

PROPOSED BUILDING ADDITION FOR: KWIK TRIP #1013

RICHFIELD, WISCONSIN LEGEND

<ul style="list-style-type: none"> • 000.00 PROPOSED SPOT ELEVATIONS (FLOW LINE OF CURB UNLESS OTHERWISE SPECIFIED) • 000.00 EG EXISTING GRADE SPOT ELEVATIONS • 000.00 BG PROPOSED SPOT ELEVATIONS (REFERENCE R-WALL DETAIL) • 000.00 FG BG-FINISHED SURFACE GRADE AT BACK OF WALL • 000.00 FC FG-FINISHED SURFACE GRADE AT FRONT OF WALL • 000.00 TC PROPOSED SPOT ELEVATIONS (TOP OF CURB, FLOWLINE OF CURB) • 000.00 FL PROPOSED SPOT ELEVATIONS (TOP OF WALK, BOTTOM OF WALK @ FLOWLINE) • EXISTING WATER VALVE IN BOX • PROPOSED WATER VALVE IN BOX • EXISTING WATER VALVE IN MANHOLE • EXISTING WATER SERVICE VALVE • EXISTING TELEPHONE MANHOLE • EXISTING STORM CATCH BASIN • PROPOSED STORM CATCH BASIN - ST CB • PROPOSED STORM FIELD INLET - ST FI • EXISTING SQUARE CATCH BASIN • EXISTING STORM CURB INLET • PROPOSED STORM CURB INLET - ST CI • EXISTING UTILITY POLE • EXISTING UTILITY POLE WITH GUY WIRE • EXISTING STREET LIGHT • EXISTING TELEPHONE PEDESTAL • EXISTING ELECTRIC PEDESTAL • EXISTING ELECTRIC BOX • EXISTING CABLE TV PEDESTAL • PROPOSED DRAINAGE FLOW • 1-1/4" REBAR SET WEIGHING 4.30 LB/FT. • 3/4" REBAR SET WEIGHING 1.50 LB/FT. □ 1-1/4" REBAR FOUND ○ 3/4" REBAR FOUND ○ 2" IRON PIPE FOUND ▲ 1" IRON PIPE FOUND • EXISTING FLOOD LIGHT • SECTION CORNER • PROPOSED APRON END SECTION • EXISTING MARSH AREA • EXISTING DECIDUOUS TREE WITH TRUNK DIAMETER • EROSION MATTING • IP PROPOSED INLET PROTECTION 	<ul style="list-style-type: none"> ☀ EXISTING CONIFEROUS TREE ☁ EXISTING SHRUB ⌵ EXISTING STUMP ■ SOIL BORING ⊙ EXISTING WELL • PROPOSED WELL ○ PROPOSED LIGHT POLE ○ EXISTING LIGHT POLE — PROPOSED SIGN — EXISTING SIGN ⊕ CENTER LINE • EXISTING HANDICAP PARKING STALL • PROPOSED HANDICAP PARKING STALL • EXISTING GAS VALVE • EXISTING WOODED AREA • EXISTING HEDGE • EXISTING CHAINLINK FENCE • EXISTING WOOD FENCE • EXISTING BARBED WIRE FENCE • PROPOSED PROPERTY LINE • EXISTING GUARD RAIL • EXISTING STORM SEWER AND MANHOLE • PROPOSED STORM SEWER AND MANHOLE - ST MH • EXISTING SANITARY SEWER AND MANHOLE • PROPOSED SANITARY SEWER AND MANHOLE - SAN MH • EXISTING WATER LINE AND HYDRANT • PROPOSED WATER LINE AND HYDRANT • EXISTING OVERHEAD UTILITY LINE • EXISTING UNDERGROUND FIBER OPTIC LINE • EXISTING UNDERGROUND ELECTRIC CABLE • EXISTING UNDERGROUND TELEPHONE CABLE • EXISTING UNDERGROUND GAS LINE • PROPOSED CURB AND GUTTER • EXISTING CURB AND GUTTER • GRADING/SEEDING LIMITS • RIGHT-OF-WAY LINE • INTERIOR PROPERTY LINE • RAILROAD TRACKS • EXISTING GROUND CONTOUR • PROPOSED GROUND CONTOUR
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PROJECT LOCATION MAP

PLAN SPECIFICATIONS

DIVISION 31 EARTH WORK

31 10 00 SITE CLEARING (DEMOLITION)

- CONTRACTOR SHALL CALL DIGGER'S HOT LINE AND CONDUCT A PRIVATE UTILITY LOCATE AS REQUIRED 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 TELEVIS ALL EXISTING SANITARY AND STORM LATERALS THAT ARE SCHEDULED TO BE RE-USED AND/OR CONNECTED TO ON SITE AT TIME OF DEMOLITION. THE TELEVISION 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 PIPE 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 DIGGER'S 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. PROOF ROLL SUBGRADES BEFORE PLACING FILL WITH HEAVY ANIMATED-TYRED EQUIPMENT, SUCH AS A FULLY-LOADED TANDEM AXLE DUMP TRUCK, TO IDENTIFY SOFT POCKETS AND AREAS OF EXCESS WELDING. 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 LAYER BEFORE COMPACTION AS RECOMMENDED TO ACHIEVE SPECIFIED DRY DENSITY. REMOVE AND REPLACE, OR SCARIFY AND AIR DRY, OTHERWISE SATISFACTORY SOIL MATERIAL THAT IS TOO WET TO COMPACT TO SPECIFIED DRY DENSITY.
- PLACE BACKFILL AND FILL MATERIALS IN LAYERS NOT MORE THAN 8" 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 998, STANDARD PROCTOR TEST. FILL MAY 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 98 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 CONCRETE AND ASPHALT PAVEMENTS - COMPACT THE SUBGRADE AND EACH LAYER OF BACKFILL OR FILL MATERIAL TO NOT LESS THAN 95 PERCENT.
 - UNDER WALKWAYS - 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.
- ALLOW THE TESTING AGENCY TO INSPECT SUBGRADES AND EACH FILL OR BACKFILL LAYER. PROCEED WITH SUBSEQUENT EARTHWORK 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 STRIP FOOTING.
- WHEN THE TESTING AGENCY REPORTS THAT SUBGRADES, FILLS, OR BACKFILLS HAVE NOT ACHIEVED DEGREE OF COMPACTION SPECIFIED, SCARIFY AND MOISTEN OR REWORK THE SUBGRADE AND EACH FILL OR BACKFILL LAYER. RECOMPACT AND RETEST UNTIL SPECIFIED COMPACTION IS OBTAINED.
- 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

- THE GRADING PLAN REFLECTS LESS THAN 1 ACRE OF DISTURBED AREA. THE SITE IS THEREFORE EXEMPT FROM WISCONSIN DEPARTMENT OF NATURAL RESOURCES NR 216 NOTICE OF INTENT REQUIREMENTS. THE DESIGN ENGINEER SHALL PREPARE AN EROSION CONTROL PLAN TO MEET NR 151-1005 CONSTRUCTION SITE PERFORMANCE STANDARDS FOR NON-PERMITTED SITES.
- EROSION AND SEDIMENT CONTROL IMPLEMENTED DURING CONSTRUCTION SHALL STRICTLY COMPLY WITH THE GUIDELINES AND REQUIREMENTS SET FORTH IN WISCONSIN ADMINISTRATIVE CODE (W.A.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) 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. CONTRACTOR TO PROVIDE MAINTENANCE WITH A WEDGY TYPE B GOTTLE FABRIC AS NEEDED. THE TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT (12" 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 B OR C 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 ELIMINATE 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 TACKIFIERS, CHLORIDES, AND BARRIERS. SOME SITES MAY REQUIRE AN APPROACH THAT UTILIZES 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, ELEMENTS, AND OTHER COMPOUNDS AND MATERIALS USED ON SITE SHALL BE MANAGED DURING THE CONSTRUCTION PROCESS 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 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 (CURRENT EDITION).
 - ALL OFF-SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION SHALL BE CLEANED UP BY THE END OF EACH WORKING DAY. DUST CONTROL REQUIREMENTS SHALL BE FOLLOWED PER WI DNR TECHNICAL STANDARD 1068 (CURRENT EDITION). FLUSHING SHALL NOT BE ALLOWED.
 - ALL EROSION CONTROL DEVICES SHALL AT A MINIMUM BE INSPECTED EVERY 7 CALENDAR DAYS OR EVERY 14 DAYS AND WITHIN 24 HOURS OF THE END OF A RAIN EVENT OF 0.5" OR MORE. MAINTENANCE SHALL BE PERFORMED PER WISCONSIN ADMINISTRATIVE CODE (W.A.C.) NR 151 STORMWATER MANAGEMENT TECHNICAL STANDARD REQUIREMENTS.
 - EROSION CONTROL MEASURES SHALL NOT BE REMOVED UNTIL THE AREA(S) SERVED HAVE ESTABLISHED VEGETATIVE COVER.
 - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LOCAL EROSION CONTROL PERMITS.

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 330R-08 & ACI 318-08.
- EXTERIOR CONCRETE FLAT WORK CONSTRUCTION TO 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. PROVIDE TK-290 SEALER.
 - DUMPSTER PAD/APRON CONCRETE - 8" OF CONCRETE OVER 6" OF AGGREGATE BASE. PROVIDE TK-290 SEALER.
 - CONCRETE SHALL BE STEEL REINFORCED WITH THE FOLLOWING AND PLACED IN THE UPPER 1/3 TO 1/4 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 - POUR 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" SPEED DOWEL TUBES SHALL BE USED.
 - HEAVY DUTY CONCRETE (TRUCK TRAFFIC) - 6" OF CONCRETE OVER 6" OF 3/4" CRUSHED AGGREGATE. CONCRETE SHALL BE REINFORCED WITH #3 REBARS ON CHAIRS AT 3' O.C. REBAR SHALL BE PLACED IN THE UPPER 1/3 TO 1/4 OF THE SLAB. CONSTRUCTION JOINTS SHALL BE SAWCUT 1.5" IN DEPTH AND BE SPACED A MAXIMUM OF 15' ON CENTER. PROVIDE TK-290 SEALER.

E 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 2.5" OR LESS FOR SLIP-FORMED CURB AND GUTTER.
- SLUMP SHALL BE BETWEEN 1.5" TO 3" FOR NON-SLIP-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 REQUIRING PAD. PADS SHALL HAVE FIBERMESH 300 FIBERS AT A RATE OF 1.5 LBS./CU. YD. OR 6 X 6 W-14 X W-4 WELDED WIRE MESH WITH MINIMUM 1" INCH COVER. EQUIPMENT PADS SHALL BE 5.5 INCHES THICK WITH 1" INCH CHAMFER UNLESS SPECIFIED OTHERWISE. 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 GRADES 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 PER 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 LIGHT 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 ACI MANUAL AND STANDARD PRACTICES. THE REINFORCEMENT SHALL NOT BE BENT AND MUST BE FREE OF GREASE/OIL, DIRT OR DEEP RUST WHEN PLACED ON THE WORK. ALL WELDED WIRE FABRIC SHALL MEET THE REQUIREMENTS OF ASTM A 104. 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 TESTS DURING CONCRETE PLACEMENT. TESTS WILL BE PERFORMED ACCORDING TO ACI 301. CAST AND LABORATORY CURE ONE SET OF FOUR STANDARD CYLINDERS FOR EACH COMPOSITE SAMPLE AND ONE SET OF FOUR STANDARD CUBES FOR EACH COMPOSITE SAMPLE. TESTS SHALL BE PERFORMED AT 7 DAYS AND 28 DAYS. PERFORM DRY 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 FOR EACH CONCRETE MIX. PERFORM ADDITIONAL TESTS WHEN CONCRETE CONSISTENCY APPEARS TO CHANGE.
- PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING 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 BULL FLOATING, BUT BEFORE POWER FLOATING AND TROWELLING.
- LIMIT MAXIMUM WATER-CEMENTITIOUS RATIO OF CONCRETE EXPOSED TO FREEZING, THAWING AND DEICING SALTS TO 0.45.
- TEST RESULTS WILL BE REPORTED IN WRITING TO THE DESIGN ENGINEER, READY TO MIX CONTRACTOR, 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.
- CONTRACTOR TO PROVIDE 4" WEDGING SPACING FOR PARKING STALLS, TRAFFIC LINES, AND NO PARKING AREAS. (YELLOW PAINT MARKINGS SHALL ALSO BE PROVIDED FOR H.C. ACCESSIBLE SYMBOLS, TRAFFIC ARROWS, AND TRAFFIC MESSAGES).

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 IMPROVED OR MANUFACTURED TOPSOIL FROM OFF SITE SOURCES WHEN QUANTITIES ARE INSUFFICIENT. EXCAVATOR SHALL BE RESPONSIBLE FOR ROUGH FINISHING OF TOPSOIL TO WITHIN 1" OF FINAL GRADE PRIOR TO LANDSCAPE 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 AT POINT OF PLANTING AND INFORM 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, RUBBISH AND OTHER EXTRANEOUS 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 IF 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 SEED WITH THE FOLLOWING MIXTURE: 65% KENTUCKY BLUEGRASS BLEND (2.0-2.6 LBS./1,000 S.F.), 20% PERENNIAL RYEGRASS (0.6-0.8 LBS./1,000 S.F.), 15% FINE FESCUE (0.4-0.6 LBS./1,000 S.F.). STRAW AND MULCH SHALL BE LAID AT 100LBS/1,000 S.F. FERTILIZE AS PER SOIL TEST OR APPLY 5-10-10 OR EQUIVALENT AT 5-6 LBS./1,000 S.F. SEE EROSION MATTING SPECIFICATIONS AS REQUIRED. ALL SITE DISTURBED AREAS NOT DESIGNATED FOR OTHER LANDSCAPING AND SITE STABILIZATION METHODS SHALL BE SEED AS PERMANENT LAWN. NO BARE TOPSOIL SHALL BE LEFT ON SITE. FOLLOW PROCEDURES FOUND IN WDNR TECHNICAL STANDARDS 1058 & 1059.
 - ALL PERMANENT AND TEMPORARY STORM WATER CONVEYANCE SWALE BOTTOMS AND SIDE SLOPES SHALL BE SEED 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 5-6 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 1.9 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 5-6 LBS./1,000 S.F. SEE EROSION MATTING SPECIFICATIONS AS REQUIRED. FOLLOW PROCEDURES FOUND IN WDNR TECHNICAL STANDARDS 1058 & 1059.
- SEEDED LAWNS: 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%. 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 S150) OR EQUIVALENT ON ALL SLOPES THAT ARE 4:1 AND GREATER-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 REQUIRED. LAWN SEED SHALL BE PLACED BELOW MATTING PER SEEDING REQUIREMENTS AND MANUFACTURER SPECIFICATION.
 - TREES AND SHRUBS: FURNISH NURSERY-GROWN TREES AND SHRUBS WITH HEALTHY ROOT SYSTEMS DEVELOPED BY TRANSPLANTING 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. SEE THE LANDSCAPE PLAN FOR SPECIFIC SPECIE TYPE, SIZE, AND LOCATION.
 - EXISTING AND SHRUB INSTALLATION: EXCAVATE CURB AND RAMP FITS WITH SIDES SLOPED INWARD. TRIM BARK BASE LATERALS RAISED SLIGHTLY TO SUPPORT ROOT BALL. EXCAVATE FIT APPROXIMATELY THREE TIMES AS WIDE AS TREE OR SHRUB BALL DIAMETER. SET TREES AND SHRUBS IN CENTER OF FIT 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.
 - TREE 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 BLANKET OF 1.5" MINIMUM TO 2.5" MAXIMUM CRUSHED DECORATIVE STONE AT ALL PLANTING AREAS INDICATED ON THE LANDSCAPE PLAN. INSTALL OVER NON-WOVEN WEED BARRIER FABRIC. COLOR BY OWNER.
 - PLASTIC EDGING: INSTALL VALLEY VIEW INDUSTRIES BLACK DIAMOND LAWN 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 CODE) 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 TELEVIS ALL EXISTING SANITARY AND STORM LATERALS THAT ARE SCHEDULED TO BE RE-USED AND/OR CONNECTED TO ON SITE. THE TELEVISION 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 PIPE OBSTRUCTIONS AND/OR STRUCTURAL DEFICIENCIES IMMEDIATELY AFTER COMPLETION OF FIELD TELEVISION.
- 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 1/4" 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, WHICH EVER IS SHALLOWER. THE CLEANOUT SHALL EXTEND JO UP ABOVE THE SURFACE GRADE IN LAWN OR LANDSCAPE AREA WITH THE FROST SLEEVE TERMINATING AT THE GRADE SURFACE. THE CLEANOUT SHALL EXTEND TO 4 INCHES BELOW SURFACE GRADE IN PAVED SURFACES WITH A ZURN (Z-1474-N) 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 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. PIPES SHALL BE PLACED MIN. 8" HORIZONTALLY FROM FOUNDATION WALLS.
- SANITARY STORM AND UTILITY PIPE INVERTS SHALL BE CONSTRUCTED WITHIN 0.10' OF DESIGN INVERT ELEVATIONS ASSUMING PIPE SLOPE AND SEPARATION IS MAINTAINED PER THE UTILITY DESIGN PLANS AND STATE REQUIREMENTS.
- 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 SECURED EVERY 20 FEET AND AT ALL BENDS. TRACER WIRE SHALL HAVE ACCESS POINTS AT LEAST EVERY 300 FEET. TRACER WIRE SHALL TERMINATE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS AT GRADE OR IN TERMINATION BOX PER LOCALITY 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.

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

CIVIL SHEET INDEX

SHEET	SHEET TITLE
C001	CIVIL COVER AND SPECIFICATION SHEET
C020	EXISTING SITE AND DEMOLITION PLAN
C100	SITE PLAN
C200	GRADING AND EROSION CONTROL PLAN
C400	UTILITY PLAN
C500	DETAILS
C800	CIVIL SITE PHOTOMETRIC PLAN

GENERAL PROJECT NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL WORK IN ROW PERMITS.

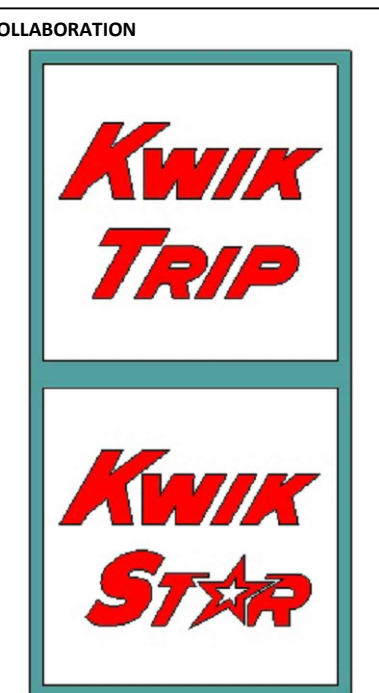
CONSTRUCTION STAKING SERVICES

CONSTRUCTION STAKING SHALL BE COMPLETED BY EXCEL ENGINEERING AS REQUESTED BY THE CONTRACTOR AT THE CONTRACTORS EXPENSE. CONTRACTOR TO CONTACT RYAN WILGREEN AT 920-926-9800 OR RYAN.WILGREEN@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.

Utility	Material	Pipe Code	Fitting Code	Joint Code
Storm Sewer	HDPE	ASTM F2668, ASTM F2306, AASHTO M252, TYPE 5 (4 IN - 10 IN), Elastomeric Seal ASTM 4477	ASTM F2668, ASTM F2306, AASHTO M252, or AASHTO M294	Joint: ASTM F2648, ASTM F2306, AASHTO M252, or AASHTO M294
		SDR 35 PVC	ASTM F1336	Push On: ASTM D3212 for Tightness Elastomeric Seal: ASTM 4477
*Storm Sewer	SCH. 40 PVC	ASTM D1785, ASTM D2665, ASTM F891	ASTM F1336	Primer: ASTM F656 Sol

SPECIFICATION NOTE:
SEE SHEET C001 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

NOTE: SURFACE INDICATIONS OF UTILITIES ALONG WITH DIGGER'S HOTLINE MARKINGS PER TICKET NO. 20241502833 HAVE BEEN SHOWN. SIZES AND ELEVATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD MEASUREMENTS OF VISIBLE STRUCTURES IN COMBINATION WITH AVAILABLE DATA PROVIDED TO EXCEL ENGINEERING. EXCEL ENGINEERING MAKES NO GUARANTEE THAT ALL THE EXISTING UTILITIES IN THE SURVEYED AREA HAVE BEEN SHOWN NOR THAT THEY ARE IN THE EXACT LOCATION INDICATED. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION.



PROJECT INFORMATION

PROPOSED ADDITION FOR:
KWIK TRIP #1013
2900 HOLY HILL RD. • RICHFIELD, WI 53076

PROFESSIONAL SEAL

PRELIMINARY DATES

JUNE 11, 2024
JUNE 17, 2024
JUNE 19, 2024

JOB NUMBER

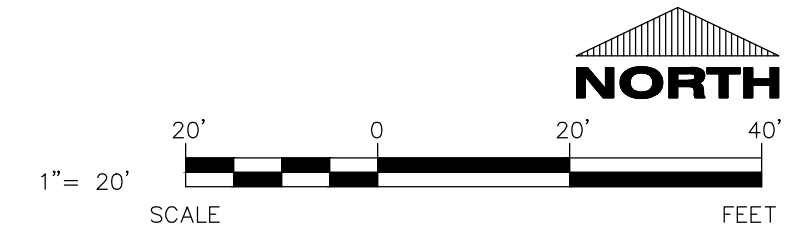
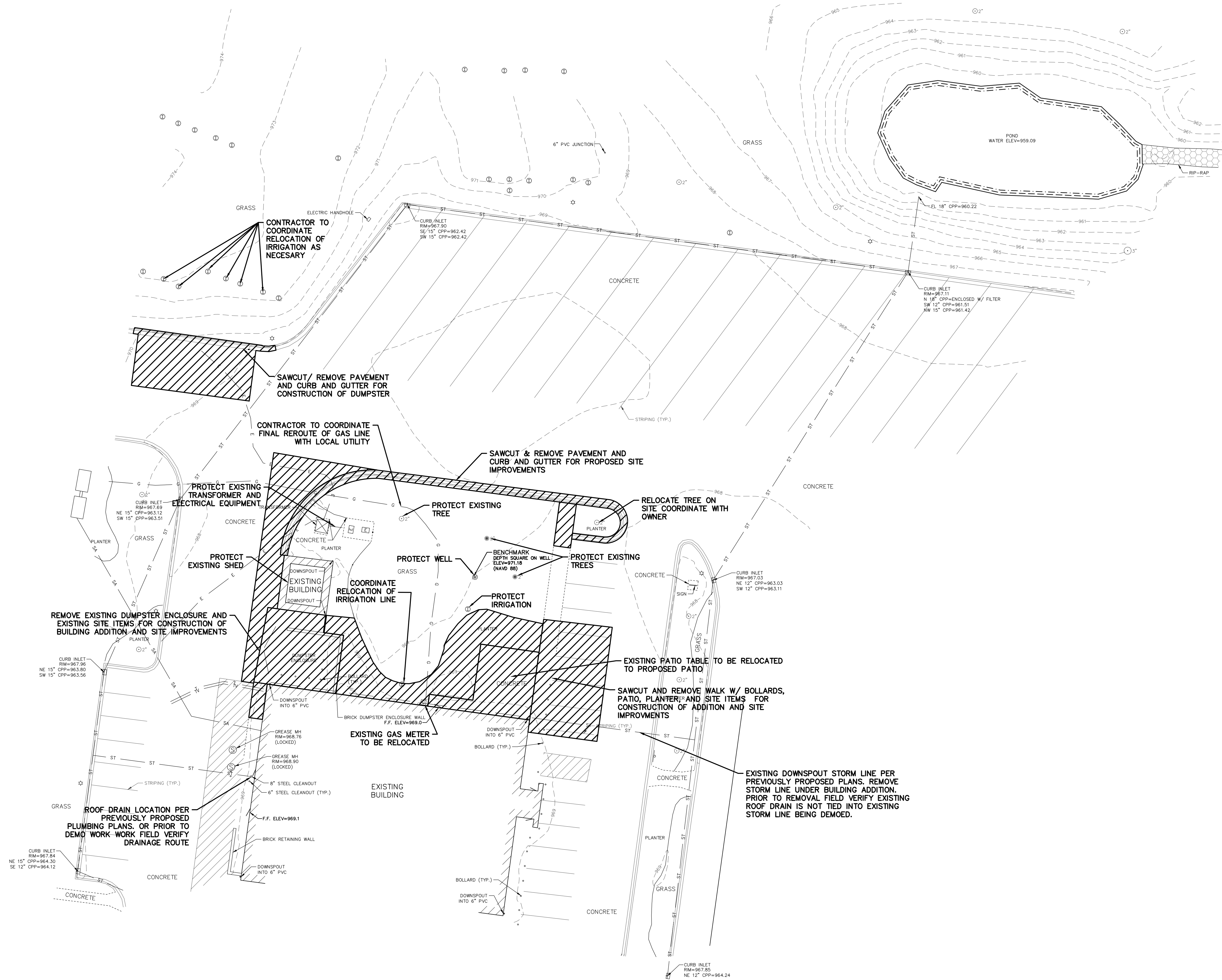
240099400

SHEET NUMBER

C020

NOT FOR CONSTRUCTION

RICHFIELD PKWY.



CIVIL EXISTING SITE AND DEMOLITION PLAN

SPECIFICATION NOTE:
SEE SHEET C001 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

SITE INFORMATION:

PROPERTY AREA: AREA = 605,048 S.F. (13.89 ACRES).
EXISTING ZONING: B-4
PROPOSED ZONING: B-4
PROPOSED USE: VEHICLE FUELING STATION
AREA OF SITE DISTURBANCE: 15,206 S.F.

SETBACKS: BUILDING: FRONT = 40'
SIDE = 25'
REAR = 25'
PAVEMENT: FRONT = 5'
SIDE = 5'
REAR = 5'

PROPOSED BUILDING HEIGHT: 22.02' (MAX. HEIGHT ALLOWED: 35')

PARKING REQUIRED: 1 SPACE PER 300 S.F.(GROSS FLOOR AREA) (38 SPACES REQ.)

PARKING PROVIDED: 46 SPACES/ 20 PUMP SPACES (6 H.C. ACCESSIBLE)

HANDICAP STALLS REQUIRED: 3, HANDICAP STALLS PROVIDED: 6

LANDSCAPE REQUIREMENTS:
MAXIMUM IMPERVIOUS SURFACE: 55%

SITE PLAN KEYNOTES

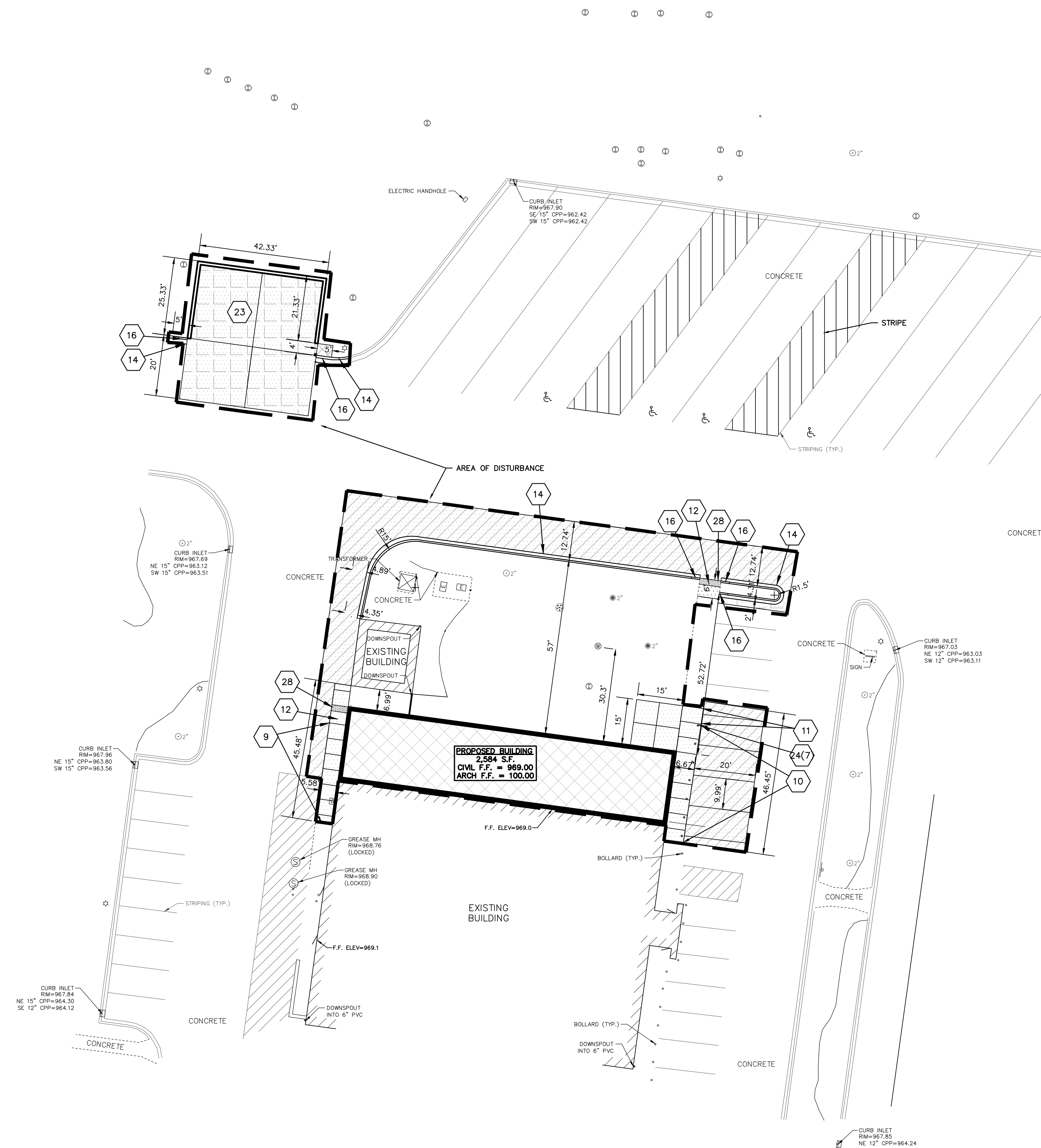
9	RAISED WALK (TYP.)
10	FLUSH WALK (TYP.)
11	STRIPE EDGE OF TRANSITIONING WALK
12	CURB RAMP (TYP.)
14	18" CURB & GUTTER (TYP.)
16	CURB TAPER (TYP.)
23	DUMPSTER ENCLOSURE (SEE ARCH PLANS FOR DETAILS)
24	6" CONCRETE BOLLARDS (SEE DETAIL ON ARCH. PLAN)
28	DETECTABLE WARNING PLATE
X(X)	IDENTIFICATION: KEYNOTE ITEM(QUANTITY) - IF NO () = QUANTITY IS 1

EXISTING SITE DATA (AREA OF DISTURBANCE)

	AREA (AC)	AREA (SF)	RATIO
AREA OF DISTURBANCE	0.35	15,206	
BUILDING FLOOR AREA	0.01	439	2.9%
PAVEMENT (ASP. & CONC.)	0.12	5,280	34.7%
TOTAL IMPERVIOUS	0.13	5,719	37.6%
LANDSCAPE/ OPEN SPACE	0.22	9,487	62.4%

PROPOSED SITE DATA (AREA OF DISTURBANCE)

	AREA (AC)	AREA (SF)	RATIO
AREA OF DISTURBANCE	0.35	15,206	
BUILDING FLOOR AREA	0.06	2,673	17.6%
PAVEMENT (ASP. & CONC.)	0.14	6,305	41.5%
TOTAL IMPERVIOUS	0.21	8,978	59.0%
LANDSCAPE/ OPEN SPACE	0.14	6,228	41.0%



RICHFIELD, R.K.W.Y.



Always a Better Plan

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

COLLABORATION



PROJECT INFORMATION

PROPOSED ADDITION FOR:
KWIK TRIP #1013
2900 HOLY HILL RD. • RICHFIELD, WI 53076

PROFESSIONAL SEAL

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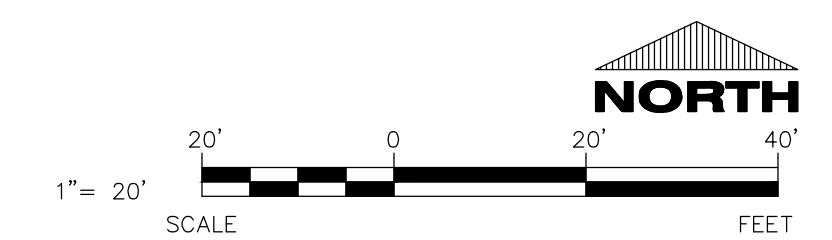
SHEET NUMBER

C100

NOT FOR CONSTRUCTION

PAVEMENT HATCH KEY:

- SIDEWALK CONCRETE
- HEAVY DUTY CONCRETE
- DUMPSTER PAD CONCRETE



CIVIL SITE PLAN



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2900 HOLY HILL RD. • RICHFIELD, WI 53076

PROFESSIONAL SEAL

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NOT FOR CONSTRUCTION

JOB NUMBER

240099400

SHEET NUMBER

C200

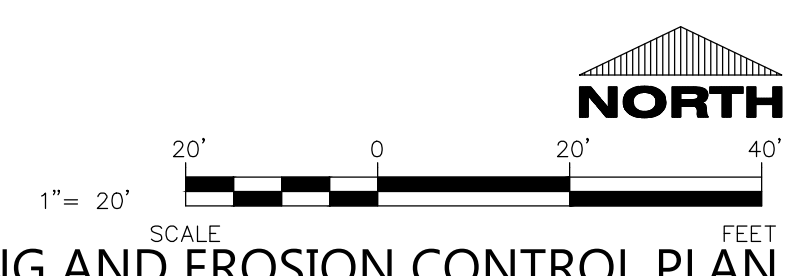
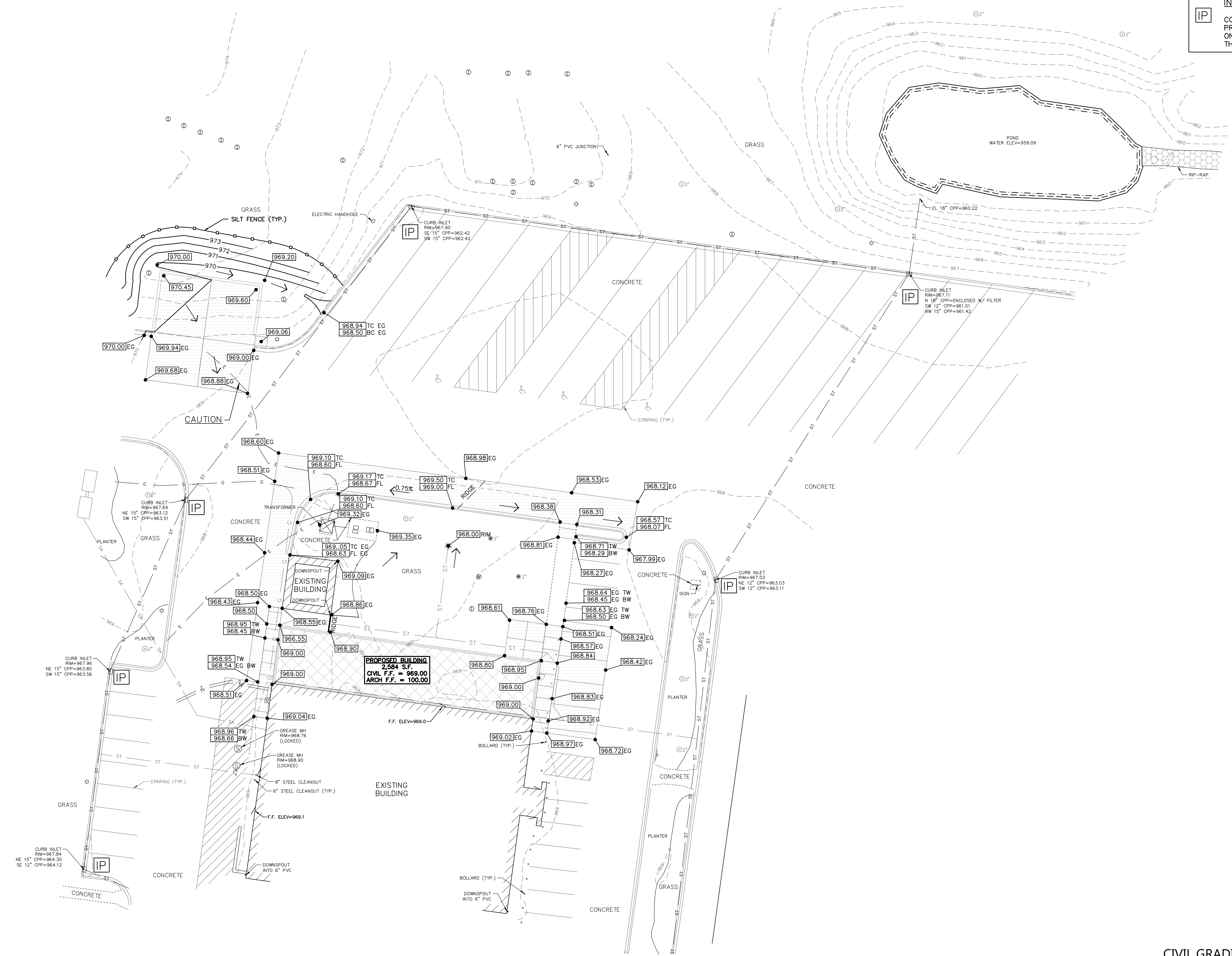
SPECIFICATION NOTE:
SEE SHEET C001 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

NOTES:
1. 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)
2. ALL SIDEWALKS SHALL NOT EXCEED A MAXIMUM CROSS SLOPE OF 1.50% AND RUNNING SLOPE OF 4.50% UNLESS OTHERWISE SPECIFIED.

INLET PROTECTION NOTE:
CONTRACTOR SHALL PROVIDE TEMPORARY INLET PROTECTION FOR ALL CURB INLETS & CATCH BASINS ONSITE & OFFSITE IMMEDIATELY DOWNSTREAM OF THE PROJECT SITE PER LOCAL CODE.

CONCRETE WASHOUT NOTE:
CONTRACTOR SHALL PROVIDE CONCRETE WASHOUT AS REQUIRED PER CODE. FINAL LOCATION TBD BY CONTRACTOR.

RICHFIELD PKWY.



CIVIL GRADING AND EROSION CONTROL PLAN

SPECIFICATION NOTE:
SEE SHEET C001 FOR PLAN SPECIFICATIONS AND REQUIREMENTS

DOWNSPOUT NOTE:
[DS] = DENOTES DOWNSPOUT TO GRADE LOCATIONS. PROVIDE SPLASH BLOCKS AT ALL DS TO GRADE LOCATIONS. SEE ARCH PLANS FOR FINAL LOCATIONS.



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

COLLABORATION



PROJECT INFORMATION

PROPOSED ADDITION FOR:
KWIK TRIP #1013
2900 HOLY HILL RD. • RICHFIELD, WI 53076

PROFESSIONAL SEAL

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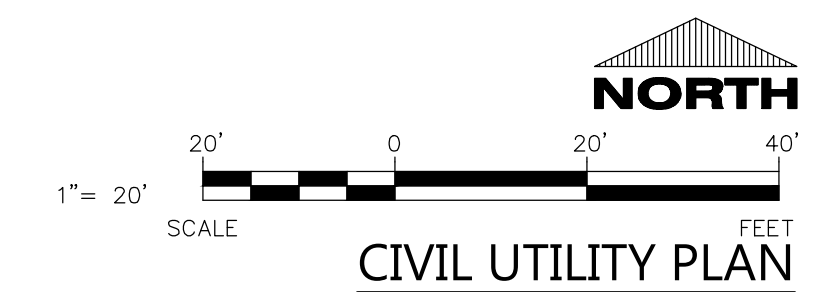
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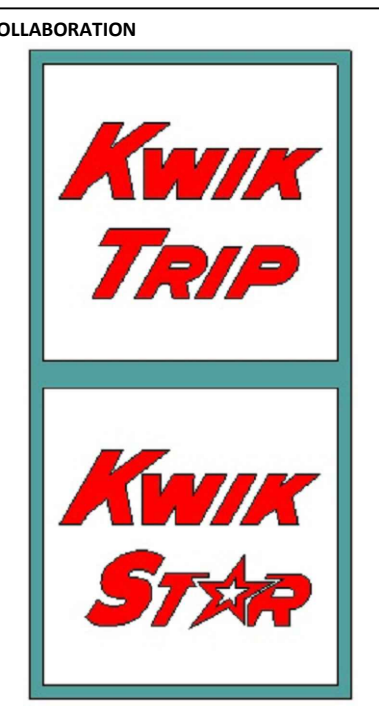
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NOT FOR CONSTRUCTION

RICHFIELD PKWY.



SPECIFICATION NOTE:
SEE SHEET C001 FOR PLAN
SPECIFICATIONS AND REQUIREMENTS



PROJECT INFORMATION

PROPOSED ADDITION FOR:
KWIK TRIP #1013
2900 HOLY HILL RD. • RICHFIELD, WI 53076

PROFESSIONAL SEAL

PRELIMINARY DATES

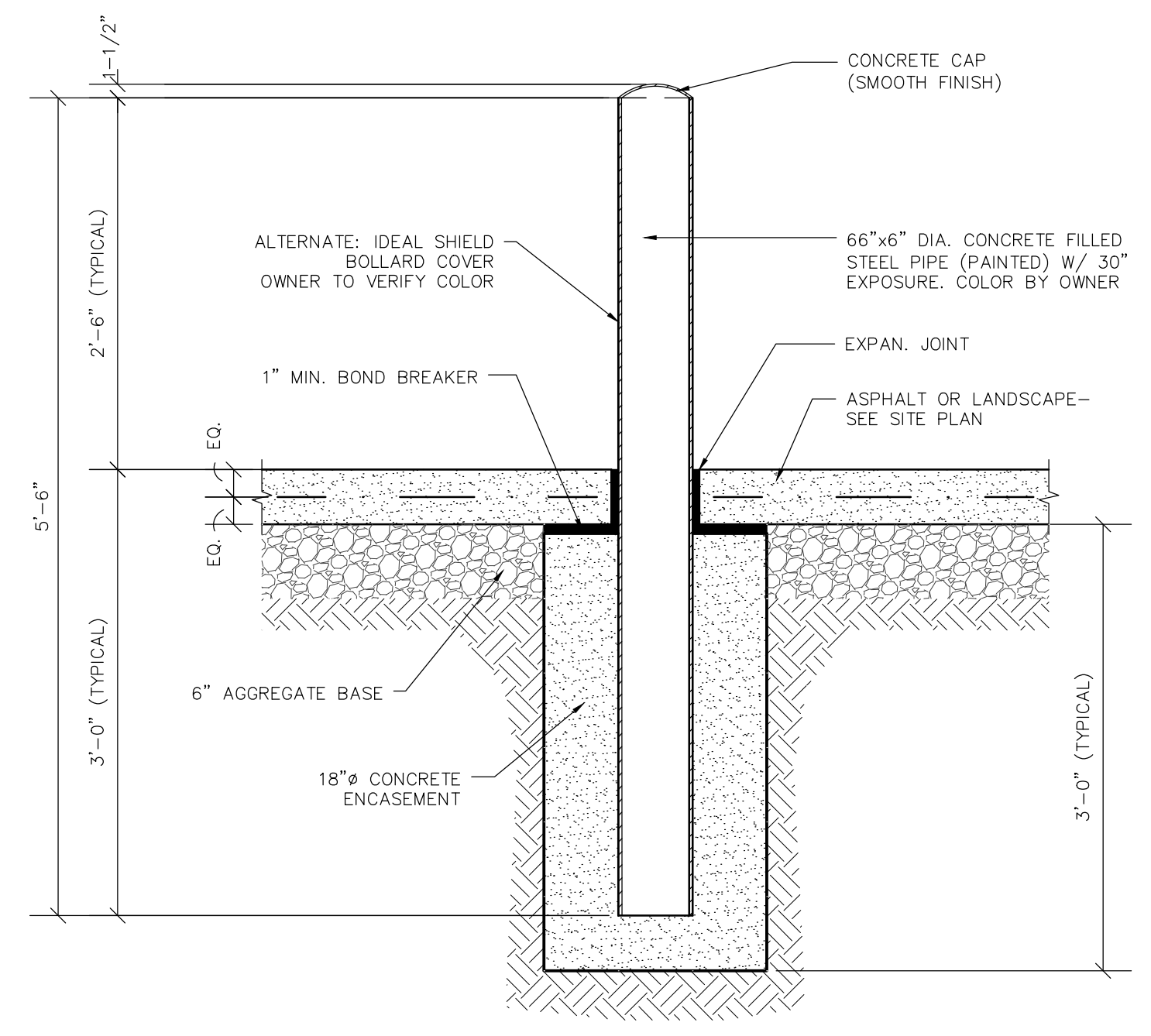
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JUNE 19, 2024

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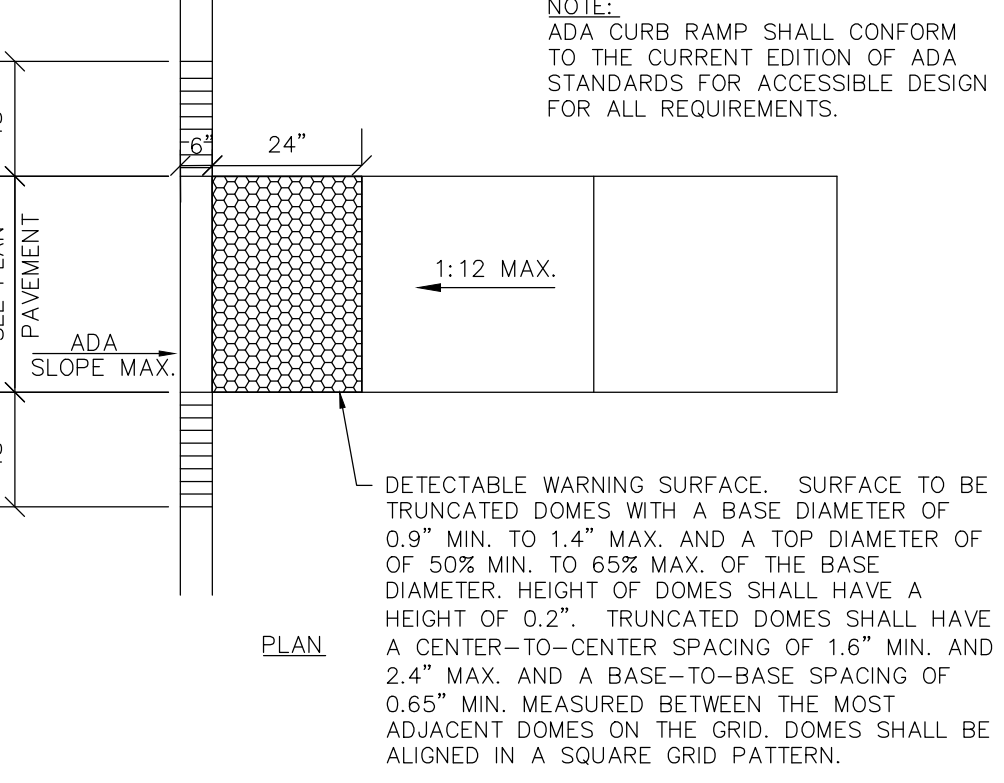
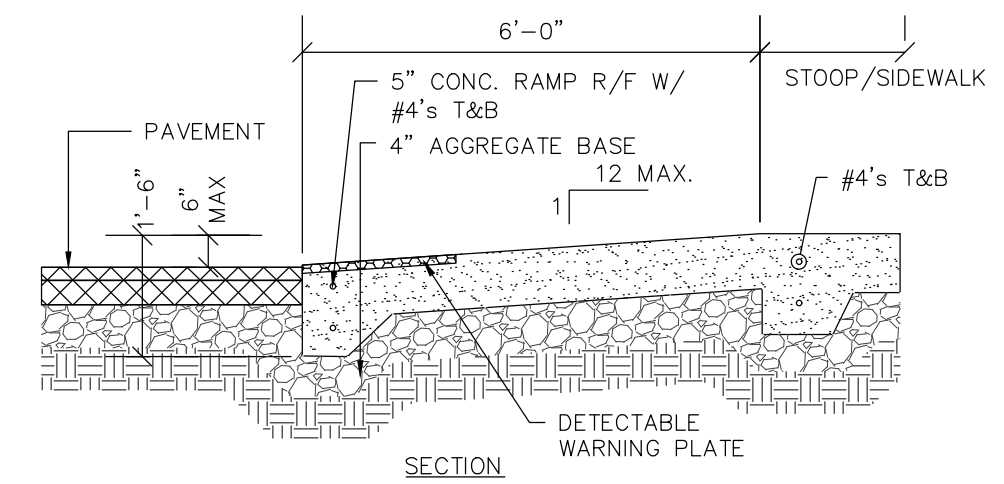
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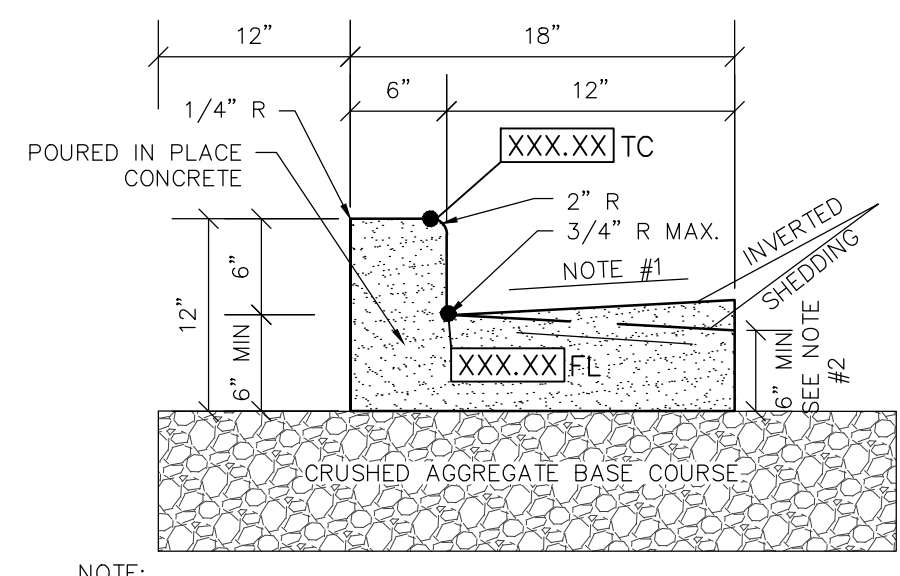
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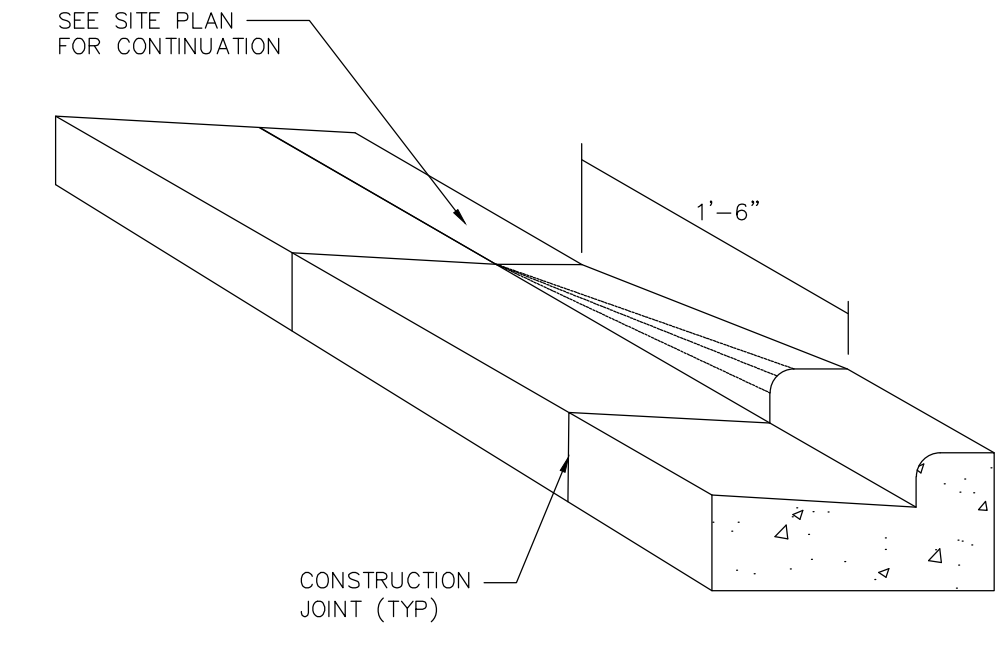
6" PIPE BOLLARD DETAIL
NO SCALE



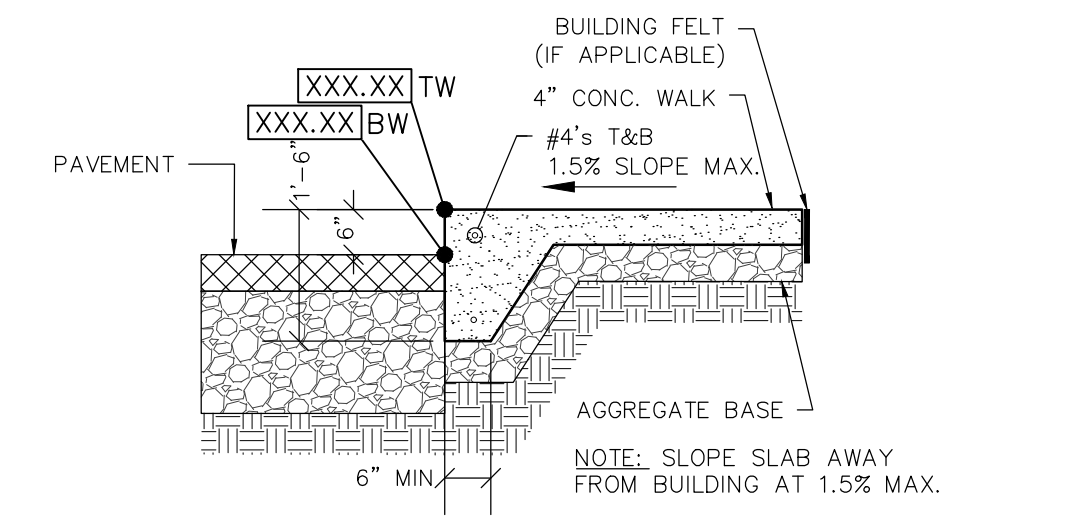
CURB RAMP DETAIL
NO SCALE



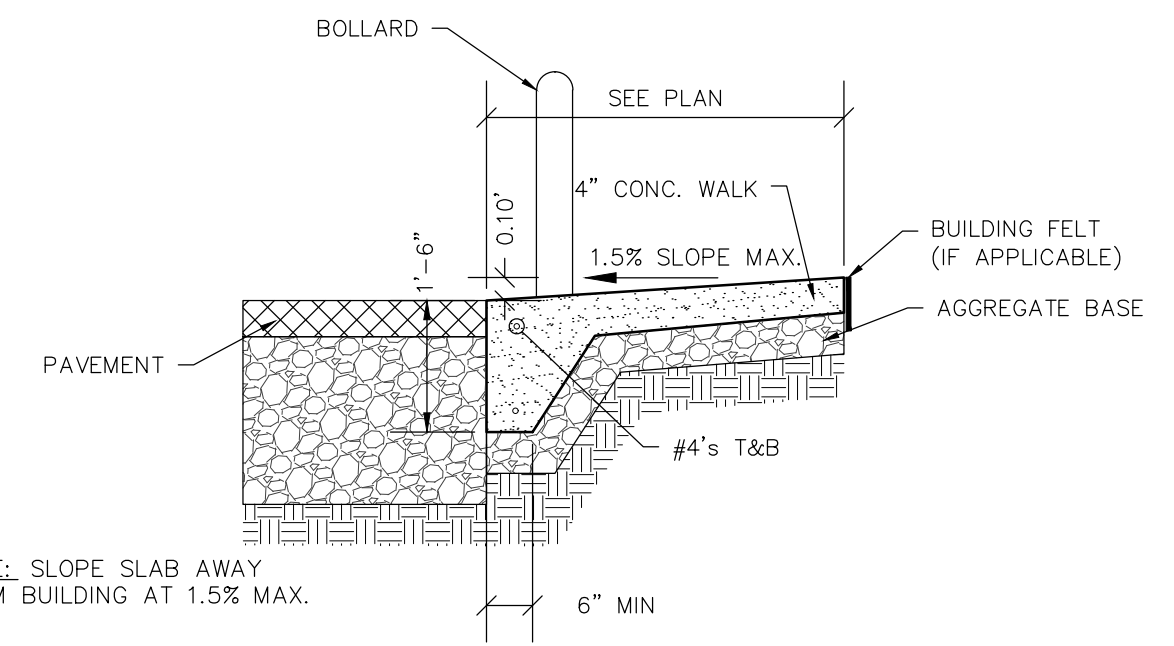
18" CONCRETE CURB & GUTTER DETAIL
NO SCALE



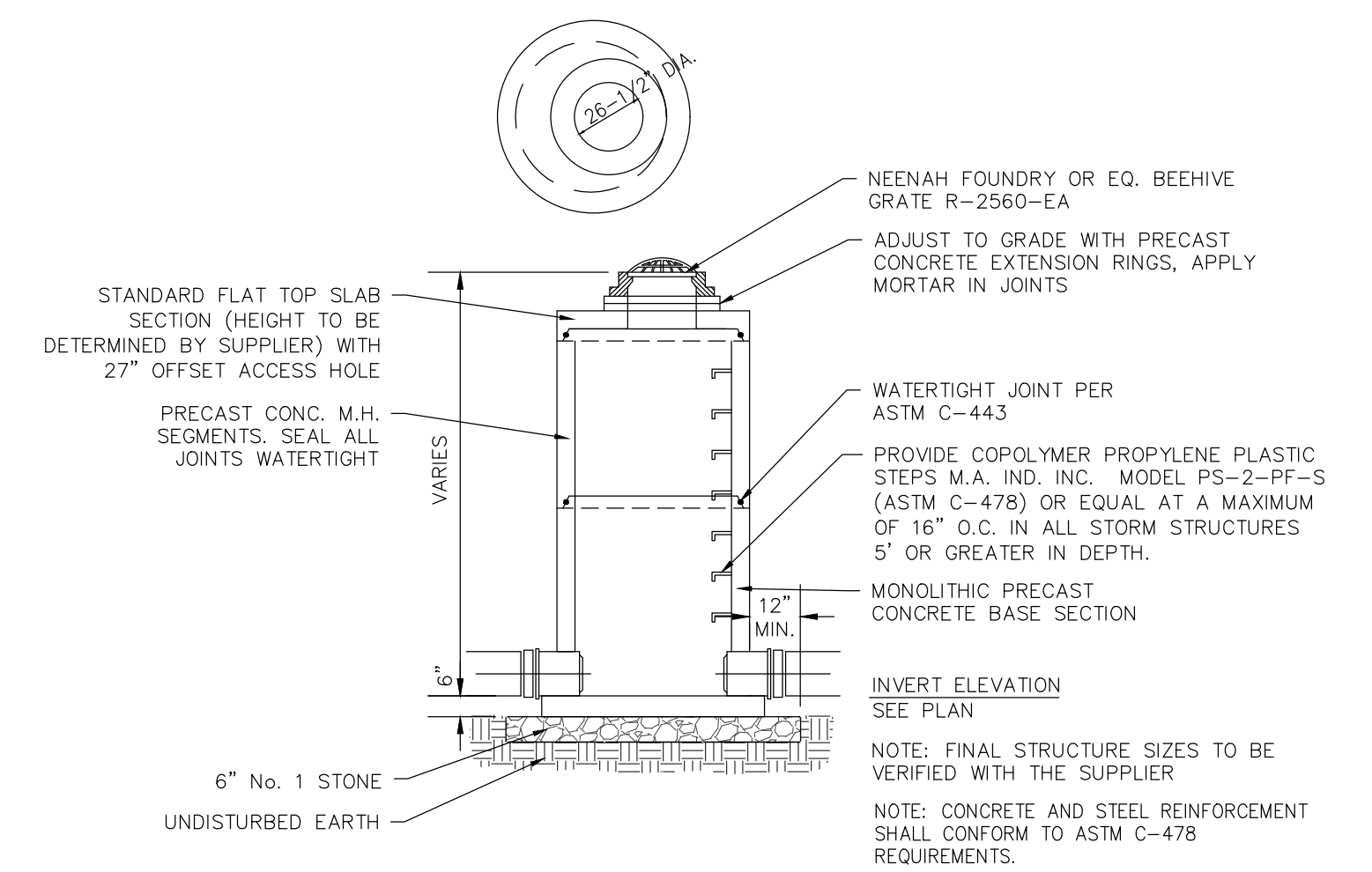
CURB TAPER DETAIL
NO SCALE



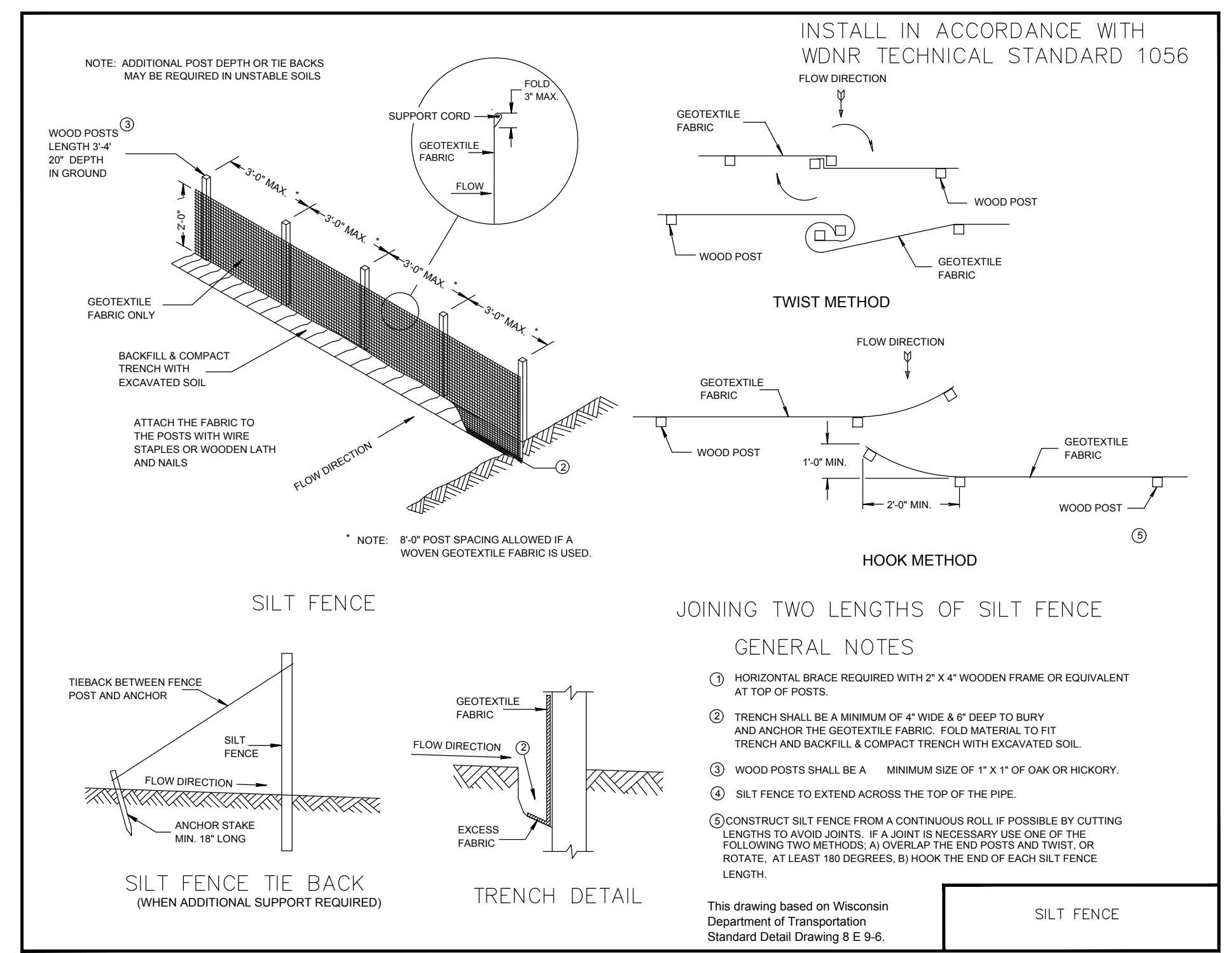
RAISED WALK DETAIL
NO SCALE



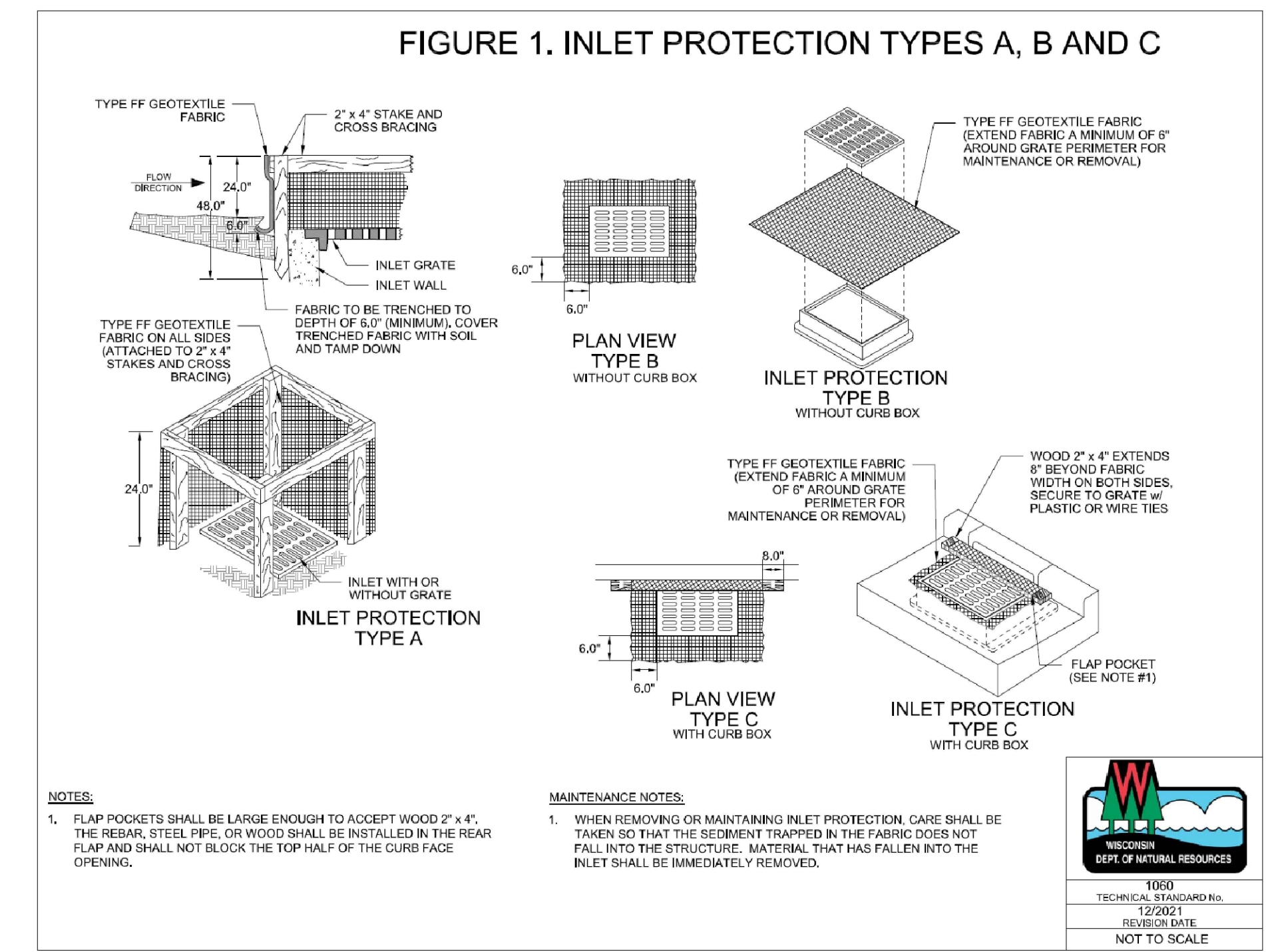
FLUSH WALK DETAIL
NO SCALE



**STORM CATCH BASIN W/
DOME GRATE DETAIL**
NO SCALE



SILT FENCE - INSTALLATION DETAIL
NO SCALE



INLET PROTECTION DETAIL
NO SCALE



CIVIL DETAILS

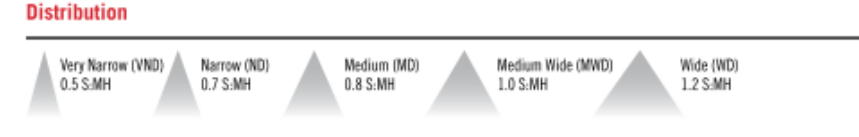
General Illumination Round Downlight

6"

Feature Set

- Blending Ray™ optical design
- Blending distribution with feathered edges provides even illumination on horizontal and vertical surfaces
- 45° cutoff to source and source image
- Fully serviceable and replaceable lensed LED light engine
- 20% lumen maintenance at 60,000 hours
- 2.5 MacAdam Ellipse; 95 CRI typical, 90+ CRI optional
- Features are wet location, covered ceiling

- Available with 10% dimming, 1% dimming, or dim to dark
- ENERGY STAR™ certified product
- UGR of one for fixtures aimed at ceiling with a cut-off equal to or less than 60deg per CIE 117-1995 Discomfort Glare in Interior Lighting, UGR F42

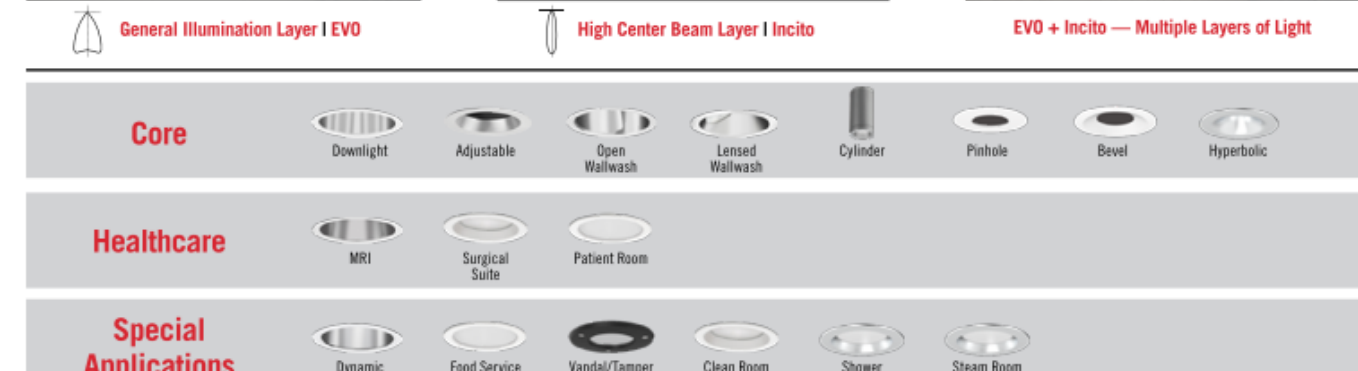


Superior Performance

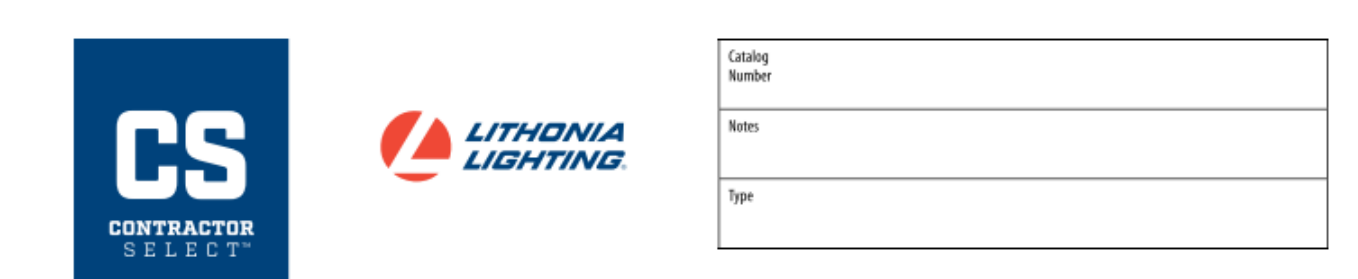
Beam Spread	250	500	750	1000	1500	2000	2500	3000	3500	4000	4500	5000	6000	8000	10,000	12,000	15,000	17,500
Delivered Lumens	297	519	776	994	1471	2006	2537	3072	3602	4133	4659	5181	6277	8367	10457	12547	15776	17861
Wattage	3.4	6.2	9.2	12.2	17.7	24.7	31.7	38.7	45.7	52.7	59.7	66.7	80.0	106.7	133.4	160.1	186.8	213.5
Lumens per Watt	87.4	83.7	84.6	80.5	100.1	101.8	102.7	104.3	104.8	103.3	95.8	107.3	110.6	110.1	105.5	107.2	104.5	101.5

*Based on 2500K A9 LSI M900 BCRN

Coordinated Apertures | Multiple Layers of Light



EVO+ OPEN page 1 of 8 | LITHONIA ARCHITECTURAL DOWNLIGHTING | 1400 Lector Road Cypress, CA 94022 | P 800-765-5261 (7736) | info@lithonia.com
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Contractor Select™
TWS LED
Mini Wall Pack
Adjustable+Switchable+Photocell



Our new "traditional style" LED luminaires offer the shapes you've grown accustomed to coupled with the flexibility to customize the light output best suited for the job site. This fixture was designed to fit seamlessly—eliminating unwanted markings from the removal of older fixtures. Replace one or replace them all, either case, with energy savings of up to 80%. Lithonia has you covered.

- FEATURES:
- (AJO) Adjustable Lumen Output (1,000 / 1,700 / 2,400)
 - (SWW) Switchable Color Temperatures (3000K, 4000K, 5000K)
 - Replaces up to 100W Metal Halide/70W HPS, saves 80% energy
 - Traditional form factor, and payback within two years
 - Switchable on/off Photocell for dusk to dawn operation

Catalog Number	Adjustable Lumen Output AJO	Switchable CCT SWW	Back to Dawn Operation PE	Input Voltage	CEI
TWS LED AJO SWW2 MVOLT PE DOB	1,000 LUMENS 1,700 LUMENS 2,400 LUMENS	Switchable 3000K, 4000K, 5000K	Included Standard, Selectable On/Off	120-277V	BRN

* Default out of the box settings

TWS LED Stock Configurations

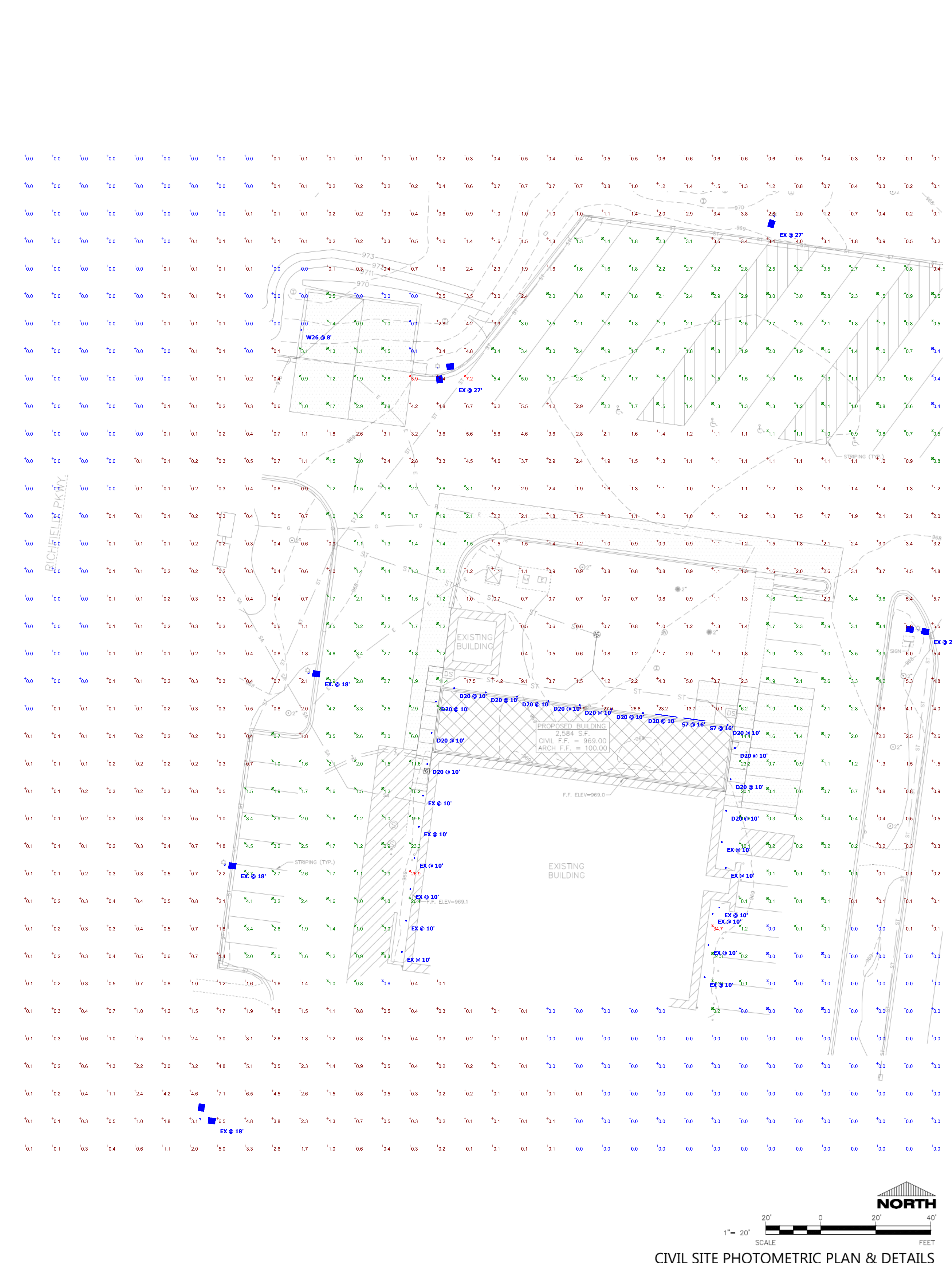
Catalog Number	UPC	Q Code	Number of fixtures per pallet	Traditional Replacement
TWS LED AJO SWW2 MVOLT PE DOB R2	007161848332	*2008P	100	T08-100W HPS

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Number Lamps	Lumens Per Lamp	Wattage
□	EX.	2	LSI INDUSTRIES, INC.	EXISTING	1	12632	86
□	W26	1	Lithonia Lighting	TWS LED P1 50K MVOLT PE DOB R4	1	2080	17.8
○	EX	12	Gotham Architectural Lighting	EXISTING	1	3480	39
○	D20	14	Gotham Architectural Lighting	EV06 35/40 AR WD LD	1	3480	39
□	EX	1	LSI INDUSTRIES, INC.	EXISTING	1	12632	172
□	EX	1	LSI INDUSTRIES, INC.	EXISTING	1	12632	86
□	EX	1	LSI INDUSTRIES, INC.	EXISTING	1	23904	392
□	EX	1	LSI INDUSTRIES, INC.	EXISTING	1	23904	196
□	EX	1	LSI INDUSTRIES, INC.	EXISTING	1	23904	196
□	EX	1	LSI INDUSTRIES, INC.	EXISTING	1	23904	392
□	EX	1	LSI INDUSTRIES, INC.	EXISTING	1	23904	196

Statistics

Description	Avg	Symbol	Max	Min	Max/Min	Avg/Min
EAST LOT	3.3 fc	X	34.7 fc	0.0 fc	N/A	N/A
KT #1013	1.5 fc	+	34.7 fc	0.0 fc	N/A	N/A
NORTH LOT (TRUCKER)	1.9 fc	X	7.2 fc	0.4 fc	18.0:1	4.8:1
WEST LOT	3.4 fc	X	26.9 fc	0.6 fc	44.8:1	5.7:1
DUMPSTER	1.6 fc	X	3.9 fc	0.1 fc	39.0:1	16.0:1



EXCEL
Always a Better Plan
100 Camelot Drive
Fond du Lac, WI 54935
920-926-9800
excelengineer.com

COLLABORATION
KWIK TRIP
KWIK STAR

PROJECT INFORMATION

PROPOSED ADDITION FOR:
KWIK TRIP #1013
2900 HOLY HILL RD. • RICHFIELD, WI 53076

PROFESSIONAL SEAL

PRELIMINARY DATES
JUNE 19, 2024

NOT FOR CONSTRUCTION

JOB NUMBER
240099400

SHEET NUMBER
C800

