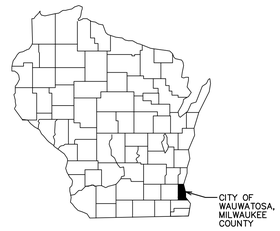
MILWAUKEE REGIONAL MEDICAL CENTER

CITY OF WAUWATOSA, WISCONSIN
WEST CAMPUS DEVELOPMENT INFRASTRUCTURE IMPROVEMENTS
9201 WATERTOWN PLANK ROAD PARKING LOT

MILWAUKEE REGIONAL MEDICAL CENTER
VICINITY MAP

SHEET INDEX

N.T.S.



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CLIENT:
MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	11/28/2022
DRAWN BY:	SRK
CHECKED BY:	JAL
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
COVERSHEET

SHEET NUMBER:
C-001

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GENERAL NOTES

1. THE BASE PLAN IS A COMBINATION OF A SURVEY PREPARED BY GRAEF IN 2023, AND PREVIOUS DESIGN PLANS. ALL UNDERGROUND UTILITIES AND STRUCTURES HAVE BEEN SHOWN TO A REASONABLE DEGREE OF ACCURACY, AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE THERETO.
2. HORIZONTAL COORDINATES ARE BASED ON WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY. NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (NAD83(2011)), US SURVEY FOOT, USING THE WISCORS NETWORK.
3. VERTICAL DATUM IS NGVD88(2012), GEOID 12A, REDUCED DOWN TO CITY OF WAUWATOSA DATUM USING A FIELD COMPUTED FACTOR OF −579.968'. THIS FACTOR IS LOCALIZED TO THE MRMC CAMPUS ONLY AND SHOULD NOT BE USED FOR TRANSFORMING VERTICAL ELEVATIONS FROM NAVD88(2012) TO CITY OF WAUWATOSA DATUM ON OTHER SITES WITHOUT FIELD VERIFYING.
4. THE PROPERTY LINE SHOWN ON THE PLANS IS THE LOCATION OF THE PROPOSED PROPERTY LINE AS SUBMITTED FOR REVIEW AND APPROVAL TO THE CITY OF WAUWATOSA IN APRIL 2018. THE PROPERTY LINE IS STILL CURRENTLY UNDER REVIEW AND HAS NOT BEEN APPROVED OR FINALIZED BY THE CITY OF WAUWATOSA. AT THE TIME CONSTRUCTION DRAWINGS ARE ISSUED, THE PROPERTY LINE SHOWN WILL BE APPROVED AND FINALIZED BY THE CITY OF WAUWATOSA.
5. EXISTING CONDITIONS SHALL BE VERIFIED AND DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING CONSTRUCTION.
6. CONTRACTOR PARKING SHALL BE COORDINATED WITH CONSTRUCTION MANAGER.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF PAVEMENTS, CURB AND GUTTER, VEGETATION, ABOVE GROUND APPURTENANCES, OR ANY OTHER ITEM SCHEDULED TO REMAIN THAT IS DAMAGED AS A RESULT OF CONSTRUCTION RELATED ACTIVITIES, AS DETERMINED BY THE OWNER. CONTRACTOR SHALL REPAIR OR REPLACE DAMAGED ITEMS TO THE SATISFACTION OF OWNER AT NO ADDITIONAL COST TO THE OWNER.
8. SITE LIGHTS AND FUTURE ELECTRICAL CONDUIT SHOWN ARE FOR REFERENCE PURPOSES ONLY AND SHALL NOT BE USED FOR STAKING PURPOSES. COORDINATE WITH THE ELECTRICAL ENGINEER ON THE STAKING OF THE SITE LIGHTS AND THE EXTERIOR ELECTRICAL SYSTEM. REFER TO THE ELECTRICAL SHEETS FOR DETAIL DESIGN INFORMATION ASSOCIATED WITH SITE LIGHTS AND THE EXTERIOR ELECTRICAL SYSTEM.
9. IN ACCORDANCE WITH WISCONSIN STATUTE 182.0175, DAMAGE TO TRANSMISSION FACILITIES, EXCAVATOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE ADVANCE NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THIS DRAWING, AND FURTHER, EXCAVATOR SHALL COMPLY WITH ALL OTHER REQUIREMENTS OF THIS STATUTE RELATIVE TO EXCAVATOR'S WORK.
10. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. GRAEF MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. GRAEF FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. GRAEF HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
11. THE N. 95TH STREET WILL BE RECONSTRUCTED AND EXTENDED SOUTH TO W. WISCONSIN AVENUE. THIS PROJECT DOES NOT REQUIRE THIS STREET TO BE FUNCTIONAL AT THE TIME OF OCCUPANCY DUE TO ACCESS FROM EXISTING N. 92ND STREET. THE DESIGN LAYOUT OF N. 95TH STREET SHOWN IN THESE DRAWINGS ARE PRELIMINARY. ROADWAY DESIGNS, INCLUDING SIDEWALKS AND BICYCLE LANES, WILL BE SUBMITTED FOR WAUWATOSA REVIEW AT A LATER DATE

SURVEY LEGEND

- TRAVERSE POINT
- CONCRETE MONUMENT W/BRASS CAP
- POWER POLE
- LIGHT POLE
- TELEPHONE POLE
- SERVICE POLE
- FLAG POLE
- MANHOLE
- SEPTIC TANK
- DRAIN TILE
- PVC P — PVC PIPE
- CO — CLEANOUT
- SUMP D — SUMP DISCHARGE
- IP — IRON PIPE
- R BAR — REBAR
- BM. — BENCH MARK
- C.S. — CHISELED SQUARE
- C.C. — CHISELED CROSS
- SB — SOIL BORING
- SMH — SIGNAL MANHOLE
- EMH — ELECTRIC MANHOLE
- TMH — TELEPHONE MANHOLE
- GMH — GAS MANHOLE
- WVP — WATER VALVE PIT
- GP — GUY POLE
- GSV — GAS SERVICE VALVE
- WSV — WATER SERVICE VALVE
- CATCH BASIN
- WATER VAULT
- W — WATER VALVE BOX
- G — GAS VALVE BOX
- TV — CABLE TV PEDESTAL
- POWER POLE W/LIGHT
- TANK — TANK
- GROUND LIGHT
- GRT — GRATE
- STORM INLET
- WV — WATER VALVE
- GV — GAS VALVE
- FIRE HYDRANT
- MAIL BOX
- ELECTRIC TRANSFORMER
- T — TELEPHONE PEDESTAL
- CONTROL BOX
- TELEPHONE BOOTH
- GATE — GATE POST
- METAL — METAL POST
- FUEL — FUEL TANK
- PARKING METER
- SPRINKLER
- HANDHOLE
- W — WATER METER
- FIRE ALARM — FIRE ALARM
- POL — POLICE TELEPHONE
- MISCELLANEOUS METER
- propane — PROPANE TANK
- WOOD — WOOD POST
- HIGH TENSION TOWER
- MWELL — MONITORING WELL
- C — COMBINED POWER POLE
- A — ABANDONED POLE
- FNC — FENCE POST
- YL — YARD LIGHT
- PULL BOX
- A/C — AIR CONDITIONER
- 2" — DECIDUOUS TREE
- 2" — CONIFEROUS TREE
- 2" — STUMP
- BUSH
- MARSH AREA
- SIGN
- GUY — GUY WIRE
- MON — MONUMENT
- 1"IP — 1" IRON PIPE
- 2"IP — 2" IRON PIPE
- VENT — VENT PIPE
- WELL — WELL
- EL. R — ELECTRIC RISER
- GRD — GUARD POST
- M.P. — MARKER POST
- RAILROAD SIGNAL
- TRAFFIC SIGNAL
- EDGE OF BRUSH
- EDGE OF WOODS
- HEDGE ROW
- RIP RAP
- CHAIN LINK FENCE
- WOOD FENCE
- SPLIT RAIL FENCE
- WOVEN WIRE FENCE
- GUARD RAIL
- BURIED CABLE TV — CTV
- BURIED ELECTRIC LINE — E
- OVERHEAD ELECTRIC LINE — OHE
- BURIED FIRE PROTECTION — FP
- BURIED FIBER OPTIC — FO
- BURIED GAS MAIN — G
- BURIED FORCE MAIN — FM
- BURIED SIGNAL LINE — SIG
- BURIED SANITARY SEWER — SAN
- BURIED STEAM LINE — STEAM
- BURIED STORM SEWER — STM
- BURIED TELEPHONE LINE — T
- OVERHEAD TELEPHONE LINE — OHT
- BURIED WATER MAIN — W
- EXISTING PROPERTY LINE — P/L
- EXISTING RIGHT OF WAY — R/W
- EXISTING EASEMENT — EASE

REMOVAL NOTES

1. SECURE THE JOB SITE TO PROTECT THE PUBLIC.
2. COMPLY WITH LOCAL, STATE, AND FEDERAL CODES, RULES, AND REGULATIONS APPLICABLE TO DEMOLITION WORK INCLUDING BUT NOT LIMITED TO EROSION CONTROL, DUST CONTROL, AIR POLLUTION, NOISE POLLUTION, AND WASTE DISPOSAL.
3. PROTECT EXISTING SITE FEATURES AND STRUCTURES SCHEDULED TO REMAIN.
4. ITEMS SCHEDULED FOR REMOVAL THAT WILL NOT BE REINSTALLED AND EXCESS EXCAVATED MATERIALS NOT DESIRED BY FROEDTERT HOSPITAL SHALL BE DISPOSED OF OFF−SITE IN ACCORDANCE WITH ANY APPLICABLE REGULATIONS.
5. CONTRACTOR SHALL VERIFY ALL EXISTING UTILITY LINES NOTED FOR REMOVAL. ALL UTILITY STRUCTURES LOCATED ALONG THE REMOVED UTILITY LINES SHALL BE REMOVED IN THEIR ENTIRETY. COORDINATE TIMING OF UTILITY REMOVALS SUCH THAT DRAINAGE AND SERVICE IS MAINTAINED THROUGHOUT CONSTRUCTION.
6. CONCRETE PAVEMENT AND CONCRETE CURB AND GUTTER NOTED FOR REMOVAL SHALL BE SAW CUT FULL DEPTH PRIOR TO REMOVAL OR REMOVED AT THE NEAREST JOINT.
7. ASPHALT PAVEMENT NOTED FOR REMOVAL SHALL BE SAW CUT TO FULL DEPTH PRIOR TO REMOVAL.
8. REFER TO THE ELECTRICAL SHEETS AND COORDINATE WITH THE ELECTRICAL ENGINEER REGARDING THE REMOVAL EFFORTS ASSOCIATED WITH THE EXTERIOR ELECTRICAL SYSTEM (ELECTRICAL LINES, DUCT BANKS, SITE LIGHTS, ETC.)
9. TREE PROTECTION FENCING LOCATIONS SHOWN ARE APPROXIMATE. ALL EXISTING TREES OUTSIDE OF GRADING LIMITS ARE INTENDED TO REMAIN. FINAL LOCATIONS OF FENCING SHALL BE DETERMINED IN THE FIELD AND AS IDENTIFIED ON CONSTRUCTION DETAILS. ADDITIONAL FENCING MAY BE REQUIRED. COORDINATE WITH OWNER'S REPRESENTATIVE. TREE PROTECTION FENCE SHALL REMAIN IN PLACE THROUGHOUT CONSTRUCTION.

LAYOUT NOTES

1. PROVIDE ENGINEER WITH A CONCRETE PAVEMENT PAVING AND JOINTING PLAN FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WORK. CONTRACTOR SHALL INDICATE POUR SEQUENCE AND LOCATION OF CONSTRUCTION AND CONTROL JOINTS. CONCRETE JOINTING SHALL MEET THE REQUIREMENTS OF ACI 330.
2. PAVEMENT STRIPING COLOR AND WIDTH SHALL BE WHITE AND 4−INCHES, RESPECTIVELY.
3. ALL SIDEWALK RAMPS SHALL BE INSTALLED WITH DUCTILE IRON TRUNCATED DOME PANELS. TRUNCATED DOME PANELS SHALL BE INSTALLED IN COMPLIANCE WITH ADA REGULATIONS.
4. ALL DIMENSIONS SHOWN ARE TO THE EDGE OF PAVEMENT OR TO THE FACE OF CONCRETE CURB AND GUTTER, HIGHSIDE CONCRETE CURB AND GUTTER, FLUSH CONCRETE CURB AND GUTTER, FLUSH HIGHSIDE CONCRETE CURB AND GUTTER, WHERE SHOWN CURB AND GUTTER IS SHOWN.
5. STANDARD CURB RADIUS IS 5' UNLESS INDICATED OTHERWISE.
6. REFER TO LANDSCAPING PLANS FOR SITE RESTORATION INFORMATION AND DETAILS.

GRADING NOTES

1. SPOT GRADES, CURB AND GUTTER GRADES, AND CONTOURS SHOWN ON THE PLANS ARE TO FINISH GRADE.
2. ADJUST EXISTING CASTINGS, VALVE BOXES, AND OTHER UTILITY PENETRATIONS TO FINISH GRADE.
3. RIM ELEVATIONS IN STANDARD CONCRETE CURB AND GUTTER, HIGHSIDE CONCRETE CURB AND GUTTER, FLUSH CONCRETE CURB AND GUTTER, AND FLUSH HIGHSIDE CONCRETE CURB AND GUTTER ARE FLANGE GRADES.
4. ALL SLOPES 4:1 AND STEEPER TO BE STABILIZED WITH CLASS I TYPE B MATTING.
5. ADA REGULATIONS FOR A NON−RAMP ACCESSIBLE REQUIRE A MAXIMUM SLOPE OF 1:20 (5%) ALONG THE LENGTH OF THE ROUTE AND A MAXIMUM CROSS SLOPE OF 1:48 (2.08%) ACROSS THE WIDTH OF THE ROUTE.
6. ADA REGULATIONS FOR ACCESSIBLE PARKING, ACCESS AISLES, AND PASSENGER LOADING ZONES REQUIRES A MAXIMUM SLOPE OF 1:48 (2.08%) ALONG THE LENGTH OF ACCESSIBLE ZONE AND 1:48 (2.08%) ACROSS THE WIDTH OF THE ACCESSIBLE ZONE.
7. ACCESSIBLE AREAS DESCRIBED ABOVE SHALL BE MEASURED IN ACCORDANCE WITH THE US ACCESS BOARD REPORT 'DIMENSIONAL TOLERANCES IN CONSTRUCTION AND FOR SURFACE ACCESSIBILITY'PART II, SECTION 4, 1.1 MEASUREMENT PROTOCOLS.

UTILITY NOTES

1. CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRICAL UTILITY FOR EXACT LOCATION, SIZE, AND DEPTH OF THEIR RESPECTIVE NEW SERVICES.
2. CONTRACTOR SHALL VERIFY ELEVATION OF EXISTING INVERTS PRIOR TO INSTALLATION OF UTILITIES.
3. PIPE LENGTHS AND INVERTS ARE TO THE CENTER OF STRUCTURE.
4. RIM ELEVATIONS IN CONCRETE CURB AND GUTTER, HIGHSIDE CONCRETE CURB AND GUTTER, FLUSH CONCRETE CURB AND GUTTER, AND FLUSH HIGHSIDE CONCRETE CURB AND GUTTER ARE FLANGE GRADES.
5. GRANULAR BACKFILL SHALL BE USED FOR ALL UTILITY INSTALLATIONS.
6. SITE STORM SEWER PIPING SHALL BE AS SPECIFIED IN SECTION 33 31 00 − SITE STORM SEWER SYSTEM AND SHALL BE EITHER, UNLESS SPECIFICALLY NOTED ON THE UTILITY PLAN:
   - 6.1. POLYVINYL CHLORIDE PIPE CONFORMING TO: ASTM D3034, SDR 35, TYPE PSM, POLYVINYL CHLORIDE MATERIAL FOR PIPES 4−15 INCHES IN DIAMETER; OR ASTM F 679, POLYVINYL CHLORIDE MATERIAL, PS 46 FOR PIPES GREATER THAN 15 INCHES IN DIAMETER.
7. THE STORM SEWER SYSTEM SANITARY SEWER SYSTEM, WATER DISTRIBUTION SYSTEM, STEAM AND CHILLED WATER SYSTEMS ARE CURRENTLY OWNED BY MILWAUKEE REGIONAL MEDICAL CENTER. CONTACT MARK GERONIME (PHONE: 414−778−6091) FOR COORDINATION OF WORK ASSOCIATED WITH CONNECTING TO THE EXISTING UTILITIES. ALL EXISTING UTILITIES MUST REMAIN ACTIVE AND BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION BY MEANS AND METHODS OF THE CONTRACTOR UNLESS OTHERWISE APPROVED BY THE MILWAUKEE REGIONAL MEDICAL CENTER.
8. HOLD A PRE−CONSTRUCTION MEETING ON SITE WITH ALL UTILITY OWNERS PRESENT PRIOR TO COMMENCING WORK. A COPY OF THE APPROVED CONSTRUCTION DRAWINGS MUST BE KEPT ON SITE AT ALL TIMES.
9. EXISTING UTILITY INFORMATION PROVIDED IN THE UTILITY PROFILES ARE APPROXIMATE. VERIFY ALL EXISTING INVERT ELEVATIONS, PIPE SIZES, LOCATIONS AND REPORT TO ENGINEER ANY DISCREPANCIES FOUND PRIOR TO COMMENCING CONSTRUCTION.
10. VERIFY THE DEPTH OF THE EXISTING CHILLED WATER MAIN AND WATER MAIN IN AREAS OF THE PROPOSED SITE IMPROVEMENTS. PROVIDE INSULATION OVER THE EXISTING CHILLED WATER MAIN AND WATER MAIN WHERE THE COVER IS DETERMINED TO BE LESS THAN 6' AFTER THE PROPOSED SITE IMPROVEMENTS ARE INSTALLED.
11. PIPE LENGTHS AND INVERTS ARE TO CENTER OF STRUCTURES.
12. CRUSHED STONE BACKFILL SHALL BE USED UNDER AND WITHIN 5' OF ALL PAVED AREAS.

CONTROL POINTS

NO.	DESCRIPTION	NORTHING	EASTING	ELEV. (NGVD88)	ELEV. (WAUWATOSA)
CP−52	MAG NAIL	301,012.882	575,806.908		
CP−220	CUT CROSS	301,104.012	575,545.992		
CP−221	CUT CROSS	301,266.948	575,817.432		
CP−222	CUT CROSS	301,157.336	575,853.807		
CP−223	5/8−INCH REBAR WITH YELLOW GRAEF CAP	301,447.744	576,225.015		
CP−224	5/8−INCH REBAR WITH YELLOW GRAEF CAP	301,533.355	576,095.172		
CP−225	CUT CROSS	301,687.817	575,943.149		
CP−226	5/8−INCH REBAR WITH YELLOW GRAEF CAP	301,831.296	576,100.390		
CP−227	5/8−INCH REBAR WITH YELLOW GRAEF CAP	301,861.876	576,294.277		
CP−513	F1000 SPK BERNTSEN FENO MONUMENT WITH 2−INCH GRAEF ALUMINUM CAP	301,428.723	576,528.672		

PROJECT INFORMATION

SITE ADDRESS:	9201 W WATERTOWN PLANK ROAD, WAUWATOSA, WI		
TAX PARCEL NUMBER:	TO BE DETERMINED AFTER CSM IS RECORDED		
PROPERTY OWNER:	MILWAUKEE REGIONAL MEDICAL CENTER		
PROPERTY OWNER ADDRESS:	8700 W WATERTOWN PLANK ROAD, WAUWATOSA, WI		
MMSD CHAPTER 13 RUNOFF MANAGEMENT REQUIREMENT CRITERIA			
13.301 (2)(C).1 − NET INCREASE OF 5,000 SQUARE FEET OR MORE OF IMPERVIOUS SURFACE:	YES		
NET INCREASE IN IMPERVIOUS AREA:	35,120 SQUARE FEET (0.81 ACRES)		
13.301 (2)(C).2 − DEMOLITION OR CONSTRUCTION DURING REDEVELOPMENT WILL DISTURB AN AREA LARGER THAN 2 ACRES.	YES		
TOTAL DISTURBANCE AREA:	395,812 SQUARE FEET (9.09 ACRES)		
WDNR CONSTRUCTION SITE NOTICE OF INTENT	YES		
ACRES OF LAND DISTURBACE:	395,812 SQUARE FEET (9.09 ACRES)		
CITY OF WAUWATOSA CHAPTER 24.13.040 RUNOFF MANAGEMENT REQUIREMENT CRITERIA			
24.13.040 (D)(1) − PROPERTY DEVELOPMENT WILL DISTURB ONE ACRE OR MORE:	YES		
TOTAL DISTURBANCE AREA:			
24.13.040 (D)(2) − PROPERTY DEVELOPMENT WILL INCREASE IMPERVIOUS SURFACE BY ONE−HALF OR MORE ACRES:	YES		
TOTAL DISTURBANCE AREA:	395,812 SQUARE FEET (9.09 ACRES)		

SITE AREA DATA			
EXISTING CONDITIONS		PROPOSED CONDITIONS	
PERVIOUS AREA	3.50 ACRES	PERVIOUS AREA	2.69 ACRES
IMPERVIOUS AREA	5.59 ACRES	IMPERVIOUS AREA	6.40 ACRES
TOTAL AREA	9.09 ACRES	TOTAL AREA	9.09 ACRES

PARKING DATA			
TOTAL PARKING	284 STALLS	TOTAL PARKING	
STANDARD PARKING	259 STALLS	STANDARD PARKING	658 STALLS
TOTAL ACCESSIBLE PARKING	25 STALLS	TOTAL ACCESSIBLE PARKING	0 STALLS
VAN ACCESSIBLE PARKING	25 STALLS	VAN ACCESSIBLE PARKING	0 STALLS
BIKE PARKING	0 SPACES	BIKE PARKING	0 SPACES

WAUWATOSA SITE PLAN PERMIT

EROSION CONTROL LEGEND

- SCE — −STONE CONSTRUCTION ENTRANCE
- −EROSION MATTING
- SF — −SILT FENCE
- S — −INLET PROTECTION
- SF — −EXISTING SILT FENCE
- S — −EXISTING INLET PROTECTION
- SCE — −EXISTING STONE CONSTRUCTION ENTRANCE
- −DIVERSION BERM
- −CONSTRUCTION LIMITS
- −TREE PROTECTION

DEMOLITION LEGEND

- −REMOVE ASPHALT PAVEMENT
- −REMOVE BUILDING
- −REMOVE CONCRETE PAVEMENT
- −REMOVE GRAVEL PAVEMENT
- −SAWCUT
- −REMOVE CHAIN LINK FENCE
- −REMOVE UTILITY
- −REMOVE CONCRETE CURB
- −REMOVE TREE/BOLLARD/SIGN
- −REMOVE UTILITY STRUCTURE
- −REMOVE SITE LIGHT

LAYOUT LEGEND

- −CONCRETE SIDEWALK
- −CONCRETE PAVEMENT
- −STANDARD ASPHALT PAVEMENT
- −HEAVY DUTY ASPHALT PAVEMENT
- −STANDARD CONCRETE CURB AND GUTTER
- −HIGHSIDE CONCRETE CURB AND GUTTER
- −FLUSH CONCRETE CURB AND GUTTER
- −FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
- −CONSTRUCTION LIMITS
- −SITE LIGHT
- Rx — −ADA RAMP WITH TRUNCATED DOMES (x = TYPE)
- T — −CURB TAPER

GRADING LEGEND

- 100 — −EXISTING CONTOUR
- 100 — −ROADWAY PROJECT CONTOUR
- 100 — −PROPOSED CONTOUR
- −STANDARD CONCRETE CURB AND GUTTER
- −HIGHSIDE CONCRETE CURB AND GUTTER
- −FLUSH CONCRETE CURB AND GUTTER
- −FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
- −CONSTRUCTION LIMITS
- −MANHOLE
- −CATCH BASIN
- −SITE LIGHT
- 204.05 ME± — −SPOT GRADE −MATCH EXISTING
- 192.42 / 192.00 — −TOP OF CURB GRADE −FLANGE GRADE
- −OVERLAND FLOW PATH ARROW

UTILITY LEGEND

- STM — −STORM SEWER
- STM — −STORM SEWER BY OTHERS
- SAN — −SANITARY SEWER BY OTHERS
- W — −WATER MAIN BY OTHERS
- E — −ELECTRICAL BY OTHERS
- EASE — −UTILITY EASEMENT
- −MANHOLE
- −CATCH BASIN
- −SITE LIGHT

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CLIENT:
MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
CIVIL ENGINEERING GENERAL NOTES, LEGENDS, AND INDEX

SHEET NUMBER:
C-002

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EROSION CONTROL NOTES

1. CONSTRUCTION SITE EROSION CONTROL AND SEDIMENTATION CONTROL SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY OF WAUWATOSA, AND SHALL EMPLOY EROSION CONTROL METHODS AS SHOWN AND SPECIFIED IN THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR) "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL STANDARDS".

2. ALL EROSION CONTROL MEASURES SHALL BE ADJUSTED TO MEET FIELD CONDITIONS AT THE TIME OF CONSTRUCTION AND SHALL BE INSTALLED PRIOR TO ANY GRADING OR DISTURBANCE OF EXISTING SURFACE MATERIAL ON THE SITE.

3. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED FOR STABILITY AND OPERATION AFTER A RAINFALL OF 0.5 INCHES OR MORE, BUT NO LESS THAN ONCE EVERY WEEK. MAINTENANCE OF ALL EROSION CONTROL STRUCTURES SHALL BE PROVIDED TO INSURE INTENDED PURPOSE IS ACCOMPLISHED. REPAIRS AND MAINTENANCE SHALL BE COMPLETED WITHIN 24 HOURS OF INSPECTION. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANUP AND REMOVAL OF ALL SEDIMENT WHEN LEAVING PROPERTY. EROSION CONTROL MEASURES MUST BE IN WORKING CONDITION AT END OF EACH WORK DAY. MAINTAIN A LOG BOOK THAT DOCUMENTS EROSION CONTROL INSPECTIONS, FINDINGS, AND CORRECTIVE ACTIONS TAKEN.

4. SILT FENCE AND SEDIMENT LOGS SHALL BE INSTALLED IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE SILT FENCE WHEN DEPOSITS REACH A DEPTH OF 6 INCHES. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE SEDIMENT LOGS WHEN DEPOSITS REACH A DEPTH OF HALF THE HEIGHT OF THE SEDIMENT LOGS. THE SILT FENCE OR SEDIMENT LOGS SHALL BE REPAIRED OR REPLACED AS NECESSARY TO MAINTAIN A BARRIER.

5. FILTER FABRIC SHALL BE INSTALLED AS INLET PROTECTION TO TRAP SEDIMENT IN THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. INLET PROTECTION SHALL BE IN ACCORDANCE WITH WDNR TECHNICAL STANDARD 1060. TYPE FF GEOTEXTILE FABRIC SHALL BE ON THE WISDOT EROSION CONTROL PRODUCT ACCEPTABILITY LIST (PAL).

6. STONE CONSTRUCTION ENTRANCE/TEMPORARY GRAVEL ROAD SHALL BE MAINTAINED BY SCRAPING STONE OR BY PLACING NEW STONE ONCE THE SURFACE BECOMES CLOGGED WITH SEDIMENT. A MINIMUM OF A 12 INCH THICK PAD DEPTH SHALL BE MAINTAINED.

7. EROSION CONTROL MEASURES SHALL BE MAINTAINED ON A CONTINUING BASIS UNTIL SITE IS FULLY STABILIZED.

8. PERIODIC SWEEPING SHALL BE COMPLETED TO MAINTAIN THE PUBLIC STREETS AND/OR ADJACENT PAVEMENT FREE OF DUST AND DIRT AND AS REQUESTED BY THE CITY OF WAUWATOSA.

9. SILT FENCE OR SEDIMENT LOGS SHALL BE INSTALLED IN HORSESHOE FASHION AROUND ALL TOPSOIL AND FILL STOCKPILES. NOTIFY CITY OF WAUWATOSA OF ANY NEW STOCKPILE LOCATIONS.

10. CONSTRUCTION SEQUENCE FOR EROSION CONTROL INCLUDES:
    a. APPROXIMATE START AND END DATE: MARCH 1, 2023 – JULY 1, 2023.
    b. INSTALL CONSTRUCTION FENCING AS NECESSARY BASED ON PHASING OF WORK TO ENSURE PUBLIC SAFETY.
    c. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
    d. INSTALL SILT FENCE OR SEDIMENT LOGS.
    e. INSTALL INLET PROTECTION ON EXISTING STORM SEWER STRUCTURES.
    f. REMOVE SITE PAVEMENTS, UTILITIES, AND APPURTENANCES INDICATED ON THE PLANS.
    g. INSTALL SEDIMENT BASIN AND OUTLET CONTROL STRUCTURE. STABILIZE IMMEDIATELY AFTER INSTALLATION WITH EROSION MATTING.
    h. STRIP TOPSOIL AND INSTALL TEMPORARY DIVERSIONS TO DIRECT RUNOFF TO SEDIMENT BASIN.
    i. PERFORM ROUGH GRADING AND STRIP TOPSOIL FROM REMAINDER OF SITE.
    j. INSTALL UTILITIES AND INLET PROTECTION ON NEW STORM SEWER STRUCTURES.
    k. INSTALL PAVEMENTS AND REMAINING SITE FEATURES.
    m. REMOVE TEMPORARY SEDIMENTATION BASIN
    n. INSTALL LANDSCAPING ON COMPLETED SITE WITHIN 7 DAYS OF COMPLETING CONSTRUCTION.
    o. REMOVE EROSION CONTROL MEASURES ONLY WHEN SITE IS FULLY STABILIZED AND APPROVED BY THE ENGINEER AND THE OWNER.

11. SITE DEWATERING. WATER PUMPED FROM THE SITE SHALL BE TREATED BY SEDIMENT BASINS OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICES SPECIFIED IN THE WDNR "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS". WATER SHALL NOT BE DISCHARGED IN A MANNER THAT CAUSES EROSION OF THE SITE, ADJACENT SITES, OR RECEIVING CHANNELS.

12. WASTE AND MATERIAL DISPOSAL. ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, WASTEWATER, TOXIC MATERIALS, OR HAZARDOUS MATERIALS) SHALL BE PROPERLY DISPOSED AND NOT ALLOWED TO BE CARRIED OFF–SITE BY RUNOFF OR WIND.

13. TRACKING. EACH SITE SHALL HAVE GRAVELED ROADS, ACCESS DRIVES AND PARKING AREAS OF SUFFICIENT WIDTH AND LENGTH TO PREVENT SEDIMENT FROM BEING TRACKED ONTO PUBLIC ROADWAYS AND/OR ADJACENT PAVEMENT. ANY SEDIMENT REACHING A PUBLIC ROAD AND/OR ADJACENT PAVEMENT SHALL BE REMOVED BY STREET CLEANING, TO THE SATISFACTION OF THE CITY, BEFORE THE END OF EACH WORKDAY. FLUSHING MAY NOT BE USED UNLESS SEDIMENT WILL BE CONTROLLED BY A SEDIMENT BASIN OR OTHER APPROPRIATE BEST MANAGEMENT PRACTICE SPECIFIED IN THE WDNR "CONSTRUCTION SITE EROSION AND SEDIMENT CONTROL TECHNICAL STANDARDS". NOTIFY CITY OF WAUWATOSA FOR CHANGES IN STABILIZED CONSTRUCTION ENTRANCE LOCATION.

14. SEDIMENT CLEANUP. ALL OFF–SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF A STORM EVENT SHALL BE CLEANED UP BY THE END OF THE NEXT WORK DAY. ALL OTHER OFF–SITE SEDIMENT DEPOSITS OCCURRING AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE CLEANED UP BY THE END OF THE WORK DAY.

15. ALL DISTURBED GROUND LEFT INACTIVE FOR SEVEN DAYS SHALL BE STABILIZED BY TEMPORARY SEEDING, AND MULCHING, SODDING, COVERING WITH TARPS, OR EQUIVALENT BEST MANAGEMENT PRACTICES.

16. PERMANENT SEEDING SHALL BE ESTABLISHED NO LATER THAN SEPTEMBER 15TH. IF PERMANENT SEEDING IS NOT ESTABLISHED, TEMPORARY SEEDING SHALL BE ESTABLISHED NO LATER THAN OCTOBER 15TH. ALL SEEDED AREAS MUST BE MULCHED AT A RATE OF 1.5 TO 2 TONS PER ACRE AND ANCHORED BY EITHER CRIMPING OR BY APPLYING A TACKIFIER.

17. PERMANENT SEED MIX SHALL BE WISDOT SEED MIX NO. 40 AT 7 POUNDS PER 1000 SQUARE FEET.

18. USE ANNUAL RYE SEED MIX AT 100 POUNDS PER ACRE AS A TEMPORARY SEED MIX. PERMANENT SEEDING SHALL FOLLOW WITHIN ONE YEAR. IF TEMPORARY SEEDING IS NOT ESTABLISHED BY OCTOBER 15TH, USE CLASS I TYPE B MATTING ON ALL SLOPES 4:1 OR STEEPER.

19. SOIL OR DIRT STORAGE PILES SHALL BE LOCATED A MINIMUM OF TWENTY–FIVE FEET FROM ANY DOWNSLOPE ROAD, LAKE, STREAM, WETLAND, OR DRAINAGE CHANNEL. STRAW BALE OR FILTER FABRIC FENCES SHALL BE PLACED ON THE DOWN SLOPE SIDE OF THE PILE. IF REMAINING FOR MORE THAN THIRTY DAYS. PILES SHALL BE STABILIZED BY MULCHING, VEGETATIVE COVER, TARPS, OR OTHER MEANS.

20. WHEN THE DISTURBED AREA HAS BEEN STABILIZED BY PERMANENT VEGETATION OR OTHER MEANS AND APPROVED BY THE ENGINEER AND OWNER, TEMPORARY BEST MANAGEMENT PRACTICES SUCH AS SILT FENCE OR SEDIMENT LOGS AND INLET PROTECTION SHALL BE REMOVED.

21. NOTIFY THE CITY WITHIN TWO WORKING DAYS OF COMMENCING ANY LAND DEVELOPMENT OR LAND DISTURBING ACTIVITY.

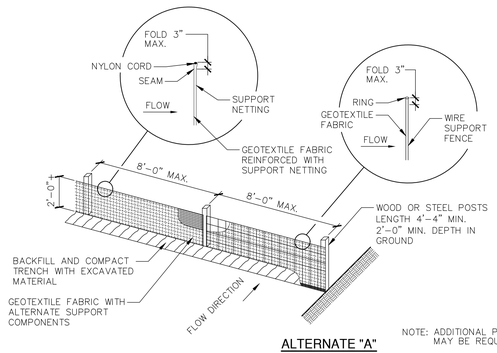
22. NOTIFY THE CITY OF COMPLETION OF ANY BEST MANAGEMENT PRACTICES WITHIN THE NEXT WORKING DAY AFTER THEIR INSTALLATION.

23. OBTAIN PERMISSION IN WRITING FROM THE CITY OF WAUWATOSA ENGINEERING DEPARTMENT PRIOR TO MODIFYING THE EROSION CONTROL PLAN. NOTIFY WDNR AT LEAST FIVE WORKING DAYS PRIOR TO IMPLEMENTING CHANGES TO THE EROSION CONTROL PLAN.

24. REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPMENT OR LAND DISTURBING ACTIVITIES.

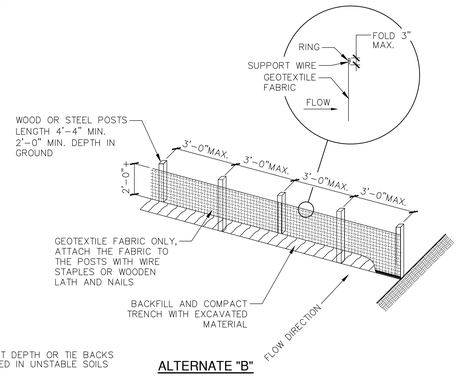
25. KEEP A COPY OF THE APPROVED EROSION CONTROL PLAN ON SITE.

26. EROSION CONTROL MEASURES ESTABLISHED AS PART OF PRIOR AND SEPARATE PROJECTS ARE TO REMAIN IN PLACE AND BE MAINTAINED UNLESS NOTED FOR REMOVAL.



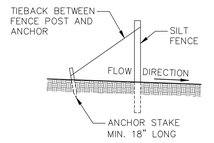
ALTERNATE "A"

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

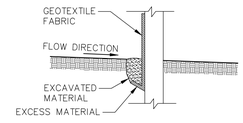


ALTERNATE "B"

D2 SILT FENCE
N.T.S.



SILT FENCE TIE BACK
N.T.S.



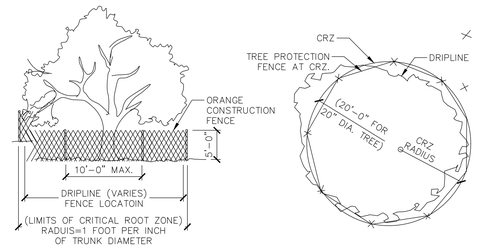
TRENCH DETAIL
N.T.S.

GENERAL NOTES:

DETAIL OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISCONSIN DNR CONSTRUCTION SITE BEST MANAGEMENT PRACTICE HANDBOOK.

WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSE SHOE SHAPE, WITH THE ENDS POINTING UP SLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.

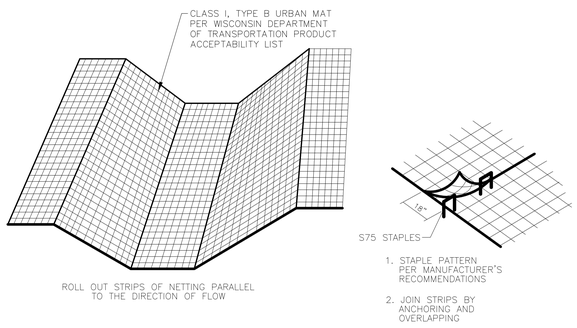
EXCAVATE A TRENCH A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.



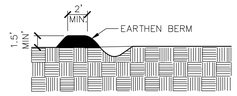
TREE PROTECTION FENCE – ORANGE CONSTRUCTION FENCE

1. ALL TREES SHOWN TO BE RETAINED WITHIN THE LIMITS OF CONSTRUCTION ON THE PLANS, SHALL BE PROTECTED DURING CONSTRUCTION WITH FENCING.
2. TREE PROTECTION FENCES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY SITE PREPARATION WORK (CLEARING, GRUBBING, OR GRADING).
3. EROSION AND SEDIMENTATION CONTROL BARRIERS SHALL BE INSTALLED OR MAINTAINED IN A MANNER WHICH DOES NOT RESULT IN SOIL BUILD–UP WITHIN TREE DRIPLINES.
4. FENCES SHALL COMPLETELY SURROUND THE TREE OR CLUSTERS OF TREES, LOCATED AT THE OUTERMOST LIMITS OF THE TREE BRANCHES (DRIPLINE) OR CRITICAL ROOT ZONE (CRZ), WHICHEVER IS GREATER; AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PROJECT.
5. ANY ROOTS EXPOSED BY CONSTRUCTION ACTIVITY SHALL BE PRUNED FLUSH WITH THE SOIL AND BACKFILLED WITH GOOD QUALITY TOP SOIL WITHIN TWO DAYS. IF EXPOSED ROOT AREAS CANNOT BE BACKFILLED WITHIN 2 DAYS, AN ORGANIC MATERIAL WHICH REDUCES SOIL TEMPERATURE AND MINIMIZES WATER LOSS DUE TO EVAPORATION SHALL BE PLACED TO COVER THE ROOTS UNTIL BACKFILL CAN OCCUR.
6. PRIOR TO EXCAVATION OR GRADE CUTTING WITHIN TREE DRIPLINES, A CLEAN CUT SHALL BE MADE WITH A ROCK SAW OR SIMILAR EQUIPMENT, TO MINIMIZE DAMAGE TO REMAINING ROOTS.
7. NO LANDSCAPE TOPSOIL DRESSING GREATER THAN FOUR (4) INCHES SHALL BE PERMITTED WITHIN THE DRIPLINE OR CRZ OF TREES, WHICHEVER IS GREATER. NO TOPSOIL IS PERMITTED ON ROOT FLARES OF ANY TREE.
8. PRUNING TO PROVIDE CLEARANCE FOR STRUCTURES, VEHICULAR TRAFFIC, AND CONSTRUCTION EQUIPMENT SHALL TAKE PLACE BEFORE CONSTRUCTION BEGINS. ALL PRUNING MUST BE DONE AS OUTLINED IN LITERATURE PROVIDED BY THE INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA PRUNING TECHNIQUES).

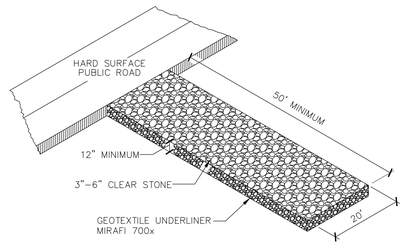
B2 TREE PROTECTION
N.T.S.



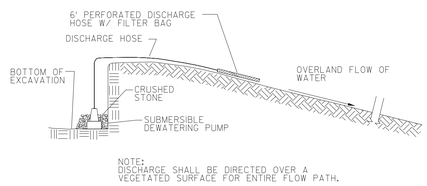
A2 EROSION MATTING
N.T.S.



C4 DIVERSION DITCH
N.T.S.



B4 STONE CONSTRUCTION ENTRANCE
N.T.S.



A4 DEWATERING SEDIMENTATION CONTROL
N.T.S.

GRAEF
275 WEST WISCONSIN AVENUE, SUITE 300
MILWAUKEE, WI 53203
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

CLIENT:
MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
CIVIL ENGINEERING EROSION CONTROL NOTES AND DETAILS

SHEET NUMBER:
C-003

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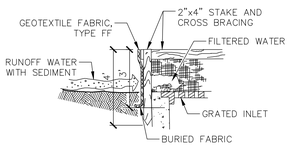
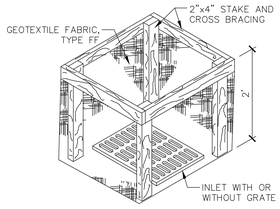
NOTE: ATTACH GEOTEXTILE FABRIC, TYPE FF TO THE TOP OF STAKES AND CROSS BRACINGS.





GENERAL NOTES

FABRIC SHALL BE REPLACED AT THE ENGINEERS DISCRETION.

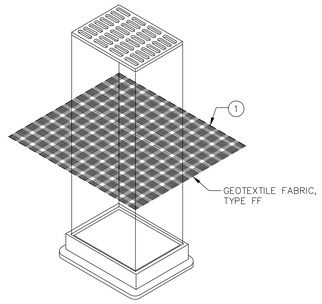
THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTIBILITY LIST MAY BE SUBSTITUTED.

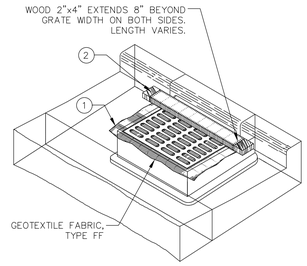
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

1. FABRIC SIZE SHALL BE 8" (MIN) GREATER ON ALL SIDES OF THE INLET COVER TO PROVIDE A HAND HOLD WHEN MAINTENANCE OR REMOVAL IS REQUIRED.
2. FOR INLET PROTECTION, TYPE C, WITH A CURB BOX, AND ADDITIONAL 1/8" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES.

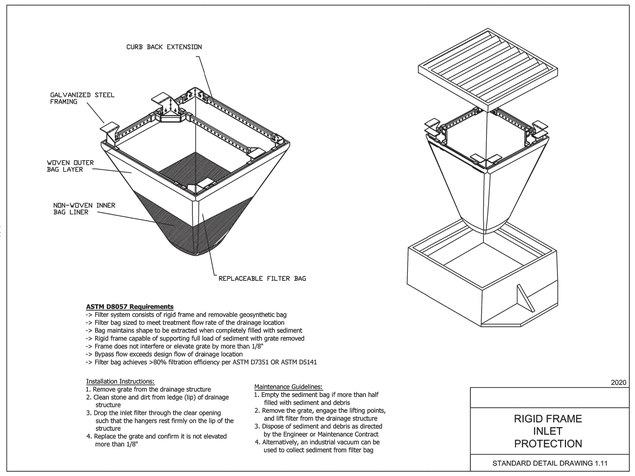
C1 INLET PROTECTION (TYPE A)
N.T.S.



C3 INLET PROTECTION (TYPE B)
N.T.S.



C4 INLET PROTECTION (TYPE C)
N.T.S.



ASTM D8057 Requirements
-> Filter system consists of rigid frame and removable geosynthetic bag
-> Filter bag sized to meet treatment flow rate of the drainage location
-> Bag maintains shape to be extracted when completely filled with sediment
-> Rigid frame capable of supporting full load of sediment with grate removed
-> Frame does not interfere or elevate grate by more than 1/8"
-> Bypass flow exceeds design flow of drainage location
-> Filter bag achieves >80% filtration efficiency per ASTM D7351 OR ASTM D5141

Installation Instructions:
1. Remove grate from the drainage structure
2. Clean stone and dirt from ledge (lip) of drainage structure
3. Drop the inlet filter through the clear opening such that the hangers rest firmly on the lip of the structure
4. Replace the grate and confirm it is not elevated more than 1/8"

Maintenance Guidelines:
1. Empty the sediment bag if more than half filled with sediment and debris
2. Remove the grate, engage the lifting points, and lift filter from the drainage structure
3. Dispose of sediment and debris as directed by the Engineer or Maintenance Contract
4. Alternatively, an industrial vacuum can be used to collect sediment from filter bag

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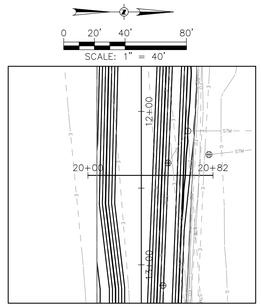
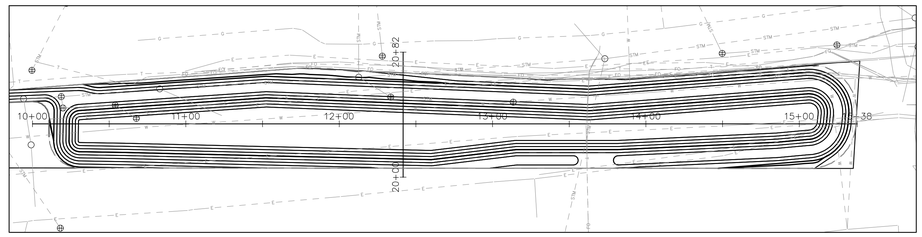
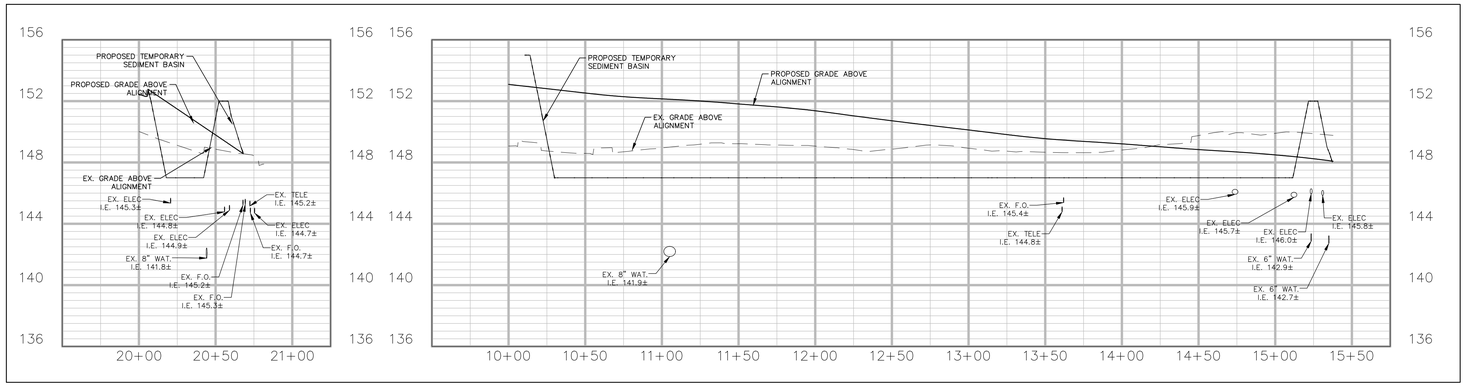
RIGID FRAME INLET PROTECTION

STANDARD DETAIL DRAWING 1.11

A1 INLET PROTECTION (TYPE D)
N.T.S.







A3 SEDIMENT TRAP
N.T.S.

GRAEF
275 WEST WISCONSIN AVENUE, SUITE 300
MILWAUKEE, WI 53203
414 / 259 1500
414 / 259 0037 fax

www.graef-usa.com

CLIENT:
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PROJECT TITLE:
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CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
CIVIL ENGINEERING EROSION CONTROL DETAILS

SHEET NUMBER:
C-004

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SPECIFICATIONS

INFORMATION FROM 02 41 14 – UTILITY ABANDONMENT AND REMOVAL

WORK SHALL COMPLY WITH:

STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, SIXTH EDITION, DECEMBER 22, 2003, WITH ADDENDUM NO. 2, APRIL 22, 2008, (SSSW).

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION:
STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. (WISDOT)

CITY OF WAUWATOSA:
ORDINANCE FOR EROSION AND SEDIMENTATION CONTROL.

REGULATORY REQUIREMENTS

CONFORM TO FOLLOWING CODES AS APPLICABLE TO ABANDONMENT AND REMOVAL WORK OF THIS PROJECT:
STATE OF WISCONSIN ADMINISTRATIVE CODE, DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES, CHAPTER SPS 381 – DEFINITIONS AND STANDARDS, CHAPTER SPS 382 – DESIGN, CONSTRUCTION, INSTALLATION, SUPERVISION, AND INSPECTION OF PLUMBING, AND CHAPTER SPS 384 – PLUMBING PRODUCTS, AND LOCAL CODE IF MORE STRINGENT FOR MATERIALS AND INSTALLATION OF THE WORK OF THIS SECTION.

INFORMATION FROM 02 41 15 – UTILITY REMOVAL

WORK SHALL COMPLY WITH:

STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, SIXTH EDITION, DECEMBER 22, 2003, WITH ADDENDUM NO. 2, APRIL 22, 2008 (SSSW).

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION:
STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. (WISDOT)]

CITY OF WAUWATOSA:
ORDINANCE FOR EROSION AND SEDIMENTATION CONTROL.

REGULATORY REQUIREMENTS

CONFORM TO FOLLOWING CODES AS APPLICABLE TO REMOVAL WORK OF THIS PROJECT:

STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
STATE OF WISCONSIN ADMINISTRATIVE CODE, DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES, CHAPTER SPS 381 – DEFINITIONS AND STANDARDS, CHAPTER SPS 382 – DESIGN, CONSTRUCTION, INSTALLATION, SUPERVISION, AND INSPECTION OF PLUMBING, AND CHAPTER SPS 384 – PLUMBING PRODUCTS, AND LOCAL CODE IF MORE STRINGENT FOR MATERIALS AND INSTALLATION OF THE WORK OF THIS SECTION.

STATE OF WISCONSIN ADMINISTRATIVE CODE, DEPARTMENT OF TRANSPORTATION AND LOCAL CODE IF MORE STRINGENT FOR MATERIALS AND INSTALLATION OF THE WORK OF THIS SECTION.

INFORMATION FROM 01 57 13 – TEMP EROSION

REFERENCES

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR):
STORM WATER CONSTRUCTION TECHNICAL STANDARDS, MODELS AND BEST MANAGEMENT PRACTICES (BMP'S):
WDNR STORM WATER CONSTRUCTION TECHNICAL STANDARDS WEBPAGE

STORM WATER POST–CONSTRUCTION TECHNICAL STANDARDS:
WDNR STORM WATER POST–CONSTRUCTION TECHNICAL STANDARDS WEBPAGE

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION (WISDOT):
STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION.

EROSION CONTROL PRODUCT ACCEPTABILITY LISTS FOR MULTI–MODAL APPLICATIONS. (PAL)

CITY OF WAUWATOSA:
ORDINANCE FOR EROSION AND SEDIMENTATION CONTROL.

INFORMATION FROM 31 23 23 – FILL

SUBSOIL MATERIALS

SUBSOIL TYPE S1:
EXCAVATED AND RE–USED MATERIAL.
GRADED.
FREE OF LUMPS LARGER THAN THREE (3) INCHES, ROCKS LARGER THAN TWO (2) INCHES, AND DEBRIS.
CONTRACTOR SHALL PROVIDE 40 LB SAMPLE OF EXISTING SITE MATERIAL TO LABORATORY FOR SOIL CLASSIFICATION ANALYSIS CONFORMING TO ASTM D2487.

SUBSOIL TYPE S2:
IMPORTED BORROW.
GRADED.
FREE OF LUMPS LARGER THAN THREE (3) INCHES, ROCKS LARGER THAN TWO (2) INCHES, AND DEBRIS.
IMPORTED SUBSOIL AND BORROW SHALL BE SIMILAR IN COMPOSITION WHEN COMPARED TO EXISTING SITE SUBSOIL.
CONTRACTOR SHALL PROVIDE 40 LB SAMPLE OF PROPOSED IMPORTED BORROW MATERIAL TO LABORATORY FOR SOIL CLASSIFICATION ANALYSIS CONFORMING TO ASTM D2487.

AGGREGATES MATERIALS

STRUCTURAL FILL, COURSE AGGREGATE (GRAVEL): CRUSHED GRAVEL: FREE OF ORGANIC MATTER AND DEBRIS; GRADED IN ACCORDANCE WITH:
WISDOT 3/4–INCH GRADATION OR WISDOT 1–1/4–INCH GRADATION.

RECYCLED CONCRETE STRUCTURAL FILL: CRUSHED CONCRETE; FREE OF FROM WOOD, STEEL, ROOTS, BARK OR OTHER EXTRANEOUS MATERIAL; GRADED IN ACCORDANCE WITH:
MATCH REQUIREMENTS FOR STRUCTURAL FILL.

RECYCLED CONCRETE STRUCTURAL FILL: CRUSHED ASPHALTIC CONCRETE; FREE OF FROM WOOD, STEEL, ROOTS, BARK OR OTHER EXTRANEOUS MATERIAL; GRADED IN ACCORDANCE WITH:
MATCH REQUIREMENTS FOR STRUCTURAL FILL.

STONE: CRUSHED STONE; FREE OF CLAY, SHALE, ORGANIC MATTER; GRADED IN ACCORDANCE WITH:
WISDOT OPEN–GRADED GRADATION.

3/4–INCH STONE CHIPS: CRUSHED STONE; FREE OF CLAY, SHALE, ORGANIC MATTER; GRADED IN ACCORDANCE WITH THE FOLLOWING LIMITS:

SIEVE SIZE	PERCENT PASSING
1–INCH	100
3/4–INCH	90 – 100
3/8–INCH	20 – 55
NO. 4	0 – 10
NO. 8	0 – 5

3/8–INCH STONE CHIPS SHALL BE CRUSHED STONE; FREE OF CLAY, SHALE, ORGANIC MATTER; GRADED IN ACCORDANCE WITH THE FOLLOWING LIMITS:

SIEVE SIZE	PERCENT PASSING
1/2–INCH	100
3/8–INCH	85–100
NO. 4	10–30
NO. 8	0–10
NO. 16	0–5

PEA GRAVEL: FRACTURED, WASHED, FREE OF CLAY, SHALE, ORGANIC MATTER; GRADED IN ACCORDANCE WITH THE FOLLOWING LIMITS:
MINIMUM SIZE: 1/4–INCH.
MAXIMUM SIZE: 3/8–INCH.

GRANULAR FILL:
WISDOT GRANULAR BACKFILL, GRADE 1.

BEDDING SAND / FINE AGGREGATE: UNWASHED BANK–RUN SAND OR REJECTED CONCRETE SAND; APPROXIMATELY SIX (6) PERCENT FINE CLAY OR LOAM PARTICLES BUT FREE OF SILT AND CLAY OR LOAM LUMPS CONSISTING OF DURABLE PARTICLES RANGING IN SIZE FROM FINE TO COARSE IN UNIFORM COMBINATIONS; MAXIMUM MOISTURE CONTENT SHALL BE 10 PERCENT, GRADED WITHIN FOLLOWING LIMITS:

SIEVE SIZE	PERCENT PASSING
1–INCH	100
NO. 16	45 – 80
NO. 200	2 – 10

INFORMATION FROM 31 10 00 – SITE CLEARING

WORK SHALL COMPLY WITH:

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION (WISDOT):
STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION.
HTTP://ROADWAYSTANDARDS.DOT.WI.GOV/STANDARDS/STNDSPEC/INDEX.HTM

STATE OF WISCONSIN DEPARTMENT OF NATURAL RESOURCES (WDNR):
CONSTRUCTION SITE EROSION & SEDIMENT CONTROL.
HTTP://DNR.WI.GOV/TOPIC/STORMWATER/

U.S. ENVIRONMENTAL PROTECTION AGENCY (USEPA):
DEVELOPING YOUR STORMWATER POLLUTION PREVENTION PLAN, A GUIDE FOR CONSTRUCTION SITES.
HTTP://CFPUB.EPA.GOV/NPDES/STORMWATER/SWPPP.CFM

INFORMATION FROM 31 22 00 – GRADING

WORK SHALL COMPLY WITH:

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION (WISDOT):
STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION.
STATE OF WISCONSIN DOT STANDARD SPECIFICATIONS

MATERIALS

TOPSOIL AS SPECIFIED IN SECTION 31 23 23 – FILL.

SUBSOIL FILL AS SPECIFIED IN SECTION 31 23 23 – FILL.

AGGREGATE FILL AS SPECIFIED IN SECTION 31 23 23 – FILL.

SCHEDULES

AGGREGATE FILL:
MAXIMUM [SEVEN (7)] [____]–INCH LOOSE LIFTS.
COMPACT EACH LIFT TO MINIMUM 95 PERCENT OF MODIFIED PROCTOR DENSITY.

SUBSOIL FILL:
MAXIMUM 12–INCH LOOSE LIFTS.
COMPACT EACH LIFT TO MINIMUM 95 PERCENT OF MODIFIED PROCTOR DENSITY.

TOPSOIL FILL:
FILL TYPE: MAXIMUM 12–INCH LOOSE LIFTS.
COMPACT EACH LIFT TO MINIMUM 85 PERCENT OF MODIFIED PROCTOR DENSITY.

INFORMATION FROM 31 23 16.3 – TRENCHING

PIPE INSULATION

EXTRUDED POLYSTYRENE BOARD TO ASTM C578, TYPE V, RIGID, CLOSED CELL TYPE, WITH INTEGRAL HIGH DENSITY SKIN.
THERMAL RESISTANCE: TYPICAL 5 YEAR AGED VALUE OF R–5 PER 1 INCH OF THICKNESS PER ASTM C518.
BOARD SIZE: 24 X 96 X 2–INCH THICK. SQUARE EDGES.
COMPRESSIVE STRENGTH: MINIMUM 100 PSI PER ASTM D1621.
WATER ABSORPTION: 0.7 PERCENT BY VOLUME MAXIMUM PER ASTM D2842.
INSULATION SHALL BE:
DOW CHEMICAL COMPANY STYROFOAM™ HIGHLOAD 100; DOW CHEMICAL STYROFOAM HIGHLOAD 100 INSULATION,
OR APPROVED EQUAL.

BEDDING AND BACKFILL MATERIALS

A. WATER MAIN BEDDING: BEDDING SAND AS DEFINED UNDER SECTION 31 23 23 – FILL ON DRAWINGS
B. SEWER BEDDING (18 INCHES IN DIAMETER AND LESS): 3/8" STONE CHIPS AS DEFINED UNDER SECTION 31 23 23 – FILL ON DRAWINGS
C. SEWER BEDDING (GREATER THAN 18 INCHES IN DIAMETER): 3/4" STONE CHIPS AS DEFINED UNDER SECTION 31 23 23 – FILL ON DRAWINGS
D. CRUSHED GRAVEL BACKFILL: STRUCTURAL FILL AS DEFINED UNDER SECTION 31 23 23 – FILL ON DRAWINGS
E. SITE EXCAVATED MATERIAL (SPOIL) BACKFILL: TYPE S1 AS DEFINED UNDER SECTION 31 23 23 –FILL ON DRAWINGS.
F. IMPORTED SUBSOIL MATERIAL BACKFILL: TYPE S2 AS DEFINED UNDER SECTION 31 23 23 –FILL ON DRAWINGS.

INFORMATION FROM 32 12 16 – ASPHALT PAVING

ASPHALT PAVING MIX

RECYCLED ASPHALT PAVEMENT (RAP) MAY BE USED.
CONTRACTOR MAY USE UP TO 25 PERCENT RAP FOR BASE, BINDER, AND INTERMEDIATE COURSE MIXTURES.

ASPHALT MATERIALS

TACK COAT: SS–1, IN ACCORDANCE WITH WISDOT SECTION 455.

SOURCE QUALITY CONTROL AND TESTS

PERFORM ASPHALTIC CONCRETE TESTING IN ACCORDANCE WITH WISDOT SECTION 460.

INFORMATION FROM 32 13 13 – CONCRETE PAVING

REINFORCEMENT

EPOXY–COATED JOINT DOWEL BARS: ASTM A775; WITH ASTM A615, GRADE 60, SMOOTH STEEL BARS. CUT BARS TRUE TO LENGTH WITH ENDS FLUSH AND FREE OF BURRS.

CONCRETE MIX– BY PERFORMANCE CRITERIA

PROVIDE CONCRETE TO THE FOLLOWING CRITERIA:
COMPRESSIVE STRENGTH: 4,000 PSI AT 28 DAYS.
SLUMP: 4 INCHES.
AIR ENTRAINED: 6 ± 1 PERCENT.

INFORMATION FROM 33 42 11 – STORMWATER GRAVITY PIPING

WORK SHALL COMPLY WITH:
STATE OF WISCONSIN ADMINISTRATIVE CODE, DEPARTMENT OF SAFETY AND PROFESSIONAL SERVICES, CHAPTER SPS 381 – DEFINITIONS AND STANDARDS, CHAPTER SPS 382 – DESIGN, CONSTRUCTION, INSTALLATION, SUPERVISION, AND INSPECTION OF PLUMBING, AND CHAPTER SPS 384 – PLUMBING PRODUCTS.

STATE OF WISCONSIN

TRACER WIRE MATERIALS

MARK ALL NON–CONDUCTIVE LATERAL PIPES WITH A LOCATING WIRE SYSTEM.

LOCATING WIRE SYSTEM CONSISTS OF THE FOLLOWING:
TRACER WIRE: 30–MIL SOLID COPPER, NO. 12 HMW–PE YELLOW JACKET COATING. INSTALL TO ENABLE ELECTRONIC LOCATING OF UNDERGROUND UTILITY.

TRACER WIRE LOCATING BOX: 2–1/2–INCH DIAMETER, MINIMUM, ABS PIPE WITH 2 POINT TERMINAL BOX AND CAST IRON COVER.
MANUFACTURER: VALCO, INC. MODEL C.P. MINI BOX, OR AN APPROVED EQUAL.

FIELD TEST EACH LOCATING WIRE AFTER INSTALLATION IS COMPLETED.

IDENTIFICATION WARNING TAPE: HEAVY PLASTIC UNDERGROUND WARNING TAPE, 2–INCH WIDTH. COLOR–BRIGHT GREEN, WARNING MESSAGE "CAUTION BURIED STORM SEWER BELOW" TO REPEAT EVERY 30 INCHES.

GRAEF
275 WEST WISCONSIN AVENUE, SUITE 300
MILWAUKEE, WI 53203
414 / 259 1500
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www.graef-usa.com

CLIENT:
MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
CIVIL CONSTRUCTION SPECIFICATIONS

SHEET NUMBER:
C-005

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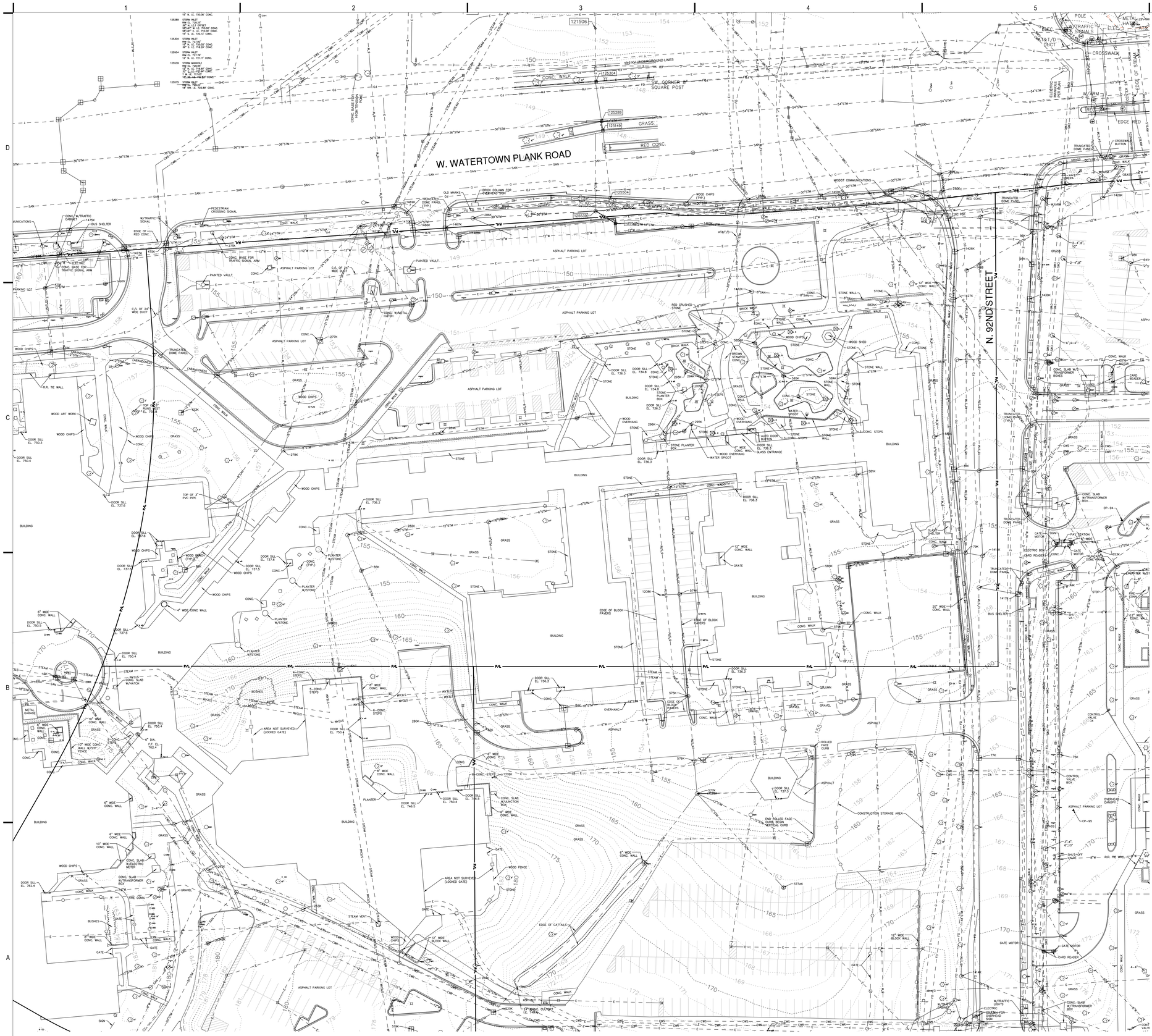

GENERAL NOTES

SURVEY NOTES

1. THE BASE SURVEY WAS PREPARED BY GRAEF IN 2021. ALL UNDERGROUND UTILITIES AND STRUCTURES HAVE BEEN SHOWN TO A REASONABLE DEGREE OF ACCURACY AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE THERETO.
2. HORIZONTAL COORDINATES ARE BASED ON WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY. NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (NAD83(2011)), US SURVEY FOOT, USING THE WISCORS NETWORK.
3. VERTICAL DATUM IS NGVD88(2012), GEOID 12A, REDUCED DOWN TO CITY OF WAUWATOSA DATUM USING A FIELD COMPUTED FACTOR OF −579.968. THIS FACTOR IS LOCALIZED TO THE MRMC CAMPUS ONLY AND SHOULD NOT BE USED FOR TRANSFORMING VERTICAL ELEVATIONS FROM NAVD88(2012) TO CITY OF WAUWATOSA DATUM ON OTHER SITES WITHOUT FIELD VERIFYING.
4. EXISTING CONDITIONS SHALL BE VERIFIED AND DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENSING CONSTRUCTION.

SURVEY LEGEND

- TRAVERSE POINT
- CONCRETE MONUMENT W/BRASS CAP
- POWER POLE
- LIGHT POLE
- TELEPHONE POLE
- SERVICE POLE
- FLAG POLE
- MANHOLE
- STORM INLET
- WATER VALVE
- GAS VALVE
- FIRE HYDRANT
- MAIL BOX
- ELECTRIC TRANSFORMER
- TELEPHONE PEDESTAL
- CONTROL BOX
- RAILROAD SIGNAL
- TRAFFIC SIGNAL
- GUY WIRE
- MONUMENT
- 1" IRON PIPE
- 2" IRON PIPE
- VENT PIPE
- WELL
- ELECTRIC RISER
- GUARD POST
- MARKER POST
- SEPTIC TANK
- DRAIN TILE
- PVC PIPE
- CLEANOUT
- SUMP DISCHARGE
- IRON PIPE
- REBAR
- BENCH MARK
- CHISELED SQUARE
- CHISELED CROSS
- SOIL BORING
- SIGNAL MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- GAS MANHOLE
- WATER VALVE PIT
- GUY POLE
- GAS SERVICE VALVE
- WATER SERVICE VALVE
- CATCH BASIN
- WATER VAULT
- WATER VALVE BOX
- GAS VALVE BOX
- CABLE TV PEDESTAL
- POWER POLE W/LIGHT
- TANK
- GROUND LIGHT

1 EXISTING CONDITIONS

0 20' 40' 80'

SCALE: 1" = 40'

N

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MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:

9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:

EXISTING CONDITIONS

SHEET NUMBER:

C-100

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1 EXISTING CONDITONS - POST DEMO

0 20' 40' 80'

SCALE: 1" = 40'

GENERAL NOTES

SURVEY NOTES

1. THE BASE SURVEY WAS PREPARED BY GRAEF IN 2021. ALL UNDERGROUND UTILITIES AND STRUCTURES HAVE BEEN SHOWN TO A REASONABLE DEGREE OF ACCURACY AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THEIR EXACT LOCATION AND TO AVOID DAMAGE THERETO.
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4. EXISTING CONDITIONS SHALL BE VERIFIED AND DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENSING CONSTRUCTION.

SURVEY LEGEND

Symbol	Description	Symbol	Description
▲	TRAVERSE POINT	SEPTIC	SEPTIC TANK
	CONCRETE MONUMENT W/BRASS CAP	TILE	DRAIN TILE
	POWER POLE	PVC P	PVC PIPE
	LIGHT POLE	CO	CLEANOUT
	TELEPHONE POLE	SUMP D	SUMP DISCHARGE
	SERVICE POLE	IP	IRON PIPE
FLAG	FLAG POLE	R BAR	REBAR
	MANHOLE	BM.	BENCH MARK
	STORM INLET	C.S.	CHISELED SQUARE
WV	WATER VALVE	C.C.	CHISELED CROSS
GV	GAS VALVE	SB	SOIL BORING
	FIRE HYDRANT	SMH	SIGNAL MANHOLE
	MAIL BOX	EMH	ELECTRIC MANHOLE
	ELECTRIC TRANSFORMER	TMH	TELEPHONE MANHOLE
T	TELEPHONE PEDESTAL	GMH	GAS MANHOLE
	CONTROL BOX	WVP	WATER VALVE PIT
	RAILROAD SIGNAL	GP	GUY POLE
	TRAFFIC SIGNAL	GSV	GAS SERVICE VALVE
GUY	GUY WIRE	WSV	WATER SERVICE VALVE
MON	MONUMENT		CATCH BASIN
1"IP	1" IRON PIPE		WATER VAULT
2"IP	2" IRON PIPE	W	WATER VALVE BOX
VENT	VENT PIPE	G	GAS VALVE BOX
WELL	WELL	TV	CABLE TV PEDESTAL
EL R	ELECTRIC RISER		POWER POLE W/LIGHT
GRD	GUARD POST	TANK	TANK
M.P.	MARKER POST		GROUND LIGHT

Line	Description
	EDGE OF BRUSH
	EDGE OF WOODS
	HEDGE ROW
	RIP RAP
	CHAIN LINK FENCE
	WOOD FENCE
	SPLIT RAIL FENCE
	WOVEN WIRE FENCE
	GUARD RAIL
TV	BURIED CABLE TV
E	BURIED ELECTRIC LINE
OHE	OVERHEAD ELECTRIC LINE
FP	BURIED FIRE PROTECTION
FO	BURIED FIBER OPTIC
G	BURIED GAS MAIN
FM	BURIED FORCE MAIN
SIG	BURIED SIGNAL LINE
SAN	BURIED SANITARY SEWER
STEAM	BURIED STEAM LINE
STM	BURIED STORM SEWER
T	BURIED TELEPHONE LINE
OHT	OVERHEAD TELEPHONE LINE
W	BURIED WATER MAIN
P/L	EXISTING PROPERTY LINE
R/W	EXISTING RIGHT OF WAY
EASE	EXISTING EASEMENT

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CLIENT:

MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:

9201 WATERTOWN PLANK ROAD PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:

EXISTING CONDITONS - POST DEMO

SHEET NUMBER:

C-101

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GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.

B. SEE SHEET C002 FOR EROSION CONTROL NOTES.

C. SEE SHEET C002 FOR EROSION CONTROL CONSTRUCTION DETAILS.

D. SEE SHEET C001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. PROPERTY LINE
2. CONSTRUCTION LIMITS (395,812 SQUARE FEET)
3. CAUTION! UNDERGROUND STEAM, ELECTRIC, COMMUNICATION, AND CHILLED WATER TO REMAIN AND BE PROTECTED.
4. STONE CONSTRUCTION ENTRANCE (B4/C-003)
5. EROSION MATTING (A2/C-003)
6. SILT FENCE (D2/C-003)
7. INLET PROTECTION (C1/C-004)(C3/C-004)(C4/C-004)(A1/C-004)
8. DIVERSION BERM (C4/C-003)
9. TREE PROTECTION (B2/C-003)
10. PREVIOUSLY INSTALLED INLET PROTECTION TO BE REMOVED
11. PREVIOUSLY INSTALLED SILT FENCE WITHIN DISTURBANCE LIMITS TO BE REMOVED OR ADJUSTED TO LAYOUT SHOWN.
12. PREVIOUSLY INSTALLED SILT FENCE OUTSIDE OF DISTURBANCE LIMITS TO REMAIN IN PLACE.
13. PREVIOUSLY INSTALLED STONE CONSTRUCTION ENTRANCE TO BE REMOVED OR ADJUSTED TO LAYOUT SHOWN.
14. PREVIOUSLY INSTALLED STONE CONSTRUCTION ENTRANCE OUTSIDE OF DISTURBANCE LIMITS TO REMAIN IN PLACE.
15. INLET PROTECTION PROVIDED WITHIN DIVERSION BERMS SHALL INCLUDE BOTH TYPE A AND TYPE B OR TYPE C INLET PROTECTION UNTIL BASE COURSE STONE IS INSTALLED. AFTER BASE COURSE IS INSTALLED, ONLY TYPE B OR TYPE C INLET PROTECTION IS REQUIRED.
16. INLET PROTECTION PROVIDED ON EXISTING INLETS WITHIN ROADWAYS TO HAVE TYPE D INLET PROTECTION.
17. SEDIMENT TRAP WITH TEMPORARY OUTLET CONTROL DEVICE. SEE DETAIL (A3/C-004).

EROSION CONTROL LEGEND

- SCE — –STONE CONSTRUCTION ENTRANCE
- — –EROSION MATTING
- SF — –SILT FENCE
- S — –INLET PROTECTION
- SF — –EXISTING SILT FENCE
- S — –EXISTING INLET PROTECTION
- SCE — –EXISTING STONE CONSTRUCTION ENTRANCE
- — –DIVERSION BERM
- — –CONSTRUCTION LIMITS
- — –TREE PROTECTION

W. WATERTOWN PLANK ROAD

N. 92ND STREET

N. 95TH STREET (FUTURE)

1 EROSION CONTROL PLAN

0 20' 40' 80'

SCALE: 1" = 40'

N

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CLIENT:

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WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:

9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:

EROSION CONTROL PLAN

SHEET NUMBER:

C-200

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GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.

B. SEE SHEET C001 FOR REMOVAL NOTES.

C. SEE SHEET C001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. PROPERTY LINE
2. CONSTRUCTION LIMITS 395,812 SQUARE FEET
3. CAUTION! UNDERGROUND STEAM, ELECTRIC, COMMUNICATION, AND CHILLED WATER TO REMAIN AND BE PROTECTED.
4. REMOVE ASPHALT PAVEMENT
5. REMOVE CONCRETE PAVEMENT
6. REMOVE BUILDING
7. SAWCUT
8. REMOVE/ABANDON UTILITY
9. REMOVE CONCRETE CURB AND GUTTER
10. REMOVE TREE/BOLLARD/SIGN
11. REMOVE UTILITY STRUCTURE
12. REMOVE SITE LIGHT
13. BUS STOP TO REMAIN AND BE PROTECTED
14. ALL STEAM ELECTRICAL AND COMMUNICATION REMOVALS OR ALTERATIONS SHALL BE COORDINATED WITH OWNER, CITY, AND ENGINEER.
15. DAY HOSPITAL BUILDING, PAVEMENT, AND UTILITIES REMOVED AS PART OF A PRIOR PROJECT WITHIN BOUNDARY.
16. BEHAVIOR HEALTH BUILDING, PAVEMENT AND UTILITIES TO BE REMOVED AS PART OF A SEPARATE PROJECT WITHIN BOUNDARY.
17. COORDINATE UTILITY REMOVALS WITH SEPARATE PROJECTS TO MAINTAIN DRAINAGE AS NEEDED.
18. REMOVE CONCRETE RETAINING WALL
19. REMOVE SEGMENTAL BLOCK WALL
20. STRUCTURE TO REMAIN AND BE PROTECTED

DEMOLITION LEGEND

- REMOVE ASPHALT PAVEMENT
- REMOVE BUILDING
- REMOVE CONCRETE PAVEMENT
- REMOVE GRAVEL PAVEMENT
- SAWCUT
- REMOVE CHAIN LINK FENCE
- REMOVE UTILITY
- REMOVE CONCRETE CURB
- REMOVE TREE/BOLLARD/SIGN
- REMOVE UTILITY STRUCTURE
- REMOVE SITE LIGHT

1 DEMOLITION PLAN

0 20' 40' 80'

SCALE: 1" = 40'

N

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MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:

9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:

DEMOLITION PLAN

SHEET NUMBER:

C-201

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GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.
B. SEE SHEET C001 FOR LAYOUT NOTES.
C. SEE SHEET C002 FOR CONSTRUCTION DETAILS.
D. SEE SHEET C001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. PROPERTY LINE
2. CONSTRUCTION LIMITS
3. CAUTION! UNDERGROUND STEAM, ELECTRIC, COMMUNICATION, AND CHILLED WATER TO REMAIN AND BE PROTECTED.
4. CONCRETE SIDEWALK
5. CONCRETE PAVEMENT
6. STANDARD ASPHALT PAVEMENT
7. HEAVY DUTY ASPHALT PAVEMENT
8. 30-INCH STANDARD CONCRETE CURB AND GUTTER
9. 30-INCH FLUSH CONCRETE CURB AND GUTTER
10. 18-INCH STANDARD CONCRETE CURB AND GUTTER
11. 18-INCH HIGHSIDE CONCRETE CURB AND GUTTER
12. 18-INCH FLUSH CONCRETE CURB AND GUTTER
13. 18-INCH HIGHSIDE FLUSH CONCRETE CURB AND GUTTER
14. (NOT USED)
15. PAVEMENT STRIPING
16. SITE LIGHT (SEE ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION)
17. RAISED CONCRETE MEDIAN
18. "STOP" SIGN
19. STOP BAR
20. REPLACE PAVEMENT IN KIND AS NEEDED

LAYOUT LEGEND

- —CONCRETE SIDEWALK
- —CONCRETE PAVEMENT
- —STANDARD ASPHALT PAVEMENT
- —HEAVY DUTY ASPHALT PAVEMENT
- —STANDARD CONCRETE CURB AND GUTTER
- —HIGHSIDE CONCRETE CURB AND GUTTER
- —FLUSH CONCRETE CURB AND GUTTER
- —FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
- —CONSTRUCTION LIMITS
- —SITE LIGHT

W. WATERTOWN PLANK ROAD

N. 95TH STREET (FUTURE)

N. 95TH STREET

1 OVERALL SITE LAYOUT PLAN

SCALE: 1" = 40'

N

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WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:

9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:

OVERALL SITE LAYOUT PLAN

SHEET NUMBER:

C-300

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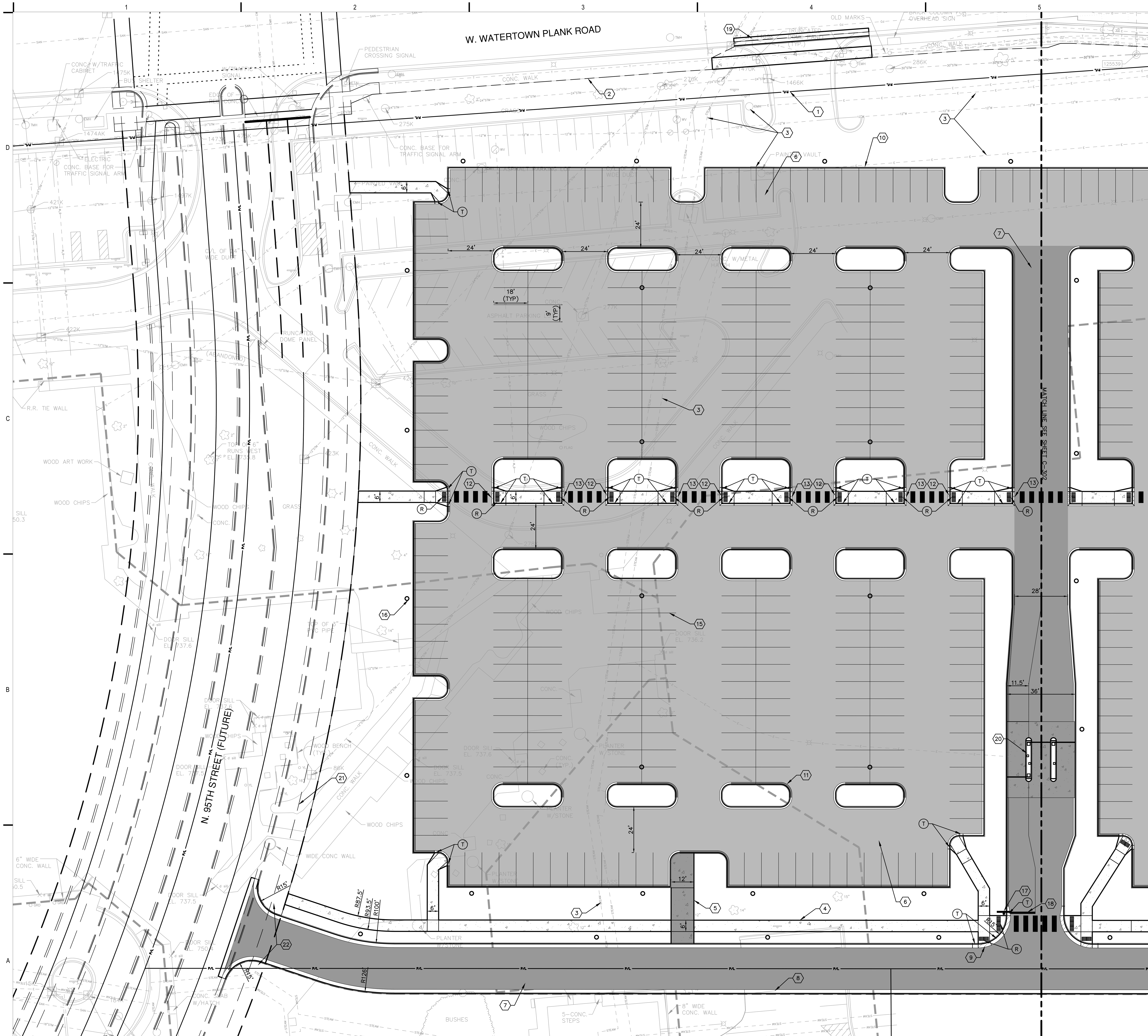

1 DETAILED SITE LAYOUT PLAN

0 10' 20' 40'
SCALE: 1" = 20'

GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.
B. SEE SHEET C001 FOR LAYOUT NOTES.
C. SEE SHEET C002 FOR CONSTRUCTION DETAILS.
D. SEE SHEET C001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. PROPERTY LINE
2. CONSTRUCTION LIMITS
3. CAUTION! UNDERGROUND STEAM, ELECTRIC, COMMUNICATION, AND CHILLED WATER TO REMAIN AND BE PROTECTED.
4. CONCRETE SIDEWALK
5. CONCRETE PAVEMENT
6. STANDARD ASPHALT PAVEMENT
7. HEAVY DUTY ASPHALT PAVEMENT
8. 30-INCH STANDARD CONCRETE CURB AND GUTTER
9. 30-INCH FLUSH CONCRETE CURB AND GUTTER
10. 18-INCH STANDARD CONCRETE CURB AND GUTTER
11. 18-INCH HIGHSIDE CONCRETE CURB AND GUTTER
12. 18-INCH FLUSH CONCRETE CURB AND GUTTER
13. 18-INCH HIGHSIDE FLUSH CONCRETE CURB AND GUTTER
14. (NOT USED)
15. PAVEMENT STRIPING
16. SITE LIGHT (SEE ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION)
17. "STOP" SIGN
18. STOP BAR
19. REPLACE PAVEMENT IN KIND AS NEEDED
20. CARD READER GATE
21. 95TH STREET EXTENSION PART OF SEPARATE PROJECT
22. SIGNAGE AND STRIPING AT INTERSECTION TO BE INCLUDED AS PART OF SEPARATE PROJECT

LAYOUT LEGEND

- CONCRETE SIDEWALK
- CONCRETE PAVEMENT
- STANDARD ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD CONCRETE CURB AND GUTTER
- HIGHSIDE CONCRETE CURB AND GUTTER
- FLUSH CONCRETE CURB AND GUTTER
- FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
- CONSTRUCTION LIMITS
- SITE LIGHT
- (Rx) ADA RAMP WITH TRUNCATED DOMES (x = TYPE)
- (T) CURB TAPER

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CLIENT:
MILWAUKEE REGIONAL MEDICAL CENTER
WEST CAMPUS DEVELOPMENT INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
DETAILED SITE LAYOUT PLAN

SHEET NUMBER:
C-301

GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.
B. SEE SHEET C001 FOR LAYOUT NOTES.
C. SEE SHEET C002 FOR CONSTRUCTION DETAILS.
D. SEE SHEET C001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. PROPERTY LINE
2. CONSTRUCTION LIMITS
3. CAUTION! UNDERGROUND STEAM, ELECTRIC, COMMUNICATION, AND CHILLED WATER TO REMAIN AND BE PROTECTED.
4. CONCRETE SIDEWALK
5. CONCRETE PAVEMENT
6. STANDARD ASPHALT PAVEMENT
7. HEAVY DUTY ASPHALT PAVEMENT
8. 30-INCH STANDARD CONCRETE CURB AND GUTTER
9. 30-INCH FLUSH CONCRETE CURB AND GUTTER
10. 18-INCH STANDARD CONCRETE CURB AND GUTTER
11. 18-INCH HIGHSIDE CONCRETE CURB AND GUTTER
12. 18-INCH FLUSH CONCRETE CURB AND GUTTER
13. 18-INCH HIGHSIDE FLUSH CONCRETE CURB AND GUTTER
14. (NOT USED)
15. PAVEMENT STRIPING
16. SITE LIGHT (SEE ELECTRICAL SHEETS FOR ADDITIONAL INFORMATION)
17. "STOP" SIGN
18. RAISED CONCRETE MEDIAN
19. REPLACE PAVEMENT IN KIND AS NEEDED
20. CARD READER GATE
21. SEE INSERT FOR INTERSECTION LAYOUT

LAYOUT LEGEND

- CONCRETE SIDEWALK
- CONCRETE PAVEMENT
- STANDARD ASPHALT PAVEMENT
- HEAVY DUTY ASPHALT PAVEMENT
- STANDARD CONCRETE CURB AND GUTTER
- HIGHSIDE CONCRETE CURB AND GUTTER
- FLUSH CONCRETE CURB AND GUTTER
- FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
- CONSTRUCTION LIMITS
- SITE LIGHT
- (Rx) ADA RAMP WITH TRUNCATED DOMES (x = TYPE)
- (T) CURB TAPER

MATCH LINE SEE SHEET C-301

N. 92ND STREET

1 DETAILED SITE LAYOUT PLAN

SCALE: 1" = 20'

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CLIENT:
MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
DETAILED SITE LAYOUT PLAN

SHEET NUMBER:
C-302

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1/30/2023 4:51 PM

GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.
B. SEE SHEET C001 FOR LAYOUT NOTES.
C. SEE SHEET C002 FOR CONSTRUCTION DETAILS.
D. SEE SHEET C001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. PROPERTY LINE
2. CONSTRUCTION LIMITS
3. CAUTION! UNDERGROUND STEAM, ELECTRIC, COMMUNICATION, AND CHILLED WATER TO REMAIN AND BE PROTECTED.
4. EXISTING CONTOUR
5. ROADWAY PROJECT CONTOUR
6. PROPOSED CONTOUR
7. 18-INCH STANDARD CONCRETE CURB AND GUTTER
8. 18-INCH HIGHSIDE CONCRETE CURB AND GUTTER
9. 18-INCH FLUSH CONCRETE CURB AND GUTTER
10. 18-INCH FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
11. 30-INCH STANDARD CONCRETE CURB AND GUTTER
12. 30-INCH FLUSH CONCRETE CURB AND GUTTER
13. MANHOLE
14. CATCH BASIN
15. OVERLAND FLOW PATH ARROW

GRADING LEGEND

- 100 – EXISTING CONTOUR
- 100 – ROADWAY PROJECT CONTOUR
- 100 – PROPOSED CONTOUR
- – STANDARD CONCRETE CURB AND GUTTER
- – HIGHSIDE CONCRETE CURB AND GUTTER
- – FLUSH CONCRETE CURB AND GUTTER
- – FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
- – CONSTRUCTION LIMITS
- – MANHOLE
- – CATCH BASIN
- – SITE LIGHT
- 204.05 ME± – SPOT GRADE – MATCH EXISTING
- 192.42 / 192.00 – TOP OF CURB GRADE – FLANGE GRADE
- – OVERLAND FLOW PATH ARROW

1 OVERALL SITE GRADING PLAN

SCALE: 1" = 40'

N

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CLIENT:
Milwaukee Regional Medical Center

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
OVERALL SITE GRADING PLAN

SHEET NUMBER:
C-400

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GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.
B. SEE SHEET C001 FOR GRADING NOTES.
C. SEE SHEET C002 FOR CONSTRUCTION DETAILS.
D. SEE SHEET C001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. PROPERTY LINE
2. CONSTRUCTION LIMITS
3. CAUTION! UNDERGROUND STEAM, ELECTRIC, COMMUNICATION, AND CHILLED WATER TO REMAIN AND BE PROTECTED.
4. EXISTING CONTOUR
5. ROADWAY PROJECT CONTOUR
6. PROPOSED CONTOUR
7. 18-INCH STANDARD CONCRETE CURB AND GUTTER
8. 18-INCH HIGHSIDE CONCRETE CURB AND GUTTER
9. 18-INCH FLUSH CONCRETE CURB AND GUTTER
10. 18-INCH FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
11. 30-INCH STANDARD CONCRETE CURB AND GUTTER
12. 30-INCH FLUSH CONCRETE CURB AND GUTTER
13. MANHOLE
14. CATCH BASIN
15. RESET STRUCTURE TO ELEVATION SHOWN
16. RELOCATE STRUCTURE. COORDINATE WITH OWNER, CITY, AND UTILITY FOR NEW LOCATION AND STRUCTURE INFORMATION.

GRADING LEGEND

- 100 — EXISTING CONTOUR
- 100 — ROADWAY PROJECT CONTOUR
- 100 — PROPOSED CONTOUR
- STANDARD CONCRETE CURB AND GUTTER
- HIGHSIDE CONCRETE CURB AND GUTTER
- FLUSH CONCRETE CURB AND GUTTER
- FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
- CONSTRUCTION LIMITS
- MANHOLE
- CATCH BASIN
- SITE LIGHT
- 204.05 ME± — SPOT GRADE – MATCH EXISTING
- 192.42 / 192.00 — TOP OF CURB GRADE / FLANGE GRADE
- OVERLAND FLOW PATH ARROW

1 DETAILED SITE GRADING PLAN

0 10' 20' 40'
SCALE: 1" = 20'

N

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CLIENT:
MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
DETAILED SITE GRADING PLAN

SHEET NUMBER:
C-401

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W. WATERTOWN PLANK ROAD

N. 92ND STREET

MATCH LINE SEE SHEET C-401

GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.
B. SEE SHEET C001 FOR GRADING NOTES.
C. SEE SHEET C002 FOR CONSTRUCTION DETAILS.
D. SEE SHEET C001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. PROPERTY LINE
2. CONSTRUCTION LIMITS
3. CAUTION! UNDERGROUND STEAM, ELECTRIC, COMMUNICATION, AND CHILLED WATER TO REMAIN AND BE PROTECTED.
4. EXISTING CONTOUR
5. ROADWAY PROJECT CONTOUR
6. PROPOSED CONTOUR
7. 18-INCH STANDARD CONCRETE CURB AND GUTTER
8. 18-INCH HIGHSIDE CONCRETE CURB AND GUTTER
9. 18-INCH FLUSH CONCRETE CURB AND GUTTER
10. 18-INCH FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
11. 30-INCH STANDARD CONCRETE CURB AND GUTTER
12. 30-INCH FLUSH CONCRETE CURB AND GUTTER
13. MANHOLE
14. CATCH BASIN
15. RESET STRUCTURE TO ELEVATION SHOWN
16. SEE INSERT FOR DETAILED GRADING AT INTERSECTION

GRADING LEGEND

- 100 — EXISTING CONTOUR
- 100 — ROADWAY PROJECT CONTOUR
- 100 — PROPOSED CONTOUR
- STANDARD CONCRETE CURB AND GUTTER
- HIGHSIDE CONCRETE CURB AND GUTTER
- FLUSH CONCRETE CURB AND GUTTER
- FLUSH HIGHSIDE CONCRETE CURB AND GUTTER
- CONSTRUCTION LIMITS
- MANHOLE
- CATCH BASIN
- SITE LIGHT
- 204.05 ME± — SPOT GRADE / MATCH EXISTING
- 192.42 / 192.00 — TOP OF CURB GRADE / FLANGE GRADE
- OVERLAND FLOW PATH ARROW

1 DETAILED SITE GRADING PLAN

SCALE: 1" = 20'

N

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PROJECT TITLE:
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DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
DETAILED SITE GRADING PLAN

SHEET NUMBER:
C-402

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1/30/2023 5:52 PM

GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.
B. SEE SHEET C001 FOR UTILITY NOTES.
C. SEE SHEET C002 FOR CONSTRUCTION DETAILS.
D. SEE SHEET C001 FOR CONTROL POINTS DATA.

SHEET KEYNOTES

1. PROPERTY LINE
2. CONSTRUCTION LIMITS
3. CAUTION! UNDERGROUND STEAM, ELECTRIC, COMMUNICATION, AND CHILLED WATER TO REMAIN AND BE PROTECTED.
4. STORM SEWER
5. STORM SEWER BY OTHERS
6. SANITARY SEWER BY OTHERS
7. WATER MAIN BY OTHERS
8. ELECTRICAL BY OTHERS
9. UTILITY EASEMENT
10. MANHOLE
11. CATCH BASIN

UTILITY LEGEND

- STM — STORM SEWER
- STM — STORM SEWER BY OTHERS
- SAN — SANITARY SEWER BY OTHERS
- W — WATER MAIN BY OTHERS
- E — ELECTRICAL BY OTHERS
- EASE — UTILITY EASEMENT
- MANHOLE
- CATCH BASIN
- SITE LIGHT

W. WATERTOWN PLANK ROAD

N. 95TH STREET (FUTURE)

N. 92ND STREET

CB 1
STA. 10+20.06, 0.00'
RIM EL. 156.27
12" E. I.E. 152.64

144 L.F. – 12" PVC @ S=0.0104'/'

144 L.F. – 18" PVC @ S=0.0104'/'

CB 2
STA. 11+64.06, 0.00'
RIM EL. 154.14
12" W. I.E. 151.14
18" E. I.E. 150.11

MH 1
STA. 14+13.09, 0.00'
RIM EL. 151.32
18" W. I.E. 146.94
18" E. I.E. 142.54

CB 5
STA. 13+08.06, 0.00'
RIM EL. 152.11
18" W. I.E. 148.61
12" SW. I.E. 149.11
18" E. I.E. 148.03

105 L.F. – 18" PVC @ S=0.0104'/'

42 L.F. – 18" PVC @ S=0.0104'/'

CB 6
STA. 14+55.27, 0.00'
RIM EL. 150.28
18" E. I.E. 142.98
18" W. I.E. 142.98

135 L.F. – 18" PVC @ S=0.0104'/'

CB 7
STA. 15+90.27, 0.00'
RIM EL. 148.14
15" SE. I.E. 144.63
18" W. I.E. 144.38

25 L.F. – 15" PVC @ S=0.0104'/'

CB 8
STA. 16+15.72, 0.00'
RIM EL. 148.14
12" S. I.E. 145.14
15" NW. I.E. 144.89

46 L.F. – 12" PVC @ S=0.0104'/'

91 L.F. – 12" PVC @ S=0.0104'/'

CB 3
STA. 11+85.06, 54.00'R
RIM EL. 155.34
12" E. I.E. 152.30

CB 4
STA. 12+30.06, 47.00'R
RIM EL. 154.83
12" W. I.E. 151.83
12" NE. I.E. 150.06

CB 15
STA. 22+86.50, 0.00'
RIM EL. 159.56
15" S. I.E. 156.31
15" SE. I.E. 156.08

23 L.F. – 15" PVC @ S=0.0104'/'

54 L.F. – 15" PVC @ S=0.0104'/'

CB 18
STA. 24+88.66, 0.00'
RIM EL. 157.85
15" E. I.E. 148.55
15" W. I.E. 148.30

CB 12
STA. 21+40.00, 0.00'
RIM EL. 162.11
12" W. I.E. 159.11
12" E. I.E. 158.88

60 L.F. – 12" PVC @ S=0.0104'/'

CB 17
STA. 24+28.66, 0.00'
RIM EL. 158.70
15" W. I.E. 154.60
15" E. I.E. 154.60

39 L.F. – 15" PVC @ S=0.0104'/'

60 L.F. – 15" PVC @ S=0.0104'/'

60 L.F. – 12" PVC @ S=0.0104'/'

84 L.F. – 12" PVC @ S=0.0104'/'

CB 9
STA. 16+99.72, 0.00'
RIM EL. 151.06
12" N. I.E. 146.01

CB 22
STA. 27+24.42, 0.00'
RIM EL. 153.99
12" S. I.E. 150.99
12" SW. I.E. 150.99

56 L.F. – 12" PVC @ S=0.0104'/'

CB 21
STA. 26+68.66, 0.00'
RIM EL. 155.29
12" NE. I.E. 150.41
12" W. I.E. 150.41

93 L.F. – 12" PVC @ S=0.0104'/'

CB 10
STA. 20+20.00, 0.00'
RIM EL. 163.82
12" E. I.E. 160.58

60 L.F. – 12" PVC @ S=0.0104'/'

CB 13
STA. 22+00.00, 0.00'
RIM EL. 161.26
12" W. I.E. 158.26
15" E. I.E. 157.84

60 L.F. – 12" PVC @ S=0.0104'/'

89 L.F. – 15" PVC @ S=0.0104'/'

37 L.F. – 15" PVC @ S=0.0125'/'

MH 2
STA. 24+52.02, 0.00'
RIM EL. 159.18
15" W. I.E. 154.36
15" E. I.E. 147.84

CB 20
STA. 26+08.66, 0.00'
RIM EL. 156.14
12" E. I.E. 149.79
12" W. I.E. 149.79

CB 11
STA. 20+80.00, 0.00'
RIM EL. 162.96
12" W. I.E. 159.96
12" E. I.E. 159.73

47 L.F. – 15" PVC @ S=0.0104'/'

CB 16
STA. 23+40.04, 0.00'
RIM EL. 160.05
15" NW. I.E. 155.52
15" E. I.E. 155.52

CB 19
STA. 25+48.66, 0.00'
RIM EL. 156.99
12" E. I.E. 149.17
15" W. I.E. 149.17

60 L.F. – 12" PVC @ S=0.0104'/'

CB 23
STA. 28+17.42, 0.00'
RIM EL. 156.91
12" N. I.E. 151.96

CB 14
STA. 22+47.00, 0.00'
RIM EL. 160.60
15" W. I.E. 157.35
15" N. I.E. 156.72

21 L.F. – 12" PVC @ S=0.0104'/'

CB 27
STA. 34+72.61, 19.81'L
RIM EL. 159.22
12" SE. I.E. 156.57

24 L.F. – 12" PVC @ S=0.0104'/'

MH 3
STA. 34+86.00, 0.00'
RIM EL. 159.45
15" W. I.E. 156.07
12" SW. I.E. 156.32
12" NW. I.E. 156.32

10 L.F. – 12" PVC @ S=0.0104'/'

8 L.F. – 12" PVC @ S=0.0104'/'

CB 25
STA. 30+13.58, 6.00'R
RIM EL. 165.87
12" NE. I.E. 162.87

CB 26
STA. 30+19.58, 0.00'
RIM EL. 165.89
12" N. I.E. 162.70
12" SW. I.E. 162.78
15" E. I.E. 160.92

CB 24
STA. 30+13.59, 20.00'L
RIM EL. 165.92
12" S. I.E. 162.92

466 L.F. – 15" PVC @ S=0.0104'/'

CB 28
STA. 34+77.79, 6.19'R
RIM EL. 158.98
12" NE. I.E. 156.43

1 SITE UTILITY PLAN

0 20' 40' 80'
SCALE: 1" = 40'

N

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CLIENT:
MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
SITE UTILITY PLAN

SHEET NUMBER:
C-500

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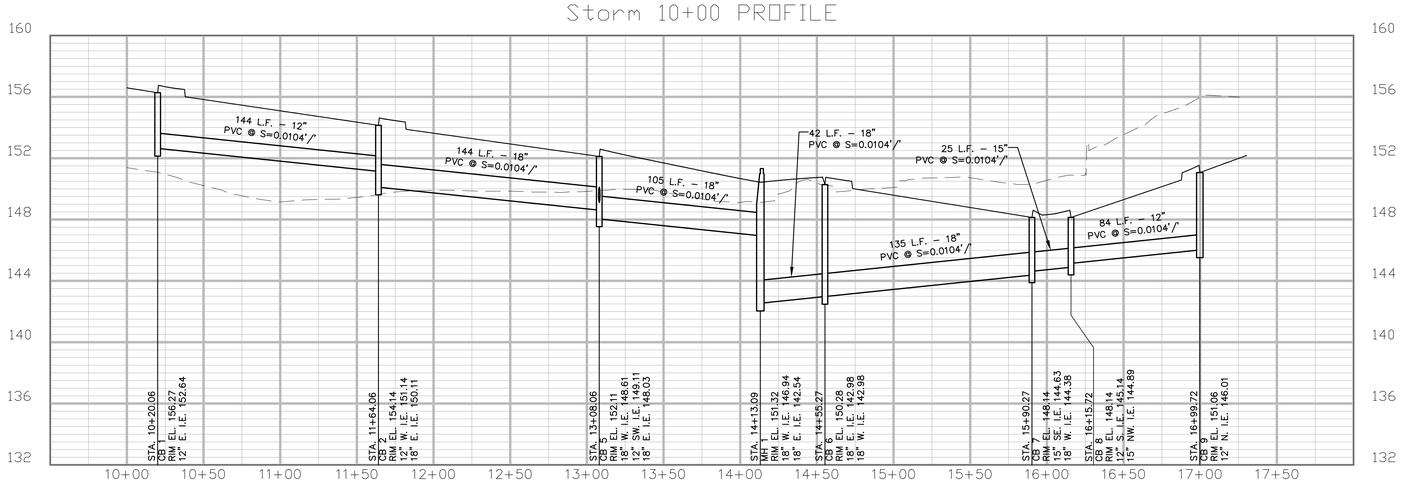
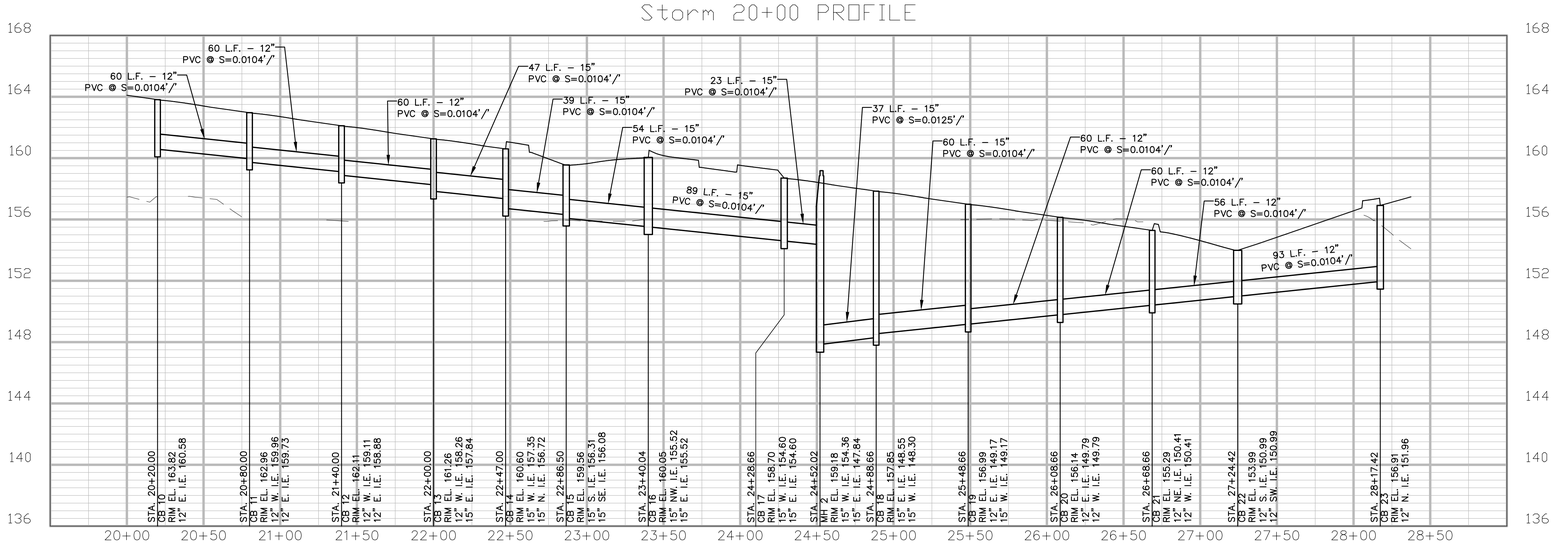
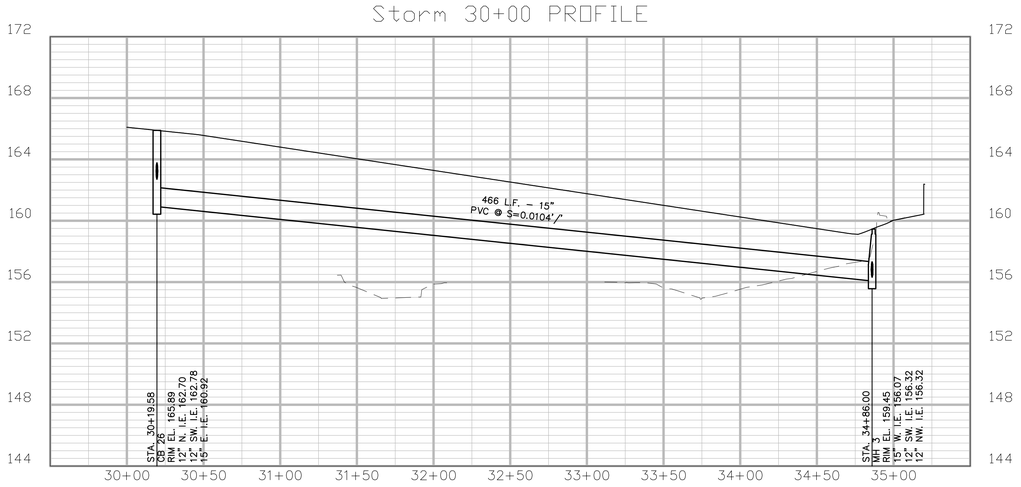
Storm 10+00 PROFILE



Storm 20+00 PROFILE



Storm 30+00 PROFILE



GENERAL NOTES

A. SEE SHEET C001 FOR GENERAL NOTES.
B. SEE SHEET C001 FOR UTILITY NOTES.
C. SEE SHEET C002 FOR CONSTRUCTION DETAILS.
D. SEE SHEET C001 FOR CONTROL POINTS DATA.

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WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:

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PARKING LOT

ISSUE:

PROJECT INFORMATION:

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DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:

SITE UTILITY PROFILES

SHEET NUMBER:

C-510

1 SITE UTILITY PROFILES

0 20' 40' 80'
SCALE: 1" = 40'

N

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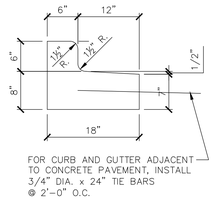
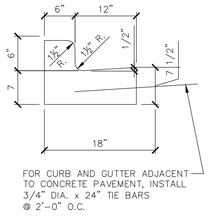
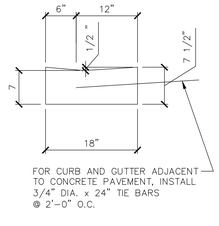


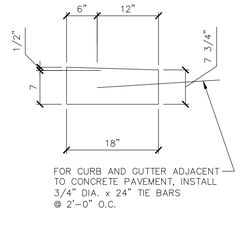
D1 18-INCH HIGHSIDE CONCRETE CURB & GUTTER
N.T.S.



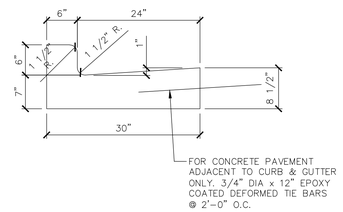
D2 18-INCH STANDARD CONCRETE CURB & GUTTER
N.T.S.



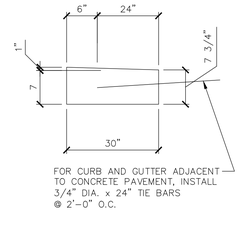
D3 18-INCH FLUSH CONCRETE CURB & GUTTER
N.T.S.



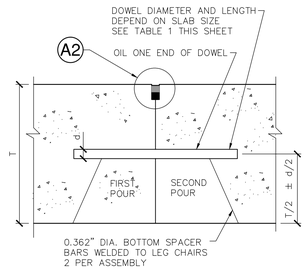
D4 18-INCH HIGHSIDE FLUSH CONCRETE CURB & GUTTER
N.T.S.



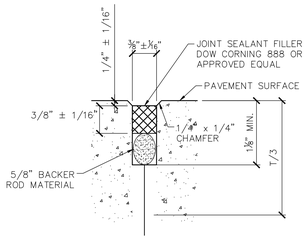
D5 30-INCH STANDARD CONCRETE CURB & GUTTER
N.T.S.



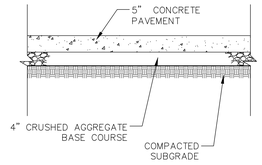
D6 30-INCH HIGHSIDE FLUSH CONCRETE CURB & GUTTER
N.T.S.



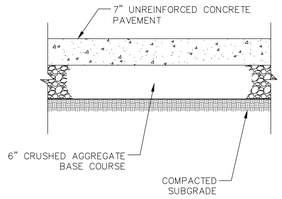
C1 TYPE E DOWELED CONSTRUCTION JOINT
N.T.S.



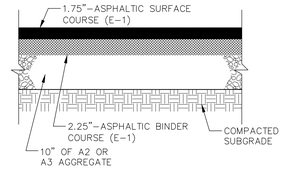
C2 CONSTRUCTION JOINT FILLER
N.T.S.



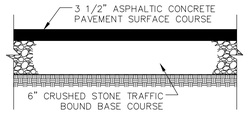
C3 TYPICAL CONCRETE SIDEWALK SECTION
N.T.S.



C4 TYPICAL CONCRETE PAVING SECTION
N.T.S.

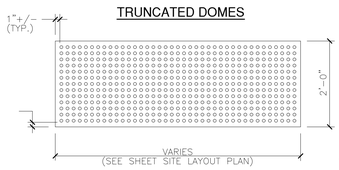


C5 HEAVY DUTY ASPHALT PAVEMENT
N.T.S.



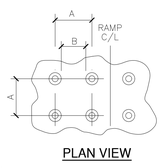
NOTE: 9" OF CRUSHED STONE REQUIRED FOR GRAVEL ROAD.

C6 STANDARD ASPHALT PAVEMENT
N.T.S.



	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.09"	1.4"

* THIS DIMENSION IS 50% TO 65% OF THE "D" DIMENSION

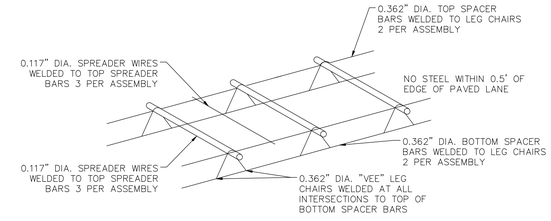


DETECTABLE WARNING FIELD (PLAN VIEW)

NOTES:

1. ALL TRUNCATED DOME PANELS SHALL BE NON-PANTED, HAVE A NATURAL IRON COLOR/FINISH.
2. TRUNCATED DOME PANELS SHALL SPAN THE ENTIRE WIDTH OF THE SIDEWALK.

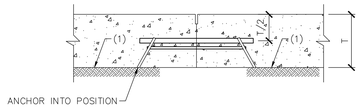
B1 TRUNCATED DOME PANELS
N.T.S.



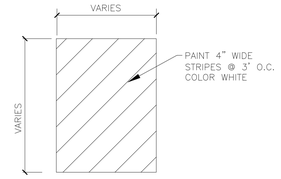
NOTES:
1. BASKET MUST BE FIRMLY ATTACHED TO EXISTING OR NEW BASE.
2. ALL WIRE SIZES SHOWN ARE MINIMUM SIZE.
3. DOWELS SHALL BE HELD FIRMLY IN THE ABOVE WELDED ASSEMBLY.

TABLE 1: DIMENSIONS AND SPACING OF STEEL DOWELS			
SLAB THICKNESS (T)	DIAMETER (d)	LENGTH (L)	SPACING MAX.
7.5-12"	1"	19"	12" O.C.

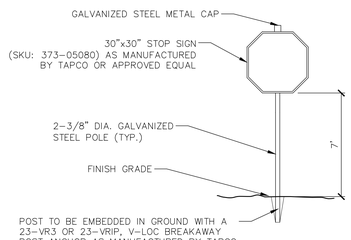
B3 TYPICAL DOWEL AND TIE BAR BASKET
N.T.S.



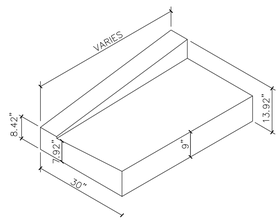
NOTES:
1. ALL DOWELS PLACED TO BE PARALLEL TO TOP OF PAVEMENT GRADES.
2. ALL DOWELS PLACED TO HAVE 50% OF LENGTH ACROSS JOINT LINES.
3. NO DOWELS SHALL BE PLACED MANUALLY IN PLASTIC CONCRETE.
4. ALL DOWELS ARE TO BE EPOXY COATED.
5. ANY WELD ON DOWELS TO HAVE FIELD APPLIED EPOXY COATING APPLIED.



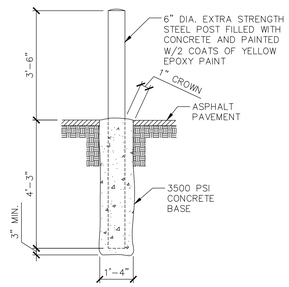
B6 CROSS STRIPING
N.T.S.



A1 "STOP" SIGN
N.T.S.



A2 CURB TAPER SECTION
N.T.S.



A3 SITE BOLLARD
N.T.S.

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CLIENT:
MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:
9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	SRK
CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
C-900

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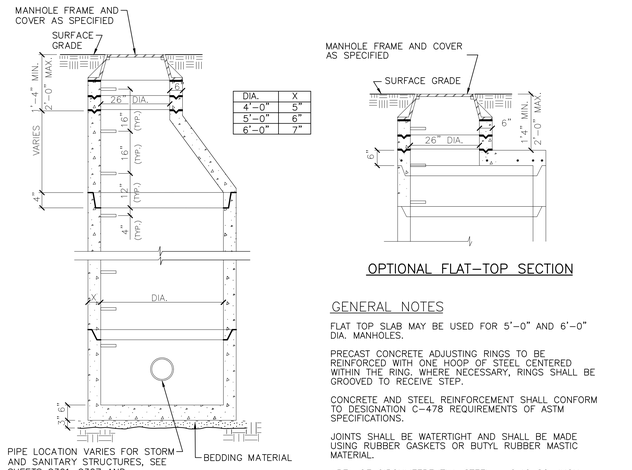


DIA.	X
4'-0"	5"
5'-0"	6"
6'-0"	7"

OPTIONAL FLAT-TOP SECTION

GENERAL NOTES

FLAT TOP SLAB MAY BE USED FOR 5'-0" AND 6'-0" DIA. MANHOLES.

PRECAST CONCRETE ADJUSTING RINGS TO BE REINFORCED WITH ONE HOOP OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY, RINGS SHALL BE GROOVED TO RECEIVE STEP.

CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO DESIGNATION C-478 REQUIREMENTS OF ASTM SPECIFICATIONS.

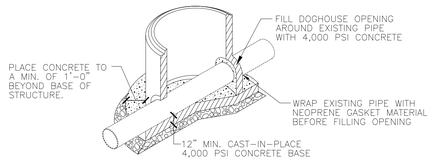
JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING RUBBER GASKETS OR BUTYL RUBBER MASTIC MATERIAL.

AREA OF CIRCUMFERENTIAL STEEL = 0.12 SQ. INCH PER LINEAL FOOT.

3" BEDDING MATERIAL REQUIRED UNDER BASE. MANHOLES TO BE BACKFILLED WITH GRANULAR BACKFILL MATERIAL.

D1 MANHOLE
N.T.S.

DOGHOUSE CONNECTION BASE

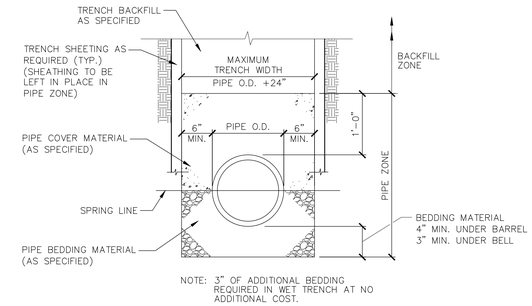


FOUNDATION SECTION VIEW

NOTES:

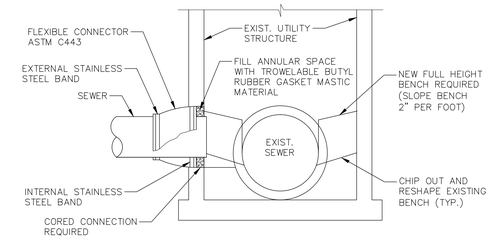
1. CONSTRUCT A FORMED INVERT FROM NEW SEWER LINE TO ALLOW FLOW TO THE EXISTING PIPE.
2. POUR SHELF TO THE LOWER HALF OF THE EXISTING PIPE.
3. CUT AND REMOVE THE TOP HALF OF THE EXISTING PIPE TO WITHIN 6" OF THE MANHOLE WALLS AFTER THE INVERT AND SHELF HAVE BEEN FORMED.

B1 DOGHOUSE MANHOLE CONNECTION BASE
N.T.S.

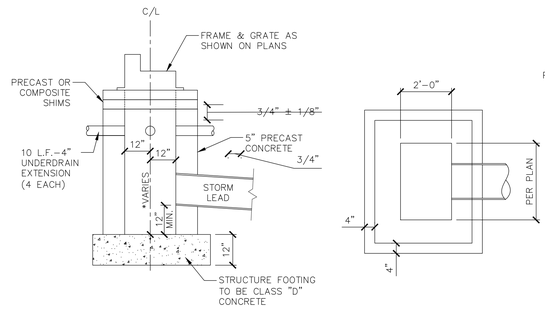


NOTE: 3" OF ADDITIONAL BEDDING REQUIRED IN WET TRENCH AT NO ADDITIONAL COST.

D5 CLASS "B" BEDDING DETAIL FOR FLEXIBLE SEWER
N.T.S.



C5 NEW CONNECTION TO EXISTING UTILITY STRUCTURE
N.T.S.



D5 RECTANGULAR CATCH BASIN
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WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

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PARKING LOT

ISSUE:

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CHECKED BY:	DAS
APPROVED BY:	JAL
SCALE:	AS SHOWN

SHEET TITLE:
CONSTRUCTION DETAILS

SHEET NUMBER:
C-901

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PARKING LOT LANDSCAPE AREA	
PARKING LOT PAVED AREA	234,774SF
REQUIRED INTERIOR PKG LDSC AREA	23,477SF
PROVIDED INTERIOR PKG LDSC AREA	29,152SF (12.4%)
REQUIRED INTERIOR PARKING TREES	131
PROVIDED INTERIOR PARKING TREES	131

GENERAL NOTES

SEE L0101 & L0102 FOR ENLARGED PLANTING PLAN AND PLANT LIST

NOTES:

1. SNOW IS NOT TO BE STORED IN LANDSCAPE ISLANDS
2. NO IRRIGATION IS PLANNED AT THIS TIME

PERIMETER LANDSCAPE REQUIREMENTS	
WEST PERIMETER: 380'	
REQUIRED TREES (2 PER 50')	16
PROVIDED TREES	19
REQUIRED SHRUBS (8 PER 50')	64
PROVIDED SHRUBS	99
NORTH PERIMETER: 720'	
REQUIRED TREES (2 PER 50')	29
PROVIDED TREES	34
REQUIRED SHRUBS (8 PER 50')	115
PROVIDED SHRUBS	148
EAST PERIMETER: 380'	
REQUIRED TREES (2 PER 50')	16
PROVIDED TREES	18
REQUIRED SHRUBS (8 PER 50')	64
PROVIDED SHRUBS	82

A1 LANDSCAPE PLAN - OVERALL

0 15' 30' 60'

SCALE: 1" = 30'

N

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DRAWN BY:	BRR
CHECKED BY:	XXX
APPROVED BY:	XXX
SCALE:	AS SHOWN

SHEET TITLE:

LANDSCAPE PLAN - OVERALL

SHEET NUMBER:

L-100

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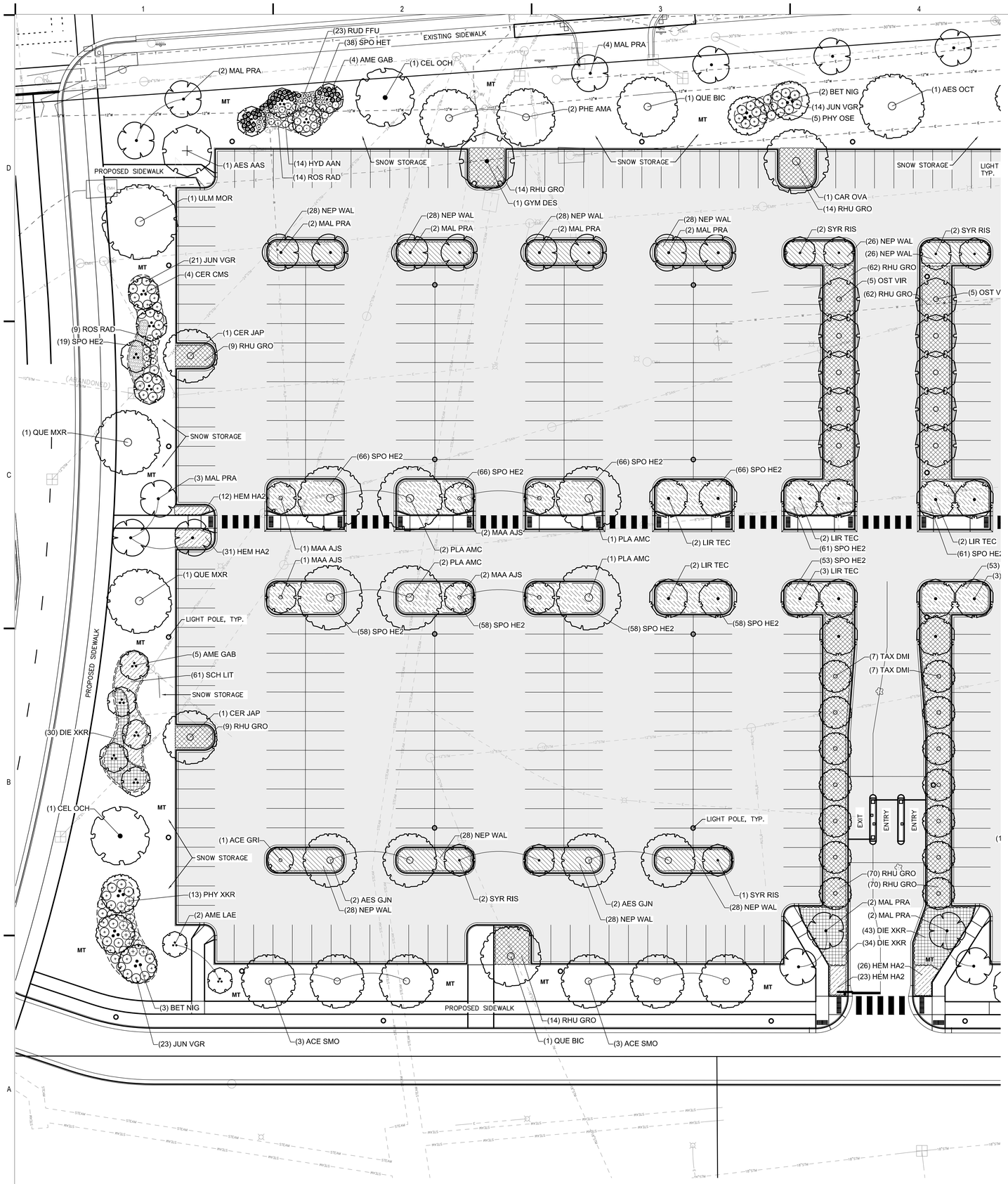

PLANT SCHEDULE

ORNAMENTAL TREES	BOTANICAL NAME	COMMON NAME	SIZE	QTY
ACE GRI	Acer griseum	Paperbark Maple	1.5" BB	3
AME LAE	Amelanchier laevis	Allegheny Serviceberry	6`-8` BB	8
AME GAB	Amelanchier x grandiflora `Autumn Brilliance`	Autumn Brilliance Serviceberry	8` multi-stem	14
CER CMS	Cercis canadensis `Minnesota Strain`	Minnesota Strain Eastern Redbud	8`-10` clump BB	9
MAA AJS	Maackia amurensis `JFS-Schiectel 1`	MaacNificent Amur Maackia	8`-10` BB	14
MAL PRA	Malus `Prairifire`	Prairifire Crabapple	6`-8` BB	34
OST VIR	Ostrya virginiana	Eastern Hop Hornbeam (Ironwood)	2.0" BB	19
SYR RIS	Syringa reticulata `Ivory Silk`	Ivory Silk Japanese Tree Lilac	8`-10` clump BB	13
SHADE TREES	BOTANICAL NAME	COMMON NAME	SIZE	QTY
ACE SMO	Acer saccharum `Morton`	Crescendo Maple	2.5" BB	7
AES GJN	Aesculus glabra `JN Select`	Early Glow Ohio Buckeye	2.5" BB	8
AES OCT	Aesculus octandra	Yellow Buckeye	2.5" BB	2
AES AAS	Aesculus x arnoldiana `Autumn Splendor`	Autumn Splendor Arnold Buckeye	2.5" BB	2
BET NIG	Betula nigra	River Birch	8`-10` clump BB	11
CAR OVA	Carya ovata	Shagbark Hickory	2.5" BB	1
CAT SPE	Catalpa speciosa	Northern Catalpa	2.5" BB	1
CEL OCC	Celtis occidentalis	Hackberry	2.5" BB	2
CEL OCH	Celtis occidentalis `Chicagoland`	Chicagoland Hackberry	2.5" BB	3
CER JAP	Cercidiphyllum japonicum	Katsura Tree	2.5" BB	4
GYM DES	Gymnocladus dioica `Espresso`	Espresso Kentucky Coffeetree	2.5" BB	7
LIR TEC	Liriodendron tulipifera `Emerald City`	Emerald City Tuliptree	2.5" BB	18
MET GLY	Metasequoia glyptostroboides	Dawn Redwood	2.5" BB	1
PHE AMA	Phellodendron amurense `Macho`	Macho Amur Corktree (male seedless)	2.0" BB	4
PLA AMC	Platanus x acerifolia `Morton Circle`	Exclamation London Planetree	2.5" BB	12
QUE BIC	Quercus bicolor	Swamp White Oak	2.0" BB	3
QUE MXR	Quercus macrocarpa x robur	Heritage Oak	2.0" BB	3
TAX DMI	Taxodium distichum `Mickelson`	Shawnee Brave Baldcypress	2.5" BB	14
ULM MOR	Ulmus `Morton`	Accolade Elm	2.5" BB	1
DECIDUOUS SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	QTY
DIE XKR	Diervilla x 'G2X885411'	Kodiak® Red Diervilla	3 gal.	107
PHY XKR	Diervilla x 'G2X885411' TM	Kodiak Red Diervilla	5 gal.	62
HYD AAN	Hydrangea arborescens `Annabelle`	Annabelle Hydrangea	36" ht.	37
PHY OSE	Physocarpus opulifolius `Seward`	Summer Wine Ninebark	36" ht.	24
RHU GRO	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	3 gal.	400
ROS RAD	Rosa x `Radrazz` TM	Knock Out Shrub Rose	24" ht.	45
EVERGREEN SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	QTY
JUN VGR	Juniperus virginiana `Grey Owl`	Grey Owl Juniper	24" spread	105
ORNAMENTAL GRASSES	BOTANICAL NAME	COMMON NAME	SIZE	QTY
SCH LIT	Schizachyrium scoparium	Little Bluestem	1 gal.	61
SPO HET	Sporobolus heterolepis	Prairie Dropseed	1 gal.	83
SPO HE2	Sporobolus heterolepis	Prairie Dropseed	1 gal.	1,363
PERENNIALS	BOTANICAL NAME	COMMON NAME	SIZE	QTY
HEM HA2	Hemerocallis x 'Happy Returns'	Happy Returns Daylily	1 gal.	135
NEP WAL	Nepeta x faassenii 'Walker's Low'	Walker's Low Catmint	1 gal.	556
RUD FFU	Rudbeckia fulgida fulgida	Orange Coneflower	1 gal.	53

LANDSCAPE LEGEND

- ALUMINUM EDGER
- MT MANICURED TURF (SEED)

A1 LANDSCAPE PLAN - WEST

0 10' 20' 40'

SCALE: 1" = 20'

N

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DRAWN BY:	BRR
CHECKED BY:	XXX
APPROVED BY:	XXX
SCALE:	AS SHOWN

SHEET TITLE:
LANDSCAPE PLAN - WEST

SHEET NUMBER:
L-101

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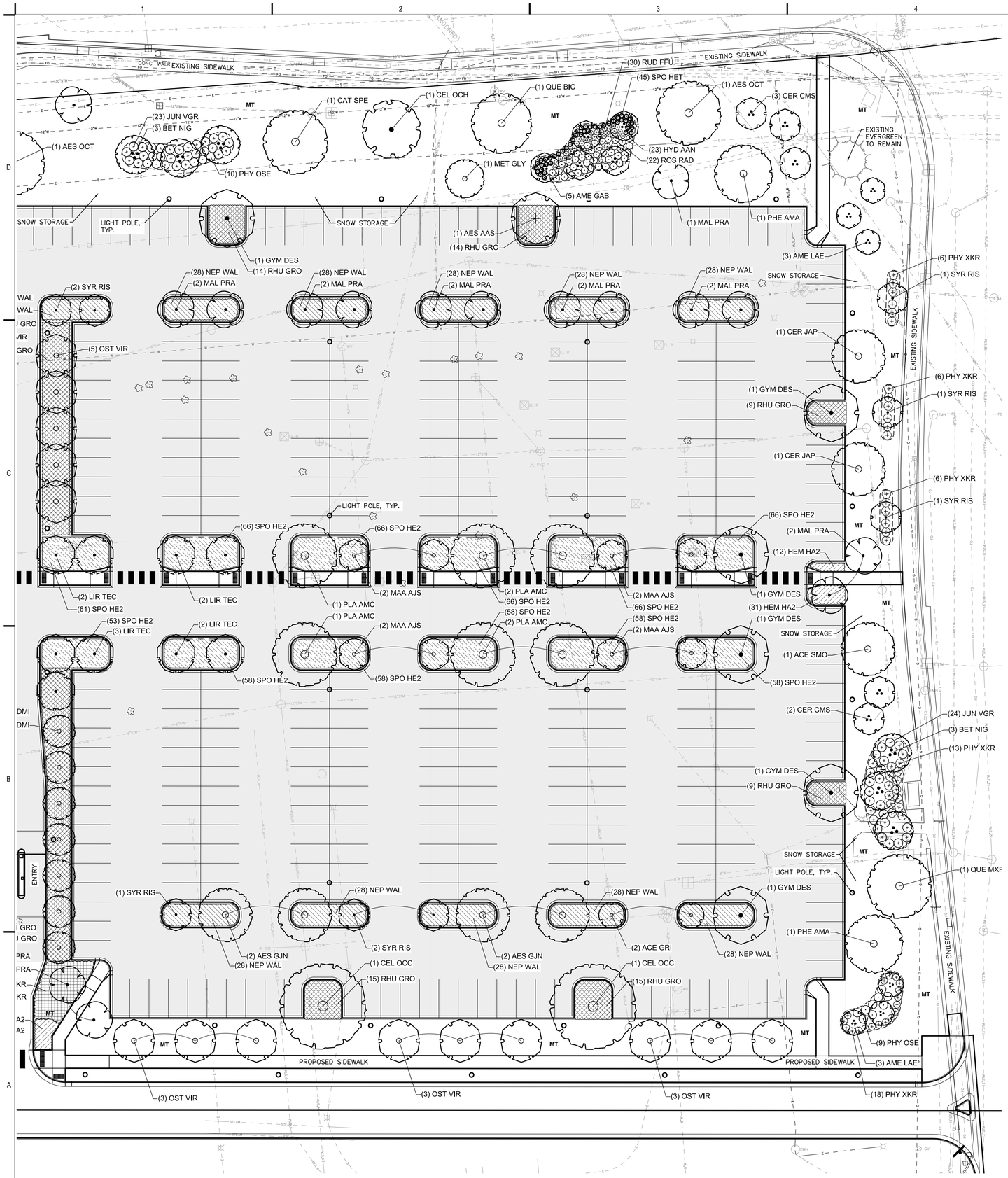

PLANT SCHEDULE

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MAA AJS	Maackia amurensis `JFS-Schiectel 1`	MaacNificent Amur Maackia	8`-10` BB	14
MAL PRA	Malus `Prairifire`	Prairifire Crabapple	6`-8` BB	34
OST VIR	Ostrya virginiana	Eastern Hop Hornbeam (Ironwood)	2.0" BB	19
SYR RIS	Syringa reticulata `Ivory Silk`	Ivory Silk Japanese Tree Lilac	8`-10` clump BB	13

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AES GJN	Aesculus glabra `JN Select`	Early Glow Ohio Buckeye	2.5" BB	8
AES OCT	Aesculus octandra	Yellow Buckeye	2.5" BB	2
AES AAS	Aesculus x arnoldiana `Autumn Splendor`	Autumn Splendor Arnold Buckeye	2.5" BB	2
BET NIG	Betula nigra	River Birch	8`-10` clump BB	11
CAR OVA	Carya ovata	Shagbark Hickory	2.5" BB	1
CAT SPE	Catalpa speciosa	Northern Catalpa	2.5" BB	1
CEL OCC	Celtis occidentalis	Hackberry	2.5" BB	2
CEL OCH	Celtis occidentalis `Chicagoland`	Chicagoland Hackberry	2.5" BB	3
CER JAP	Cercidiphyllum japonicum	Katsura Tree	2.5" BB	4
GYM DES	Gymnocladus dioica `Espresso`	Espresso Kentucky Coffeetree	2.5" BB	7
LIR TEC	Liriodendron tulipifera `Emerald City`	Emerald City Tuliptree	2.5" BB	18
MET GLY	Metasequoia glyptostroboides	Dawn Redwood	2.5" BB	1
PHE AMA	Phellodendron amurense `Macho`	Macho Amur Corktree (male seedless)	2.0" BB	4
PLA AMC	Platanus x acerifolia `Morton Circle`	Exclamation London Planetree	2.5" BB	12
QUE BIC	Quercus bicolor	Swamp White Oak	2.0" BB	3
QUE MXR	Quercus macrocarpa x robur	Heritage Oak	2.0" BB	3
TAX DMI	Taxodium distichum `Mickelson`	Shawnee Brave Baldcypress	2.5" BB	14
ULM MOR	Ulmus `Morton`	Accolade Elm	2.5" BB	1

DECIDUOUS SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	QTY
DIE XKR	Diervilla x 'G2X885411'	Kodiak® Red Diervilla	3 gal.	107
PHY XKR	Diervilla x 'G2X885411' TM	Kodiak Red Diervilla	5 gal.	62
HYD AAN	Hydrangea arborescens `Annabelle`	Annabelle Hydrangea	36" ht.	37
PHY OSE	Physocarpus opulifolius `Seward`	Summer Wine Ninebark	36" ht.	24
RHU GRO	Rhus aromatica 'Gro-Low'	Gro-Low Fragrant Sumac	3 gal.	400
ROS RAD	Rosa x `Radrazz` TM	Knock Out Shrub Rose	24" ht.	45

EVERGREEN SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	QTY
JUN VGR	Juniperus virginiana `Grey Owl`	Grey Owl Juniper	24" spread	105

ORNAMENTAL GRASSES	BOTANICAL NAME	COMMON NAME	SIZE	QTY
SCH LIT	Schizachyrium scoparium	Little Bluestem	1 gal.	61
SPO HET	Sporobolus heterolepis	Prairie Dropseed	1 gal.	83
SPO HE2	Sporobolus heterolepis	Prairie Dropseed	1 gal.	1,363

PERENNIALS	BOTANICAL NAME	COMMON NAME	SIZE	QTY
HEM HA2	Hemerocallis x 'Happy Returns'	Happy Returns Daylily	1 gal.	135
NEP WAL	Nepeta x faassenii 'Walker's Low'	Walker's Low Catmint	1 gal.	556
RUD FFU	Rudbeckia fulgida fulgida	Orange Coneflower	1 gal.	53

LANDSCAPE LEGEND

- - - - -	ALUMINUM EDGER
MT	MANICURED TURF (SEED)

A1 LANDSCAPE PLAN - EAST

0 10' 20' 40'

SCALE: 1" = 20'

N

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WEST CAMPUS DEVELOPMENT
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9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

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DRAWN BY:	BRR
CHECKED BY:	XXX
APPROVED BY:	XXX
SCALE:	AS SHOWN

SHEET TITLE:

LANDSCAPE PLAN - EAST

SHEET NUMBER:

L-102

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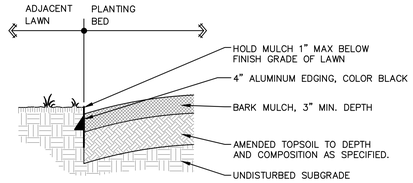
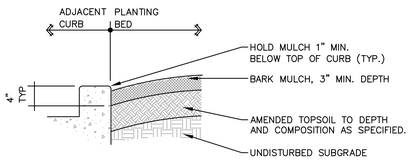
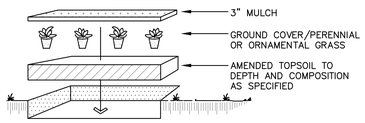


5 ALUMINUM PLANT BED EDGE



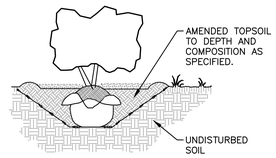
4 PLANT BED EDGE AT CURB



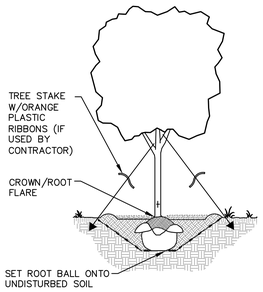
- LAYOUT PLANT MATERIAL AT SPACING AS SHOWN PER PLANT MATERIALS SCHEDULE
- HAND BROADCAST UNIFORM 3" MULCH THROUGHOUT PLANTING BED
- FLOOD IMMEDIATELY & WATER FREQUENTLY PER WRITTEN SPECIFICATIONS
- PLANT SIZES SPECIFIED ARE MINIMUM ACCEPTABLE

3 ORNAMENTAL GRASS / PERENNIAL PLANTING DETAIL

- EXCAVATE PLANTING PIT TWICE THE DIAMETER OF BALL & EQUAL IN DEPTH
- LOOSEN SUBSOIL W/PICK TO ENSURE POROSITY
- PLACE PLANTING SOIL IN PLANTING PIT & FOOT TAMP
- SELECT BEST VIEWING ANGLE, LIFT STOCK BY BALL & PLACE IN PLANTING PIT
- UNWRAP TOP HALF OF ROOT BALL
- BACKFILL TO FINISHED GRADE WITH AMENDED TOPSOIL & TAMP
- FORM 3" SAUCER TO ENCIRCLE STOCK & FILL WITH 3" MULCH
- WATER IMMEDIATELY & FREQUENTLY.
- PLANT SIZES SPECIFIED ARE MINIMUM ACCEPTABLE



2 SHRUB PLANTING DETAIL



- PRIOR TO DIGGING TREE, MARK NORTH SIDE OF TRUNK. INSTALL TREE IN SAME ORIENTATION.
- EXCAVATE PLANTING PIT 3–TIMES THE DIA. & APROXIMATELY THE HEIGHT OF ROOT BALL DEPTH. ROOT FLARE SHALL BE AT OR SLIGHTLY HIGHER THAN ADJACENT F.G.
- LOOSEN SUBSOIL W/PICK TO ENSURE POROSITY.
- SELECT BEST VIEWING ANGLE, LIFT STOCK BY BALL AND PLACE IN PLANTING PIT.
- CUT AND REMOVE ALL STRING AND WIRE AND UNWRAP TOP HALF OF ROOT BALL. BACKFILL PLANTING PIT WITH EXISTING SOIL UP TO BASE OF ROOT FLARE.
- PACK BACKFILL AROUND BASE OF ROOT BALL TO STABILIZE IT.
- BACKFILL REMAINDER OF PLANTING HOLE USING WATER PERIODICALLY TO REDUCE AIR POCKETS.
- FORM 3" HT. SAUCER IN 6'–0" DIAMETER AROUND TREE & FILL WITH 3" MULCH.
- KEEP MULCH 1–2 INCHES AWAY FROM TRUNK.
- WATER IMMEDIATELY & FREQUENTLY.
- PLANT SIZES SPECIFIED ARE MINIMUM ACCEPTABLE.

1 TREE PLANTING DETAIL

LANDSCAPING NOTES:

1. VERIFY EXISTING AND PROPOSED CONDITIONS, UTILITIES, PIPES, AND STRUCTURES, ETC. PRIOR TO BIDDING AND CONSTRUCTION.
2. INSPECT THE SITE PRIOR TO COMMENCING WORK. DOCUMENT IN WRITING AND PHOTOGRAPH EXISTING CONDITIONS WITHIN, AND IN AREAS ADJACENT TO, THE LIMITS OF CONSTRUCTION. PROVIDE DIGITAL COPIES OF PHOTOGRAPHS TO THE LANDSCAPE ARCHITECT. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES NOT DOCUMENTED IN THE SUBMITTAL PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES.
3. REFER TO GEOTECHNICAL REPORT FOR INFILTRATION RATES AND SOIL TYPES / CONDITIONS.
4. SEE WRITTEN SPECIFICATIONS AND DETAILS FOR PLANTING METHODS, REQUIREMENTS, SOIL TESTING, MATERIALS, EXECUTION AND PLANT PROTECTION, PLANT STAKING METHODS, PLANT PIT DIMENSIONS, BACKFILL AND OTHER RELATED REQUIREMENTS.
5. PLANT PLACEMENT IS REQUIRED AS SHOWN ON THE LAYOUT, PLANTING, AND OTHER DRAWINGS.
6. PLANT NAMES ARE ABBREVIATED ON THE DRAWINGS. SEE PLANT LIST FOR SYMBOLS, ABBREVIATIONS, BOTANICAL/COMMON NAMES, SIZES, ESTIMATED QUANTITIES (IF GIVEN) AND OTHER REMARKS.
7. MAINTAIN AND WARRANT PLANT MATERIALS AS DESCRIBED IN WRITTEN SPECIFICATIONS.
8. PLANT BEDS AND TREE PLANTING PITS ARE TO RECEIVE 3" DEEP LAYER OF DECORATIVE STONE OR MULCH PER WRITTEN SPECIFICATIONS AND DETAILS. REFER TO DRAWINGS FOR LOCATIONS.
9. FORM 72–INCH, OR AS OTHERWISE INDICATED, WATERING BASIN AROUND TREES NOT INSTALLED IN PAVED AREAS.
10. MAINTAIN 72–INCH DIAMETER MINIMUM CLEAR SOIL AREA AROUND ALL TREES IN MANICURED TURF AREAS. SHOVEL CUT TREE RINGS AND MULCH WITH SPECIFIED DEPTH OF MULCH. SEE PLANTING DETAILS.
11. FINE GRADE, RAKE, AND ENSURE POSITIVE DRAINAGE AWAY FROM STRUCTURES AND THROUGHOUT SITE WITHIN THE LIMITS OF CONSTRUCTION, WITH ACCURATELY SET FLOW LINES. LOW SPOTS OR PONDING OF SURFACE WATER WILL NOT BE ACCEPTED IN THE FINAL WORK. ROCKS OR DEBRIS WILL NOT BE ACCEPTED. FINAL GRADE TOLERANCES ARE +/–0.1 FOOT MAXIMUM.
12. WHERE PROVIDED, AREA TAKEOFFS AND PLANT QUANTITY ESTIMATES ARE FOR INFORMATION ONLY. LANDSCAPE CONTRACTOR IS RESPONSIBLE TO CONDUCT QUANTITY TAKE–OFFS FOR PLANT MATERIALS AND SIZES SHOWN ON PLANS. PLANT SYMBOLS INDICATED ON THE PLAN TAKE PRECEDENCE IN CASE OF DISCREPANCIES BETWEEN CALLOUTS AND THE PLANT LIST.
13. COORDINATE THE INSTALLATION OF PLANT MATERIAL WITH INSTALLATION OF ADJACENT PAVEMENTS, DRAINAGE, CURB AND RELATED STRUCTURES WITH OTHER TRADES.
14. RESTORE AREAS OF THE SITE, OR ADJACENT AREAS, WHERE DISTURBED. DAMAGE CAUSED DURING LANDSCAPE INSTALLATION TO EXISTING CONDITIONS AND IMPROVEMENTS IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.
15. UNLESS OTHERWISE INDICATED, PLACE SHRUBS, PERENNIALS AND ORNAMENTAL GRASSES IN STRAIGHT ROWS, EQUALLY SPACED.
16. FOLLOWING TESTING & ANALYSIS OF TOPSOIL, INCORPORATION OF RECOMMENDED AMENDMENTS, AND TOPSOIL PLACEMENT, ALL PLANT BED AREAS SHALL BE PREPARED AS DESCRIBED IN WRITTEN SPECIFICATIONS.
17. TAKE NECESSARY SCHEDULING AND OTHER PRECAUTIONS TO AVOID WINTER, CLIMATIC, OR OTHER DAMAGE TO PLANTS.
18. PLANTING BEDS ARE TO BE SEPARATED FROM ADJACENT TURF AREAS WITH ALUMINUM EDGING AS SPECIFIED ON DRAWINGS. INSTALL AT LOCATIONS INDICATED ON DRAWINGS AND PER LANDSCAPE DETAILS.
19. PLANT SUBSTITUTIONS WILL NOT BE PERMITTED UNLESS THE LANDSCAPE CONTRACTOR CAN DEMONSTRATE THE PLANTS ARE NOT AVAILABLE FROM NURSERY SOURCES LOCATED WITHIN 100 MILES FROM THE PROJECT SITE. ANY PROPOSED PLANT SUBSTITUTION WILL REQUIRE PRIOR REVIEW AND WRITTEN ACCEPTANCE BY THE LANDSCAPE ARCHITECT.
20. PROVIDE TREE STAKING AS DESCRIBED IN WRITTEN SPECIFICATIONS.

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PARKING LOT

ISSUE:

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CHECKED BY:	XXX
APPROVED BY:	XXX
SCALE:	AS SHOWN

SHEET TITLE:
LANDSCAPE DETAILS

SHEET NUMBER:
L-900

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NOTE :

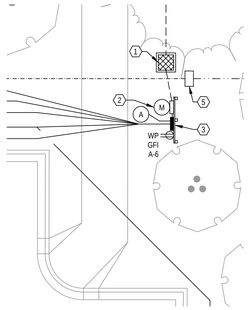
PHOTOS REPRESENT A GUIDE - NOT NECESSARILY ACTUAL EXACT DIRECTION FOR THIS PROJECT

D1 PANEL MOUNTING DETAIL

SCALE: NTS

D2 METER PEDISTAL MOUNTING DETAIL

SCALE: NTS



D3 ENLARGED PLAN - ELECTRICAL SERVICE

SCALE: NTS

ABBREVIATIONS

GF - GFCI PROTECTION
WP - WEATHER-PROOF IN-USE COVER FOR WET LOCATIONS.

ELECTRICAL SYMBOLS

- SITE POLE
- SPECIAL OUTLET
- CR — CARD READER
- DUPLEX RECEPTACLE

CONDUIT TYPES

- ELECTRICAL CONTRACTOR INSTALLED 1" CONDUIT FOR POWER
- WE ENERGIES INSTALLED CONDUIT(S)
- ELECTRICAL CONTRACTOR INSTALLED 1" CONDUIT WITH PULL STRING FOR TELECOMMUNICATIONS.
- MCW INSTALLED 1" CONDUIT WITH FIBER OPTIC CABLING FOR TELECOMMUNICATIONS

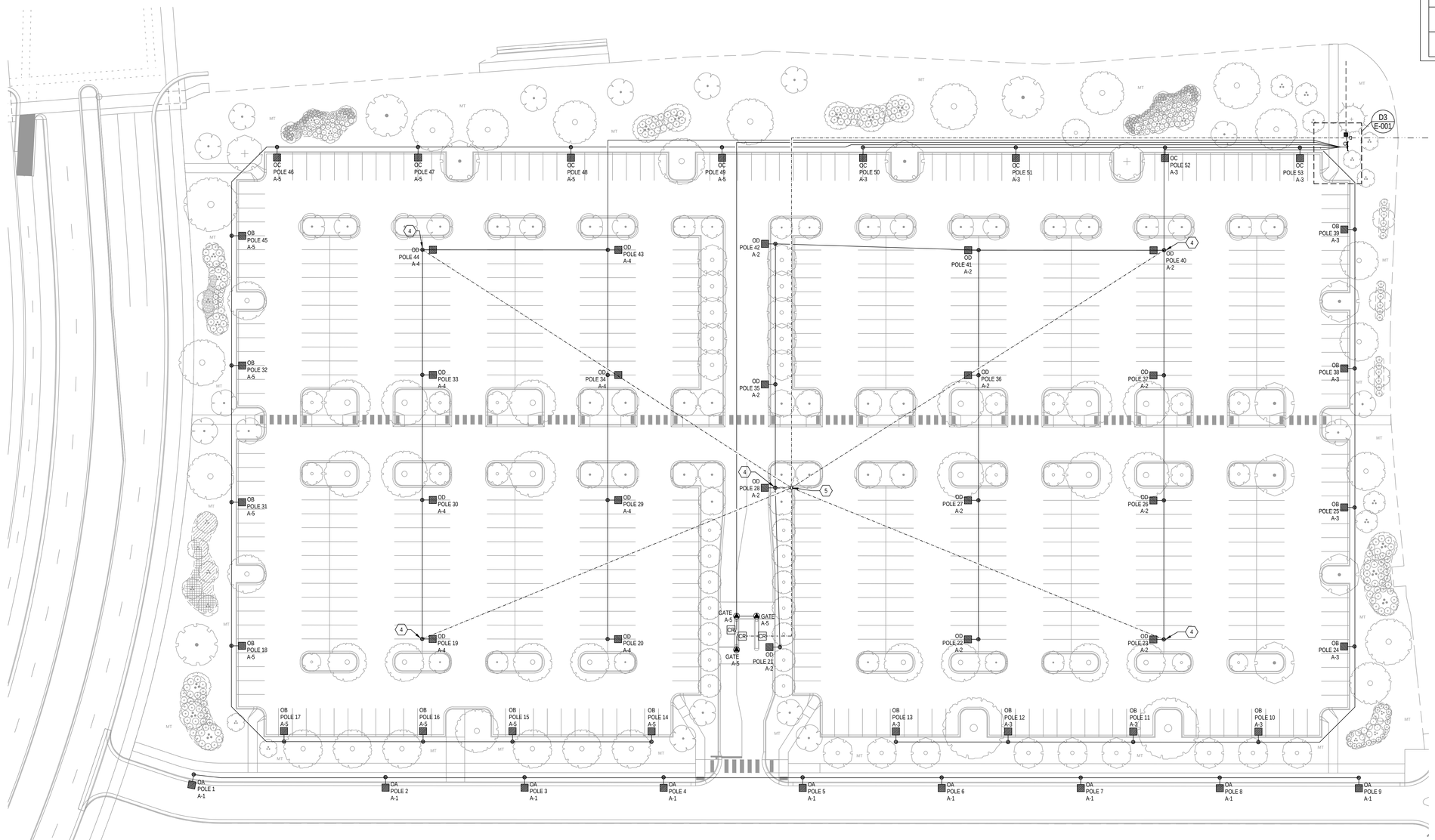
0 15' 30' 60'

SCALE: 1" = 30'

ELECTRICAL SHEET INDEX	
SHEET NUMBER	SHEET NAME
E-001	SITE PLAN - ELECTRICAL
E-002	ELECTRICAL SCHEDULES AND DETAIL
E-003	ELECTRICAL SPECIFICATIONS
E-004	SITE PLAN - LIGHTING PHOTOMETRICS
E-005	LIGHT FIXTURE CUT SHEETS

VIEW LOCATION LEGEND

D1	D2	D3	D4	D5	D6
C1	C2	C3	C4	C5	C6
B1	B2	B3	B4	B5	B6
A1	A2	A3	A4	A5	A6



A1 SITE PLAN - ELECTRICAL

SCALE: 1"=30'-0"

GENERAL NOTES

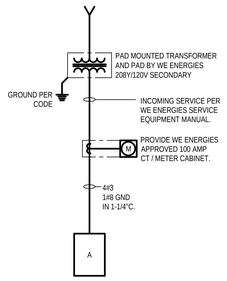
1. LOCATE POLES 3'-0" FROM THE EDGE OF THE CURB TO THE CENTER OF THE POLE BASE.
2. PROVIDE DATA ROUGH-IN, (2) 4" SQUARE BOXES AND (1) 1"C. WITH PULL STRING FOR GATE OPERATOR AND CARD READER. STUB UP 6" AFG FOR LOW VOLTAGE GATE CONTROL WIRING. COORDINATE FINAL LOCATION IN FIELD WITH CONSTRUCTION MANAGER. LOW VOLTAGE WIRING PROVIDED BY OTHERS.
3. ALL TELECOMMUNICATION EQUIPMENT, HAND HOLES, CAMERAS AND CONDUITS ARE DESIGNED BY OTHERS AND WILL BE SHOWN ON OUR DRAWINGS FOR CONVENIENCE. ALL ITEMS SHALL BE ROUGHED IN BY THE BY THE ELECTRICAL CONTRACTOR. ANY QUESTIONS OR CONCERNS RELATING TO THIS INFORMATION INCLUDING MOUNTING AND FINAL LOCATIONS SHALL BE DIRECTED THE SECURITY DESIGNER.
4. SITE LIGHTING CONTROLS BASIS OF DESIGN:
   - 4.1. LIGHTS SHALL SWEEP "ON" AT DUSK IN RESPONSE TO DAYLIGHT LEVELS VIA PHOTOSENSOR WITHIN INTEGRAL OCCUPANCY SENSORS.
     - 4.1.1. SITE POLES WITH INTEGRATED OCCUPANCY SENSORS:
       - 4.1.1.1. DURING ANY PERIOD OF TIME THAT NO ACTIVITY IS DETECTED FOR 15 MINUTES, THESE LIGHTS SHALL REDUCE BY AT LEAST 30% POWER OUTPUT VIA OCCUPANCY SENSOR. LIGHTS SHALL RETURN TO FULL BRIGHTNESS UPON DETECTION OF ACTIVITY.
   - 4.2. TO FIELD CONFIGURE THE OCCUPANCY SENSORS, PROVIDE (1) WATTSTOPPER FSIR-100.

KEYED NOTES THIS SHEET

1. TRANSFORMER
2. METER
3. PROVIDE 100A 208Y/120V, 3 PH, 4W, 30-SPACE PANEL NEAR NEW TRANSFORMER. WE ENERGIES SHALL PROVIDE ELECTRICAL METER, METER-SOCKET BY ELECTRICAL BY CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL:
   - (2) 4"x4"x9' TREATED WOOD POST (BURIED POSTS 4'-0" DEEP)
   - A 3/4" THICK SHEET OF TREATED PLYWOOD (SIZED AS REQUIRED)

   THE FOLLOWING ITEMS ARE TO BE MOUNTED TO THIS STRUCTURE:
   - ELECTRICAL PANEL WITH A NEMA-3R ENCLOSURE.
   - METER SOCKET / METER

   REFER TO PHOTO DETAILS D1/E-001 AND D2/E-001 AS A GUIDE. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH WE ENERGIES PRIOR TO INSTALLATION.
4. POLE MOUNTED CAMERA PROVIDED AND INSTALLED BY OTHERS. ELECTRICAL CONTRACTOR TO PROVIDE ROUGH-IN, INCLUDING:
   - COORDINATE CAMERA MOUNTING HEIGHT WITH TELECOMMUNICATIONS / SECURITY CONTRACTOR.
   - PROVIDE CONDUIT INTO THE POLE OR PROVIDE A DUAL CHAMBER POLE BY HAPCO.
   - PROVIDE HOLES FOR MOUNTING CAMERA AND FEEDING THE CABLING THROUGH TO THE CAMERA.
5. COMMUNICATIONS QUAZITE BOX, SIZE AS REQUIRED. VERIFY FINAL LOCATION PRIOR TO INSTALLATION.



A6 PARTIAL POWER RISER DIAGRAM - PANEL "A"

SCALE: NTS

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PARKING LOT

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APPROVED BY:	EDS
SCALE:	AS SHOWN

SHEET TITLE:

SITE PLAN - ELECTRICAL

SHEET NUMBER:

E-001

PANEL: A — New Construction

VOLTAGE:	208Y/120V	BUS RATING:	100 A	FEED-THRU LUGS:	NO
PHASE / WIRE:	3P / 4W	MAIN TYPE:	MCB	MOUNTING:	SURFACE
SVC. ENTRANCE LABEL:	YES	MAIN RATING:	100 A	ENCLOSURE:	TYPE 3R
MINIMUM AIC:	TBD	SPD:	YES	200% NEUTRAL:	NO
IS SERIES RATED ALLOWED:	NO			PANELBOARD TYPE:	PANELBOARD

CKT	DESCRIPTION	TRIP	POLE	CB TYPE	LOAD TYPE	LOAD	A		B		C		LOAD	LOAD TYPE	CB TYPE	POLE	TRIP	DESCRIPTION	CKT
1	SITE POLES 1 - 9	20	1		L	846	846	1128					1128	L		1	20	SITE POLES 21, 22, 23, 27, 26, 28, 35, 36, 37, 40, 41, 42	2
3	SITE POLES 10 - 13, 24, 25, 38, 39, 50 - 53	20	1		L	1128			1128	752			752	L		1	20	SITE POLES 19, 20, 29, 30, 33, 34, 43, 44	4
5	SITE POLES 14 - 17, 18, 31, 32, 45, 46 - 49	20	1		L	1128					1128	180	180	R		1	20	RECEPTACLE	6
7	SPO - GATE	20	1		EQ	1500	1500												8
9																			10
11																			12
13																			14
15																			16
17																			18
19																			20
21																			22
23																			24
25	SPARE	20	1													1	20	SPARE	26
27	SPARE	20	1													1	20	SPARE	28
29	SPARE	20	1													1	20	SPARE	30
							3474		1880		1308								

PANEL TOTALS	
TOTAL CONN. LOAD:	6662.00
TOTAL EST. DEMAND:	7907.50
TOTAL CONN. AMPS:	18.51
TOTAL EST. DEMAND AMPS:	21.97

NOTES:
1. SHARED NEUTRALS ARE NOT ALLOWED.

LOAD TYPE	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND
L	4982	125%	6227.5
EQ	1500	100%	1500
R	180	100%	180

CIRCUIT BREAKER TYPE ABBREVIATIONS:	LOAD TYPE ABBREVIATIONS:		
GFCI = GROUND FAULT CIRCUIT INTERRUPTER	EQ = EQUIPMENT	L = LIGHTING	R = RECEPTACLE

LIGHT FIXTURE SCHEDULE

GENERAL NOTES:
A. SEE SPECIFICATION SECTION FOR ADDITIONAL INFORMATION REGARDING FIXTURE AND INSTALLATION REQUIREMENTS.
B. NO EQUALS.
C. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED PARTS AND PIECES FOR A COMPLETE INSTALLATION.

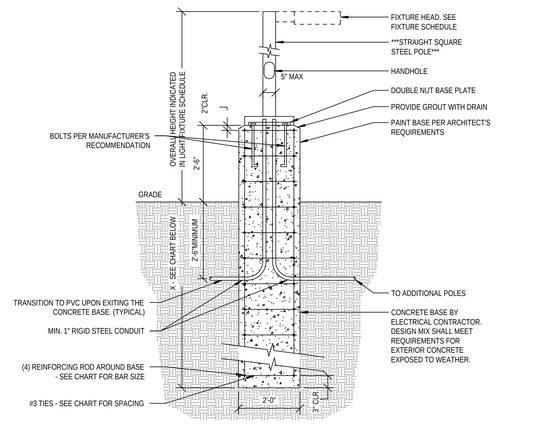
NOTES:
1. OVERALL FIXTURE HEIGHT IS 22'-6" AFG. PROVIDE COOPER SQUARE STRAIGHT STEEL POLES: SSS-5-M-20-S-COLOR-TBD-1-X

TAG	PERFORMANCE & ELECTRICAL DATA				LIGHT FIXTURE PROPERTIES			SEE NOTE
	LUMENS	KELVIN TEMP	LOAD	FIXTURE VOLTAGE	DESCRIPTION	MANUFACTURER	CATALOG SERIES	
OA	11,521	4000	94 VA	120	SITE LIGHTING - TYPE II	LUMARK	PRV-C25-D-UNV-T2-SA-COLOR-MS/DIM-L40	1
OB	11,538	4000	94 VA	120	SITE LIGHTING - TYPE III	LUMARK	PRV-C25-D-UNV-T3-SA-COLOR-MS/DIM-L40	1
OC	11,538	4000	94 VA	120	SITE LIGHTING - TYPE III WITH HOUSE SIDE SHIELD	LUMARK	PRV-C25-D-UNV-T3-SA-COLOR-HSS-MS/DIM-L40	1
OD	12,226	4000	94 VA	120	SITE LIGHITNG - TYPE V	LUMARK	PRV-C25-D-UNV-T5-SA-COLOR-MS/DIM-L40	1

SPECIAL PURPOSE OUTLET SCHEDULE

NOTES:
1.

TAG	DRIVING	POWER			FEED FROM		BREAKER		WIRING				SEE NOTE
		VOLTAGE	PHASE	ELECTRICAL LOAD IN VA	PANEL	CIRCUIT	SIZE	POLES	PHASE & NEUTRAL QTY	PHASE & NEUTRAL SIZE	GROUND SIZE	COND.	
GATE	GATE	120	1	500	A	7	20	1	2	12	12	1/2"	



NOTES:
1. A DRILLED 2'-0" DIA. HOLE SHALL BE USED AS THE FORM FOR THE CONCRETE BASE IN UNDISTURBED EARTH, EXCLUDING FILL MATERIAL.
2. BACKFILL AROUND CONCRETE BASE WITH COMPACTED GRANULAR BASE A MINIMUM OF 2'-0" IN ALL DIRECTIONS IN EXCAVATED AREAS OR IN EXISTING SOIL CONTAINING FILL OF OBJECTIONABLE MATERIAL.
3. DESIGN BASED ON IBC 2015:
   100 MPH WIND SPEED - EXPOSURE C (1609.4.3)
   150 PSF/FT - LATERAL SOIL PRESSURE (1610)
   OCCUPANCY CATEGORY II (1604.5)
   IMPORTANCE FACTOR 1.0 (ASCE 7 TABLE 1.5-1)

POLE HEIGHT	X	REBAR SIZE	#3 TIE SPACING
21'-0" - 35'-0"	103"	#5	10"

A5 LIGHT FIXTURE POLE BASE DETAIL
SCALE: NTS

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SHEET TITLE:
ELECTRICAL SCHEDULES & DETAIL

SHEET NUMBER:
E-002

GENERAL ELECTRICAL PROVISIONS

WORK INCLUDED IN CONTRACT
MENTION OF ANY ARTICLE, OPERATION OR METHOD REQUIRES THAT CONTRACTOR SHALL PROVIDE SAME AND PERFORM EACH OPERATION IN COMPLETE ACCORDANCE WITH CONDITIONS STATED. CONTRACTOR SHALL PROVIDE ALL MATERIAL, LABOR, EQUIPMENT, AND TRANSPORTATION AS NECESSARY TO COMPLETE PROJECT IN COMPLIANCE WITH CONTRACT DOCUMENTS. IN GENERAL, WORK INCLUDES EVERYTHING ESSENTIAL FOR COMPLETE ELECTRICAL SYSTEM IN OPERATING ORDER AS SHOWN ON DRAWINGS AND INDICATED IN SPECIFICATIONS.

ALL MATERIALS SHALL BE SUITABLY STORED AND PROTECTED PRIOR TO INSTALLATION AND ALL WORK SHALL BE PROTECTED AFTER INSTALLATION, DURING CONSTRUCTION, AND PRIOR TO ACCEPTANCE.

SHALL ANY CONFLICTS OCCUR WITHIN OR BETWEEN SPECIFICATIONS, DRAWINGS, OR OTHER DOCUMENTS, CONTRACTOR SHALL INCLUDE THE MORE EXPENSIVE ALTERNATIVE.

BIDDING PROCEDURES
BASE BID SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT AS SHOWN ON CONSTRUCTION DRAWINGS AND AS REQUIRED AND SPECIFIED.

BASE BID SHALL NOT INCLUDE ANY CONDITIONS OR QUALIFYING STATEMENTS, SHALL BE IN STRICT ACCORDANCE WITH SPECIFICATION REQUIREMENTS AND SHALL BE BASED UPON INSTALLATION OF MATERIALS AND EQUIPMENT AS SPECIFIED.

PERMITS AND LICENSES
CONTRACTOR SHALL PREPARE AND SUBMIT REQUIRED APPLICATIONS AND DRAWINGS FOR ALL CONSTRUCTION PERMITS AND APPROVALS TO AUTHORITIES HAVING JURISDICTION OVER PROJECT. ALL LICENSES AND PERMITS REQUIRED SHALL BE SECURED AND PAID FOR BY CONTRACTOR AND SHALL BE SECURED BY THE CONTRACTOR BEFORE STARTING WORK.

SHORT CIRCUIT / COORDINATION / ARC FLASH STUDY
ELECTRICAL CONTACTOR SHALL RETAIN THE SERVICES OF A THIRD PARTY TO PERFORM A SHORT CIRCUIT / COORDINATION / ARC FLASH STUDY FOR THE PROJECT.

ELECTRICAL CONTRACTOR SHALL PROVIDE THE THIRD PARTY WITH ALL NECESSARY INFORMATION TO COMPLETE THE STUDY.

STUDY SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL

CONTRACTOR SHALL NOT RELEASE ANY ELECTRICAL DISTRIBUTION EQUIPMENT FOR MANUFACTURE BEFORE THE STUDY HAS BEEN SUBMITTED, REVIEWED, AND APPROVED.

STANDARDS AND CODES
WORK SHALL BE INSTALLED IN ACCORDANCE WITH NATIONAL, STATE, AND LOCAL CODES, ORDINANCES, LAWS, AND REGULATIONS. COMPLY WITH ALL APPLICABLE OSHA REGULATIONS.

MATERIALS SHALL HAVE UL OR ETL LABEL WHERE UL OR ETL STANDARD AND / OR TEST EXISTS.

ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH RECOGNIZED INDUSTRY STANDARDS AND SHALL FOLLOW EQUIPMENT MANUFACTURER'S PUBLISHED INSTRUCTIONS.

MATERIALS AND EQUIPMENT
MATERIALS AND EQUIPMENT REQUIRED SHALL BE NEW, UNLESS OTHERWISE INDICATED.

EQUIPMENT SUPPLIED SHALL BE BASED ON MATERIALS AND EQUIPMENT OF MANUFACTURERS SPECIFIED. NO SUBSTITUTIONS WILL BE ALLOWED.

SUBMITTALS
THE FOLLOWING EQUIPMENT SHALL BE SUBMITTED FOR REVIEW AND APPROVAL BY THE ENGINEER.
- SHORT CIRCUIT / COORDINATION / ARC FLASH STUDY
- ELECTRICAL SERVICE AND DISTRIBUTION EQUIPMENT.
- LIGHTING FIXTURES

CLEANING AND PAINTING
RUBBISH RESULTING FROM WORK SHALL BE REMOVED AND DISPOSED OF ON DAILY BASIS IN SUCH MANNER AS TO BE ACCEPTABLE TO OWNER.

CONTRACTOR SHALL CLEAN ALL EXPOSED IRON WORK, INTERIOR AND EXTERIOR OF CABINETS AND PULL BOXES, ETC.

WHERE PAINTED SURFACES OF EQUIPMENT HAVE BEEN DAMAGED OR RUSTED DURING CONSTRUCTION, CONTRACTOR SHALL PAINT SAME TO MATCH FINAL.

TESTS AND ACCEPTANCE
OPERATION OF EQUIPMENT AND ELECTRICAL SYSTEMS DOES NOT CONSTITUTE ACCEPTANCE OF WORK BY OWNER. FINAL ACCEPTANCE IS TO BE MADE AFTER CONTRACTOR HAS ADJUSTED HIS EQUIPMENT AND DEMONSTRATED THAT IT FULFILLS REQUIREMENTS OF DRAWINGS AND SPECIFICATIONS.

UPON COMPLETION OF INSTALLATION, CONTRACTOR SHALL FURNISH CERTIFICATES OF APPROVAL AND OCCUPANCY PERMITS FROM AUTHORITIES HAVING JURISDICTION. CONTRACTOR SHALL DEMONSTRATE THAT ALL WORK IS COMPLETE AND IN PERFECT OPERATING CONDITION, WITH RACEWAY AND CONDUIT SYSTEM PROPERLY GROUNDED, WIRING FREE FROM GROUNDS AND SHORTS, AND ENTIRE INSTALLATION IS FREE FROM ANY PHYSICAL DEFECTS.

IN PRESENCE OF ENGINEER AND OWNER, CONTRACTOR SHALL DEMONSTRATE PROPER OPERATION OF ALL SYSTEMS.

UNLESS OTHERWISE INDICATED, ALL WORK SHALL BE GUARANTEED FOR A MINIMUM OF ONE (1) YEAR AFTER DATE OF FINAL ACCEPTANCE.

DEFINITIONS
A/E - ARCHITECT AND / OR ENGINEER

PROVIDE - FURNISHED, INSTALLED, AND COMPLETELY WIRED AND CONNECTED BY ELECTRICAL CONTRACTOR

NEC – NATIONAL ELECTRICAL CODE
.
CONTRACTOR - PERSON OR GROUP RESPONSIBLE FOR PROJECT CONSTRUCTION.

ELECTRICAL SERVICE AND DISTRIBUTION

PRODUCTS
NEW PANELBOARDS SHALL BE PROVIDED AS FOLLOWS.
- POWER PANELS – SQUARE D I-LINE STYLE.
- 480Y/277 VOLT LIGHTING PANELS – SQUARE D NF STYLE PANELBOARDS WITH BOLT-ON BREAKERS.
- 208Y/120 VOLT LIGHTING PANELS – SQUARE D NQ STYLE PANELBOARDS WITH BOLT-ON BREAKERS.

PROVIDE NEW DISTRIBUTION / BRANCH PANELS COMPLETE WITH CIRCUIT BREAKERS AND AIC RATING AS INDICATED.

PANELBOARD BUSSING SHALL BE COPPER.

NEW TRANSFORMERS SHALL BE SELF-VENTILATED, DRY-TYPE TRANSFORMERS WITH THE FOLLOWING CHARACTERISTICS.
- COPPER OR ALUMINUM WINDINGS.
- PRIMARY AND SECONDARY VOLTAGES AS INDICATED ON THE PLANS.
- MINIMUM OF SIX 2-1/2% PRIMARY SIDE TAPS. TWO OF THE SIX SHALL BE ABOVE THE RATED PRIMARY VOLTAGE AND FOUR OF THE SIX BEING BELOW THE RATED PRIMARY VOLTAGE.
- RATED FOR 150° C RISE BY RESISTANCE, WITH OVERALL 220° C INSULATION RATING.

SAFETY SWITCHES SHALL BE HEAVY DUTY, FUSED WITH CLASS R INDICATING TYPE FUSES. PROVIDE THREE SPARE FUSES OF EACH FUSE TYPE TO OWNER. PROVIDE NEMA 1 SWITCHES FOR INDOOR USE, NEMA 3R FOR OUTDOOR, AND NEMA 4X FOR CORROSIVE AREAS.

MULTI-PHASE CIRCUIT BREAKERS SHALL HAVE SINGLE HANDLE TRIPS FOR ALL PHASES. HANDLE TIES, OR OTHER FIELD INSTALLED COMMON TRIP HARDWARE IS NOT PERMITTED.

PROVIDE ELECTRICAL DISTRIBUTION EQUIPMENT WITH SURGE PROTECTIVE DEVICES WHERE INDICATED ON THE PLANS AND ON THE ONE-LINE DIAGRAM.

EXECUTION
PROVIDE TEMPORARY SERVICE IN AREAS OF CONSTRUCTION FOR ALL TRADES, INCLUDE LIGHTING AND 120 VOLT POWER. COSTS TO PROVIDE AND TO REMOVE TEMPORARY SERVICE ELECTRICAL EQUIPMENT AND POWER DISTRIBUTION SHALL BE INCLUDED IN THE CONTRACTOR'S BASE BID. UTILITY ENERGY COSTS FOR TEMPORARY POWER SHALL BE PAID BY OWNER.

PROVIDE NEW UTILITY SERVICE IN ACCORDANCE WITH DRAWING AND AS REQUIRED BY LOCAL UTILITY. COORDINATE AND PROVIDE ALL EQUIPMENT INCLUDING BUT NOT LIMITED TO CONDUITS, METER SOCKETS, TERMINATION BOXES, METER STACKS, TRANSFORMER CONCRETE PADS, BOLLARDS, CONDUCTORS, AS REQUIRED BY LOCAL UTILITY. CONTRACTOR IS RESPONSIBLE FOR METER APPLICATION AND PAYING ALL FEES INVOLVED.

EXISTING PERMANENT SERVICE SHALL REMAIN IN PLACE. NEW FEEDERS AND PANEL DISTRIBUTION BOARDS SHALL BE PROVIDED IN ACCORDANCE WITH DRAWINGS.

GROUNDING SHALL BE IN ACCORDANCE WITH ALL CODES.

CONTRACTOR TO PROVIDE ALL ARC FLASH LABELING ON ELECTRICAL EQUIPMENT AS REQUIRED BY NFPA 70E, STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.

GROUNDING

PRODUCTS
ALL GROUNDING CONDUCTORS SHALL BE COPPER.

GROUND RODS SHALLBE COPPER-CLAD STEEL, ¾" DIAMETER, 10' LONG.

MECHANICAL CONNECTIONS SHALL BE MADE WITH EXOTHERMIC WELDS OR WITH MECHANICAL CONNECTORS AT THE CONTRACTOR'S OPTION. MECHANICAL CONNECTORS SHALL BE BRONZE AND SHALL BE IRREVERSIBLE.

GROUND BUSSES SHALL BE 1/4" THICK BY 2" HIGH IN CROSS SECTION. LENGTHS AS INDICATED ON THE PLANS.

EXECUTION
REMOVE SURFACE CONTAMINANTS AT ALL CONNECTION POINTS.

GROUND ELECTRICAL SYSTEMS AND EQUIPMENT AS REQUIRED BY THE NEC, THE LOCAL UTILITY, AND LOCAL ORDINANCES.

PROVIDE SEPARATE GROUNDING CONDUCTOR WITH EACH FEEDER CONDUIT AND BRANCH CIRCUIT CONDUIT. DO NOT RELY ON METAL RACEWAY AS THE SOLE EQUIPMENT GROUND FOR ELECTRICAL CIRCUITS. BOND GROUND CONDUCTOR AT BOTH ENDS OF RACWAYS WITH BOLTED GROUNDING LUGS.

SIZE GROUNDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

FIRMLY ATTACH GROUNDS BEFORE CIRCUITS ARE ENERGIZED.

ELECTRICAL WIRING METHODS

ACCEPTABLE WIRING METHODS SHALL BE INDIVIDUAL CONDUCTORS IN CIRCULAR RACEWAYS. EXCEPTIONS ARE AS FOLLOWS.
- CONDUCTORS FOR SYSTEMS RATED 50 VOLTS AND LESS AND ROUTED 8' AFF OR HIGHER, MAY BE INSTALLED IN FREE AIR WITHOUT RACEWAYS IN UNFINISHED MECHANICAL ROOMS, ELECTRICAL ROOMS, TELECOM CLOSETS. CONDUCTORS INSTALLED UNDER THIS EXCEPTION SHALL HAVE INSULATION RATINGS COMPLIANT WITH THE NEC, APPROPRIATE TO THE CONDITIONS WHERE THE CONDUCTORS ARE LOCATED.
- CONDUCTORS FOR SYSTEMS RATED 50 VOLTS AND LESS AND ROUTED ABOVE ACCESSIBLE CEILINGS CONCEALED FROM VIEW.
  - MAY BE INSTALLED IN FREE AIR WITHOUT RACEWAYS AT THE CONTRACTOR'S OPTION.
  - REVIEW PLANS OF OTHER TRADES AND IDENTIFY ANY AIR-HANDLING PLENUMS. CONDUCTORS INSTALLED UNDER THIS EXCEPTION SHALL HAVE INSULATION RATINGS COMPLIANT WITH THE NEC, APPROPRIATE TO THE CONDITIONS WHERE THE CONDUCTORS ARE LOCATED.
- WHERE SPECIFICALLY INDICATED OTHERWISE ON THE DRAWINGS.

BUILDING WIRE AND CABLE

PRODUCTS
SINGLE CONDUCTOR INSULATED WIRE.

SOLID OR STRANDED CONDUCTOR FOR #10 AWG AND SMALLER. CONDUCTOR #8 AWG AND LARGER SHALL BE STRANDED.

COPPER CONDUCTORS ONLY.

INSULATION VOLTAGE RATING: 600 VOLTS, RATED 75° CELSIUS, UNLESS OTHERWISE INDICATED.

ACCEPTABLE INSULATION TYPES:
- CONCEALED OR EXPOSED DRY INTERIOR LOCATIONS: USE ONLY BUILDING WIRE TYPE THW, THHN / THWN OR XHHW INSULATION.
- WET OR DAMP INTERIOR LOCATIONS: USE ONLY BUILDING WIRE TYPE THW INSULATION.
- EXTERIOR LOCATIONS: USE ONLY BUILDING WIRE TYPE THW, OR USE INSULATION.
- UNDERGROUND LOCATIONS: USE ONLY BUILDING WIRE TYPE THW, OR USE INSULATION.

WIRING CONNECTORS FOR CONDUCTORS #10 AWG AND SMALLER. 3M SCOTCH-LOK COMPRESSION TYPE SOLDERLESS CONNECTORS WITH PLASTIC OUTER SHELL.

WIRING CONNECTORS FOR CONDUCTORS #8 AWG AND LARGER. SOLDERLESS COMPRESSION TYPE CONNECTORS, TOOL AND DIE APPLIED, OF TYPE THAT WILL NOT LOOSEN UNDER VIBRATION OR NORMAL STRAINS. BURNDY "HY-DENT" TYPE OR EQUIVALENT. SPLIT BOLT CONNECTORS ARE NOT ACCEPTABLE.

RUBBER INSULATING ELECTRICAL TAPE: SCOTCH 3M MODEL 23, 30-MIL TAPE.

EXECUTION
CONDUCTOR SHALL NOT BE SMALLER THAN #12 AWG FOR POWER AND LIGHTING CIRCUITS.

CONDUCTOR SHALL NOT BE SMALLER THAN #14 AWG FOR CONTROL CIRCUITS.

ALL WIRES SHALL BE NEW, DELIVERED TO SITE IN UNBROKEN CARTONS, AND SHALL BE LESS THAN ONE YEAR OLD OUT OF MANUFACTURER'S STOCK.

DO NOT DRAW CONDUCTORS INTO CONDUITS UNTIL BUILDING IS ENCLOSED AND WATERTIGHT AND UNTIL WORK THAT MAY CAUSE CONDUCTOR DAMAGE HAS BEEN COMPLETED.

EACH TAP, JOINT, OR SPLICE IN CONDUCTORS #8 AWG AND LARGER SHALL BE TAPED WITH TWO HALF-LAP LAYERS OF VINYL PLASTIC ELECTRICAL TAPE AND FINISH WRAP OF COLOR CODING TAPE, WHERE REQUIRED BY THE NEC OR LOCAL CODES.

CABLE SPLICES SHALL BE MADE ONLY IN DISTRIBUTION AND JUNCTION BOXES.

NEATLY TRAIN AND BUNDLE WIRING INSIDE BOXES, EQUIPMENT, AND PANELBOARDS.

SIZE CONDUIT, OUTLET BOXES, AND OTHER RACEWAY SYSTEM COMPONENTS IN ACCORDANCE WITH NEC REQUIREMENTS AS MINIMUM.

MULTIWIRE BRANCH CIRCUITS ARE NOT PERMITTED. EACH BRANCH CIRCUIT SHALL CONTAIN A DEDICATED NEUTRAL CONDUCTOR FOR EACH PHASE CONDUCTOR. A SINGLE NEUTRAL SHARED BETWEEN MULTIPLE PHASE CONDUCTORS ARE NOT PERMITTED.

INSTALL WIRE COLORS IN ACCORDANCE WITH FOLLOWING:
- BLACK AND RED FOR SINGLE PHASE CIRCUITS AT 120/ 240 VOLTS.
- BLACK, RED, AND BLUE FOR CIRCUITS AT 120 / 208 VOLTS SINGLE OR THREE-PHASE.
- BROWN, ORANGE, AND YELLOW FOR CIRCUITS AT 277 / 480 VOLTS SINGLE OR THREE-PHASE.

NEUTRAL CONDUCTORS: WHITE. WHEN TWO OR MORE NEUTRALS ARE LOCATED IN ONE CONDUIT, INDIVIDUALLY IDENTIFY EACH WITH PROPER CIRCUIT NUMBER.

RACEWAYS AND BOXES

PRODUCTS
METAL CONDUIT:
- RIGID METAL CONDUIT (RMC).
- INTERMEDIATE METAL CONDUIT (IMC).
- ELECTRICAL METALLIC TUBING (EMT).

METAL CONDUIT FITTINGS (BOX TERMINATORS AND COUPLINGS):
- STEEL OR MALLEABLE IRON, ZINC GALVANIZED, OR CADMIUM PLATED.
- SET SCREW STYLE FASTENERS.
- BOX CONNECTORS SHALL HAVE NON-METALLIC INSULATED THROATS.
- DO NOT USE ALUMINUM OR DIE CAST FITTINGS.

LIQUID-TIGHT FLEXIBLE METAL CONDUIT (LFMC).
- INTERLOCKED STEEL CONSTRUCTION WITH PVC SUNLIGHT RESISTANT JACKET.
- FITTINGS: NEMA FB 1. LIQUID-TIGHT, SUITABLE FOR GROUNDING, SUITABLE FOR WET LOCATIONS, TAPERED THREADED HUB, NON-METALLIC MATERIALS.

NON-METALLIC CONDUIT.
- PRODUCT DESCRIPTION: NEMA TC 2: SCHEDULE 40 OR 80 PVC, UL LISTED, AND AS REQUIRED BY NEC. SUNLIGHT RESISTANT.
- RATED FOR 90° CELSIUS CABLE.
- FITTINGS AND CONDUIT BODIES: NEMA TC 3, SCHEDULE 40 OR 80, TO MATCH CONDUIT.

OUTLET BOXES
- INTERIOR OUTLET BOXES SHALL BE GALVANIZED STAMPED STEEL WITH PRE-PUNCHED KNOCK OUTS. SIZE SHALL BE 4-11/16" SQUARE, 2-½" DEEP MINIMUM.
- EXTERIOR OUTLET BOXES SHALL BE CAST FERRALLOY, TYPE FD, CAST FERALLOY. FURNISH GASKETED COVER BY BOX MANUFACTURER.

EXECUTION
MINIMUM RACEWAY SIZE: 1/2", UNLESS OTHERWISE INDICATED.

SPLIT, CRUSHED, OR SCARRED CONDUIT IS NOT ACCEPTABLE.

WELDED CONDUIT IS NOT ACCEPTABLE.

PVC CONDUIT MAY NOT BE USED IN INTERIOR OF BUILDING.

RACEWAY AND BOXES LOCATED AS INDICATED ON DRAWINGS, AND AT OTHER LOCATIONS REQUIRED FOR SPLICES, TAPS, WIRE PULLING, EQUIPMENT CONNECTIONS, AND COMPLIANCE WITH REGULATORY REQUIREMENTS. RACEWAY AND BOXES ARE SHOWN IN APPROXIMATE LOCATIONS UNLESS DIMENSIONED. PROVIDE RACEWAY TO COMPLETE WIRING SYSTEM.

UNDERGROUND (OUTSIDE) MORE THAN 5'-0" OUTSIDE FOUNDATION WALL: PROVIDE SCHEDULE 40 NON-METALLIC CONDUIT, UNLESS OTHERWISE INDICATED.

UNDERGROUND (OUTSIDE) WITHIN 5'-0" FROM FOUNDATION WALL TO INSIDE OF BUILDING: PROVIDE RIGID STEEL CONDUIT. ONCE INSIDE BUILDING PROVIDE STEEL CONDUIT. PROVIDE INTERLOCKING RUBBER GASKETS AROUND RACWAYS PASSING BELOW GRADE THROUGH BUILDING FOUNDATION WALLS. UTILIZE LINK-SEAL TYPE GASKETS OR EQUIVALENT.

WET, DAMP, AND OUTDOOR LOCATIONS: PROVIDE RIGID STEEL CONDUIT. PROVIDE CAST METAL JUNCTION AND PULL BOXES.

DRY LOCATIONS: PROVIDE METAL CONDUIT (RMC, IMC, OR EMT) UNLESS OTHERWISE INDICATED. PROVIDE STAMPED STREEL OR SHEET METAL BOXES.

SUPPORT RACEWAY USING TWO-HOLE MALLEABLE IRON STRAPS, LAY-IN ADJUSTABLE HANGERS, CLEVIS HANGERS, OR SPLIT HANGERS. PROVIDE LIGHT GAUGE STEEL FRAMING FOR RACEWAY TRAPEZE HANGERS OR FOR OTHER RACEWAY SUPPORT AS REQUIRED.

SECURE CONDUITS IN PLACE WITH MALLEABLE CORROSION-PROOF ALLOY STRAPS OR HANGERS. CONDUIT STRAPS USED IN CORROSIVE AREAS SHALL BE PVC COATED.

DO NOT SUPPORT RACEWAY WITH WIRE OR PERFORATED PIPE STRAPS. REMOVE WIRE USED FOR TEMPORARY SUPPORTS.

ROUTE INTERIOR RACEWAYS PARALLEL WITH OR PERPENDICULAR TO WALLS, CEILINGS, AND OTHER PRIMARY ARCHITECTURAL AND STRUCTURAL ELEMENTS.

CUT CONDUIT SQUARE USING SAW OR PIPE CUTTER: DE-BURR CUT ENDS. BRING CONDUIT TO SHOULDER OF FITTINGS. FASTEN SECURELY.

JOIN NON-METALLIC CONDUIT USING CEMENT AS RECOMMENDED BY MANUFACTURER. WIPE NON-METALLIC CONDUIT DRY AND CLEAN BEFORE JOINING. APPLY FULL EVEN COAT OF CEMENT TO ENTIRE AREA INSERTED IN FITTING. ALLOW JOINT TO CURE FOR MINIMUM 20 MINUTES.

INSTALL CONDUIT HUBS TO FASTEN CONDUIT TO CAST BOXES IN DAMP AND WET LOCATIONS.

INSTALL NO MORE THAN EQUIVALENT OF THREE (3) 90 DEGREE BENDS BETWEEN BOXES.

INSTALL CONDUIT BODIES TO MAKE SHARP CHANGES IN DIRECTION, AS AROUND BEAMS.

INSTALL HYDRAULIC ONE-SHOT BENDER TO FABRICATE OR FACTORY ELBOWS FOR BENDS IN METAL CONDUIT LARGER THAN 2" SIZE.

AVOID MOISTURE TRAPS: INSTALL JUNCTION BOX WITH DRAIN FITTING AT LOW POINTS IN CONDUIT SYSTEM.

PROVIDE WATERTIGHT CONDUIT SYSTEM WHERE INSTALLED IN WET LOCATIONS SUCH AS UNDERGROUND, OR WHERE EMBEDDED IN CONCRETE.

CONDUIT RUNS THAT EXTEND THROUGH AREAS OF DIFFERENT TEMPERATURE OR ATMOSPHERIC CONDITIONS OR THAT ARE PARTLY INDOORS AND PARTLY OUTDOORS SHALL BE SEALED, DRAINED, AND INSTALLED IN MANNER THAT WILL PREVENT DRAINAGE OF CONDENSED OR ENTRAPPED MOISTURE INTO CABINETS. MOTORS, OR EQUIPMENT ENCLOSURES.

CONDUIT CONNECTIONS AT MOTORS AND OTHER EQUIPMENT THAT VIBRATES:
- PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT.
- USE DOUBLE LOCKNUTS AND INSULATED BUSHINGS WITH THREADS FULLY ENGAGED.

EXTERIOR UNDERGROUND DIRECT BURIED CONDUITS SHALL BE BURIED AT DEPTH OF NOT LESS THAN 30" BELOW GRADE. UNDERGROUND CONDUITS SHALL SLOPE 1/8" PER FOOT FOR PROPER DRAINAGE. CONDUITS SHALL DRAIN TOWARD MANHOLES AND JUNCTION BOXES. CONDUITS SHALL NOT PITCH TO ELECTRICAL EQUIPMENT.

INSTALL KNOCKOUT CLOSURES IN UNUSED OPENINGS IN BOXES.

CLEAN INTERIOR OF BOXES TO REMOVE DUST, DEBRIS, AND OTHER MATERIAL.

CLEAN EXPOSED SURFACES AND RESTORE FINISH.

SPECIAL PURPOSE OUTLETS

SPECIAL PURPOSE OUTLET SHALL BE LOCATED AS REQUIRED BY EQUIPMENT BEING SERVED.

CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ELECTRICAL CHARACTERISTICS OF ACTUAL EQUIPMENT BEING FURNISHED FOR PROJECT PRIOR TO RACEWAY ROUGH-IN.

ELECTRICAL CONTRACTOR SHALL VERIFY ALL MATERIALS ARE PROVIDED FOR COMPLETE ELECTRICAL INSTALLATION.

ELECTRICAL RECEPTACLES

PRODUCTS
PROVIDE ALL WIRING DEVICE TYPES FROM A SINGLE MANUFACTURER.

FOR BIDDING PURPOSES, DEVICE COLOR AND DEVICE COVER PLATES IN FINISHED AREAS SHALL BE WHITE. VERIFY COLOR AND MATERIAL OF EXISTING DEVICES AND COVER PLATES AND PROVIDE NEW PLATES TO MATCH EXISTING.

ACCEPTABLE MANUFACTURERS ARE:
- HUBBELL.
- LEVITON.
- ARROW-HART, INC.
- PASS & SEYMOUR/LEGRAND

RECEPTACLES
- GENERAL USE DUPLEX CONVENIENCE RECEPTACLE: HEAVY DUTY, SPECIFICATION GRADE, 20 AMP, 125 VOLT, NEMA 5- 20R HUBBEL CAT. NO. HBL5362.
- TAMPER-RESISTANT: COMMERCIAL SPECIFICATION GRADE, 20 AMP DUPLEX, 125 VOLT, NEMA 5-20R, HUBBELL CAT. NO. BR20TR.
- WEATHER-RESISTANT: CORROSION RESISTANT HEAVY DUTY, SPECIFICATION GRADE, 20 AMP DUPLEX, 125 VOLT, NEMA 5-20P. HBL53CM62 (COLOR-YELLOW)
- GFCI RECEPTACLE: HEAVY DUTY, SPECIFICATION GRADE, SELF-TESTING, 20 AMP, 125 VOLT, NEMA 5-20R, UL 2006 COMPLIANT, HUBBELL CAT. NO. GFST20.
- TAMPER-RESISTANT GFCI: HEAVY DUTY COMMERCIAL GRADE, 20 AMP DUPLEX, 125 VOLT, NEMA 5-20R, UL 2006 COMPLIANT, HUBBELL CAT. NO. GFTR20.
- WEATHER-RESISTANT GFCI: EXTRA HEAVY-DUTY GRADE, 20 AMP DUPLEX, 125 VOLT, NEMA 5-20R, UL 2006 COMPLIANT, HUBBELL CAT. NO. GFR5362.

WEATHERPROOF COVERPLATE: GASKETED DIE CAST METAL PLATE WITH HINGED AND GASKETED DEVICE COVERS. COVER SHALL ALLOW CORDS TO BE PLUGGED IN AND COVER CLOSED. PROVIDE INTERMATIC QP1010MC FOR SINGLE DUPLEX RECEPTACLES OR WP1030MC FOR DOUBLE (QUAD) DUPLEX RECEPTACLES.

EXECUTION
RECEPTACLES IN FINISHED SPACES SHALL BE FLUSH MOUNTED.

RECEPTACLES IN UNOCCUPIED ELECTRICAL ROOMS, IT ROOMS, AND MECHANICAL ROOMS MAY BE INSTALLED SURFACE MOUNTED IN 4" SQUARE, ROUNDED CORNER, SURFACE MOUNTED ELECTRICAL BOXES WITH MATCHING ROUNDED CORNER, RAISED METAL COVER PLATES.

DO NOT INSTALL DEVICES UNTIL AFTER WALL FINISHES HAVE BEEN COMPLETELY APPLIED.

RECEPTACLES SHALL NOT BE INSTALLED BACK-TO-BACK IN COMMON STUD WALL CAVITIES SHARED BETWEEN ADJACENT ROOMS.

INSTALL DEVICES AND WALL PLATES PLUMB AND LEVEL.

INSTALL RECEPTACLES WITH GROUNDING POLE ON TOP.

CONNECT WIRING DEVICE GROUNDING TERMINAL TO OUTLET BOX WITH BONDING JUMPER AND BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR.

INSTALL GALVANIZED STEEL PLATES ON OUTLET BOXES AND JUNCTION BOXES IN UNFINISHED AREAS, ABOVE ACCESSIBLE CEILINGS, AND ON SURFACE MOUNTED OUTLETS.

DO NOT USE TERMINALS ON WIRING DEVICES (HOT OR NEUTRAL) FOR FEED-THROUGH CONNECTIONS, LOOPED OR OTHERWISE MAKE CIRCUIT CONNECTIONS VIA WIRE CONNECTORS AND PIGTAILS.
PROVIDE A LAYER OF ELECTRICAL TAPE AROUND PERIMETER SIDES OF EACH WIRING DEVICE SO THAT TERMINATIONS ARE INSULATED.

WHERE GFI PROTECTED RECEPTACLES ARE INDICATED ON DRAWINGS, EACH RECEPTACLE INDICATED SHALL BE A GFI RECEPTACLE. STANDARD RECEPTACLES PROTECTED WITH AN UPSTREAM GFI RECEPTACLE SHALL NOT BE APPROVED.

VERIFY EACH RECEPTACLE DEVICE IS ENERGIZED.

TEST EACH RECEPTACLE DEVICE FOR PROPER POLARITY.

TEST EACH GFCI RECEPTACLE DEVICE FOR PROPER OPERATION
MARK PANEL AND CIRCUIT NUMBER SERVING DEVICE ON BACKSIDE OF DEVICE PLATE WITH A PERMANENT MARKING SYSTEM THAT DOES NOT SHOW THROUGH FRONT OF PLATE.

LIGHTING FIXTURES

PRODUCTS
REFER TO PLANS AND/OR TO LIGHTING FIXTURE SCHEDULE.

RECESSED FIXTURES SHALL INCLUDE THERMAL CUTOFF PROTECTION IN ACCORDANCE WITH THE NEC OR LOCAL CODES, WHICHEVER APPLICATION DICTATES. PROVIDE IC RATED FIXTURES WHEN REQUIRED BY THE NEC.

LIGHT FIXTURES WITH INTEGRAL LED'S SHALL BE PROVIDED WITH THE FOLLOWING COLOR CHARACTERISTICS. SEE LIGHTING FIXTURE SCHEDULE FOR ANY EXCEPTIONS.
- LED'S WITH A COLOR RENDERING INDEX OF 80 OR HIGHER.
- LED COLOR TEMPERATURE:
  - GENERAL INTERIOR LIGHT FIXTURES-3500˚K.
  - TOILET ROOM LIGHT FIXTURES-3000˚K.
  - EXTERIOR LIGHT FIXTURES-4000˚K.

PROVIDE LED LIGHT FIXTURES WITH 0-10 VDC DIMMING CAPABILITY WITH INTEGRAL DRIVERS UNLESS NOTED OTHERWISE IN THE LIGHTING FIXTURE SCHEDULE.

EXECUTION
WHERE LAMPS ARE NEEDED, PROVIDE FIXTURES COMPLETE WITH INITIAL FILL OF LAMPS AS SCHEDULED. PROVIDE BALLASTS AS SPECIFIED.

CONTRACTOR SHALL VERIFY CEILING CONSTRUCTION PRIOR TO ORDERING FIXTURES. PROVIDE RECESS FIXTURES WITH TRIM CHARACTERISTICS COMPATIBLE WITH CEILING TYPES WHERE FIXTURES ARE TO BE INSTALLED.

DEMOLITION

CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY EXISTING CODE VIOLATIONS OBSERVED DURING THE COURSE OF PERFORMING HIS WORK. THE ENGINEER WILL DECIDE IF CORRECTIVE ACTION NEEDS TO BE TAKEN. CORRECTIVE ACTIONS THAT CHANGE THE SCOPE OF THE WORK WILL BE CONSIDERED A CHANGE ORDER AND WILL BE PROCESSED ACCORDINGLY.

EXISTING BUILDINGS SHALL REMAIN IN SERVICE DURING CONSTRUCTION.

PRIOR TO DEMOLITION OR ALTERATION OF STRUCTURES, THE FOLLOWING SHALL BE ACCOMPLISHED:
- OWNER RELEASE OF SUCH STRUCTURE.
- DISCONNECTION OF ELECTRICAL POWER TO EQUIPMENT AND CIRCUITS REMOVED OR AFFECTED BY DEMOLITION WORK.
- ELECTRICAL SERVICES REROUTED OR SHUT OFF OUTSIDE AREA OF DEMOLITION.
- COORDINATE SEQUENCING WITH OWNER AND OTHER CONTRACTORS.
- SURVEY AND RECORD CONDITION OF EXISTING FACILITIES TO REMAIN IN PLACE THAT MAY BE AFFECTED BY DEMOLITION OPERATIONS.

POWER OUTAGES AND INTERRUPTIONS IN BUILDING SYSTEMS SHALL BE HELD TO A MINIMUM AND SHALL BE DONE AT A TIME CONVENIENT TO OWNER. TIME OF ALL OUTAGES SHALL BE SCHEDULED WITH OWNER AND ALL OTHER TRADES AFFECTED BY OUTAGE AT LEAST TEN WORKING DAYS IN ADVANCE.

IDENTIFY SALVAGE ITEMS IN COOPERATION WITH OWNER. OWNER MAY KEEP ANY EQUIPMENT IN DEMOLITION AREAS. CONTRACTOR SHALL DELIVER EQUIPMENT OWNER WANTS SALVAGED TO AREA IN BUILDING DESIGNATED BY OWNER. CONTRACTOR SHALL REMOVE ALL MATERIALS IN DEMOLISHED AREA NOT SALVAGED FROM SITE. CONTRACTOR SHALL OBTAIN RELEASE OF ALL MATERIALS BEFORE DISPOSITION.

AFTER DEMOLITION OPERATIONS ARE COMPLETED, SURVEY CONDITIONS AND RESTORE EXISTING FACILITIES TO THEIR PRE-DEMOLITION CONDITION.

REMOVE ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILINGS. CUT CONDUIT CAST INTO CONCRETE STRUCTURES FLUSH WITH WALLS AND FLOORS. PATCH SURFACES AROUND CONDUITS.

REMOVE CONDUIT, WIRE, BOXES, AND FASTENING DEVICES TO AVOID ANY INTERFERENCE WITH NEW INSTALLATION.

DE-ENERGIZE AND DISCONNECT ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.

DISCONNECT OR SHUT OFF POWER TO AREAS WHERE ELECTRICAL WORK IS TO BE REMOVED. REMOVE ELECTRICAL FIXTURES, EQUIPMENT AND RELATED SWITCHES, OUTLETS, CONDUIT AND WIRING WHICH ARE NOT PART OF FINAL PROJECT.

REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.

REMOVE ABANDONED GROUNDING AND BONDING COMPONENTS, FASTENERS AND SUPPORTS, AND ELECTRICAL IDENTIFICATION COMPONENTS, INCLUDING ABANDONED COMPONENTS ABOVE ACCESSIBLE CEILINGS.

CUT EMBEDDED SUPPORT ELEMENTS FLUSH WITH WALLS AND FLOORS.

FEEDERS, BRANCH CIRCUITS, AND OTHER SYSTEM WIRING WHICH ARE TO REMAIN IN SERVICE BUT WHICH ARE PRESENTLY ROUTED THROUGH AREAS BEING DEMOLISHED SHALL BE REROUTED AROUND DEMOLITION AREA.

WHERE EXISTING BRANCH CIRCUITS ARE TO BE EXTENDED OR MODIFIED, EXISTING CONDUIT THAT HAS NOT BEEN REMOVED MAY BE REUSED AT CONTRACTOR'S DISCRETION. EXISTING CONDUITS THAT ARE REMOVED FROM THEIR EXISTING LOCATION SHALL NOT BE REUSED.

EXISTING WIRING MAY BE SPLICED AND USED TO EXTENT THAT IT WAS NOT REMOVED. EXISTING CONDUCTORS THAT HAVE BEEN REMOVED SHALL NOT BE RE-USED.

REMOVE AND PROTECT ITEMS REQUESTED BY OWNER TO BE SALVAGED AND TRANSPORT TO LOCATION ON SITE DESIGNATED BY OWNER.

CONTRACTOR SHALL TOUR DEMOLITION AREAS WITH OWNER TO DETERMINE STATUS OF ALL EQUIPMENT TO BE REMOVED DURING DEMOLITION.

ALL EQUIPMENT THAT IS TO BE SALVAGED FOR REUSE BY THE OWNER SHALL BE REMOVED BY CONTRACTOR AND TRANSPORTED TO AN OWNER DESIGNATED STORAGE AREA ON SITE.

RACEWAY, BOXES, AND SUPPORTING DEVICES SHALL BECOME PROPERTY OF CONTRACTOR AND SHALL BE REMOVED FROM SITE AND DISPOSED OF BY THE CONTRACTOR.

REMOVED EQUIPMENT SHALL BE DISPOSED OF BY CONTRACTOR UNLESS SPECIFICALLY OTHERWISE INDICATED ON DRAWINGS OR REQUESTED BY OWNER. CONTRACTOR SHALL PROVIDE TRANSPORT FOR DISPOSAL.

ANY HAZARDOUS MATERIALS REMOVED FROM SERVICE AS PART OF THIS PROJECT SHALL BE DISPOSED OF BY THE ELECTRICAL CONTRACTOR IN COMPLETE COMPLIANCE WITH ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL LAWS. EXAMPLES OF SUCH MATERIALS WOULD INCLUDE LIGHT FIXTURE LAMPS AND LIGHT FIXTURE BALLASTS THAT CONTAIN REGULATED ELEMENTS.

REFER TO ARCHITECTURAL DEMOLITION PLANS FOR ADDITIONAL WORK, SUCH AS PAINTING, THAT WOULD REQUIRE THE ELECTRICAL CONTRACTOR TO MASK, TAPE, OR OTHERWISE PROTECT EXISTING ELECTRICAL ITEMS NOT SCHEDULED FOR DEMOLITION.

GRAEF

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MILWAUKEE, WI 53203
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www.graef-usa.com

CLIENT:

MILWAUKEE REGIONAL MEDICAL CENTER

WEST CAMPUS DEVELOPMENT
INFRASTRUCTURE IMPROVEMENTS

PROJECT TITLE:

9201 WATERTOWN PLANK ROAD
PARKING LOT

ISSUE:

PROJECT INFORMATION:

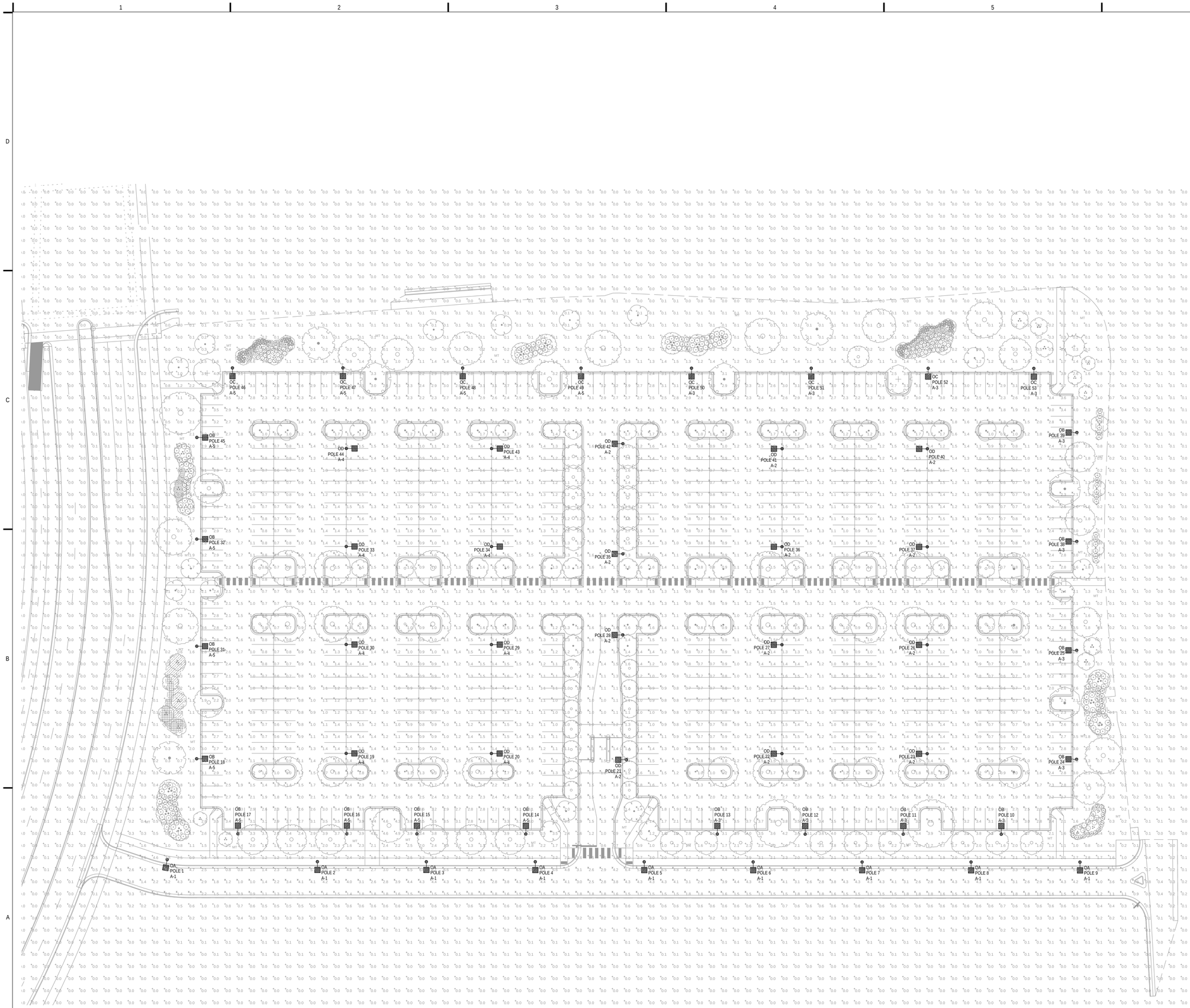
PROJECT NUMBER:	2022-1100.05
DATE:	01/30/2022
DRAWN BY:	BAB
CHECKED BY:	EDS
APPROVED BY:	EDS
SCALE:	AS SHOWN

SHEET TITLE:

ELECTRICAL SPECIFICATIONS

SHEET NUMBER:

E-003



0 15' 30' 60'

SCALE: 1" = 30'

STATS

ALLEY		
Average	3.1	fc
Maximum	6.6	fc
Minimum	0.5	fc
Max/Min	13.2:1	
Average/Min	6.2:1	
OVERALL		
Average	0.6	fc
Maximum	6.6	fc
Minimum	0.0	fc
Max/Min	N/A	
Average/Min	N/A	
PARKING LOT		
Average	1.6	fc
Maximum	4.6	fc
Minimum	0.6	fc
Max/Min	7.7:1	
Average/Min	2.7:1	

A1 SITE PLAN - LIGHTING PHOTOMETRICS

SCALE: 1"=30'-0"

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SITE PLAN - LIGHTING
PHOTOMETRICS

SHEET NUMBER:

E-004

Project		Catalog #		Type	OA - OD
Prepared by		Notes		Date	

Lumark

Prevail LED

Area / Site Luminaire

Product Features

Product Certifications

Interactive Menu

- Ordering Information page 2
- Mounting Details page 3
- Optical Configurations page 4
- Product Specifications page 4
- Energy and Performance Data page 5
- Control Options page 6

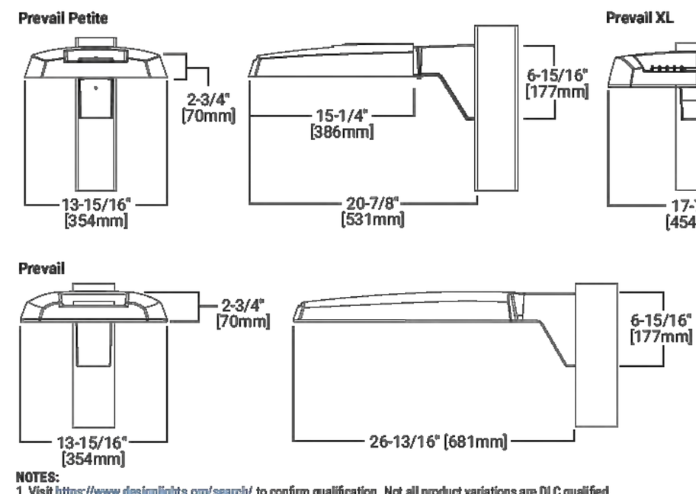
Quick Facts

- Lumen packages range from 4,800 - 52,300 lumens (35W - 350W)
- Replaces 70W up to 1,000W HID equivalents
- Efficacies up to 160 lumens per watt
- Energy and maintenance savings up to 85% versus HID solutions
- Standard universal quick mount arm with universal drill pattern

Connected Systems

- WaveLinx

Dimensional Details



Lumark — Prevail LED

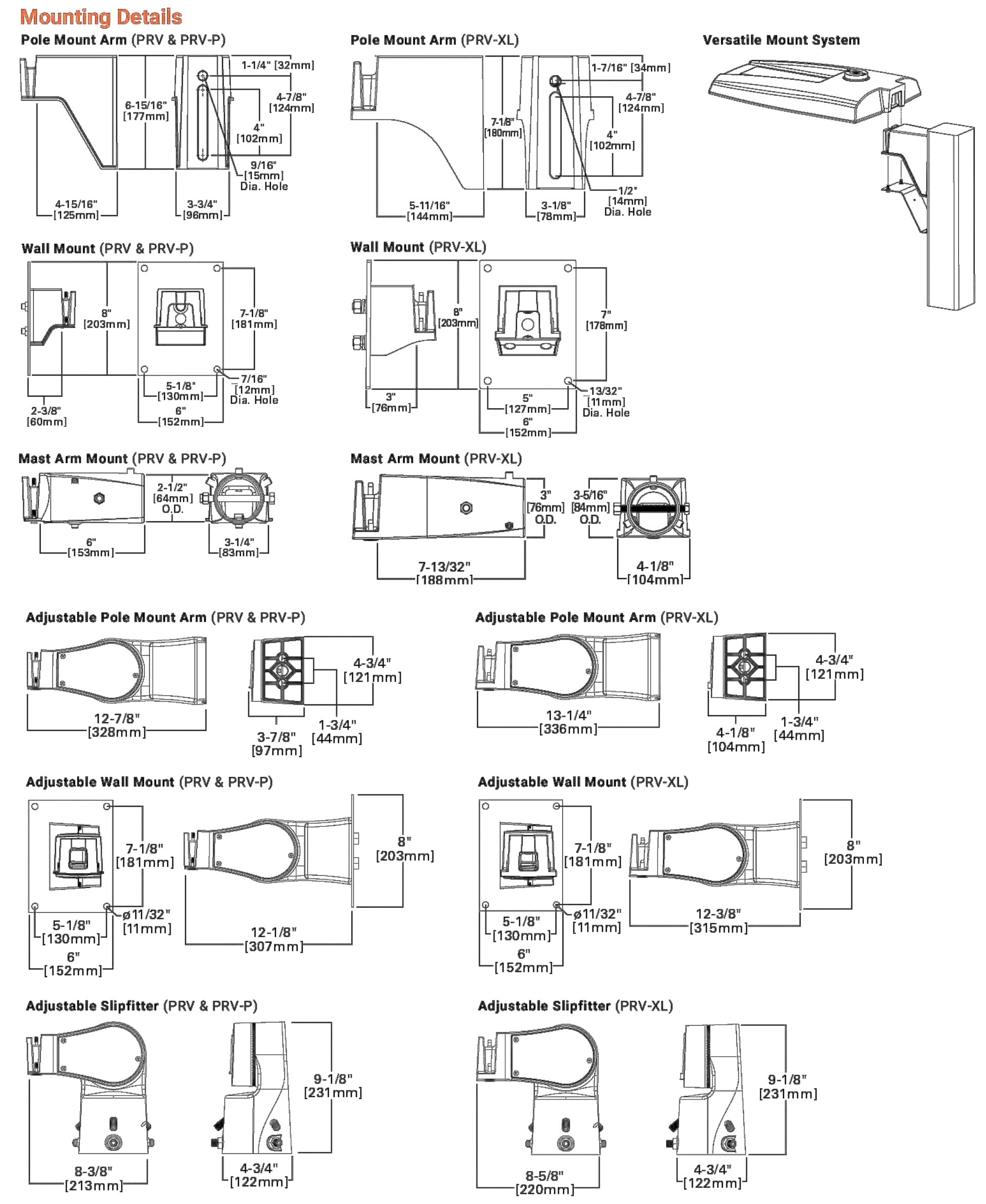
Ordering Information

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Stock Ordering Information

Lumark — Prevail LED

Mounting Details

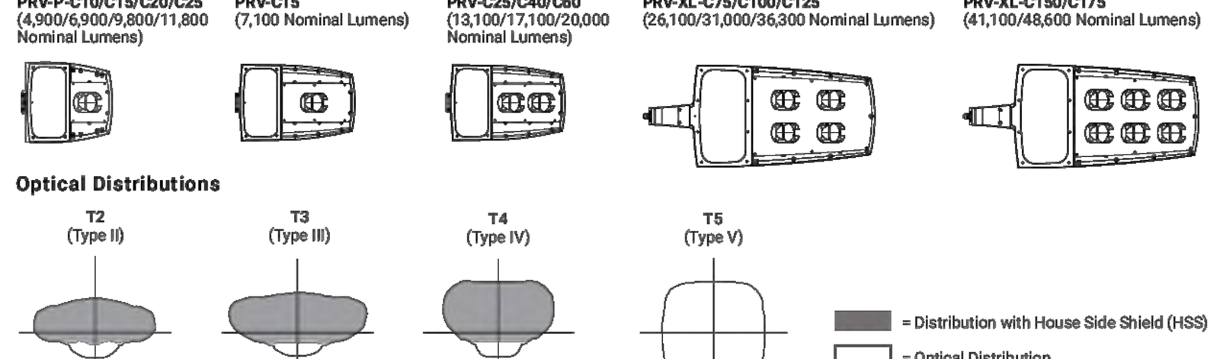


Lumark — Prevail LED

Mounting Details

Mounting Configurations and EPAs

Optical Configurations



Product Specifications

Lumark — Prevail LED

Energy and Performance Data

Power and Lumens

Lumen Maintenance

Configuration	TM-21 Lumen Maintenance (50,000 Hours)	Theoretical L70 (Hours)
Prevail and Prevail Petite at 25°C	91.30%	> 194,000
Prevail and Prevail Petite at 40°C	87.59%	> 134,000
Prevail XL at 25°C	91.40%	> 204,000
Prevail XL at 40°C	89.41%	> 158,000

Sensor Color Reference Table (SPBx)

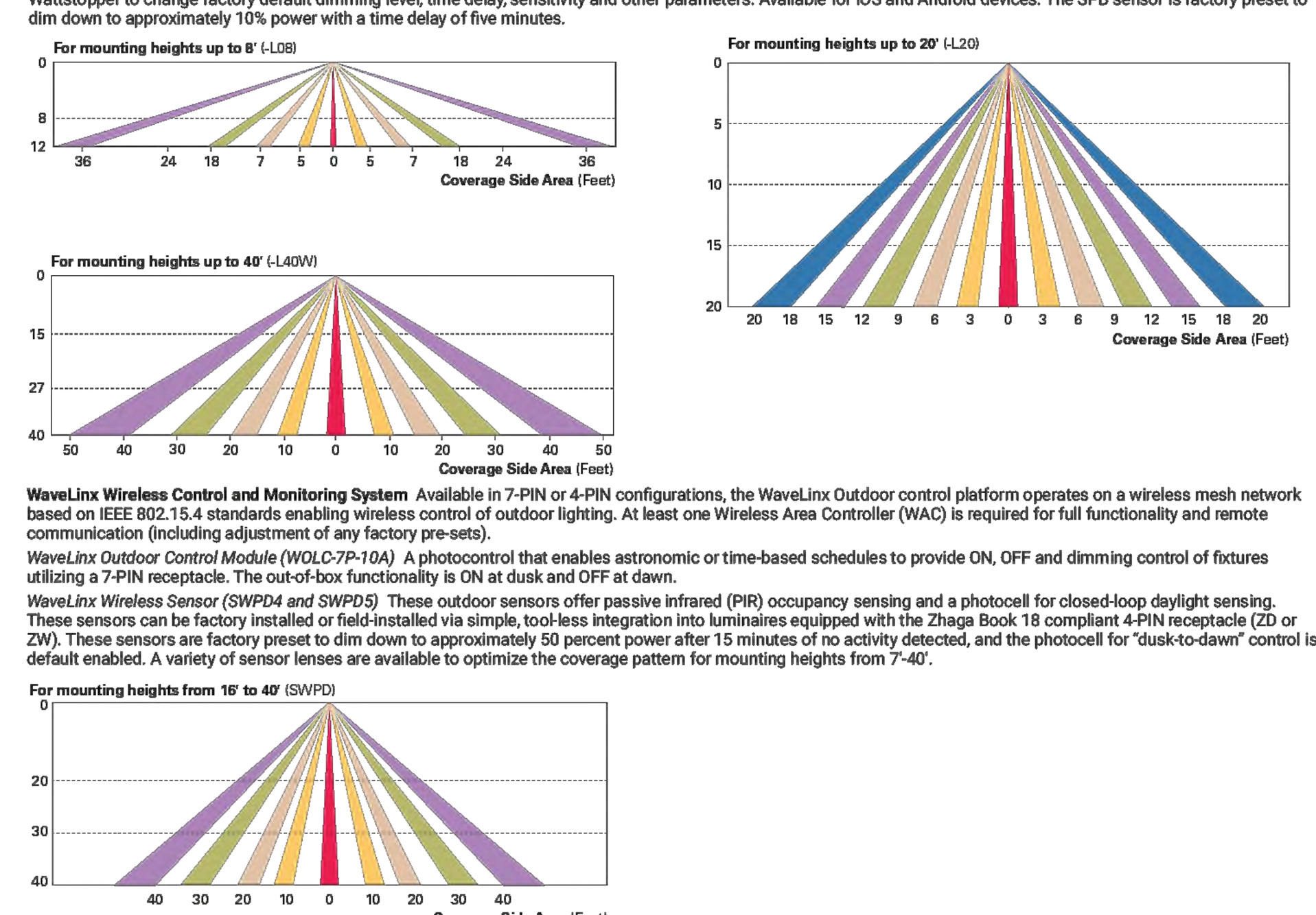
Housing Finish	Sensor Color
AP=Grey	Grey
BZ=Bronze	Bronze
BK=Black	Black
DP=Dark Platinum	Grey
GM=Graphite Metallic	Black
WH=White	White

Lumen Multiplier

Ambient Temperature	Lumen Multiplier
10°C	1.02
15°C	1.01
25°C	1.00
40°C	0.99

Lumark — Prevail LED

Control Options



FIXTURE TYPES OA, OB, OC & OD

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SHEET TITLE:

LIGHT FIXTURE CUT SHEETS

SHEET NUMBER:

E-005