

K:\TWC\_LDEV\starbucks\_fy22\_reno\_program\42958\_columbia\_mo - broadway & fairview\3 Design\CAD\plansheets\CO-COVER SHEET.dwg September 26, 2023 - 9:52am

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SITE DEVELOPMENT PLANS  
FOR  
STARBUCKS # 42958 - BROADWAY & FAIRVIEW  
FAIRVIEW MARKETPLACE REVISION #3 PD PLAN

S9, T48N, R13W  
COLUMBIA, BOONE COUNTY, MO

PROJECT TEAM:

ENGINEER  
KIMLEY-HORN AND ASSOCIATES, INC.



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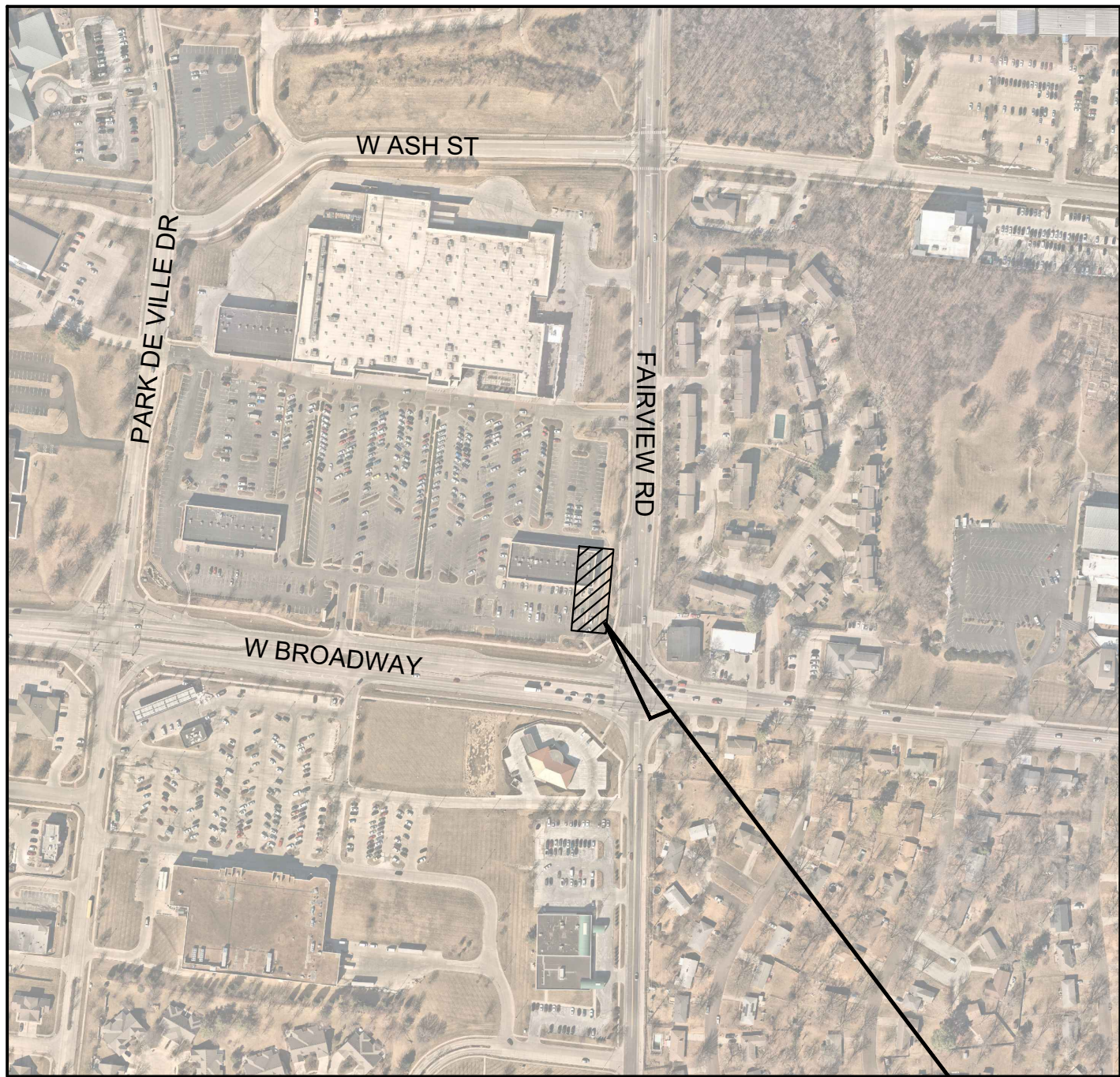
SURVEYOR  
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OWNER / DEVELOPER  
STARBUCKS

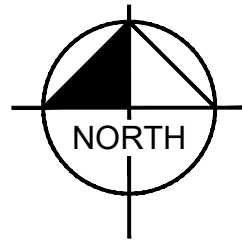


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VICINITY  
N.T.S.



SITE

Sheet List Table	
Sheet Number	Sheet Title
C000	COVER SHEET
C100	GENERAL NOTES
C200	SITE DEMOLITION PLAN
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PROPERTY SUMMARY	
STARBUCKS # 42958 - BROADWAY & FAIRVIEW	
EXISTING ZONING	M-C: CONTROLLED INDUSTRIAL DISTRICT
LEGAL DESCRIPTION	A TRACT OF LAND LOCATED IN THE EAST HALF OF SECTION 9 T48N R13W IN COLUMBIA, BOONE COUNTY, MISSOURI, BEING PART OF LOT 1 OF FAIRVIEW MARKETPLACE RECORDED IN PLAT BOOK 40 PAGE 29
FLOODPLAIN STATEMENT	THE SITE OF INTEREST IS LOCATED WITHIN FLOOD ZONE X
STREAM BUFFER STATEMENT	THE SITE OF INTEREST IS NOT LOCATED WITHIN A STREAM BUFFER

NOTES:

- CONTRACTOR SHALL CONFIRM THAT THE EXISTING CONDITIONS FOR THE SITE MATCH WHAT IS SHOWN ON THE DRAWINGS INCLUDED PRIOR TO CONSTRUCTION.
- IF REPRODUCED, THE SCALES SHOWN ON THESE PLANS ARE BASED ON A 22x34 SHEET.
- 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.
- ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS.

BENCHMARKS
SITE BENCHMARKS: (LOCATIONS SHOWN ON SURVEY)
SBM #1 SQUARE CUT. SOUTHEAST CORNER OF SITE. ELEVATION=748.49'
SBM #2 SQUARE CUT. SOUTHWEST CORNER OF SITE. ELEVATION=743.27'



PRELIMINARY - NOT FOR CONSTRUCTION

STARBUCKS # 42958 -  
BROADWAY & FAIRVIEW  
PREPARED FOR  
STARBUCKS

COVER SHEET

KHA PROJECT 160924201	DATE 01/06/2023	SCALE AS SHOWN	DESIGNED BY SJS	DRAWN BY SJS	CHECKED BY MTL
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No.	REVISIONS	DATE	BY

SHEET NUMBER  
C000



GENERAL CONSTRUCTION NOTES

- THE CONTRACTOR AND SUBCONTRACTORS SHALL OBTAIN A COPY OF THE MO 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.
- 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.
- 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 C/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.
- 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.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS AND BONDS IF REQUIRED PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.
- 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.
- ALL COPIES OF COMPACTION, CONCRETE AND OTHER REQUIRED TEST RESULTS ARE TO BE SENT TO THE OWNER DIRECTLY FROM THE TESTING AGENCY.
- 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 MO PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.
- 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.
- ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES WITHIN 24 HOURS AFTER DISCOVERY IS MADE.
- 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.
- 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.

- 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.
- 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.
- 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.
- 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.
- 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

- 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.
- 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 MO NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- 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.
- 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.
- TEMPORARY SEEDING OR OTHER APPROVED METHODS OF STABILIZATION SHALL BE INITIATED WITHIN 7 DAYS OF THE LAST DISTURBANCE ON ANY AREA OF THE SITE.
- THE CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- 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.
- ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- 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.
- 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.
- 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.
- ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE PLAN SHALL BE INITIATED AS SOON AS IS PRACTICABLE.
- ALL STAGING AREAS, STOCKPILES, SPOILS, ETC. SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. OTHERWISE, COVERING OR ENCIRCLING THESE AREAS WITH SOME PROTECTIVE MEASURE WILL BE NECESSARY.
- 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.
- EROSION CONTROL DEVICES SHOWN ON THESE PLANS SHALL BE INSTALLED PRIOR TO THE START OF LAND-DISTURBING ACTIVITIES ON THE PROJECT.
- 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 COLUMBIA ENGINEERING DIVISION.
- 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 MO/DOT SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.
- 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.
- 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.
- ALL EXPANSION JOINTS SHALL EXTEND THROUGH THE CURB.
- THE MINIMUM LENGTH OF OFFSET JOINTS AT RADIUS POINTS SHALL BE 2 FEET.
- ALL JOINTS, INCLUDING EXPANSION JOINTS WITH REMOVABLE TACK STRIPS, SHALL BE SEALED WITH JOINT SEALANT.
- THE MATERIALS AND PROPERTIES OF ALL CONCRETE SHALL MEET THE APPLICABLE REQUIREMENTS IN THE A.C.I. (AMERICAN CONCRETE INSTITUTE) MANUAL OF CONCRETE PRACTICE.
- 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.
- 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.
- 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.
- MAXIMUM JOINT SPACING IS TWICE THE DEPTH OF THE CONCRETE PAVEMENT IN FEET.

THIRD PARTY TEST REPORTS REQUIRED

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

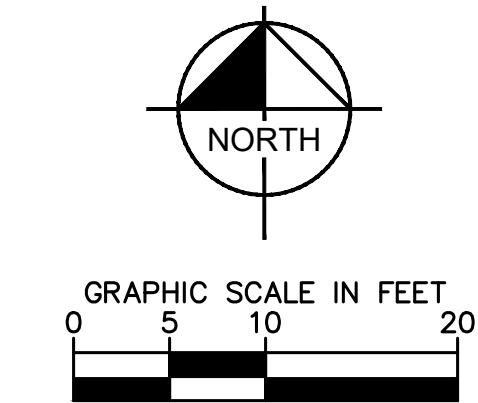
GRADING AND DRAINAGE NOTES

- 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.
- 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.
- 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.
- 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.
- 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.
- 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 REGRADED AND SODDED.
- 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.
- 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.
- 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 POSITIVE DRAINAGE FLOWS.
- 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 EXCAVATION.
- FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE LOCAL JURISDICTIONAL AGENCY OR TO MO/DOT STANDARDS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.
- 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.
- 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.
- SOD, WHERE CALLED FOR, MUST BE INSTALLED AND MAINTAINED ON EXPOSED SLOPES WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.
- 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.
- THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS AND MO/DOT SPECIFICATION.
- ALL CONCRETE/ASPHALT SHALL BE INSTALLED PER GEOTECH REPORT, CITY OF COLUMBIA AND MO/DOT SPECIFICATIONS.
- SPOT ELEVATIONS ARE TO FLOWLINE OF CURB UNLESS OTHERWISE NOTED.
- LIMITS OF CONSTRUCTION ARE TO THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED ON THE PLAN.
- IMMEDIATELY REPORT TO THE OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION WITHOUT COMPENSATION.
- BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- 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.
- 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.
- ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- CONTRACTOR SHALL ENSURE MINIMUM GRADES ARE MET WITHIN PAVED AREAS, 1.2% FOR ASPHALT PAVING AND 0.6% FOR CONCRETE PAVING.



No.	REVISIONS	DATE	BY





- PROPERTY LINE
- REMOVE BITUMINOUS SURFACE
- REMOVE CONCRETE CURB AND GUTTER
- REMOVE BUILDING
- CLEARING & GRUBBING
- FULL DEPTH SAWCUT
- ROCK ROCK
- INLET PROTECTION
- REMOVE TREE
- REMOVE CONCRETE CURB & GUTTER
- REMOVE UTILITY LINES
- FILL & ABANDON UTILITY LINES
- LIMITS OF CONSTRUCTION, OFFSET FOR CLARITY
- EXISTING OVERHEAD POWER LINE
- EXISTING CHAINLINK FENCE
- EXISTING J-BARRIER
- EXISTING RETAINING WALL
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- EXISTING WATERMAIN
- EXISTING GAS MAIN
- EXISTING UNDERGROUND TELEPHONE
- EXISTING UNDERGROUND CABLE
- EXISTING CONTOUR
- EXISTING CURB & GUTTER
- EXISTING SIGN
- EXISTING FLARED END SECTION
- EXISTING STORM MANHOLE
- EXISTING STORM CATCHBASIN
- EXISTING GAS METER
- EXISTING POST INDICATOR VALVE
- EXISTING WELL
- EXISTING AUTOMATIC SPRINKLER
- EXISTING ROOF DRAIN
- EXISTING GATE VALVE
- EXISTING HYDRANT
- EXISTING METAL COVER
- EXISTING ELECTRICAL METER
- EXISTING AIR CONDITIONER
- EXISTING TELEPHONE MANHOLE
- EXISTING CABLE BOX
- EXISTING GUY WIRE
- EXISTING POWER POLE
- EXISTING LIGHT POLE
- EXISTING TREE
- EXISTING TREE LINE
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND FIBER

1. THE CONTRACTOR IS RESPONSIBLE FOR THE DEMOLITION, REMOVAL, AND DISPOSAL (IN A LOCATION APPROVED BY ALL GOVERNING AUTHORITIES) ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, PARKING, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS ARE ON THE PLANS. THE CONTRACTOR SHALL FACILITATE THE REMOVAL OF ALL EXISTING MATERIAL TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE PROJECT DOCUMENTS.
2. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL. CONTRACTOR SHALL PROVIDE COPIES OF THE PERMIT AND RECEIPTS OF DISPOSAL OF MATERIALS TO THE OWNER AND OWNERS REPRESENTATIVE.
3. THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO ADJACENT PROPERTIES AT ALL TIMES. UTILITY SERVICES SHALL NOT BE INTERRUPTED WITHOUT APPROVAL FROM THE CONSTRUCTION MANAGER AND COORDINATION WITH THE ADJACENT PROPERTIES AND/OR THE CITY.
4. THE CONTRACTOR SHALL COORDINATE WITH RESPECTIVE UTILITY COMPANIES PRIOR TO THE REMOVAL AND/OR RELOCATION OF UTILITIES. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANY'S FORCES AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR PAYING ALL FEES AND CHARGES.
5. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR STRUCTURE, UTILITY, PRIOR TO THE START OF ANY DEMOLITION ACTIVITY. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES FOR LOCATIONS OF EXISTING UTILITIES WITHIN ALL AREAS OF PROPOSED WORK.
6. ALL EXISTING SEWERS, PIPING AND UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT LOCATION, OR AS ANY OBSTACLES THAT MAY OCCUR ON THE SITE. VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES. GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DESTRUCTION AND REMOVAL OF ALL SERVICE LINES AND CAP ALL LINES BEFORE PRECEDING WITH THE WORK.
7. ELECTRICAL, TELEPHONE, CABLE, WATER, FIBER OPTIC, AND/OR GAS LINES NEEDING TO BE REMOVED OR RELOCATED SHALL BE COORDINATED WITH THE AFFECTED UTILITY COMPANY. ADEQUATE TIME SHALL BE PROVIDED FOR RELOCATION AND CLOSE COORDINATION WITH THE UTILITY COMPANY IS NECESSARY TO PROVIDE A SMOOTH TRANSITION IN UTILITY SERVICE. CONTRACTOR SHALL PAY CLOSE ATTENTION TO EXISTING UTILITIES WITHIN ANY ROAD RIGHT-OF-WAY DURING CONSTRUCTION.
8. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. (AND OTHER APPROPRIATE BEST MANAGEMENT PRACTICES) AS APPROVED BY THE CONSTRUCTION MANAGER. MAINTENANCE OF UTILITY CONTROL SHALL BE COORDINATED IN ACCORDANCE WITH COLUMBIA, BOONE COUNTY AND MO/DOT.
9. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES DURING CONSTRUCTION, AND SHALL NOTIFY ALL PROPERTIES OF ANY ACTIONS THAT BE INTERRUPTED OR ALTERED AT ANY TIME DURING CONSTRUCTION.
10. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED.
11. CONTRACTOR MAY LIMIT SAW-CUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE IT IS REQUIRED AS SHOWN ON THESE CONSTRUCTION PLANS BUT IF ANY DAMAGE IS INCURRED ON ANY OF THE SURROUNDING PAVEMENT, ETC., THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR.
12. THE CONTRACTOR SHALL COORDINATE WATER MAIN WORK WITH THE FIRE DEPT. AT THE CITY WATER DEPARTMENT TO PLAN PROPOSED IMPROVEMENTS AND TO ENSURE ADEQUATE FIRE PROTECTION IS CONSTANTLY AVAILABLE TO THE SITE THROUGHOUT THIS SPECIFIC WORK AND THROUGH ALL PHASES OF CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR ARRANGING/PROVIDING ANY REQUIRED WATER MAIN SHUT OFFS WITH THE CITY OF COLUMBIA DURING CONSTRUCTION. ANY DAMAGE INCURRED WITH WATER MAIN SHUT OFFS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION WILL BE PROVIDED.
13. REFER TO SURVEY FOR ALL EXISTING INVERT AND RIM ELEVATIONS.
14. ALL UTILITIES SHOWN ARE EXISTING UTILITIES.
15. IN THE EVENT A WELL IS FOUND, THE CONTRACTOR SHALL CONTACT THE ENGINEER AND OWNER IMMEDIATELY. ALL WELLS SHALL BE SEALED BY A LICENSED WELL CONTRACTOR IN ACCORDANCE WITH ALL STATE OR NO REQUIREMENTS.
16. IN THE EVENT THAT UNKNOWN CONTAINERS OR TANKS ARE ENCOUNTERED, THE CONTRACTOR SHALL CONTACT THE OWNER AND/OR OWNERS REPRESENTATIVE IMMEDIATELY. ALL CONTAINERS SHALL BE DISPOSED OF AT A PERMITTED LANDFILL PER THE PROJECT DOCUMENTS.
17. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY EXISTING DRAINLITE IS ENCOUNTERED ON SITE. NO ACTIVE DRAINLITE SHALL BE REMOVED WITHOUT APPROVAL FROM THE ENGINEER.



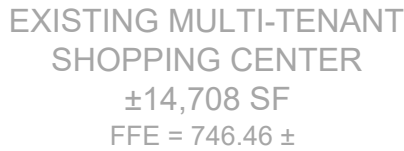
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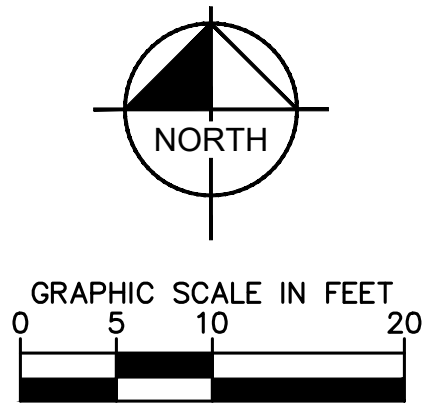






———— 928 ———— PROPERTY LINE  
 ———— 925 ———— EXISTING CONTOUR  
 ———— PROPOSED CONTOUR  
 ———— PROPOSED RIDGE LINE  
 ← ← ← ← ← ← ← ← PROPOSED SWALE  
 (D) PROPOSED STORM MANHOLE (SOLID CASTING)  
 ● PROPOSED STORM MANHOLE (ROUND INLET CASTING)  
 ● PROPOSED STORM MANHOLE/ CATCH BASIN (CURB INLET CASTING)  
 G PROPOSED STORM SEWER CLENOT  
 ▽ PROPOSED FLARED END SECTION  
 ▒ PROPOSED RIPRAP  
 ———— ➔ ———— PROPOSED STORM SEWER  
 (100.00) X PROPOSED SPOT ELEVATION  
 HP:0.0 X PROPOSED HIGH POINT ELEVATION  
 LP:0.0 X PROPOSED LOW POINT ELEVATION  
 G:0.00 X PROPOSED GUTTER ELEVATION  
 T:0.00 X PROPOSED TOP OF CURB ELEVATION  
 T/G:0.0 X PROPOSED FLUSH PAVEMENT ELEVATION  
 ME:0.0 X MATCH EXISTING ELEVATION  
 ECF:0.0 X PROPOSED EMERGENCY OVERFLOW ELEVATION  
 TW:0.0 X PROPOSED TOP/BOTTOM OF WALL ELEVATION  
 BW:0.0 X  
 0.0% PROPOSED DRAINAGE DIRECTION  
 0.00% PROPOSED ADA SLOPE

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF COLUMBIA, SPECIFICATIONS AND BUILDING PERMIT REQUIREMENTS.
- 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:  
RCP PER ASTM C-76  
HDPE: 0" - 10" PER AASHTO M-252  
PVC: 12" OR GREATER PER ASTM F-2306  
PVC SCH. 40 PER ASTM D-1785  
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
- 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.
- 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 PAVEMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL HORIZONTAL AND VERTICAL CONTROL.
- CONTRACTOR SHALL EXCAVATE DRAINAGE TRENCHES TO FOLLOW PROPOSED STORM SEWER ALIGNMENTS.
- GRADES SHOWN ARE FINISHED GRADES. CONTRACTOR SHALL ROUGH GRADE TO SUBGRADE ELEVATION AND LEAVE STREET READY FOR SUBBASE.
- 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.
- REFER TO THE UTILITY PLAN FOR SANITARY SEWER MAIN, WATER MAIN SERVICE LAYOUT AND ELEVATIONS AND CASTING / STRUCTURE NOTATION.
- CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF PAVEMENTS AND CURB AND GUTTER WITH SMOOTH UNIFORM SLOPES TO PROVIDE POSITIVE DRAINAGE.
- INSTALL A MINIMUM OF 4" CLASS 5 AGGREGATE BASE UNDER CURB AND GUTTER AND CONCRETE SIDEWALKS.
- 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.
- ALL SPOT ELEVATIONS/CONTOURS ARE TO GUTTER / FLOW LINE UNLESS OTHERWISE NOTED.
- 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% THRESHOLD) 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.
- MAINTAIN A MINIMUM OF 0.5% GUTTER SLOPE TOWARDS LOW POINTS.
- 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 LANDSCAPE AREAS.
- ROOF DRAIN INVERT CONNECTIONS AT THE BUILDING SHALL BE AT ELEVATION -XXXXXX- OR LOWER UNLESS NOTED OTHERWISE. REFERENCE MEP PLANS FOR ROOF DRAIN CONNECTION.
- ALL STORM SEWER CONNECTIONS SHALL BE GASKETED AND WATER TIGHT INCLUDING MANHOLE CONNECTIONS.
- ALL STORM SEWER PIPE SHALL BE AIR TESTED IN ACCORDANCE WITH THE CURRENT PLUMBING CODE.
- MAINTAIN A MINIMUM OF 1.25% SLOPE IN BITUMINOUS PAVEMENT AREAS, 0.5% SLOPE IN CONCRETE PAVEMENT AREAS.
- CONTRACTOR SHALL REVIEW PAVEMENT GRADIENT AND CONSTRUCT "INFALL CURBS" WHERE PAVEMENT DRAINS TOWARD GUTTER, AND "OUTFALL" CURB WHERE PAVEMENT DRAINS AWAY FROM GUTTER.



Know what's **below**.  
**Call** before you dig.

**STARBUCKS # 42958 -  
BROADWAY & FAIRVIEW**

**PREPARED FOR**

**STARBUCKS**

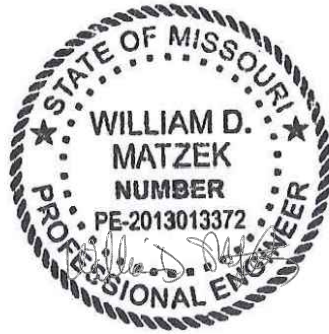
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SHEET NUMBER

**C400**

# GRADING AND DRAINAGE PLAN

KHA PROJECT 160924201	DATE 01/06/2023
SCALE	AS SHOWN
DESIGNED BY	SJS
DRAWN BY	SJS
CHECKED BY	MTL



**Kimley»»Horn**

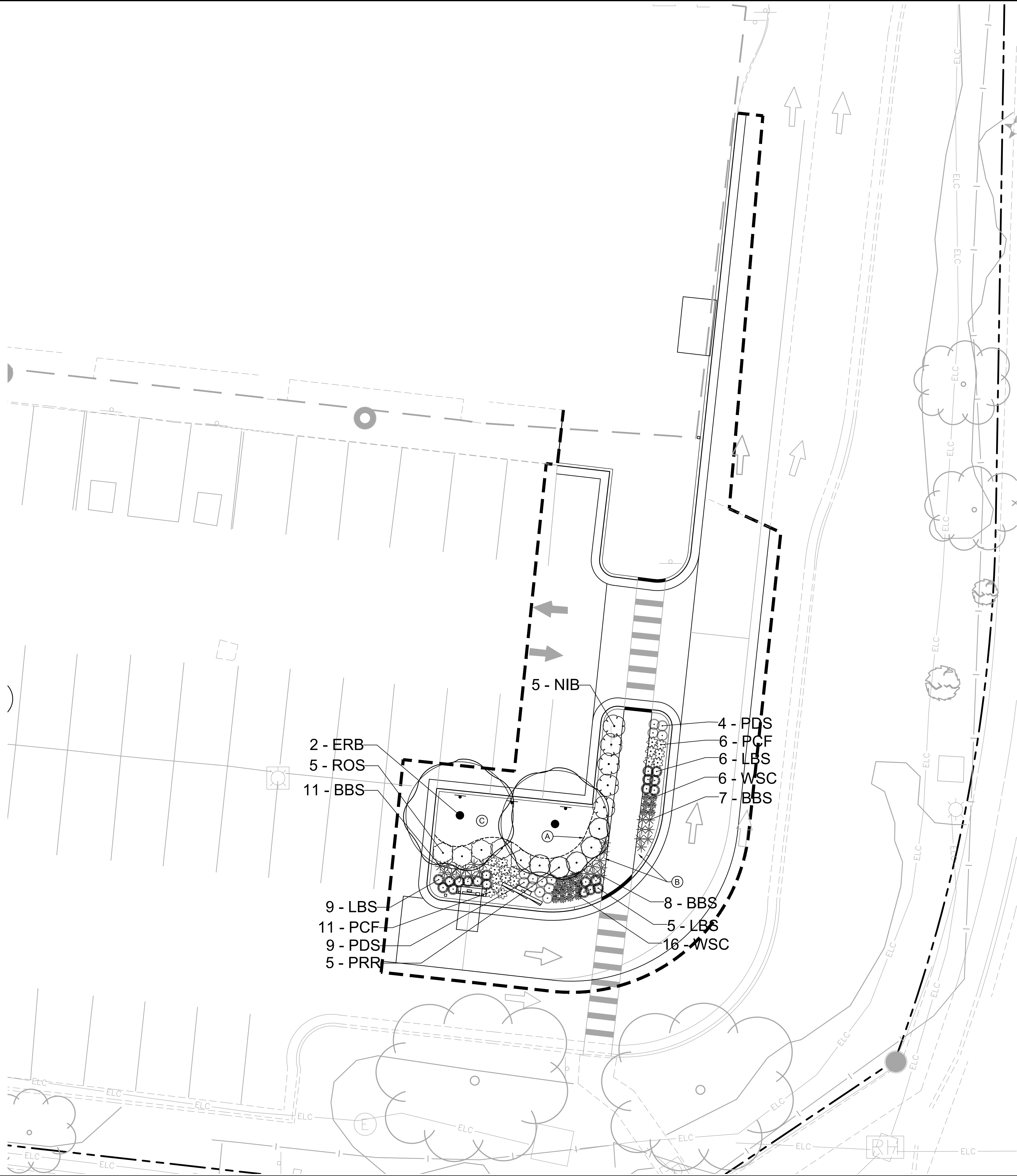
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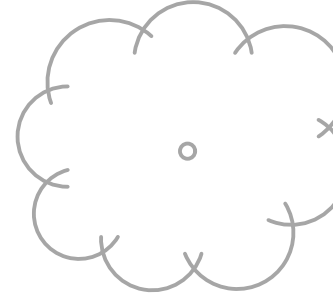








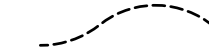
## LANDSCAPE LEGEND



EXISTING DECIDUOUS TREE (TYP.)












EXISTING SHRUB (TYP.)



EDGER (TYP.)

## PLANT SCHEDULE

<u>ORNAMENTAL TREES</u>	<u>CODE</u>	<u>QTY</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>CAL/SIZE</u>
	ERB	2	CERCIS CANADENSIS	EASTERN REDBUD	B & B	1.5" CAL
<u>DECIDUOUS SHRUBS</u>	<u>CODE</u>	<u>QTY</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>SPACING</u>
	NIB	5	PHYSOCARPUS OPULIFOLIUS	NINEBARK	#5 CONT.	4' O.C.
	PRR	5	ROSA SETIGERA	PRAIRIE ROSE	#5 CONT.	4' O.C.
	ROS	5	HIBISCUS SYRIACUS	ROSE OF SHARON	#5 CONT.	4' O.C.
<u>PERENNIALS</u>	<u>CODE</u>	<u>QTY</u>	<u>BOTANICAL NAME</u>	<u>COMMON NAME</u>	<u>CONT</u>	<u>SPACING</u>
	BBS	26	ANDROPOGON GERARDII	BIG BLUESTEM	#1 CONT.	2' O.C.
	LBS	20	ANDROPOGON SCOPARIUS	LITTLE BLUESTEM	#1 CONT.	2' O.C.
	PCF	17	RUDBECKIA PURPUREA	PURPLE CONEFLOWER	#2 CONT.	2' O.C.
	PDS	13	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	#1 CONT.	2' O.C.
	WSC	22	ECHINACEA PURPUREA 'WHITE SWAN'	WHITE SWAN CONEFLOWER	#1 CONT.	1.5' O.C.

## LANDSCAPE KEYNOTES

Ⓐ EDGER (TYP.)

ⓑ RIVER STONE (TYP.)

© SOD (TYP.)



Know what's **below**.  
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PRELIMINARY - NOT FOR CONSTRUCTION

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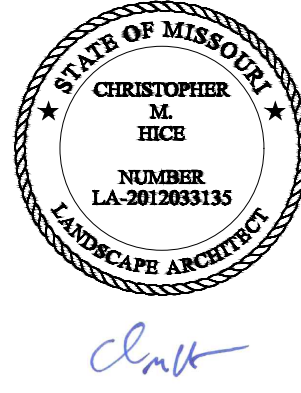
# STARBUCKS

PREPARED FOR

COLUMBIA

160924201	DATE	01/06/2023
SCALE	AS SHOWN	
DESIGNED BY	SSL	
DRAWN BY	SSL	
CHECKED BY	CMH	

# LANDSCAPE PLAN



**Kimley»»Horn**

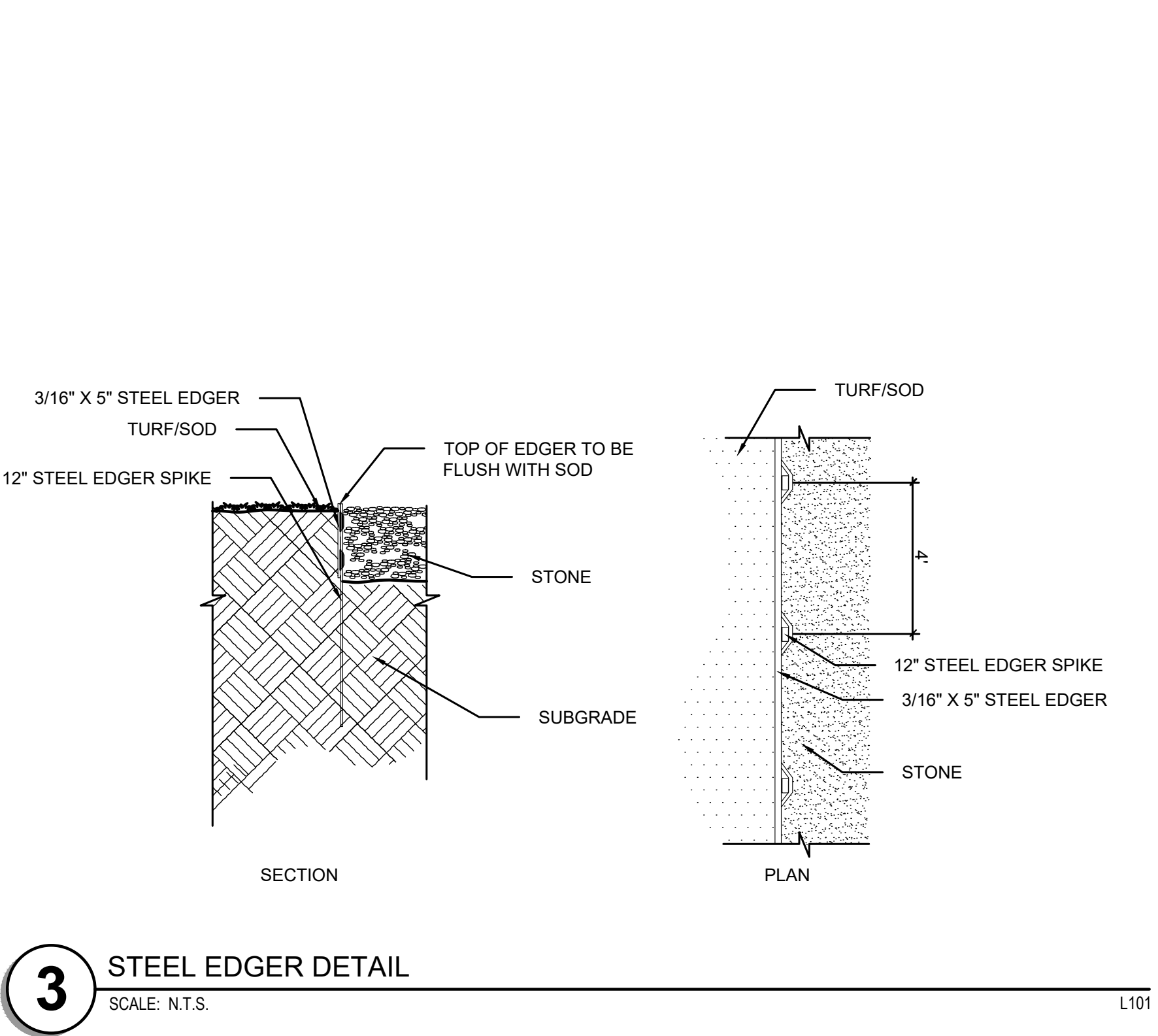
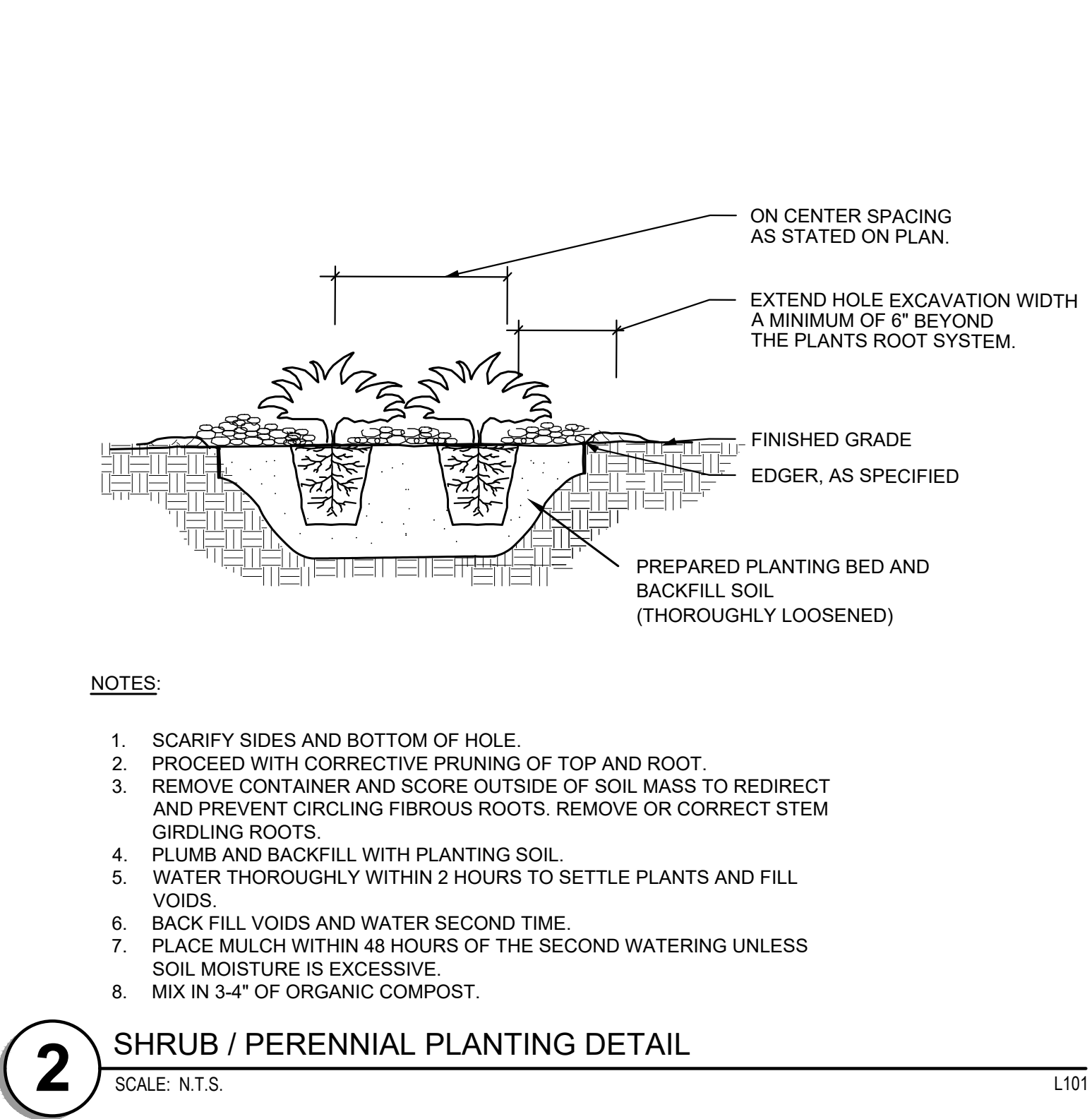
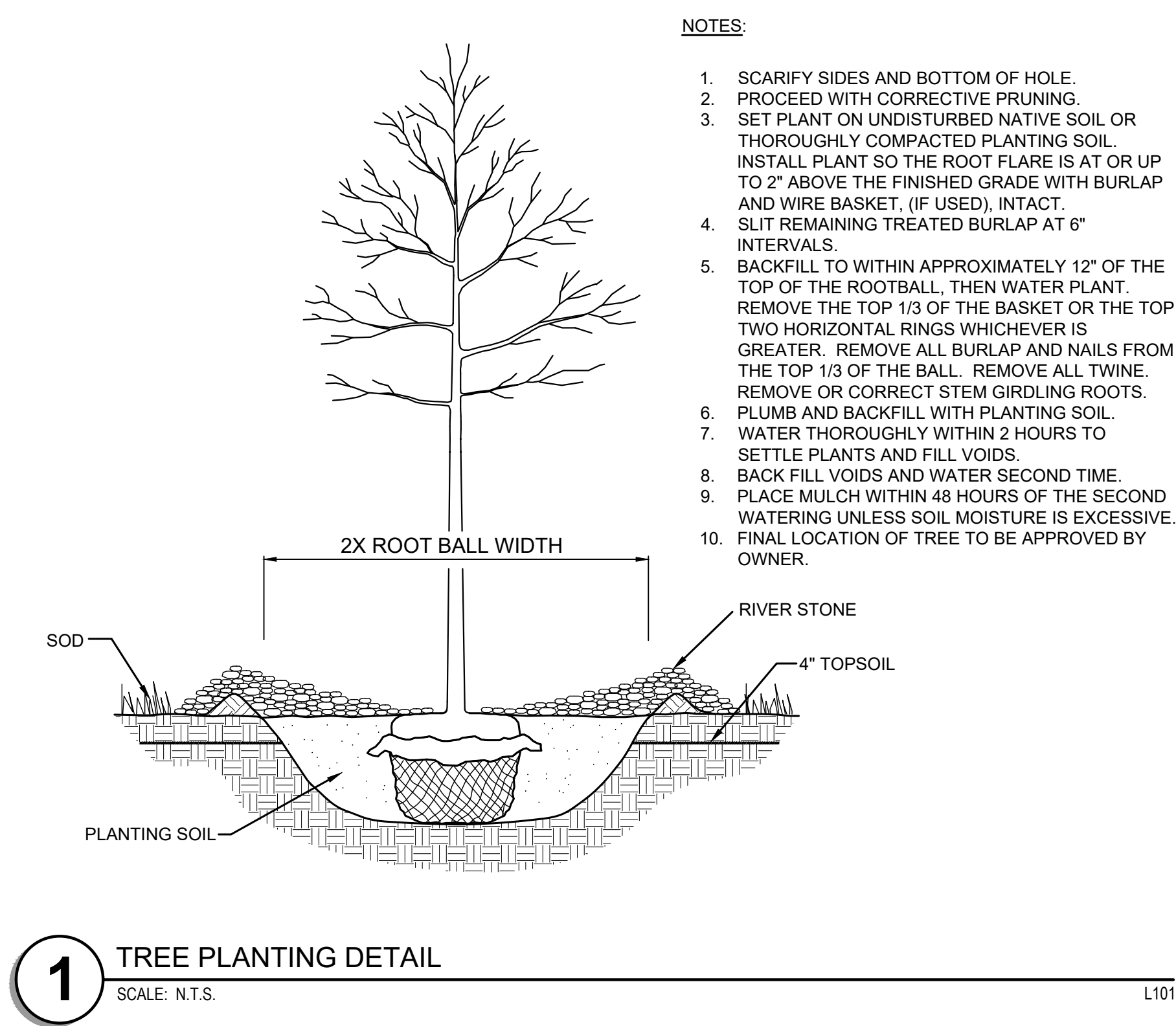
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LANDSCAPE NOTES

1. CONTRACTOR SHALL CONTACT COMMON GROUND ALLIANCE AT 811 OR CALL811.COM TO VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF ANY PLANTS OR LANDSCAPE MATERIAL.
2. ACTUAL LOCATION OF PLANT MATERIAL IS SUBJECT TO FIELD AND SITE CONDITIONS.
3. NO PLANTING WILL BE INSTALLED UNTIL ALL GRADING AND CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
4. ALL SUBSTITUTIONS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO SUBMISSION OF ANY BID AND/OR QUOTE BY THE LANDSCAPE CONTRACTOR.
5. CONTRACTOR SHALL PROVIDE TWO YEAR GUARANTEE OF ALL PLANT MATERIALS. THE GUARANTEE BEGINS ON THE DATE OF THE LANDSCAPE ARCHITECT'S OR OWNER'S WRITTEN ACCEPTANCE OF THE INITIAL PLANTING. REPLACEMENT PLANT MATERIAL SHALL HAVE A ONE YEAR GUARANTEE COMMENCING UPON PLANTING.
6. ALL PLANTS TO BE SPECIMEN GRADE, MISSOURI-GROWN AND/OR HARDY. SPECIMEN GRADE SHALL ADHERE TO, BUT IS NOT LIMITED BY, THE FOLLOWING STANDARDS:  
ALL PLANTS SHALL BE FREE FROM DISEASE, PESTS, WOUNDS, SCARS, ETC.  
ALL PLANTS SHALL BE FREE FROM NOTICEABLE GAPS, HOLES, OR DEFORMITIES.  
ALL PLANTS SHALL BE FREE FROM BROKEN OR DEAD BRANCHES.  
ALL PLANTS SHALL HAVE HEAVY, HEALTHY BRANCHING AND LEAFING.  
CONIFEROUS TREES SHALL HAVE AN ESTABLISHED MAIN LEADER AND A HEIGHT TO WIDTH RATIO OF NO LESS THAN 5:3.
7. PLANTS TO MEET AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-2014 OR MOST CURRENT VERSION) REQUIREMENTS FOR SIZE AND TYPE SPECIFIED.
8. PLANTS TO BE INSTALLED AS PER ANSI STANDARD PLANTING PRACTICES.
9. PLANTS SHALL BE IMMEDIATELY PLANTED UPON ARRIVAL AT SITE. PROPERLY HEEL-IN MATERIALS IF NECESSARY; TEMPORARY ONLY.
10. REMOVE POT ON POTTED PLANTS; SPLIT AND BREAK APART PEAT POTS.
11. PRUNE PLANTS AS NECESSARY - PER STANDARD NURSERY PRACTICE AND TO CORRECT POOR BRANCHING OF EXISTING AND PROPOSED TREES.
12. THE NEED FOR SOIL AMENDMENTS SHALL BE DETERMINED UPON SITE SOIL CONDITIONS PRIOR TO PLANTING. LANDSCAPE CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT FOR THE NEED OF ANY SOIL AMENDMENTS.
13. BACKFILL SOIL AND TOPSOIL TO ADHERE TO MO/DOT STANDARD SPECIFICATION 3877 (SELECT TOPSOIL BORROW) AND TO BE EXISTING TOP SOIL FROM SITE FREE OF ROOTS, ROCKS LARGER THAN ONE INCH, SUBSOIL DEBRIS, AND LARGE WEEDS UNLESS SPECIFIED OTHERWISE. MINIMUM 4" DEPTH TOPSOIL FOR ALL LAWN GRASS AREAS AND 12" DEPTH TOPSOIL FOR TREE, SHRUBS, AND PERENNIALS.
14. RIVER STONE TO BE AT ALL TREE, SHRUB, PERENNIAL, AND MAINTENANCE AREAS. TREE AND SHRUB PLANTING BEDS SHALL HAVE 4" DEPTH OF RIVER STONE. STONE TO BE FREE OF DELETERIOUS MATERIAL AND COLOR CONFIRMED BY OWNER, OR APPROVED EQUAL. RIVER STONE TO BE SMOOTH OR TUMBLED ROCK, 3/4" TO 2" DIAMETER, AT MINIMUM 4" DEPTH, OR APPROVED EQUAL. RIVER STONE TO BE ON COMMERCIAL GRADE FILTER FABRIC, BY TYPAR, OR APPROVED EQUAL WITH NO EXPOSURE. STONE AND FABRIC TO BE APPROVED BY OWNER PRIOR TO INSTALLATION. STONE TO MATCH EXISTING CONDITIONS (WHERE APPLICABLE).
15. EDGING TO BE COMMERCIAL GRADE COL-MET (OR EQUAL) STEEL EDGING; 3/16" THICK, COLOR BLACK, OR SPADED EDGE, AS INDICATED. STEEL EDGING SHALL BE PLACED WITH SMOOTH CURVES AND STAKED WITH METAL SPIKES NO GREATER THAN 4 FOOT ON CENTER WITH TOP OF EDGER AT GRADE, FOR MOWERS TO CUT ABOVE WITHOUT DAMAGE. UTILIZE CURBS AND SIDEWALKS FOR EDGING WHERE POSSIBLE. SPADED EDGE TO PROVIDE V-SHAPED DEPTH AND WIDTH TO CREATE SEPARATION BETWEEN MULCH AND GRASS. INDIVIDUAL TREE, SHRUB, OR RAIN-GARDEN BEDS TO BE SPADED EDGE, UNLESS NOTED OTHERWISE. EDGING TO MATCH EXISTING CONDITIONS (WHERE APPLICABLE).
16. ALL DISTURBED AREAS TO BE SODDED, UNLESS OTHERWISE NOTED. SOD TO BE STANDARD MISSOURI GROWN AND HARDY BLUEGRASS MIX, FREE OF LAWN WEEDS. ALL TOPSOIL AREAS TO BE RAKED TO REMOVE DEBRIS AND ENSURE DRAINAGE. SLOPES OF 3:1 OR GREATER SHALL BE STAKED. SEED AS SPECIFIED AND PER MO/DOT SPECIFICATIONS. IF NOT INDICATED ON LANDSCAPE PLAN, SEE EROSION CONTROL PLAN.
17. PROVIDE IRRIGATION TO ALL PLANTED AREAS ON SITE. IRRIGATION SYSTEM TO BE DESIGN/BUILD BY LANDSCAPE CONTRACTOR. LANDSCAPE CONTRACTOR TO PROVIDE SHOP DRAWINGS TO LANDSCAPE ARCHITECT FOR APPROVAL PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. CONTRACTOR TO PROVIDE OPERATION MANUALS, AS-BUILT PLANS, AND NORMAL PROGRAMMING. SYSTEM SHALL BE WINTERIZED AND HAVE SPRING STARTUP DURING FIRST YEAR OF OPERATION. SYSTEM SHALL HAVE ONE-YEAR WARRANTY ON ALL PARTS AND LABOR. ALL INFORMATION ABOUT INSTALLATION AND SCHEDULING CAN BE OBTAINED FROM THE GENERAL CONTRACTOR.
18. CONTRACTOR SHALL PROVIDE NECESSARY WATERING OF PLANT MATERIALS UNTIL THE PLANT IS FULLY ESTABLISHED OR IRRIGATION SYSTEM IS OPERATIONAL. OWNER WILL NOT PROVIDE WATER FOR CONTRACTOR.
19. REPAIR, REPLACE, OR PROVIDE SOD/SEED AS REQUIRED FOR ANY AREAS ADJACENT TO THE SITE DISTURBED DURING CONSTRUCTION.
20. REPAIR ALL DAMAGE TO PROPERTY FROM PLANTING OPERATIONS AT NO COST TO OWNER.
21. MAINTAIN TREES, SHRUBS, AND OTHER PLANTS UNTIL PROJECT COMPLETION, BUT IN NO CASE, LESS THAN FOLLOWING PERIOD: 1 YEAR AFTER PROJECT COMPLETION. MAINTAIN TREES, SHRUBS, AND OTHER PLANTS BY PRUNING, CULTIVATING, AND WEEDING AS REQUIRED FOR HEALTHY GROWTH. RESTORE PLANTING SAUCERS. TIGHTEN AND REPAIR STAKE AND GUY SUPPORTS AND RESET TREES AND SHRUBS TO PROPER GRADES OR VERTICAL POSITION AS REQUIRED. RESTORE OR REPLACE DAMAGED WRAPPINGS. SPRAY AS REQUIRED TO KEEP TREES AND SHRUBS FREE OF INSECTS AND DISEASE. REPLENISH MULCH TO THE REQUIRED DEPTH. MAINTAIN LAWNS FOR 45 DAYS AFTER INSTALLING SOD INCLUDING MOWING WHEN SOD RECHES 4" IN HEIGHT. WEED PLANTING BEDS AND MULCH SAUCERS AT MINIMUM ONCE A MONTH DURING THE GROWING SEASON. PROVIDE A MONTHLY REPORT TO THE OWNER ON WEEDING AND OTHER MAINTENANCE RESPONSIBILITIES.

PRELIMINARY - NOT FOR CONSTRUCTION

KHA PROJECT 160924201		DATE 01/06/2023	SCALE AS SHOWN	DESIGNED BY SSL	DRAWN BY SSL	CHECKED BY CMH
STARBUCKS # 42958 - BROADWAY & FAIRVIEW		LANDSCAPE DETAILS		STARBUCKS		
PREPARED FOR		COLUMBIA		MO		
SHEET NUMBER L101		STARBUCKS		COLUMBIA		
Kimley»Horn		2023 KIMLEY-HORN AND ASSOCIATES, INC. 767 EUSTIS STREET, SUITE 100, ST. PAUL, MN 55114 PHONE 651-445-4197 WWW.KIMLEY-HORN.COM		No.		
				REVISIONS		
				DATE		
				BY		