# SITE DEVELOPMENT PLANS **FOR**

# SICK - CAMPUS USA PHASE 1

SECTION 01, TOWNSHIP 27, RANGE 24 BLOOMINGTON, HENNEPIN COUNTY, MN

**PROJECT TEAM:** 

ENGINEER KIMLEY-HORN AND ASSOCIATES, INC.

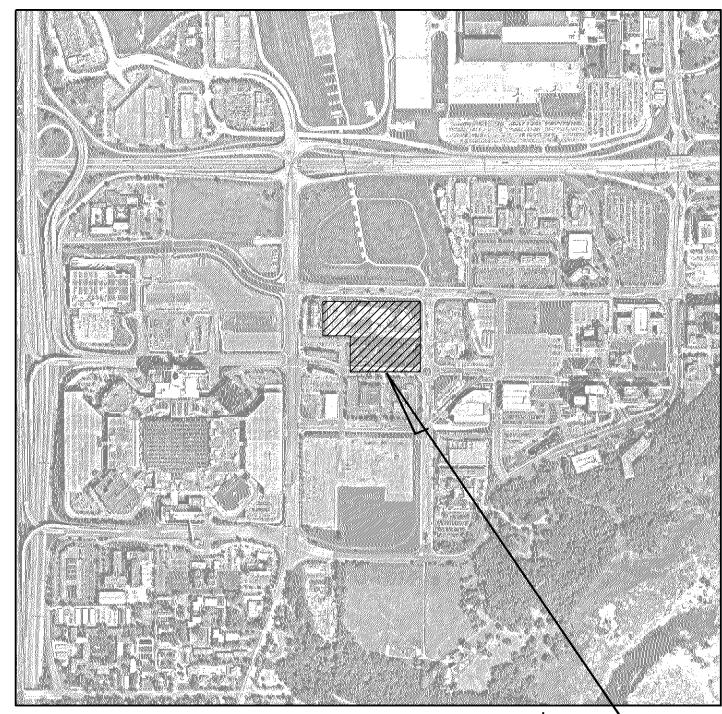
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**VICINITY** N.T.S.



### NOTES:

1. CONTRACTOR SHALL CONFIRM THAT THE EXISTING CONDITIONS FOR THE SITE MATCH WHAT IS SHOWN ON THE DRAWINGS INCLUDED PRIOR TO CONSTRUCTION. 2. IF REPRODUCED, THE SCALES SHOWN ON THESE PLANS ARE BASED ON A 30x42 SHEET. 3. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICES COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.

4. ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS.

		2020 KIMLEY-HORN AND A 767 EUSTIS STREET, SUITE 100 PHONE: 651-64

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BOUNDARY, TOPOGRAPHIC, LOCATION, AND UTILITY SURVEY

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EROSION AND SEDIMENT CONTROL PLAN - PHASE 2

EROSION AND SEDIMENT CONTROL DETAILS

FIRE DEPARTMENT ACCESS PLAN

STORMWATER MANAGEMENT PLAN

GRADING AND DRAINAGE DETAILS

GRADING AND DRAINAGE DETAILS

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND ENGINEER UNDER THE LAWS OF THE STATE OF

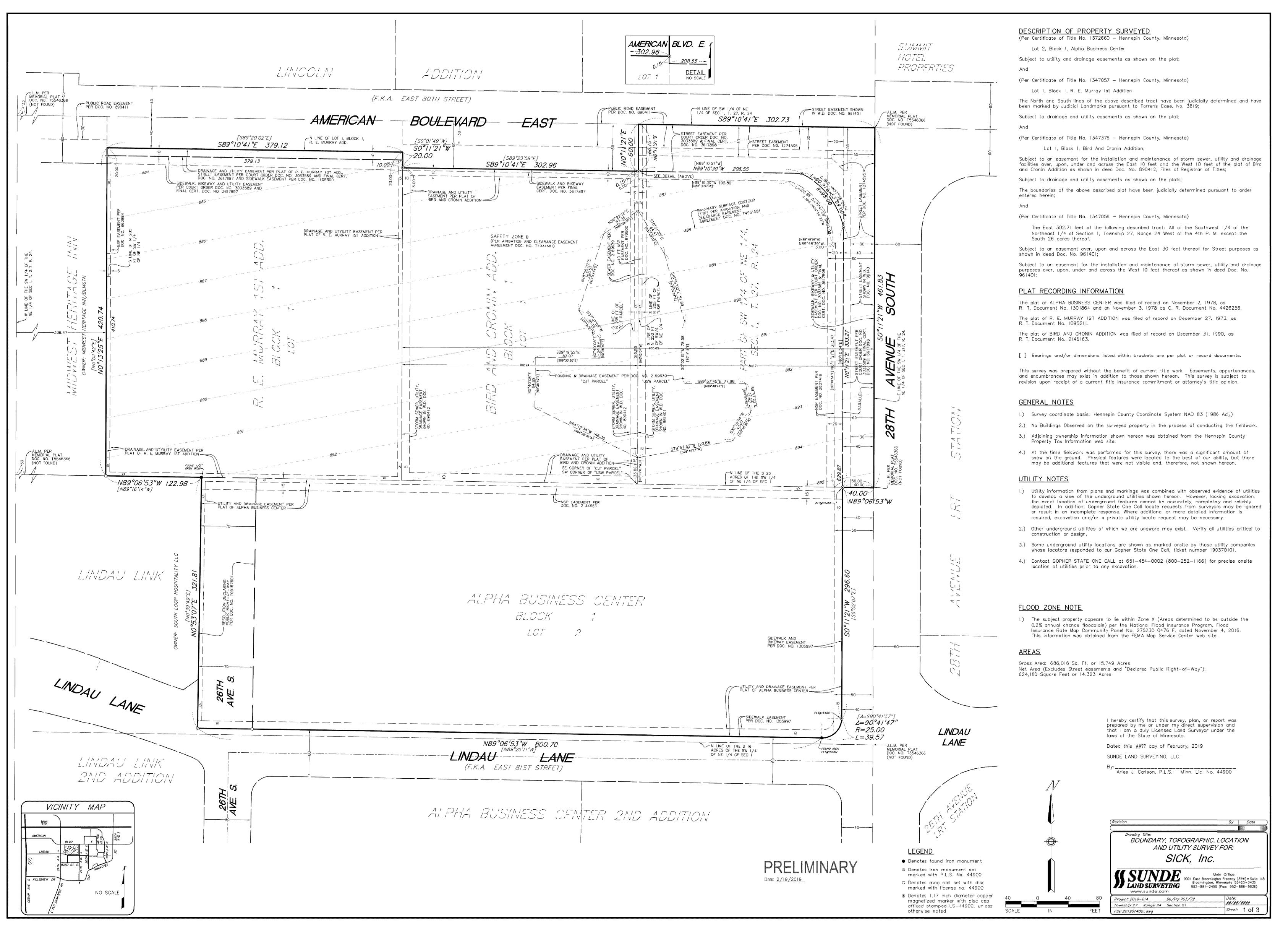
WILLIAM D. MATZEK, P.E. MN
DATE: \_\_\_\_\_\_ LIC. NO. \_\_\_\_ 45790

PRE-DRC phase 02.09.2021 drawn by WDM checked by project number 160687009 project name

SICK - CAMPUS USA PHASE 1

sheet title
COVER SHEET

COOO



NOT TO SCALE

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2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
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I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

WILLIAM D. MATZEK, P.E.

MN
TE: \_\_\_\_\_\_ LIC. NO. \_\_\_\_45790

phase PRE-DRC date 02.09.2021 drawn by LEC checked by WDM project number 160687009 project name

SICK - CAMPUS USA PHASE 1

BOUNDARY, TOPOGRAPHIC, LOCATION AND UTILITY SURVEY

CLOW BERG

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I HEREBY CERTIFY THAT THIS PLAN,
SPECIFICATION OR REPORT WAS PREPARED BY
ME OR UNDER MY DIRECT SUPERVISION AND
THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE OF
MINNESOTA.

WILLIAM D. MATZEK, P.E.

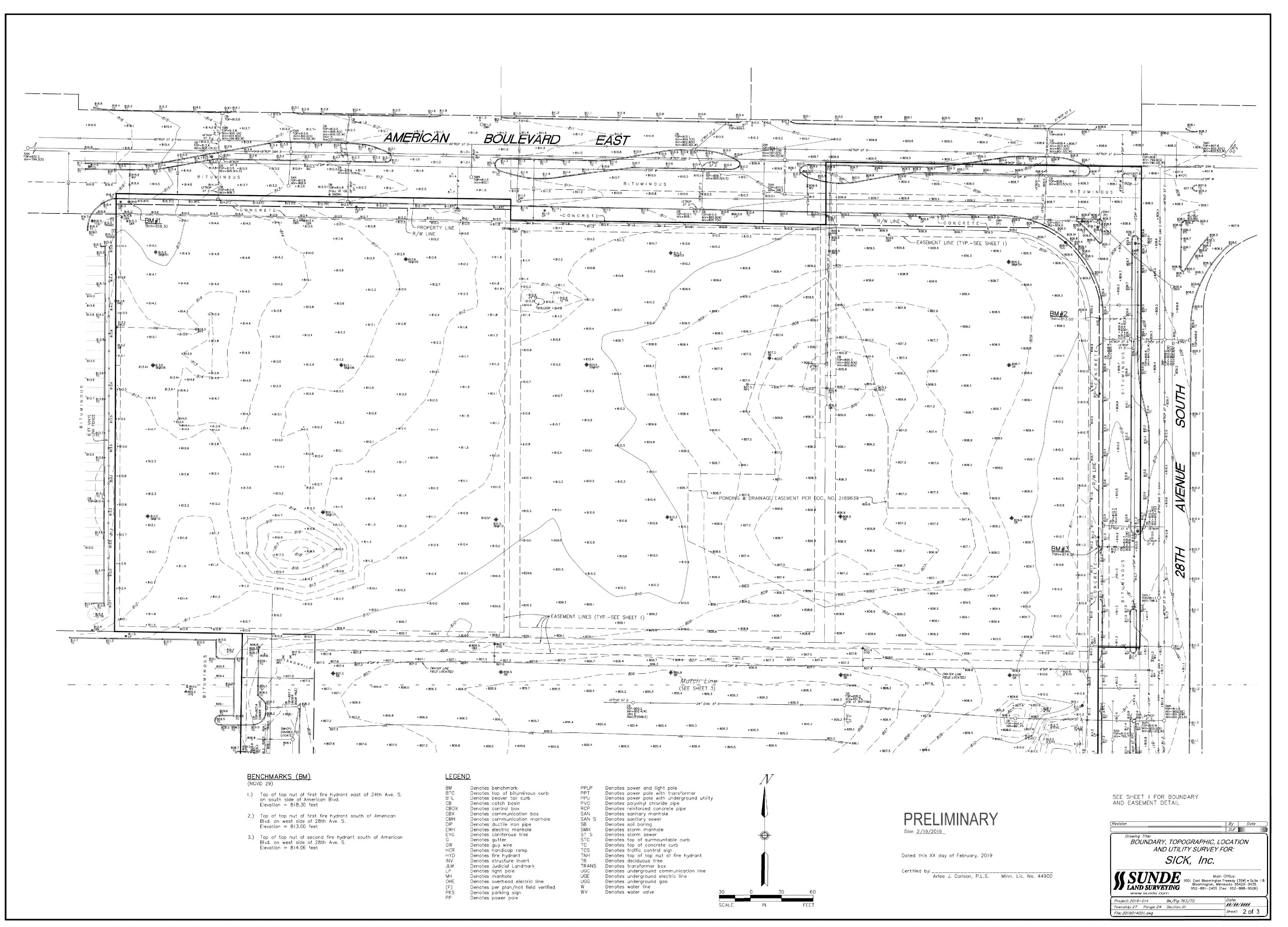
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SICK - CAMPUS USA PHASE 1

BOUNDARY, TOPOGRAPHIC, LOCATION AND UTILITY SURVEY

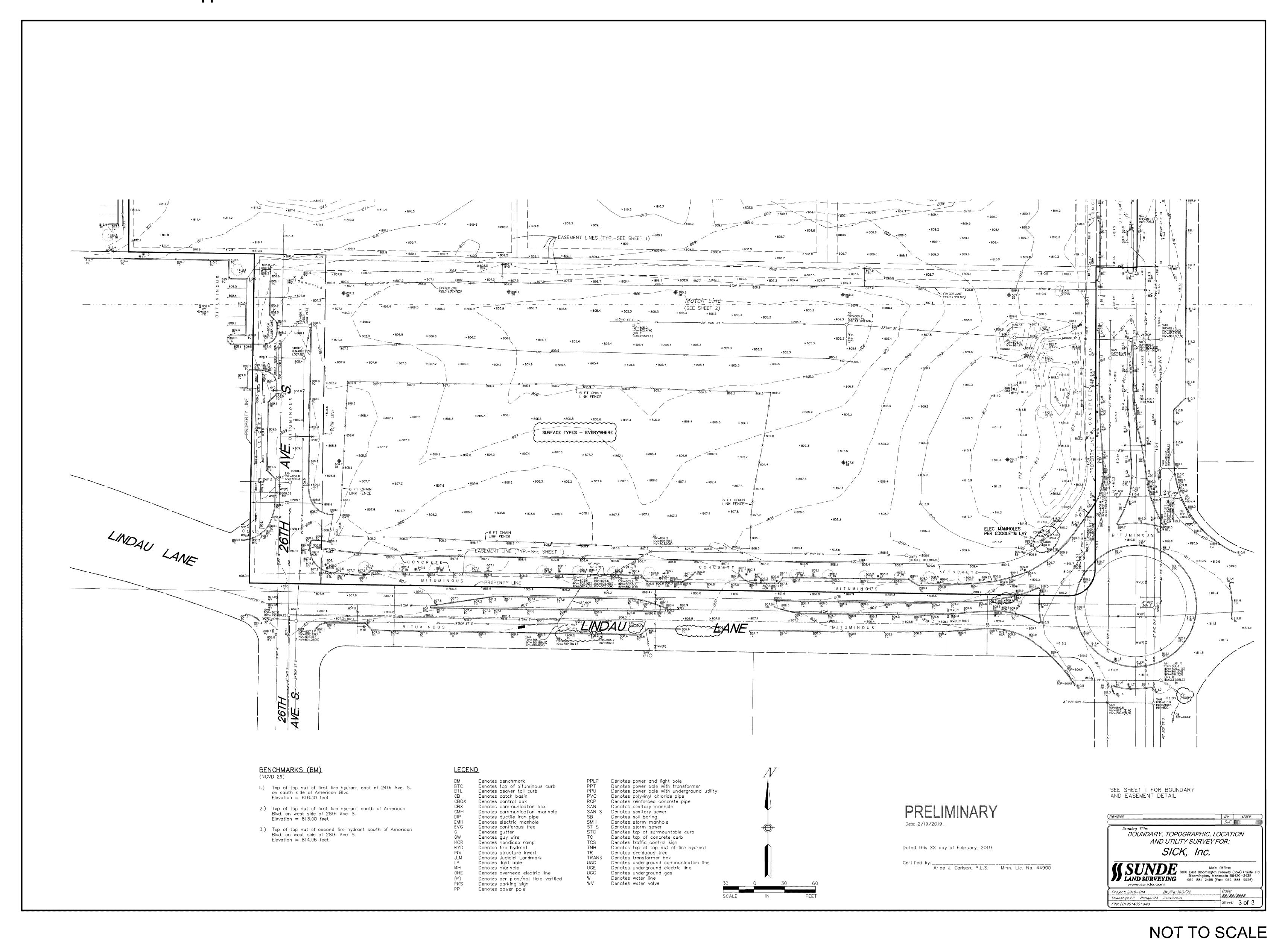
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CLOW BERG

BOUNDARY, TOPOGRAPHIC, LOCATION AND UTILITY SURVEY



#### GENERAL CONSTRUCTION NOTES

- 1. THE CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE MN DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" (LATEST EDITION) AND BECOME FAMILIAR WITH THE CONTENTS PRIOR TO COMMENCING WORK, AND, UNLESS OTHERWISE NOTED, ALL WORK SHALL CONFORM AS APPLICABLE TO THESE STANDARDS AND SPECIFICATIONS.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.
- 3. THE EXISTING SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS QUALITY LEVEL "D" UNLESS OTHERWISE NOTED. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ACSE 38/02, ENTITLED STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF SUBSURFACE QUALITY DATA BY THE FHA. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
- 4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.
- 6. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
- 7. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT. TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.
- 8. ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER DIRECTLY FROM THE TESTING AGENCY.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF MN PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.
- 10. ANY WELLS DISCOVERED ON SITE THAT WILL HAVE NO USE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED.
- 11. ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER DISCOVERY IS MADE.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.
- 13. SHOULD CONTRACTOR ENCOUNTER ANY DEBRIS LADEN SOIL, STRUCTURES NOT IDENTIFIED IN THE DOCUMENTS, OR OTHER SOURCE OF POTENTIAL CONTAMINATION, THEY SHALL IMMEDIATELY CONTACT THE ENGINEER AND OWNER.

#### **EROSION CONTROL MAINTENANCE**

ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION AS REQUIRED BY ALL JURISDICTIONS UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A CERTIFIED PERSON AT LEAST ONCE EVERY 7 CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

- 1. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED. FOR MAINTENANCE REQUIREMENTS REFER TO THE STANDARD SPECIFICATIONS.
- 2. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-THIRD THE HEIGHT OF THE SILT FENCE.
- 3. THE CONSTRUCTION ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING
- OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND. 4. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR
- PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
- 5. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER BUT IN NO CASE LATER THAN 2 CALENDAR DAYS FOLLOWING THE INSPECTION.

## TYPICAL OWNER/ENGINEER OBSERVATIONS

CONTRACTOR SHALL NOTIFY OWNER AND/OR ENGINEER 48 HOURS IN ADVANCE OF THE FOLLOWING ACTIVITIES:

> PRE-CONSTRUCTION MEETING, SUBGRADE PREPARATION, BASE INSTALLATION ASPHALT INSTALLATION, UNDERGROUND PIPING AND UTILITIES INSTALLATION. INSTALLATION OF STRUCTURES, CHECK VALVES, HYDRANTS, METERS, ETC., SIDEWALK INSTALLATION, CONNECTIONS TO WATER AND SEWER MAINS, TESTS OF UTILITIES

#### **EROSION CONTROL NOTES**

- 1. THE STORM WATER POLLUTION PREVENTION PLAN ("SWPPP") IS COMPRISED OF THE EROSION CONTROL PLAN, THE STANDARD DETAILS, THE PLAN NARRATIVE, ATTACHMENTS INCLUDED IN THE SPECIFICATIONS OF THE SWPPP, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- 2. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF MN NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- 3. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY THE PERMITTING AGENCY OR OWNER.
- 4. SITE ENTRY AND EXIT LOCATIONS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ON A PUBLIC ROADWAY MUST BE REMOVED IMMEDIATELY, WHEN WASHING IS REQUIRED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO A PUBLIC ROADWAY, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED SEDIMENT BASIN. ALL FINES IMPOSED FOR DISCHARGING SEDIMENT ONTO PUBLIC AREAS SHALL BE PAID BY THE CONTRACTOR.
- 5. TEMPORARY SEEDING OR OTHER APPROVED METHODS OF STABILIZATION SHALL BE INITIATED WITHIN 7 DAYS OF THE LAST DISTURBANCE ON ANY AREA OF THE SITE.
- 6. THE CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY
- 7. CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- 8. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- 9. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ON SITE. THE USE OF MOTOR OILS AND

- OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED. 11. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED
- CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- SOON AS IS PRACTICABLE. 13. ALL STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED SUCH THAT THEY WILL NOT

12. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE PLAN SHALL BE INITIATED AS

- ADVERSELY AFFECT STORM WATER QUALITY. OTHERWISE, COVERING OR ENCIRCLING THESE AREAS WITH SOME PROTECTIVE MEASURE WILL BE NECESSARY.
- 14. CONTRACTOR SHALL BE RESPONSIBLE FOR RE-ESTABLISHING ANY EROSION CONTROL DEVICE WHICH THEY DISTURB. EACH CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE OF ANY DEFICIENCIES IN THE ESTABLISHED EROSION CONTROL MEASURES THAT MAY LEAD TO UNAUTHORIZED DISCHARGE OR STORM WATER POLLUTION, SEDIMENTATION, OR OTHER POLLUTANTS, UNAUTHORIZED POLLUTANTS INCLUDE (BUT ARE NOT LIMITED TO) EXCESS CONCRETE DUMPING OR CONCRETE RESIDUE, PAINTS, SOLVENTS, GREASES, FUEL AND LUBRICANT OIL, PESTICIDES, AND ANY SOLID WASTE MATERIALS.
- 15. EROSION CONTROL DEVICES SHOWN ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE START OF LAND-DISTURBING ACTIVITIES ON THE PROJECT.
- 16. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THIS PROJECT. CHANGES ARE TO BE APPROVED BEFORE CONSTRUCTION BY THE DESIGN ENGINEER AND THE CITY OF BLOOMINGTON ENGINEERING DIVISION.
- 17. IF THE EROSION CONTROL PLAN AS APPROVED CANNOT CONTROL EROSION AND OFF-SITE SEDIMENTATION FROM THE PROJECT, THE EROSION CONTROL PLAN WILL HAVE TO BE REVISED AND/OR ADDITIONAL EROSION CONTROL DEVICES WILL BE REQUIRED ON SITE. ANY REVISIONS TO THE EROSION CONTROL PLAN MADE BY THE CONTRACTOR MUST BE APPROVED BY THE ENGINEER.

#### **PAVING AND STRIPING NOTES**

- ALL PAVING. CONSTRUCTION. MATERIALS. AND WORKMANSHIP WITHIN JURISDICTION'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR MN/DOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY
- 2. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D) AND CITY STANDARDS.
- 3. CONTRACTOR SHALL FURNISH ALL PAVEMENT MARKINGS FOR FIRE LANES, ROADWAY LANES, PARKING

STALLS, ACCESSIBLE PARKING SYMBOLS, ACCESS AISLES, STOP BARS AND SIGNS, AND MISCELLANEOUS

- STRIPING WITHIN THE PARKING LOT AS SHOWN ON THE PLANS. 4. ALL EXPANSION JOINTS SHALL EXTEND THROUGH THE CURB.
- 5. THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET.
- 6. ALL JOINTS, INCLUDING EXPANSION JOINTS WITH REMOVABLE TACK STRIPS, SHALL BE SEALED WITH JOINT SEALANT.
- 7. THE MATERIALS AND PROPERTIES OF ALL CONCRETE SHALL MEET THE APPLICABLE REQUIREMENTS IN THE A.C.I. (AMERICAN CONCRETE INSTITUTE) MANUAL OF CONCRETE PRACTICE.
- 8. CONTRACTOR SHALL APPLY A SECOND COATING OVER ALL PAVEMENT MARKINGS PRIOR TO ACCEPTANCE BY OWNER FOLLOWED BY A COAT OF GLASS BEADS AS APPLICABLE PER THE PROJECT DOCUMENTS.
- 9. ANY EXISTING PAVEMENT, CURBS AND/OR SIDEWALKS DAMAGED OR REMOVED WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE TO THE SATISFACTION OF THE ENGINEER AND OWNER.
- 10. BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY SUITABLE ACCESSIBLE ROUTES (PER A.D.A). GRADING FOR ALL SIDEWALKS AND ACCESSIBLE ROUTES INCLUDING CROSSING DRIVEWAYS SHALL CONFORM TO CURRENT ADA STATE/NATIONAL STANDARDS. IN NO CASE SHALL ACCESSIBLE RAMP SLOPES EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPES EXCEED 2%. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPES EXCEED 5%. IN NO CASE SHALL ACCESSIBLE PARKING STALLS OR AISLES EXCEED 2% (1.5% TARGET) IN ALL DIRECTIONS. SIDEWALK ACCESS TO EXTERNAL BUILDING DOORS AND GATES SHALL BE ADA COMPLIANT. CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY IF ADA CRITERIA CANNOT BE MET IN ANY LOCATION PRIOR TO PAVING. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR A.D.A COMPLIANCE ISSUES.
- 11. MAXIMUM JOINT SPACING IS TWICE THE DEPTH OF THE CONCRETE PAVEMENT IN FEET.

#### GRADING AND DRAINAGE NOTES

REGRADED AND SODDED.

- 1. GENERAL CONTRACTOR AND ALL SUBCONTRACTORS SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE START OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
- 2. THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL ADJUST BMP'S AS NECESSARY AND REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL A GRASS STAND IS WELL ESTABLISHED OR ADEQUATE STABILIZATION OCCURS.
- 3. CONTRACTOR SHALL ENSURE THERE IS POSITIVE DRAINAGE FROM THE PROPOSED BUILDINGS SO THAT SURFACE RUNOFF WILL DRAIN BY GRAVITY TO NEW OR EXISTING DRAINAGE OUTLETS. CONTRACTOR SHALL ENSURE NO PONDING OCCURS IN PAVED AREAS AND SHALL NOTIFY ENGINEER IF ANY GRADING DISCREPANCIES ARE FOUND IN THE EXISTING AND PROPOSED GRADES PRIOR TO PLACEMENT OF PAVEMENT OR UTILITIES.
- 4. CONTRACTOR SHALL PROTECT ALL MANHOLE COVERS, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, POWER POLES, GUY WIRES, AND TELEPHONE BOXES THAT ARE TO REMAIN IN PLACE AND UNDISTURBED DURING CONSTRUCTION. EXISTING CASTINGS AND STRUCTURES TO REMAIN SHALL BE ADJUSTED TO MATCH THE PROPOSED FINISHED GRADES.
- 5. BACKFILL FOR UTILITY LINES SHALL BE PLACED PER DETAILS, STANDARDS, AND SPECIFICATIONS SO THAT THE UTILITY WILL BE STABLE. WHERE UTILITY LINES CROSS THE PARKING LOT, THE TOP 6 INCHES SHALL BE COMPACTED SIMILARLY TO THE REMAINDER OF THE LOT. UTILITY DITCHES SHALL BE VISUALLY INSPECTED DURING THE EXCAVATION PROCESS TO ENSURE THAT UNDESIRABLE FILL IS NOT USED.

6. CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND REPLACEMENT OF 4" OF TOPSOIL AT COMPLETION

OF WORK. ALL UNPAVED AREAS IN EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE

- 7. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORM RUNOFF. CONTRACTOR SHALL IMMEDIATELY
- NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED. 8. WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT FULL DEPTH FOR A SMOOTH AND STRAIGHT JOINT AND REPLACE THE PAVEMENT WITH THE SAME

TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED.

- 9. THE CONTRACTOR SHALL INSTALL PROTECTION OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE
- 10. IF DEWATERING IS REQUIRED, THE CONTRACTOR SHALL OBTAIN ANY APPLICABLE REQUIRED PERMITS. THE CONTRACTOR IS TO COORDINATE WITH THE OWNER AND THE DESIGN ENGINEER PRIOR TO ANY
- 11. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO MN/DOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL
- 12. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE SODDED OR SEEDED AS SPECIFIED IN THE PLANS. FERTILIZED. MULCHED. WATERED AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE SODDED OR SEEDED AND MULCHED AS SHOWN ON THE LANDSCAPING PLAN.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.
- OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.

14. SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS

- 15. THE CONTRACTOR SHALL ENSURE THAT LANDSCAPE ISLAND PLANTING AREAS AND OTHER PLANTING AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE CONTRACTOR SHALL ALSO EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL AREAS ON THE SITE TO BE PLANTED AND PROPERLY DISPOSED OF IN A LEGAL MANNER.
- 16. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS AND MN/DOT SPECIFICATION.
- 17. ALL CONCRETE/ASPHALT SHALL BE INSTALLED PER GEOTECH REPORT, CITY OF BLOOMINGTON AND MN/DOT SPECIFICATIONS.
- 18. SPOT ELEVATIONS ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
- 19. LIMITS OF CONSTRUCTION ARE TO THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED ON THE PLAN.
- 20. IMMEDIATELY REPORT TO THE OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS.
- 21. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION WITHOUT
- 22. BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- 23. ALL PROPOSED GRADES ONSITE SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE INDICATED ON THE PLANS. ANY SLOPES STEEPER THAN 4:1 REQUIRE EROSION AND SEDIMENT CONTROL BLANKET.
- 24. ADHERE TO ALL TERMS AND CONDITIONS AS NECESSARY IN THE GENERAL N.P.D.E.S. PERMIT AND STORMWATER POLLUTION PREVENTION PLAN FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
- 25. ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS
- 26. CONTRACTOR SHALL ENSURE MINIMUM GRADES ARE MET WITHIN PAVED AREAS, 1.2% FOR ASPHALT PAVING AND 0.6% FOR CONCRETE PAVING.

3RD PARTY TEST REPORTS REQ'D

TEST REPORTS REQUIRED FOR CLOSE OUT INCLUDE, BUT ARE NOT LIMITED TO

- DENSITY TEST REPORTS - BACTERIOLOGICAL TESTS OF WATER SYSTEM - PRESSURE TEST OF WATER/SEWER - LEAK TESTS ON SEWER SYSTEM AND GREASE TRAPS - ANY OTHER TESTING REQUIRED BY THE AGENCY/MUNICIPALITY

### WATER STORM SEWER & SANITARY SEWER NOTES

- 1. THE CONTRACTOR SHALL CONSTRUCT GRAVITY SEWER LATERALS, MANHOLES, GRAVITY SEWER LINES, AND DOMESTIC WATER AND FIRE PROTECTION SYSTEM AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS, EQUIPMENT, MACHINERY, TOOLS, MEANS OF TRANSPORTATION AND LABOR NECESSARY TO COMPLETE THE WORK IN FULL AND COMPLETE ACCORDANCE WITH THE SHOWN, DESCRIBED AND REASONABLY INTENDED REQUIREMENTS OF THE CONTRACT DOCUMENTS AND JURISDICTIONAL AGENCY REQUIREMENTS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- 2. ALL EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR UTILITY LOCATION AND COORDINATION IN ACCORDANCE WITH THE NOTES CONTAINED IN THE GENERAL CONSTRUCTION SECTION OF THIS SHEET.

WHEN WORK IS NOT IN PROGRESS. THE INTERIOR OF ALL PIPES SHALL BE CLEAN AND JOINT SURFACES WIPED CLEAN AND DRY AFTER THE PIPE HAS BEEN LOWERED INTO THE TRENCH. VALVES SHALL BE

- 3. THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE. 4. DEFLECTION OF PIPE JOINTS AND CURVATURE OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS. SECURELY CLOSE ALL OPEN ENDS OF PIPE AND FITTINGS WITH A WATERTIGHT PLUG
- 5. ALL PIPE AND FITTINGS SHALL BE CAREFULLY STORED FOLLOWING MANUFACTURER'S RECOMMENDATIONS. CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE COATING OR LINING IN ANY D.I. PIPE FITTINGS. ANY PIPE OR FITTING WHICH IS DAMAGED OR WHICH HAS FLAWS OR IMPERFECTIONS WHICH, IN THE OPINION OF THE ENGINEER OR OWNER, RENDERS IT UNFIT FOR USE, SHALL NOT BE USED. ANY PIPE NOT SATISFACTORY FOR USE SHALL BE CLEARLY MARKED AND IMMEDIATELY REMOVED FROM THE JOB SITE, AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

PLUMB AND LOCATED ACCORDING TO THE PLANS.

- 6. WATER FOR FIRE FIGHTING SHALL BE MADE AVAILABLE FOR USE BY THE CONTRACTOR PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.
- 7. ALL UTILITY AND STORM DRAIN TRENCHES LOCATED UNDER AREAS TO RECEIVE PAVING SHALL BE COMPLETELY BACK FILLED IN ACCORDANCE WITH THE GOVERNING JURISDICTIONAL AGENCY'S SPECIFICATIONS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- 8. UNDERGROUND LINES SHALL BE SURVEYED BY A STATE OF MN PROFESSIONAL LAND SURVEYOR PRIOR TO BACK FILLING.

9. CONTRACTOR SHALL PERFORM, AT HIS OWN EXPENSE, ANY AND ALL TESTS REQUIRED BY THE

- SPECIFICATIONS AND/OR ANY AGENCY HAVING JURISDICTION. THESE TESTS MAY INCLUDE, BUT MAY NOT BE LIMITED TO, INFILTRATION AND EXFILTRATION, TELEVISION INSPECTION AND A MANDREL TEST ON GRAVITY SEWER. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE UTILITY PROVIDER, OWNER AND JURISDICTIONAL AGENCY AS REQUIRED. 10. CONTRACTOR SHALL PROVIDE FOR A MINIMUM HORIZONTAL CLEARANCE OF 10' AND A VERTICAL
- CLEARANCE OF 18" BETWEEN WATER AND SANITARY SEWER MANHOLES AND LINES. 11. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- 12. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT UNLESS OTHERWISE STATED BY CITY AND STATE DESIGN STANDARDS AND SPECIFICATIONS.
- 13. UNLESS OTHERWISE STATED IN CITY AND STATE DESIGN STANDARDS AND SPECIFICATIONS, ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER". EXISTING CASTINGS AND STRUCTURES WITHIN PROJECT LIMITS SHALL BE ADJUSTED TO MEET THESE CONDITIONS AND THE PROPOSED FINISHED GRADE.
- 14 TOPOGRAPHIC INFORMATION IS TAKEN FROM A TOPOGRAPHIC SURVEY BY LAND SURVEYORS. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS. WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY. AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
- 15. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO
- 16. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT
- 17. ROOF DRAINS SHALL BE CONNECTED TO STORM SEWER BY PREFABRICATED WYES OR AT STORM STRUCTURES. ROOF DRAINS AND TRUCK WELL DRAIN SHALL RUN AT A MINIMUM 1% SLOPE. UNLESS NOTED OTHERWISE, AND TIE IN AT THE CENTERLINE OF THE STORM MAIN.
- 18. ALL ROOF AND SANITARY SEWER DRAINS SHALL BE INSULATED IF 7' OF COVER CANNOT BE PROVIDED.

TO DETERMINE THE EXACT LOCATION. SIZE AND INVERT ELEVATIONS OF EACH PRIOR TO THE START OF

- 19. THE CONTRACTOR SHALL PROTECT EXISTING UNDERGROUND UTILITIES AND APPURTENANCES THAT ARE TO REMAIN FROM DAMAGE DURING CONSTRUCTION OPERATIONS. 20. THE LOCATION OF EXISTING UTILITIES, STORM DRAINAGE STRUCTURES AND OTHER ABOVE AND BELOW-GRADE IMPROVEMENTS ARE APPROXIMATE AS SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY
- 21. A MINIMUM OF 5' SEPARATION IS REQUIRED BETWEEN UTILITIES AND TREES UNLESS A ROOT BARRIER IS
- 22. GAS, PHONE AND ELECTRIC SERVICES SHOWN FOR INFORMATIONAL PURPOSES ONLY. DRY UTILITY COMPANIES MAY ALTER THE DESIGN LAYOUT DURING THEIR REVIEW. CONTRACTOR TO COORDINATE
- FINAL DESIGN AND INSTALLATION WITH UTILITY COMPANIES. 23. COORDINATE UTILITY INSTALLATION WITH IRRIGATION DESIGN AND INSTALLATION.
- ARE TO INSIDE WALL FACE. REFERENCE ARCHITECTURAL PLANS FOR EXACT WALL WIDTH AND

24. ALL DIMENSIONS ARE TO FLOW LINE OF CURB UNLESS OTHERWISE NOTED. PERIMETER WALL DIMENSIONS

- 25. REFERENCE ARCHITECTURAL PLANS (BY OTHERS). FOR EXACT BUILDING DIMENSIONS, AND MATERIALS
- 26. REFERENCE M.E.P. PLANS (BY OTHERS) FOR MECHANICAL EQUIPMENT DIMENSIONS AND SPECIFICATIONS. 27. CONTRACTOR SHALL REFERENCE STRUCTURAL PLANS (BY OTHERS) FOR MECHANICAL EQUIPMENT

REFER TO PRELIMINARY GEOTECHNICAL EVALUATION REPORT No. B1901159

BRAUN INTERTEC

2600 LINDAU LANE

DATED 03/21/2019

DIMENSIONS AND PAD PREPARATION SPECIFICATIONS. 28. CONTRACTOR SHALL REFERENCE M.E.P PLANS (BY OTHERS) FOR LIGHT POLE WIRING. HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

9800 Bren Road East ,Suite 290 Hopkins, Minnesota 55343 612-345-2559

PL202100026 Pre-App

WILLIAM D. MATZEK, P.E.

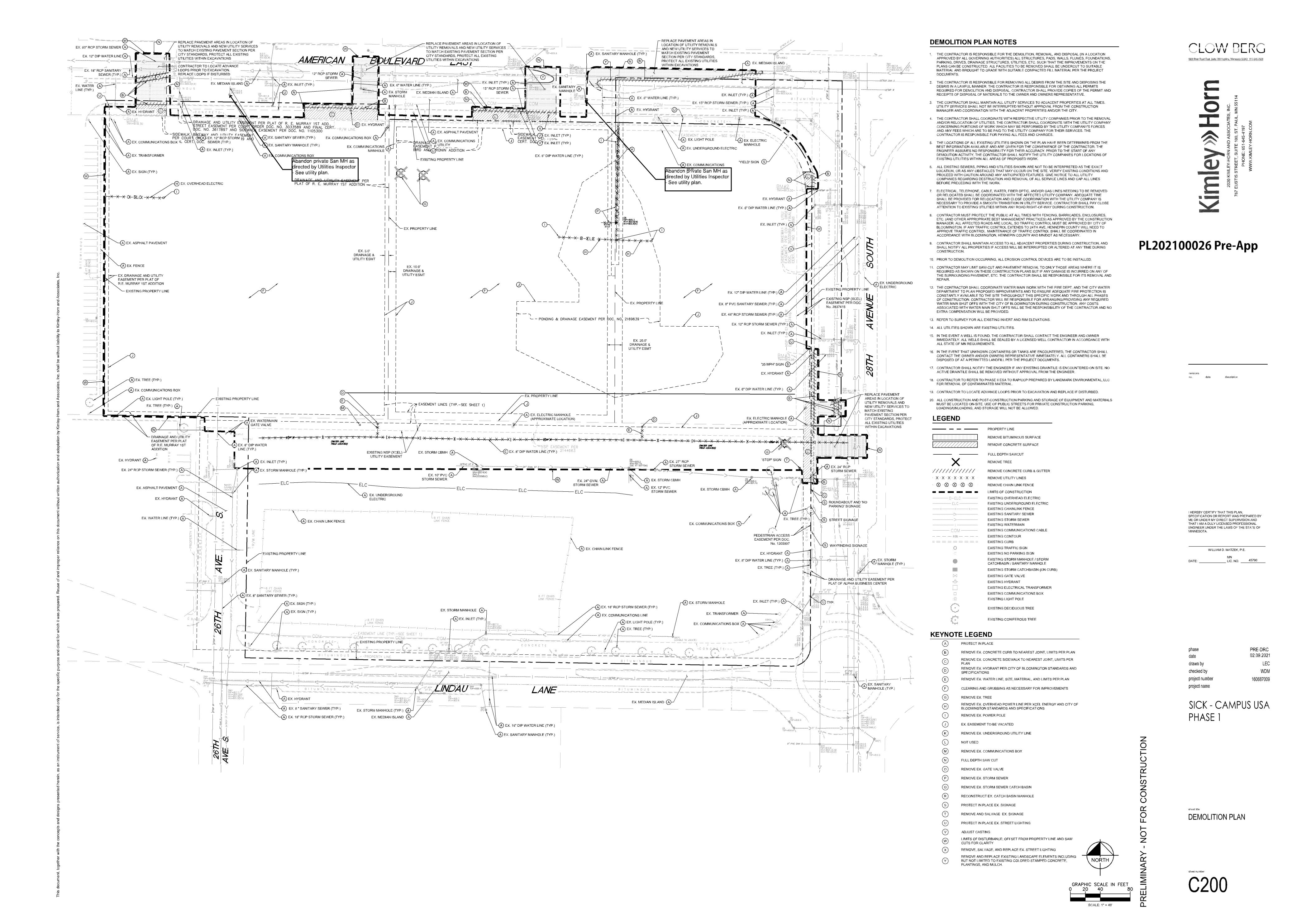
PRE-DRC phase 02.09.2021 date drawn by checked by project number 160687009

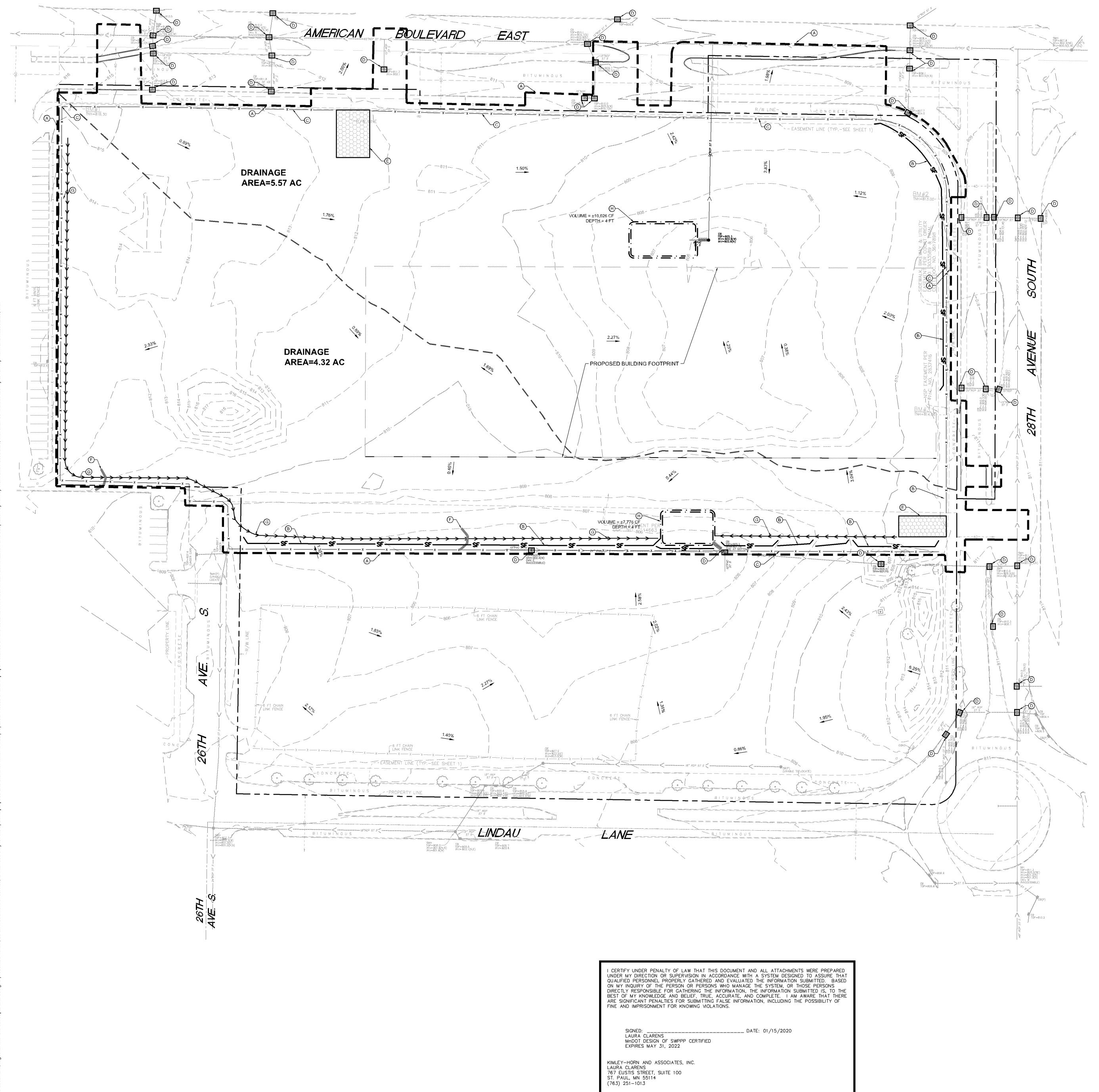
project name

WDM

SICK - CAMPUS USA PHASE 1

**GENERAL NOTES** 





**LEGEND** 

ROCK ENTRANCE INLET PROTECTION APPROXIMATE GRADE BREAK TEMPORARY CHECK DAM SEDIMENT TRAP BASIN

#### **EROSION CONTROL PLAN NOTES**

- 1. ALL PERIMETER SILT FENCE AND ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO
- 2. THE CONTRACTOR SHALL CONSTRUCT DRAINAGE BASINS PRIOR TO SITE GRADING.
- 3. THE CONTRACTOR SHALL INSTALL CATCH BASIN EROSION CONTROL MEASURES.
- 4. WITHIN ONE WEEK (7 DAYS) OF SITE GRADING, ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED, SOD, OR ROCK BASE. REFER TO LANDSCAPE PLANS FOR MATERIALS. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH CITY, STATE, AND WATERSHED DISTRICT PERMITS.
- 6. THE CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES, INCLUDING THE REMOVAL OF SILT IN FRONT OF SILT FENCES DURING THE DURATION OF THE CONSTRUCTION.
- 7. ANY EXCESS SEDIMENT IN PROPOSED BASINS SHALL BE REMOVED BY THE CONTRACTOR. 8. REMOVAL ALL EROSION CONTROL MEASURES AFTER VEGETATION IS ESTABLISHED.
- 9. THE CONTRACTOR SHALL REMOVE ALL SOILS AND SEDIMENT TRACKED ONTO EXISTING STREETS AND PAVED AREAS AND SHALL SWEEP ADJACENT STREETS DAILY, AS REQUIRED, AND PRIOR TO ANY
- 10. IF BLOWING DUST BECOMES A NUISANCE, THE CONTRACTOR SHALL APPLY WATER FROM A TANK TRUCK TO ALL CONSTRUCTION AREAS.

12. INLET PROTECTION DEVICES MUST HAVE EMERGENCY OVERFLOW CAPACITY WHEN USED IN PUBLIC

- 11. INLET PROTECTION IN PUBLIC STREETS SHALL BE REMOVED PRIOR TO WINTER FREEZE-UP. UPSTREAM BMPS MUST BE IN PLACE PRIOR TO INLET PROTECTION REMOVAL..
- 13. STREETS SHALL BE SWEPT DAILY, AS REQUIRED, AND PRIOR TO ANY STORM.
- 14. SHOP DRAWINGS AND ALL MATERIALS SHALL BE APPROVED BY THE SITE DESIGN ENGINEER PRIOR TO ANY REQUEST FOR APPROVAL FROM THE CITY ENGINEER.
- 15. UNDERGROUND STORMWATER SYSTEM SHALL BE AS-BUILT BY A LICENSED PROFESSIONAL
- 16. INLET PROTECTION IN PUBLIC STREETS SHALL BE REMOVED PRIOR TO WINTER FREEZE-UP. UPSTREAM BMPS MUST BE IN PLACE PRIOR TO INLET PROTECTION REMOVAL
- 17. INLET PROTECTION DEVICES MUST HAVE EMERGENCY OVERFLOW CAPACITY WHEN USED IN PUBLIC

#### **SEQUENCE OF CONSTRUCTION:**

- UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAYDOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. BMP AND EROSION CONTROL INSTALLATION SEQUENCE SHALL BE AS FOLLOWS:
- INSTALL INLET PROTECTION AT EXISTING STORMWATER CULVERTS. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE (1), CONCRETE WASHOUT PIT (1) AND INSTALL
- PREPARE TEMPORARY PARKING AND STORAGE AREA. CONSTRUCT AND STABILIZE DIVERSIONS AND TEMPORARY SEDIMENT TRAPS. PERFORM CLEARING AND GRUBBING OF THE SITE. PERFORM MASS GRADING. ROUGH GRADE TO
- ESTABLISH PROPOSED DRAINAGE PATTERNS. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
- TEMPORARILY SEED WITH PURE LIVE SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE OR AS REQUIRED BY NPDES AND/OR CITY OF BLOOMINGTON GRADING PERMIT.

#### **SWPPP UPDATES AND AMENDMENTS**

THE GC MUST UPDATE THE SWPPP, INCLUDING THE JOBSITE BINDER AND SITE MAPS, TO REFLECT THE PROGRESS OF CONSTRUCTION ACTIVITIES AND GENERAL CHANGES TO THE PROJECT SITE. UPDATES SHALL BE MADE DAILY TO TRACK PROGRESS WHEN ANY OF THE FOLLOWING ACTIVITIES OCCUR: BMP INSTALLATION, MODIFICATION OR REMOVAL, CONSTRUCTION ACTIVITIES (E.G., PAVING, STORM SEWER INSTALLATION, FOOTING INSTALLATION, ETC.), CLEARING, GRUBBING OR GRADING, OR TEMPORARY OR PERMANENT

SITE DISCHARGE RUNOFF WILL DISCHARGE INTO THE CITY SEWER THEN TO LONG MEADOW LAKE AND ULTIMATELY THE MINNESOTA RIVER APPROXIMATELY 2 MILES FROM THE SITE. THE MINNESOTA RIVER IS CONSIDERED IMPAIRED AT THIS LOCATION.

THE SITE BORING LOGS CONSIST GENERALLY OF 5 TO 11 FEET OF SILTY SAND AND SANDY LEAN CLAY FILL FOLLOWED BY POORLY GRADED SAND, MOST LIKELY GLACIAL OUTWASH.

AREA SUMMARY	
TOTAL PROPERTY AREA	14.33 AC
TOTAL DISTURBED AREA	10.52 AC
EXISTING IMPERVIOUS AREA	0.86 AC
EXISTING PERVIOUS AREA	9.66 AC
PROPOSED IMPERVIOUS AREA	6.75 AC
PROPOSED PERVIOUS AREA	3.77 AC

ESTIMATED PHASE 1 BMP QUANTITIES			
SILT FENCE	1129	LF	
SAFETY FENCE	2650	LF	
CONSTRUCTION ENTRANCE	2	EA	
INLET PROTECTION	37	EA	
DIVERSION DITCH	1190	LF	
CHECK DAMS	2	EA	
SEDIMENT TRAP	2	EA	

### **KEYNOTE LEGEND**

LIMITS OF DISTURBANCE

SILT FENCE - OFFSET FROM LIMITS OF DISTURBANCE FOR CLARITY

SAFETY FENCE - OFFSET FROM LIMITS OF DISTURBANCE FOR

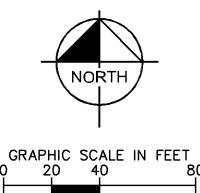
INLET PROTECTION

ROCK CONSTRUCTION ENTRANCE/EXIT

TEMPORARY DIVERSION DITCH

TEMPORARY CHECK DAM

SEDIMENT TRAP WITH RIP-RAP TO INLET STRUCTURE







# PL202100026 Pre-App

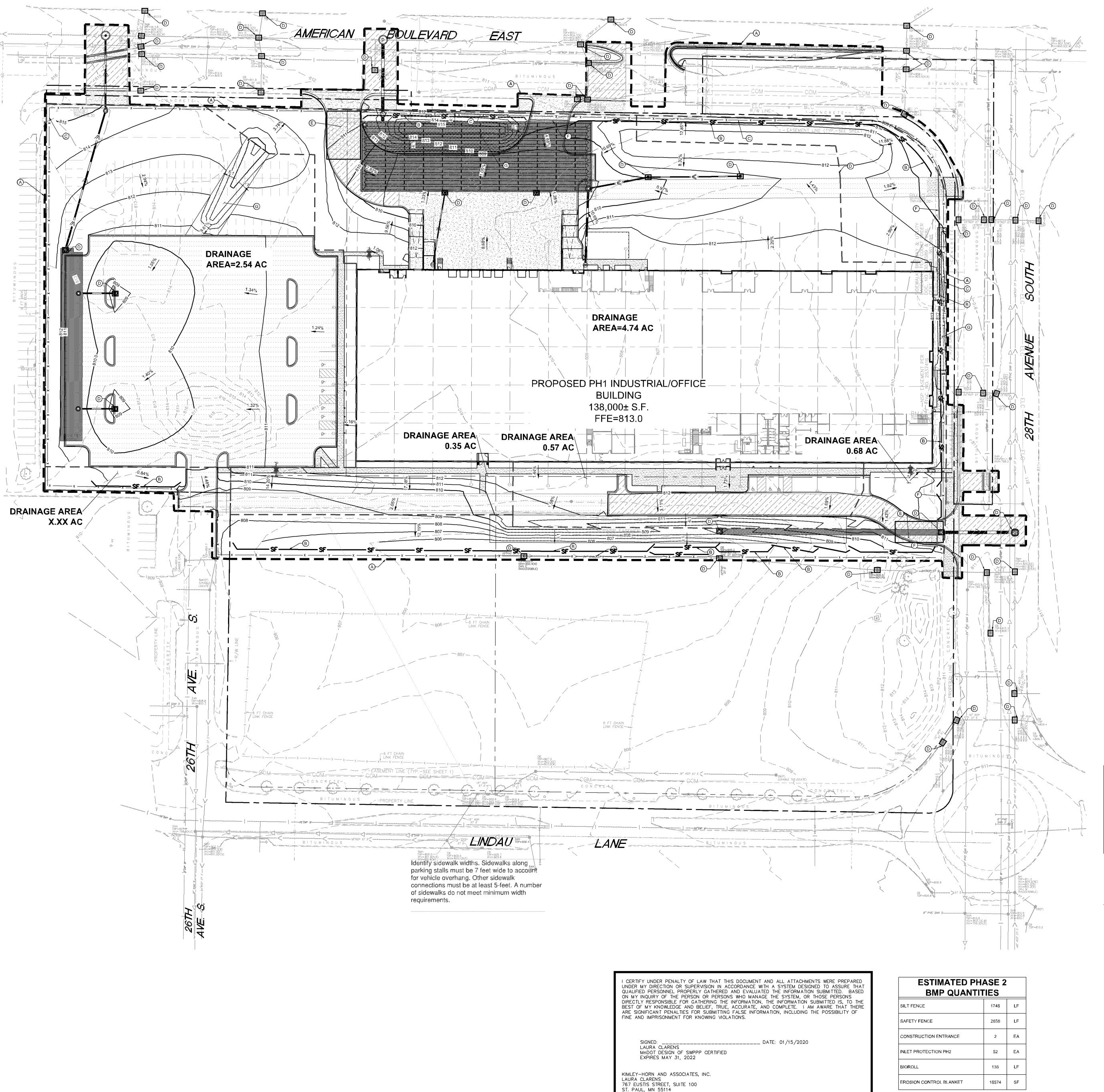
I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

WILLIAM D. MATZEK, P.E.

PRE-DRC 02.09.2021 WDM checked by project number 160687009 project name

SICK - CAMPUS USA PHASE 1

**EROSION AND SEDIMENT** CONTROL PLAN - PHASE 1



(763) 251-1013

PROPOSED ASPHALT PAVEMENT

PROPOSED CONCRETE PAVEMENT

PROPOSED CONCRETE SIDEWALK

PROPOSED HEAVY DUTY ASPHALT

PROPOSED CLASS V AGGREGATE BASE FIRE ACCESS ROUTE

EROSION CONTROL BLANKET

ROCK ENTRANCE

INLET PROTECTION

SILT FENCE

LIMITS OF DISTURBANCE

APPROXIMATE GRADE BREAK

#### **EROSION CONTROL PLAN NOTES**

1. ALL PERIMETER SILT FENCE AND ROCK CONSTRUCTION ENTRANCES SHALL BE INSTALLED PRIOR TO CONSTRUCTION.

- THE CONTRACTOR SHALL CONSTRUCT DRAINAGE BASINS PRIOR TO SITE GRADING.
   THE CONTRACTOR SHALL INSTALL CATCH BASIN EROSION CONTROL MEASURES.
- 4. WITHIN ONE WEEK (7 DAYS) OF SITE GRADING, ALL DISTURBED AREAS SHALL BE STABILIZED WITH SEED, SOD, OR ROCK BASE. REFER TO LANDSCAPE PLANS FOR MATERIALS.
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   PREPARE TEMPORARY PARKING AND STORAGE AREA.
   CONSTRUCT AND STABILIZE DIVERSIONS AND TEMPORARY SEDIMENT TRAPS.
   PERFORM CLEARING AND GRUBBING OF THE SITE. PERFORM MASS GRADING. ROUGH GRADE TO ESTABLISH PROPOSED DRAINAGE PATTERNS.
   START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.
- 7. TEMPORARILY SEED WITH PURE LIVE SEED, THROUGHOUT CONSTRUCTION, DISTURBED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE OR AS REQUIRED BY NPDES AND/OR CITY OF BLOOMINGTON GRADING PERMIT.

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### KEYNOTE LEGEND

- LIMITS OF DISTURBANCE
- B SILT FENCE OFFSET FROM LIMITS OF DISTURBANCE FOR CLARITY
- SAFETY FENCE OFFSET FROM LIMITS OF DISTURBANCE FOR
- D INLET PROTECTION
- E ROCK CONSTRUCTION ENTRANCE / EXIT
- F BIOROLL
- G EROSION CONTROL BLANKET





PL202100026 Pre-App

revisions no. date description

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

WILLIAM D. MATZEK, P.E.

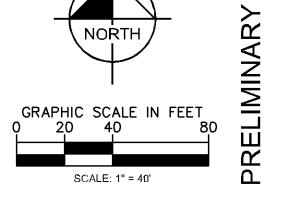
MN
LIC. NO. 45790

phase PRE-DRC date 02.09.2021 drawn by LEC checked by WDM project number 160687009 project name

SICK - CAMPUS USA PHASE 1

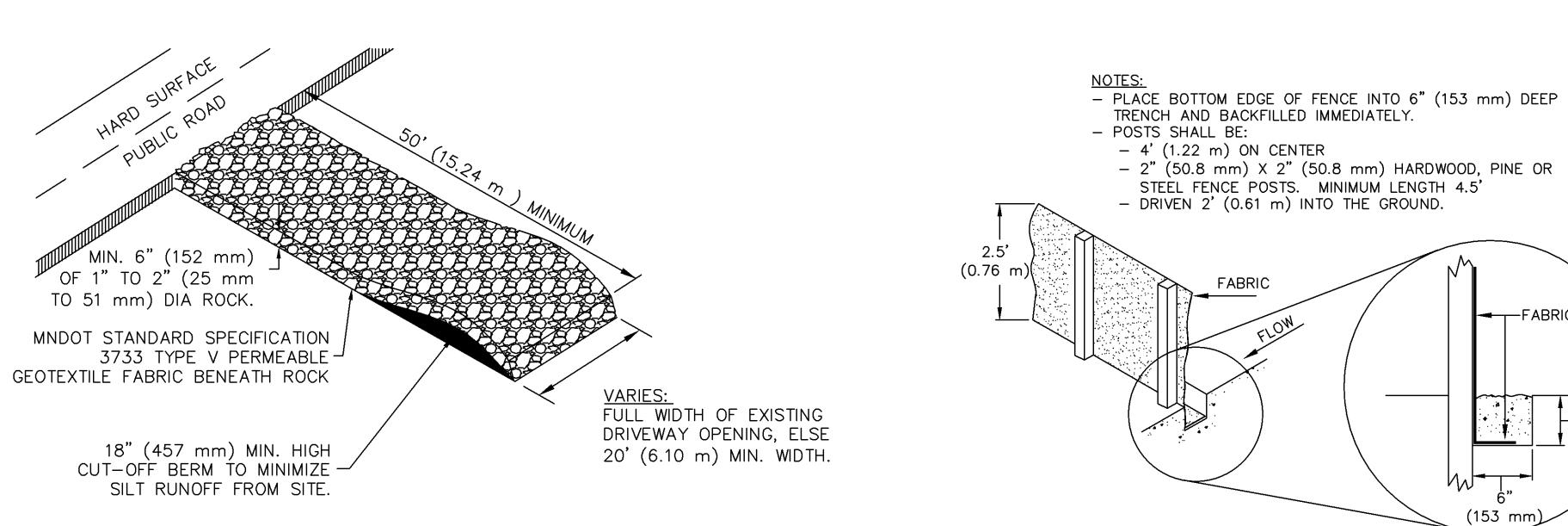
EROSION AND SEDIMENT CONTROL PLAN - PHASE 2

cmber C301







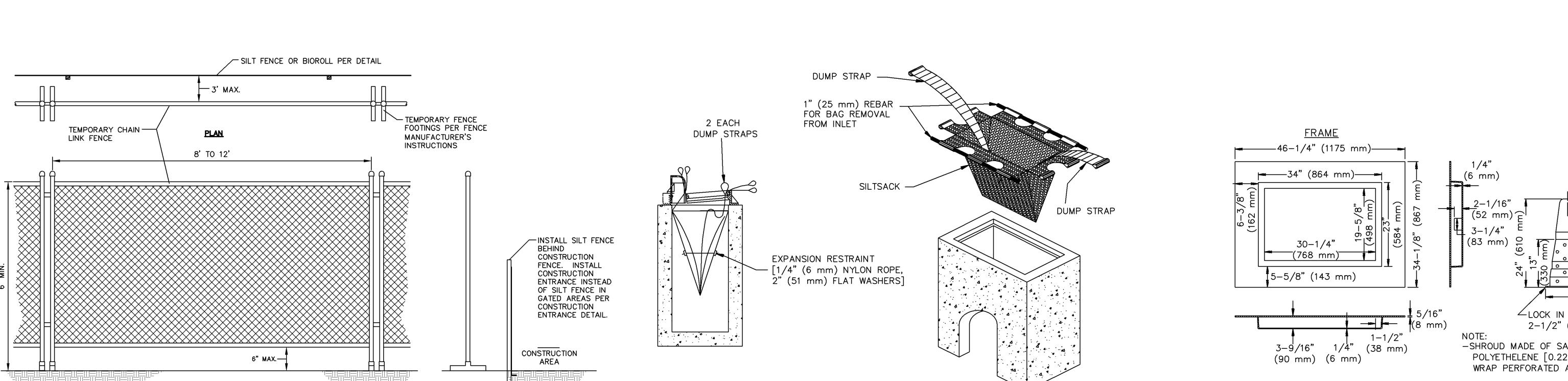




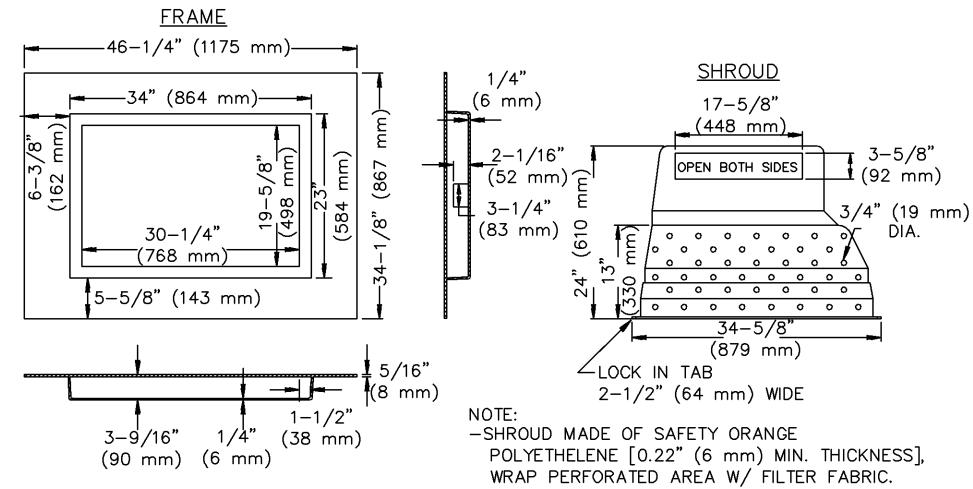
└ 8", 11 GA. STAPLES SPACED 1'-0" ON CENTER

<u>SECTION</u>

- 2" x 2" x 18" LONG WOODEN STAKES AT 2'-0" SPACING. DRIVE THROUGH NETTING AND FIBER ROLL.



SILT\_SACK\_2x3

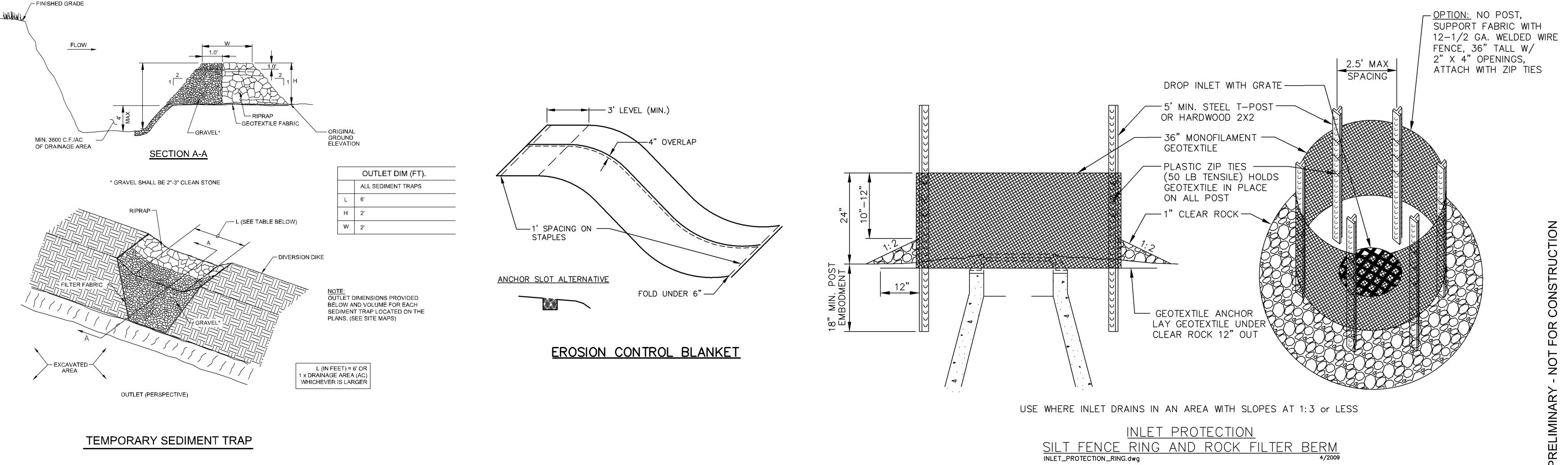


EROSION CONTROL FENCE SILT\_FEN\_STD.dwg 4/2009

<del>-</del> → FABRIC

— 6" (1\$3 mm)

INLET PROTECTION, PERFORATED EROSION BARRIER SHROUD W/ 2' x 3' (0.61 x 0.91 m) FRAME INLET\_SHROUD\_2x3.dwg 4/2009



INLET PROTECTION, SEDIMENT FILTER SACK SILT SACK 2x3 4/2009

drawn by WDM checked by project number 160687009 project name

PRE-DRC 02.09.2021

SICK - CAMPUS USA PHASE 1

**EROSION AND SEDIMENT** CONTROL DETAILS

C302

TEMPORARY SEDIMENT TRAP

**ELEVATION** 

SAFETY FENCE

CATEGORY 3
EROSION CONTROL BLANKET —
(SPEC. 3885)

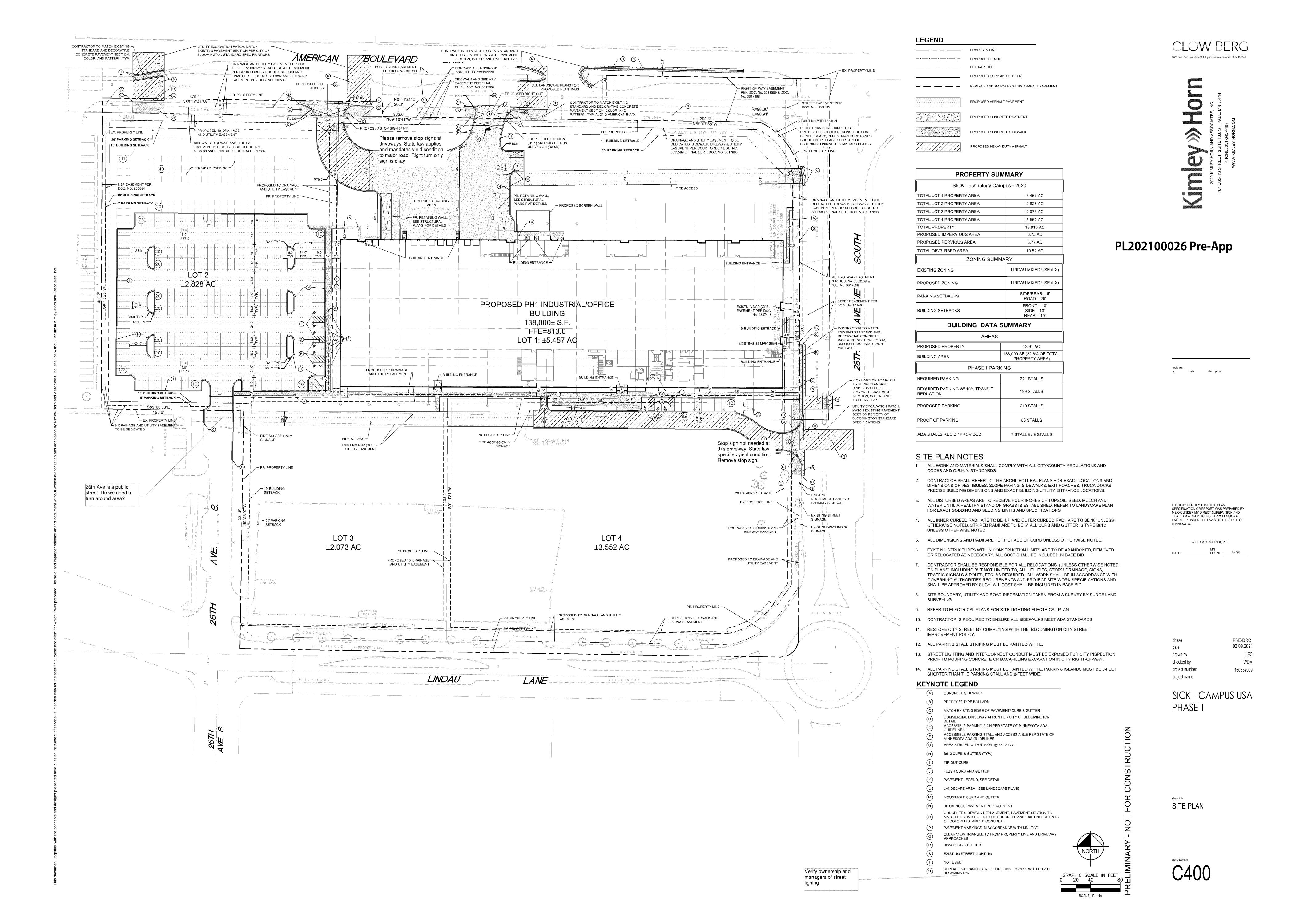
4" x 4" TRENCH BACKFILLED OVER

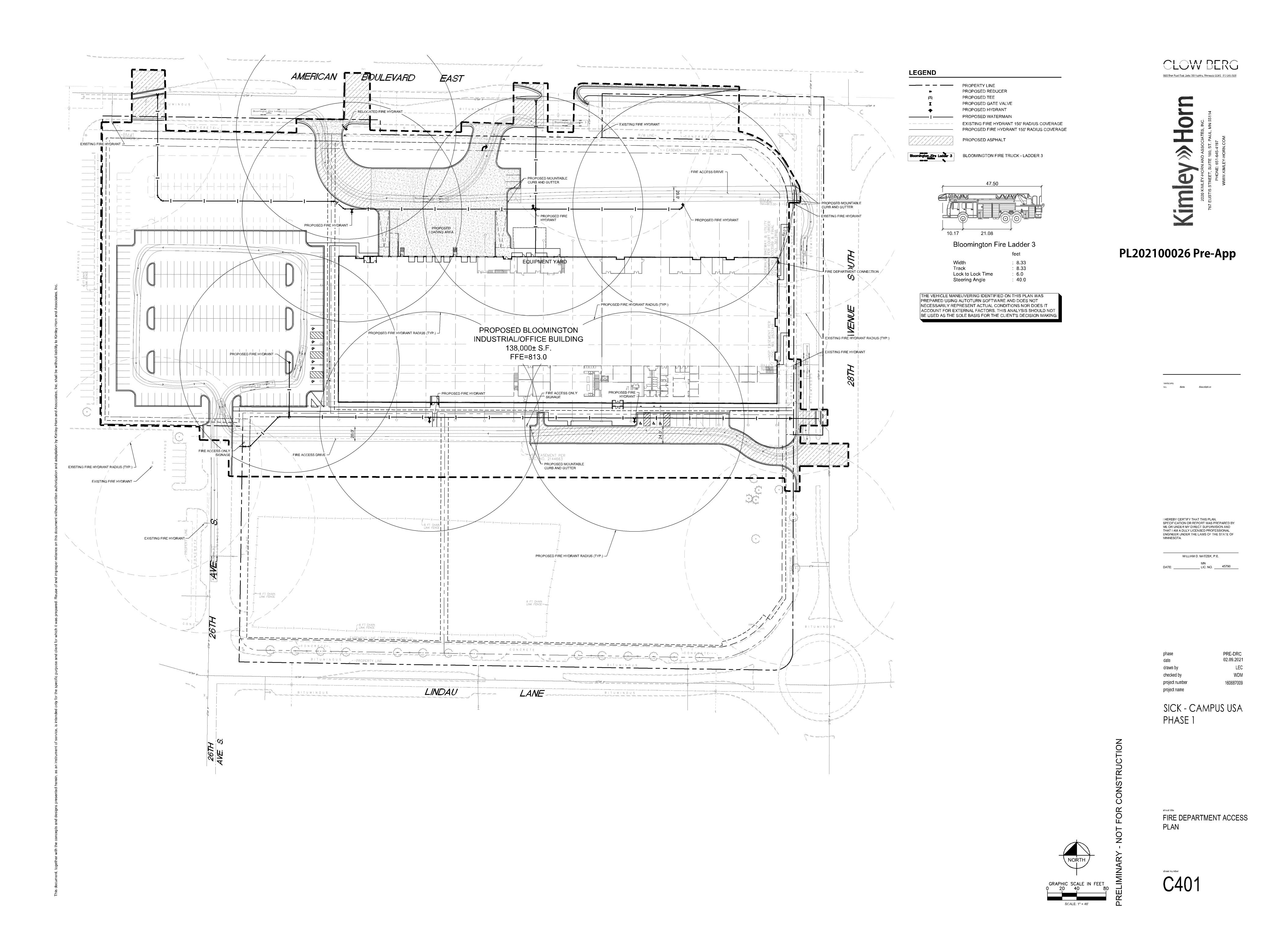
EROSION CONTROL BLANKET - (SPEC. 3885)

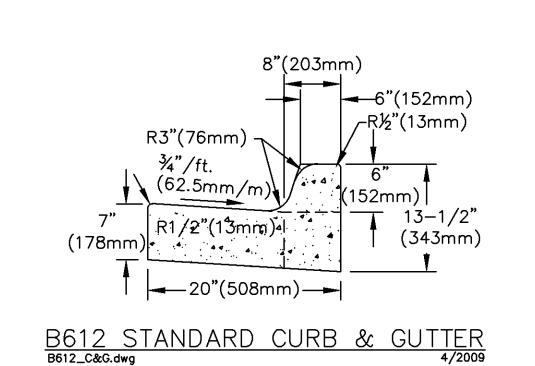
STRAW OR WOOD FIBER 6" OR

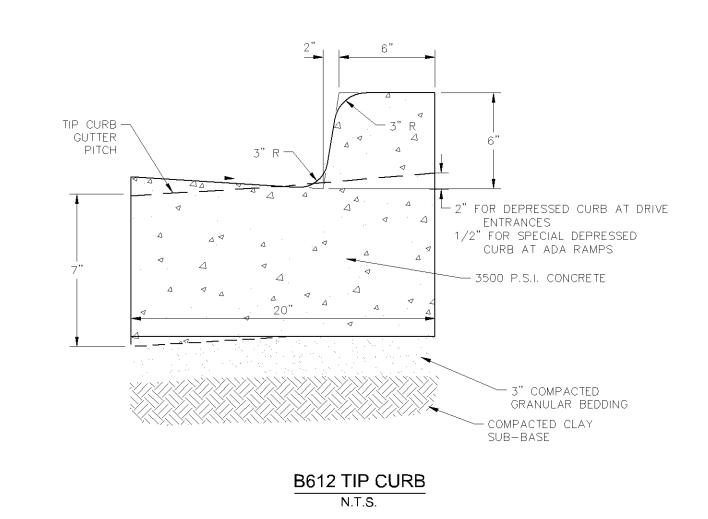
12" DIAMETER ROLL ENCLOSED -

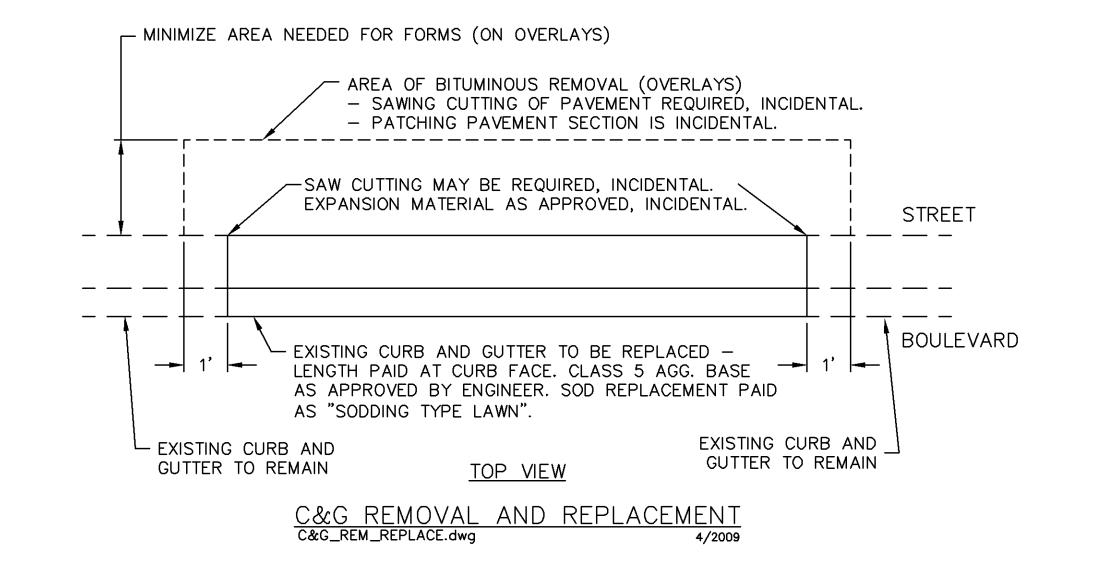
IN PLASTIC OR POLYESTER NETTING













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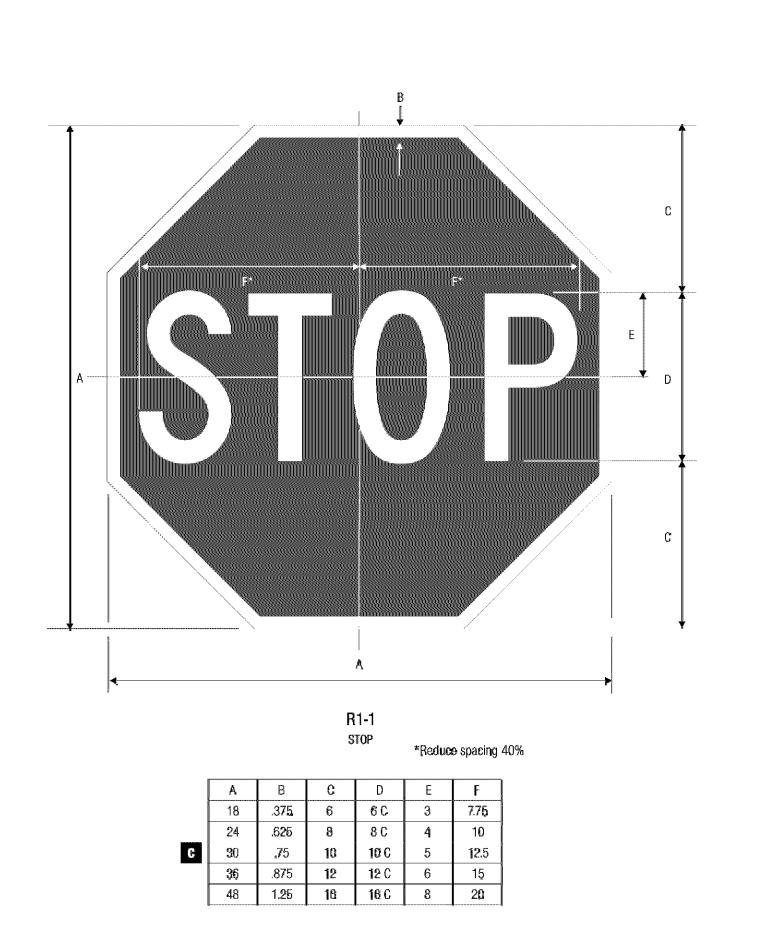
ME OR UNDER MY DIRECT SUPERVISION AND

WILLIAM D. MATZEK, P.E.

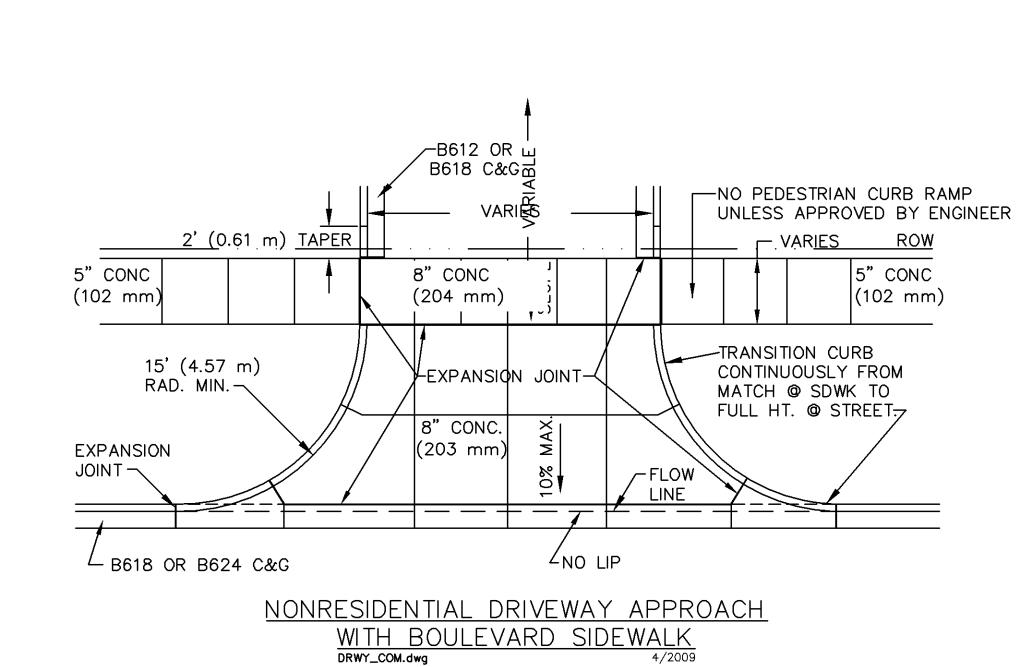
DATE: \_\_\_\_\_\_ MN LIC. NO. 45790

THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

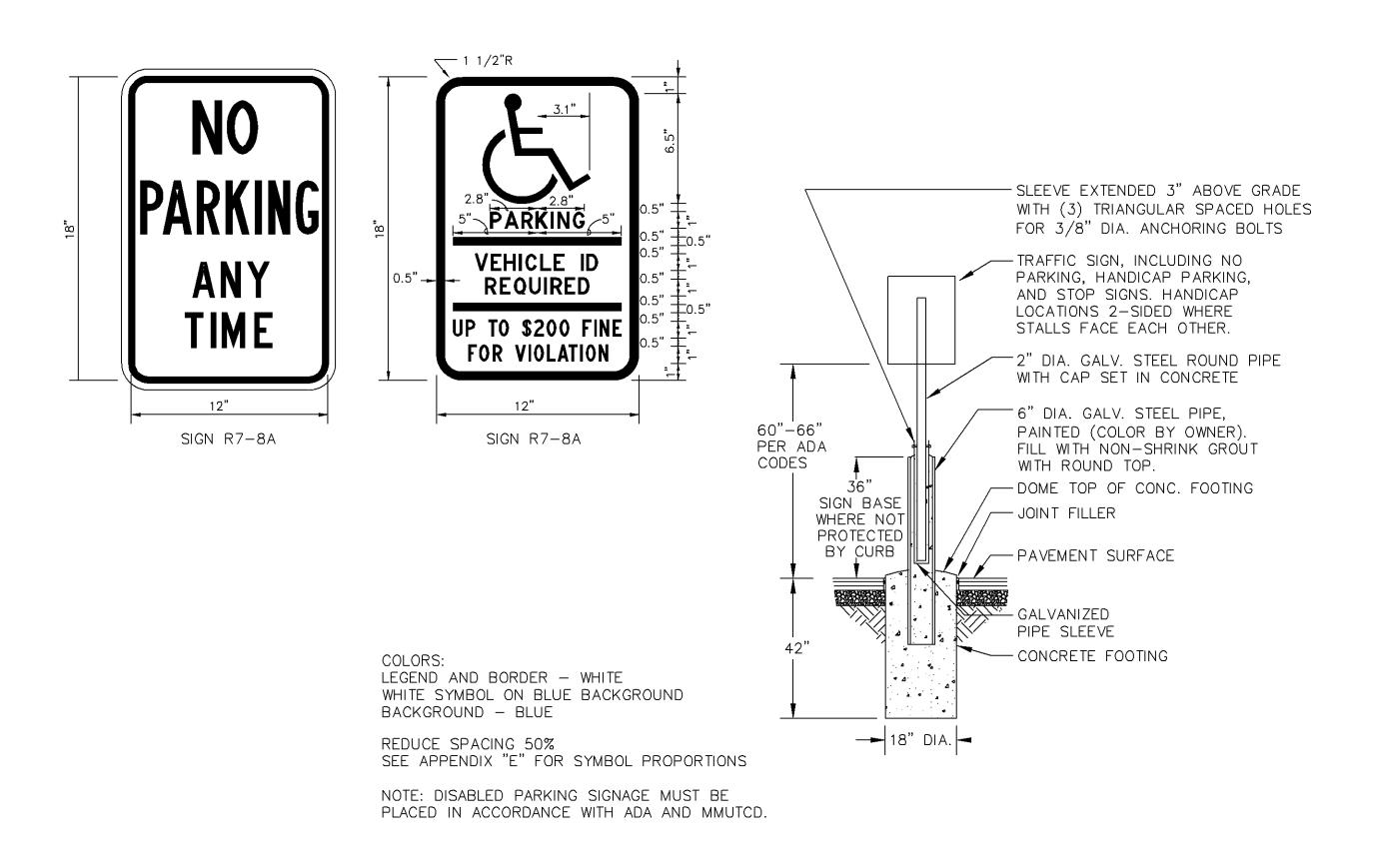
CLOW BERG



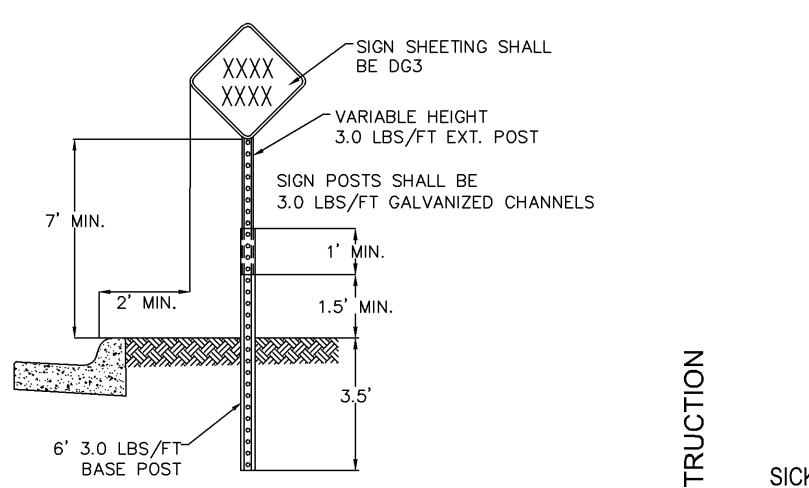




1. WORDS AND ARROWS SHALL BE APPLIED IN ACCORDANCE WITH SECTION 3B.20 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.



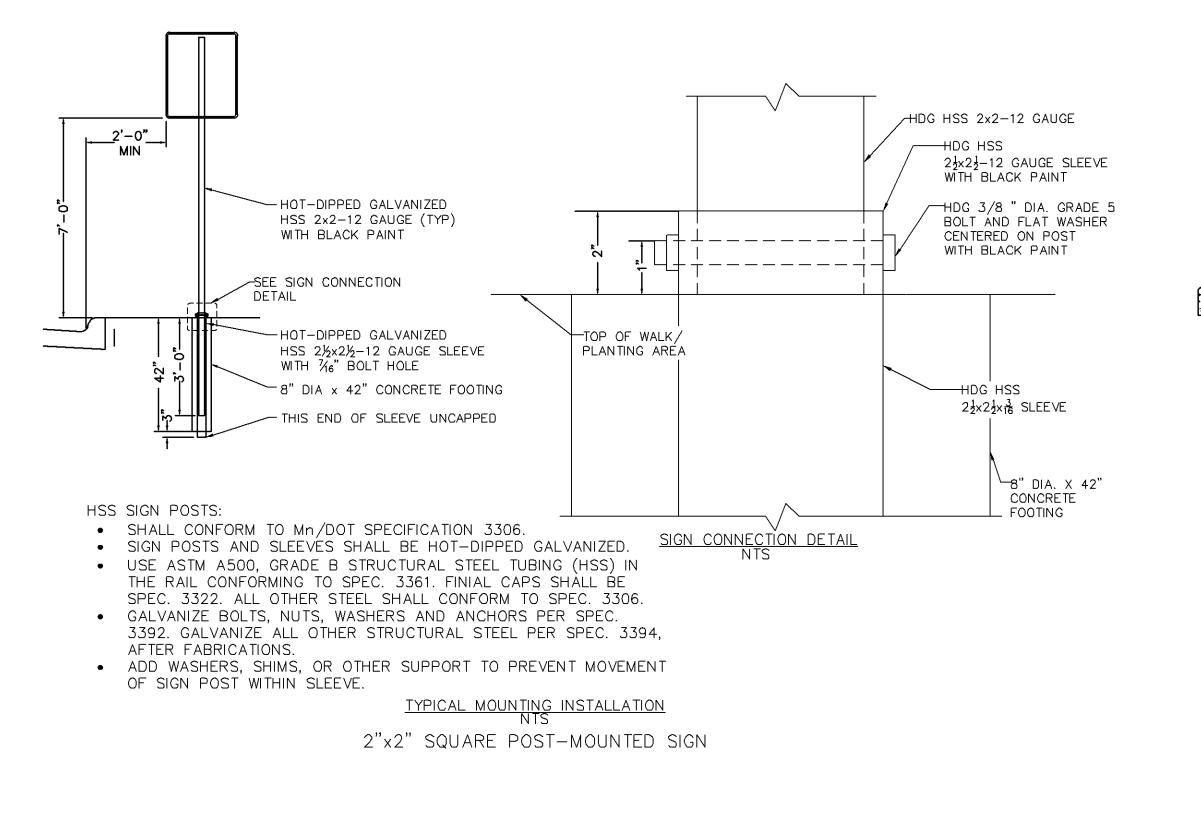
HANDICAP SIGN WITH BOLLARD

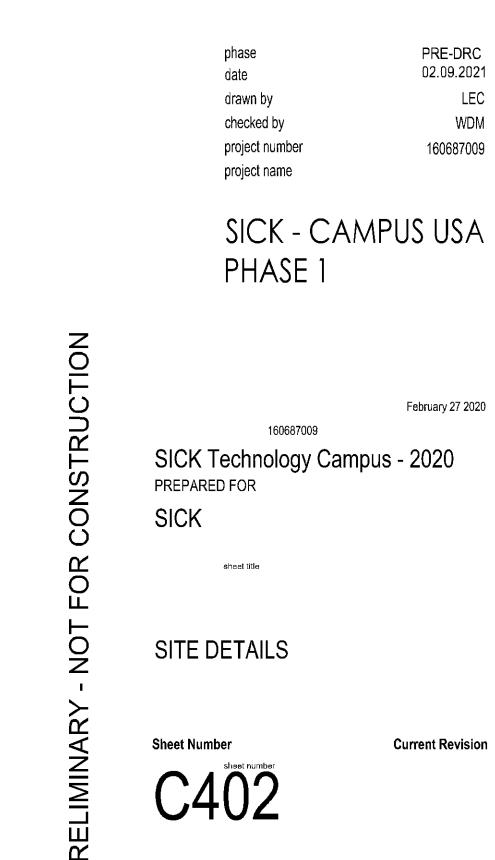


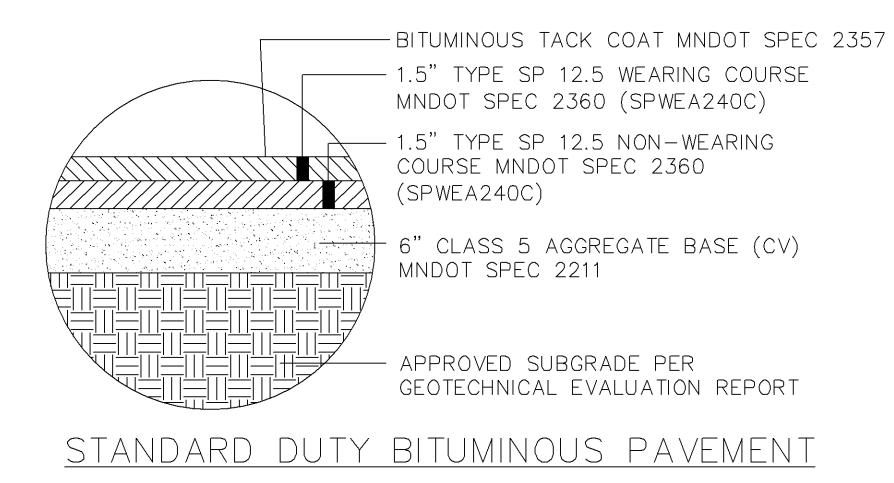
NOTE:
ALL TRAFFIC CONTROL DEVICES, INSTALLATION
AND SIGNING SHALL CONFORM TO THE LATEST
VERSION OF THE MINNESOTA MANUAL ON
UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD).

GROUND POST-MOUNTED SIGN
TYPICAL INSTALLATION
Sign\_Ground\_Mount.dwg 10/2012

	2. THESE WORDS AND ARROWS ARE TO BE PAINTED RETROREFLECTIVE WHITE.  6'-0"  6'-0"  6'-0"
SIGN, CENTER ON STALL	8-70
FACE OF CURB OR PAVEMENT MARKING	SOLID ARROW MARKINGS USED AT EXITS FROM THE PARKING LOT TO PUBLIC STREETS  PAVEMENT MARKINGS
PAINTED WHITE 4"  STENCILED WHITE 4"  NOTE: DISABLED PARKING PAY MARKINGS MUST BE PLACED II WITH ADA AND MMUTCD	N.T.S.  VEMENT
LETTERING	6' — EX. CURB & GUTTER  2% 1: 4 MAX.
8.0' MINIMUM PER STATE STANDARDS  (TYP.)	4" SELECT TOPSOIL BORROW & SOD
HANDICAP PARKING STALL LAYOUT	TYPICAL SIDEWALK INSTALLATION TYP_CONC_WALK.dwg 11/2012







- BITUMINOUS TACK COAT MNDOT SPEC 2357

--- 1.5" TYPE SP 12.5 WEARING COURSE

10" CLASS 5 AGGREGATE BASE (CV) MNDOT SPEC 2211

GEOTECHNICAL EVALUATION REPORT

- 1.5" TYPE SP 12.5 WEARING COURSE

- BITUMINOUS TACK COAT MNDOT SPEC 2357

MNDOT SPEC 2360 (SPWEB440B)

MNDOT SPEC 2360 (SPWEB440B)

8" CLASS 5 AGGREGATE BASE (CV) MNDOT SPEC 2211

- APPROVED SUBGRADE PER GEOTECHNICAL EVALUATION REPORT

2" TYPE SP 12.5 WEARING COURSE

MNDOT SPEC 2360 (SPWEB340C)

2.0" TYPE SP 12.5 NON-WEARING COURSE MNDOT SPEC 2360

APPROVED SUBGRADE PER

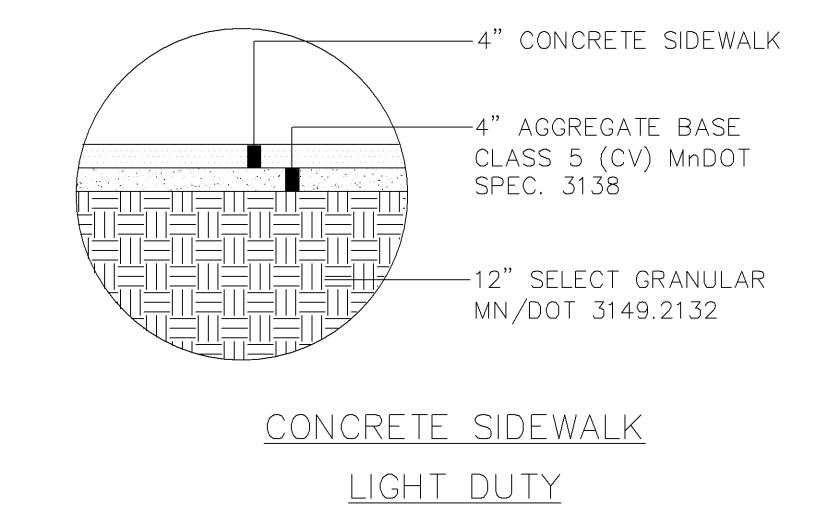
(SPWEB340C)

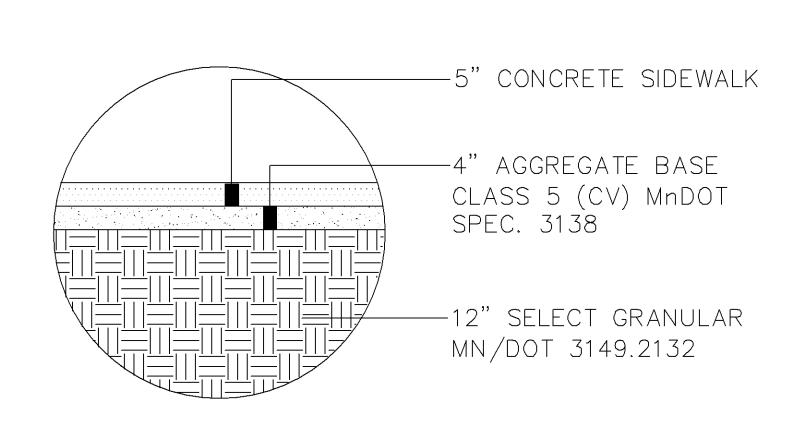
HEAVY DUTY BITUMINOUS

2.5" TYPE SP 12.5 NON-WEARING COURSE MNDOT SPEC 2360 (SPNWB430B)

<u>BITUMINOUS PATCH</u>

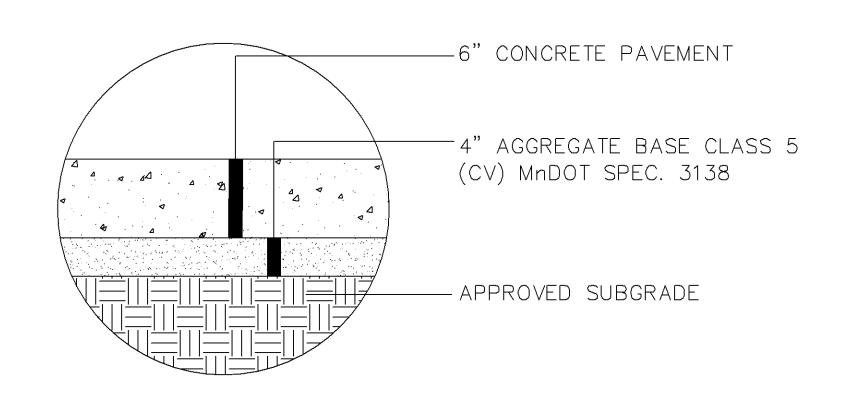
PAVEMENT



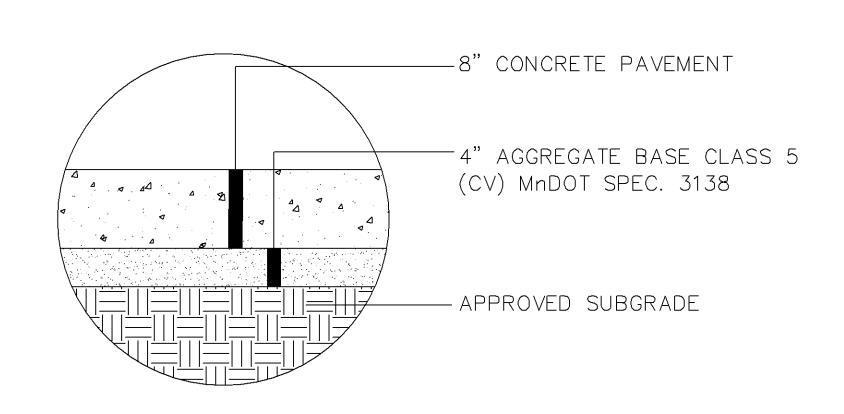


CONCRETE SIDEWALK

W/IN PUBLIC ROW



HEAVY DUTY CONCRETE PAVEMENT



TRUCK DOCK PAD CONCRETE PAVEMENT





revisions no. date description

I HEREBY CERTIFY THAT THIS PLAN,
SPECIFICATION OR REPORT WAS PREPARED BY
ME OR UNDER MY DIRECT SUPERVISION AND
THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE OF
MINNESOTA.

WILLIAM D. MATZEK, P.E.

DATE: \_\_\_\_\_\_ NN LIC. NO. \_\_\_\_45790

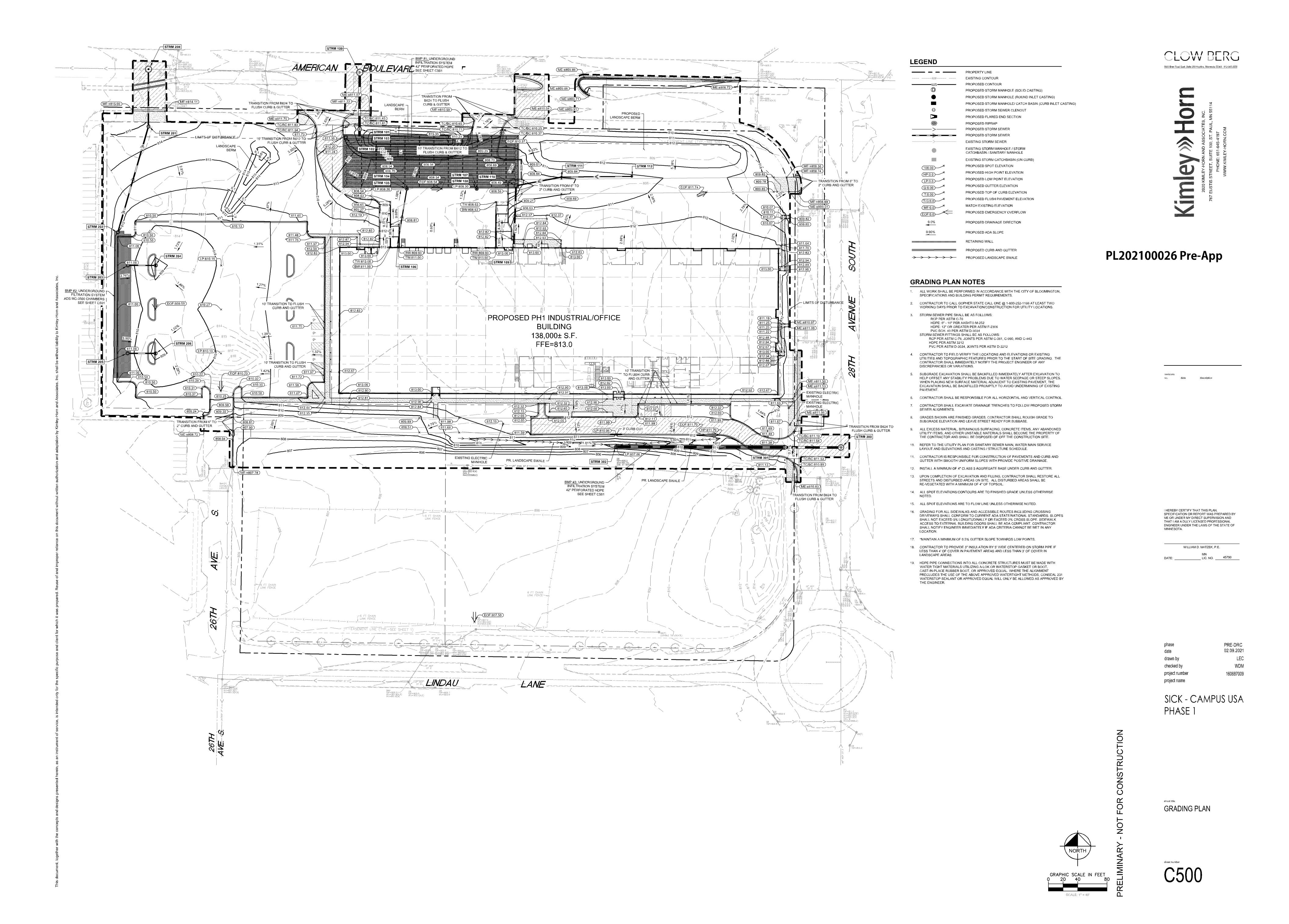
phase PRE-DRC date 02.09.2021 drawn by LEC checked by WDM project number 160687009

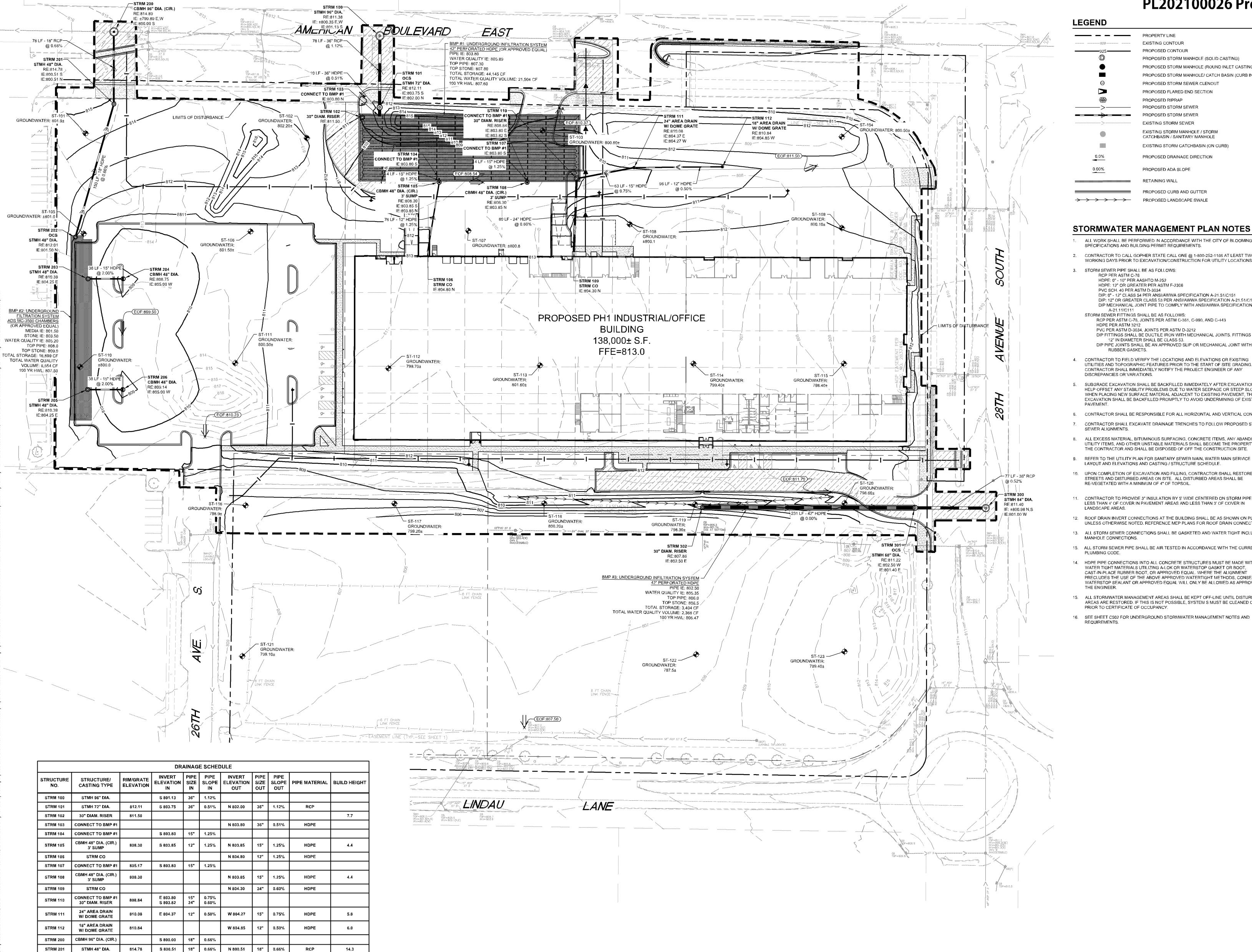
SICK - CAMPUS USA PHASE 1

project name

SITE DETAILS

C403





STMH 48" DIA.

STMH 48" DIA. CBMH 48" DIA.

STMH 48" DIA. CBMH 48" DIA.

STRM 302 30" DIAM. RISER

STRM 203

810.39 E 804.25 15" 2.00%

W 805.00 15" 2.00% HDPE

E 802.50 42" 0.00% HDPE

W 802.50 42" 0.00% E 801.40 36" 0.52%

## PL202100026 Pre-App

#### **LEGEND**

	PROPERTY LINE
посиност иносенности 922 иносенности. посиност	EXISTING CONTOUR
925	PROPOSED CONTOUR
<b>©</b>	PROPOSED STORM MANHOLE (SOLID CASTING)
•	PROPOSED STORM MANHOLE (ROUND INLET CASTING)
	PROPOSED STORM MANHOLE/ CATCH BASIN (CURB INLET CASTING
<b>⊚</b>	PROPOSED STORM SEWER CLENOUT
	PROPOSED FLARED END SECTION
<b>₩</b>	PROPOSED RIPRAP
<del>&gt;</del>	PROPOSED STORM SEWER
<del></del>	PROPOSED STORM SEWER
	EXISTING STORM SEWER
	EXISTING STORM MANHOLE / STORM CATCHBASIN / SANITARY MANHOLE
	EXISTING STORM CATCHBASIN (ON CURB)
0.0%	PROPOSED DRAINAGE DIRECTION
0.00%	PROPOSED ADA SLOPE
	RETAINING WALL
	PROPOSED CURB AND GUTTER

#### STORMWATER MANAGEMENT PLAN NOTES

- . ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF BLOOMINGTON, SPECIFICATIONS AND BUILDING PERMIT REQUIREMENTS.
- 2. CONTRACTOR TO CALL GOPHER STATE CALL ONE @ 1-800-252-1166 AT LEAST TWO WORKING DAYS PRIOR TO EXCAVATION/CONSTRUCTION FOR UTILITY LOCATIONS.
- STORM SEWER PIPE SHALL BE AS FOLLOWS: HDPE: 0" - 10" PER AASHTO M-252 HDPE: 12" OR GREATER PER ASTM F-2306 PVC SCH. 40 PER ASTM D-3034
- DIP: 0" 12" CLASS 54 PER ANSI/AWWA SPECIFICATION A-21.51/C151 DIP: 12" OR GREATER CLASS 53 PER ANSI/AWWA SPECIFICATION A-21.51/C151 DIP MECHANICAL JOINT PIPE TO COMPLY WITH ANSI/AWWA SPECIFICATION STORM SEWER FITTINGS SHALL BE AS FOLLOWS:

RCP PER ASTM C-76, JOINTS PER ASTM C-361, C-990, AND C-443

- HDPE PER ASTM 3212 PVC PER ASTM D-3034, JOINTS PER ASTM D-3212 DIP FITTINGS SHALL BE DUCTILE IRON WITH MECHANICAL JOINTS. FITTINGS OVER 12" IN DIAMETER SHALL BE CLASS 53. DIP PIPE JOINTS SHALL BE AN APPROVED SLIP OR MECHANICAL JOINT WITH RUBBER GASKETS.
- 4. CONTRACTOR TO FIELD VERIFY THE LOCATIONS AND ELEVATIONS OR EXISTING UTILITIES AND TOPOGRAPHIC FEATURES PRIOR TO THE START OF SITE GRADING. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES OR VARIATIONS.
- 5. SUBGRADE EXCAVATION SHALL BE BACKFILLED IMMEDIATELY AFTER EXCAVATION TO HELP OFFSET ANY STABILITY PROBLEMS DUE TO WATER SEEPAGE OR STEEP SLOPES. WHEN PLACING NEW SURFACE MATERIAL ADJACENT TO EXISTING PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING OF EXISTING
- 6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL. 7. CONTRACTOR SHALL EXCAVATE DRAINAGE TRENCHES TO FOLLOW PROPOSED STORM SEWER ALIGNMENTS.
- 8. ALL EXCESS MATERIAL, BITUMINOUS SURFACING, CONCRETE ITEMS, ANY ABANDONED UTILITY ITEMS, AND OTHER UNSTABLE MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF OFF THE CONSTRUCTION SITE.
- 9. REFER TO THE UTILITY PLAN FOR SANITARY SEWER MAIN, WATER MAIN SERVICE LAYOUT AND ELEVATIONS AND CASTING / STRUCTURE SCHEDULE.
- 10. UPON COMPLETION OF EXCAVATION AND FILLING, CONTRACTOR SHALL RESTORE ALL STREETS AND DISTURBED AREAS ON SITE. ALL DISTURBED AREAS SHALL BE RE-VEGETATED WITH A MINIMUM OF 4" OF TOPSOIL.
- 11. CONTRACTOR TO PROVIDE 3" INSULATION BY 5' WIDE CENTERED ON STORM PIPE IF LESS THAN 4' OF COVER IN PAVEMENT AREAS AND LESS THAN 3' OF COVER IN
- 12. ROOF DRAIN INVERT CONNECTIONS AT THE BUILDING SHALL BE AS SHOWN ON PLAN UNLESS OTHERWISE NOTED. REFERENCE MEP PLANS FOR ROOF DRAIN CONNECTION.
- 13. ALL STORM SEWER CONNECTIONS SHALL BE GASKETED AND WATER TIGHT INCLUDING MANHOLE CONNECTIONS. 15. ALL STORM SEWER PIPE SHALL BE AIR TESTED IN ACCORDANCE WITH THE CURRENT
- 14. HDPE PIPE CONNECTIONS INTO ALL CONCRETE STRUCTURES MUST BE MADE WITH WATER TIGHT MATERIALS UTILIZING A-LOK OR WATERSTOP GASKET OR BOOT, CAST-IN-PLACE RUBBER BOOT, OR APPROVED EQUAL. WHERE THE ALIGNMENT PRECLUDES THE USE OF THE ABOVE APPROVED WATERTIGHT METHODS, CONSEAL 231 WATERSTOP SEALANT OR APPROVED EQUAL WILL ONLY BE ALLOWED AS APPROVED BY
- 15. ALL STORMWATER MANAGEMENT AREAS SHALL BE KEPT OFF-LINE UNTIL DISTURBED AREAS ARE RESTORED. IF THIS IS NOT POSSIBLE, SYSTEM S MUST BE CLEANED OUT
- PRIOR TO CERTIFICATE OF OCCUPANCY.

CLOW BERG

9800 Bren Road East ,Suite 290 Hopkins, Minnesota 55343 612-345-2559



HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

WILLIAM D. MATZEK, P.E.

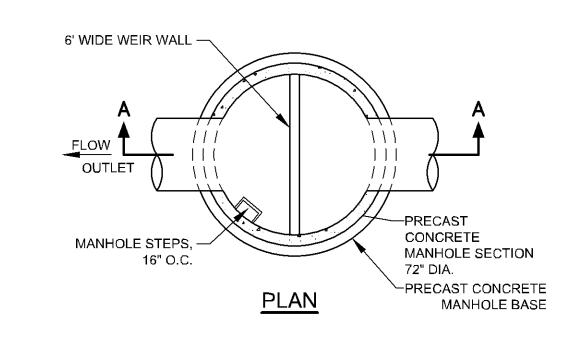
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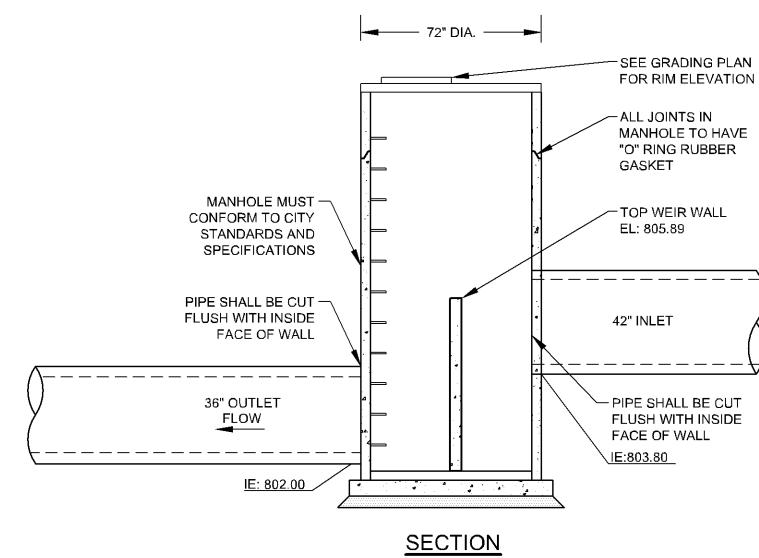
SICK - CAMPUS USA

project name

STORMWATER MANAGEMENT



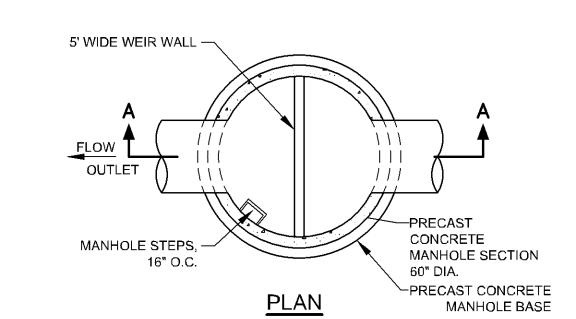


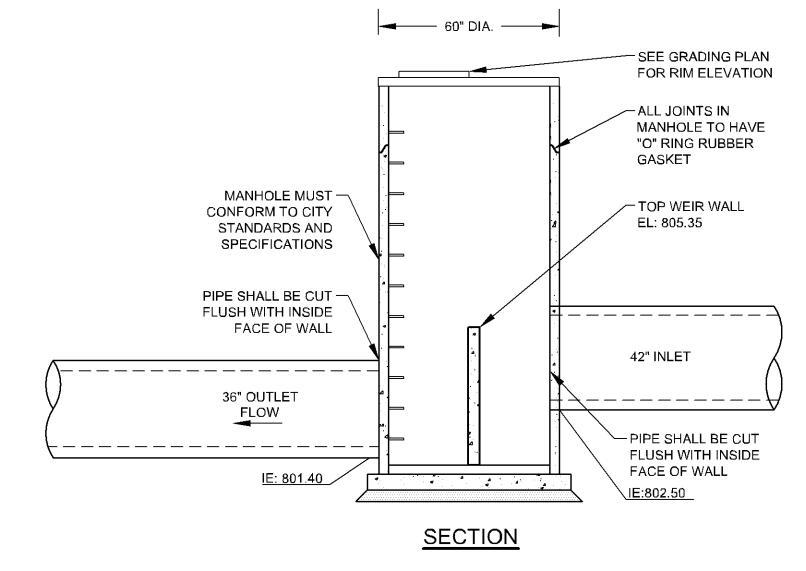


BMP#1 OUTLET CONTROL STRUCTURE (STRM 101)

# UNDERGROUND STORMWATER MANAGEMENT NOTES

- CONTRACTOR TO PROVIDE (2) DOUBLE RING INFILTROMETER TESTS WITHIN THE UNDERGROUND SYSTEM EXCAVATION PRIOR TO INSTALLATION OF THE UNDERGROUND SYSTEM. THE CONTRACTOR SHALL PROVIDE THE RESULTS TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION OF THE UNDERGROUND SYSTEM.
- 2. CONTRACTOR SHALL OVER-EXCAVATE ALL FILL AS NECESSARY TO NATIVE POORLY GRADED SANDY SOILS. EXCAVATION SHALL BE REPLACED WITH SUITABLE ENGINEERED FILL MEETING THE MNDOT SPECIFICATION FOR COARSE FILTER AGGREGATE PER SECTION 3149.2H. DEPTHS OF FILL/URBAN FILL EXPECTED TO VARY, CONTRACTOR SHALL VERIFY DEPTHS OF EXCAVATION AND PERFORM INFILTROMETER TESTS PRIOR TO INSTALLING UNDERGROUND SYSTEM.
- 3. IF NATIVE SUBGRADE SOILS BELOW FILL ARE DETERMINED TO NOT BE CONDUCIVE TO THE DESIGN INFILTRATION REQUIREMENTS, THE CONTRACTOR SHALL REMOVE AND REPLACE THE POORLY INFILTRATING SOILS TO A DEPTH WHERE THE EXISTING NATIVE SUBGRADE SOILS MEET OR EXCEED THE DESIGN INFILTRATION RATE AS REVIEWED BY THE ENGINEER.
- 4. UPON COMPLETION OF THE STORMWATER BMP AND FINAL STABILIATION OF THE TRIBUTARY DRAINAGE AREA, THE CONTRACTOR SHALL PROVIDE DOCUMENTATION THE BMP AFTER A SIGNIFICAT RAIN EVENT THAT SHOWS THE BMPS DRAWS DOWN WITHIN 48 HOURS.
- NO CONSTRUCTION EQUIPMENT SHALL TRAVEL WITHIN THE UNDERGROUND INFILTRATION SYSTEM AREA. USE EXCAVATOR WITH TOOTHED BUCKET FOR INFILTRATION BASIN EXCAVATION TO AVOID COMPACTING OR SMEARING OF SOILS.
- 6. FINAL EXCAVATION OF UNDERGROUND INFILTRATION SYSTEM AREA AND INSTALLATION OF OF ENGINEERED SOIL MUST OCCUR IN DRY SOIL CONDITIONS TO PREVENT SMEARING AND COMPACTION. DO NOT WORK IN INFILTRATION SYSTEM AREA IF SOIL CONDITIONS ARE WET.
- 7. IMMEDIATELY FOLLOWING SYSTEM CONSTRUCTION, THE EXCAVATION FOR THE TRENCH SHALL BE IMMEDIATELY BACKFILLED WITH APPROVED BACKFILL MATERIAL PER MANUFACTURER'S RECOMMENDATION, OR THE EXCAVATION SHALL BE PROTECTED WITH SILT FENCE AND OR BIO-ROLLS SUCH THAT ON-SITE SOILS DO NOT ENTER THE TRENCH EXCAVATION AND CLOG UP THE BOTTOM/SIDES OF THE TRENCH LIMITING THE INFILTRATION CAPACITY OF THE UNDERGROUND SYSTEM.
- 8. IF ANY SOILS ENTER THE TRENCH PRIOR TO BACKFILLING, THE CONTRACTOR SHALL REMOVE SOILS AND CONFIRM THE INFILTRATION CAPACITY OF THE NATIVE SUBGRADE SOILS IS MET WITH INFILTROMETER TESTS.
- CONTRACTOR SHALL COORDINATE AND COMPLETE CERTIFIED AS-BUILT PLANS
  DEMONSTRATING ALL CONSTRUCTED STORMWATER CONVEYANCE STRUCTURES,
  AND STORMWATER MANAGEMENT FACILITIES (INCLUDING AS-BUILT VOLUMES)
  CONFORM TO DESIGN AND/OR PLANS AS APPROVED BY THE CITY
- 10. STORMWATER MANAGEMENT AREAS TO BE KEPT OFF-LINE UNTIL DISTURBED AREAS ARE RESTORED. IF NOT POSSIBLE, SYSTEMS MUST BE CLEANED OUT PRIOR TO CERTIFICATE OF OCCUPANCY



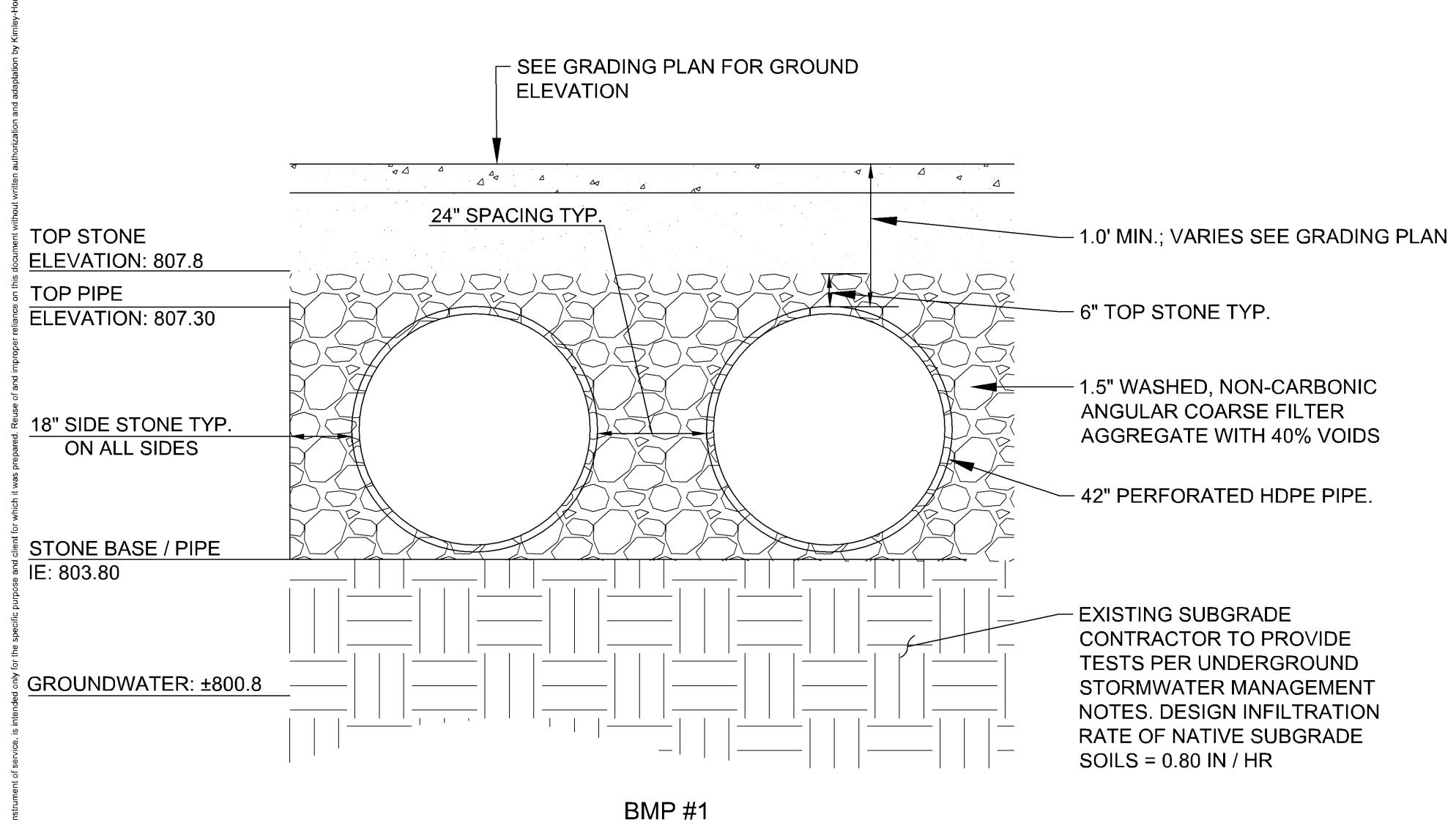


BMP#3 OUTLET CONTROL STRUCTURE (STRM 301)

9800 Bren Road East , Suite 290 Hopkins, Minnesota 55343 612-345-2559



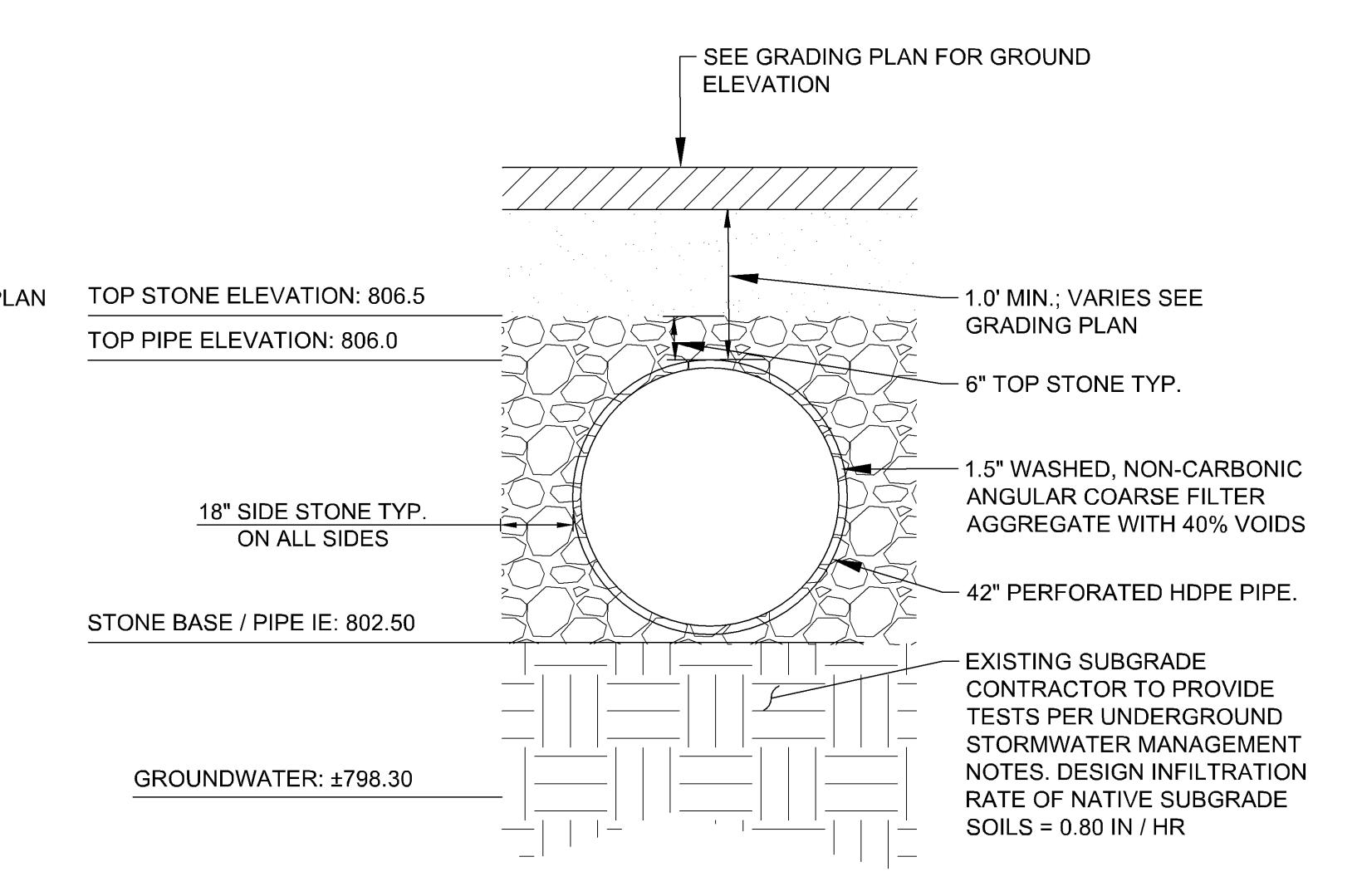
revisions no. date description



# UNDERGROUND INFILTRATION SYSTEM DETAILS NOT TO SCALE

### NOTES:

- 1. ALL HDPE CONNECTIONS SHALL BE MADE WITH WATERTIGHT MATERIALS.
- 2. THE CONTRACTOR SHALL TAKE CARE TO PREVENT SEDIMENT AND DEBRIS FROM CLOGGING THE PORE SPACE IN THE COARSE FILTER AGGREGATE.



# BMP #3 UNDERGROUND INFILTRATION SYSTEM DETAILS NOT TO SCALE

### NOTES:

- 1. ALL HDPE CONNECTIONS SHALL BE MADE WITH WATERTIGHT MATERIALS.
- 2. THE CONTRACTOR SHALL TAKE CARE TO PREVENT SEDIMENT AND DEBRIS FROM CLOGGING THE PORE SPACE IN THE COARSE FILTER AGGREGATE.

date 02.09.2021
drawn by LEC
checked by WDM
project number 160687009
project name

SICK - CAMPUS USA
PHASE 1

GRADING AND DRAINAGE
DETAILS

C502



PROJECT NO.

MINSEPARATION

MIN INSERTION

NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL





#### BLOOMINGTON INDUSTRIAL 2 BLOOMINGTON, MN

#### MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- 1. CHAMBERS SHALL BE STORMTECH MC-3500. CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-16a, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP)
- CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS. CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12:12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION
- FOR IMPACT AND MULTIPLE VEHICLE PRESENCES. CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"."
- LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (<1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK). AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION: TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS.
- . TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT AS DEFINED IN SECTION 6.2.8 OF ASTM F2418 SHALL BE GREATER THAN OR EQUAL TO 500 LBS/IN/IN. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED, UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE
- DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS: THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR

DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO

- LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE. THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN. EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- 9. CHAMBERS AND ENDICAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

- IMPORTANT NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM
- PRE-CONSTRUCTION MEETING WITH THE INSTALLERS. 2. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- STORMTECH RECOMMENDS 3 BACKFILL METHODS:

  STONESHOOTER LOCATED OFF THE CHAMBER BED. BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
   BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- 4. THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- 5. JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE. 6. MAINTAIN MINIMUM - 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
- 7. INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3
- 9. STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

#### NOTES FOR CONSTRUCTION EQUIPMENT 1. STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".

- 7 THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
- NO RUBBER TIRED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE". WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD

PL202100026 Pre-App STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A 3. CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. 10. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN 3. FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING. MANIFOLD SIZE TO BE DETERMINED BY SITE DESIGN ENGINEER. SEE TECH SHEET #7 FOR MANIFOLD SIZING GUIDANCE. DUE TO THE ADAPTATION OF THIS CHAMBER SYSTEM TO SPECIFIC SITE AND DESIGN CONSTRAINTS, IT MAY BE NECESSARY TO CUT AND COUPLE ADDITIONAL PIPE TO STANDARD MANIFOLD COMPONENTS IN THE FIELD. PLACE MINIMUM 17.50' OF ADS GEOSYNTHETICS 315WTM WOVEN CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT. GEOTEXTILE OVER BEDDING STONE AND UNDERNEATH CHAMBER THE SITE DESIGN ENGINEER MUST REVIEW ELEVATIONS AND IF NECESSARY ADJUST GRADING TO ENSURE THE CHAMBER COVER REQUIREMENTS ARE MET. THIS CHAMBER SYSTEM WAS DESIGNED WITHOUT SITE-SPECIFIC INFORMATION ON SOIL CONDITIONS OR BEARING CAPACITY. THE SITE DESIGN ENGINEER FEET FOR SCOUR PROTECTION AT ALL CHAMBER INLET ROWS IS RESPONSIBLE FOR DETERMINING THE SUITABILITY OF THE SOIL AND PROVIDING THE BEARING CAPACITY OF THE INSITU SOILS. THE BASE STONE DEPTH ---- BED LIMITS 2 OF 5 MAY BE INCREASED OR DECREASED ONCE THIS INFORMATION IS PROVIDED. - OPTIONAL INSPECTION PORT

809.50 PREFABRICATED END CAP

24" BOTTOM CORED END CAP/TYP OF ALL 24" BOTTOM CONNECTIONS AND ISOLATOR

ONCRETE STRUCTURE F OCS (DESIGN BY ENGINEER / PROVIDED BY OTHERS)

ONCRETE STRUCTURE WWEIR G (DESIGN BY ENGINEER / PROVIDED BY OTHERS)

H 6" ADS N-12 DUAL WALL PERFORATED HDPE UNDERDRAIN

STORMTECH MC-3500 CHAMBERS MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT/UNPAVED)

% STONE VOID MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT) TOP OF STONE:

24" ISOLATOR ROW INVERT

15182 (PERIMETER STONE INCLUDED)

(BASE STONE INCLUDED) 4539 SYSTEM AREA (SF)

MN/DOT S.P. 4020

OFFSET HOLE COVER

O-RING GASKET OR

AT EACH BUTTED

JOINT SURFACE.

INVERT LOCATIONS ON THE MC-3500

RECOMMENDED FOR PIPE SIZES

SREATER THAN 10" (250 mm). THE

INVERT LOCATION IN COLUMN 'B'

ARE THE HIGHEST POSSIBLE FOR

5 OF 5

THE PIPE SIZE.

BITUMASTIC MATERIAL

BREAKOUT TOP HALF PIPE

- NO LIFT HOLES ARE ALLOWED IN

AS APPROVED.

MANHOLES LESS THAN 60" IN DIA.

- FOR MH'S IN DRIVE LANES, ROTATE COVER FOUNDATION

SO THAT CASTING IS OUT OF WHEEL PATH, MATERIAL.

STANDARD MANHOLE

GROUT AROUND PIPE &

FORM INVERT AS SHOWN.

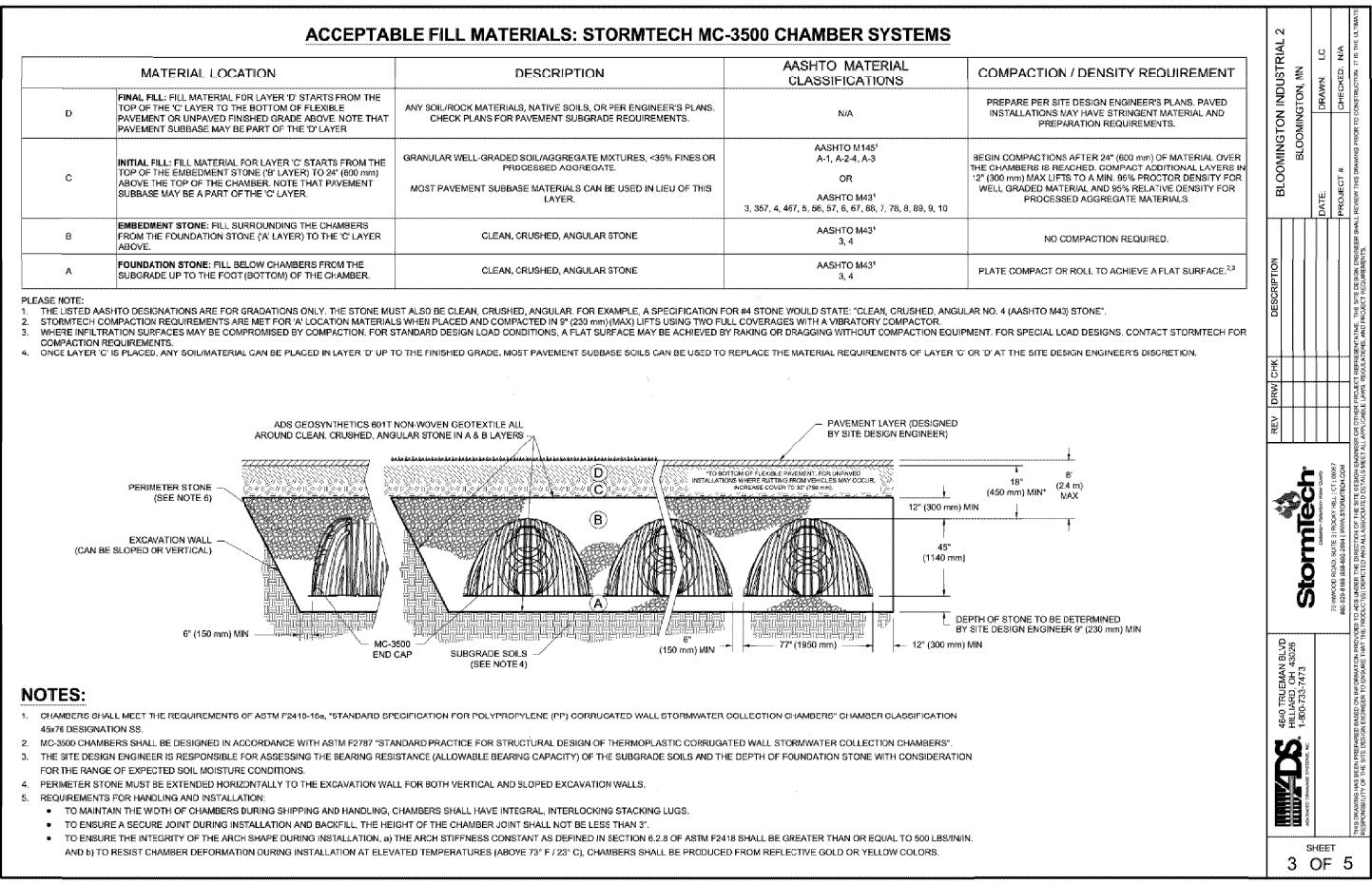
446.40 SYSTEM PERIMETER (ft)

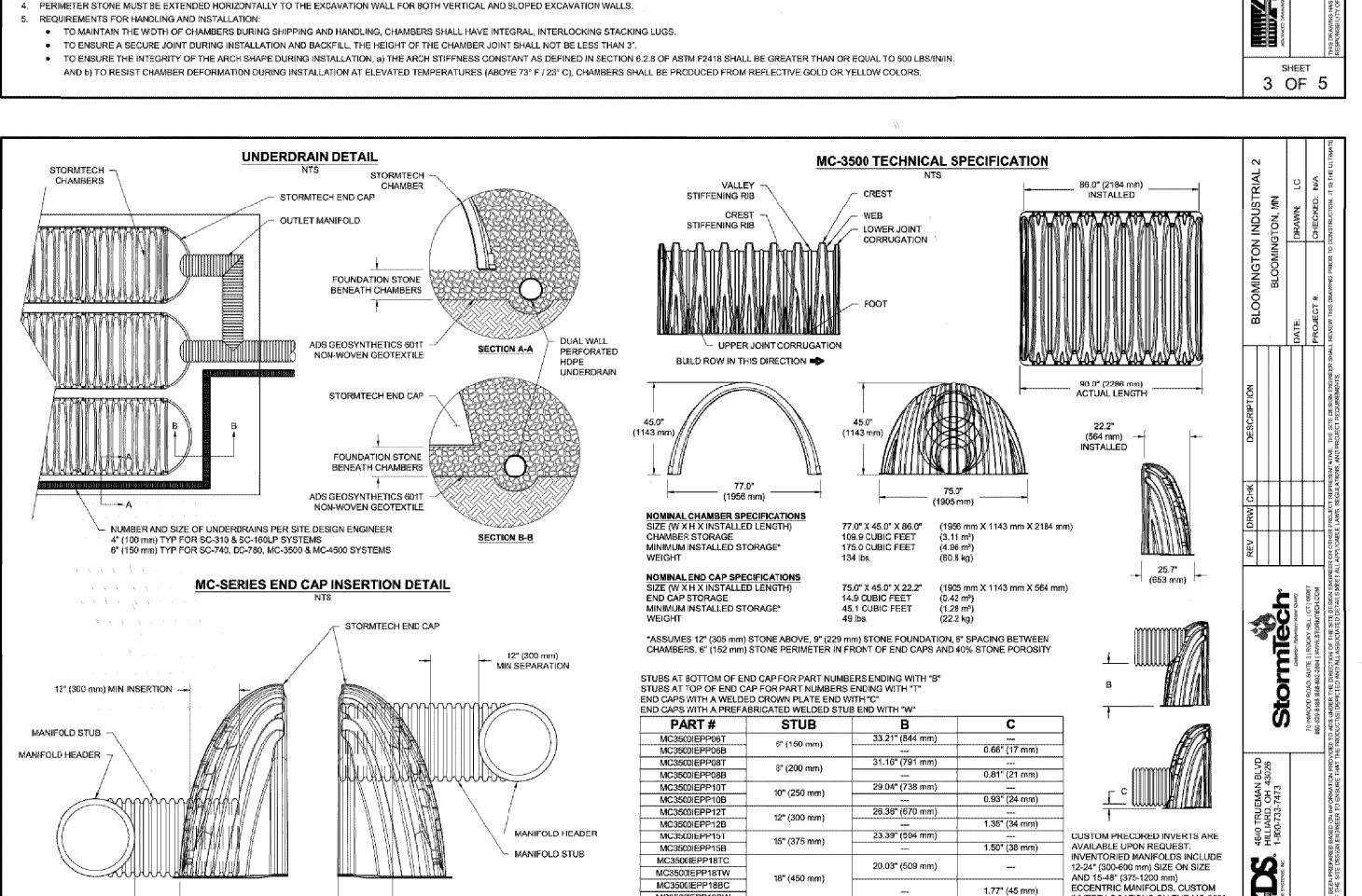
STORMTECH MC-3500 END CAPS
STONE ABOVE (in)
STONE BELOW (in)
MINIMUM ALLOWABLE GRADE (UNPAVED WITH TRAFFIC):
MINIMUM ALLOWABLE GRADE (UNPAVED NO TRAFFIC):
MINIMUM ALLOWABLE GRADE (TOP OF RIGID CONCRETE PAVEMENT):

18" x 18" BOTTOM MANIFOLD INVERT:

18" x 18" BOTTOM MANIFOLD INVERT: 18" BOTTOM CONNECTION INVERT

BOTTOM OF MC-3500 CHAMBER:





MC3500IEPP24Te

MC3500IEPP24TW

MC3500/EPP24BC

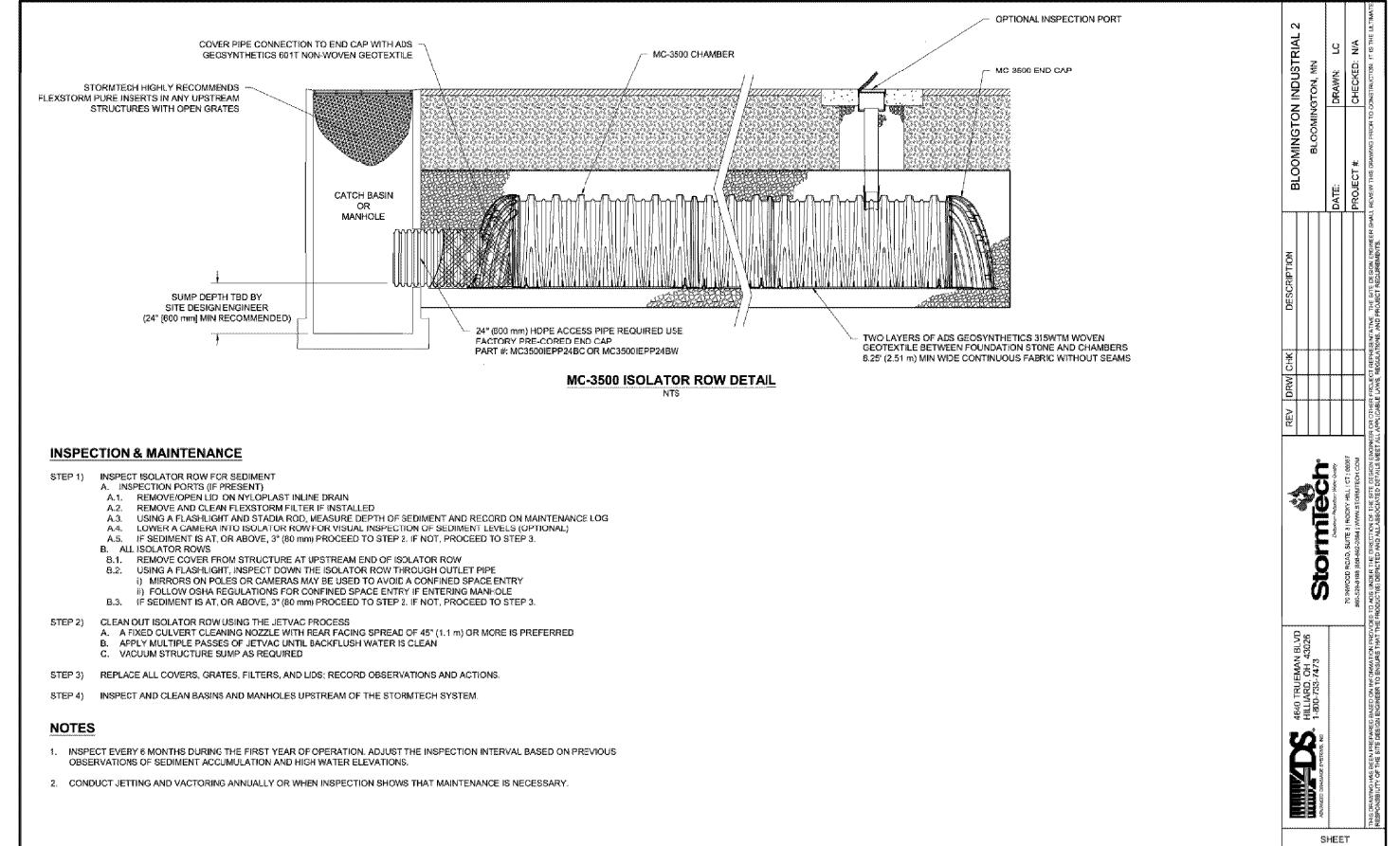
MC3500IEPP24BW

MC3500/EPP30BC

NOTE: ALL DIMENSIONS ARE NOMINAL

14.48" (368 mm)

2.06" (52 mm)



2" ADJUSTING

TO 12" MAX.).

SET EACH RING

IN A FULL BED

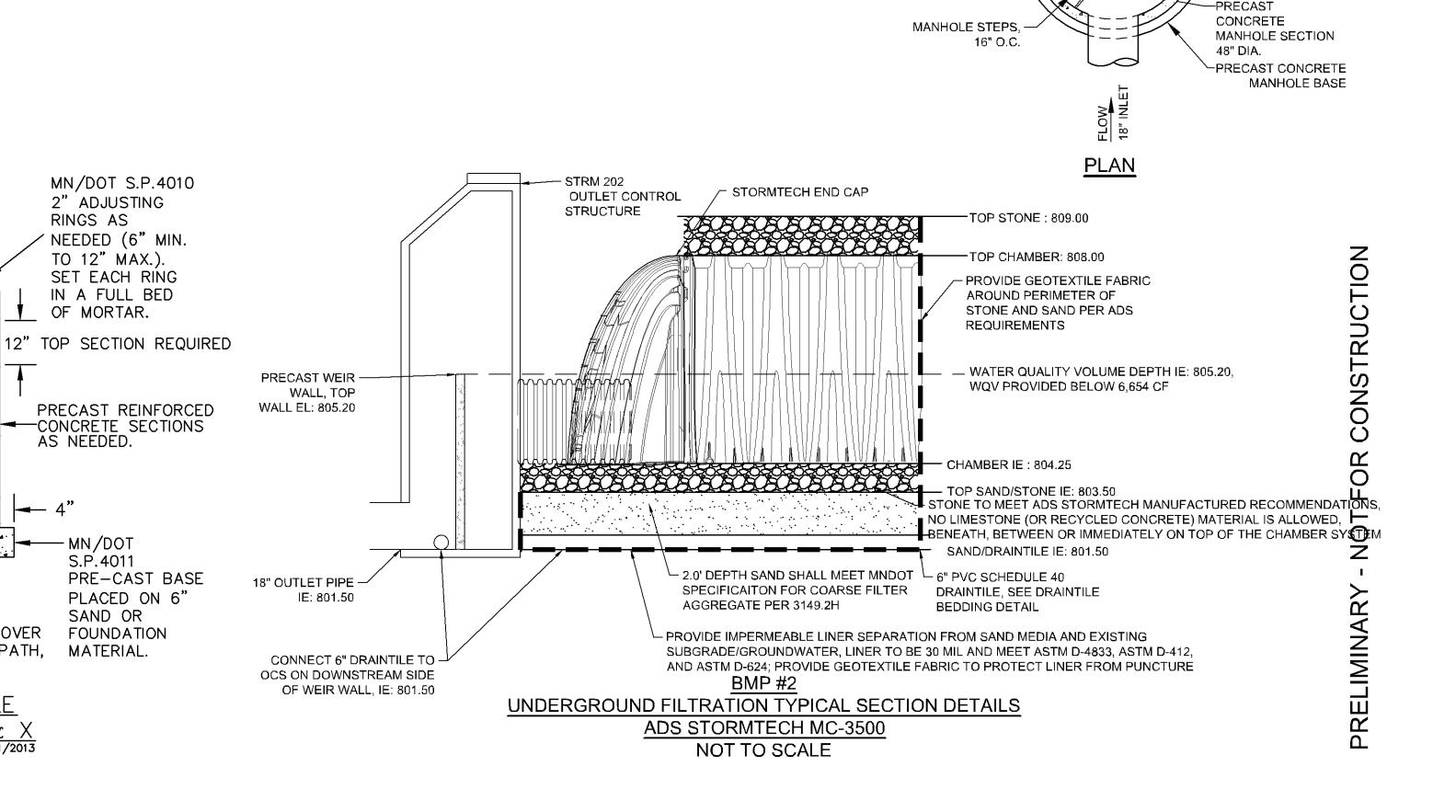
OF MORTAR.

AS NEEDED.

S.P.4011

SAND OR

RINGS AS



CLOW BERG

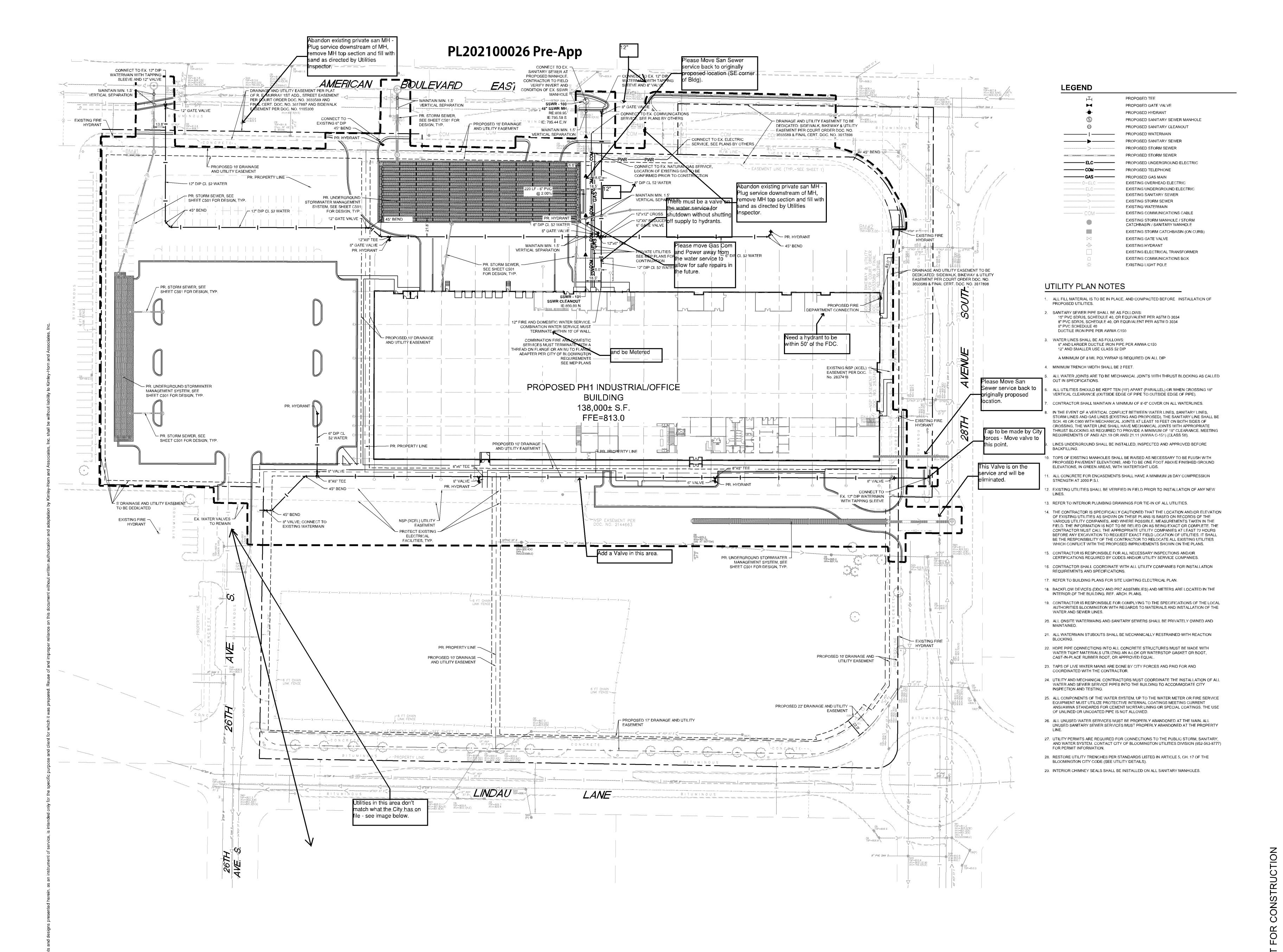
9800 Bien Road East "Suite 290 Hopkins, Minnesota 55343 612-345-2559

checked by project number 160687009 project name

- 4' WIDE WEIR WALL

SICK - CAMPUS USA

**GRADING AND DRAINAGE DETAILS** 



CLOW BERG

9800 Bren Road East ,Suite 290 Hopkins, Minnesota 55343 612-345-2559

2020 KIMLEY-HORN AND ASSOCIATES, INC.
767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114
PHONE: 651-645-4197

revisions no. date description

I HEREBY CERTIFY THAT THIS PLAN,
SPECIFICATION OR REPORT WAS PREPARED BY
ME OR UNDER MY DIRECT SUPERVISION AND
THAT I AM A DULY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE OF

WILLIAM D. MATZEK, P.E.

MN
TE: LIC. NO. 45790

phase PRE-DR
date 02.09.20
drawn by L
checked by W

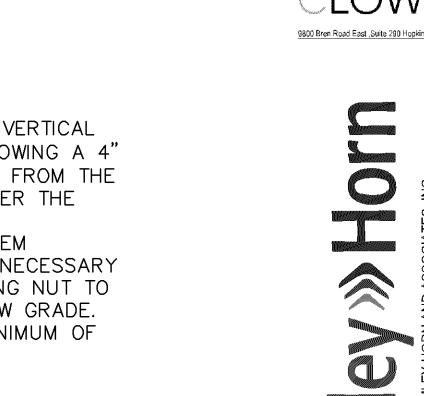
160687009

project number

project name

SICK - CAMPUS USA PHASE 1

sheet title
UTILITY PLAN





CLOW BERG 9800 Bren Road East ,Suite 290 Hopkins, Minnesota 55343 612-345-2559

VALVE BOX TO BE VERTICAL AND STRAIGHT ALLOWING A 4" PVC PIPE TO SLIDE FROM THE TOP DOWN AND OVER THE OPERATING NUT. ∠ 8' MIN. ADD OPERATING STEM (2.44 m) EXTENSION WHERE NECESSARY TO BRING OPERATING NUT TO 5 TO 9 FEET BELOW GRADE. ATTACH WITH A MINIMUM OF TWO ½" SET BOLTS WATERMAIN 18"X 18" PRECAST CONC.

FULL FLOW APPROVED FIRE VALVES

5 1/4" DROP LID COVER MARKED "WATER"-R.S. GATE VALVE TYLER SERIES 6860 VALVE -BOX AND # 6 BELL (OR APPROVED EQUAL) CENTERING ADAPTOR WITH 3/4" RUBBER PAD (ATAPTOR INC, POWERSEAL OR APPROVED EQUAL)

BASE MIN. 4" THICK TYPICAL VALVE INSTALLATION

#### TYPICAL WATER MAIN INSTALLATION DETAIL WATERMAIN\_INST.DWG

1.5 MAX

SELECT MATERIAL IN 12" LIFTS

SELECT MATERIAL IN 12" LIFTS

COMPACTED TO 95% STANDARD

'MINUS MnDOT GRANULAR BORROW

" MINUS MnDOT GRANULAR BORROW

3149.2B1-COMPACTION BY HAND

3149.2B1-COMPACTION BY HAND

(WHERE NECESSARY TO REPLACE

UNSUITABLE/UNSTABLE SOILS)

AND PORTABLE COMPACTION

AND PORTABLE COMPACTION

COARSE FILTER AGGREGATE

<10% PASSING #4 SIEVE

MnDOT 3149: 1 1/2" MINUS,

BACKFILL UPPER 3 COMPACTED TO 100% STANDARD

EQUIPMENT

EQUIPMENT

• HYDRANT TO BE:

WATEROUS PACER CLASSIC.

o OR APPROVED EQUAL.

• BARREL TO BE BRIGHT RED.

○ MUELLER SUPERCENTURION 250 MODEL A-423.

ONE - FACTORY INSTALLED 5 INCH STORZ PUMPER

o TWO - 2.5 INCH HOSE NOZZLES/CONNECTIONS (WITH

WITH 1.5 INCH PENTAGON NUTS, AND NO ROCKER LUGS. • USE SS NUTS AND BOLTS AS APPROVED BY THE ENGINEER.

1.5 INCH PENTAGON NUT AND NO ROCKER LUG.

ALL EXPOSED WATERMAIN SHALL BE WRAPPED WITH

POLYETHYLENE IN ACCORDANCE WITH AWWA C-105.

• WATEROUS PACER CLASSIC HYDRANTS SHALL INCLUDE

INSTALLATION OF THE MANUFACTURERS MOST CURRENT

ALL VALVES TO OPEN COUNTER-CLOCKWISE.

ANTI-CHATTER BRASS UPPER VALVE WASHER.

BACKFILL

GRANULAR

GRANULAR

GRANULAR

FOUNDATION

BEDDING

ENCASEMENT

PROCTOR DENSITY

PROCTOR DENSITY

## PL202100026 Pre-App

VALVE BOX TO BE VERTICAL AND

DOWN AND OVER THE OPERATING

OPERATING NUT TO 5 TO 9 FEET

BELOW GRADE. ATTACH WITH A

MINIMUM OF TWO 1/2" SET BOLTS

STRAIGHT ALLOWING A 4" PVC

PIPE TO SLIDE FROM THE TOP

WHERE NECESSARY TO BRING

8' MIN. ADD OPERATING STEM EXTENSION

5 1/4" DROP LID COVER -

TYLER SERIES 6860 STANDARD

/BUTTERFLY VALVE ADAPTER -

BUTTERFLY\_VALVE.dwg

VALVE BOX WITH 6850 BASE

(OR APPROVED EQUAL)\_

VALVE OPERATOR

18"X18" PRECAST CONC.—

WITH RESTRAINED MECHANICAL JOINTS

TYPICAL BUTTERFLY VALVE INSTALLATION

PIPE BEDDED IN GRANULAR BEDDING

PIPE BEDDING DETAIL
PIPE-BED.DWG 4/2009

TO DEPTH OF 5 INCHES. BACKFILL

COMPACTED TO FINISHED GRADE.

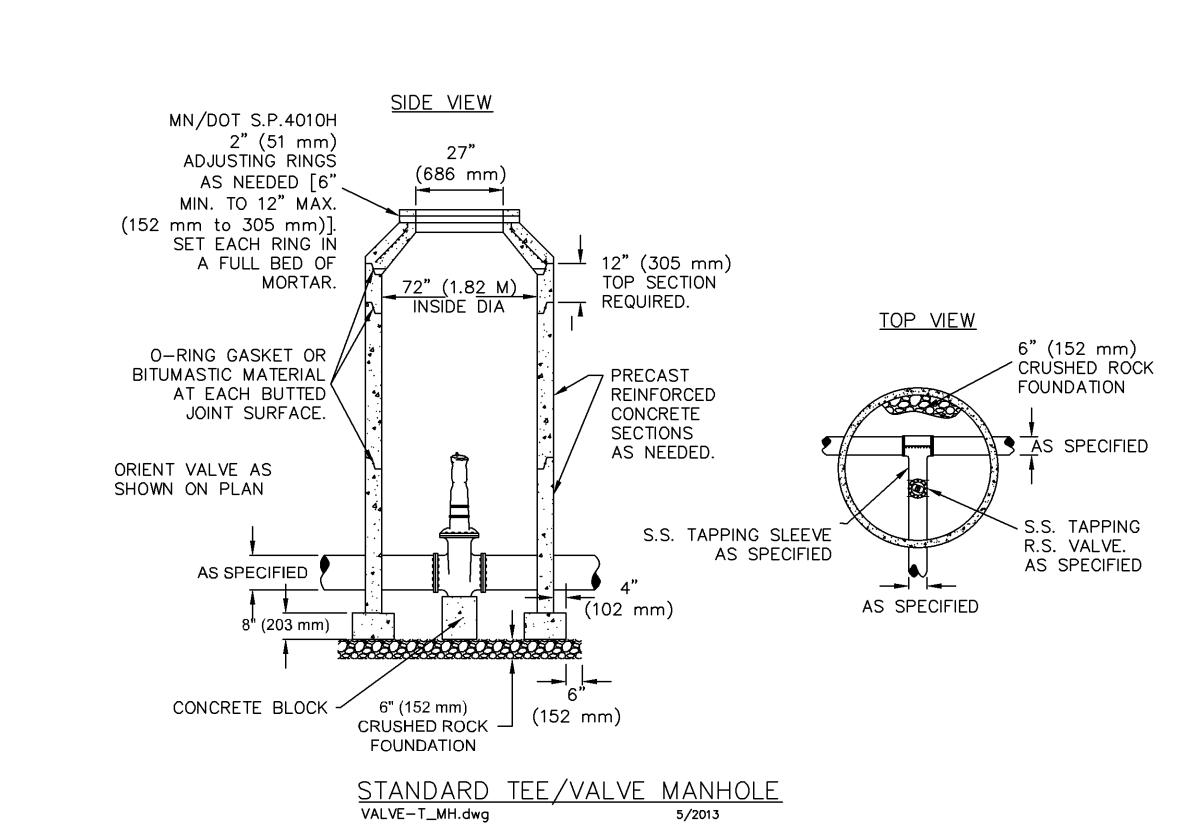
BASES MIN. 4" THICK

AWWA C504 BUTTERFLY VALVE—/

AND CENTERING ADAPTER

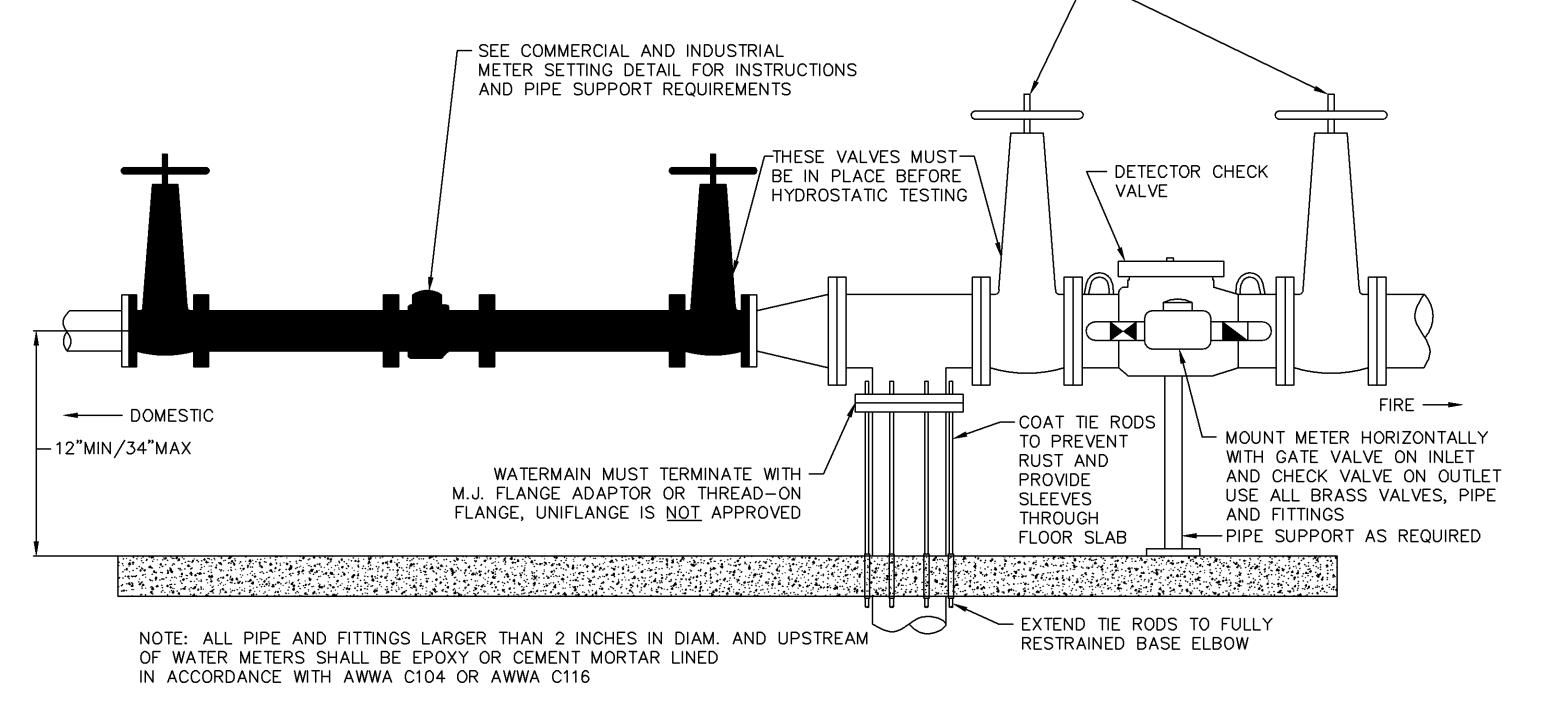
BELL SHALL NOT REST ON

MARKED "WATER"

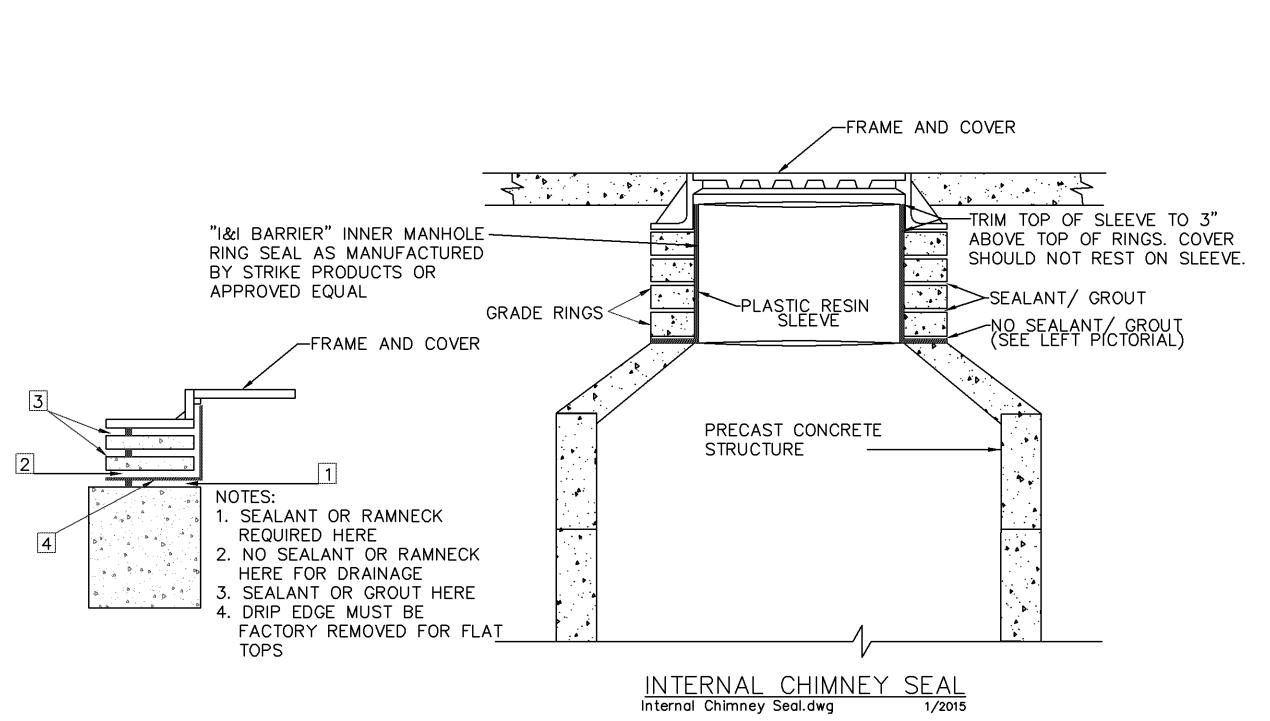


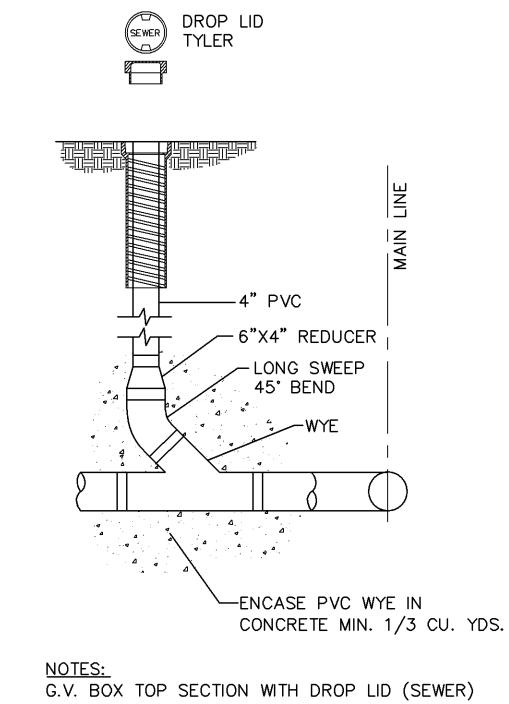
∠DUCTILE IRON WATERMAIN

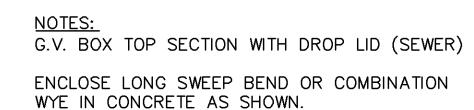
W/POLYETHYLENE ENCASEMENT



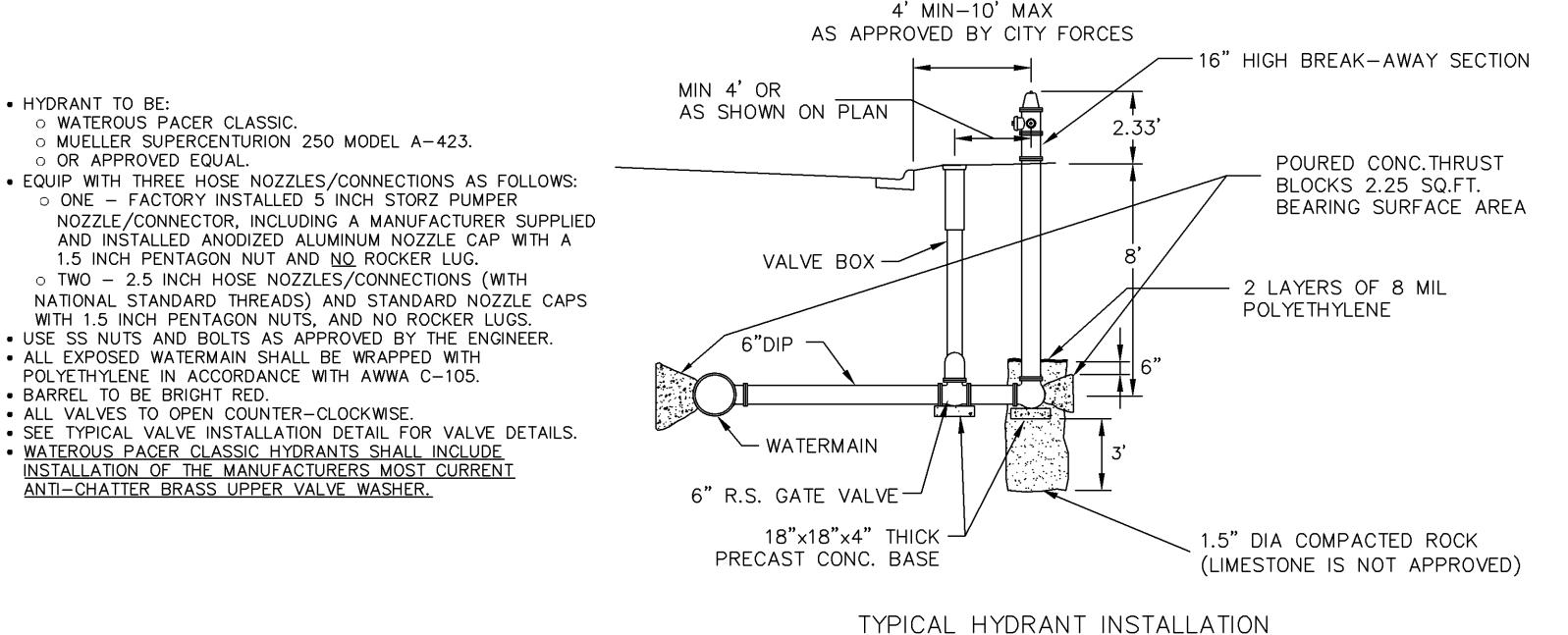




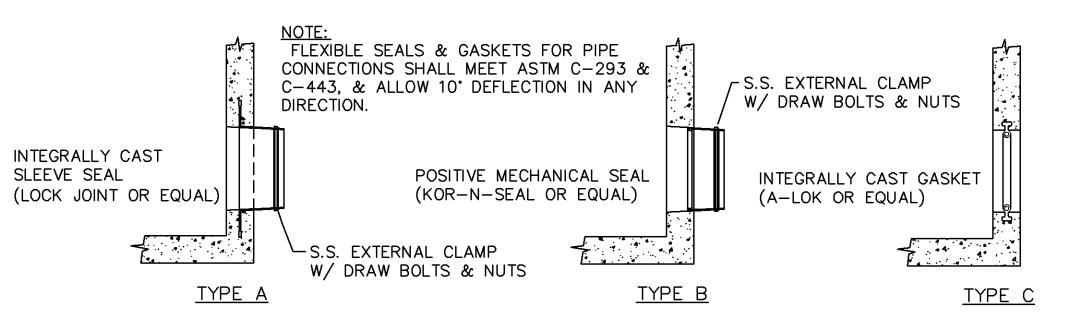




SANITARY SEWER CLEANOUT



Hyd\_instl.dwg



WATER TIGHT PIPE CONNECTIONS

phase

date

drawn by

checked by

project number

project name

PHASE 1

SICK - CAMPUS USA

PRE-DRC

02.09.2021

160687009

LEC

WDM

C601

UTILITY DETAILS