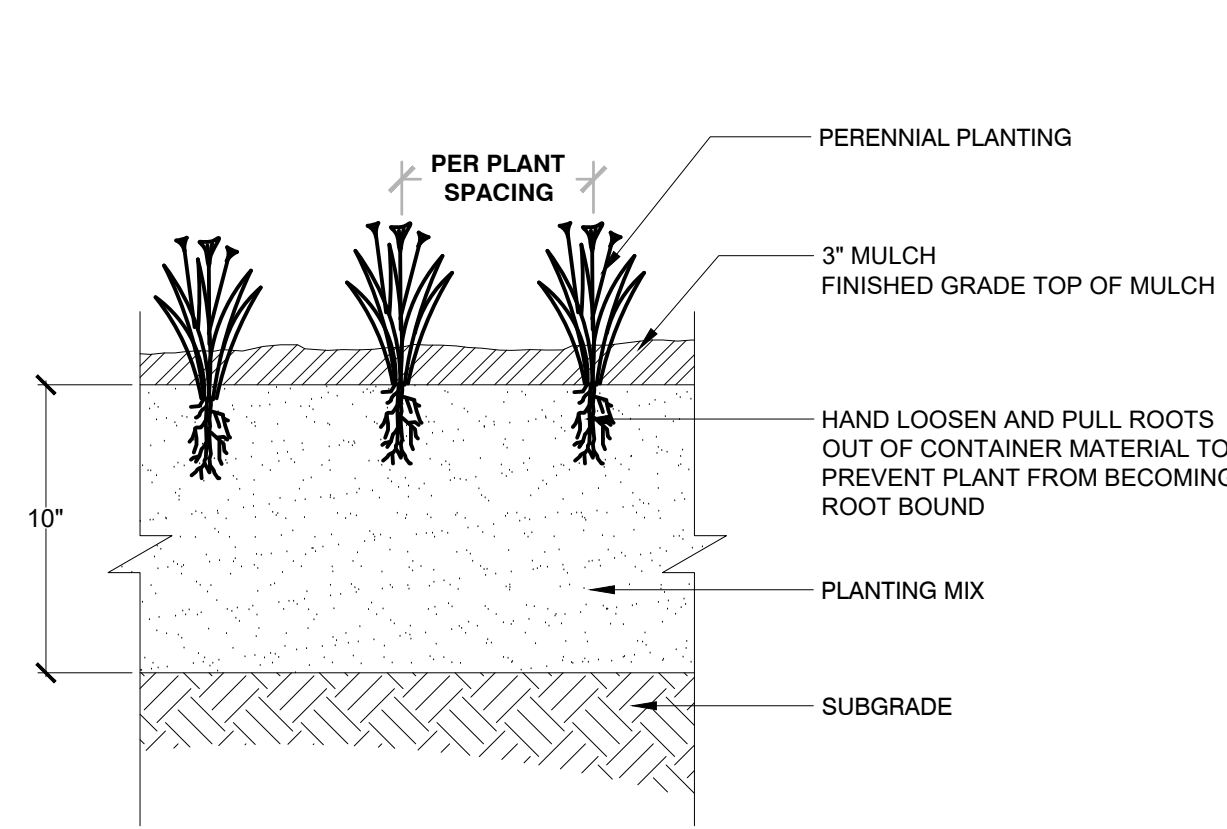
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2 SHRUB PLANTING

1/2\"/>

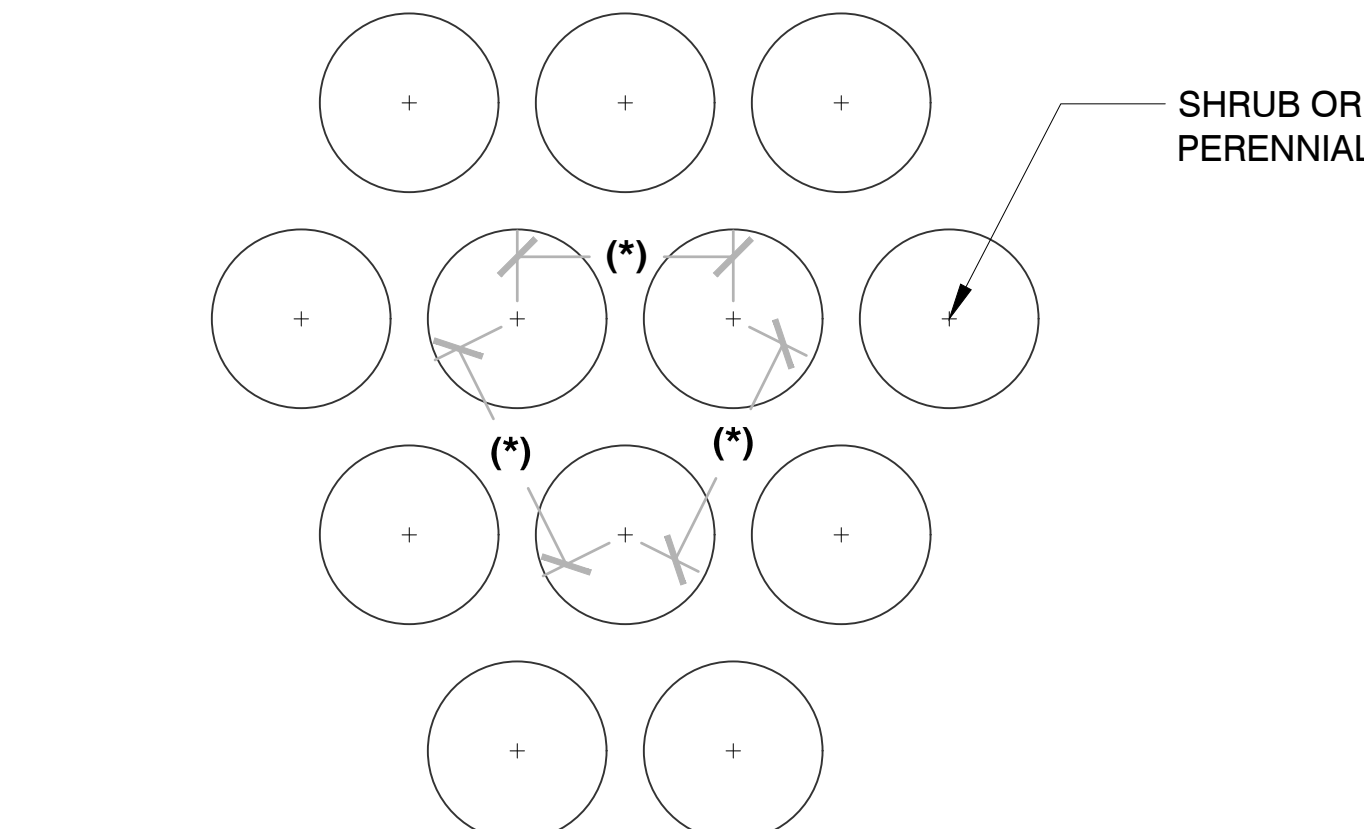
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3 PERENNIAL PLANTING

1\"/>

3293-01



4 PLANT SPACING

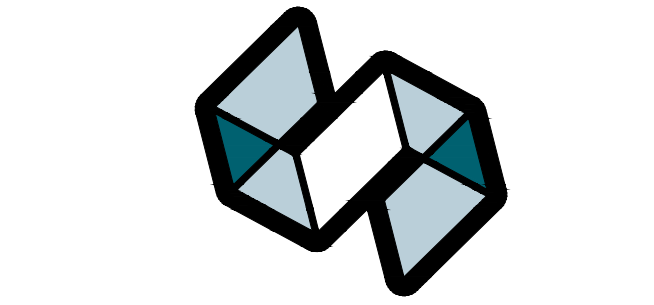
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3293-02

5 TRENCHED BED EDGE

3/4\"/>

3293-03



STRANG

ARCHITECTURE  
ENGINEERING  
INTERIOR DESIGN

MADISON, WI | WAUKESHA, WI



tredogroup



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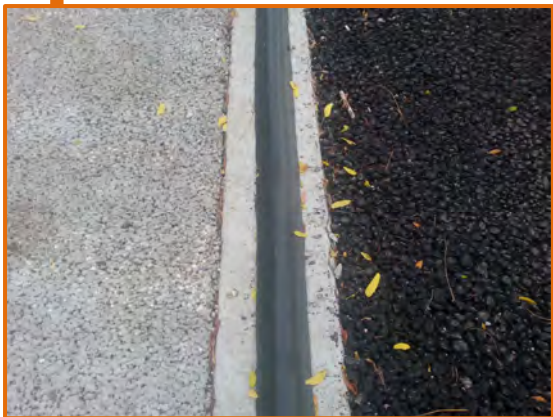
SHEET NAME

LANDSCAPE NOTES &  
DETAILS

SHEET NO.

L-2

# STORMWATER MANAGEMENT PLAN



## **LUTHER PREPARATORY MUSIC CENTER**

City of Watertown, Jefferson County, Wisconsin  
*PEG Project Number: 5384.10-WI*

08/08/2025



**PINNACLE ENGINEERING GROUP**  
20725 Watertown Road | Suite 100 | Brookfield, WI 53186  
[www.pinnacle-engr.com](http://www.pinnacle-engr.com)

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## APPENDICIES

### APPENDIX 1 – MAPS

- Location Map
- USDA Soils Map

### APPENDIX 2 – POST-DEVELOPMENT CONDITIONS

- Proposed Drainage Areas Exhibit
- HydroCAD Rain Garden Model
- Rain Garden Details

### APPENDIX 3 – WATER QUALITY TREATMENT

- WinSLAMM Modeling Input Data & Output Computations

### APPENDIX 4 – STORM SEWER CALCULATIONS

- Storm Sewer Drainage Areas Exhibit
- Storm Sewer Calculations

### APPENDIX 5 – OPERATION AND MAINTENANCE PLAN

Questions and comments can be directed to:

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Associate Project Manager

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[jsimon@pinnacle-engr.com](mailto:jsimon@pinnacle-engr.com)



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Brookfield, WI 53186

[www.pinnacle-engr.com](http://www.pinnacle-engr.com)

## INTRODUCTION

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The proposed project is located on the campus of Luther Preparatory School in the City of Watertown, Jefferson County, WI. The project site is along the east side of College Avenue, between Wisconsin Street and Western Avenue. The existing site is currently mowed lawn with trees and concrete sidewalks. The land generally slopes from east to west with stormwater runoff flowing into the College Avenue right-of-way. Soils on the site consist of Theresa silt loam (C) per USDA Soil Maps (See **Appendix 1**). A location map that illustrates the tract of land is also included in **Appendix 1**.

The proposed development is a 30,000 square-foot music center which will include music and choral classrooms as well as an auditorium. Additional parking will be added and two rain gardens will be implemented to provide stormwater management.

## DESIGN CRITERIA

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*City of Watertown:* ..... Chapter 288 of the City Ordinances

*Wisconsin Department of Natural Resources:* ..... NR 216 & NR 151

*Water Quantity:* Per City and WDNR ordinances, the proposed project is exempt from peak discharge performance standards due to the site being a redevelopment.

*Water Quality:* City ordinance requires a redevelopment site to remove at least 60% of the total suspended solids (TSS) load on an average annual basis from paved parking areas and roads. A 30% reduction in phosphorus loading from paved parking areas and roads is also required.

WDNR regulations require a reduction of at least 40% of TSS loading from paved parking and roads.

*Infiltration:* As a redevelopment, the site is exempt from City and WDNR infiltration requirements.

## ANALYSIS METHODS

---

HydroCAD® (Version 10.00) software has been used to analyze stormwater characteristics for the proposed project. HydroCAD uses the accepted TR-55 methodology for determining peak discharge runoff rates. Runoff curve numbers for building roof, pavement, sidewalk, and grass were based on the standard values for hydrologic soil group C. Modeling was conducted for the 10-year and 100-year storm events to determine storage depths and safe conveyance of runoff from the rain gardens. 10-year and 100-year rainfall depths used in the model, 3.93 inches and 6.19 inches respectively, were based on the values from NOAA Atlas 14 for Jefferson County. TSS reduction characteristics for the proposed water quality facilities were determined using WinSLAMM® (Version 10.5.0) Source Loading and Management Model.

## POST-DEVELOPMENT CONDITIONS

---

Development of the site will disturb approximately 2.09 acres and will involve construction of a 30,000 square-foot music center which will consist of classrooms, practice rooms, and an auditorium. The site will also include reconstruction of drive aisles, construction of additional asphalt parking areas, new concrete sidewalks, private utilities, and two rain gardens. Development of the site will increase the amount of impervious surface area by 40,732 square feet (0.94 acres). The parking areas and drive aisles, specifically, will increase by 8,678 square

feet so an equivalent amount of pavement must be treated for total suspended solids and phosphorus removal to meet DNR and City of Watertown requirements. The two rain gardens will allow stormwater runoff from smaller, frequent events to infiltrate into the soil thereby removing pollutants. Discharge from the rain gardens will be controlled by a pair of outlet control structures which will direct runoff to the public storm sewer system in College Avenue consistent with existing drainage patterns. Each outlet control structure will be comprised of a 24" diameter precast concrete standpipe connected to a 10" HDPE storm sewer. As water levels rise during larger storm events, discharge will be controlled by the top of the standpipe. An emergency spillway has also been provided at each rain garden to safely discharge runoff from storm events exceeding the 100-year event. Details of the outlet control structures have been provided in **Appendix 2**.

To ensure the rain gardens treat an amount of pavement equal to or greater than the amount of new pavement, the drainage area to each rain garden has been delineated. A Proposed Drainage Areas Exhibit can be found in **Appendix 2**. A comparison of the new impervious area and amount of treated impervious area is shown below.

#### Impervious Area Comparison

|                                         |                    |
|-----------------------------------------|--------------------|
| Pavement Added                          | 8,966 s.f.         |
| Pavement Removed                        | 288 s.f.           |
| Net New Pavement                        | <b>8,678 s.f.</b>  |
| Pavement Draining to North Rain Garden  | 8,883 s.f.         |
| Pavement Draining to South Rain Garden  | 2,715              |
| Total Pavement Draining to Rain Gardens | <b>11,598 s.f.</b> |

## SUMMARY OF RESULTS

### Runoff Rate Attenuation

As a redevelopment, the site is exempt from WDNR and City of Watertown peak discharge rate requirements according to criteria outlined in **WDNR NR151.124(3)b3** and **Chapter 288-18D(3)(i)[5]**. Although runoff rate attenuation is not required, the proposed rain gardens have been analyzed to determine peak depths and verify safe conveyance of runoff discharged from the rain gardens. A summary of the results is illustrated below.

### Rain Garden Data

|                       | North Rain Garden |          | South Rain Garden |          |
|-----------------------|-------------------|----------|-------------------|----------|
|                       | 10-year           | 100-year | 10-year           | 100-year |
| Peak Inflow (cfs)     | 1.62              | 2.73     | 0.60              | 1.03     |
| Peak Outflow (cfs)    | 1.62              | 2.73     | 0.60              | 1.03     |
| Storage Volume (c.f.) | 495               | 531      | 289               | 303      |
| Peak Elev.            | 857.68            | 857.76   | 858.09            | 858.14   |
| Bottom Elev.          | 856.50            |          | 857.00            |          |
| Spillway Elev.        | 859.25            |          | 859.20            |          |
| Top of Berm Elev.     | 859.50            |          | 860.00            |          |

Runoff Water Quality

Post-development water quality will be provided by the rain gardens (Refer to **Appendix 3** for details). Analysis demonstrates the rain gardens will remove more than the 60% minimum of total suspended solids (TSS) from paved parking and drive aisles as required by City code and the 40% TSS required by WDNR. The analysis also indicates total phosphorous removal will exceed the 30% required by City code.

**Total Suspended Solids Removal Summary**

|                | <b>Solids Loading<br/>(lbs)</b> | <b>Treatment<br/>Efficiency</b> | <b>Solids Removed<br/>(lbs)</b> |
|----------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Area 1S</b> | 125.7                           | 73.24%                          | 92.1                            |
| <b>Area 2S</b> | 38.2                            | 89.80%                          | 34.3                            |
| <b>Total</b>   | 163.9                           | <b>77.12%</b>                   | 126.4                           |

**Phosphorus Removal Summary**

| <b>Yield Without<br/>Controls<br/>(lbs)</b> | <b>Yield With<br/>Controls<br/>(lbs)</b> | <b>Percent<br/>Yield<br/>Reduction</b> |
|---------------------------------------------|------------------------------------------|----------------------------------------|
| 0.4194                                      | 0.1030                                   | <b>75.44%</b>                          |

Stormwater Infiltration

The proposed site is considered a redevelopment. According to criteria outlined in **WDNR NR151.124(3)b3** and **Chapter 288-18D(3)(i)[5]** of City of Watertown code, infiltration is optional for redevelopment sites. Therefore, infiltration measures have not been incorporated into this stormwater management plan.

Stormwater Conveyance System

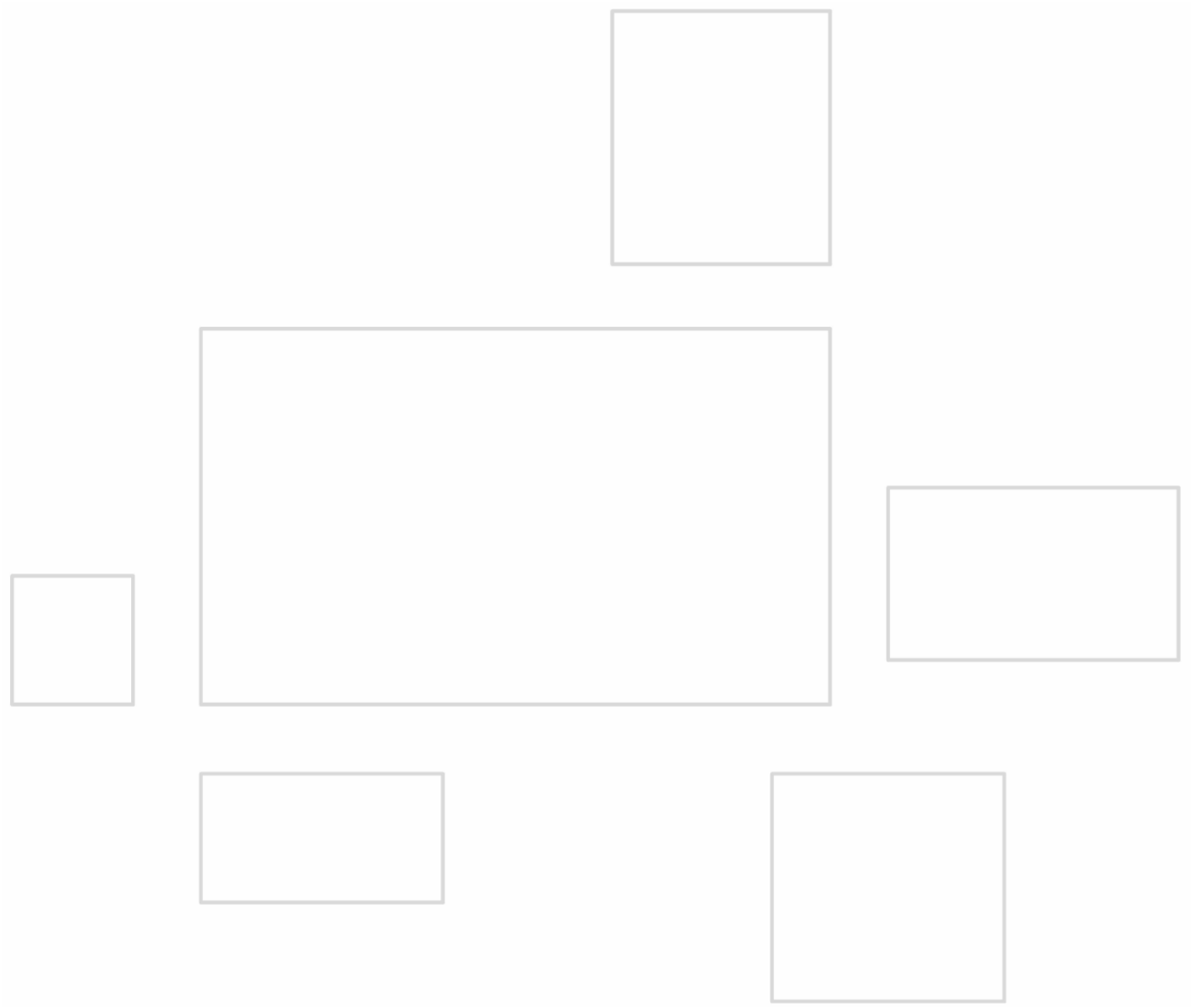
Storm sewer was sized to accommodate stormwater runoff for the 10-year design storm event intensity using rational method and manning's formulas. Where overland flow routes for the 100-year storm event were unable to be provided, the storm sewer was designed to convey the 100-year storm. Final storm sewer calculations are provided in **Appendix 4**.

**CONCLUSION**

The stormwater management features for the proposed development have been designed to comply with City of Watertown Ordinance and WDNR technical standards NR216/151. The amount of paved parking areas and drive aisles draining to the proposed rain gardens will exceed the amount of new parking and drive aisles constructed as part of this project. Runoff from the remaining impervious surfaces will drain offsite consistent with existing drainage patterns. Stormwater runoff discharging from the site will be treated to remove at least 60% of total suspended solids and at least 30% of phosphorous from paved parking and drive aisles annually via the proposed rain gardens.

# APPENDIX 1

## MAPS



# Jefferson County Land Information



## Areas



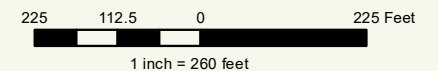
Override 1

Road Names



Jefferson County Geographic Information System

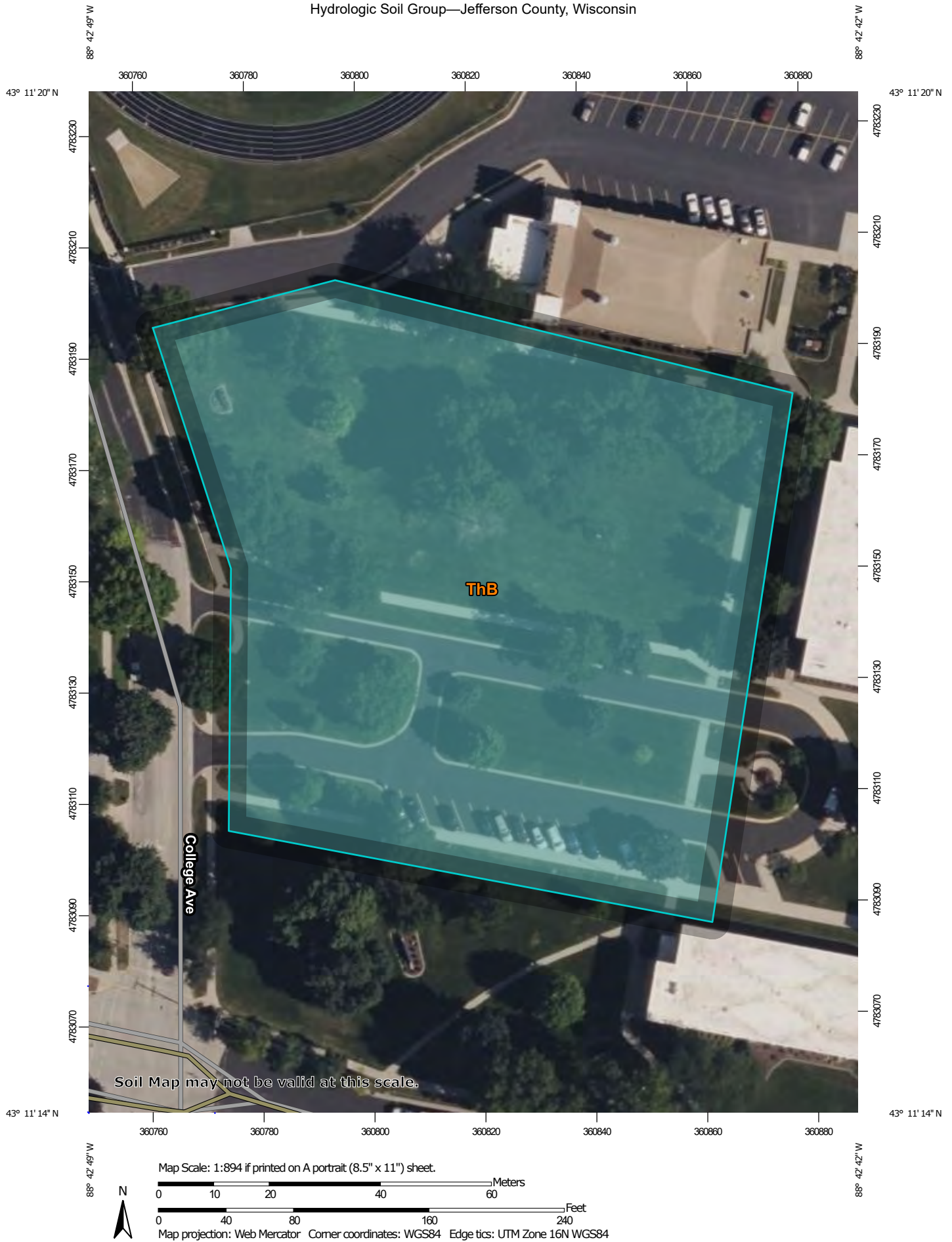
DISCLAIMER: This map is not a substitute for an actual field survey or onsite investigation. The accuracy of this map is limited to the quality of the records from which it was assembled. Other inherent inaccuracies occur during the compilation process. Jefferson County makes no warranty whatsoever concerning this information.



Printed on: July 23, 2025

Author: Public User

Hydrologic Soil Group—Jefferson County, Wisconsin



Soil Map may not be valid at this scale.



## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Lines

 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Points

 A  
 A/D  
 B  
 B/D

 C  
 C/D  
 D  
 Not rated or not available

### Water Features

 Streams and Canals

### Transportation

 Rails  
 Interstate Highways  
 US Routes  
 Major Roads  
 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Jefferson County, Wisconsin  
 Survey Area Data: Version 23, Sep 3, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 4, 2022—Sep 13, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Hydrologic Soil Group

| Map unit symbol                    | Map unit name                            | Rating | Acres in AOI | Percent of AOI |
|------------------------------------|------------------------------------------|--------|--------------|----------------|
| ThB                                | Theresa silt loam, 2 to 6 percent slopes | C      | 2.4          | 100.0%         |
| <b>Totals for Area of Interest</b> |                                          |        | <b>2.4</b>   | <b>100.0%</b>  |

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

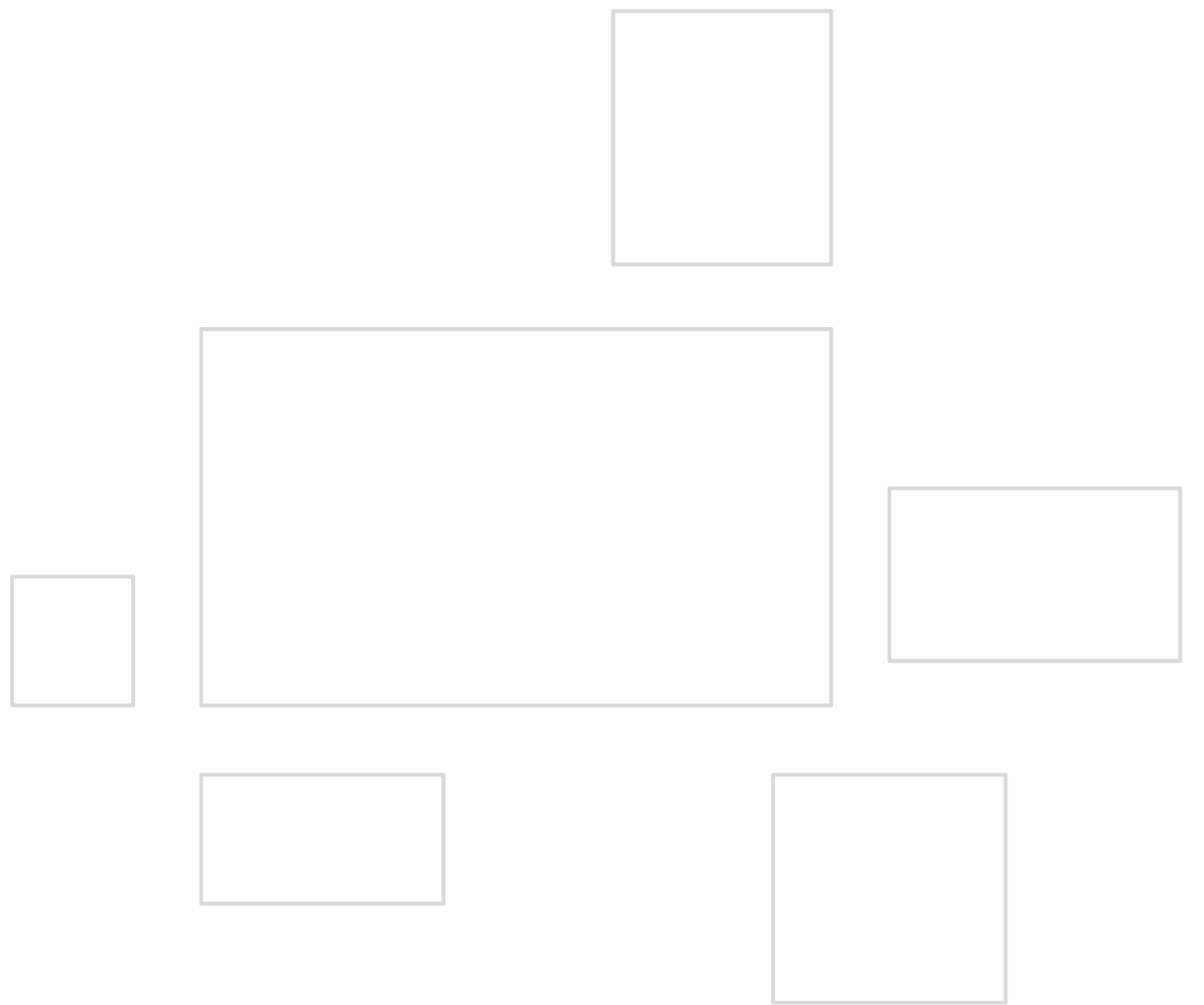
*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

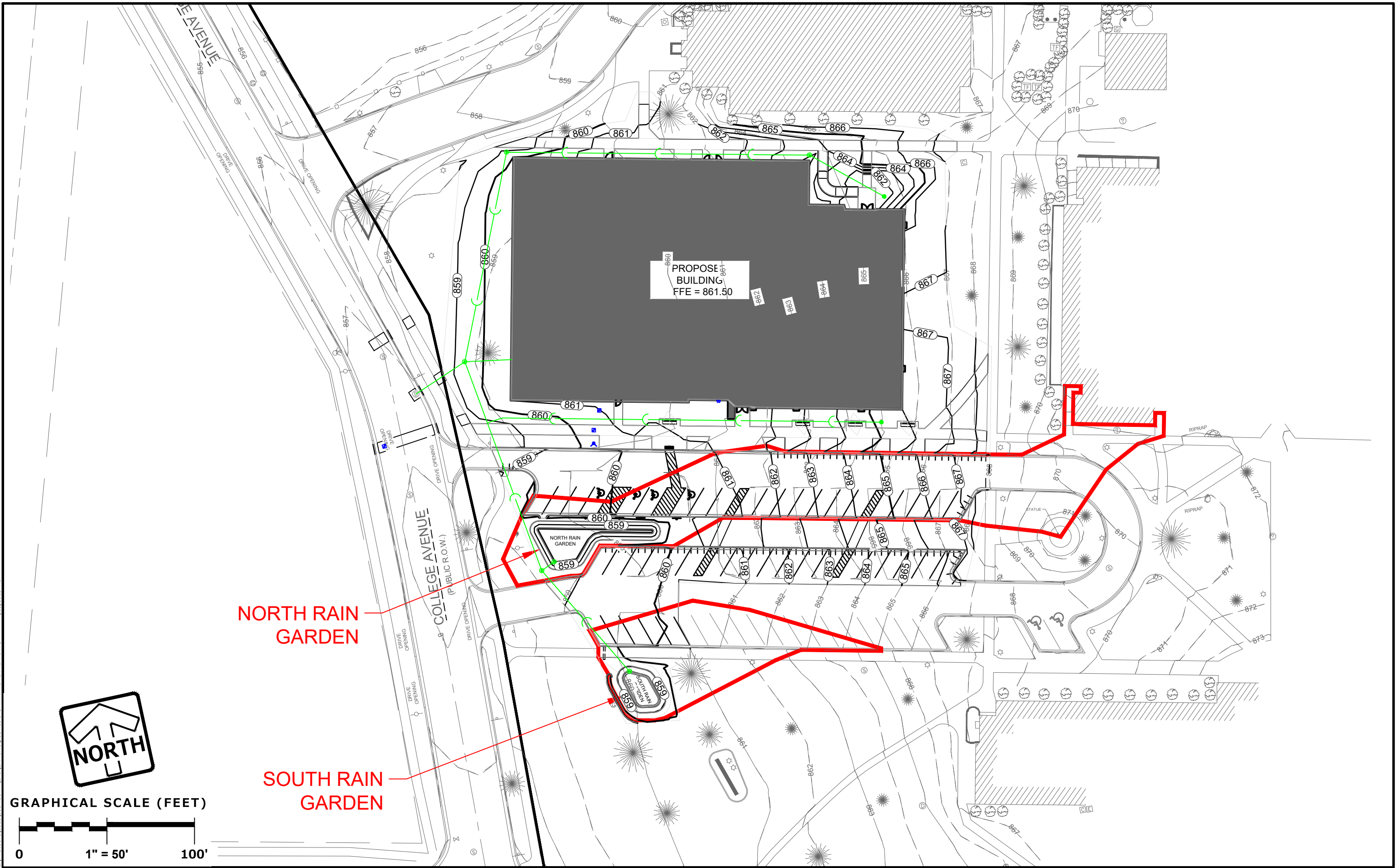
*Tie-break Rule:* Higher

## **APPENDIX 2**

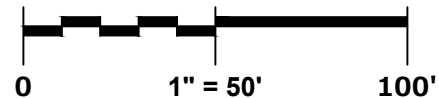
# **POST-DEVELOPMENT CONDITIONS**



Z:\PROJECTS\2023\5384.10-WI\CAD\EXHIBITS\5384.10 STORMWATER EXHIBIT.DWG 7/23/2025 4:17 PM



GRAPHICAL SCALE (FEET)



# PROPOSED DRAINAGE AREAS EXHIBIT

PINNACLE ENGINEERING GROUP

20725 WATERTOWN ROAD | SUITE 100 | BROOKFIELD, WI 53186 | WWW.PINNACLE-ENGR.COM |

07/24/2025

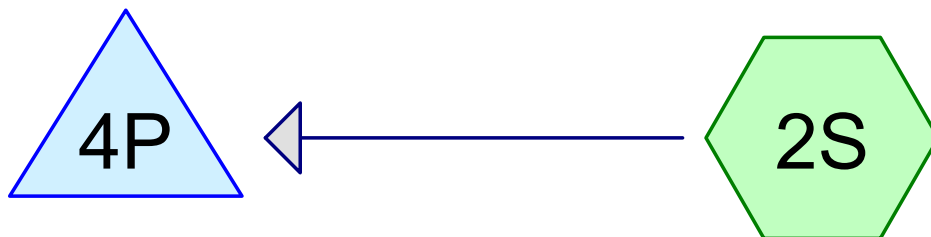
PLAN | DESIGN | DELIVER

PEG JOB# 5384.10



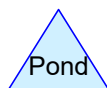
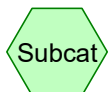
North Rain Garden

Area 1S



South Rain Garden

Area 2S



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1S: Area 1S**

Runoff Area=14,170 sf 69.35% Impervious Runoff Depth>2.95"  
Tc=6.0 min CN=91 Runoff=1.62 cfs 0.080 af

**Subcatchment2S: Area 2S**

Runoff Area=5,505 sf 61.36% Impervious Runoff Depth>2.76"  
Tc=6.0 min CN=89 Runoff=0.60 cfs 0.029 af

**Pond 3P: North Rain Garden**

Peak Elev=857.68' Storage=495 cf Inflow=1.62 cfs 0.080 af  
Discarded=0.00 cfs 0.002 af Primary=1.62 cfs 0.069 af Secondary=0.00 cfs 0.000 af Outflow=1.62 cfs 0.071 af

**Pond 4P: South Rain Garden**

Peak Elev=858.09' Storage=289 cf Inflow=0.60 cfs 0.029 af  
Discarded=0.00 cfs 0.001 af Primary=0.60 cfs 0.022 af Secondary=0.00 cfs 0.000 af Outflow=0.60 cfs 0.023 af

**Total Runoff Area = 0.452 ac Runoff Volume = 0.109 af Average Runoff Depth = 2.90"**  
**32.88% Pervious = 0.149 ac 67.12% Impervious = 0.303 ac**

**Summary for Subcatchment 1S: Area 1S**

Runoff = 1.62 cfs @ 12.13 hrs, Volume= 0.080 af, Depth> 2.95"

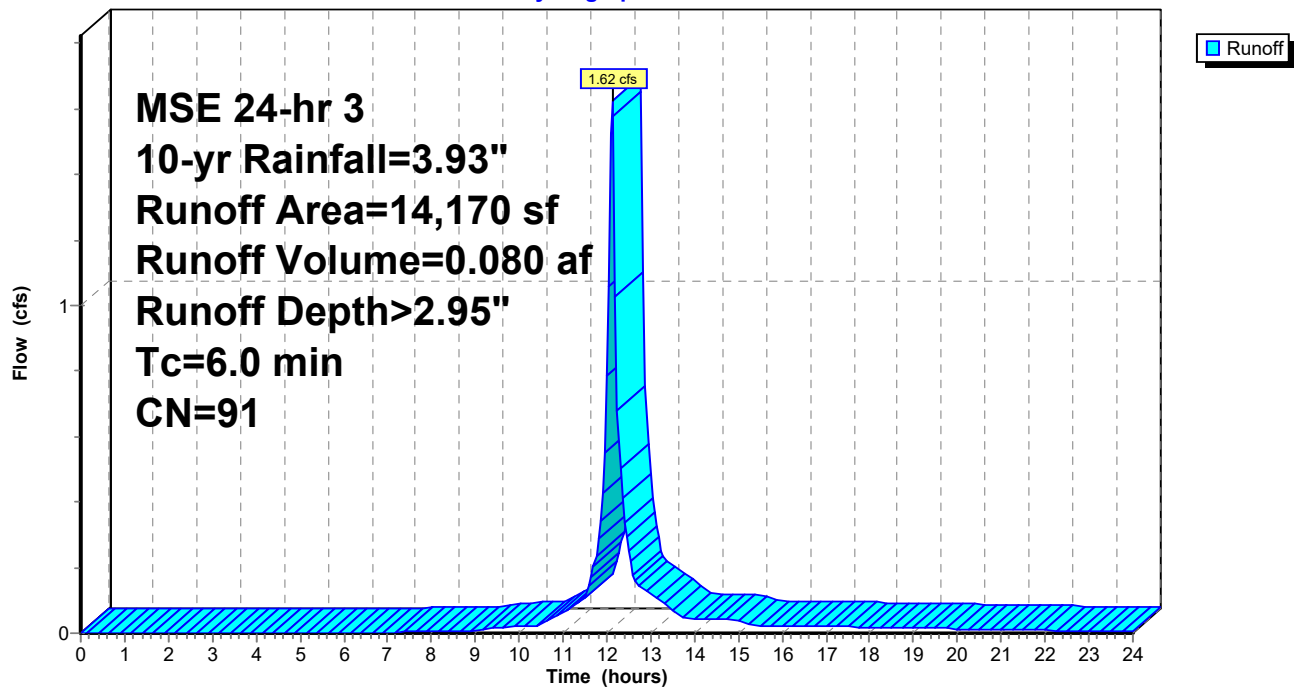
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
MSE 24-hr 3 10-yr Rainfall=3.93"

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 8,883     | 98 | Paved parking and roads       |
| * | 944       | 98 | Sidewalks                     |
|   | 4,343     | 74 | >75% Grass cover, Good, HSG C |
|   | 14,170    | 91 | Weighted Average              |
|   | 4,343     |    | 30.65% Pervious Area          |
|   | 9,827     |    | 69.35% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR-55 Minimum |

**Subcatchment 1S: Area 1S**

Hydrograph



**Summary for Subcatchment 2S: Area 2S**

Runoff = 0.60 cfs @ 12.13 hrs, Volume= 0.029 af, Depth> 2.76"

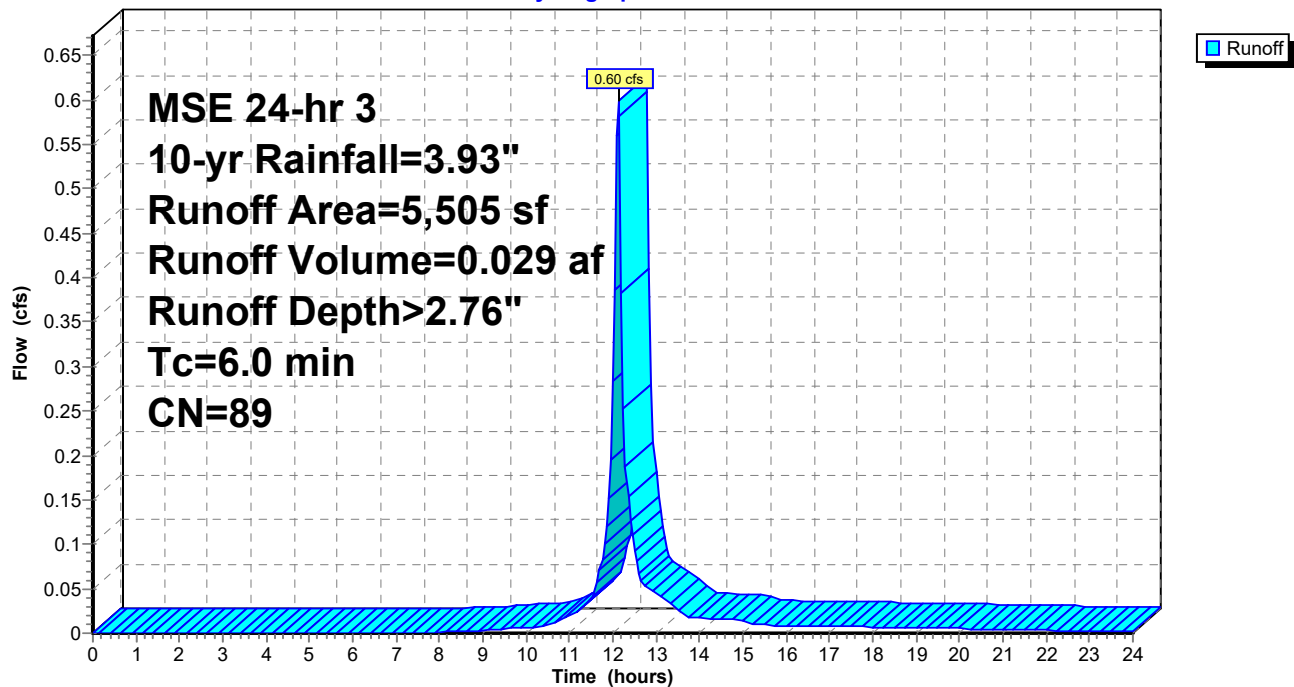
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
MSE 24-hr 3 10-yr Rainfall=3.93"

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 2,715     | 98 | Paved parking and roads       |
| * | 663       | 98 | Sidewalks                     |
|   | 2,127     | 74 | >75% Grass cover, Good, HSG C |
|   | 5,505     | 89 | Weighted Average              |
|   | 2,127     |    | 38.64% Pervious Area          |
|   | 3,378     |    | 61.36% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR-55 Minimum |

**Subcatchment 2S: Area 2S**

Hydrograph



### Summary for Pond 3P: North Rain Garden

Inflow Area = 0.325 ac, 69.35% Impervious, Inflow Depth > 2.95" for 10-yr event  
 Inflow = 1.62 cfs @ 12.13 hrs, Volume= 0.080 af  
 Outflow = 1.62 cfs @ 12.14 hrs, Volume= 0.071 af, Atten= 0%, Lag= 0.7 min  
 Discarded = 0.00 cfs @ 12.14 hrs, Volume= 0.002 af  
 Primary = 1.62 cfs @ 12.14 hrs, Volume= 0.069 af  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
 Peak Elev= 857.68' @ 12.14 hrs Surf.Area= 462 sf Storage= 495 cf

Plug-Flow detention time= 66.5 min calculated for 0.071 af (88% of inflow)  
 Center-of-Mass det. time= 20.4 min ( 800.8 - 780.5 )

| Volume | Invert  | Avail.Storage | Storage Description                                        |
|--------|---------|---------------|------------------------------------------------------------|
| #1     | 856.50' | 1,736 cf      | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Perim.<br>(feet) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) | Wet.Area<br>(sq-ft) |
|---------------------|----------------------|------------------|---------------------------|---------------------------|---------------------|
| 856.50              | 376                  | 147.0            | 0                         | 0                         | 376                 |
| 858.50              | 527                  | 154.0            | 899                       | 899                       | 721                 |
| 859.50              | 1,193                | 179.0            | 838                       | 1,736                     | 1,404               |

| Device | Routing   | Invert  | Outlet Devices                                                                                                                                                                                                                                                                   |
|--------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Discarded | 856.50' | <b>0.130 in/hr Exfiltration over Surface area</b>                                                                                                                                                                                                                                |
| #2     | Primary   | 855.29' | <b>10.0" Round Culvert</b><br>L= 8.6' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 855.29' / 855.19' S= 0.0116 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf                                                                    |
| #3     | Device 2  | 857.50' | <b>24.0" Horiz. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                                                                                                                                                                  |
| #4     | Secondary | 859.25' | <b>6.0' long x 8.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00<br>2.50 3.00 3.50 4.00 4.50 5.00 5.50<br>Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64<br>2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74 |

**Discarded OutFlow** Max=0.00 cfs @ 12.14 hrs HW=857.68' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.00 cfs)

**Primary OutFlow** Max=1.57 cfs @ 12.14 hrs HW=857.68' (Free Discharge)

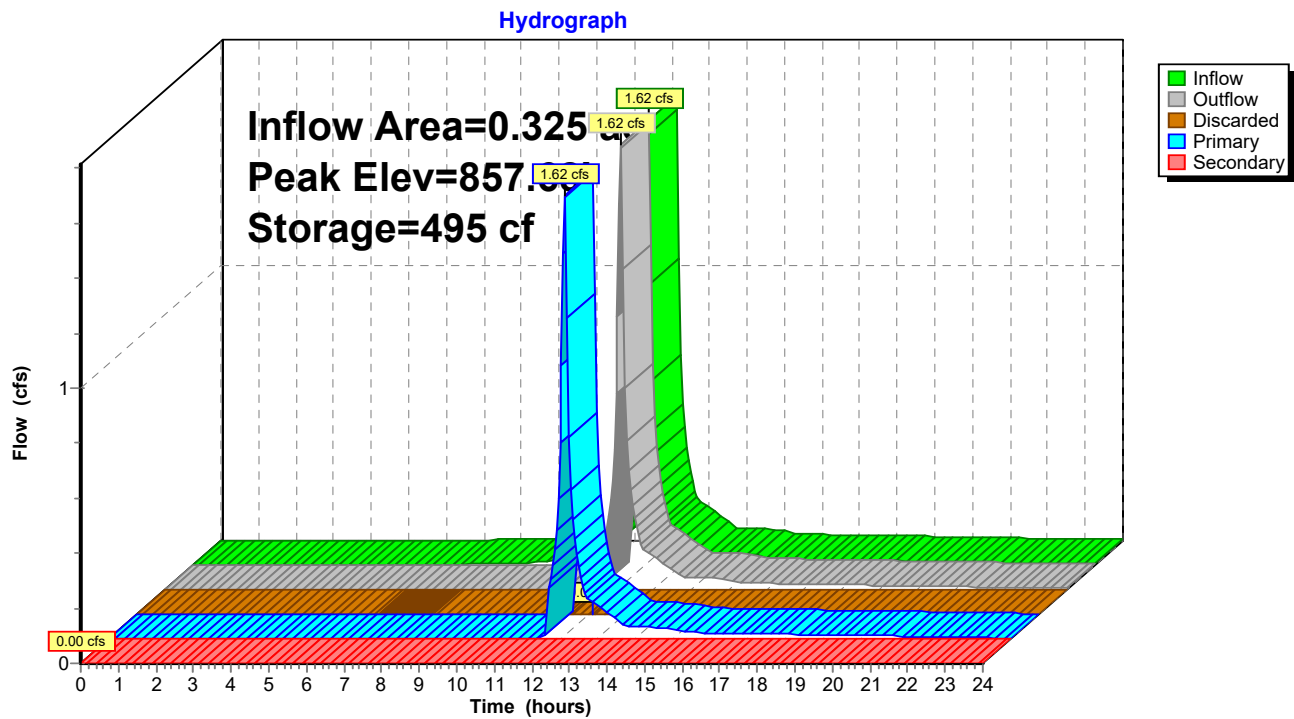
↑ **2=Culvert** (Passes 1.57 cfs of 3.69 cfs potential flow)

↑ **3=Orifice/Grate** (Weir Controls 1.57 cfs @ 1.39 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=856.50' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

## Pond 3P: North Rain Garden



### Summary for Pond 4P: South Rain Garden

[88] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 0.126 ac, 61.36% Impervious, Inflow Depth > 2.76" for 10-yr event  
 Inflow = 0.60 cfs @ 12.13 hrs, Volume= 0.029 af  
 Outflow = 0.60 cfs @ 12.14 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.8 min  
 Discarded = 0.00 cfs @ 12.14 hrs, Volume= 0.001 af  
 Primary = 0.60 cfs @ 12.14 hrs, Volume= 0.022 af  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
 Peak Elev= 858.09' @ 12.14 hrs Surf.Area= 312 sf Storage= 289 cf

Plug-Flow detention time= 88.8 min calculated for 0.023 af (79% of inflow)  
 Center-of-Mass det. time= 28.5 min ( 814.8 - 786.2 )

| Volume | Invert  | Avail.Storage | Storage Description                                        |
|--------|---------|---------------|------------------------------------------------------------|
| #1     | 857.00' | 1,318 cf      | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Perim.<br>(feet) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) | Wet.Area<br>(sq-ft) |
|---------------------|----------------------|------------------|---------------------------|---------------------------|---------------------|
| 857.00              | 230                  | 60.0             | 0                         | 0                         | 230                 |
| 858.00              | 293                  | 66.0             | 261                       | 261                       | 317                 |
| 859.00              | 520                  | 85.0             | 401                       | 662                       | 558                 |
| 860.00              | 803                  | 104.0            | 656                       | 1,318                     | 859                 |

| Device | Routing   | Invert  | Outlet Devices                                                                                                                                                                                                 |
|--------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Discarded | 857.00' | <b>0.130 in/hr Exfiltration over Surface area</b>                                                                                                                                                              |
| #2     | Primary   | 855.34' | <b>10.0" Round Culvert</b><br>L= 76.2' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 855.34' / 855.19' S= 0.0020 ' S Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf |
| #3     | Device 2  | 858.00' | <b>24.0" Horiz. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                                                                                                |
| #4     | Secondary | 859.20' | <b>4.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64                              |

**Discarded OutFlow** Max=0.00 cfs @ 12.14 hrs HW=858.09' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.00 cfs)

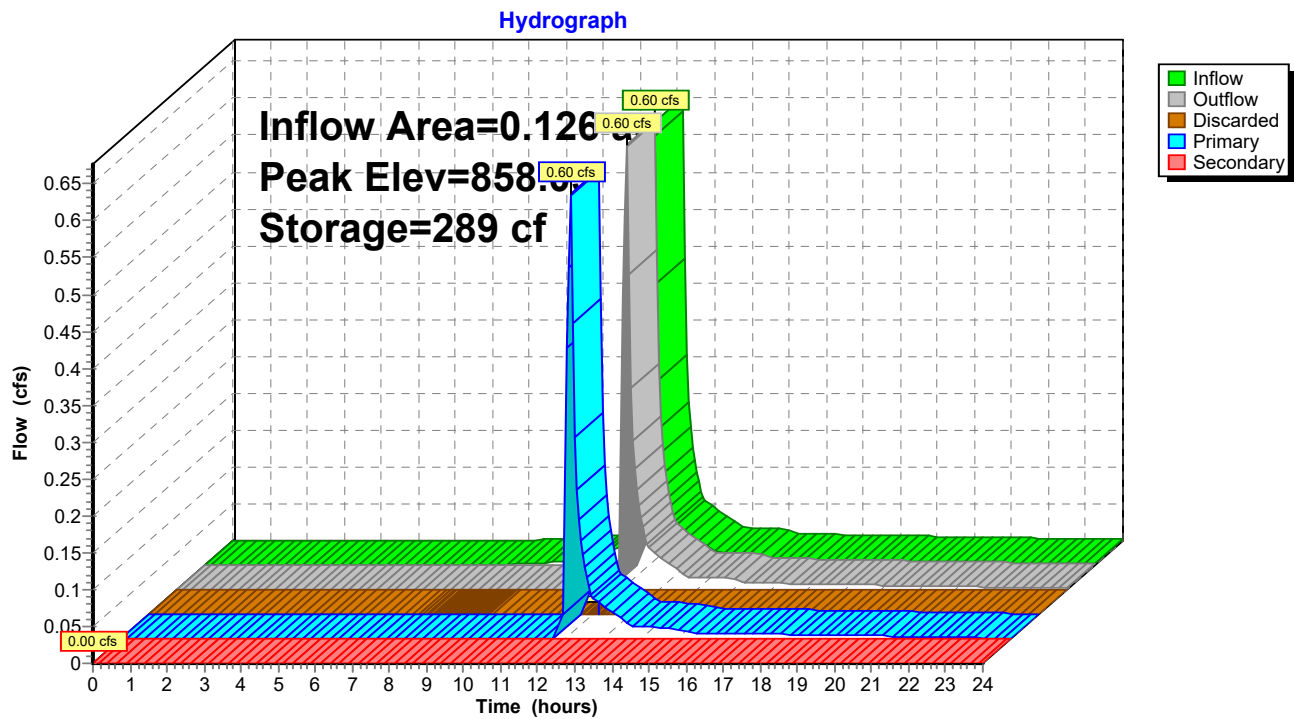
**Primary OutFlow** Max=0.58 cfs @ 12.14 hrs HW=858.09' (Free Discharge)

↑ **2=Culvert** (Passes 0.58 cfs of 2.95 cfs potential flow)

↑ **3=Orifice/Grate** (Weir Controls 0.58 cfs @ 1.00 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=857.00' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

**Pond 4P: South Rain Garden**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points  
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Subcatchment1S: Area 1S**

Runoff Area=14,170 sf 69.35% Impervious Runoff Depth>5.14"  
Tc=6.0 min CN=91 Runoff=2.73 cfs 0.139 af

**Subcatchment2S: Area 2S**

Runoff Area=5,505 sf 61.36% Impervious Runoff Depth>4.92"  
Tc=6.0 min CN=89 Runoff=1.03 cfs 0.052 af

**Pond 3P: North Rain Garden**

Peak Elev=857.76' Storage=531 cf Inflow=2.73 cfs 0.139 af  
Discarded=0.00 cfs 0.002 af Primary=2.73 cfs 0.128 af Secondary=0.00 cfs 0.000 af Outflow=2.73 cfs 0.130 af

**Pond 4P: South Rain Garden**

Peak Elev=858.14' Storage=303 cf Inflow=1.03 cfs 0.052 af  
Discarded=0.00 cfs 0.001 af Primary=1.03 cfs 0.045 af Secondary=0.00 cfs 0.000 af Outflow=1.03 cfs 0.046 af

**Total Runoff Area = 0.452 ac Runoff Volume = 0.191 af Average Runoff Depth = 5.08"**  
**32.88% Pervious = 0.149 ac 67.12% Impervious = 0.303 ac**

**Summary for Subcatchment 1S: Area 1S**

Runoff = 2.73 cfs @ 12.13 hrs, Volume= 0.139 af, Depth> 5.14"

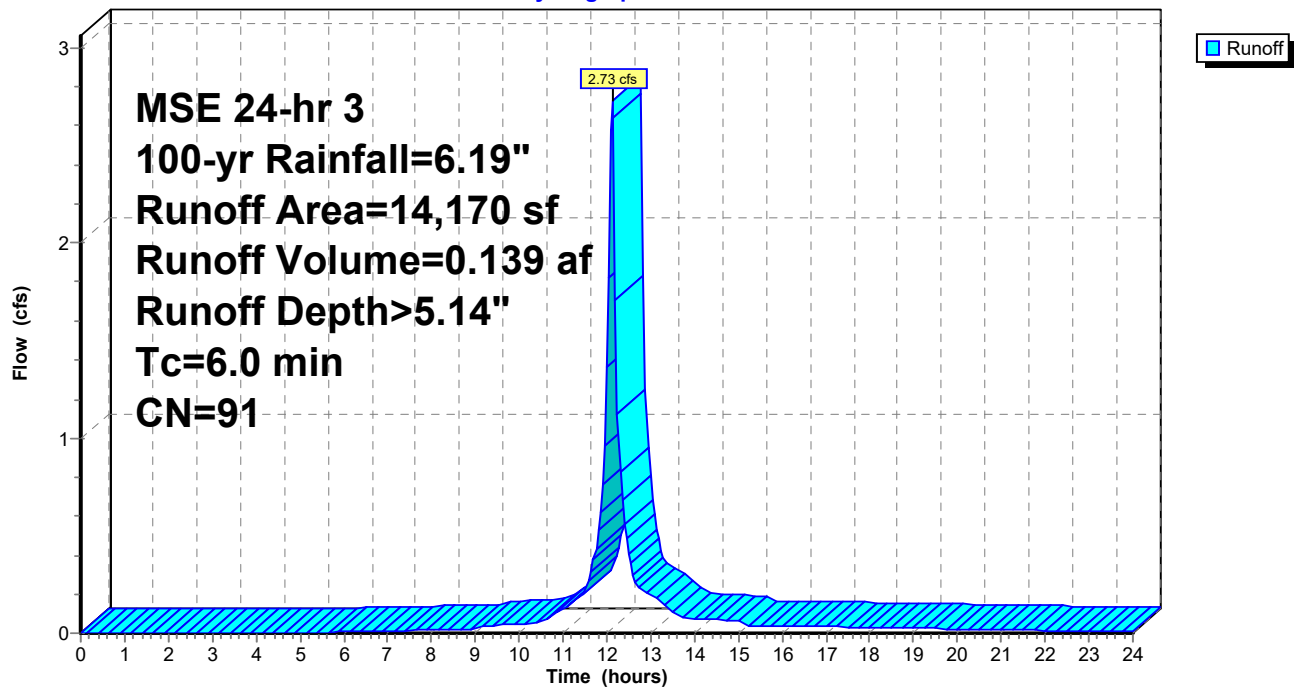
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
MSE 24-hr 3 100-yr Rainfall=6.19"

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 8,883     | 98 | Paved parking and roads       |
| * | 944       | 98 | Sidewalks                     |
|   | 4,343     | 74 | >75% Grass cover, Good, HSG C |
|   | 14,170    | 91 | Weighted Average              |
|   | 4,343     |    | 30.65% Pervious Area          |
|   | 9,827     |    | 69.35% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR-55 Minimum |

**Subcatchment 1S: Area 1S**

Hydrograph



**Summary for Subcatchment 2S: Area 2S**

Runoff = 1.03 cfs @ 12.13 hrs, Volume= 0.052 af, Depth> 4.92"

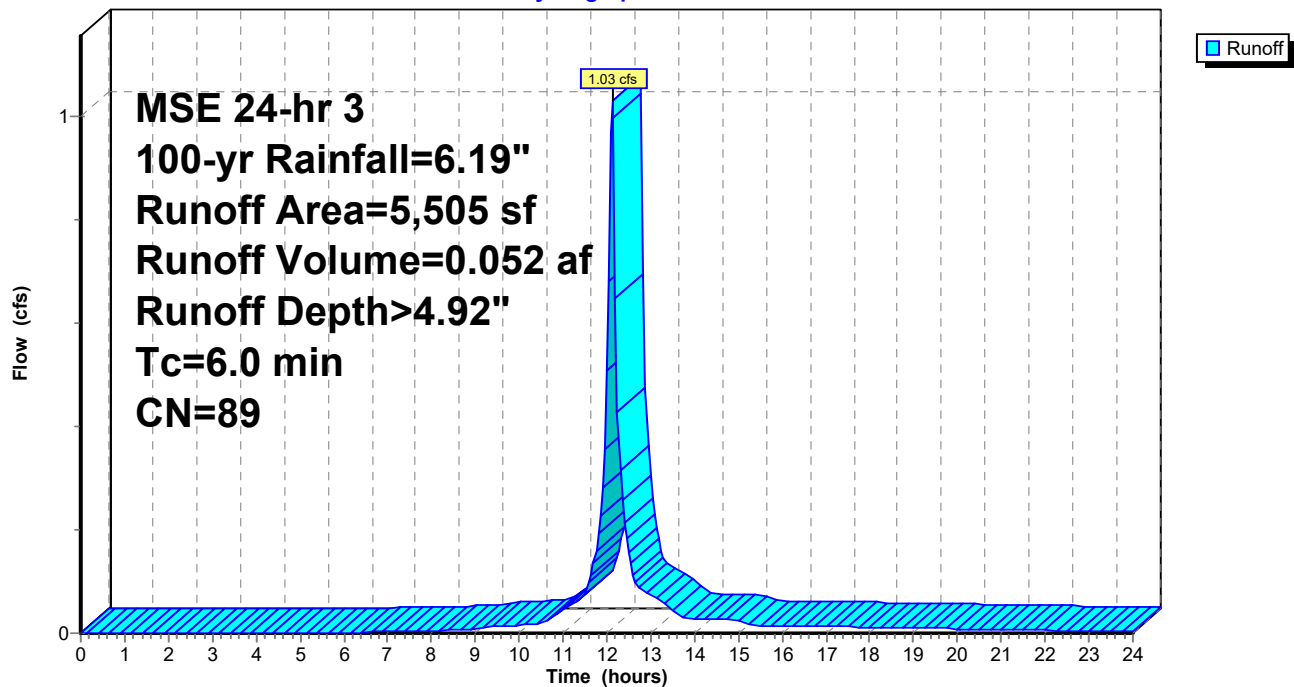
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
MSE 24-hr 3 100-yr Rainfall=6.19"

|   | Area (sf) | CN | Description                   |
|---|-----------|----|-------------------------------|
| * | 2,715     | 98 | Paved parking and roads       |
| * | 663       | 98 | Sidewalks                     |
|   | 2,127     | 74 | >75% Grass cover, Good, HSG C |
|   | 5,505     | 89 | Weighted Average              |
|   | 2,127     |    | 38.64% Pervious Area          |
|   | 3,378     |    | 61.36% Impervious Area        |

| Tc<br>(min) | Length<br>(feet) | Slope<br>(ft/ft) | Velocity<br>(ft/sec) | Capacity<br>(cfs) | Description                 |
|-------------|------------------|------------------|----------------------|-------------------|-----------------------------|
| 6.0         |                  |                  |                      |                   | Direct Entry, TR-55 Minimum |

**Subcatchment 2S: Area 2S**

Hydrograph



### Summary for Pond 3P: North Rain Garden

Inflow Area = 0.325 ac, 69.35% Impervious, Inflow Depth > 5.14" for 100-yr event  
 Inflow = 2.73 cfs @ 12.13 hrs, Volume= 0.139 af  
 Outflow = 2.73 cfs @ 12.14 hrs, Volume= 0.130 af, Atten= 0%, Lag= 0.6 min  
 Discarded = 0.00 cfs @ 12.14 hrs, Volume= 0.002 af  
 Primary = 2.73 cfs @ 12.14 hrs, Volume= 0.128 af  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
 Peak Elev= 857.76' @ 12.14 hrs Surf.Area= 468 sf Storage= 531 cf

Plug-Flow detention time= 48.2 min calculated for 0.130 af (93% of inflow)  
 Center-of-Mass det. time= 17.2 min ( 786.8 - 769.7 )

| Volume | Invert  | Avail.Storage | Storage Description                                        |
|--------|---------|---------------|------------------------------------------------------------|
| #1     | 856.50' | 1,736 cf      | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |

| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Perim.<br>(feet) | Inc.Store<br>(cubic-feet) | Cum.Store<br>(cubic-feet) | Wet.Area<br>(sq-ft) |
|---------------------|----------------------|------------------|---------------------------|---------------------------|---------------------|
| 856.50              | 376                  | 147.0            | 0                         | 0                         | 376                 |
| 858.50              | 527                  | 154.0            | 899                       | 899                       | 721                 |
| 859.50              | 1,193                | 179.0            | 838                       | 1,736                     | 1,404               |

| Device | Routing   | Invert  | Outlet Devices                                                                                                                                                                                                                                                                   |
|--------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Discarded | 856.50' | <b>0.130 in/hr Exfiltration over Surface area</b>                                                                                                                                                                                                                                |
| #2     | Primary   | 855.29' | <b>10.0" Round Culvert</b><br>L= 8.6' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 855.29' / 855.19' S= 0.0116 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf                                                                    |
| #3     | Device 2  | 857.50' | <b>24.0" Horiz. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                                                                                                                                                                  |
| #4     | Secondary | 859.25' | <b>6.0' long x 8.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00<br>2.50 3.00 3.50 4.00 4.50 5.00 5.50<br>Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64<br>2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74 |

**Discarded OutFlow** Max=0.00 cfs @ 12.14 hrs HW=857.75' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.00 cfs)

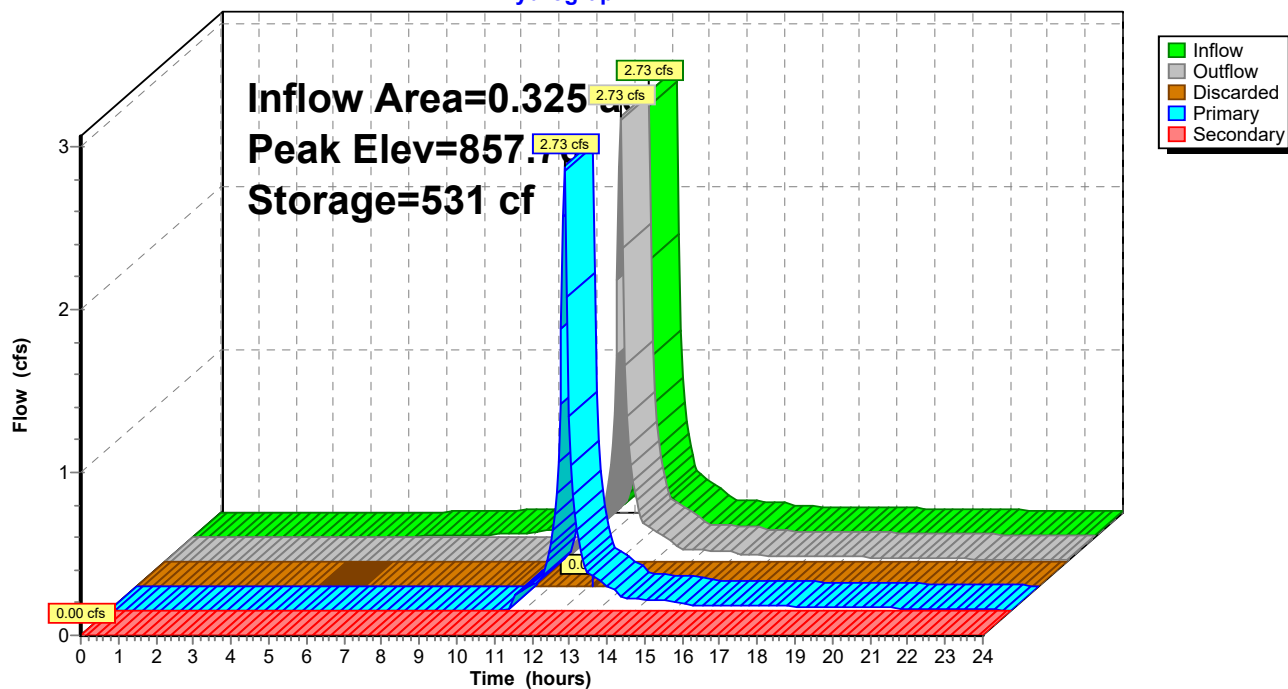
**Primary OutFlow** Max=2.63 cfs @ 12.14 hrs HW=857.75' (Free Discharge)

↑ **2=Culvert** (Passes 2.63 cfs of 3.76 cfs potential flow)

↑ **3=Orifice/Grate** (Weir Controls 2.63 cfs @ 1.65 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=856.50' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)



### Summary for Pond 4P: South Rain Garden

Inflow Area = 0.126 ac, 61.36% Impervious, Inflow Depth > 4.92" for 100-yr event  
 Inflow = 1.03 cfs @ 12.13 hrs, Volume= 0.052 af  
 Outflow = 1.03 cfs @ 12.14 hrs, Volume= 0.046 af, Atten= 0%, Lag= 0.6 min  
 Discarded = 0.00 cfs @ 12.14 hrs, Volume= 0.001 af  
 Primary = 1.03 cfs @ 12.14 hrs, Volume= 0.045 af  
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
 Peak Elev= 858.14' @ 12.14 hrs Surf.Area= 320 sf Storage= 303 cf

Plug-Flow detention time= 66.6 min calculated for 0.046 af (88% of inflow)  
 Center-of-Mass det. time= 21.4 min ( 796.2 - 774.8 )

| Volume              | Invert               | Avail.Storage    | Storage Description                                        |                           |                     |
|---------------------|----------------------|------------------|------------------------------------------------------------|---------------------------|---------------------|
| #1                  | 857.00'              | 1,318 cf         | <b>Custom Stage Data (Irregular)</b> Listed below (Recalc) |                           |                     |
| Elevation<br>(feet) | Surf.Area<br>(sq-ft) | Perim.<br>(feet) | Inc.Store<br>(cubic-feet)                                  | Cum.Store<br>(cubic-feet) | Wet.Area<br>(sq-ft) |
| 857.00              | 230                  | 60.0             | 0                                                          | 0                         | 230                 |
| 858.00              | 293                  | 66.0             | 261                                                        | 261                       | 317                 |
| 859.00              | 520                  | 85.0             | 401                                                        | 662                       | 558                 |
| 860.00              | 803                  | 104.0            | 656                                                        | 1,318                     | 859                 |

| Device | Routing   | Invert  | Outlet Devices                                                                                                                                                                                                 |
|--------|-----------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| #1     | Discarded | 857.00' | <b>0.130 in/hr Exfiltration over Surface area</b>                                                                                                                                                              |
| #2     | Primary   | 855.34' | <b>10.0" Round Culvert</b><br>L= 76.2' CPP, square edge headwall, Ke= 0.500<br>Inlet / Outlet Invert= 855.34' / 855.19' S= 0.0020 '/' Cc= 0.900<br>n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.55 sf |
| #3     | Device 2  | 858.00' | <b>24.0" Horiz. Orifice/Grate</b> C= 0.600<br>Limited to weir flow at low heads                                                                                                                                |
| #4     | Secondary | 859.20' | <b>4.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b><br>Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60<br>Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64                              |

**Discarded OutFlow** Max=0.00 cfs @ 12.14 hrs HW=858.13' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.00 cfs)

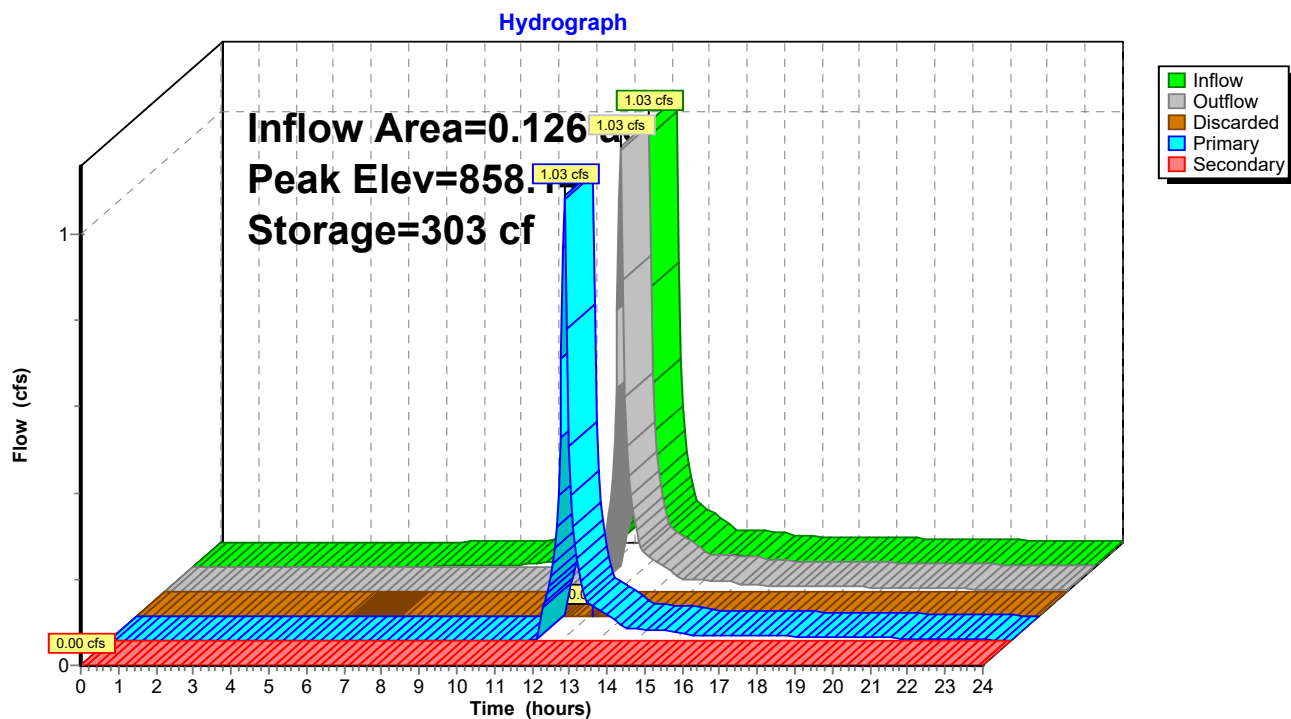
**Primary OutFlow** Max=0.99 cfs @ 12.14 hrs HW=858.13' (Free Discharge)

↑ **2=Culvert** (Passes 0.99 cfs of 2.98 cfs potential flow)

↑ **3=Orifice/Grate** (Weir Controls 0.99 cfs @ 1.19 fps)

**Secondary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=857.00' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

**Pond 4P: South Rain Garden**



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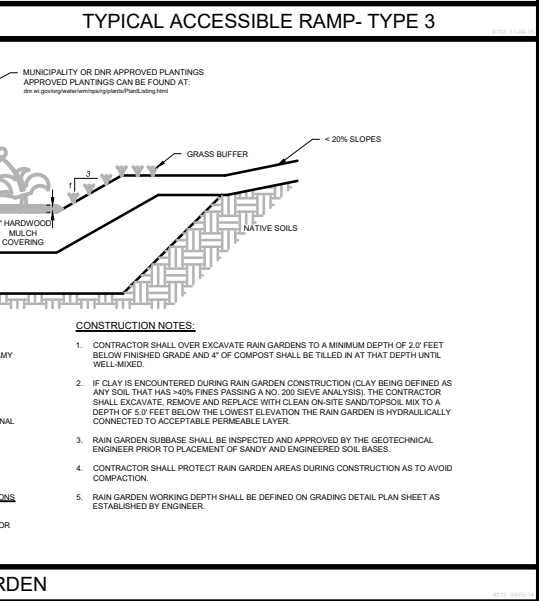
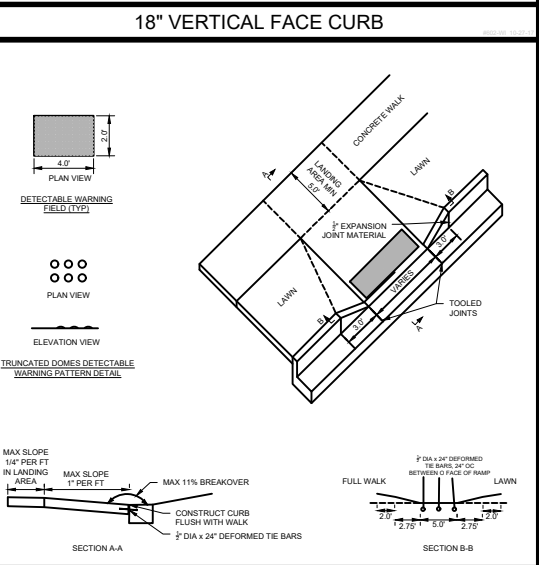
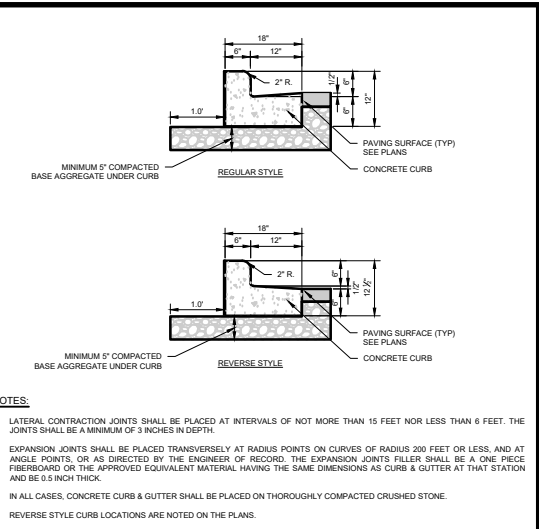
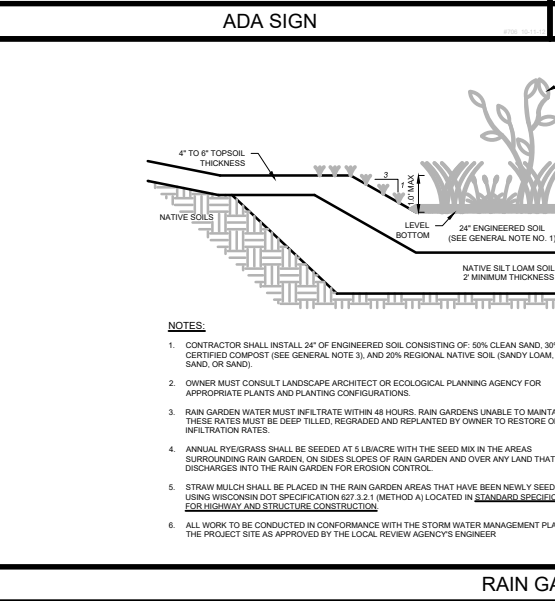
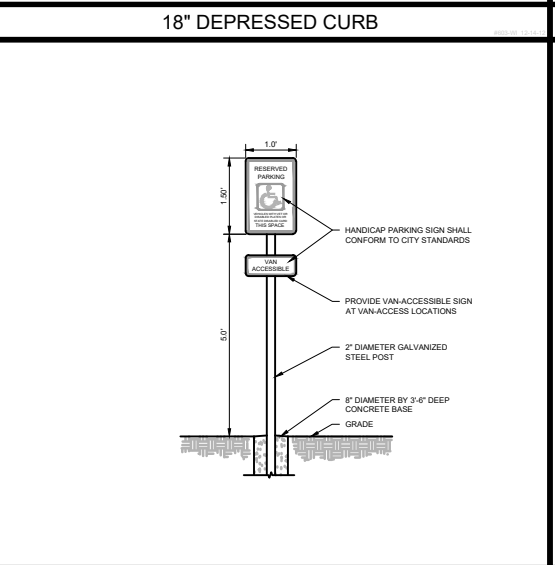
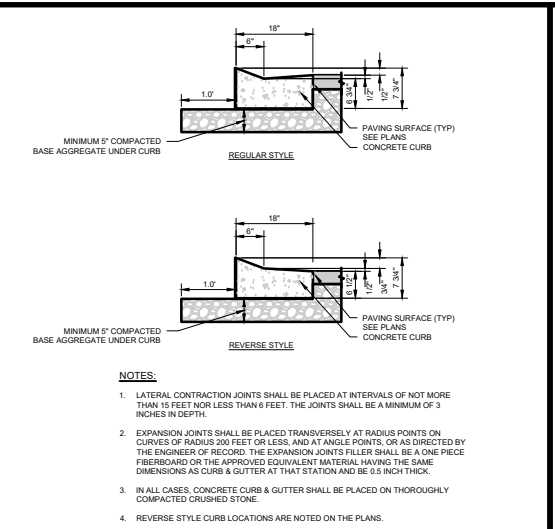
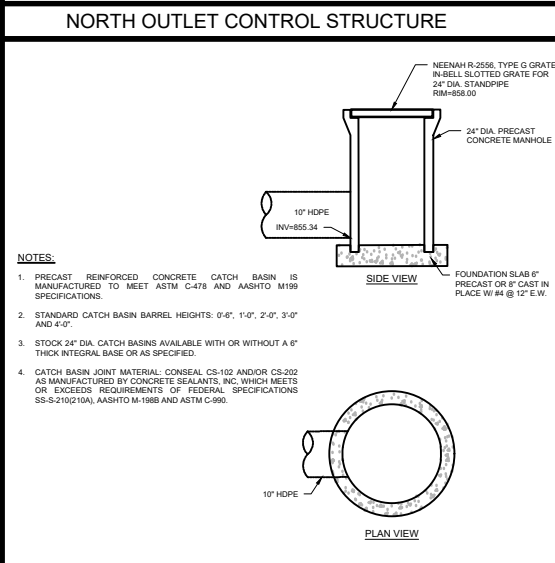
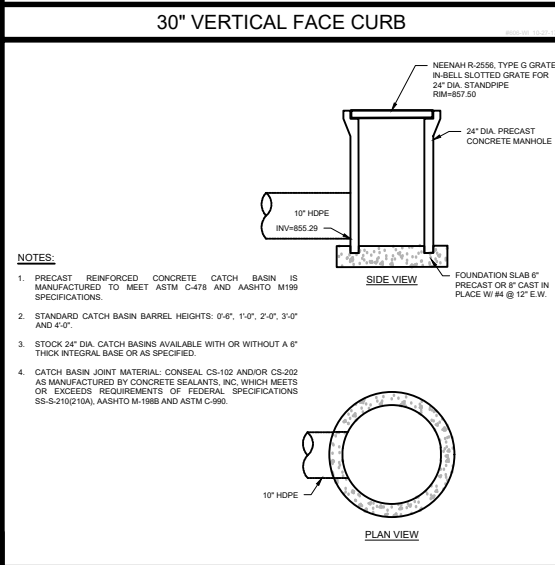
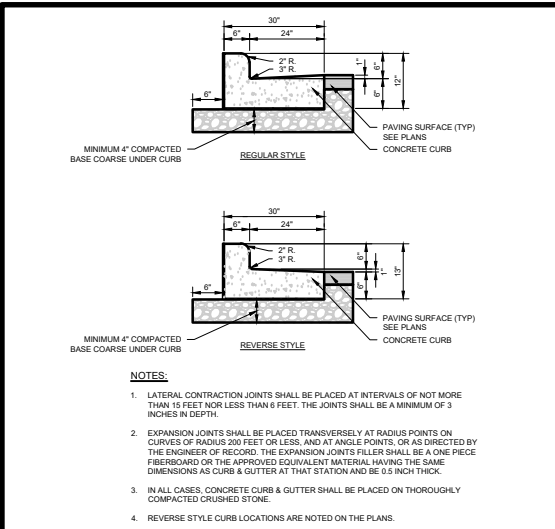
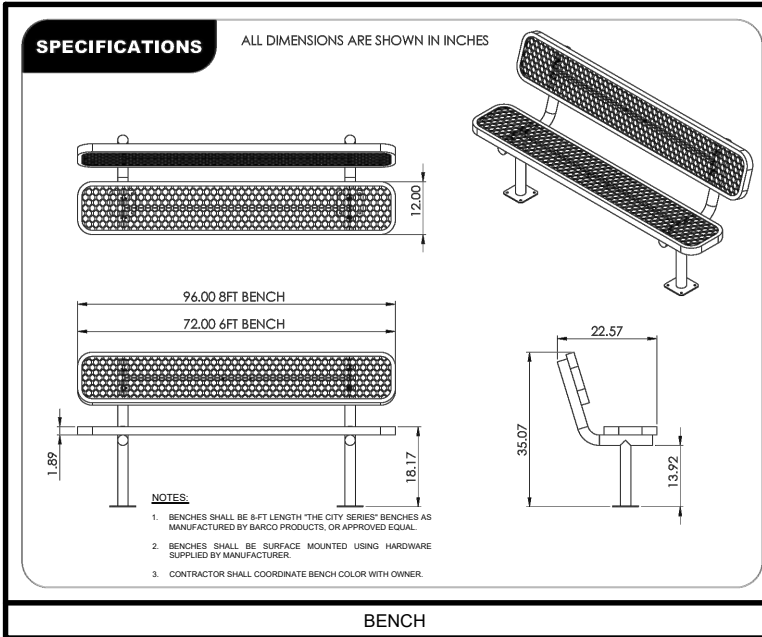
tredogroup



PINNACLE ENGINEERING GROUP  
PEG: 5834.10 - PROJECT PM: MTS

DESIGN  
DEVELOPMENT SET

NOT FOR  
CONSTRUCTION



COPYRIGHT STRANG, INC. 2025  
DRAWING SET DD  
DATE 08/08/2025  
PROJECT NO. 2025038

PROJECT TITLE  
LUTHER PREP MUSIC  
CENTER

1300 WESTERN AVE  
WATERTOWN, WI 53094

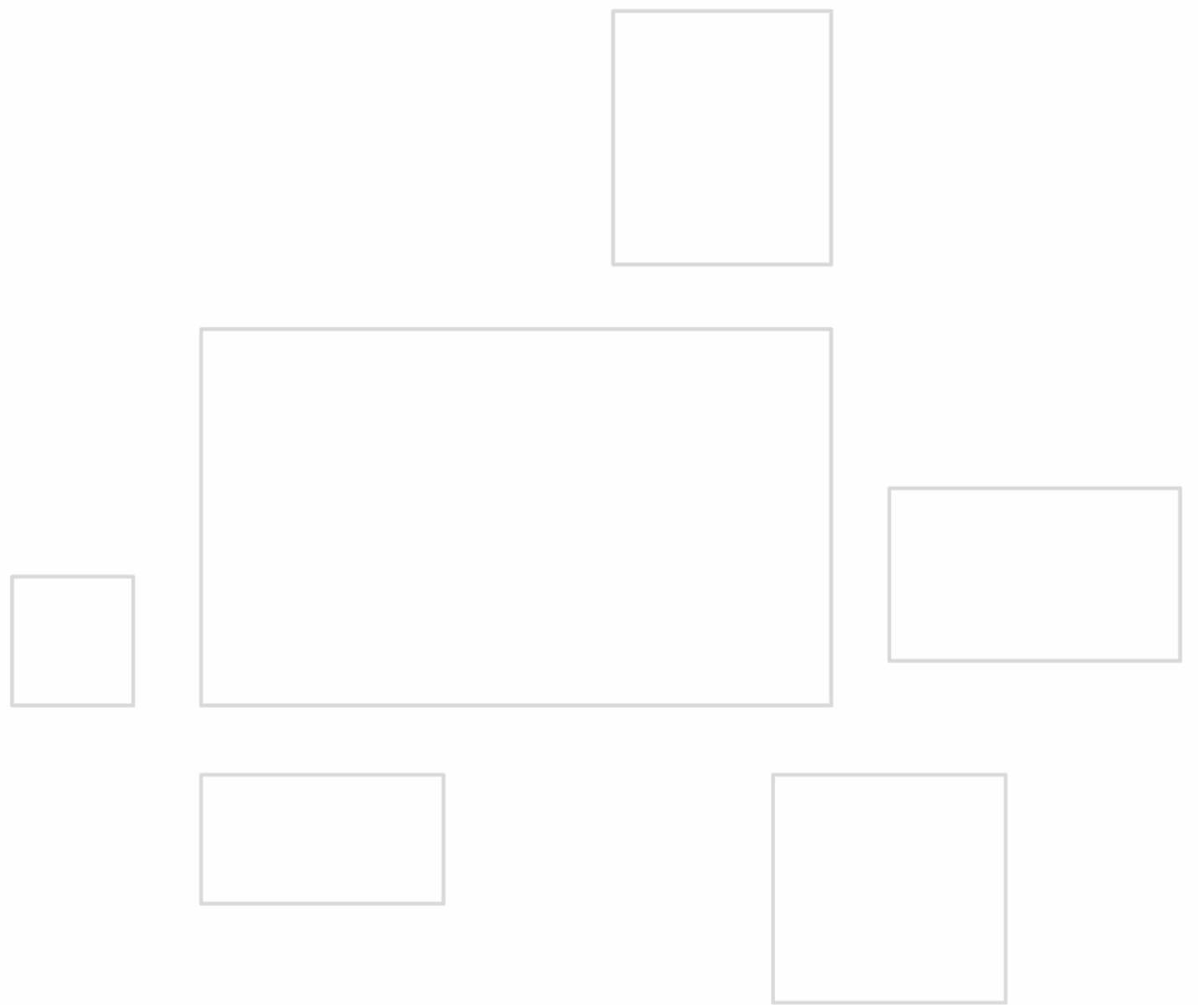
SHEET NAME  
CONSTRUCTION  
DETAILS

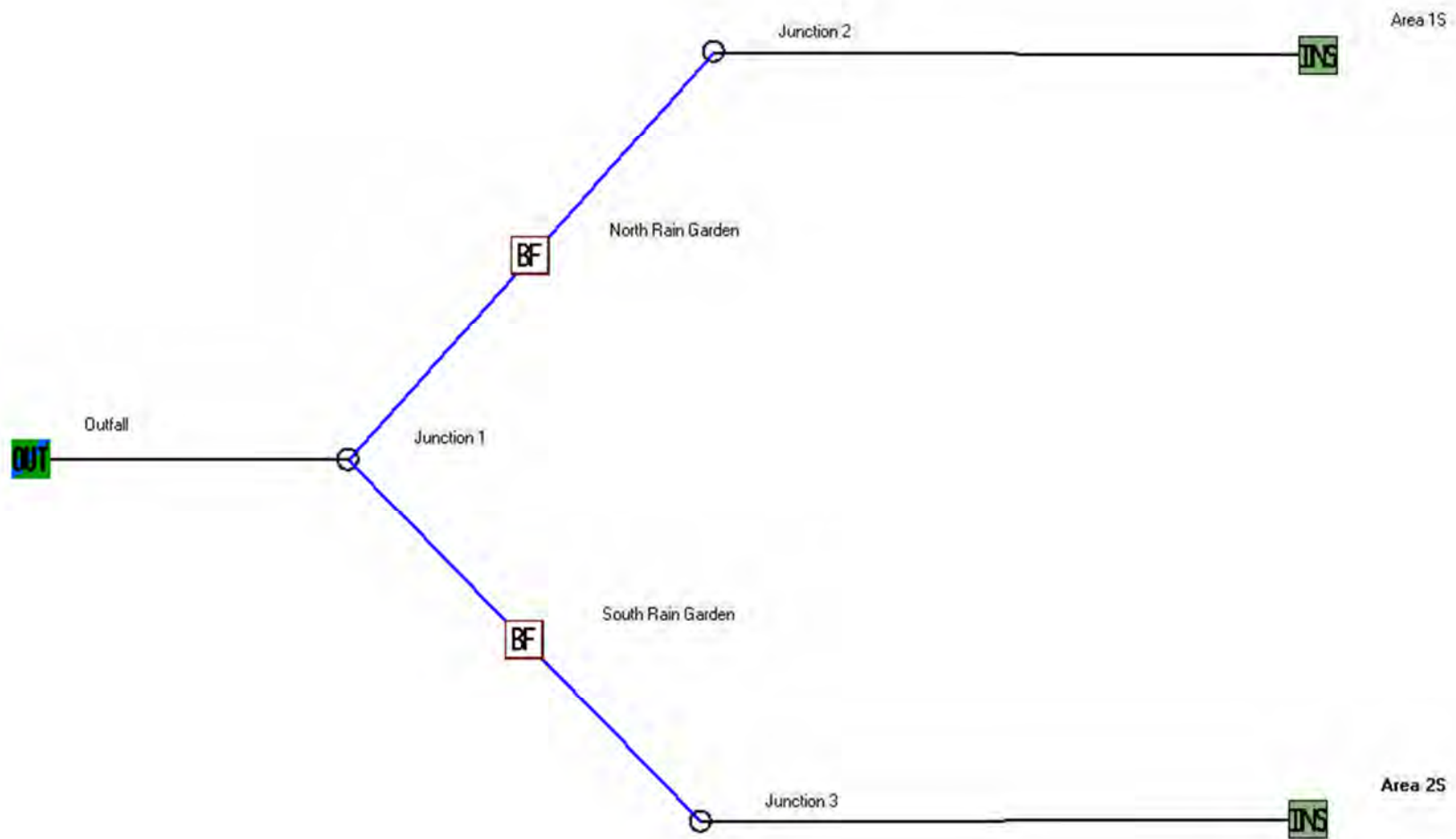
SHEET NO.

C-9

## **APPENDIX 3**

# **WATER QUALITY TREATMENT**





Data file name: Z:\Projects\2023\5384.10-WI\DESIGN\SWMP\SLAMM\5384.10 SLAMM 2025-07-24.mdb

WinSLAMM Version 10.5.0

Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN

Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI\_AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI\_SL06 Dec06.rsvx

Residential Street Delivery file name: C:\WinSLAMM Files\WI\_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\WinSLAMM Files\WI\_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI\_GEO03.ppdX

Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:

If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations

Seed for random number generator: -42

Study period starting date: 01/01/81

Study period ending date: 12/31/81

Start of Winter Season: 12/02

End of Winter Season: 03/12

Date: 07-23-2025

Time: 11:51:22

Site information:

LU# 1 - Institutional: Area 1S Total area (ac): 0.326

13 - Paved Parking 1: 0.204 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.022 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

51 - Small Landscaped Areas 1: 0.100 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Institutional: Area 2S Total area (ac): 0.126

13 - Paved Parking 1: 0.062 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

31 - Sidewalks 1: 0.015 ac. Connected Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

51 - Small Landscaped Areas 1: 0.049 ac. Normal Silty Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Biofilter CP# 1 (DS) - North Rain Garden

1. Top area (square feet) = 1193

2. Bottom area (square feet) = 376
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.13
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

| Soil Data               | Soil Type Fraction in Eng. Soil |
|-------------------------|---------------------------------|
| User-Defined Media Type | 1.000                           |
| Silt Loam               | 1.000                           |

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 6
2. Weir crest width (ft): 8
3. Height of datum to bottom of weir opening: 4.75

Outlet type: Vertical Stand Pipe

1. Stand pipe diameter (ft): 2
2. Stand pipe height above datum (ft): 3

Control Practice 2: Biofilter CP# 2 (DS) - South Rain Garden

1. Top area (square feet) = 803
2. Bottom area (square feet) = 203
3. Depth (ft): 5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0.13
6. Random infiltration rate generation? No

7. Infiltration rate fraction (side): 1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 0
10. Porosity of rock filled volume = 0
11. Engineered soil infiltration rate: 3.6
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0
  - Soil Data                                      Soil Type Fraction in Eng. Soil
  - User-Defined Media Type                                      1.000
  - Biofilter Outlet/Discharge Characteristics:
  - Outlet type: Broad Crested Weir
    - 1. Weir crest length (ft): 4
    - 2. Weir crest width (ft): 10
    - 3. Height of datum to bottom of weir opening: 4.2
  - Outlet type: Vertical Stand Pipe
    - 1. Stand pipe diameter (ft): 2
    - 2. Stand pipe height above datum (ft): 3

Data File: Z:\Projects\2023\5384.10-WI\DESIGN\SWMP\SLAMM\5384.10 SLAMM 2025-07-24.mdb

Rain File: WisReg - Madison WI 1981.RAN

Date: 07-23-25 Time: 11:30:39 AM

### Institutional: Area 1S Areas - Particulate Solids Yield (lbs)

|        | Land Use Totals | <b>Paved Parking 1</b> | Sidewalks 1 | Small Landscaped Areas 1 |
|--------|-----------------|------------------------|-------------|--------------------------|
| Total: | 142.39          | <b>125.7</b>           | 7.819       | 8.895                    |

### Institutional: Area 2S Areas - Particulate Solids Yield (lbs)

|        | Land Use Totals | <b>Paved Parking 1</b> | Sidewalks 1 | Small Landscaped Areas 1 |
|--------|-----------------|------------------------|-------------|--------------------------|
| Total: | 47.88           | <b>38.19</b>           | 5.331       | 4.359                    |

Data File: Z:\Projects\2023\5384.10-WI\DESIGN\SWMP\SLAMM\5384.10 SLAMM 2025-07-24.mdb

Rain File: WisReg - Madison WI 1981.RAN

Date: 07-23-25 Time: 11:30:41 AM

| Control Practice Name or Location | Total Influent Load (lbs) | Total Effluent Load (lbs) | Percent Load Reduction |
|-----------------------------------|---------------------------|---------------------------|------------------------|
| North Rain Garden                 | 142.4                     | 38.1                      | 73.24                  |
| South Rain Garden                 | 47.88                     | 4.886                     | 89.80                  |

SLAMM for Windows Version 10.5.0

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Data file name: Z:\Projects\2023\5384.10-WI\DESIGN\SWMP\SLAMM\5384.10 SLAMM 2025-07-24.mdb

Data file description:

Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN

Particulate Solids Concentration file name: C:\WinSLAMM Files\v10.1 WI\_AVG01.pscx

Runoff Coefficient file name: C:\WinSLAMM Files\WI\_SL06 Dec06.rsvx

Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI\_GE003.ppdX

Residential Street Delivery file name: C:\WinSLAMM Files\WI\_Res and Other Urban Dec06.std

Institutional Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std

Commercial Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std

Industrial Street Delivery file name: C:\WinSLAMM Files\WI\_Com Inst Indust Dec06.std

Other Urban Street Delivery file name: C:\WinSLAMM Files\WI\_Res and Other Urban Dec06.std

Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std

Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False

Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv

Cost Data file name:

If Other Device Pollutant Load Reduction Values = 1, Off-site Pollutant Loads are Removed from Pollutant Load % Reduction calculations

Seed for random number generator: -42

Start of Winter Season: 12/02                      End of Winter Season: 03/12

Model Run Start Date: 01/01/81      Model Run End Date: 12/31/81

Date of run: 07-23-2025      Time of run: 11:50:31

Total Area Modeled (acres): 0.452

Years in Model Run: 1.00

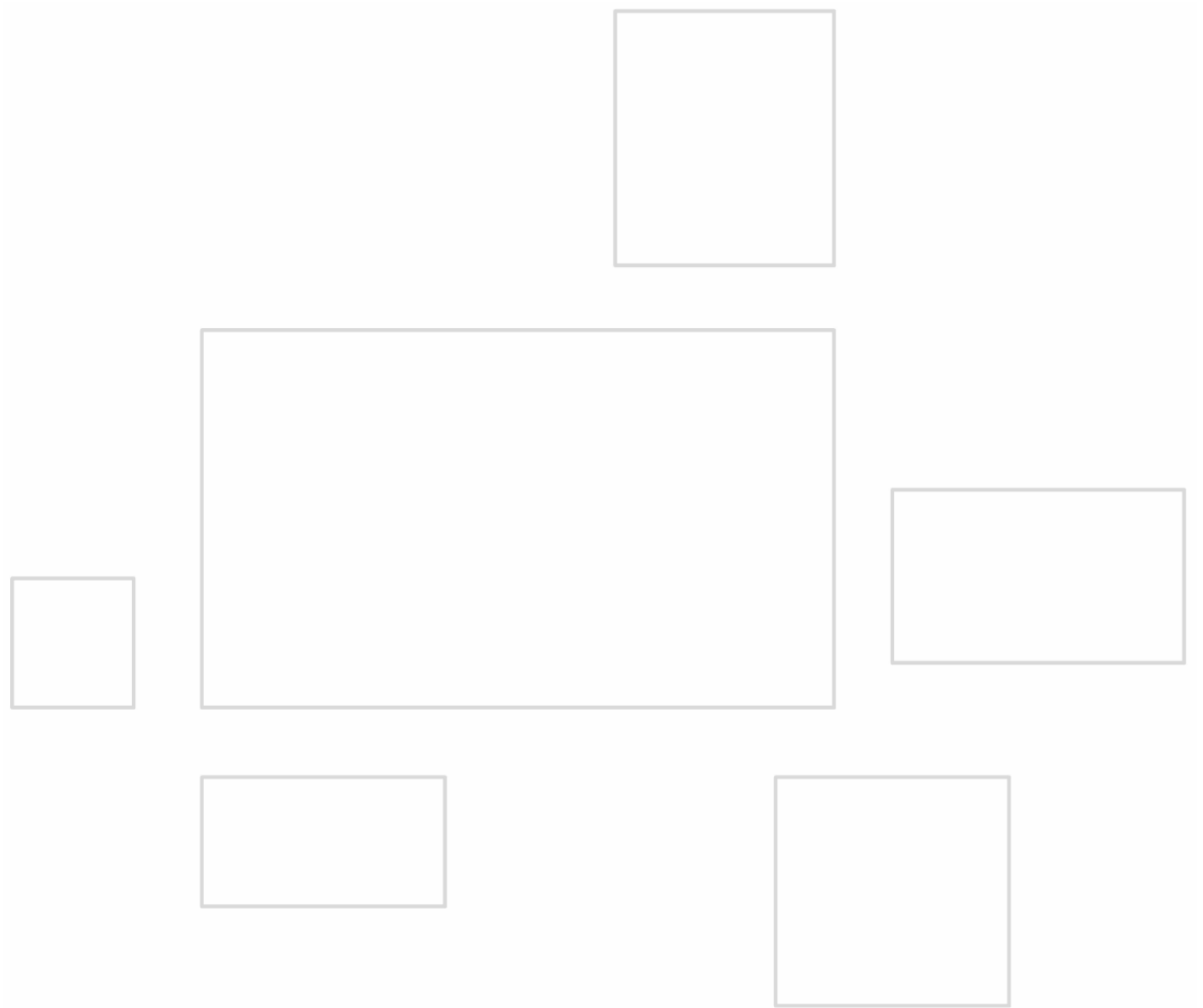
|                                          | Runoff<br>Volume<br>(cu ft) | Percent<br>Runoff<br>Volume<br>Reduction | Particulate<br>Solids<br>Conc.<br>(mg/L) | Particulate<br>Solids<br>Yield<br>(lbs) | Percent<br>Particulate<br>Solids<br>Reduction |
|------------------------------------------|-----------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|-----------------------------------------------|
| Total of all Land Uses without Controls: | 23935                       | -                                        | 127.3                                    | 190.3                                   | -                                             |
| Outfall Total with Controls:             | 5276                        | 77.96%                                   | 130.5                                    | 42.99                                   | 77.41%                                        |
| Annualized Total After Outfall Controls: | 5290                        |                                          |                                          | 43.10                                   |                                               |

| Pollutant          | Yield | Pol. Yield | Concentration -<br>Percent | Concentration -<br>No Controls | Conc. | Pollutant Yield | Pollutant |
|--------------------|-------|------------|----------------------------|--------------------------------|-------|-----------------|-----------|
|                    |       | Units      | Reduction                  | With Controls                  | Units | No Controls     | With      |
| Particulate Solids |       |            | 127.3                      | 130.5                          | mg/L  | 190.3           | 42.99     |
| lbs                |       | 77.41 %    |                            |                                |       |                 |           |
| Total Phosphorus   |       |            | 0.2807                     | 0.3126                         | mg/L  | 0.4194          | 0.1030    |
| lbs                |       | 75.44 %    |                            |                                |       |                 |           |

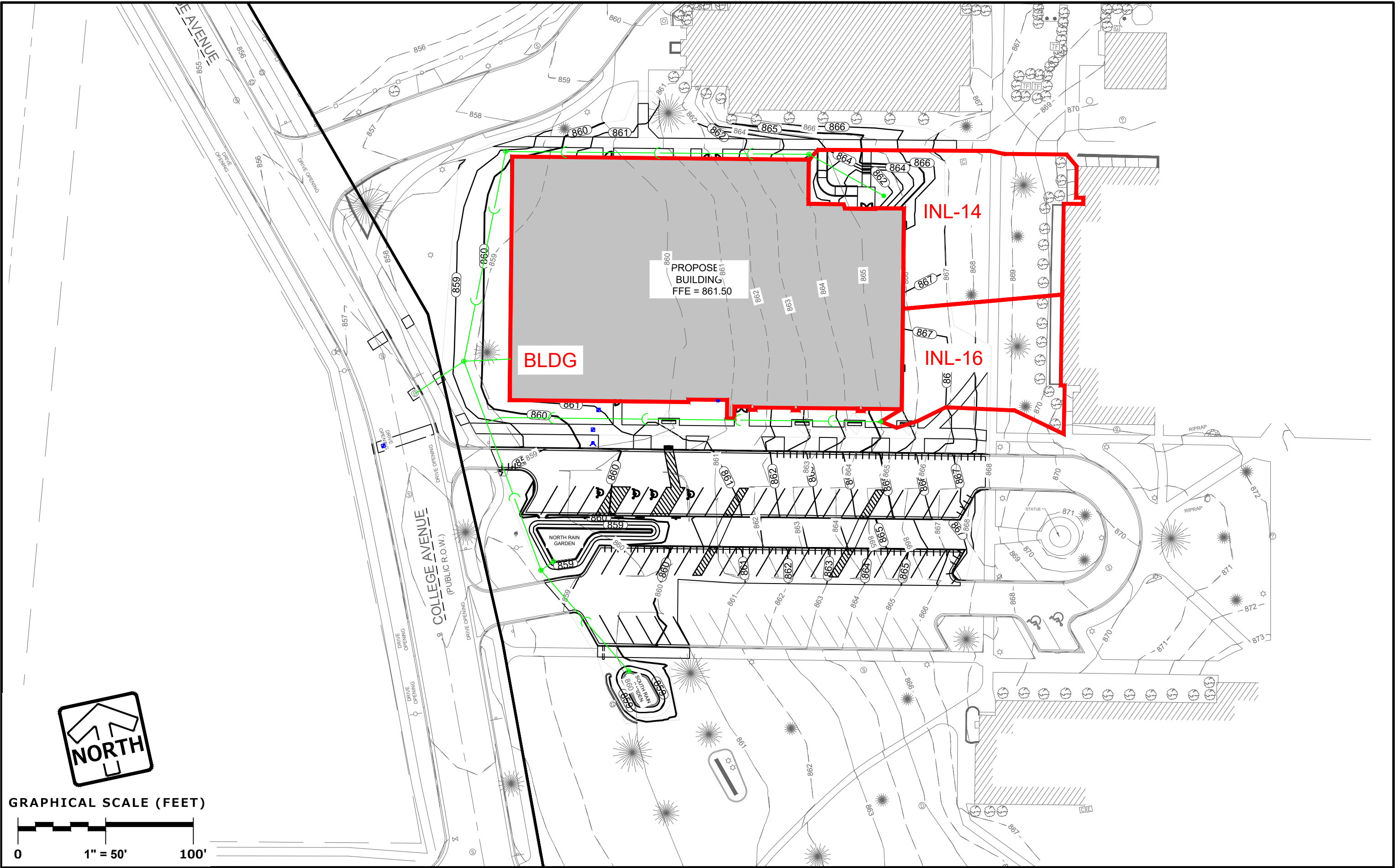
Biofilter # 1 is expected to clog in 14.79 years.. Percent Solids Reduction due to Engineered Media = 80  
 Biofilter # 2 is expected to clog in 9.69 years.. Percent Solids Reduction due to Engineered Media = 80

## **APPENDIX 4**

# **STORM SEWER CALCULATIONS**



Z:\PROJECTS\2023\5384.10-W\CAD\EXHIBITS\5384.10 STORMWATER EXHIBIT.DWG 7/23/2025 4:27 PM



7/23/2025 4:27 PM

# STORM SEWER AREAS EXHIBIT

PINNACLE ENGINEERING GROUP

20725 WATERTOWN ROAD | SUITE 100 | BROOKFIELD, WI 53186 | WWW.PINNACLE-ENGR.COM |

07/24/2025

PLAN | DESIGN | DELIVER

PEG JOB# 5384.10

STORM SEWER COMPUTATIONS (RATIONAL METHOD)

LUTHER PREPARATORY SCHOOL EXPANSION

WATERTOWN, WI

DESIGNED BY    JJS    DATE            7/18/2025

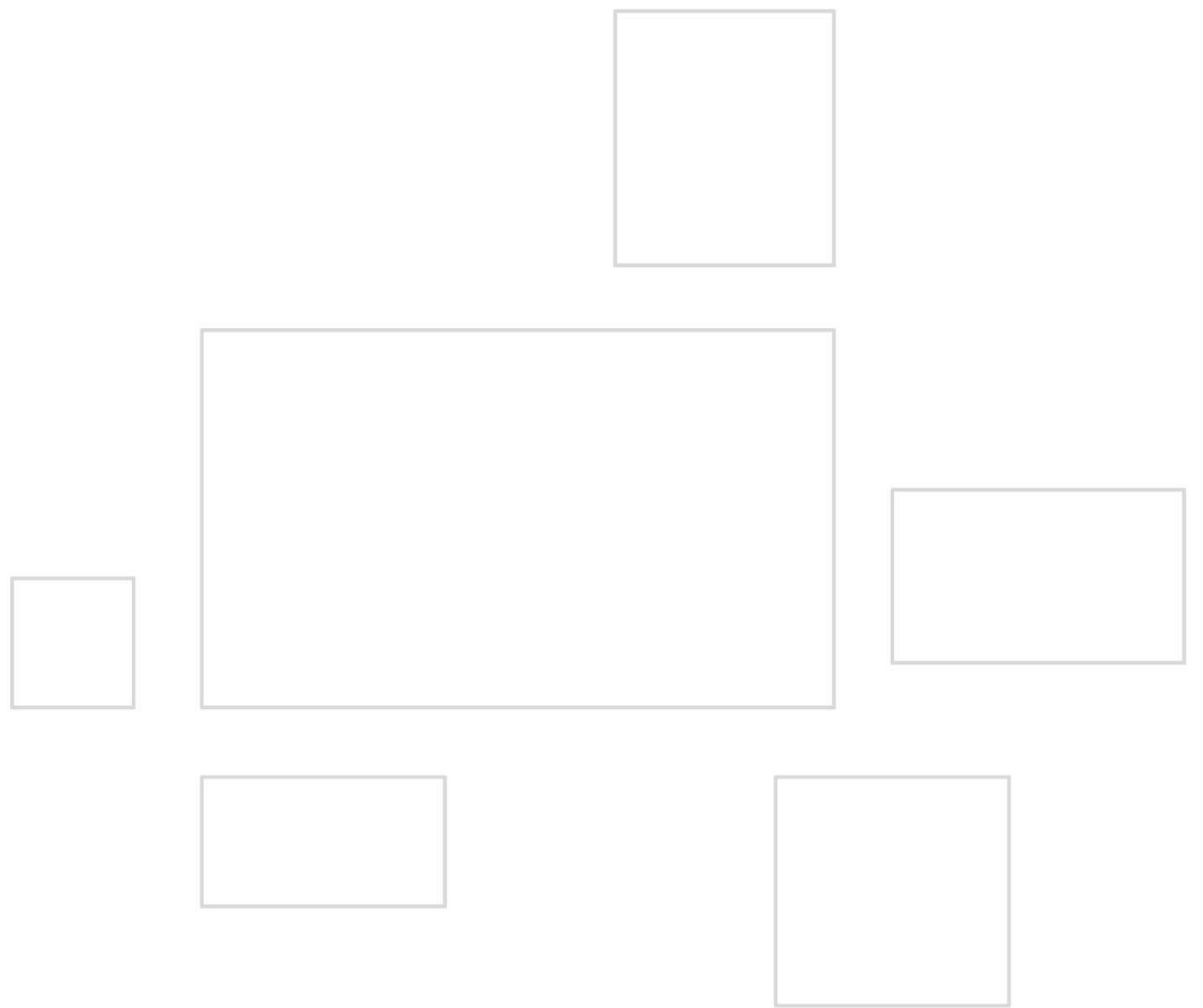
CHECKED BY    JJS    PROJECT #       5384.10



| DESIGN DATA             |                       |                         |                                                  |                                |                               |                             |                           |                  |                                     |                        |                                                                                                     |                                                  |                        |                             |                           |               |              |                |
|-------------------------|-----------------------|-------------------------|--------------------------------------------------|--------------------------------|-------------------------------|-----------------------------|---------------------------|------------------|-------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------|------------------------|-----------------------------|---------------------------|---------------|--------------|----------------|
| COUNTY:    JEFFERSON    |                       |                         | DESIGN STORM:    10                              |                                | YR                            |                             | STORM DURATION:    10 MIN |                  | DESIGN INTENSITY (I):    5.28 IN/HR |                        |                                                                                                     | INTENSITY CALCULATED USING SEWRPC IDF EQUATIONS. |                        |                             |                           |               |              |                |
| STRUCTURE DATA          |                       |                         | DRAINAGE AREA AND FLOW DATA                      |                                |                               |                             | PIPE DATA                 |                  |                                     |                        | PIPE CAPACITY INFORMATION                                                                           |                                                  |                        |                             |                           | ELEVATIONS    |              |                |
|                         |                       |                         | FLOW IS DETERMINED BY RATIONAL METHOD<br>Q = CIA |                                |                               |                             |                           |                  |                                     |                        | PIPE CAPACITY IS DETERMINED BY MANNING'S EQUATION<br>Q = 1.486/N AR <sup>2/3</sup> S <sup>1/2</sup> |                                                  |                        |                             |                           |               |              |                |
|                         |                       |                         | INDIVIDUAL<br>ACRES<br>A                         | INDIVIDUAL<br>COEFFICIENT<br>C | INDIVIDUAL<br>FLOW<br>Q (CFS) | CUMULATIVE<br>FLOW<br>(CFS) |                           |                  |                                     |                        | REQUIRED<br>DROP<br>(FT)                                                                            | ACTUAL<br>DROP<br>(FT)                           | PERCENT<br>FULL<br>(%) | ACTUAL<br>VELOCITY<br>(FPS) | MAX.<br>CAPACITY<br>(CFS) |               |              |                |
| NOTES                   | UPSTREAM<br>STRUCTURE | DOWNSTREAM<br>STRUCTURE |                                                  |                                |                               |                             | LENGTH<br>(FT)            | DIAMETER<br>(IN) | SLOPE<br>(%)                        | MANNING<br>COEFFICIENT |                                                                                                     |                                                  |                        |                             |                           | RIM/TOC<br>UP | INVERT<br>UP | INVERT<br>DOWN |
|                         | INL-I6                | TEE                     | 0.14                                             | 0.27                           | 0.20                          | 0.20                        | 225.4                     | 6                | 3.50                                | 0.012                  | 0.23                                                                                                | 7.89                                             | 23%                    | 4.33                        | 1.22                      | 865.20        | 862.51       | 854.62         |
|                         |                       |                         |                                                  |                                |                               |                             |                           |                  |                                     |                        | -                                                                                                   | -                                                |                        |                             |                           |               |              |                |
| SIZED FOR 100-YEAR FLOW | OCS-I                 | MH-I5                   | 0.00                                             | -                              | 2.71                          | 2.71                        | 8.6                       | 10               | 1.20                                | 0.012                  | 0.11                                                                                                | 0.10                                             | 92%                    | 5.41                        | 2.80                      | 857.50        | 855.29       | 855.18         |
|                         |                       |                         |                                                  |                                |                               |                             |                           |                  |                                     |                        | -                                                                                                   | -                                                |                        |                             |                           |               |              |                |
| SIZED FOR 100-YEAR FLOW | OCS-2                 | MH-I5                   | 0.00                                             | -                              | 1.03                          | 1.03                        | 76.2                      | 10               | 0.20                                | 0.012                  | 0.14                                                                                                | 0.15                                             | 85%                    | 2.22                        | 1.14                      | 858.00        | 855.34       | 855.18         |
| SIZED FOR 100-YEAR FLOW | MH-I5                 | TEE                     | 0.00                                             | -                              | 0.00                          | 3.74                        | 89.9                      | 12               | 0.90                                | 0.012                  | 0.84                                                                                                | 0.81                                             | 90%                    | 5.31                        | 3.94                      | 859.15        | 855.18       | 854.37         |
| SIZED FOR 100-YEAR FLOW | TEE                   | MH-II                   | 0.00                                             | -                              | 0.00                          | 3.94                        | 37.2                      | 12               | 0.90                                | 0.012                  | 0.39                                                                                                | 0.33                                             | 97%                    | 5.18                        | 3.94                      | 858.75        | 854.37       | 854.04         |
|                         |                       |                         |                                                  |                                |                               |                             |                           |                  |                                     |                        | -                                                                                                   | -                                                |                        |                             |                           |               |              |                |
|                         | BLDG                  | MH-II                   | 0.69                                             | 0.90                           | 3.26                          | 3.26                        | 26.7                      | 10               | 4.00                                | 0.012                  | 0.50                                                                                                | 1.07                                             | 64%                    | 9.38                        | 5.11                      | 861.00        | 855.11       | 854.04         |
|                         |                       |                         |                                                  |                                |                               |                             |                           |                  |                                     |                        | -                                                                                                   | -                                                |                        |                             |                           |               |              |                |
| SIZED FOR 100-YEAR FLOW | INL-I4                | MH-I3                   | 0.22                                             | 0.27                           | 0.47                          | 0.47                        | 48.8                      | 6                | 1.00                                | 0.012                  | 0.29                                                                                                | 0.49                                             | 70%                    | 3.41                        | 0.65                      | 861.20        | 858.70       | 858.21         |
| SIZED FOR 100-YEAR FLOW | MH-I3                 | MH-I2                   | 0.00                                             | -                              | 0.00                          | 0.47                        | 173.0                     | 6                | 1.00                                | 0.012                  | 1.02                                                                                                | 1.73                                             | 70%                    | 3.41                        | 0.65                      | 864.05        | 858.21       | 856.48         |
| SIZED FOR 100-YEAR FLOW | MH-I2                 | MH-II                   | 0.00                                             | -                              | 0.00                          | 0.47                        | 121.9                     | 6                | 2.00                                | 0.012                  | 0.72                                                                                                | 2.44                                             | 53%                    | 4.47                        | 0.92                      | 859.20        | 856.48       | 854.04         |
| SIZED FOR 100-YEAR FLOW | MH-II                 | EXIST-I0                | 0.00                                             | -                              | 0.00                          | 7.66                        | 33.5                      | 12               | 4.00                                | 0.013                  | 1.55                                                                                                | 1.34                                             | 97%                    | 10.06                       | 7.66                      | 859.35        | 854.04       | 852.70         |
|                         |                       |                         |                                                  |                                |                               |                             |                           |                  |                                     |                        | -                                                                                                   | -                                                |                        |                             |                           |               |              |                |

## **APPENDIX 5**

# **OPERATION AND MAINTENANCE PLAN**



## Stormwater Management Practice Maintenance Agreement

Document Number

[Owners Name], as “Owner” of the property described below, in accordance with the City of Watertown’s Municipal Code Chapter 288 Erosion and Sediment Control Ordinance, agrees to install, inspect and maintain stormwater management practice(s) on the subject property in accordance with approved plans and Stormwater Permit conditions. The owner further agrees to the terms stated in this document to ensure that the stormwater management practice(s) continues serving the intended functions in perpetuity. This Agreement includes the following exhibits:

**Exhibit A:** Legal Description of the real estate for which this Agreement applies (“Property”).

**Exhibit B:** Location Map(s) – shows an accurate location of each stormwater management practice affected by this Agreement.

**Exhibit C:** Maintenance Plan – prescribes those activities that must be carried out to maintain compliance with this Agreement.

**Exhibit D:** As-Built Survey – shows detailed “as-built” cross-section and plan view information of the stormwater practice(s).

Name and Return Address

City of Watertown Engineering Dept.  
106 Jones Street  
PO BOX 477  
Watertown, WI 53094

Parcel Identification Number(s) – (PIN)

Through this Agreement, the Owner hereby subjects the Property to the following covenants, conditions and restrictions:

1. The Owner shall be responsible for the routine and extraordinary maintenance, inspection(s), and repair of the stormwater management practice(s) and drainage easements identified in Exhibit B until Stormwater Permit termination by City of Watertown in accordance with Chapter 288 of the City Code of Ordinances.
2. After Stormwater Permit termination under 1, the current Owner(s) shall be solely responsible for maintenance and repair of the stormwater management practices and drainage easements in accordance with the maintenance plan contained in Exhibit C and the as-built survey in Exhibit D.
3. The Owner shall regularly inspect the stormwater management practice(s) as described in this agreement or as often as conditions require, and a minimum of once every three years. The inspection shall be conducted by a qualified professional, a report shall be filed with the City of Watertown and any maintenance or repair work recommended in the report must be completed. If the inspection schedule contained herein is not maintained and/or the City of Watertown (or their designee) determines that an inspection is necessary, the City or their designee may provide written notification to the Owner(s) that an inspection and/or repair is required as outlined in paragraphs 4 and 5 below. The Owner(s) shall be liable for the failure to undertake any maintenance or repairs.
4. In addition, and independent of the requirements under paragraph 3 above, the City of Watertown, or its designee, is authorized to access the property as necessary to conduct inspections of the stormwater management practices, structures, or drainage easements to ascertain compliance with the intent of this Agreement and the activities prescribed in Exhibits C and D. The City of Watertown may require work to be done which differs from the report described in paragraph 3 above, if the City of Watertown reasonably concludes that such work is necessary and consistent with the intent of this agreement. Upon notification by

the City of Watertown of required maintenance or repairs, the Owner(s) shall complete the specified maintenance or repairs within a reasonable time frame determined by the City of Watertown.

5. If the Owner(s) do not complete an inspection under 3. above or required maintenance or repairs under 4. above within the specified time period, the City of Watertown is authorized, but not required, to perform the specified inspections, maintenance or repairs. In the case of an emergency situation, as determined by the City of Watertown, no notice shall be required prior to the City of Watertown performing emergency maintenance or repairs. The City of Watertown may levy the costs and expenses of such inspections, maintenance or repair related actions as a special charge against the Property and collected as such in accordance with the procedures under s. 66.0627 Wis. Stats. or subch. VII of ch. 66 Wis. Stats.
6. This Agreement shall run with the Property and be binding upon all heirs, successors and assigns. After the Owner records this document, the City of Watertown shall have the sole authority to modify this agreement upon a 30-day notice to the current Owner(s).

Dated this \_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_.

**Owner:**

\_\_\_\_\_  
(Owners Signature)

\_\_\_\_\_  
(Owners Typed Name)

## Acknowledgements

State of Wisconsin:

County of \_\_\_\_\_

Personally came before me this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the above named     [Owners name]      
to me known to be the person who executed the foregoing instrument and acknowledged the same.

\_\_\_\_\_  
[Name]

Notary Public, \_\_\_\_\_, WI

My commission expires: \_\_\_\_\_.

**This document was drafted by:**

[Name and address of drafter]

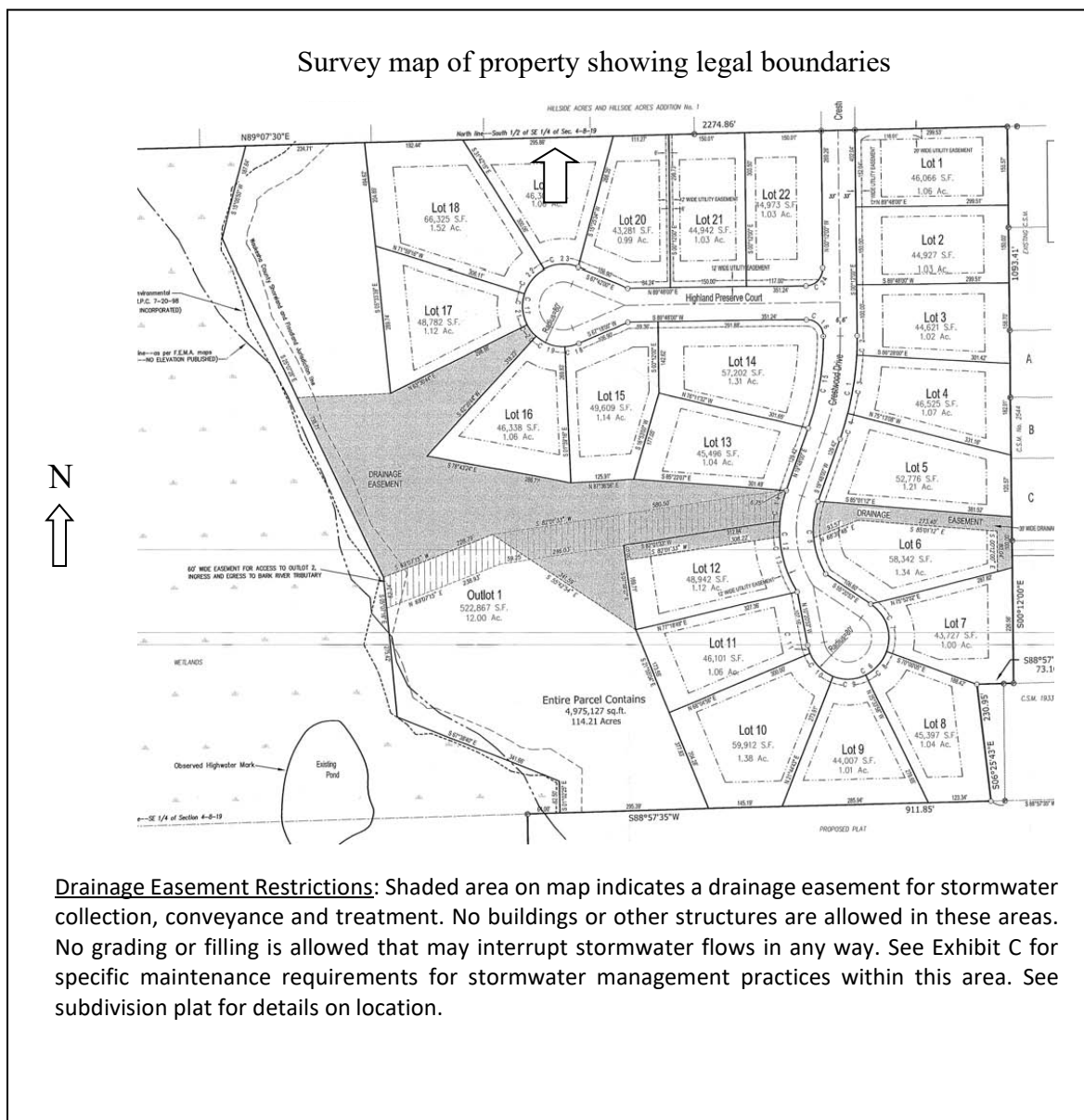
*For Certification Stamp*

## Exhibit A – Legal Description

The following description and reduced copy map identifies the land parcel(s) affected by this Agreement. For a larger scale view of the referenced document, contact the Jefferson or Dodge County Register of Deeds office.

*[Note: An example exhibit is shown below. This exhibit must be customized for each site, including the minimum elements shown. It must include a reference to a Subdivision Plat, Certified Survey number, or Condominium Plat, and a map to illustrate the affected parcel(s).]*

Project Identifier: [project name]      Acres: [ \_\_\_ acres]  
Date of Recording: [date]  
Map Produced By: [designer's name]  
Legal Description: [enter legal description as described on the property title here]



## Exhibit B - Location Map

### Stormwater Management Practices Covered by this Agreement

*[An example location map and the minimum elements that must accompany the map are shown below. This exhibit must be customized for each site. Map scale must be sufficiently large enough to show necessary details.]*

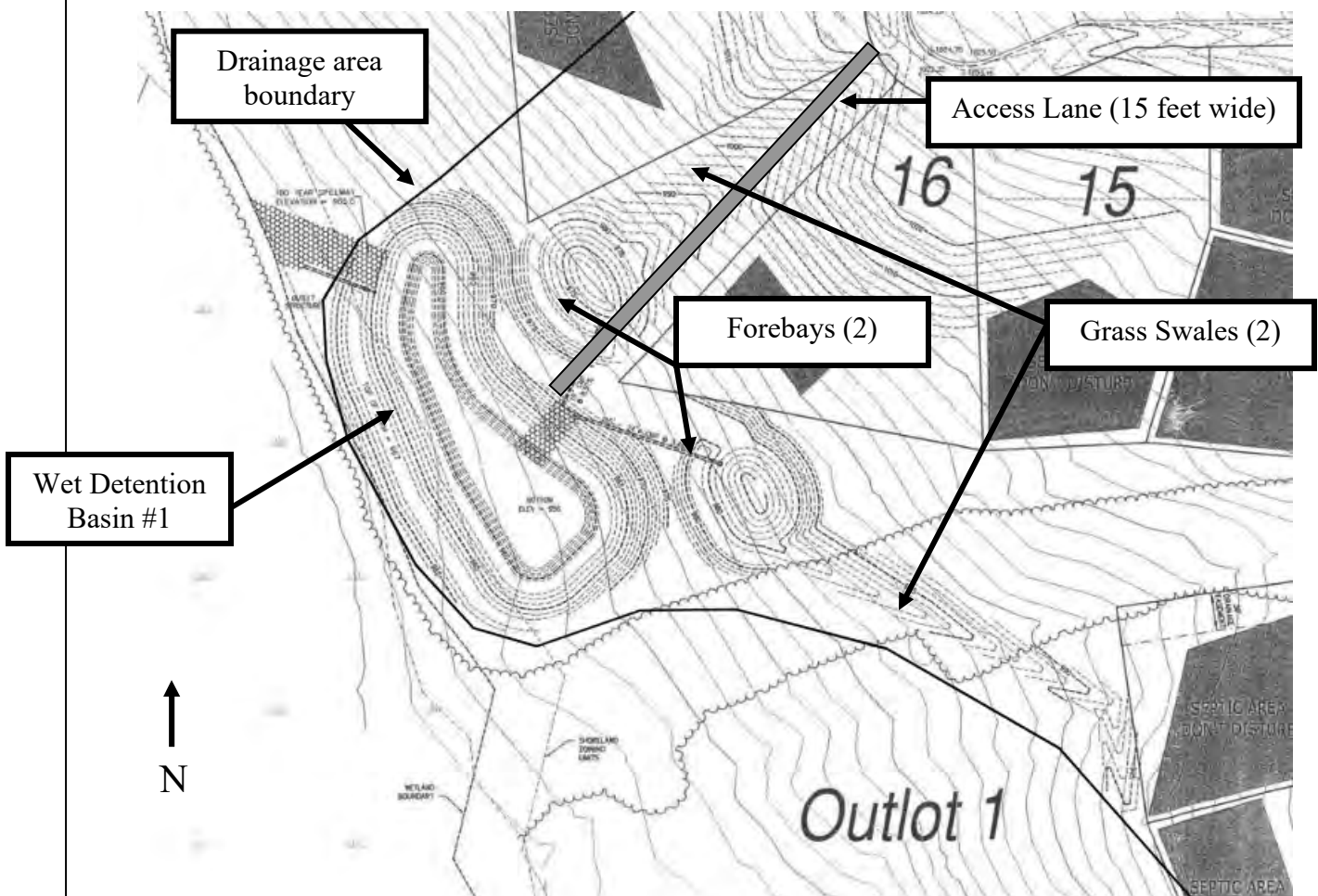
The stormwater management practices covered by this Agreement are depicted in the reduced copy of a portion of the construction plans, as shown below. The included stormwater practices are as listed below and include all associated pipes, ditches, swales, earthen berms, access routes, easements, drainage areas, and other components of these practices. All of the noted stormwater management practices are located within the drainage easement(s) described and shown below.

Development Name: [development name]

Stormwater Practices: [brief list]

Location of Practices: [enter a metes and bounds description of the easement area. The figure below must illustrate this description.]

**Figure 1**  
Plan View of Stormwater Practices



## **Exhibit C**

### **Stormwater Practice Maintenance Plan**

This exhibit explains the basic function of each of the stormwater practices listed in Exhibit B and prescribes the minimum maintenance requirements to remain compliant with this Agreement. The maintenance activities listed below are aimed to ensure these practices continue serving their intended functions in perpetuity. The list of activities is not all inclusive, but rather indicates the minimum type of maintenance that can be expected for this particular site. Access to the stormwater practices for maintenance vehicles is shown in Exhibit B. Any failure of a stormwater practice that is caused by a lack of maintenance will subject the Owner(s) to enforcement of the provisions listed on page 1 of this Agreement by the City of Watertown.

*[Sample maintenance language is listed below. This exhibit must be customized for each site. The minimum elements of this exhibit include: a description of the drainage area and the installed stormwater management system & best management practices, vegetation plan (if applicable), a list of BMP maintenance requirements and a reference to as-built drawings and design summaries recorded as part of this agreement.]*

#### **System Description:**

*[include a description of the drainage area and the installed stormwater management system & best management practices.]*

#### **Minimum Maintenance Requirements:**

To ensure the proper long-term function of the stormwater management practices described above, the following activities must be completed:

##### **General Maintenance Requirements and Restrictions:**

1. Grass swales and storm sewers shall be preserved / maintained to allow free flow of runoff in accordance with approved plans.
2. No buildings or other structures are allowed in grass swale areas.
3. No grading or filling is allowed that may interrupt flows in any way.
4. Grass swales, inlets and outlets should be checked after heavy rains (minimum of annually) for signs of erosion and/or clogging. Any eroding areas must be repaired immediately to prevent premature sediment build-up in the downstream forebays or basin. Erosion matting is recommended for repairing grassed areas.
5. NO trees are to be planted or allowed to grow in the bottom of grass swales.
6. Periodic mowing of grass swales will encourage vigorous grass cover and allow better inspections for erosion. Waiting until after August 1 will avoid disturbing nesting wildlife.
7. Invasive plant and animal species shall be managed in compliance with Wisconsin Administrative Code Chapter NR 40. This may require eradication of invasive species in some cases.
8. Any other repair or maintenance needed to ensure the continued function of the stormwater practices or as ordered by the City of Watertown under the provisions listed on page 1 of this Agreement.

##### **Wet Pond/Forebay Maintenance**

1. The basin and all components (grass swales, forebay, inlets, outlets, etc.) should be inspected after each heavy rain, and periodically throughout the year, but at a minimum of once per year to ensure there is no blockage from floating debris or ice, especially near the outlet structure. Any blockage must be removed immediately. Washed stone must be replaced when it becomes clogged.
2. NO trees are to be planted or allowed to grow on the earthen berms for the ponds. Tree root systems can reduce soil compaction and cause berm failure. The berms must be inspected annually and any woody vegetation removed.

3. If the permanent pool water level falls below the safety shelf, a review shall be performed to determine whether the cause is liner leakage or an insufficient water recharge. If the cause is leakage, the liner shall be repaired. Leakage due to muskrat burrows may require removal of the animals, repair of the liner, and embedding wire mesh in the liner to deter further burrowing. If the permanent pool cannot be sustained at the design elevation, benching of the safety shelf may be necessary.
4. Floating algae or weed growth should be removed from the basin or forebay and deposited where it cannot drain back into the basin. Removal of the vegetation from the water reduces regrowth the following season (by harvesting the nutrients).
5. If mosquitoes become a nuisance, the use of mosquito larvicide containing naturally-occurring Bti soil bacteria is recommended.
6. When sediment in the forebays or the basin has accumulated to an elevation of \_\_\_\_\_ feet below the outlet elevation, it must be removed (see Exhibit D). All removed sediment must be placed in an appropriate upland disposal site and stabilized (grass cover) to prevent sediment from washing back into the basin. The forebays will likely need sediment removal first. Failure to remove sediment from the forebays will cause resuspension of previously trapped sediments and increase downstream deposition.
7. No grading or filling of the basin other than for sediment removal is allowed, unless otherwise approved by the City of Watertown.
8. Mowing around the basin or the forebays may attract nuisance populations of geese to the property and is not necessary or recommended.
9. Aerators/Fountains – If an aerator or fountain is desired for visual and other aesthetic effects (aerators designed to mix the contents of the pond are prohibited) they must meet all of the items below in addition to current Wisconsin Department of Natural Resources guidelines:
  - i. Use an aerator/fountain that does not have a depth of influence that extends into the sediment storage depth.
  - ii. If the water surface drops due to drought or leakage, the aerator / fountain may not be operated until the water rises enough for the depth of influence to be above the sediment storage layer.
  - iii. Provide an automatic shut-off of the aerator/fountain as the pond starts to rise during a storm event. The aerator/fountain must remain off while the pond depth returns to the permanent pool elevation and, further, shall remain off for an additional 48 hours, as required for the design micron particle size to settle to below the draw depth of the pump.
  - iv. Configure the pump intake to draw water primarily from a horizontal plane so as to minimize the creation of a circulatory pattern from bottom to top throughout the pond.

#### Infiltration Basin Maintenance

1. A minimum of 70% soil cover made up of native vegetation must be maintained on the basin bottom to ensure infiltration rates. Periodic burning or mowing is recommended to enhance establishment of the native vegetation (which may take 2-3 years) and maintain the minimum native cover. To reduce competition from cool season grasses (bluegrass, fescues, quack, etc.) and other weeds:
  - i. For the first year, cut to a 6" height three times – once each in June, July and early August. To prevent damage to the native vegetation, do not mow below a 6" height. Remove excessive accumulation of clippings to avoid smothering next year's seedlings.
  - ii. After the first year, mowing may only be needed in early June each year to help control the spread of cool season plants. The mowing should also be raised to 10-12" to avoid damage to the warm season plants.
  - iii. Burning may also be used to manage weeds in 2-5 years intervals. Late spring burns (mid-late May) provide maximum stimulus to warm season grasses and work well to control cool season grasses. Burn when the cool season grasses are growing and the warm season plants are just barely starting to grow to get maximum control of cool season species.
  - iv. Any major bare areas or areas taken over by nonnative species must be reseeded. To clear area of weeds and cool season grasses, treat with an herbicide that contains glyphosphate in accordance

with manufacturer's instructions. Ensure a firm seedbed is prepared to a depth of 3 inches (a roller is recommended). Seeding should occur in early-mid June. Seed with Big Bluestem, Indian Grass, Little Blue Stem or Switchgrass (preferably an equal mix of all four types). A companion crop of oats is recommended. Seed must be placed at a depth of 1/4 – 1/2" and a minimum rate of 1/4 pound per 100 square feet. If broadcast seeding by hand, drag leaf rake over soil surface after seeding. Then roll it again and cover with a light layer of mulch and staked erosion control netting to hold it in place until germination. For other planting details, see NRCS standard 342 (Critical Area Planting).

2. The basin and all components (grass swales, forebay, inlets, outlets, etc.) should be inspected after each heavy rain, but at a minimum of once per year. If the basin is not draining properly (within 72 hours), further inspection may be required by persons with expertise in stormwater management and/or soils.
  - i. If soil testing shows that the soil surface has become crusted, sealed or compacted, some deep tillage should be performed. Deep tillage will cut through the underlying soils at a 2-3 foot depth, loosening the soil and improving infiltration rates, with minimal disturbance of the surface vegetation. Types of tillage equipment that can be used include a subsoiler or straight, narrow-shanked chisel plow.
  - ii. If sedimentation is determined to be causing the failure, the accumulated sediment must be removed, and the area reseeded in accordance with the notes above.
  - iii. If inspection of the monitoring well shows that groundwater is regularly near the surface, additional design features may need to be considered, such as subsurface drainage or conversion to a wetland treatment system. *Remove this requirement if a monitoring well is not installed.*
3. All outlet pipes, stone trenches and other flow control devices must be kept free of debris. Any blockage or debris buildup must be removed immediately.
4. Any eroding areas must be repaired immediately to prevent premature sediment build-up in the system. Erosion matting is recommended for repairing vegetated areas.
5. Heavy equipment and vehicles must be kept off of the bottom and side slopes of infiltration basins to prevent soil compaction. Soil compaction will reduce infiltration rates and may cause failure of the basin, resulting in ponding and possible growth of wetland plants.

No trees are to be planted or allowed to grow on the earthen berms or the bottom of the basin. On the berms, tree root systems can reduce soil compaction and cause berm failure. On the basin bottom, trees may shade out the native grasses. The basin must be inspected annually and any woody vegetation removed.

## Maintenance Tasks and Schedule

| Tasks                                                                            | Street Clean | Storm Sewer System | Catch Basin Sumps | Catch Basin Inlet Castings | Ditches & Swales | Outflow Control Structures | Rip Rap | Infiltration Basins | Storm Detention Areas | Wetland Issues | Emergency Overflow | Schedule                  |
|----------------------------------------------------------------------------------|--------------|--------------------|-------------------|----------------------------|------------------|----------------------------|---------|---------------------|-----------------------|----------------|--------------------|---------------------------|
| Inspects for Sediment Accumulation                                               |              | X                  | X                 |                            | X                | X                          |         | X                   | X                     |                |                    | Bi Annual                 |
| Removal of Sediment Accumulation                                                 |              | X                  | X                 |                            | X                | X                          |         | X                   | X                     |                |                    | Every 2 years as needed   |
| Inspect for Floatable and Debris                                                 |              |                    |                   | X                          | X                | X                          |         | X                   | X                     |                |                    | Bi Annual                 |
| Inspection for Erosion                                                           |              |                    |                   |                            | X                | X                          |         | X                   | X                     |                |                    | Bi Annual                 |
| Re-establish Permanent Vegetation on Eroded Slopes                               |              |                    |                   |                            | X                |                            |         | X                   | X                     |                |                    | Bi Annual                 |
| Replacement of Stone                                                             |              |                    |                   |                            |                  | X                          |         |                     |                       |                |                    | Every 3-5 years as needed |
| Clean Streets                                                                    | X            |                    |                   |                            |                  |                            |         |                     |                       |                |                    | Bi Annual                 |
| Mowing                                                                           |              |                    |                   |                            | X                |                            |         | X                   | X                     |                |                    | 0-2 times per year        |
| Make Adjustments or Replacements as determined by Annual Wet Weather Inspections |              | X                  | X                 | X                          | X                | X                          | X       | X                   | X                     | X              | X                  | As needed                 |
| Keep Records of all Inspections and Maintenance Activities                       |              |                    |                   |                            |                  |                            |         |                     |                       |                |                    | Bi Annual                 |

## As-Built Survey for Stormwater Practices

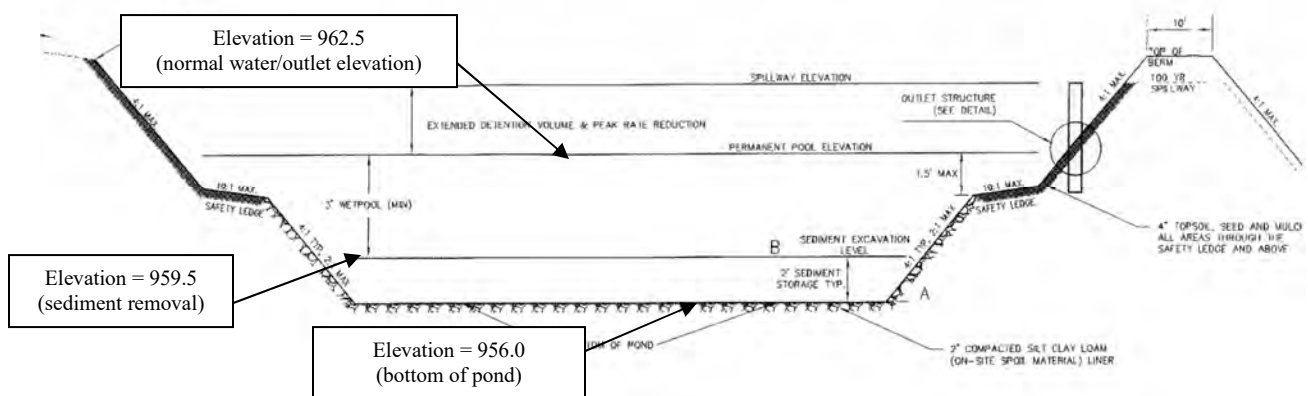
**Stormwater Practice:** [As-built survey information required for each stormwater practice]

**Location of Practice:** [Enter a metes and bounds description of the easement area.]

### Cross-Section A – A'

*[Note: Show plan view of BMP with cross-section location clearly labeled and cross-referenced. On cross-section and plan view, clearly label all key components and elevations of the BMP. Also show outlet details. Map scale must be sufficiently large enough to show necessary details, but page size should not exceed 11" x 17".]*

## Figure 2



### Figure 3

### Outlet Structure Detail

