

PROPOSED BUILDING ADDITION FOR: MONTESSORI SCHOOL OF WAUKESHA WAUKESHA, WISCONSIN

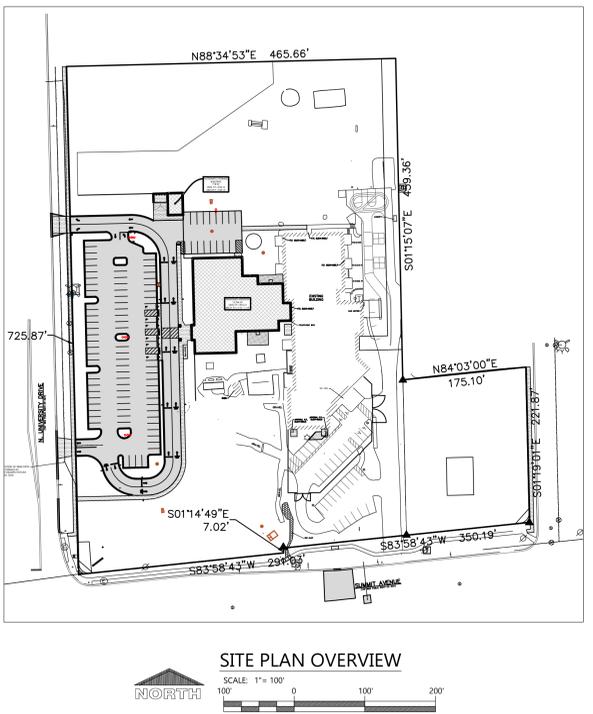


PROJECT INFORMATION

PROPOSED BUILDING ADDITION FOR:
MONTESSORI SCHOOL OF WAUKESHA
 2600 SUMMIT AVENUE • WAUKESHA, WI 53188

CONSTRUCTION SEQUENCE	
PHASE	TYPE OF ACTION
1. PRE-CONSTRUCTION ACTION	1. CONTRACTOR TO CALL DIGGERS HOTLINE AT A MINIMUM OF 3 DAYS PRIOR TO CONSTRUCTION. 2. CONTRACTOR TO FIELD VERIFY LOCATION AND DEPTH OF ALL UTILITIES WITHIN THE PROJECT AREA PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES. 3. PLACE ALL SILT FENCE AND INLET PROTECTION. 4. CONSTRUCT TRACKING STONE ENTRANCES AND ANY TEMPORARY CONSTRUCTION ROADWAYS AS NEEDED. 5. CONSTRUCT PERMANENT DETENTION PONDS AND PERMANENT STORMWATER CONVEYANCE SYSTEMS. 6. CONSTRUCT ANY TEMPORARY STORMWATER CONVEYANCE SYSTEMS AS NEEDED. 7. STABILIZE ALL TEMPORARY AND PERMANENT EROSION CONTROL AND STORMWATER CONVEYANCE SYSTEMS BEFORE TOPSOIL CAN BE STRIPPED.
2. CONSTRUCTION ACTION	1. SITE DEMOLITION AS REQUIRED. 2. STRIP AND RELOCATE TOPSOIL TO THE DESIGNATED TOPSOIL STOCKPILE. LOCATION BY OWNER. FINAL LOCATION BY CONTRACTOR. PROVIDE PERIMETER SILT FENCE UNTIL STABILIZED. 3. BEGIN MASS EARTH WORK FOR THE BUILDING PAD AND PAVEMENT AREAS. 4. CONSTRUCT ANY REMAINING STORMWATER CONVEYANCE SYSTEMS, AND INSTALL ALL OTHER UTILITIES ON SITE. 5. DIG AND POUR ALL BUILDING FOOTINGS. 6. PLACE GRAVEL FOR ALL PROPOSED PAVEMENT AREAS, INCLUDING FIRE LANES. 7. TOPSOIL, SEED, AND MULCH ALL DISTURBED AREAS OUTSIDE THE BUILDING AND PROPOSED PAVEMENT AREAS. 8. CONSTRUCT BUILDING. 9. PAVE DRIVEWAYS AND PARKING AREAS. 10. TOPSOIL, SEED, AND MULCH ALL OTHER DISTURBED AREAS. PLACE EROSION MATTING AND RIP RAP.
3. POST CONSTRUCTION ACTION	1. CONTRACTOR TO REMOVE TEMPORARY EROSION CONTROL MEASURES UPON SITE STABILIZATION. 2. SEE THE POST CONSTRUCTION MAINTENANCE PLAN FOR PERMANENT STORMWATER MANAGEMENT SYSTEMS.

CONTRACTOR TO FOLLOW THE EROSION CONTROL SPECIFICATIONS FOR CONSTRUCTION EROSION CONTROL INSPECTION AND MAINTENANCE.



TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN
CALL DIGGERS HOTLINE
 1-800-242-8511
 TOLL FREE TELEFAX (414) 259-0947
 TDD (FOR THE HEARING IMPAIRED) 1-800-542-2289
 WISCONSIN STATUTE 182.0175 (1974) REQUIRES MINIMUM OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

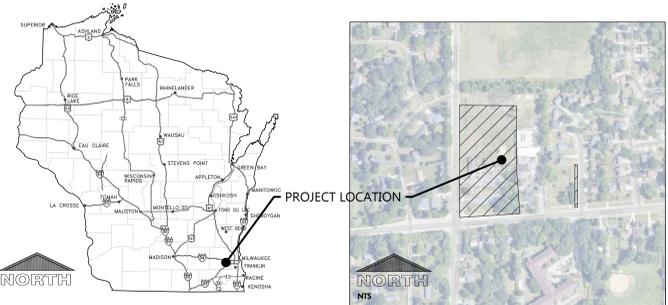
WARNING!!
UNDERGROUND UTILITIES MUST BE LOCATED BY DIGGERS HOTLINE PRIOR TO THE START OF CONSTRUCTION.

PROJECT CONTACTS

OWNER INFORMATION: Montessori School of Waukesha Attn: Brenda Zellmer 2600 Summit Ave Waukesha, WI 53188 Email: bzellmer@msow.org	CIVIL: Devin Winter, P.E. Phone: (920) 322-1777 E-mail: devin.winter@excelengineer.com	CITY PLANNER: Marie Pandazi Phone: (262) 524-3530	CITY ENGINEER: Brandon Schwenn Phone: (262) 524-3600 E-mail: bschwenn@waukesha-wi.gov	CITY FIRE CHIEF: Robert Gopin Phone: (262) 524-3651 E-mail: fire@waukesha-wi.gov	CITY BUILDING INSPECTOR: Kristen Stone Phone: (262) 524-3651 E-mail: fire@waukesha-wi.gov	CITY DIRECTOR OF PUBLIC WORKS: Alex Damien Phone: (262) 524-3600 E-mail: dpw@waukesha-wi.gov	CITY STREET LIGHTING: Jeffrey Henke Phone: (262) 524-3592 E-mail: jhenke@waukesha-wi.gov
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Contact with any questions, concerns, or damage to Fiber Optic facilities.

LOCATION MAP



SITE BENCHMARKS

- WEST HYDRANT (N. UNIVERSITY DRIVE)
LOCATION: BURY TAG BOLT ON HYDRANT
ELEVATION: 135.96 (CITY DATUM)
- EAST HYDRANT (BRENTWOOD DR.)
LOCATION: BURY TAG BOLT ON HYDRANT
ELEVATION: 139.96 (CITY DATUM)

SITE DATUM NOTE

PROJECTS ON SITE HISTORICALLY HAVE BEEN COMPLETED ON CITY DATUM. TO CONVERT FROM HISTORICAL ELEVATION TO PROPOSED ELEVATION (NAVD88) = **ADD 780.12'**

PROJECT NOTES

- ### GENERAL PROJECT NOTES
- ALL DRIVEWAYS AND CURB CUTS TO BE CONSTRUCTED ACCORDING TO LOCAL ORDINANCES. CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS.
 - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL WORK IN ROW PERMITS. NOTIFY CITY ENGINEERING DEPARTMENT 5 DAYS PRIOR TO WORK IN THE CITY RIGHT OF WAY. CONTRACTOR TO CONTACT MAT VINCENT BY EMAIL (MVINCENT@WAUKESHA-WI.GOV) PRIOR TO COMING IN FOR THE PERMIT.
 - INSPECTION WILL BE REQUIRED FOR ALL ROW WORK. PLEASE CONTACT MAT VINCENT (MVINCENT@WAUKESHA-WI.GOV) 24-HOURS PRIOR TO SCHEDULE THE REQUIRED INSPECTION.
 - CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL AND COORDINATE WITH CITY DPW PRIOR TO CONSTRUCTION FOR ANY WORK WITHIN THE RIGHT-OF-WAY/TRAFFIC LANES NECESSARY FOR PROPOSED IMPROVEMENTS/UTILITY CONNECTIONS. TRAFFIC (PEDESTRIAN AND VEHICULAR) MUST BE MAINTAINED THROUGHOUT WORK. ALL SIGNAGE EXISTING IN THE ROW SHALL BE RE-ESTABLISHED.
 - ALL WORK WITHIN CITY RIGHT OF WAY AND CITY EASEMENTS TO BE IN ACCORDANCE WITH CURRENT CITY STANDARD SPECIFICATIONS AND DETAILS.
 - LIMITS OF FINAL CITY STREET PAVEMENT AND CURB AND GUTTER REMOVAL AND REPLACEMENTS TO BE MARKED BY CITY ENGINEERING STAFF IN FIELD.
 - CONTRACTOR TO CALL WAUKESHA WATER UTILITY CONTACT MAT KADICH AT 262-408-3492 AT LEAST 72-HOURS PRIOR TO ANY WORK BEING DONE TO COORDINATE SHUTOFFS OF THE WATER MAIN AS NECESSARY AND HAVE AN INSPECTOR ON SITE.
 - ALL SITE IMPROVEMENTS AND CONSTRUCTION SHOWN ON THE PLANS SHALL CONFORM TO THE CITY OF WAUKESHA DEVELOPMENT HANDBOOK & INFRASTRUCTURE SPECIFICATIONS, WHERE THE PLANS DO NOT COMPLY, IT SHALL BE THE SOLE RESPONSIBILITY AND EXPENSE OF THE DEVELOPER TO MAKE REVISIONS TO THE PLANS AND/OR CONSTRUCT INFRASTRUCTURE TO COMPLY.
 - CONTRACTOR TO CONTACT EXCEL ENGINEERING TO COMPLETE AS-BUILT SURVEY OF STORMWATER POND FOLLOWING COMPLETION OF THE POND.
 - CONTRACTOR SHALL PROVIDE SEWER LATERAL VIDEO TO CITY FOR REVIEW AND APPROVAL. CONTRACTOR TO CONTACT THE CITY ENGINEERING DEPARTMENT FOR THE VIDEO FORMAT. IF LATERAL MAINTENANCE IS NEEDED, THEN THE LATERAL IMPROVEMENTS MAY NEED TO BE INCLUDED AS PART OF THIS PROJECT. THE LATERAL PIPE AND CONNECTION TO THE MAIN LINE MAY NEED TO BE LINED OR RELAYED TO REDUCE INFILTRATION INTO THE CITY'S SANITARY SEWER SYSTEM TO IMPROVE THE STRUCTURAL INTEGRITY.
 - ALL PLANS HAVE BEEN REVIEWED AND APPROVED BY ENGINEER AND TO THE BEST OF THEIR KNOWLEDGE THE PLANS COMPLY WITH THE REQUIREMENTS OF THE ORDINANCE.

CONSTRUCTION STAKING SERVICES

CONSTRUCTION STAKING SHALL BE COMPLETED BY EXCEL ENGINEERING AS REQUESTED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. CONTRACTOR TO CONTACT RYAN WILGREN AT 920-926-9800 OR RYAN.WILGREN@EXCELENGINEER.COM TO GET STAKING PRICE TO INCLUDE IN BID TO OWNER. PAYMENT OF STAKING COSTS ABOVE AND BEYOND THE BASE PRICE DUE TO RESTAKING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR, NOT THE OWNER. CAD DRAWING FILES AND SURVEY CONTROL WILL NOT BE PROVIDED FOR STAKING PURPOSES.

STORMWATER POND ASBUILT NOTE

CONTRACTOR TO CONTACT EXCEL ENGINEERING TO COMPLETE AN AS-BUILT SURVEY FOLLOWING COMPLETION OF THE CONSTRUCTION OF THE STORMWATER POND. CONTRACTOR SHALL GIVE EXCEL ENGINEERING A MINIMUM OF 3 DAY NOTICE. PLEASE NOTE THAT THE HORIZONTAL TOLERANCE FOR POND CONSTRUCTION IS 0.50' AND THE VERTICAL TOLERANCE FOR POND, OUTLET, AND SPILLWAY CONSTRUCTION IS 0.10'. ANY ADDITIONAL WORK REQUIRED TO SURVEY AN INCOMPLETE POND OR FOR SURVEYING FOLLOWING WORK SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL NOT BE DIRECTED TO OWNER.

RECORD DRAWING NOTES

A RECORD DRAWING OF THE SANITARY/STORM SEWER FACILITIES SEALED BY A PROFESSIONAL ENGINEER OR REGISTERED LAND SURVEYOR SHALL BE SUBMITTED TO THE ENGINEERING DIVISION, AT MINIMUM THE DRAWINGS SHOULD INCLUDE:

- RIM/COVER ELEVATION
- INVERT ELEVATION
- DISTANCES
- SLOPES
- MATERIALS
- CONTRACTOR
- INSTALLATION DATES (MONTH AND YEAR COMPLETED)
- ANY NOTES RELATED TO MAJOR FIELD CHANGES (E. ADDITIONAL / DELETED STRUCTURES, ETC.)
- SIGNED AND SEALED BY PROFESSIONAL ENGINEER OR REGISTERED LAND SURVEYOR
- AUTOCAD DRAWING FOR IMPORTING INTO GIS

A REDLINED COPY OF THE PLANS WITH THE PROPOSED INFORMATION CROSSED OUT AND THE ACTUAL INFORMATION NEXT TO IT ACCEPTABLE AND HELPS THE REVIEW PROCESS.

CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL NECESSARY INFORMATION TO THE ENGINEER TO ACCURATELY COMPLETE THE RECORD DRAWINGS. IF NEEDED, CONTRACTOR SHALL COORDINATE WITH THE ENGINEER/SURVEYOR AS NEEDED FOR SURVEYOR TO SURVEY NECESSARY INFORMATION FOR RECORD DRAWING COMPLETION. COST TO SURVEY FOR THE RECORD DRAWING SHALL BE THE CONTRACTOR'S RESPONSIBILITY.

LEGEND

NOTE: ALL SYMBOLS SHOWN MAY NOT APPEAR ON DRAWINGS.

SYM.	IDENTIFICATION	SYM.	IDENTIFICATION
●	PROPOSED SPOT ELEVATIONS (FLOW LINE OF CURB UNLESS OTHERWISE SPECIFIED)	●	PROPOSED SPOT ELEVATIONS (TOP OF CURB, FLOWLINE OF CURB)
●	EXISTING GRADE SPOT ELEVATIONS	●	PROPOSED SPOT ELEVATIONS (TOP OF WALK, BOTTOM OF WALK @ FLOWLINE)
●	EXISTING SPOT ELEVATIONS (REFERENCE R-WALL DETAIL) (6'-FINISHED SURFACE GRADE AT BACK OF WALL)		
●	EXISTING SPOT ELEVATIONS (REFERENCE R-WALL DETAIL) (6'-FINISHED SURFACE GRADE AT FRONT OF WALL)		
EXISTING SITE SYMBOLS			
—	EXISTING SIGN	⊘	EXISTING UTILITY POLE
⊘	EXISTING HANDICAP PARKING STALL	⊘→	EXISTING UTILITY POLE WITH GUY WIRE
⊘	EXISTING WATER VALVE IN BOX	○→	EXISTING STREET LIGHT
⊘	EXISTING WATER VALVE IN MANHOLE	⊠	EXISTING TELEPHONE PEDESTAL
⊘	EXISTING WATER SERVICE VALVE	⊠	EXISTING ELECTRIC PEDESTAL
⊘	EXISTING WELL	⊠	EXISTING ELECTRIC BOX
⊘	EXISTING STORM CATCH BASIN	⊠	EXISTING FLOOD LIGHT
⊠	EXISTING STORM CURB INLET	⊠	EXISTING TELEPHONE MANHOLE
⊠	EXISTING SQUARE CATCH BASIN	⊠	EXISTING CABLE TV PEDESTAL
⊠	EXISTING LIGHT POLE	⊠	EXISTING GAS VALVE
■	1-1/4" REBAR SET WEIGHING 4.30 LB/FT.	⊠	EXISTING HEDGE
●	3/4" REBAR SET WEIGHING 1.50 LB/FT.	⊠	EXISTING WOODED AREA
□	1-1/4" REBAR FOUND	⊠	EXISTING MARSH AREA
○	3/4" REBAR FOUND	⊠	EXISTING DECIDUOUS TREE WITH TRUNK DIAMETER
⊠	2" IRON PIPE FOUND	⊠	EXISTING CONIFEROUS TREE
⊠	1" IRON PIPE FOUND	⊠	EXISTING SHRUB
⊠	SECTION CORNER	⊠	EXISTING STUMP
PROPOSED SITE SYMBOLS			
—	PROPOSED SIGN	⊠	PROPOSED STORM FINE INLET - ST FI
⊘	PROPOSED HANDICAP PARKING STALL	⊠	PROPOSED LIGHT POLE
⊘	PROPOSED WATER VALVE IN BOX	→	PROPOSED DRAINAGE FLOW
⊘	PROPOSED WATER VALVE IN MANHOLE	→	PROPOSED APRON END SECTION
⊘	PROPOSED WATER SERVICE VALVE	⊠	SOIL BORING
⊘	PROPOSED WELL	⊠	CENTER LINE
⊠	PROPOSED STORM CATCH BASIN - ST CB	⊠	PROPOSED CLEANOUT
⊠	PROPOSED STORM CURB INLET - ST CI	⊠	PROPOSED DOWNSPOUT TO GRADE
		⊠	PROPOSED DOWNSPOUT TO RISER
EXISTING LINETYPES			
—	EXISTING CHAINLINK FENCE	—	EXISTING POLISH SEWER AND MANHOLE
—	EXISTING WOOD FENCE	—	EXISTING PROCESS SEWER AND MANHOLE
—	EXISTING BARBED WIRE FENCE	—	EXISTING CLEAR WATER LINE
—	EXISTING CURB AND GUTTER	—	EXISTING UNDERGROUND FIBER OPTIC LINE
—	EXISTING GUARD RAIL	—	EXISTING UNDERGROUND ELECTRIC CABLE
—	EXISTING GROUND CONTOUR	—	EXISTING UNDERGROUND TELEPHONE CABLE
—	EXISTING STORM SEWER AND MANHOLE	—	EXISTING UNDERGROUND GAS LINE
—	EXISTING SANITARY SEWER AND MANHOLE	—	EXISTING OVERHEAD UTILITY LINE
—	EXISTING WATER LINE AND HYDRANT	—	RAILROAD TRACKS
—	INTERIOR PROPERTY LINE	—	RIGHT-OF-WAY LINE
PROPOSED LINETYPES			
—	PROPOSED CHAINLINK FENCE	—	PROPOSED POLISH SEWER AND MANHOLE
—	PROPOSED WOOD FENCE	—	PROPOSED PROCESS SEWER AND MANHOLE
—	PROPOSED BARBED WIRE FENCE	—	PROPOSED CLEAR WATER LINE
—	PROPOSED CURB AND GUTTER	—	PROPOSED UNDERGROUND GAS LINE
—	PROPOSED GUARD RAIL	—	PROPOSED UNDERGROUND TELEPHONE CABLE
—	PROPOSED GROUND CONTOUR	—	PROPOSED UNDERGROUND GAS LINE
—	PROPOSED STORM SEWER AND MANHOLE - ST MH	—	PROPOSED OVERHEAD UTILITY LINE
—	PROPOSED SANITARY SEWER AND MANHOLE - SAN MH	—	—
—	PROPOSED WATER LINE AND HYDRANT	—	—
—	PROPOSED PROPERTY LINE	—	—

SHEET INDEX

SHEETS BELOW INTENDED TO BE PRINTED IN COLOR. REFER TO DIGITAL FORMAT DRAWINGS IF PRINTED GRAYSCALE TO ENSURE SCOPE CLARITY.

NUMBER	SHEET NAME / DESCRIPTION
C0.1	CIVIL COVER SHEET
C0.2	CIVIL SPECIFICATIONS
C1.0	EXISTING SITE AND DEMOLITION PLAN
C1.1	SITE PLAN
C1.2	GRADING AND EROSION CONTROL PLAN
C1.3	UTILITY PLAN
C1.4	LANDSCAPE AND RESTORATION PLAN
C1.5	COLORLED LANDSCAPE PLAN
C2.0	DETAILS
C2.1	DETAILS
C3.1	SITE PHOTOMETRIC PLAN & DETAILS



SHEET DATES

ISSUED FOR APPROVAL	DATE
IFA	DEC. 19, 2025
IFA	JAN. 26, 2026

JOB NUMBER

230187600

SHEET NUMBER

C0.1

CIVIL SPECIFICATIONS

DIVISION 31 EARTH WORK

31 10 00 SITE CLEARING (DEMOLITION)

- CONTRACTOR SHALL CALL DIGGERS HOT LINE AND CONDUCT A PRIVATE UTILITY LOCATE TO ENSURE THAT ALL UTILITIES HAVE BEEN LOCATED BEFORE STARTING SITE DEMOLITION. DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
- CONTRACTOR TO FIELD TELEVE ALL EXISTING SANITARY AND STORM LATERALS THAT ARE SCHEDULED TO BE RE-USED AND/OR CONNECTED TO ON SITE AT TIME OF DEMOLITION. THE TELEVISIONS SHALL BE FREE OF OBSTRUCTIONS AND IN SOUND STRUCTURAL CONDITION. TELEVISIONS OF THESE LATERALS SHOULD BE COMPLETED AT BEGINNING OF CONSTRUCTION AND DESIGN ENGINEER SHALL BE NOTIFIED OF ANY OBSTRUCTIONS AND/OR STRUCTURAL DEFICIENCIES IMMEDIATELY AFTER COMPLETION OF FIELD TELEVISION.
- DEMOLITION PLAN IS AN OVERVIEW OF DEMOLITION TO TAKE PLACE ON SITE. CONTRACTOR TO FIELD VERIFY EXISTING SITE CONDITIONS PRIOR TO BIDDING. CONTRACTOR SHALL REMOVE, REPLACE, OR DEMOLISH ALL ITEMS AS NEEDED DURING CONSTRUCTION.
- CONTRACTOR TO PROTECT EXISTING IMPROVEMENTS THAT ARE SCHEDULED TO REMAIN. ANY DAMAGE TO EXISTING FACILITIES SHALL BE REPLACED AT CONTRACTORS EXPENSE.
- ALL CONCRETE NOTED TO BE REMOVED SHALL BE REMOVED TO THE NEAREST CONTROL JOINT.

31 20 00 EARTH MOVING

- CONTRACTOR SHALL CALL DIGGERS HOT LINE AND CONDUCT A PRIVATE UTILITY LOCATE AS REQUIRED TO ENSURE THAT ALL UTILITIES HAVE BEEN LOCATED BEFORE STARTING EXCAVATION. DESIGN ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN PLAN AND FIELD CONDITIONS PRIOR TO CONSTRUCTION.
- PROVIDE ALL LABOR, MATERIALS AND EQUIPMENT FOR ALL EXCAVATION, GRADING, FILL AND BACKFILL WORK AS REQUIRED TO COMPLETE THE GENERAL CONSTRUCTION WORK. ALL EXCAVATION AND BACKFILL FOR ELECTRICALS AND MECHANICALS ARE THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTOR UNLESS OTHERWISE SPECIFIED IN THE BID DOCUMENTS.
- ALL ORGANIC TOPSOIL INSIDE THE BUILDING AREA, UNDER PAVED AREAS, AND AT SITE FILL AREAS SHALL BE REMOVED. PROFUL ROL SUBGRADES BEFORE PLACING FILL WITH HEAVY PNEUMATIC-TIRED EQUIPMENT, SUCH AS A FULLY-LOADED TANDEM AXLE DUMP TRUCK, TO DENSITY SOFT POCKETS AND AREAS OF EXCESS YIELDING. CONTRACTOR SHALL VERIFY TOPSOIL DEPTHS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW AND FOLLOW THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND ACCOUNT FOR EXISTING CONDITIONS PRIOR TO SUBMITTING BID FOR THE PROJECT. EXCESS MATERIALS SHALL BE REMOVED FROM THE SITE UNLESS OTHERWISE DIRECTED IN THE PLANS OR BY LOCAL ZONING REQUIREMENTS.
- PLACE AND COMPACT FILL MATERIAL IN LAYERS TO REQUIRED ELEVATIONS, UNIFORMLY MOISTEN OR AERATE SUBGRADE AND EACH SUBSEQUENT FILL OR BACKFILL BEFORE COMPACTION AS COMPROMISED TO ACHIEVE SPECIFIED DENSITY. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTHERWISE SATISFACTORY SOIL MATERIAL THAT IS TOO WET TO COMPACT TO SPECIFIED DRY DENSITY.
- REMOVE AND FILL MATERIAL IN LAYERS NOT MORE THAN 18" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT MORE THAN 4" IN LOOSE DEPTH FOR MATERIAL COMPACTED BY HAND-OPERATED TAMPERS.
- COMPACT THE SOIL TO NOT LESS THAN THE FOLLOWING PERCENTAGES OF MAXIMUM DRY DENSITY ACCORDING TO ASTM D 698 STANDARD PROCTOR TEST. FILL MAY NOT BE PLACED ON FROZEN GROUND AND NO FROZEN MATERIALS MAY BE USED FOR BACK FILL. APPLY THE MORE STRINGENT REQUIREMENTS WHEN COMPARING BETWEEN THE FOLLOWING AND THE GEOTECHNICAL REPORT.
 - UNDER FOUNDATIONS: SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL, TO NOT LESS THAN 95 PERCENT.
 - UNDER INTERIOR SLAB-ON-GRADE WHERE GROUNDWATER IS MORE THAN 3 FEET BELOW THE SLAB: PLACE A DRAINAGE COURSE LAYER OF 3/4" CRUSHED STONE, WITH 5% TO 12% FINES, PER THICKNESS INDICATED ON FOUNDATION PLANS ON PREPARED SUBGRADE. COMPACT THE SUBGRADE AND DRAINAGE COURSE TO NOT LESS THAN 95 PERCENT.
 - UNDER INTERIOR SLAB-ON-GRADE WHERE GROUNDWATER IS WITHIN 3 FEET OF THE SLAB SURFACE: PLACE A DRAINAGE COURSE LAYER OF CLEAN 3/4" CRUSHED STONE WITH NO MORE THAN 5% FINES, PER THICKNESS INDICATED ON FOUNDATION PLANS ON PREPARED SUBGRADE. COMPACT THE SUBGRADE AND DRAINAGE COURSE TO NOT LESS THAN 95 PERCENT.
 - UNDER EXTERIOR CONCERTE AND ASPHALT PAVEMENTS: COMPACT THE SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 95 PERCENT. VENEER AND HEAVILY COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 95 PERCENT.
 - UNDER LAWN OR UNPAVED AREAS: COMPACT SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL, TO NOT LESS THAN 85 PERCENT.
- CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO PERFORM FIELD TESTS AND INSPECTIONS. CONTRACTOR SHALL PROVIDE DOCUMENTATION OF PASSING DENSITY TESTING AND PROOF ROLLING TO ENGINEER UPON COMPLETION. IT IS SUGGESTED THAT THE GEOTECHNICAL FIRM USED TO PERFORM THE SUBSURFACE SOIL INVESTIGATION BE ENGAGED FOR THE FIELD QUALITY CONTROL TESTS. THE GEOTECHNICAL REPORT WAS PERFORMED BY GILES ENGINEERING ASSOCIATES INC. IN JULY 2018.
- ALLOW THE TESTING AGENCY TO TEST AND INSPECT SUBGRADES AND EACH FILL OR BACKFILL LAYER. PROCEED WITH SUBSEQUENT EARTH-WORK ONLY AFTER TEST RESULTS FOR PREVIOUSLY COMPLETED WORK COMPLY WITH REQUIREMENTS. PROVIDE ONE TEST FOR EVERY 2000 SQUARE FEET OF PAVED AREA OR BUILDING SLAB, ONE TEST FOR EACH SPREAD FOOTING, AND ONE TEST FOR EVERY 50 LINEAR FEET OF WALL STEP FOOTING.
 - WHEN THE TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR AERATE, OR REMOVE AND REPLACE SOIL, TO DEPTH REQUIRED. RECOMPACT AND RE-TEST UNTIL, SPECIFIED COMPACTION IS OBTAINED.
 - IF THE BUILDING SITE SHALL BE GRADED TO PROVIDE DRAINAGE AWAY FROM THE BUILDING AS INDICATED ON THE PLANS, SITE EARTHWORK SHALL BE GRADED TO WITHIN 0.10' OF REQUIRED EARTHWORK ELEVATIONS ASSUMING POSITIVE DRAINAGE IS MAINTAINED IN ACCORDANCE WITH THE GRADING PLAN.

31 30 00 EROSION CONTROL/STORMWATER MANAGEMENT

- THE EXCEL ENGINEERING DESIGN ENGINEER SHALL PREPARE A SITE SPECIFIC EROSION CONTROL AND A STORMWATER MANAGEMENT PLAN PURSUANT TO NR 216.46 AND NR 216.47. THE DESIGN ENGINEER SHALL ALSO FILE A CONSTRUCTION NOTICE OF INTENT WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES PURSUANT TO NR 216.43 OR TO AN AUTHORIZED LOCAL PROGRAM PURSUANT TO NR 216.415 TO OBTAIN COVERAGE UNDER THE GENERAL WPDPS STORM WATER PERMIT.
- THE CONTRACTOR SHALL KEEP THE NOTICE OF INTENT PERMIT, APPROVED EROSION CONTROL, AND STORMWATER MANAGEMENT PLANS, AND PLAN AMENDMENTS ON THE CONSTRUCTION SITE AT ALL TIMES PURSUANT TO NR 216.45 UNTIL PERMIT COVERAGE IS TERMINATED.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL EROSION CONTROL PERMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE MONITORING, MAINTENANCE, AND REPORTING REQUIREMENTS OF NR 216.48. INSPECTIONS OF IMPLEMENTED EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES MUST AT A MINIMUM BE INSPECTED EVERY 7 CALENDAR DAYS OR EVERY 14 DAYS AND WITHIN HOURS OF THE END OF A RAIN EVENT OF 0.5" OR MORE. A RAIN EVENT MAY BE CONSIDERED TO BE THE TOTAL AMOUNT OF PRECIPITATION RECORDED IN ANY CONTINUOUS 24 HOUR PERIOD. THE CONTRACTOR SHALL REPAIR OR REPLACE EROSION AND SEDIMENT CONTROL, AS NECESSARY WITHIN 24 HOURS OF AN INSPECTION OR AFTER A DEPARTMENT NOTIFICATION WHEN REPAIR OR REPLACEMENT IS REQUESTED.
- THE CONTRACTOR SHALL MAINTAIN, AT THE CONSTRUCTION SITE OR AVAILABLE VIA AN INTERNET WEBSITE, WEEKLY WRITTEN REPORTS OF ALL INSPECTIONS CONDUCTED. WISCONSIN DNR CONSTRUCTION SITE INSPECTION REPORT FORM 3480-187 SHALL BE USED. WEEKLY INSPECTION REPORTS SHALL INCLUDE ALL OF THE FOLLOWING:
 - THE DATE, TIME, AND LOCATION OF THE CONSTRUCTION SITE INSPECTION.
 - THE NAME OF THE INDIVIDUAL WHO PERFORMED THE INSPECTION.
 - AN ASSESSMENT OF THE CONDITION OF THE EROSION AND SEDIMENT CONTROLS.
 - A DESCRIPTION OF ANY EROSION AND SEDIMENT CONTROL, BEST MANAGEMENT PRACTICE IMPLEMENTATION AND MAINTENANCE PERFORMED.
 - A DESCRIPTION OF THE PRESENT PHASE OF AND DISTURBING CONSTRUCTION ACTIVITY AT THE CONSTRUCTION SITE.
- EROSION AND SEDIMENT CONTROL IMPLEMENTED DURING CONSTRUCTION SHALL STRICTLY COMPLY WITH THE GUIDELINES AND REQUIREMENTS SET FORTH IN WISCONSIN ADMINISTRATIVE CODE (WA/C) NR 151: THE STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES RUNOFF MANAGEMENT PERFORMANCE STANDARDS. TECHNICAL STANDARDS PUBLISHED BY THE WISCONSIN DNR SHALL ALSO BE UTILIZED TO IMPLEMENT THE REQUIRED PERFORMANCE STANDARDS. THE METHODS AND TYPES OF EROSION CONTROL WILL BE DEPENDENT ON THE LOCATION AND TYPE OF WORK INVOLVED. ALL SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION, AND INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL. BELOW IS A LIST OF EROSION AND SEDIMENT CONTROL, BEST MANAGEMENT PRACTICES TO ACHIEVE THE PERFORMANCE STANDARDS REQUIRED.
 - SILT FENCE SHALL BE PLACED ON SITE AT LOCATIONS SHOWN ON THE EROSION CONTROL PLAN. SILT FENCE SHALL ALSO BE PROVIDED AROUND THE PERIMETER OF ALL SOIL STOCKPILES THAT WILL EXIST FOR MORE THAN 7 DAYS. FOLLOW PROCEDURES FOUND IN WISCONSIN DNR TECHNICAL STANDARD 1056 (CURRENT EDITION).
 - DITCH CHECKS SHALL BE PROVIDED TO REDUCE THE VOLUME OF WATER FLOWING IN DITCH CHANNELS. PLACE AT LOCATIONS SHOWN ON THE EROSION CONTROL PLAN. FOLLOW PROCEDURES FOUND IN WISCONSIN DNR TECHNICAL STANDARD 1062 (CURRENT EDITION).
 - STONE TRACKING PADS AND TRACKOUT CONTROL PRACTICES SHALL BE PLACED AT ALL CONSTRUCTION SITE ENTRANCES AND SHALL BE INSTALLED PRIOR TO ANY TRAFFIC LEAVING THE CONSTRUCTION SITE. SEE THE EROSION CONTROL PLAN FOR LOCATIONS. THE AGGREGATE USED FOR THE STONE TRACKING PAD SHALL BE 3/8" TO 3/4" INCH CLEAR OR WASHED STONE AND SHALL BE PLACED IN A LAYER AT LEAST 12 INCHES THICK. THE STONE SHALL BE UNDERLAIN WITH A WISDOT TYPE R GEOTEXTILE FABRIC AS NEEDED. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE GORES POINT (1/2" MIN WIDTH) AND SHALL BE A MINIMUM OF 50 FEET LONG. SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. OTHER TRACKOUT CONTROL PRACTICES INCLUDING STABILIZED WORK SURFACES, MANUFACTURED TRACKOUT CONTROL DEVICES, TIRE WASHING, AND STREET/PAVEMENT CLEANING SHALL BE IMPLEMENTED AS NECESSARY TO MITIGATE THE TRACKOUT OF SEDIMENT OFFSITE. FOLLOW PROCEDURES FOUND IN WISCONSIN DNR TECHNICAL STANDARD 1057 (CURRENT EDITION).
 - STORM DRAIN INLET PROTECTION SHALL BE PROVIDED FOR ALL NEW AND DOWNSTREAM STORM CATCH BASINS AND CURB INLETS. TYPE D PROTECTION SHOULD BE PROVIDED AND SHALL BE IN CONFORMANCE WITH WISCONSIN DNR TECHNICAL STANDARD 1060 (CURRENT EDITION).
 - DUST CONTROL MEASURES SHALL BE PROVIDED TO REDUCE OR PREVENT THE SURFACE AND AIR TRANSPORT OF DUST DURING CONSTRUCTION. CONTROL MEASURES INCLUDE APPLYING MULCH AND ESTABLISHING VEGETATION, WATER SPRAYING, SURFACE ROUGHENING, APPLYING POLYMERS, SPRAY ON TACKERS, CHLORIDES, AND BARRIERS. SOME TYPES MAY REQUIRE AN APPROACH THAT INCLUDES A COMBINATION OF MEASURES FOR DUST CONTROL. FOLLOW PROCEDURES FOUND IN WISCONSIN DNR TECHNICAL STANDARD 1068 (CURRENT EDITION).
 - THE USE, STORAGE, AND DISPOSAL OF CHEMICALS, CEMENT, AND OTHER COMPOUNDS AND MATERIALS USED ON SITE SHALL BE MANAGED DURING THE CONSTRUCTION PERIOD TO PREVENT THEIR TRANSPORT BY RUNOFF INTO WATERS OF THE STATE.
 - CONTRACTOR SHALL PROVIDE AN OPEN AGGREGATE CONCRETE TRUCK WASHOUT AREA ON SITE. CONTRACTOR TO ENSURE THAT CONCRETE WASHOUT SHALL BE CONTAINED TO THIS DESIGNATED AREA AND NOT BE ALLOWED TO RUN INTO STORM INLETS OR INTO THE OVERLAND STORMWATER DRAINAGE SYSTEM. WASHOUT AREA SHALL BE REMOVED UPON COMPLETION OF CONSTRUCTION.
 - TEMPORARY SITE RESTORATION SHALL TAKE PLACE IN DISTURBED AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH LAND DISTURBING ACTIVITIES WILL NOT BE PERFORMED FOR A PERIOD GREATER THAN 14 DAYS AND WHICH REQUIRES VEGETATIVE COVER FOR LESS THAN ONE YEAR. THIS TEMPORARY SITE RESTORATION REQUIREMENT ALSO APPLIES TO SOIL STOCKPILES THAT EXIST FOR MORE THAN 7 DAYS. PERMANENT RESTORATION APPLIES TO AREAS WHERE PERENNIAL VEGETATIVE COVER IS NEEDED TO PERMANENTLY STABILIZE AREAS OF EXPOSED SOIL. PERMANENT STABILIZATION SHALL OCCUR WITHIN 3 WORKING DAYS OF FINAL GRADING. TOPSOIL, SEED, AND MULCH SHALL BE IN GENERAL CONFORMANCE WITH TECHNICAL STANDARDS 1058 AND 1059 AND SHALL MEET THE SPECIFICATIONS FOUND IN THE LANDSCAPING AND SITE STABILIZATION SECTION OF THIS CONSTRUCTION DOCUMENT. ANY SOIL EROSION THAT OCCURS AFTER FINAL GRADING AND/OR FINAL STABILIZATION MUST BE REPAIRED AND THE STABILIZATION WORK REDONE.
 - IF SITE DEWATERING IS REQUIRED FOR PROPOSED CONSTRUCTION ACTIVITIES, ALL SEDIMENT LADEN WATER GENERATED DURING THE DEWATERING PROCESS SHALL BE TREATED TO REMOVE SEDIMENT PRIOR TO DISCHARGING OFF-SITE OR TO WATERS OF THE STATE. FOLLOW ALL PROCEDURES FOUND IN TECHNICAL STANDARD 1061.
 - ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION WORK OR A STORM EVENT SHALL BE CLEANED UP BY THE END OF EACH WORKING DAY. DUST CONTROL REQUIREMENTS SHALL BE FOLLOWED PER W DNR TECHNICAL STANDARD 1068 (CURRENT EDITION). FLUSHING SHALL NOT BE ALLOWED.
 - EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL THE AREAS SERVED HAVE ESTABLISHED VEGETATIVE COVER.
 - ONCE THE CONSTRUCTION SITE HAS BEEN FULLY STABILIZED AND TEMPORARY EROSION CONTROL BEST MANAGEMENT PRACTICES HAVE BEEN REMOVED, THE CONTRACTOR SHALL FILE A CONSTRUCTION NOTICE OF TERMINATION WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES IN ACCORDANCE WITH NR 216.55.
 - AT THE COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL GIVE THE OWNER COPIES OF THE EROSION CONTROL AND STORM WATER MANAGEMENT PLANS, AMENDMENTS TO PLANS, SUPPORTING PLAN DATA, AND CONSTRUCTION SITE EROSION CONTROL INSPECTION REPORTS. THE OWNER SHALL RETAIN THESE FOR A PERIOD OF 3 YEARS FROM THE DATE OF TERMINATING COVERAGE UNDER WPDPS GENERAL PERMIT.
 - ALL POST CONSTRUCTION STORMWATER MANAGEMENT BEST MANAGEMENT PRACTICES SHALL BE CONSTRUCTED BEFORE THE SITE HAS UNDERGONE FINAL STABILIZATION.

DIVISION 32 EXTERIOR IMPROVEMENTS

32 10 00 AGGREGATE BASE & ASPHALT PAVEMENT

- CONTRACTOR TO PROVIDE COMPACTED AGGREGATE BASE AND HOT MIX ASPHALT PAVEMENT WHERE INDICATED ON THE PLANS. ALL AGGREGATE PROVIDED MUST COMPLY WITH SECTION 305 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. PROVIDE HOT MIX ASPHALT MIXTURE TYPES PER SECTION 40 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. CONTRACTOR SHALL OBTAIN AND REVIEW SOILS REPORT FOR RECOMMENDATIONS AND INSTRUCTIONS REGARDING CRUSHED AGGREGATE (IF APPLICABLE). CONTRACTOR TO PROVIDE AGGREGATE BASE AND HOT MIX ASPHALT PAVEMENT TYPES AND DEPTHS AS INDICATED BELOW.

STANDARD ASPHALT PAVING SECTION	HEAVY ASPHALT PAVING SECTION
1-1/2" SURFACE COURSE (S 11 58-285)	1-1/2" SURFACE COURSE (S 11 58-285)
(WISDOT 455.2.5 TACK COAT (STAGED PAVING))	(WISDOT 455.2.5 TACK COAT (STAGED PAVING))
2" BINDER COURSE (4 L1 58-285)	2-1/2" BINDER COURSE (4 L1 58-285)
10" OF 1-1/4" CRUSHED AGGREGATE	12" OF 1-1/4" CRUSHED AGGREGATE
GEOTEXTILE FABRIC, MBRA1 150N OR EQ	GEOTEXTILE FABRIC, MBRA1 150N OR EQ
- PUBLIC ROADWAY ASPHALT PAVING SECTION

1-1/2" SURFACE COURSE (S 11 58-285)	1-1/2" SURFACE COURSE (S 11 58-285)
(WISDOT 455.2.5 TACK COAT (STAGED PAVING))	(WISDOT 455.2.5 TACK COAT (STAGED PAVING))
2" UPPER BINDER COURSE (4 L1 58-285)	2-1/2" BINDER COURSE (4 L1 58-285)
2-1/2" LOWER BINDER COURSE (S 11 58-285)	2-1/2" BINDER COURSE (4 L1 58-285)
14-1/2" OF 1-1/4" CRUSHED AGGREGATE	14-1/2" OF 1-1/4" CRUSHED AGGREGATE
- CONTRACTOR TO COMPACT THE AGGREGATE BASE, ASPHALT BINDER COURSE, AND ASPHALT SURFACE COURSE TO AN AVERAGE DENSITY PER WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. ALL ASPHALT PAVEMENT AREAS SHALL BE PAVED TO WITHIN 0.05" OF DESIGN SURFACE GRADES WITH POSITIVE DRAINAGE BEING MAINTAINED IN ACCORDANCE WITH DESIGN PLANS. A MINIMUM OF 1% SLOPE SHALL BE MAINTAINED IN ALL ASPHALT PAVEMENT AREA.
- HOT MIX ASPHALT CONSTRUCTION TO BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF GEOTECHNICAL REPORT OR CONSTRUCTION DOCUMENTS.
- CONTRACTOR TO PROVIDE 4" WIDE YELLOW PAINTED STOPPING FOR PARKING STALLS, TRAFFIC LANES, AND NO PARKING AREAS. YELLOW PAINT MARKINGS SHALL ALSO BE PROVIDED FOR C, C, ACCESS SYMBOLS, TRAFFIC ARROWS, AND TRAFFIC MESSAGES.

32 20 00 CONCRETE AND AGGREGATE BASE

- CONTRACTOR TO PROVIDE CRUSHED AGGREGATE BASE AND CONCRETE WHERE INDICATED ON THE PLANS.
- ALL AGGREGATE PROVIDED MUST COMPLY WITH SECTION 305 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION. ALL AGGREGATE PLACED MUST BE COMPACTED TO AN AVERAGE DENSITY PER WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- DESIGN AND CONSTRUCTION OF ALL CAST-IN-PLACE EXTERIOR CONCRETE FLAT WORK SHALL CONFORM TO ACI 308-08 OR ACI 318-08.
- CONCRETE FLAT WORK SHALL BE PROVIDED PER MORE STRINGENT REQUIREMENTS OF THE GEOTECHNICAL REPORT OR THIS SPECIFICATION. CONCRETE FLAT WORK CONSTRUCTION IS AS FOLLOWS:
 - SIDEWALK CONCRETE: 4" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE BASE. CONSTRUCTION JOINTS SHALL CONSIST OF 1/8" WIDE BY 1" DEEP TOOLED JOINT WHERE INDICATED ON THE PLANS.
 - NON-DRAINWAY LOCATIONS: 4" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE BASE.
 - PUBLIC SIDEWALK CONCRETE: 4" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE BASE.
 - NON-DRAINWAY LOCATIONS: 4" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE BASE.
- CONSTRUCTION JOINTS SHALL CONSIST OF 1/8" WIDE BY 1" DEEP TOOLED JOINT WHERE INDICATED ON THE PLANS.
- DUMPSTER PAD/PIRON CONCRETE: 8" OF CONCRETE OVER 6" OF AGGREGATE BASE OVER GEOTEXTILE FABRIC (MBRA1 150N OR EQ).
 - CONCRETE SHALL BE STEEL REINFORCED WITH THE FOLLOWING AND PLACED IN THE UPPER 1/3 TO 1/2 OF THE SLAB.
 - THE BARS AT ALL CONSTRUCTION JOINTS OF THE CONCRETE. THE BARS SHALL BE #4 REBAR 30" LONG PLACED AT 30" O.C.
 - DUMPSTER PAD CONCRETE JOINTING SHALL BE AS FOLLOWS:
 - CONSTRUCTION SAWCUT JOINT - CONTRACTOR SHALL PROVIDE A SAWCUT JOINT AT MAXIMUM SPACING OF 15' ON CENTER. SAWCUT SHALL BE 2" IN DEPTH.
 - TYPICAL POUR CONTROL JOINT - FOUR CONTROL JOINT SHALL BE PROVIDED WITH 1-1/4" DIAMETER BY 20' LONG SMOOTH DOWEL PLACED AT 12" O.C. ONE HALF OF THE DOWEL SHALL BE GREASED. GREENSTRAK 9" SPORED DOWEL TUBES SHALL BE USED.
- HEAVY DUTY CONCRETE (TRUCK TRAFFIC): 6" OF CONCRETE OVER 4" OF 3/4" CRUSHED AGGREGATE OVER GEOTEXTILE FABRIC (MBRA1 150N OR EQ). REFER TO CITY DETAIL 02C02. CONSTRUCTION JOINTS SHALL BE SAWCUT 1.5" IN DEPTH AND 8" SPACED A MAXIMUM OF 15' ON CENTER.

- DESIGN MIXES SHALL BE IN ACCORDANCE WITH ASTM C94
 - STRENGTH TO BE MINIMUM OF 4,500 PSI AT 28 DAYS FOR EXTERIOR CONCRETE.
 - MAXIMUM WATER/CEMENT RATIO SHALL BE 0.45.
 - SLUMP SHALL NOT EXCEED 4" FOR EXTERIOR CONCRETE FLAT WORK.
 - SLUMP SHALL BE 15" OR LESS FOR SUMP-FORMED CURB AND GUTTER.
 - SLUMP SHALL BE BETWEEN 15" TO 3" FOR NON-SUMP-FORMED CURB AND GUTTER.
 - ALL EXTERIOR CONCRETE SHALL BE AIR ENTRAINED WITH 4% TO 7% AIR CONTENT. NO OTHER ADMIXTURES SHALL BE USED WITHOUT APPROVAL OF EXCEL ENGINEERING, INC. CALCIUM CHLORIDE SHALL NOT BE USED.
 - MAXIMUM AGGREGATE SIZE FOR ALL EXTERIOR CONCRETE SHALL BE 0.75 INCHES.
- VERIFY EQUIPMENT CONCRETE PAD SIZES WITH CONTRACTOR REQUIRED PAD. PADS SHALL HAVE FIBERESH 300 FIBERS AT A RATE OF 1.5 LBS./CU. YD. OR 6 X 6-W1-4 X W1-4 WELDED WIRE MESH WITH MINIMUM 1 INCH COVER. EQUIPMENT PADS SHALL BE 5.5 INCHES THICK WITH 1 INCH CHAMFER UNLESS SPECIFIED OTHERWISE. CONCRETE SHALL BE PROVIDED ON 6" OF 3/4" CRUSHED AGGREGATE BASE. COORDINATE ADDITIONAL PAD REQUIREMENTS WITH RESPECTIVE CONTRACTOR.
- ALL CONCRETE FLAT WORK SURFACES AND CONCRETE CURB FLOWLINES SHALL BE CONSTRUCTED TO WITHIN 0.05" OF DESIGN SURFACE AND FLOWLINE GRADIES ASSUMING POSITIVE DRAINAGE IS MAINTAINED IN ACCORDANCE WITH THE DESIGN PLANS.
- CONCRETE FLAT WORK SHALL HAVE CONSTRUCTION JOINTS OR SAW CUT JOINTS PLACED AS INDICATED ON THE PLANS OR BY THIS SPECIFICATION. SAWCUTS SHALL BE DONE AS SOON AS POSSIBLE, BUT NO LATER THAN 24 HOURS AFTER CONCRETE IS PLACED. CONCRETE CURB AND GUTTER JOINTING SHALL BE PLACED EVERY 10' OR CLOSER (6" MIN). IF CONCRETE PAVEMENT IS ADJACENT TO CONCRETE CURB, JOINTING IN THE PAVEMENT AND CURB SHALL ALIGN. ALL EXTERIOR CONCRETE SHALL HAVE A BROOM FINISH UNLESS NOTED OTHERWISE. A UNIFORM COAT OF A HIGH SOLIDS CURING COMPOUND MEETING ASTM C309 SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES. ALL CONCRETE IS TO BE CURED FOR 7 DAYS. EXTERIOR CONCRETE SHALL BE SEPARATED FROM BUILDINGS WITH CONTINUOUS 0.5 INCH FIBER EXPANSION JOINT AND/OR 0.25 INCH FIBER EXPANSION JOINT AT DECORATIVE MASONRY UNITS.
- ALL REINFORCING BARS SHALL BE ASTM A615 GRADE 60. THICKNESS OF CONCRETE COVER OVER REINFORCEMENT SHALL BE NOT LESS THAN 3" WHERE CONCRETE IS DEPOSITED AGAINST THE GROUND WITHOUT THE USE OF FORMS AND NOT LESS THAN 1.5" FOR UP TO #5 BARS AND 2" FOR #6 TO #10 BARS IN ALL OTHER LOCATIONS. ALL REINFORCING SHALL BE LAPPED 48 DIAMETERS FOR UP TO #6 BARS, 62 DIAMETERS FOR #7 TO #9 BARS, 68 DIAMETERS FOR #10 BARS OR AS NOTED ON THE DRAWINGS AND EXTENDED AROUND CORNERS WITH CORNER BARS. PLACING AND DETAILING OF STEEL REINFORCING AND REINFORCING SUPPORTS SHALL BE IN ACCORDANCE WITH CRSI AND AC MANUALS, AND STANDARD PRACTICES. THE REINFORCEMENT SHALL NOT BE PAINTED AND MUST BE FREE OF GREASE, OIL, DIRT OR DEEP RUST WHEN PLACED IN THE WORK. ALL WELDED WIRE FABRIC SHALL MEET THE REQUIREMENTS OF ASTM A 1064. WELDED WIRE FABRIC SHALL BE PLACED 2" FROM TOP OF SLAB, UNLESS INDICATED OTHERWISE.
- CONTRACTOR SHALL ENGAGE A QUALIFIED INDEPENDENT TESTING AND INSPECTING AGENCY TO SAMPLE MATERIALS, PERFORM TESTS, AND SUBMIT TEST REPORTS DURING CONCRETE PLACEMENT. TESTS WILL BE PERFORMED ACCORDING TO ACI 301. CAST AND LAMINATION CURB ONE SET OF FOUR STANDARD CYLINDERS FOR EACH COMPOSITE SAMPLE FOR EACH DAY'S POUR OF EACH CONCRETE MIX EXCEEDING 5 CU. YD., BUT LESS THAN 25 CU. YD., PLUS ONE SET FOR EACH ADDITIONAL 50 CU. YD. OR FRACTION THEREOF. PERFORM COMPRESSIVE STRENGTH TESTS ACCORDING TO ASTM C 39. TEST TWO SPECIMENS AT 7 DAYS AND TWO SPECIMENS AT 28 DAYS. PERFORM SLUMP TESTING ACCORDING TO ASTM C 143. PROVIDE ONE TEST AT POINT OF PLACEMENT FOR EACH COMPOSITE SAMPLE, BUT NOT LESS THAN ONE TEST FOR EACH DAY'S POUR OF EACH CONCRETE MIX. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
- PROTECT FRESHLY PLACED CONCRETE FROM PREATURE DRAINAGE AND EXCESSIVE COLD OR HOT TEMPERATURES. IN HOT, DRY, AND WINDY WEATHER, APPLY AN EVAPORATION CONTROL COMPOUND ACCORDING TO MANUFACTURER'S INSTRUCTIONS AFTER SCREEDING AND BLOW FLOATING, BUT BEFORE POWER FLOATING AND TROWELLING.
- LIMIT MAXIMUM WATER-CEMENTitious RATIO OF CONCRETE EXPOSED TO FREEZING, THAWING AND DICING SALTS TO 0.45.
- TEST RESULTS WILL BE REPORTED IN WRITING TO THE DESIGN ENGINEER, READY-MIX PRODUCER, AND CONTRACTOR WITHIN 24 HOURS AFTER TESTS. REPORTS OF COMPRESSIVE STRENGTH TESTS SHALL CONTAIN THE PROJECT IDENTIFICATION NAME AND NUMBER, DATE OF CONCRETE PLACEMENT, NAME OF CONCRETE TESTING SERVICE, CONCRETE TYPE AND CLASS, LOCATION OF CONCRETE BATCH ON SITE, DESIGN COMPRESSIVE STRENGTH AT 28 DAYS, CONCRETE MIX PROPORTIONS AND MATERIALS, COMPRESSIVE BREAKING STRENGTH, AND TYPE OF BREAK FOR BOTH 7-DAY TESTS AND 28-DAY TESTS.

32 30 00 LANDSCAPING AND SITE STABILIZATION

- TOPSOIL: CONTRACTOR TO PROVIDE A MINIMUM OF 6" OF TOPSOIL FOR ALL DISTURBED OPEN AREAS, OTHER THAN A LANDSCAPE ISLANDS SHALL BE PROVIDED WITH A MINIMUM OF 10" OF TOPSOIL. REUSE SURFACE SOIL STOCKPILED ON SITE AND SUPPLEMENT WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF-SITE SOURCES WHEN QUANTITIES ARE INSUFFICIENT. EXCAVATOR SHALL BE RESPONSIBLE FOR ROUGH PLACEMENT OF TOPSOIL TO WITHIN 1" OF FINAL GRADE PRIOR TO LANDSCAPER FINAL GRADING. LANDSCAPER TO PROVIDE PULVERIZING AND FINAL GRADING OF TOPSOIL. PROVIDE SOIL ANALYSIS BY A QUALIFIED SOIL TESTING LABORATORY AS REQUIRED TO VERIFY THE SUITABILITY OF SOIL TO BE USED AS TOPSOIL AND TO DETERMINE THE NECESSARY SOIL AMENDMENTS. TEST SOIL FOR PRESENCE OF ATRAZINE AND INFROM EXCEL ENGINEERING, INC. IF PRESENT PRIOR TO BIDDING PROJECT. TOPSOIL SHALL HAVE A PH RANGE OF 5.5 TO 8, CONTAIN A MINIMUM OF 5 PERCENT ORGANIC MATERIAL CONTENT, AND SHALL BE FREE OF STONES 1 INCH OR LARGER IN DIAMETER. ALL MATERIALS HARMFUL TO PLANT GROWTH SHALL ALSO BE REMOVED. TOPSOIL INSTALLATION: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 6 INCHES AND REMOVE STONES LARGER THAN 1" IN DIAMETER. ALSO REMOVE ANY STICKS, ROOTS, RUBBER, AND OTHER EXTRANEIOUS MATTER AND DISPOSE OF THEM OFF THE PROPERTY. SPREAD TOPSOIL TO A DEPTH OF 6" BUT NOT LESS THAN WHAT IS REQUIRED TO MEET FINISHED GRADES AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. DO NOT SPREAD TOPSOIL ON SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET. GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN 0.05 FEET OF FINISHED GRADE ELEVATION.
- SEEDED LAWNS:
 - PERMANENT LAWN AREAS SHALL BE SEEDDED WITH THE FOLLOWING MIXTURE: 65% KENTUCKY BLUEGRASS BLEND (2.0-2.6 LBS./1,000 S.F.), 20% PERENNIAL RYEGRASS (0.8-0.8 LBS./1,000 S.F.), 15% PER FESCUE (0.4-0.8 LBS./1,000 S.F.). STRAW AND MULCH SHALL BE Laid AT 100 LBS./1,000 S.F. FERTILIZE AS PER SOIL TEST OR APPLY 5-10-10 OR EQUIVALENT AT 5-10-10 LBS./1,000 S.F. SEE EROSION MATTING SPECIFICATIONS AS REQUIRED. FOLLOW PROCEDURES FOUND IN WDNR TECHNICAL STANDARDS 1058 & 1059.
 - ALL PERMANENT AND TEMPORARY STORM WATER CONVEYANCE SWALE BOTTOMS AND SIDE SLOPES AS WELL AS STORMWATER MANAGEMENT BASIN BOTTOMS AND SIDE SLOPES SHALL BE SEEDDED WITH THE FOLLOWING MIXTURE: 45% KENTUCKY BLUEGRASS (0.60 LBS./1,000 S.F.), 40% CREEPING RED FESCUE (0.50 LBS./1,000 S.F.), AND 15% PERENNIAL RYEGRASS (0.20 LBS./1,000 S.F.). FERTILIZE AS PER SOIL TEST OR APPLY 5-10-10 OR EQUIVALENT AT 5-10-10 LBS./1,000 S.F. SEE EROSION MATTING SPECIFICATIONS AS REQUIRED. FOLLOW PROCEDURES FOUND IN WDNR TECHNICAL STANDARDS 1058 & 1059.
 - ALL TEMPORARY SEEDING SHALL CONSIST OF THE FOLLOWING MIXTURE: 100% RYEGRASS AT 1.0 LBS./1,000 S.F. STRAW AND MULCH SHALL BE Laid AT 100 LBS./1,000 S.F. FERTILIZE AS PER SOIL TEST OR APPLY 5-10-10 OR EQUIVALENT AT 5-10-10 LBS./1,000 S.F. SEE EROSION MATTING SPECIFICATIONS AS REQUIRED. FOLLOW PROCEDURES FOUND IN WDNR TECHNICAL STANDARDS 1058 & 1059.
- SEEDED LAWN MAINTENANCE: CONTRACTOR TO PROVIDE MAINTENANCE OF ALL LANDSCAPING FOR A PERIOD OF 90 DAYS FROM THE DATE OF INSTALLATION. AT THE END OF THE MAINTENANCE PERIOD, A HEALTHY, UNIFORM CLOSE STAND OF GRASS SHOULD BE ESTABLISHED FREE OF WEEDS AND SURFACE IRREGULARITIES. LAWN COVERAGE SHOULD EXCEED 90% AND BARE SPOTS SHOULD NOT EXCEED 5.0%. CONTRACTOR SHOULD REESTABLISH LAWNS THAT DO NOT COMPLY WITH THESE REQUIREMENTS AND CONTINUE MAINTENANCE UNTIL LAWNS ARE SATISFACTORY.
- EROSION MATTING:
 - CONTRACTOR TO PROVIDE EROSION CONTROL MATTING (NORTH AMERICAN GREEN S100) OR EQUIVALENT ON ALL SLOPES THAT ARE 4:1 AND GREATER OUTSIDE OF STORMWATER CONVEYANCE SWALES AND STORMWATER MANAGEMENT BASINS. LAWN SEED SHALL BE PLACED BELOW MATTING IN ACCORDANCE WITH SEEDING REQUIREMENTS AND MANUFACTURER SPECIFICATIONS.
 - CONTRACTOR TO PROVIDE EROSION MATTING (NORTH AMERICAN GREEN C125) OR EQUIVALENT IN ALL SWALE BOTTOMS AND SIDE SLOPES AS WELL AS STORMWATER MANAGEMENT BASIN BOTTOMS AND SIDING SLOPES AS REQUIRED. LAWN SEED SHALL BE PLACED BELOW MATTING IN ACCORDANCE WITH SEEDING REQUIREMENTS AND MANUFACTURER SPECIFICATIONS.
- RIP-RAP: ALL RIP-RAP ASSOCIATED WITH STORMWATER MANAGEMENT AND STORMWATER CONVEYANCE, AS DELINEATED ON THE PLANS, SHALL BE CONSTRUCTED WITH THE FOLLOWING AND OTHER RIP-RAP MATCHING THE PROPOSED ADJUSTED GRADE ELEVATIONS. PLACEMENT OF RIP-RAP ABOVE THE PROPOSED ADJUSTED GRADE ELEVATIONS IS NOT ACCEPTABLE. ALL RIP-RAP SHALL BE PLACED ON TYPE H FILTER FABRIC SECTION 645 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURAL CONSTRUCTION.
- TREES AND SHRUBS: FURNISH NURSERY-GROWN TREES AND SHRUBS WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPARENTING OR ROOT PRUNING. PROVIDE WELL-SHAPED, FULLY BRANCHED, AND HEALTHY LOOKING STOCK. STOCK SHOULD ALSO BE FREE OF DISEASE, INSECTS, EGGS, LARVAE, AND DEFECTS SUCH AS KNOTS, SUN SCALD, INJURIES, ABRASIONS, AND DISFIGUREMENT. USE THE LANDSCAPE PLAN FOR SPECIFIC SPECIE TYPE, SIZE, AND LOCATION.
- TREE AND SHRUB INSTALLATION: EXCAVATE CIRCULAR PITS WITH SIDES SLOPED INWARD. TRIM BASE LEAVING CENTER AREA RAISED SLIGHTLY TO SUPPORT ROOT BALL. EXCAVATE FIT APPROXIMATELY THREE TIMES AS WIDE AS THE ROOT BALL DIAMETER. SET TREES AND SHRUBS PLUMB AND IN CENTER OF PIT WITH TOP OF BALL 1" ABOVE ADJACENT FINISHED GRADES. PLACE PLANTING SOIL MIX AROUND ROOT BALL IN LAYERS AND TAMP TO SETTLE MIX. WATER ALL PLANTS THOROUGHLY. PROVIDE TEMPORARY STAKING FOR TREES AS REQUIRED.
- TREES AND SHRUB MAINTENANCE/WARRANTY: CONTRACTOR TO PROVIDE MAINTENANCE OF ALL LANDSCAPING FOR A PERIOD OF 90 DAYS FROM THE DATE OF INSTALLATION. MAINTENANCE TO INCLUDE REGULAR WATERING AS REQUIRED FOR SUCCESSFUL PLANT ESTABLISHMENT. CONTRACTOR TO PROVIDE 1 YEAR WARRANTY ON ALL TREES, SHRUBS, AND PERENNIALS.
- MINERAL MULCH: PROVIDE 3" MINIMUM THICK BLENDED, OF 1.5" MINIMUM TO 2.5" MINIMUM CRUSHED DECORATIVE STONE AT ALL PLANTING AREAS INDICATED ON THE LANDSCAPE PLAN. INSTALL OVER NON-WOVEN WED BARRIER FABRIC, COLOR BY OWNER.
- PLASTIC EDGING: INSTALL VALLEY VIEW INDUSTRIES BLACK DIAMOND LAMIN EDGING TO SEPARATE ALL PLANTING BEDS FROM LAWN AREAS. EDGING TO BE 5.5" TALL WITH METAL STAKES INSTALLED PER MANUFACTURER'S WRITTEN INSTRUCTIONS.

DIVISION 33 UTILITIES

33 10 00 SITE UTILITIES

- CONTRACTOR TO FIELD VERIFY ALL EXISTING UNDERGROUND UTILITIES ON SITE. CONTRACTOR TO VERIFY PIPE LOCATIONS, SIZES, AND DEPTHS AT POINT OF PROPOSED CONNECTIONS AND VERIFY PROPOSED UTILITY ROUTES ARE CLEAR PER CODES OF ALL EXISTING UTILITIES AND OTHER OBSTRUCTIONS PRIOR TO CONSTRUCTION. COSTS INCURRED FOR FAILURE TO DO SO SHALL BE THE CONTRACTORS RESPONSIBILITY.
- CONTRACTOR TO FIELD TELEVE ALL EXISTING SANITARY AND STORM LATERALS THAT ARE SCHEDULED TO BE RE-USED AND/OR CONNECTED TO ON SITE. THE TELEVISIONS SHALL BE COMPLETED TO ENSURE THE EXISTING LATERALS ARE FREE OF OBSTRUCTIONS AND IN SOUND STRUCTURAL CONDITION. TELEVISIONS OF THESE LATERALS SHOULD BE COMPLETED AT BEGINNING OF CONSTRUCTION AND DESIGN ENGINEER SHALL BE NOTIFIED OF ANY OBSTRUCTIONS AND/OR STRUCTURAL DEFICIENCIES IMMEDIATELY AFTER COMPLETION OF FIELD TELEVISION.
- ALL SANITARY PIPE SHALL BE IN ACCORDANCE WITH MATERIALS SPECIFIED IN TABLE A: ALLOWABLE PIPE MATERIAL SCHEDULE. ALL SANITARY PIPE BELOW PROPOSED B: FUTURE BUILDINGS SHALL BE IN ACCORDANCE WITH MATERIALS SPECIFIED IN TABLE A: ALLOWABLE PIPE MATERIAL. INSULATION SHALL BE PROVIDED PER STATE PLUMBING CODES AS NECESSARY BASED ON PROPOSED DEPTH PER PLANS.
- CLEANOUTS SHALL BE PROVIDED FOR THE SANITARY & STORM SERVICES AT LOCATIONS INDICATED ON THE UTILITY PLAN. THE CLEANOUT SHALL CONSIST OF A COMBINATION WYE FITTING IN LINE WITH THE SANITARY/STORM SERVICE WITH THE CLEANOUT LEG OF THE COMBINATION WYE FACING STRAIGHT UP. THE CLEANOUT SHALL CONSIST OF A 14" OR 6" VERTICAL PVC PIPE WITH A WATER TIGHT REMOVABLE CLEANOUT PLUG. AN 8" PVC FROST SLEEVE SHALL BE PROVIDED. THE BOTTOM OF THE FROST SLEEVE SHALL TERMINATE 12" ABOVE THE TOP OF THE SANITARY LATERAL OR AT LEAST 6" BELOW THE PREDICTED FROST DEPTH, WHICHEVER IS SHALLOWER. THE CLEANOUT SHALL EXTEND JUST ABOVE THE SURFACE GRADE IN LAWN OR LANDSCAPE AREAS WITH THE FROST SLEEVE TERMINATING AT THE GRADE SURFACE. THE CLEANOUT SHALL EXTEND TO 4 INCHES BELOW SURFACE GRADE IN PAVED SURFACES WITH A 2-1/2" (4 IN) HEAVY DUTY CLEANOUT HOUSING PLACED OVER THE TOP OF THE CLEANOUT FLUSH WITH THE SURFACE GRADE. IN PAVED SURFACES, THE FROST SLEEVE SHALL TERMINATE IN A CONCRETE PAD AT LEAST 6" THICK AND EXTENDING AT LEAST 9" FROM THE SLEEVE ON ALL SIDES, SLOPING AWAY FROM THE SLEEVE. THE CLEANOUT HOUSING SHALL BE CONSTRUCTED PER MANUFACTURERS REQUIREMENTS.
- ALL PROPOSED WATER PIPE SHALL BE IN ACCORDANCE WITH MATERIALS SPECIFIED IN TABLE A: ALLOWABLE PIPE MATERIAL SCHEDULE. # MINIMUM COVER SHALL BE PROVIDED OVER ALL WATER PIPING UNLESS OTHERWISE SPECIFIED.
- ALL PROPOSED STORM PIPE SHALL BE IN ACCORDANCE WITH MATERIALS SPECIFIED IN TABLE A: ALLOWABLE PIPE MATERIAL SCHEDULE. ALL PROPOSED STORM PIPE BELOW BUILDINGS SHALL BE IN ACCORDANCE WITH MATERIALS SPECIFIED IN TABLE A: ALLOWABLE PIPE MATERIAL SCHEDULE. SEE UTILITY PLANS FOR ALL STORM PIPE MATERIAL TYPES TO BE USED. PIPE SHALL BE PLACED MK 8" HORIZONTALLY FROM FOUNDATION WALLS.
- SANITARY, STORM, AND WATER UTILITY PIPE INVERTS SHALL BE CONSTRUCTED WITHIN 0.10' OF DESIGN INVERT ELEVATIONS ASSUMING PIPE SLOPE AND SEPARATION IS MAINTAINED PER UTILITY PLANS AND STATE REQUIREMENTS.
- SITE UTILITY CONTRACTOR SHALL RUN SANITARY SERVICE TO A POINT WHICH IS A MAXIMUM OF 5' FROM THE EXTERIOR WALL OF THE FOUNDATION. SITE UTILITY CONTRACTOR SHALL RUN STORM SEWER FOR INTERNALLY DRAINED BUILDINGS TO A POINT WHICH IS A MAXIMUM OF 5' FROM THE EXTERIOR WALL OF THE FOUNDATION. CONTRACTOR SHALL RUN CONTRACTOR SHALL RUN DOWNSPOUT LEADS TO BUILDING FOUNDATION AND 10" ABOVE SURFACE GRADE FOR CONNECTION TO DOWNSPOUT FOR ALL DOWNSPOUT TO RISER (DSR) CONNECTIONS. DOWNSPOUTS TO GRADE (DSG) SHALL BE PROVIDED WITH SPLASH BLOCKS AT THE DISCHARGE LOCATION. ALL DOWNSPOUT LOCATIONS SHOULD BE VERIFIED WITH ARCHITECTURAL PLANS AND DOWNSPOUT CONTRACTOR/GC PRIOR TO INSTALLATION OF DOWNSPOUT LEADS. DOWNSPOUT LEADS SHALL NOT UNDERNEATH BUILDING FOUNDATIONS. SITE UTILITY CONTRACTOR SHALL RUN WATER SERVICE TO A POINT WITHIN THE CURBLINE SPECIFIED BY THE PLUMBING PLANS. CONTRACTOR TO CUT AND CAP WATER SERVICE 12" ABOVE FINISHED FLOOR ELEVATION.
- ALL UTILITIES SHALL BE INSTALLED WITH PLASTIC COATED TRACER WIRE (10 TO 14 GAUGE SOLID COPPER, OR COPPER COATED STEEL WIRE). PLASTIC WIRE MAY BE TAPED TO PLASTIC WATER OR SEWER PIPE. IF ATTACHED, THE TRACER WIRE SHALL BE SEEDDED EVERY 4 FEET TO 40 FEET AND AT ALL BENDS. TRACER SHALL HAVE ACCESS POINT AT LEAST EVERY 300 FEET. TRACER WIRE SHALL TERMINATE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS AT GRADE OR IN TERMINATION BOX PER LOCAL/STATE REQUIREMENTS.
- ALL UTILITIES SHALL BE INSTALLED PER STATE, LOCAL, AND INDUSTRY STANDARDS. WATER, SANITARY, AND STORM SEWER SHALL BE INSTALLED PER STANDARD SPECIFICATION FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. THE EXCEL ENGINEERING DESIGN ENGINEER SHALL BE RESPONSIBLE FOR OBTAINING STATE PLUMBING REVIEW APPROVAL (IF REQUIRED). THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL OTHER PERMITS REQUIRED TO INSTALL WATER, SANITARY AND STORM SEWER.
- SEE PLANS FOR ALL OTHER UTILITY SPECIFICATIONS AND DETAILS.



PROJECT INFORMATION

PROPOSED BUILDING ADDITION FOR:
MONTESSORI SCHOOL OF WALKESHA
 2600 SUMMIT AVENUE • WALKESHA, WI 53188



LEGEND:
 CLEAR & GRUB WOODED AREA

KEYNOTES

A	REMOVE BUILDING, ASSOCIATED SITE IMPROVEMENTS, AND DISCONNECT ASSOCIATED UTILITIES. CONTRACTOR TO OBTAIN PERMITS AND APPROVALS AS NECESSARY.
B	PROTECT
C	SAWCUT AND REMOVE PAVEMENT
D	CONTRACTOR TO COORDINATE REMOVAL AND RELOCATION OF POWER POLES AND LINES W/ LOCAL UTILITY AND OWNER
E	CONTRACTOR TO COORDINATE REMOVAL OF GAS LINE W/ LOCAL UTILITY
F	REMOVE EXISTING MONUMENT SIGN AND ASSOCIATED LANDSCAPING
G	SAWCUT AND REMOVE CURB
H	REMOVE TREE
I	PROTECT TREE
K	REMOVE LIGHT POLE
L	RELOCATE EQUIPMENT (SEE C1.1 FOR LOCATION)
M	REMOVE DECK
N	REMOVE 235 L.F. OF FENCE

WARNING!!
 UNDERGROUND UTILITIES MUST BE LOCATED BY DIGGERS HOTLINE PRIOR TO THE START OF CONSTRUCTION.

SCALE: 1" = 30'

CIVIL EXISTING SITE AND DEMOLITION PLAN

PROJECT INFORMATION

PROPOSED BUILDING ADDITION FOR:
MONTESSORI SCHOOL OF WAUKESHA
 2600 SUMMIT AVENUE • WAUKESHA, WI 53188

PROFESSIONAL SEAL

SHEET DATES

ISSUED FOR APPROVAL	
IFA	DEC. 19, 2025
IFA	JAN. 26, 2026

JOB NUMBER
 230187600

SHEET NUMBER
C1.0

PROJECT INFORMATION

PROPOSED BUILDING ADDITION FOR:
MONTESSORI SCHOOL OF WAUKESHA
2600 SUMMIT AVENUE • WAUKESHA, WI 53188

PROFESSIONAL SEAL

SHEET DATES

ISSUED FOR APPROVAL	DATE
IFA	OCT. 31, 2025
IFA	DEC. 19, 2025
IFA	JAN. 26, 2026

JOB NUMBER
230187600

SHEET NUMBER
C1.1

SITE INFORMATION:

PROPERTY AREA: 366,358 S.F. (8.41 ACRES)
LEGAL DESCRIPTION: LOT 1 OF CSM 11812
EXISTING ZONING: I-1 INSTITUTIONAL
PROPOSED ZONING: I-1 INSTITUTIONAL
PROPOSED USE: SCHOOL
AREA OF SITE DISTURBANCE: ± 158,824 SF (3.65 AC)
SETBACKS:
BUILDING: FRONT(WEST) = 25'
SIDE(NORTH) = 10'
REAR(EAST) = 40'
STREET(SOUTH) = 25'
PAVEMENT: FRONT(WEST) = 15'
SIDE(NORTH) = 5'
REAR(EAST) = 5'
STREET (SOUTH) = 15'
*RESIDENTIAL = 25' OR 10' WITH 3' HIGH BERM
PROPOSED BUILDING HEIGHT: 28.67' (MAX. HEIGHT ALLOWED: NONE)
PARKING REQUIRED: 1 SPACE PER TEACHER/STAFF (52) + 1 SPACE PER 5 STUDENTS (+16 YES OLD + 0) + 1 SHORT TERM BIKE STALL PER 20 STUDENTS (360 STUDENTS) + 1 LONG TERM BIKE PARKING PER 10 EMPLOYEES (52 EMPLOYEES)
TOTAL SPACES REQUIRED:
52 VEHICLE SPACES
18 SHORT TERM BIKE SPACES
6 LONG TERM BIKE SPACES
PARKING PROVIDED: 101 SPACES (6 H.C. ACCESSIBLE)
FUTURE PROVIDED: 141 SPACES
LIMITED USE PARKING: 17 SPACES
HANDICAP STALLS REQUIRED: 5, HANDICAP STALLS PROVIDED: 6

EXISTING SITE DATA

	AREA (AC)	AREA (SF)	RATIO
BUILDING FLOOR AREA	0.74	32,245	8.8%
PAVEMENT (ASP. & CONC.)	0.00	0	0.0%
TOTAL IMPERVIOUS	0.74	32,245	8.8%
LANDSCAPE/ OPEN SPACE	7.67	334,113	91.2%
PROJECT SITE	8.41	366,358	100.0%

PROPOSED SITE DATA

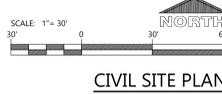
	AREA (AC)	AREA (SF)	RATIO
BUILDING FLOOR AREA	0.89	38,722	10.6%
PAVEMENT (ASP. & CONC.)	2.96	129,061	35.2%
TOTAL IMPERVIOUS	3.85	167,783	45.8%
LANDSCAPE/ OPEN SPACE	4.56	198,575	54.2%
PROJECT SITE	8.41	366,358	100.0%

KEYNOTES

1	CONCRETE STOOP (SEE STRUCTURAL PLANS FOR DETAILS)
2	RAISED WALK (SEE DETAIL)
3	FLUSH WALK (SEE DETAIL)
4	TAPER ASPHALT 0" TO 4" IN 18" (SEE DETAIL)
5	CONCRETE FLUME (SEE DETAIL)
6	6" CURB HEAD (SEE DETAIL)
7	18" CURB & GUTTER (SEE DETAIL)
8	CURB RAMP (SEE DETAIL)
9	CURB TAPER (SEE DETAIL)
10	CURB CUT (SEE DETAIL)
11	REPLACE CURB AND GUTTER PER CITY REQ. TO MATCH EXISTING
12	HANDICAP SIGN PER STATE CODE (SEE DETAIL). BE AWARE OF STORM SEWER!
13	HANDICAP STALL & STRIPING PER STATE CODES
14	PRECAST CONCRETE WHEEL STOP (TYP.)
15	MONUMENT SIGN (DETAILS, FINAL LOCATION, & APPROVAL BY SIGN VENDOR)
16	DUMPSTER ENCLOSURE (SEE ARCH PLANS FOR DETAILS)
17	6" CONCRETE BOLLARDS (TYP.) (SEE ARCH PLANS FOR DETAILS)
18	STOP SIGN PER MUTCD.
19	25' FLAGPOLE (FINAL LOCATION BY OWNER)
20	BIKE RACK (TYP.) (TYPE & COLOR BY OWNER)
21	DETECTABLE WARNING PLATE PER STATE CODE
22	TRAFFIC FLOW ARROWS (TYP.). COLOR TO MATCH PARKING STALL STRIPING
23	PAINT STRIPING (TYP.). COLOR TO MATCH PARKING STALL STRIPING
24	CHAIN-LINK FENCE TO MATCH EXISTING (TYP.) (FINAL LOCATION BY OWNER)
25	DOUBLE SWING GATE (TYP.)
26	DECK TO BE REPLACED IN KIND (COORDINATE W/ OWNER)
27	LEFT TURN ONLY SIGN
28	DO NOT ENTER SIGN
29	BYPASS ONLY LANE & DO NOT BLOCK TRAFFIC SIGN
30	DROP OFF LANE SIGN
31	KNOX BOX PER CITY FIRE REQUIREMENTS. SEE ARCH PLANS.

LEGEND:

HATCH	PAVEMENT SECTION	HATCH	PAVEMENT SECTION
[Hatch]	STANDARD ASPHALT	[Hatch]	SIDEWALK CONCRETE
[Hatch]	HEAVY DUTY ASPHALT	[Hatch]	DUMPSTER PAD / APRON CONCRETE
[Hatch]	PUBLIC ROADWAY ASPHALT	[Hatch]	HEAVY DUTY CONCRETE
[Hatch]	ALTERNATE PATIO	[Hatch]	SHEDDING CURB & GUTTER
[Hatch]	INVERTED CURB & GUTTER	[Hatch]	



WARNING!!
UNDERGROUND UTILITIES MUST BE LOCATED BY DIGGERS HOTLINE PRIOR TO THE START OF CONSTRUCTION.

CIVIL SITE PLAN



GENERAL NOTES:

- HANDICAP STALL AND ACCESS AISLES SHALL NOT EXCEED A SLOPE OF 1.50% IN ANY DIRECTION. HANDICAP STALL & ACCESS AISLES SHALL CONFORM TO ADA REQUIREMENTS (CURRENT EDITION).
- ALL SIDEWALKS SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 1.50% AND RUNNING SLOPE OF 4.50% UNLESS OTHERWISE SPECIFIED.
- CONTRACTOR SHALL PROVIDE STABILIZED CONSTRUCTION ENTRANCE AT CONSTRUCTION ENTRANCE FOR PROPOSED IMPROVEMENTS AS REQUIRED PER CODE.
- CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AS REQUIRED PER CODE. FINAL LOCATION TBD BY CONTRACTOR.
- CONTRACTOR SHALL PROVIDE TEMPORARY INLET PROTECTION FOR ALL CURB INLETS & CATCH BASINS ON-SITE & OFF-SITE IMMEDIATELY DOWNSTREAM OF THE PROJECT SITE PER LOCAL CODE.
- CONTRACTOR SHALL PROVIDE SEDIMENT BASIN IN LOCATION OF DRY DETENTION DURING CONSTRUCTION IN ACCORDANCE WITH DNR TECH STD 1064.
- RECEIVING WATER: FOX RIVER

MAP SYMBOL	SOIL TYPE	HYDROLOGIC RATING
BaA	Brookston Site Loam	C
HmB	Hochheim Loam	D
HmC2	Hochheim Loam	D

KEYNOTES

EC 1	SILT FENCE
EC 3	STABILIZED CONSTRUCTION ENTRANCE
EC 4	INLET PROTECTION
EC 5	CONCRETE WASHOUT
EC 6	SEDIMENT LOG

WARNING!!
UNDERGROUND UTILITIES MUST BE LOCATED BY DIGGERS HOTLINE PRIOR TO THE START OF CONSTRUCTION.

PROJECT INFORMATION

PROPOSED BUILDING ADDITION FOR:
MONTESSORI SCHOOL OF WAUKESHA
2600 SUMMIT AVENUE • WAUKESHA, WI 53188

PROFESSIONAL SEAL

SHEET DATES

ISSUED FOR APPROVAL

IFA	DEC. 19, 2025
IFA	JAN. 26, 2026

JOB NUMBER

230187600

SHEET NUMBER

C1.2

- GENERAL NOTES:**
- CONTRACTOR TO CALL WAUKESHA WATER UTILITY CONTACT MAT KADRECH AT 920-408-9492 AT LEAST 72 HOURS PRIOR TO ANY WORK BEING DONE TO COORDINATE SHIFTERS OF THE WATER MAIN AS NECESSARY AND HAVE AN INSPECTOR ON SITE.
 - ALL SANITARY SEWER TO BE INSTALLED IN ACCORDANCE WITH THE CITY OF WAUKESHA STANDARDS.
 - ALL APPLICATIONS AND FEES FOR SANITARY SEWER MUST BE COMPLETED AND PAID PRIOR TO CONNECTION TO THE SEWER SYSTEM.
 - ANY UTILITY WORK IN THE RIGHT-OF-WAY AND ALL SANITARY SEWER CONNECTIONS TO BE INSPECTED BY CITY. NOTIFY CITY 72 HOURS IN ADVANCE OF CONNECTING TO SEWER.
 - WHEN STARTING AN INSTALLATION, THE FARTHEST DOWNSTREAM LOCATION OF THE NEW SANITARY SEWER SYSTEM SHALL HAVE A PLUG INSTALLED AND MAINTAINED BY THE UTILITY CONTRACTOR. THAT PLUG SHALL NOT BE REMOVED UNTIL THE SYSTEM HAS BEEN ACCEPTED BY THE CITY ENGINEER AND DEEMED OPERATIONAL BY THE CITY.

- SWM ITEMIZED COST ESTIMATE:**
- STORM OUTLET STRUCTURE: \$10,000
 - STORM DETENTION POND CONSTRUCTION: \$10,000
 - STORM FILTER STRUCTURE & INSTALLATION: \$70,000

PROJECT INFORMATION

PROPOSED BUILDING ADDITION FOR:
MONTESSORI SCHOOL OF WAUKESHA
 2600 SUMMIT AVENUE • WAUKESHA, WI 53188

PROFESSIONAL SEAL

SHEET DATES

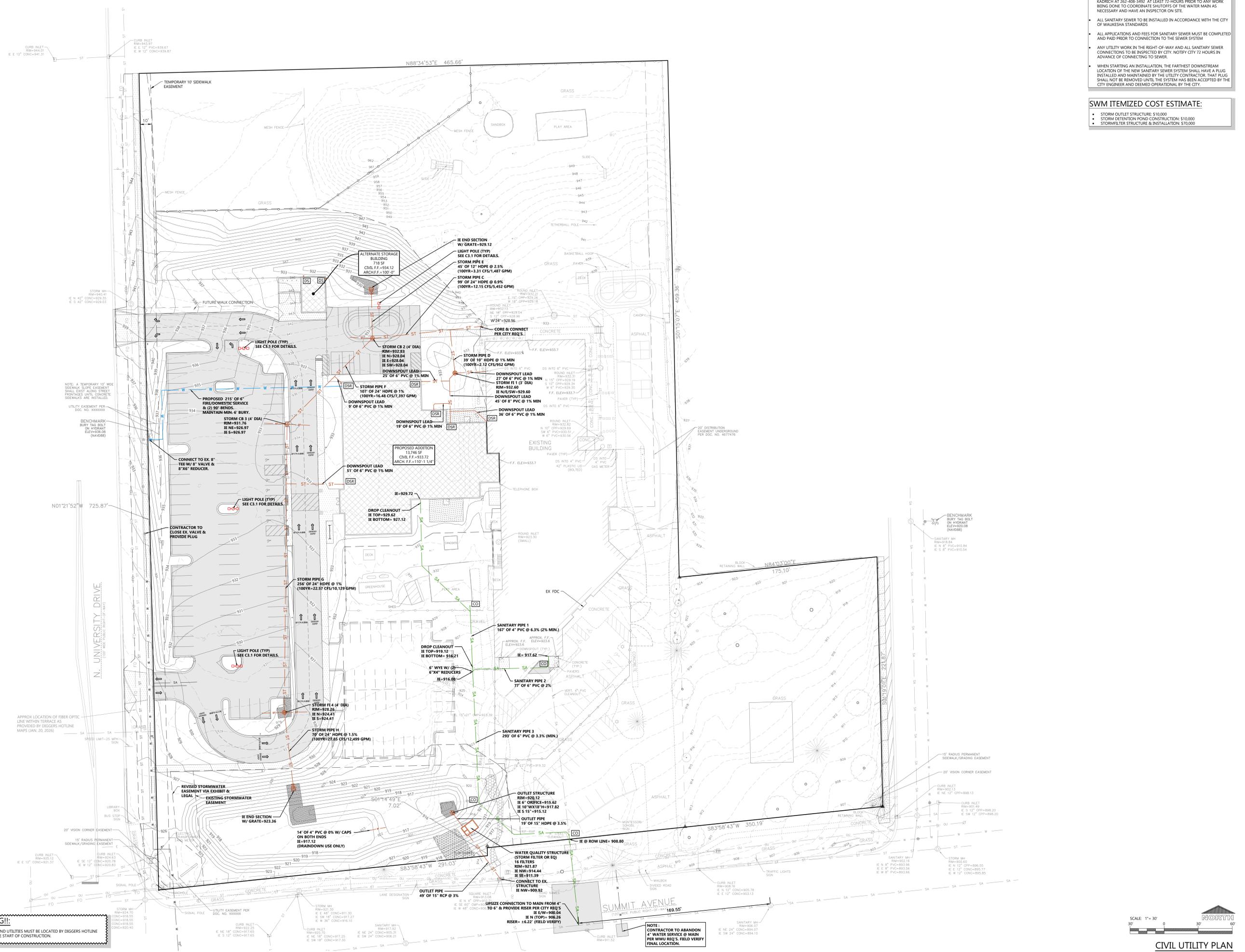
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IFA	DEC. 19, 2025
IFA	JAN. 26, 2026

JOB NUMBER

230187600

SHEET NUMBER

C1.3



WARNING!!
 UNDERGROUND UTILITIES MUST BE LOCATED BY DIGGERS HOTLINE PRIOR TO THE START OF CONSTRUCTION.



CIVIL UTILITY PLAN

LANDSCAPING CALCULATIONS		
ZONE	REQ. PLANTS	PLANTS PROVIDED
PARKING	5% INTERNAL LANDSCAPING 32,755 SF * 0.05 = 1,638 SF	1,836 SF (5.6%)
PARKING LOT BUFFER	SOLID HEDGE ROW ALONG PARKING LOT	SOLID HEDGE ROW PROVIDED WEST SIDE OF WEST PARKING LOT AND EAST SIDE OF EAST PARKING LOT.

LANDSCAPING PLANTING SCHEDULE				
SYMBOL	COMMON NAME	BOTANICAL NAME	PLANTED SIZE	QUANTITY
DECIDUOUS TREES				
⊙	Redmond Linden	Tilia americana	2.5'	6
⊙	Skyline Honeylocust	Gleditsia triacanthos 'Skyline'	2.5'	3
⊙	Flowering Crabapple (Spring Snow)	Malus x hybrid (Spring Snow)	1.5'	2
⊙	Amur Maple	Acer ginnala	2.5'	3
EVERGREEN TREES				
⊙	Colorado Blue Spruce	Picea pungens	6'	8
⊙	Austrian Pine	Pinus nigra	6'	6
DECIDUOUS SHRUBS				
⊙	Emerald Mound Honeysuckle	Lonicera x sylvestrum 'Emerald Mound'	15'-18"	6
⊙	Anthony Waterer Spirea	Spiraea x bumalda 'Anthony Water'	15'-18"	9
⊙	Burning Bush	Euonymus alatus 'Compactus'	30"-36"	12
⊙	Weigela Carnival	Weigela Florida 'Cortator'	24"	20
⊙	Goldmound Spirea	Spiraea x bumalda 'Goldmound'	15'-18"	6
EVERGREEN SHRUBS				
⊙	Techry Arborvitae	Thuja occidentalis	42"-48"	3
⊙	Arcadia Juniper	Juniperus sabinia 'arcadia'	24"	8
⊙	Wintergreen Boxwood	Buxus sinica var 'Insularis' 'Wintergreen'	18"	12

PROJECT INFORMATION

PROPOSED BUILDING ADDITION FOR:
MONTESSORI SCHOOL OF WAUKESHA
2600 SUMMIT AVENUE • WAUKESHA, WI 53188

PROFESSIONAL SEAL

SHEET DATES

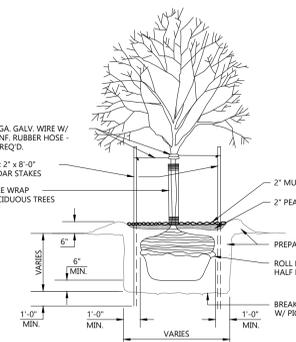
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IFA	DEC. 19, 2025
IFA	JAN. 26, 2026

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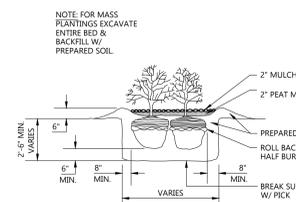
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SHEET NUMBER

C1.4



TREE PLANTING DETAIL
NOT TO SCALE

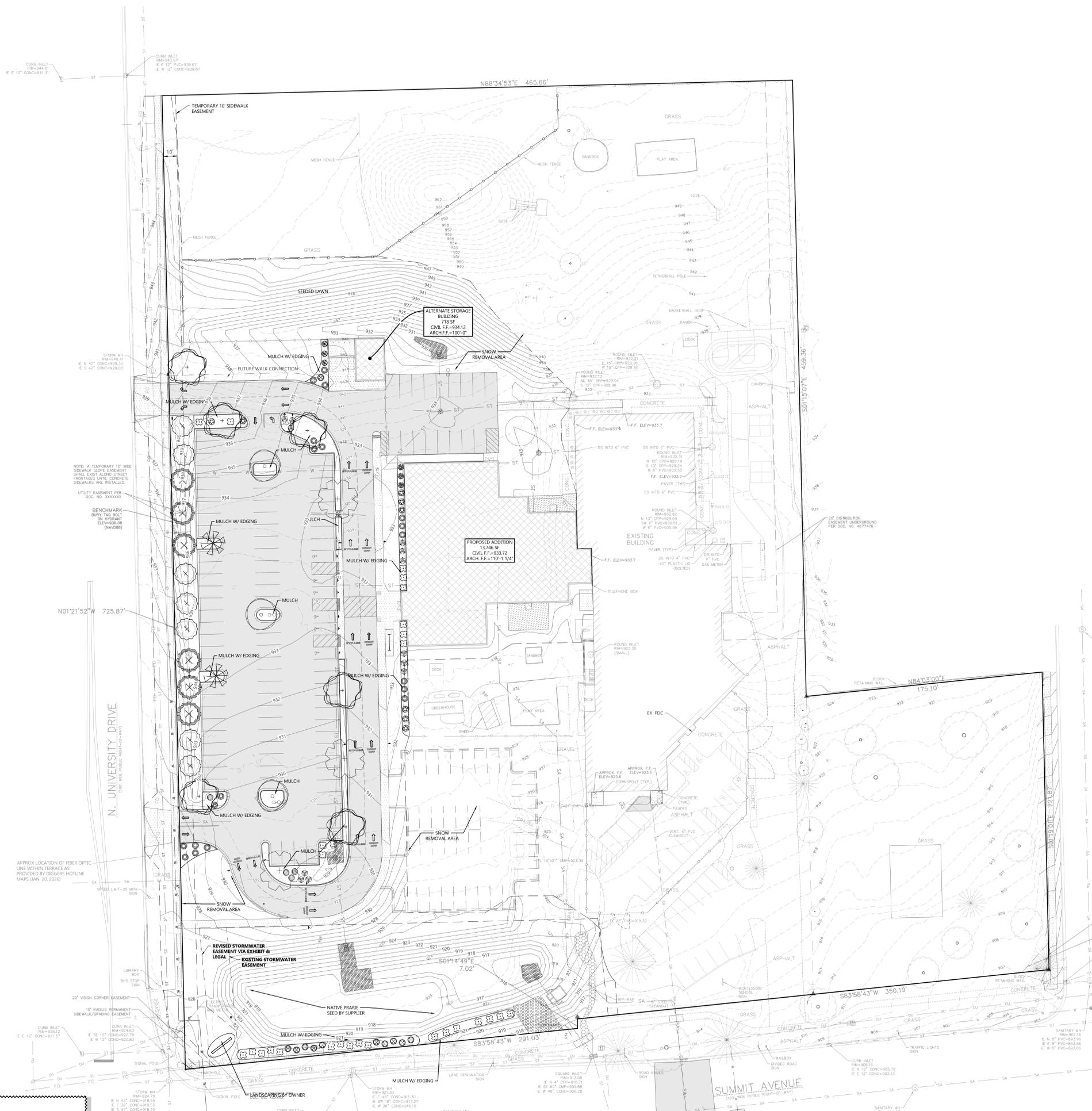


SHRUB PLANTING DETAIL
NOT TO SCALE



CIVIL LANDSCAPE AND RESTORATION PLAN

WARNING!!
UNDERGROUND UTILITIES MUST BE LOCATED BY DIGGERS HOTLINE PRIOR TO THE START OF CONSTRUCTION.



NOTE: A TEMPORARY 10' WIDE SIDEWALK CURB EASEMENT SHALL BE INSTALLED ALONG STREET FRONTAGES UNTIL CONCRETE SIDEWALKS ARE INSTALLED.

UTILITY EASEMENT PER DOC. NO. 0000000

BENCHMARK BURY TAG BOLT OR HYDRANT ELEV.=938.04 (N46088)

APPROX LOCATION OF FIBER OPTIC LINE WITHIN TERRACE AS PROVIDED BY DIGGERS HOTLINE MAPS (JAN. 20, 2026)

REVISOR: [Name]

STORM MH RM=922.10 E N 40° CONC=918.55 E E 12° CONC=918.55 E S 40° CONC=918.55 E W 18° CONC=920.40



LANDSCAPE NOTE:
SEE SHEET C1.4A FOR PROPOSED
LANDSCAPE SCHEDULE

LANDSCAPE/PAVEMENT HATCH KEY

- BUILDING
- SIDEWALK / CONCRETE
- ASPHALT
- ROCK MULCH
- LAWN
- NATIVE PRAIRIE SEED

PLANTING KEY

SYMBOL	COMMON NAME
DECIDUOUS TREES	
	Redmond Linden
	Skyline Honeylocust
	Flowering Crabapple (Spring Snow)
	Amur Maple
EVERGREEN TREES	
	Colorado Blue Spruce
	Austrian Pine
DECIDUOUS SHRUBS	
	Emerald Mound Honeysuckle
	Anthony Waterer Spirea
	Burning Bush
	Weigela Carnival
	Goldmound Spirea
EVERGREEN SHRUBS	
	Techy Arborvitae
	Arcadia Juniper
	Wintergreen Boxwood

WARNING!!
UNDERGROUND UTILITIES MUST BE LOCATED BY DIGGERS HOTLINE
PRIOR TO THE START OF CONSTRUCTION.

SCALE: 1" = 30'
NORTH
CIVIL COLORED LANDSCAPE PLAN

PROJECT INFORMATION

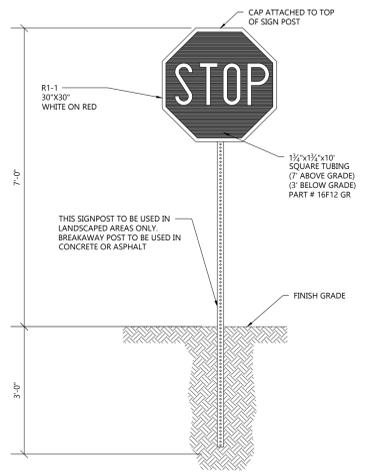
PROPOSED BUILDING ADDITION FOR:
MONTESSORI SCHOOL OF WAUKESHA
2600 SUMMIT AVENUE • WAUKESHA, WI 53188

PROFESSIONAL SEAL

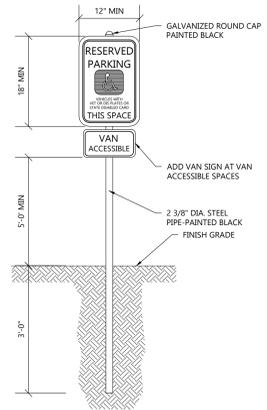
SHEET DATES
ISSUED FOR APPROVAL
IFA DEC. 19, 2025
IFA JAN. 26, 2026

JOB NUMBER
230187600

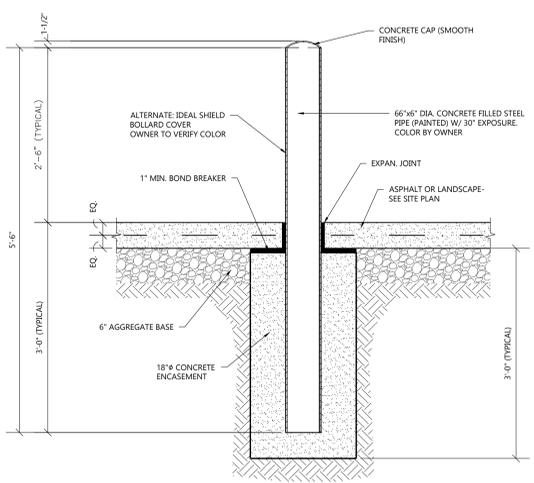
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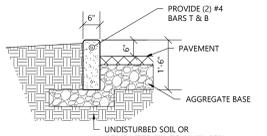
STOP SIGN WITHOUT CONCRETE BASE DETAIL
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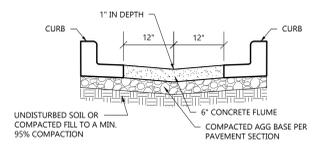
HANDICAP SIGNAGE WITHOUT CONCRETE BASE DETAIL
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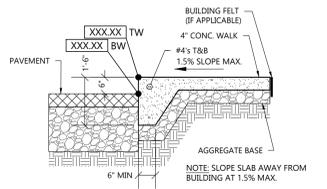
6" PIPE BOLLARD DETAIL
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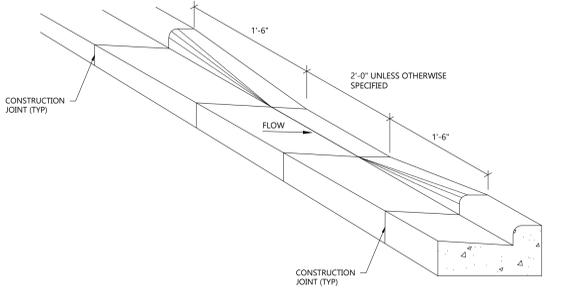
6" CURB HEAD DETAIL
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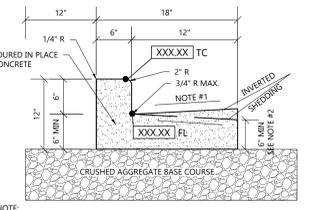
CONCRETE FLUME DETAIL (PAVEMENT)
NOT TO SCALE



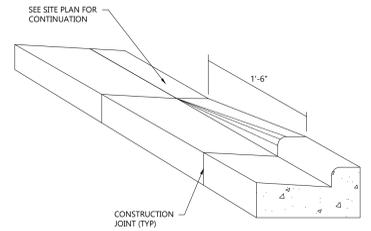
RAISED WALK DETAIL
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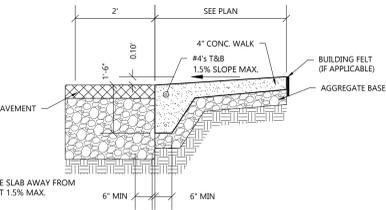
CURB CUT DETAIL
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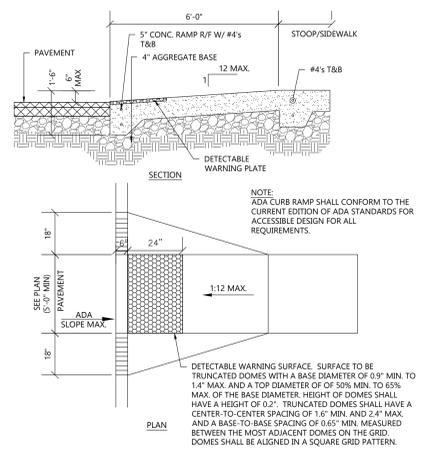
18" CONCRETE CURB & GUTTER DETAIL
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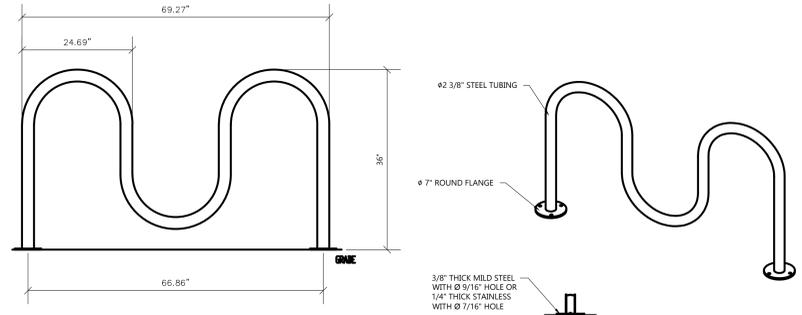
CURB TAPER DETAIL
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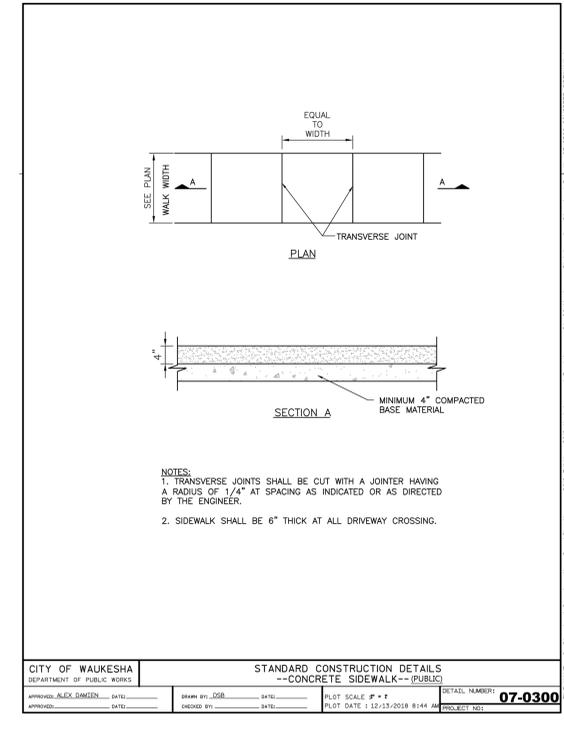
FLUSH WALK DETAIL
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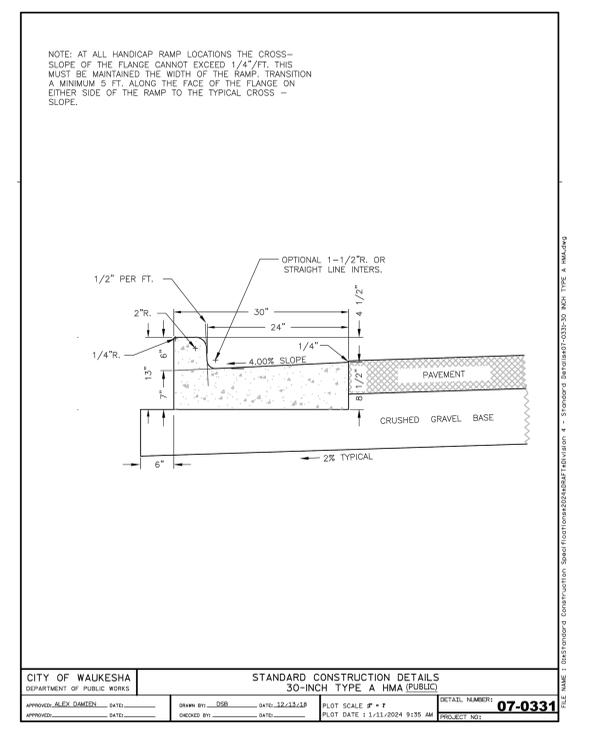
CURB RAMP DETAIL
NOT TO SCALE



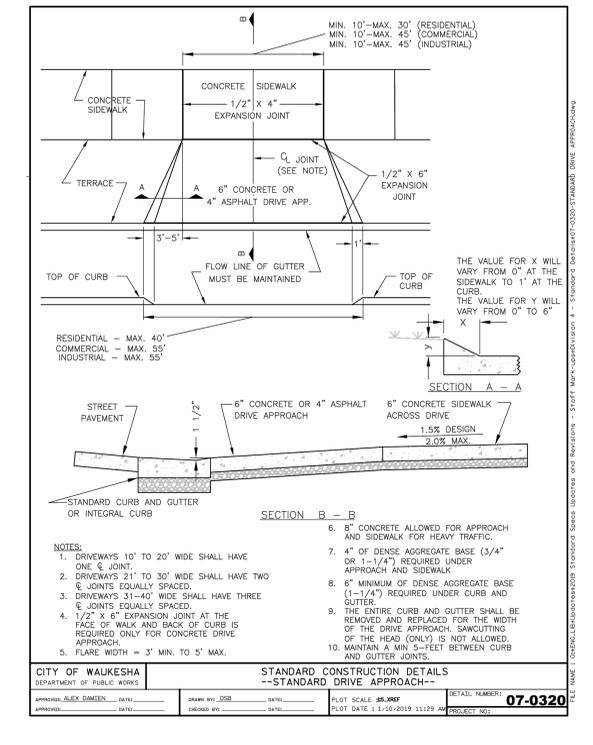
5 BIKE RACK DETAIL-WAVE TYPE
NOT TO SCALE



CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS
STANDARD CONSTRUCTION DETAILS
--CONCRETE SIDEWALK-- (PUBLIC)
DRAWN BY: [blank] DATE: [blank] CHECKED BY: [blank] DATE: [blank] PLOT DATE: 11/13/2024 8:44 AM PROJECT NO: 07-0300



CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS
STANDARD CONSTRUCTION DETAILS
30-INCH TYPE A HMA (PUBLIC)
DRAWN BY: [blank] DATE: [blank] CHECKED BY: [blank] DATE: [blank] PLOT DATE: 11/13/2024 9:35 AM PROJECT NO: 07-0331



CITY OF WAUKESHA
DEPARTMENT OF PUBLIC WORKS
STANDARD CONSTRUCTION DETAILS
--STANDARD DRIVE APPROACH--
DRAWN BY: [blank] DATE: [blank] CHECKED BY: [blank] DATE: [blank] PLOT DATE: 11/13/2024 11:29 AM PROJECT NO: 07-0320

EROSION CONTROL NOTES

- INSTALLATION** - The contractor shall install EC measures per plan prior to land disturbing activities. The EC plan indicates minimum measures, the contractor shall furnish and install additional measures as required to secure the site and as directed by the City or any other authorized agent. The contractor is responsible for repairing any damages due to sedimentation, dust, or any other materials originating from the site.
- INSPECTION** - The contractor shall inspect EC measures at least once per week and within 24 hours after each 0.5 inch rainfall. Log inspections on-site or online and make them available to the City and other authorized agents upon request. Use DNR Form 3400-187 or equivalent.
- Maintain EC measures in accordance with the notes below and DNR Technical Standards: https://dnr.wisconsin.gov/Topics/Stormwater/Standards/cont_standards.html
 - INLET PROTECTIONS** - Type D shall be used in curbs and roadways unless the structure is not deep enough. Curb head boards shall not be installed in areas where and when City snow plow trucks might be in operation - See Figure 1 and DNR Tech Standard #1060
 - SILT FENCE** - shall be trenched and compacted at the base to prevent undercutting. Joints shall be made by twist or hook method to prevent bypassing - See Figure 2 and DNR Tech Standard #1056
 - SILT SOCK** - shall be in continuous contact with the ground to prevent undercutting. Joints shall be overlapped 24" and shingled in the direction of flow - See Figure 3 and DNR Tech Standard #1056
 - TRACKING PAD** - stone size shall be approximately 25 to 50% by weight passing the 1.5" sieve. The tracking pad shall be at least 12 inches thick, 12 feet wide, and 50 feet long with traffic restricted to pass over the length of the pad - See DNR Tech Standard #1057
 - SWEEPING** - and/or scraping shall occur as needed to maintain public safety and prevent sediment from reaching the storm water drainage system and at the end of each work day. See DNR Tech Standard #1057
 - STOCKPILES** - shall be surrounded with silt fence or silt sock if remaining for 24 hours or longer and downstream inlets must be protected.
 - STABILIZATION** - Areas remaining inactive for 14 days or longer shall be temporarily stabilized. Areas shall be permanently stabilized within 7 days of reaching final grade.
- REMOVAL** - The contractor shall remove EC measures when land disturbing activities have ceased and the site is stabilized. Final Stabilization is achieved when uniform perennial vegetative cover is established at a density of 70% or greater for all areas not covered by permanent structures.
- Permitting of GROUNDWATER DEMATERING is the responsibility of the contractor. Groundwater demetering is subject to a DNR Discharge Permit and a WDRN High Capacity Well Approval if cumulative pump capacity is 70 GPM or more.
- PLAN REVISIONS or amendments shall be submitted to the City and WDRN at least 5 days prior to field implementation.

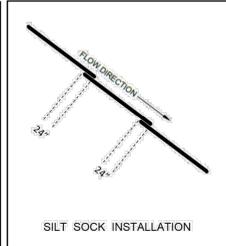
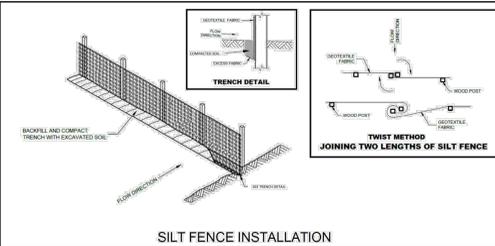
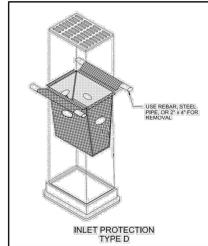


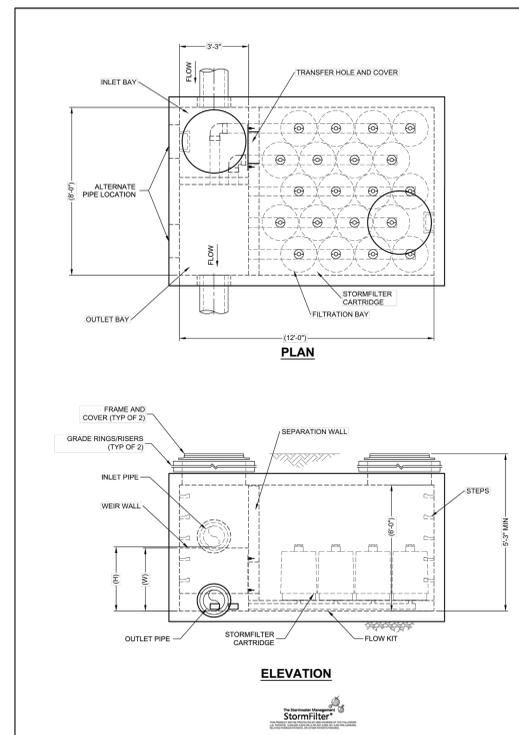
Figure 1 - Excerpt from DNR Tech Standard #1060

Figure 2 - Excerpt from DNR Tech Standard #1056

Figure 3 - Shingled overlaps of Silt Sock relative to flow direction

CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS STANDARD CONSTRUCTION DETAILS EROSION CONTROL

APPROVED: ALEX DIMENZ, DATE: 11/11/2022, SHEET NO.: 02-0001, PROJECT NO.: 230187600, STANDARD DETAILS



STORMFILTER DESIGN NOTES

THE 8' X 12' PEAK DIVERSION STORMFILTER TREATMENT CAPACITY VARIES BY CARTRIDGE COUNT AND LOCALLY APPROVED SURFACE AREA SPECIFIC FLOW RATE. PEAK CONVEYANCE CAPACITY TO BE DETERMINED BY ENGINEER OF RECORD.

ALL PARTS AND INTERNAL ASSEMBLY PROVIDED BY CONTECH UNLESS OTHERWISE NOTED.

CARTRIDGE SELECTION	2"	3"	4"	LOW FLOW
RECOMMENDED HYDRAULIC DROP (ft)	2.0	2.0	2.0	1.0
HEIGHT OF WEIR (ft)	3.0	3.0	3.0	1.75
SPECIFIC FLOW RATE (gpm/ft)	2.0	1.7	1.5	1.0
CARTRIDGE FLOW RATE (gpm)	22.5	19.5	17.5	12.5

1.67 gpm/ft SPECIFIC FLOW RATE IS APPROVED WITH PHOSPHORUS (PSORB) MEDIA ONLY.

FRAME AND COVER (DIAMETER VARIES) NOT TO SCALE

PERFORMANCE SPECIFICATION

FILTER CARTRIDGES SHALL BE MEDIA-FILLED, PASSIVE, SIPHON-ACTUATED, RADIAL-FLOW AND SELF-CLEANING. RADIAL MEDIA DEPTH SHALL BE 16 INCHES. FILTER MEDIA CONTACT TIME SHALL BE AT LEAST 30 SECONDS.

SPECIFIC FLOW RATE SHALL BE 2 GPM/FT MAXIMUM. SPECIFIC FLOW RATE IS THE MEASURE OF THE FLOW (GPM) DIVIDED BY THE MEDIA SURFACE CONTACT AREA (SF). MEDIA VOLUMETRIC FLOW RATE SHALL BE 6 GPM/CF OF MEDIA (MAXIMUM).

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR FABRICATION DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH REPRESENTATIVE: www.contech.com
- STORMFILTER WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- STRUCTURE SHALL MEET AASHTO HEAVY LOAD RATING, ASSUMING EARTH COVER OF 1' AND GROUNDWATER ELEVATION AT OR BELOW THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M206 AND BE CAST WITH THE CONTECH LOGO.

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE STORMFILTER STRUCTURE (LIFTING CAPACITY PROVIDED).
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL SECTIONS AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT PILES. MATCH OUTLET PIPE INVERT WITH OUTLET BAY FLOOR.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT CARTRIDGES FROM CONSTRUCTION-RELATED EROSION RUNOFF.
- CONTRACTOR TO REMOVE THE TRANSFER HOLE COVER WHEN THE SYSTEM IS BROUGHT ONLINE.

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	FLOW RATE (GPM)
WATER QUALITY FLOW RATE (GPM)	
PEAK FLOW RATE (GPM)	
RETURN PERIOD OF PEAK FLOW (YRS)	
CARTRIDGE HEIGHT (ft)	
NUMBER OF CARTRIDGES REQUIRED	
CARTRIDGE FLOW RATE	
MEDIA TYPE (PS, PSORB)	
PIPE DATA: I.E. MATERIAL, DIAMETER	
INLET PIPE	
OUTLET PIPE	
UPSTREAM RIM ELEVATION	
DOWNSTREAM RIM ELEVATION	
ANTI-FLOTATION BALLAST	WIDTH HEIGHT

NOTES/SPECIAL REQUIREMENTS:

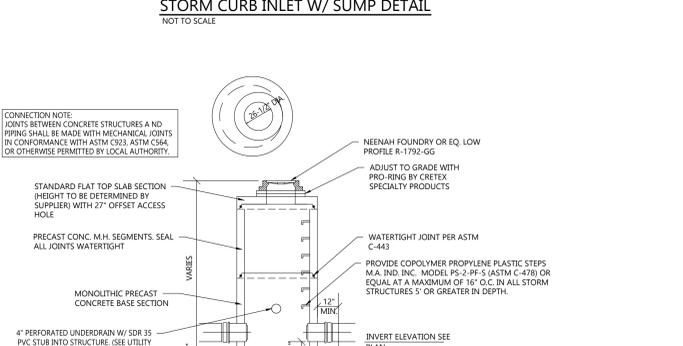
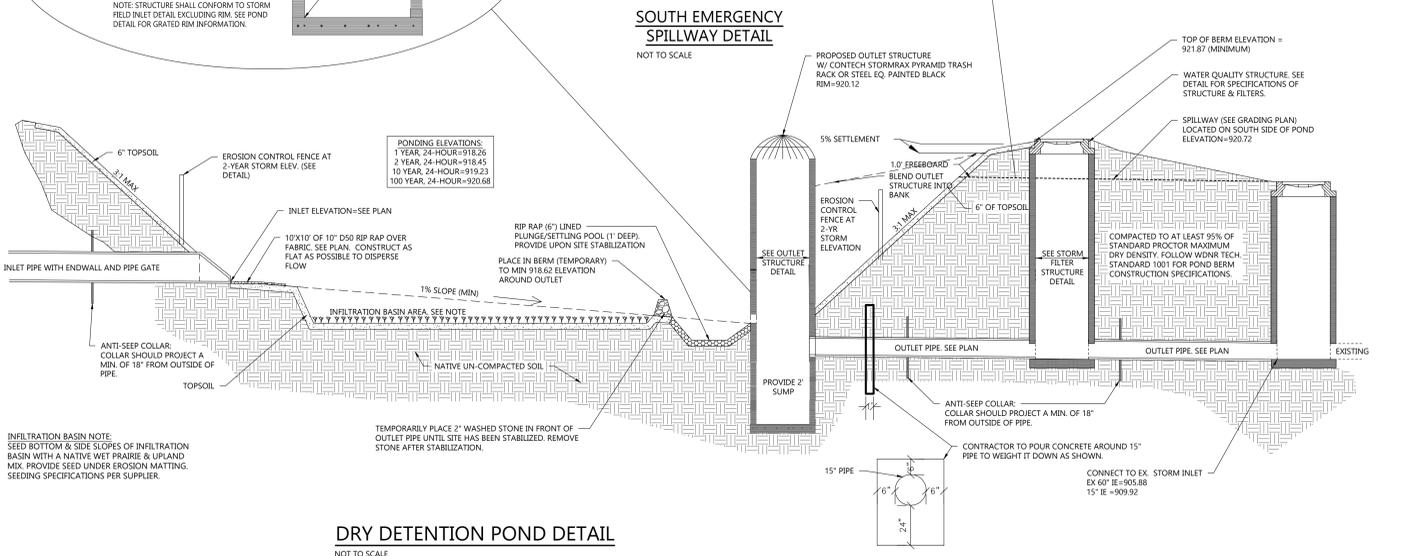
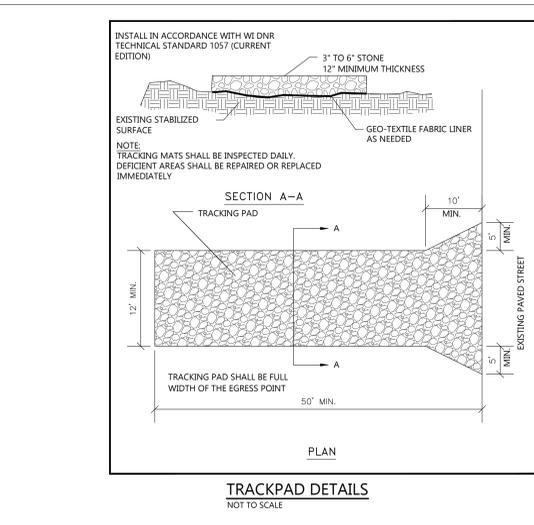
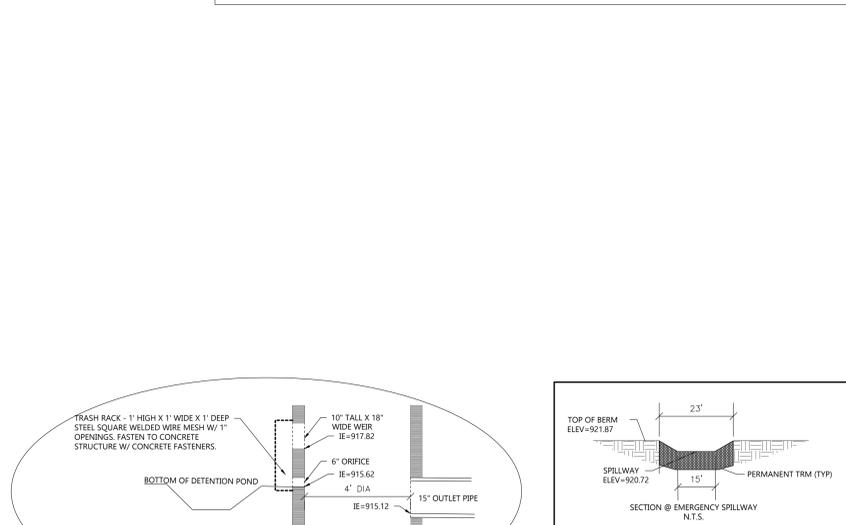
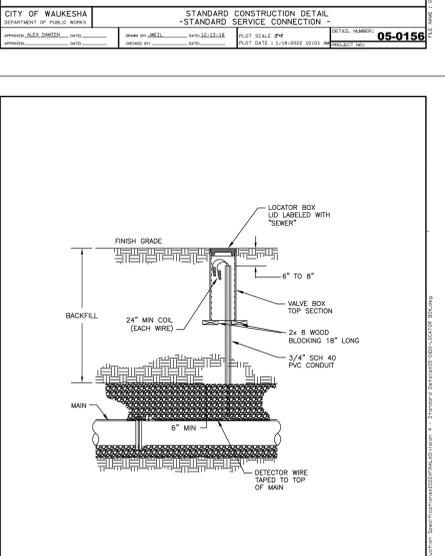
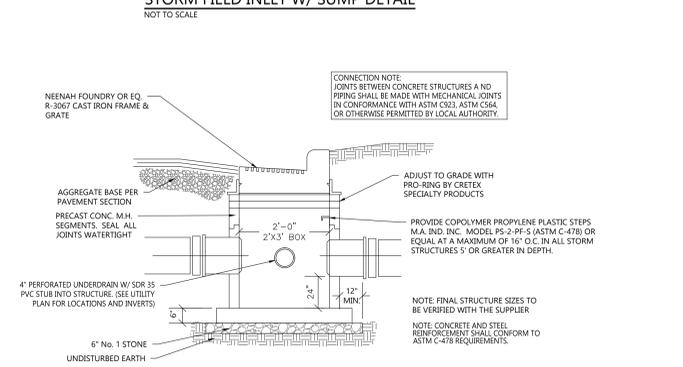
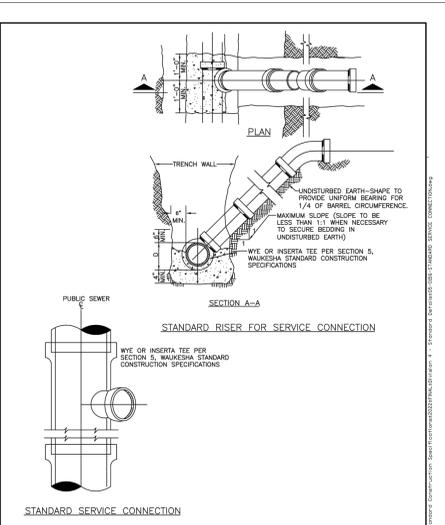
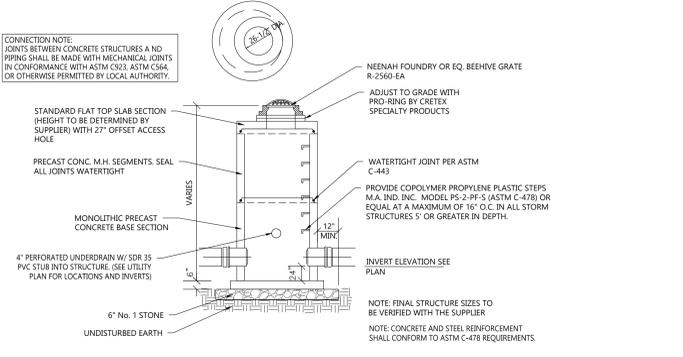
16 FILTERS

1 PER ENGINEER OF RECORD

CONTECH ENGINEERING SERVICES LLC

1100 Gates Road, Suite 200, Waukesha, WI 53188
262-536-1125 513-946-7002 513-465-7983 FAX

THE STORMWATER MANAGEMENT STORMFILTER 8' X 12' PEAK DIVERSION STORMFILTER STANDARD DETAIL



CITY OF WAUKESHA DEPARTMENT OF PUBLIC WORKS STANDARD CONSTRUCTION DETAILS - DETECTOR WIRE AND LOCATION BOX

APPROVED: ALEX DIMENZ, DATE: 11/11/2022, SHEET NO.: 05-0100, PROJECT NO.: 230187600, STANDARD DETAILS

STORMWATER POND ASBUILT NOTE

CONTRACTOR TO CONTACT EXCEL ENGINEERING TO COMPLETE AN AS-BUILT SURVEY FOLLOWING COMPLETION OF THE CONSTRUCTION OF THE STORMWATER POND. CONTRACTOR SHALL GIVE EXCEL ENGINEERING A MINIMUM OF A 3 DAY NOTICE. PLEASE NOTE THAT THE HORIZONTAL TOLERANCE FOR POND CONSTRUCTION IS 0.50 AND THE VERTICAL TOLERANCE FOR POND, OUTLET AND SPILLWAY CONSTRUCTION IS 0.10. ANY ADDITIONAL WORK REQUIRED TO SURVEY A POND FULL OF WATER OR FOR SURVEYING FOLLOWING REWORK SHALL BE AT THE CONTRACTOR'S DISPENSE.

PROFESSIONAL SEAL

SHEET DATES

ISSUED FOR APPROVAL	DATE
IFA	DEC. 19, 2025
IFA	JAN. 26, 2026

JOB NUMBER

230187600

SHEET NUMBER

C2.1

EXCEL

Always a Better Plan

100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

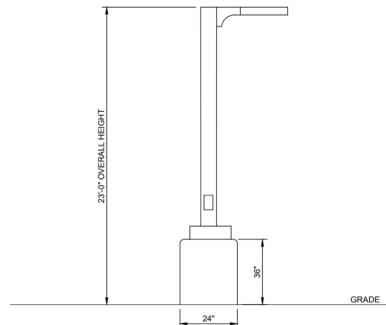
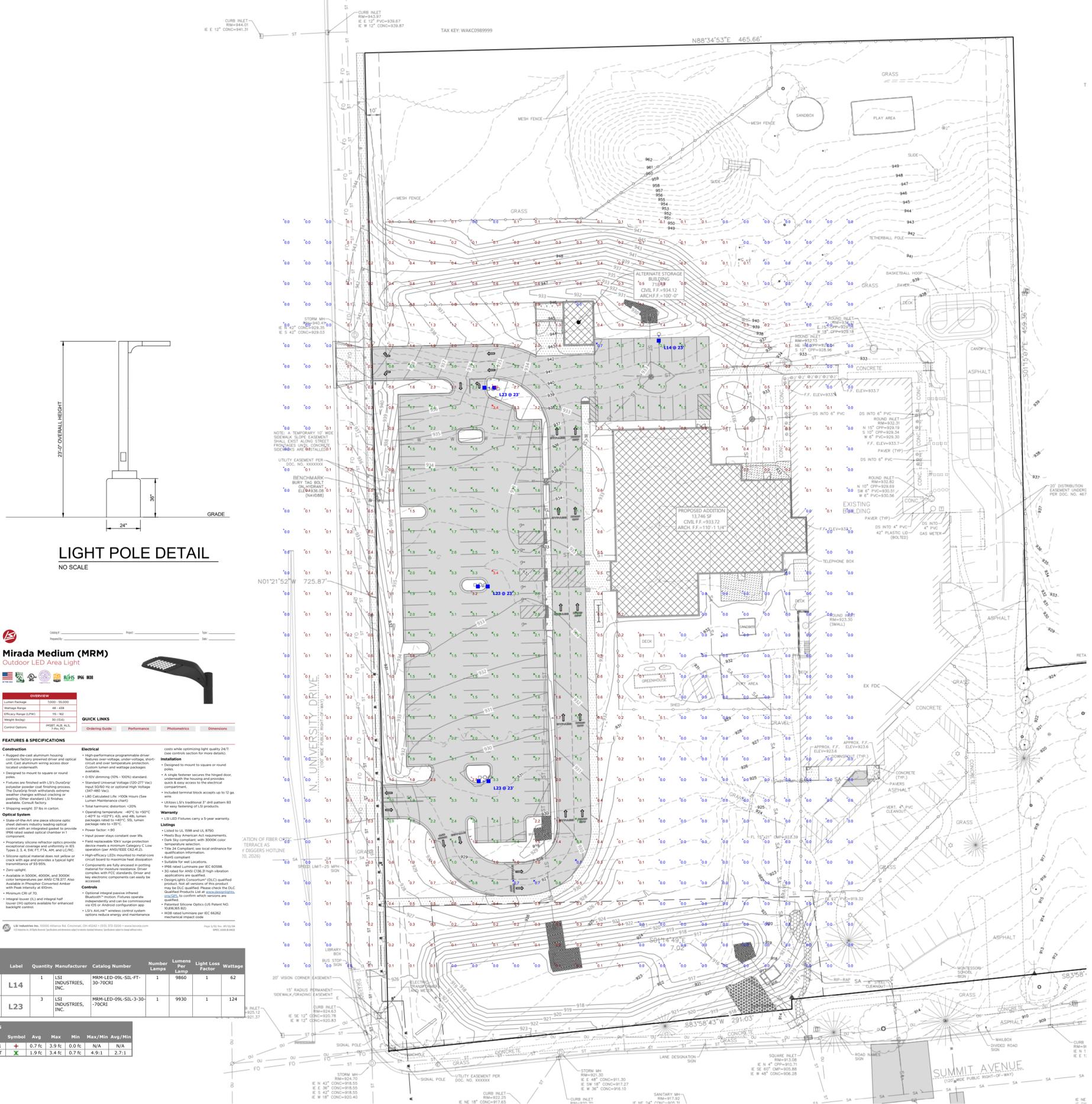
PROJECT INFORMATION

PROPOSED BUILDING ADDITION FOR:

MONTESSORI SCHOOL OF WAUKESHA

2600 SUMMIT AVENUE • WAUKESHA, WI 53188

CIVIL DETAILS



LIGHT POLE DETAIL
NO SCALE

Mirada Medium (MRM)
Outdoor LED Area Light

Overview	Ordering Guide	Performance	Photometrics	Dimensions
<ul style="list-style-type: none"> Linear Package: 3500 - 35,000 Material Finish: 48 - 400 Efficiency Range (LPW): 105 - 162 Weight (Backpack): 30 (3.5kg) Control Options: MPST, A&L, A&L, 3-Phase, PFC 				

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing conforms factory pre-wired driver and optical cable. Cast aluminum wiring enters through a gasketed, weather-resistant, IP67-rated enclosure.
- Designed to mount to square or round poles.
- Features are finished with LSI Duxford® polyester powder coat finishing process. The Duxford® finish withstands extreme weather changes without cracking or peeling. Other standard finishes available. Contact factory.
- Shipping weight: 37 lbs in carton.

Optical System

- State-of-the-art new silicon photodiode driver delivers industry leading optical control with an integrated gasket to provide IP67-rated sealed optical chamber in 1 component.
- Proprietary silicon refractor optics provide exceptional coverage and uniformity in 32 Types 2, 3, 4, 5A, FE, FA, AA, and LC-RIC.
- Silicone optical material does not yellow or crack with age and provides a typical light transmission of 93-95%.
- Zero-voltage.
- Available in 5000K, 4000K, and 3000K color temperatures per ANSI C78.377. Also available in phosphor converted amber with peak intensity at 60nm.
- Maximum CRI of 90.
- Integral lower O/L and integral heat layer (O/L) options available for enhanced backlight control.

Electrical

- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over-temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (0% - 100%) standard.
- Standard universal voltage (120-277 VAC) input. 50/60 Hz or optional High Voltage (240-480 VAC).
- LED Calculated Life: >100,000 Hours (See Lumen Maintenance Chart).
- Operating temperature: -30°C to +50°C (-20°F to 122°F). 42, and 48, lumen packages rated to -30°C. LED lumen package life to -30°C.
- Power factor > 90.
- Input power stays constant over life.
- Field-replaceable 10V surge protection device meets a minimum Category C Level duration per ANSI/IEEE C62.41.
- High-efficiency LEDs mounted to maximize output based on maximum heat dissipation material for maximum resistance. Circuit components are fully enclosed in cooling fins for maximum resistance. Circuit complies with FCC standards. Driver and low electronic components can easily be replaced.

Compliance

- Optional integral passive infrared Bluetooth® motion feature controls independently and can be commissioned via iOS or Android configuration app.
- LSI A&L™ wireless control system options reduce energy and maintenance costs while optimizing light quality. 24/7 (See controls section for more details).

Installation

- Integral LED fixture secures the longest drive underneath the housing and provides a side & top access to the electrical compartment.
- Included terminal block access on top of drive.
- Integral LED is threaded at all pattern B3 for easy fastening of LSI products.

Warranty

- LSI LED fixtures carry a 5-year warranty.

Listings

- Listed in UL 1599 and UL 8750.
- Meets Buy American Act requirements.
- Back Bay Certified with 3000K color temperature selection.
- File # C-Compliant: see our website for qualification information.
- RoHS compliant.
- Suitable for wet locations.
- IP67 rated lumen per IEC 60598.
- 30 rated for ANSI C136.31 high vibration applications are available.
- Designs Light Converter™ (DLC) qualified products. Not all versions of this product qualify. To confirm which version qualifies, please refer to the product qualification list on our website.
- Approved Solution Provider (US Patent No. 8,049,955 B2).
- RoHS rated lumen per IEC 60528 mechanical impact code.

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
□	L14	1	LSI INDUSTRIES, INC.	MRM-LED-09L-SIL-FI-30-70CRI	1	9860	1	62
□	L23	3	LSI INDUSTRIES, INC.	MRM-LED-09L-SIL-3-30-70CRI	1	9930	1	124

Statistics

Description	Symbol	Avg	Max	Min	Max/Min Avg/Min
Calc Zone #1	X	0.7 fc	3.9 fc	0.0 fc	N/A N/A
PARKING LOT	X	1.9 fc	3.4 fc	0.7 fc	4.9:1 2.7:1



CIVIL SITE PHOTOMETRIC PLAN & DETAILS