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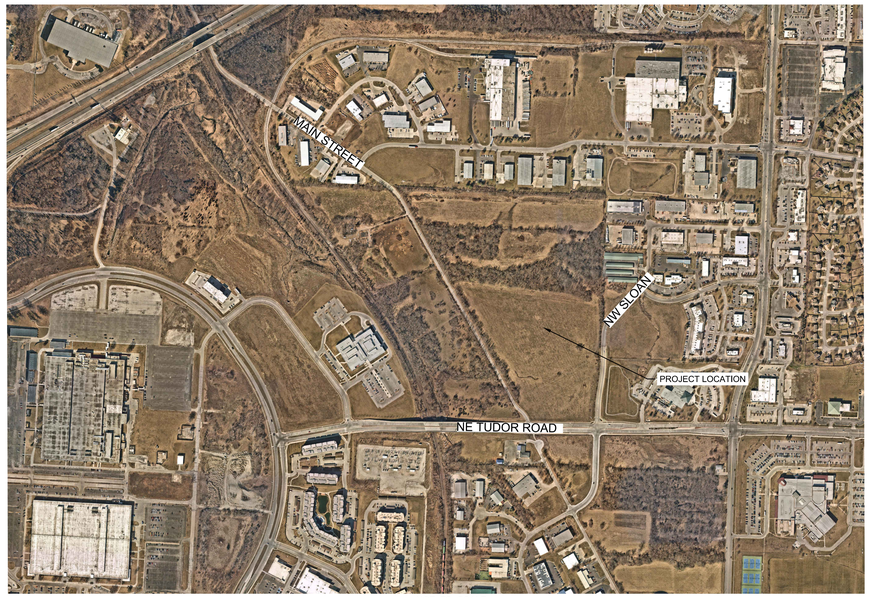
SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
FINAL DEVELOPMENT PLAN

AN UNPLATTED PARCEL IN THE WEST HALF OF SECTION 31, TOWNSHIP 48 NORTH, RANGE 31 WEST, IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI



NOT TO SCALE

LEGEND

- SECTION CORNER
- SET 1/2" REBAR W/LC 366 CAP
- FOUND MONUMENT AS NOTED
- FIRE HYDRANT
- WV WATER VALVE
- WM WATER METER
- WATER METER PIT
- GV GAS VALVE
- GM GAS METER
- SPRINKLER BOX
- S SANITARY SEWER MANHOLE
- TS TRAFFIC SIGNAL BOX
- TRAFFIC SIGNAL POLE
- F FIBER OPTIC BOX
- TVP TELEVISION PEDESTAL
- TV TELEVISION BOOTH
- GRATE INLET
- 4"x4" WOOD POST
- BOLLARD
- STEEL POST
- COLUMN
- SIGN
- TREE
- SCV SPRINKLER VALVE
- BOREHOLE
- (M) MEASURED
- (P) PLATTED
- —P—OH— OVERHEAD POWER LINE
- —G— GAS LINE
- —P—UG— UNDERGROUND POWER LINE
- —TEL— UNDERGROUND TELEPHONE LINE
- —FO— UNDERGROUND FIBER OPTIC LINE
- —SS— SANITARY SEWER LINE
- —SD— STORM LINE
- —W— WATER LINE
- TELEPHONE MANHOLE
- TP TELEPHONE PEDESTAL
- TELEPHONE CABINET
- STORM SEWER MANHOLE
- SANITARY SEWER CLEANOUT
- E ELECTRIC BOX
- BREAKER BOX
- EM ELECTRIC METER
- ER ELECTRIC RISER
- TRANSFORMER
- POWER POLE
- PPP POWER POLE/W LIGHT
- GUY WIRE
- LIGHT POLE
- BU BUSH

DEVELOPMENT TEAM CONTACT INFORMATION	
OWNER/DEVELOPER	
SCANNELL PROPERTIES #603, LLC	*8801 RIVER CROSSING BOULEVARD, SUITE 300 INDIANAPOLIS, INDIANA 46240*
CIVIL ENGINEER	
MITCH PLEAK OLSSON	7301 W 133RD STREET SUITE 200 OVERLAND PARK, KS 66213 PH: 913–381–1170 mpleak@olsson.com

PROPERTY DESCRIPTION

All that part of an unplatted tract of land, together with all that part of North Main Street right of way, all lying in the West Half of Section 31, Township 48 North, Range 31 West, lying in the City of Lee's Summit, Jackson County, Missouri, described by Patrick Ethan Ward, MO PLS-2005007l, of Olsson MOLC-366, on October 14, 2021, as follows:

BEGINNING at the Northeast corner of the Southwest Quarter of Section 31, Township 48 North, Range 31 West; thence South 01 degree 59 minutes 47 seconds West, on the East line of said Southwest Quarter, a distance of 65.98 feet to a point on the West line of NW Sloan Street right of way, as established in Document 2013E0075031, said point also lying on a non-tangent curve; thence in a Southerly direction, departing said East line, on said West line and on a curve to the right whose initial tangent bears South 02 degrees 47 minutes 37 seconds West, having a radius of 970.00 feet, through a central angle of 6 degrees 27 minutes 07 seconds, an arc distance of 109.23 feet to a point of tangency; thence South 09 degrees 14 minutes 44 seconds West, continuing on said West line, a distance of 111.80 feet to a point of curvature; thence in a Southerly direction, continuing on said West line and on a curve to the left, having a radius of 1030.00 feet, through a central angle of 7 degrees 14 minutes 57 seconds, an arc distance of 130.32 feet to a point of tangency; thence South 01 degree 59 minutes 47 seconds West, continuing on said West line, a distance of 69.49 feet to a point on the North line of NE Tudor Road right of way, as established in said Document 2013E0075031; thence South 46 degrees 15 minutes 48 seconds West, departing said West line, on said North line, a distance of 46.09 feet to a point; thence North 89 degrees 24 minutes 16 seconds West, continuing on said North line, and on the North line of NW Tudor Road right of way, as established in Document 2013E0075030, a distance of 1249.23 feet to a point on the East line of Union Pacific Railroad right of way, as now established, said point also lying on a non-tangent curve; thence in a Northerly and Northwesterly direction, departing said North line, on said East line and on a curve to the left whose initial tangent bears North 15 degrees 46 minutes 27 seconds West, having a radius of 3203.90 feet, through a central angle of 22 degrees 48 minutes 11 seconds, an arc distance of 1275.12 feet to a point of tangency; thence North 38 degrees 34 minutes 39 seconds West, continuing on said East line, a distance of 738.40 feet to a point of curvature; thence in a Northwesterly direction, continuing on said East line and on a curve to the right, having a radius of 5981.13 feet, through a central angle of 2 degrees 39 minutes 22 seconds, an arc distance of 277.27 feet to a point on the North line of the South Half of the Northwest Quarter of said Section 31, said point also lying on a non-tangent line; thence South 87 degrees 40 minutes 30 seconds East, departing said East line, on said North line, a distance of 884.17 feet to a point on a non-tangent curve; thence in a Southeasterly direction, departing said North line, on a curve to the right whose initial tangent bears South 45 degrees 29 minutes 38 seconds East, having a radius of 544.00 feet, through a central angle of 16 degrees 59 minutes 44 seconds, an arc distance of 159.94 feet to a point of tangency; thence South 28 degrees 38 minutes 55 seconds East a distance of 437.58 feet to a point of curvature; thence in a Southeasterly and Easterly direction, on a curve to the left, having a radius of 476.00 feet, through a central angle of 63 degrees 19 minutes 59 seconds, an arc distance of 526.16 feet to a point of tangency; thence North 88 degrees 01 minute 06 seconds East a distance of 416.85 feet to a point of curvature; thence in an Easterly and Southeasterly direction, on a curve to the right, having a radius of 544.00 feet, through a central angle of 65 degrees 51 minutes 08 seconds, an arc distance of 625.24 feet to a point on a non-tangent line, said point also lying on the East line of said Northwest Quarter; thence South 01 degree 53 minutes 30 seconds West, on said East line, a distance of 338.00 feet to the POINT OF BEGINNING, containing 2,375,437 Square Feet or 54.5325 Acres, more or less.

UTILITY COMPANIES AND GOVERNING AGENCIES:

AT&T
RON GIPFERT
500 E. 8TH STREET, ROOM 1146
KANSAS CITY, MISSOURI 64106
(816) 275–1550
EMAIL: RG7910@ATT.COM

EVERGY
JEFF R. WILLIAMS– ENGINEER–CENTRAL DESIGN
401 SE BAILEY ROAD
LEE'S SUMMIT, MO 64081
(816) 347–4310
EMAIL: JEFF.WILLIAMS@KCPL.COM

CONSOLIDATED COMMUNICATIONS
JOHN CASTILOW
14859 W. 95TH STREET
LENEXA, KS 66215
(913) 322–9785
JOHN.CASTILOW@CONSOLIDATED.COM

GOOGLE FIBER
LAUREN MARCUCCI
(913) 663–1900
LMARCUCCI@GOOGLE.COM

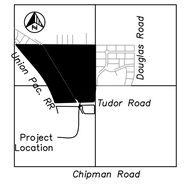
LEE'S SUMMIT R–7 SCHOOL DISTRICT
KINZIE WOODERSON
301 NE TUDOR ROAD
LEE'S SUMMIT, MO 64086
(816) 986–1050
KINZIE.WOODERSON@LRS7.NET

LEE'S SUMMIT WATER UTILITIES
1200 SE HAMBLEN ROAD
LEE'S SUMMIT, MO 64081
(816) 969–1900

WASTE WATER
LEE'S SUMMIT WATER UTILITIES
1200 SE HAMBLEN ROAD
LEE'S SUMMIT, MO 64081
(816) 969–1900

SPIRE GAS
RICHARD FROCK
3025 SE CLOVER DRIVE
LEE'S SUMMIT, MO 64082
(816) 472–3489
RICHARD.FROCK@SPIREENERGY.COM

CHARTER/SPECTRUM
TROY PREWITT
8221 W. 119TH STREET
OVERLAND PARK, KS 66213
(816) 401–3573
TROY.PREWITT@CHARTER.COM



Section 31, T48N, R31W
VICINITY MAP
Scale: 1" = 2000'

THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF THE SENATE BILL NUMBER 583, 78TH GENERAL ASSEMBLY OF THE STATE OF MISSOURI. THE BILL REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT–OF–WAY DO SO ONLY AFTER GIVING NOTICE TO, & OBTAINING INFORMATION FROM, UTILITY COMPANIES. STATE LAW REQUIRES 48 HOURS ADVANCE NOTICE. CALL 1–800–DIG–RITE.

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLEAK
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
1	12.04.2021	CITY COMMENTS
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES
3	02.03.2022	CITY & EVERGY COMMENTS

REVISIONS

COVER SHEET
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_TTL01_02104157.dwg
date:

SHEET
C0.01

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_TTL01_02104157.dwg USER: lmoore
DATE: Feb 08, 2022 11:05am XREFS: C_TBLK_02104157 C_PBASE_02104157 C_XAERIAL_02104157

GENERAL NOTES:

1. THE EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MAY NOT INCLUDE ALL LINES PRESENT. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALL "1-800-DIG-RITE", 1(800)344-7483, OR 811 AND COORDINATE FIELD LOCATION OF EXISTING UNDERGROUND UTILITIES PRIOR TO BEGINNING GRADING ACTIVITIES. !!STOP!! CALL BEFORE YOU DIG!!
2. THE CONTRACTOR SHALL NOT CHANGE OR DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND ENGINEER.
3. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
4. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATION PURPOSES ONLY. CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL QUANTITIES AND FOR BRINGING THE PROJECT TO THE LINES AND GRADES SHOWN HEREIN. CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS REQUIRED TO COMPLETE THE WORK SHOWN IN THESE PLANS. IT IS THE CONTRACTOR'S <u>SOLE</u> RESPONSIBILITY TO DETERMINE EARTHWORK QUANTITIES AND TO ACCOUNT FOR HAUL IN OR HAUL OFF OF MATERIAL AS NECESSARY TO MEET THE LINES AND GRADES OF THE PLANS EVEN IF QUANTITY ESTIMATES ARE SHOWN WITHIN THESE DOCUMENTS. NO ADDITIONAL PAYMENTS WILL BE MADE FOR IMPORT OR EXPORT OF MATERIAL OR FOR ADJUSTMENTS TO QUANTITY ESTIMATES.
5. ALL CONSTRUCTION SHALL CONFORM TO THE LATEST STANDARDS AND SPECIFICATIONS OF THE CITY OF LEE'S SUMMIT, EXCEPT WHERE SHOWN OTHERWISE. NOTIFY ENGINEER OF DISCREPANCIES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, PAYING ALL FEES AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
7. THE CONTRACTOR SHALL ADHERE TO THE PROVISIONS OF MISSOURI STATE LAW WHICH REQUIRES THAT ANY PERSON OR FIRM DOING EXCAVATION ON PUBLIC RIGHT-OF-WAY DO SO ONLY AFTER GIVING NOTICE TO, AND OBTAINING INFORMATION FROM UTILITY COMPANIES.
8. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL NOTIFY ALL THOSE COMPANIES WHICH HAVE FACILITIES IN THE NEAR VICINITY OF THE CONSTRUCTION TO BE PERFORMED.
9. THE CONTRACTOR SHALL PROTECT ALL MAJOR TREES SHOWN TO REMAIN FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN FOR REMOVAL ON THESE PLANS.
10. CLEARING AND GRUBBING OPERATIONS AND DISPOSAL OF ALL DEBRIS THEREFROM SHALL BE PERFORMED BY THE CONTRACTOR IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND ORDINANCES.
11. ALL WASTE MATERIAL RESULTING FROM THE PROJECT SHALL BE DISPOSED OF OFF-SITE BY THE CONTRACTOR.
12. ALL UTILITY EXTENSIONS AND CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE APPLICABLE UTILITY COMPANIES.
13. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS ARE TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED.
14. ALL DISTURBED AREAS SHALL BE LANDSCAPED, SEEDED OR SODDED, AS SHOWN ON THE LANDSCAPE PLAN.
15. HANDICAP PARKING STALLS SHALL BE SIGNED WITH CITY/ADA APPROVED SIGN AND CONSTRUCTED IN STRICT ACCORDANCE WITH CITY/ADA STANDARDS AND SHALL NOT EXCEED 2.00 PERCENT IN ANY DIRECTION. ACCESSIBLE SIDEWALKS HAVE A MAXIMUM CROSS SLOPE OF 2 PERCENT AND A MAXIMUM LONGITUDINAL SLOPE OF 5 PERCENT.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL OF SURFACE EROSION DURING CONSTRUCTION AND UNTIL THE OWNER ACCEPTS THE WORK AS COMPLETE. EROSION CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, THE SILT FENCES AND GRAVEL FILTER BAGS SHOWN ON THE EROSION CONTROL PLAN SHALL BE IN PLACE FOR THE DURATION OF THE SITE IMPROVEMENTS.
17. ALL HDPE PIPE SHALL BE ADS (N-12) OR APPROVED EQUAL, AND CONFORM TO AASHTO M294 SPECIFICATIONS. ALL PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
18. IF PRECAST CONCRETE STORM SEWER STRUCTURES ARE TO BE USED ON THIS PROJECT, THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND HAVE THEM APPROVED BY THE ENGINEER PRIOR TO FABRICATION OF THE STRUCTURES. FAILURE TO DO SO SHALL BE CAUSE FOR REJECTION.
19. EXISTING TOPSOIL SHALL BE STRIPPED TO A POINT WHERE ALL VEGETATION IS REMOVED.
20. THE CONTRACTOR SHALL, BY HIS OWN INVESTIGATION, AND PRIOR TO COMMENCING WORK, SATISFY HIMSELF AS TO THE SURFACE AND SUBSURFACE CONDITIONS TO BE ENCOUNTERED.
21. ALL WATER SERVICE LINES SHALL BE INSTALLED PER LEE'S SUMMIT WATER UTILITIES STANDARDS. ALL WATER LINES SHALL BE A MINIMUM OF 48 INCHES BELOW THE FINISHED GRADE ELEVATIONS SHOWN HEREIN.
22. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.
23. NO FEDERALLY OWNED MAILBOX MAY BE DISTURBED. THE CONTRACTOR SHALL GIVE AT LEAST TWENTY-FOUR (24) HOURS ADVANCE NOTICE TO THE MANAGER OF DELIVERY AND COLLECTIONS. TAMPERING WITH FEDERAL MAIL FACILITIES MAY SUBJECT THE CONTRACTOR TO PROSECUTION BY THE FEDERAL GOVERNMENT.
24. THE CONTOUR LINES, SPOT ELEVATIONS AND BUILDING FLOOR ELEVATIONS SHOWN ARE TO FINISH GRADE FOR SURFACE OF PAVEMENT, TOP OF SIDEWALKS AND CURBS, TOP OF FLOOR SLABS, ETC. REFER TO TYPICAL SECTIONS FOR PAVING, SLAB AND AGGREGATE BASE THICKNESS TO DEDUCT FOR GRADING LINE ELEVATIONS.
25. THE CONTRACTOR SHALL FINISH GRADE SLOPES AS SHOWN NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL.
26. THE CONTRACTOR SHALL GRADE LANDSCAPED AREAS TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING AND SIDEWALKS WHEN FINISH LANDSCAPE MATERIALS ARE IN PLACE.
27. ALL EXTERIOR CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI AND BE AIR ENTRAINED. FLYASH IS NOT A SUITABLE REPLACEMENT FOR PORTLAND CEMENT.
28. ALL ON-SITE WIRING AND CABLES SHALL BE PLACED UNDERGROUND.
29. THE CONTRACTOR SHALL MAKE HIS OWN ASSUMPTIONS ON THE LOCATION AND CONSISTENCY OF ANY EXISTING ROCK LAYERS UNDERLYING THE PROJECT SITE. ALL ROCK EXCAVATION AND REMOVAL SHALL BE INCLUDED IN THE CONTRACTORS' BID.
30. CONCRETE PAVEMENT JOINTS SHALL AT A MINIMUM BE CONSTRUCTED AS FOLLOWS (REFER TO HARDSCAPE PLANS FOR SPECIFIC TREATMENT OF THESE AREAS):
    A. LONGITUDINAL CONSTRUCTION JOINTS SPACED AT INTERVALS NOT GREATER THAN 12 FEET, TOOLED TO 1/3 THE SLAB THICKNESS AND OF THE BAR TYPE.
    B. CONSTRUCTION JOINTS AT THE END OF EACH POUR AND WHEN PAVING OPERATIONS ARE SUSPENDED FOR 30 MINUTES OR MORE AND DOWELED WITH SMOOTH DOWELS.
    C. TRANSVERSE JOINTS SPACED AT INTERVALS NOT GREATER THAN 15 FEET AND TOOLED TO 1/3 OF THE SLAB THICKNESS.
    D. ISOLATION JOINTS PLACED WHERE THE PAVEMENT ABUTS THE BUILDING, DRAINAGE STRUCTURES AND OTHER FIXED STRUCTURES, CONSTRUCTED WITH A 3/4" NONEXTRUDING FILLER, CLOSED-CELL FOAM RUBBER OR A BITUMEN-TREATED FIBER-BOARD, AND WITH A THICKENED EDGE, INCREASED BY 20 PERCENT, TAPERED TO THE REGULAR THICKNESS IN 5 FEET.
    E. ALL EXPANSION JOINTS SHALL BE FILLED AND SEALED WITH A PLASTIC JOINT SEALANT MATERIAL.
32. CONTRACTOR TO FIELD VERIFY ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES AND INFRASTRUCTURE PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS.
33. TELEPHONE AND COMMUNICATION SERVICE ROUTING AND CONDUITS NOT SHOWN ON PLANS. CONTRACTOR SHALL INSTALL NECESSARY CONDUIT PRIOR TO PAVEMENT INSTALLATION. CONTRACTOR SHALL COORDINATE ROUTING AND INSTALLATION SCOPE WITH SERVICE PROVIDER.
34. BY ACCEPTING AND UTILIZING ANY ELECTRONIC FILE OF ANY DRAWING, REPORT OR DATA TRANSMITTED BY OLSSON, THE RECIPIENT AGREES FOR ITSELF, ITS SUCCESSORS, ASSIGNS, INSURERS AND ALL THOSE CLAIMING UNDER OR THROUGH IT, THAT BY USING ANY OF THE INFORMATION CONTAINED IN THE ELECTRONIC FILE, ALL USERS AGREE TO BE BOUND BY THE FOLLOWING TERMS. ALL OF THE INFORMATION CONTAINED IN THIS ELECTRONIC FILE IS THE WORK PRODUCT AND INSTRUMENT OF SERVICE OF OLSSON, WHO SHALL BE DEEMED THE AUTHOR, AND SHALL RETAIN ALL COMMON LAW, STATUTORY LAW AND OTHER RIGHTS, INCLUDING COPYRIGHTS, UNLESS THE SAME HAVE PREVIOUSLY BEEN TRANSFERRED IN WRITING TO THE RECIPIENT. THE INFORMATION CONTAINED IN THE ELECTRONIC FILE IS PROVIDED FOR THE CONVENIENCE OF THE RECIPIENT AND IS PROVIDED IN "AS IS" CONDITION. THE RECIPIENT IS AWARE THAT DIFFERENCES MAY EXIST BETWEEN THE ELECTRONIC FILES AND THE PRINTED HARD-COPY ORIGINAL SIGNED AND SEALED DRAWINGS OR REPORTS. IN THE EVENT OF A CONFLICT BETWEEN THE SIGNED AND SEALED ORIGINAL DOCUMENTS PREPARED BY OLSSON AND THE ELECTRONIC FILES TRANSFERRED HEREWITH, THE SIGNED AND SEALED ORIGINAL DOCUMENTS SHALL GOVERN. OLSSON SPECIFICALLY DISCLAIMS ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ELECTRONIC FILES. IT SHALL BE THE RECIPIENT'S RESPONSIBILITY TO CONFIRM THE ACCURACY OF THE INFORMATION CONTAINED IN THE ELECTRONIC FILE AND THAT IF ACCURATELY REFLECTS THE INFORMATION NEEDED BY THE RECIPIENT. THE RECIPIENT SHALL NOT RETRANSMIT THE ELECTRONIC FILE, OR ANY PORTION THEREOF, WITHOUT INCLUDING THIS DISCLAIMER AS PART OF ANY SUCH TRANSMISSION. IN ADDITION, THE RECIPIENT AGREES, TO THE FULLEST EXTENT PERMITTED BY LAW, TO INDEMNIFY AND HOLD HARMLESS OLSSON, ITS OFFICERS, DIRECTORS, EMPLOYEES AND SUBCONSULTANTS AGAINST ANY AND ALL DAMAGES, LIABILITIES, CLAIMS OR COSTS, INCLUDING REASONABLE ATTORNEY'S AND EXPERT WITNESS FEES AND DEFENSE COSTS, ARISING FROM ANY CHANGES MADE BY ANYONE OTHER THAN OLSSON OR FROM ANY REUSE OF THE ELECTRONIC FILES WITHOUT THE PRIOR WRITTEN CONSENT OF OLSSON.
35. DESIGN PROFESSIONAL SHALL REVIEW SHOP DRAWINGS OR SAMPLES FOR GENERAL CONFORMANCE WITH THE DESIGN CONCEPTS ON THE PROJECT AND FOR COMPLIANCE WITH THE INFORMATION GIVEN IN THE CONTRACT DOCUMENTS, AND SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. THE DESIGN PROFESSIONAL'S REVIEW SHALL NOT RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS IN WRITING CALLED DESIGN PROFESSIONAL'S ATTENTION TO EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND DESIGN PROFESSIONAL HAS GIVEN WRITTEN APPROVAL OF EACH SUCH VARIATION BY SPECIFIC WRITTEN NOTATION THEREOF INCORPORATED INTO OR ACCOMPANYING THE SHOP DRAWING OR SAMPLE; NOR WILL ANY APPROVAL BY THE DESIGN PROFESSIONAL RELIEVE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS WITH CONFORMANCE TO CONTRACT DOCUMENTS.

    BEFORE SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE DETERMINED AND VERIFIED:
    a. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;
    b. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;
    c. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;
    d. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.

    ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY REVIEWED THE SUBMISSION AND CHECKED ALL DATA AND DETAILS. BY CONTRACTOR SIGNATURE, CONTRACTOR CERTIFIES SHOP DRAWING CONFORMANCE AND ACCURACY TO THE CONTRACT DOCUMENTS.
36. ANY CONTRACTOR BIDDING ANY PORTION OF THIS WORK SHALL HAVE IN HIS OR HER POSSESSION A COMPLETE SET OF CONSTRUCTION DOCUMENTS AND BE FAMILIAR WITH ALL SCOPES OF WORK AND TRADES TO UNDERSTAND THEIR INTERACTIONS.
37. CONTRACTOR TO PROVIDE A STRUCTURAL DESIGN FOR ALL STORM STRUCTURES WITH A ("L"+"H") AND ("W" + "H") GREATER THAN 20 FEET. "L" IS THE LENGTH OF THE BOX, "W" IS THE WIDTH OF THE BOX, AND "H" IS THE HEIGHT OF THE BOX. STRUCTURAL DESIGN SHOULD INCLUDE DETAILS AND CALCULATIONS SEALED BY A LICENSED ENGINEER. DESIGN SHALL BE SUBMITTED FOR REVIEW PRIOR TO ANY FABRICATION AND ORDERING OF PIPE PRODUCTS. IN THE EVEN THIS NOTE IS LESS STRINGENT THAN THE LOCAL JURISDICTION, THE MORE STRINGENT REQUIREMENTS SHOULD APPLY.

DEMOLITION NOTES

1. CONTRACTOR TO PRESERVE ALL SURVEY CONTROL.
2. CONTRACTOR TO COMPLETE DEMOLITION PER THE INTENT OF THESE PLANS.
3. THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THIS INCLUDES PRIVATE AND PUBLIC UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT MISSOURI ONE CALL AT 1-800-344-7483 IN ADVANCE OF ANY EXCAVATION TO COORDINATE UTILITY LOCATIONS.
4. CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER EXISTING LINES NOT OF RECORD OR SHOWN ON THESE PLANS.
5. REMOVAL AND DISPOSAL OF BUSHES AND TREES SMALLER THAN 12" IN DIAMETER SHALL BE CONSIDERED SUBSIDIARY TO THE PRICE BID FOR CLEARING AND GRUBBING.
6. ALL ITEMS REMOVED SHALL BE LEGALLY DISPOSED OFF SITE BY THE CONTRACTOR.
7. DO NOT DISRUPT UTILITY SERVICE TO ADJACENT BUSINESSES OR RESIDENCES WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.
8. DO NOT DISRUPT TRAFFIC ON ADJACENT PUBLIC STREETS WITHOUT PRIOR WRITTEN APPROVAL BY THE CITY.
9. ALL SIDEWALK AND PAVEMENT TO REMAIN SHALL BE PROTECTED IN PLACE INCLUDING PROTECTION FROM DAMAGE CAUSED BY REMOVAL OF ABUTTING PAVEMENT. CONTRACTOR SHALL SAW CUT WHERE NECESSARY.
10. CONTRACTOR SHALL GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DISCONNECTION, DEMOLITION, AND REMOVAL OF SERVICE LINES. CAP ALL LINES BEFORE PROCEEDING WITH WORK ON THIS CONTRACT.
11. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY CONCERNING PORTIONS OF WORK WHICH MAY BE PERFORMED BY THE UTILITY COMPANIES WORK FORCE AND ANY FEES WHICH ARE TO BE PAID TO THE UTILITY COMPANY FOR THEIR SERVICES.
12. CONTRACTOR SHALL PROTECT THE PUBLIC AT ALL TIME WITH FENCING, BARRICADES, ENCLOSURES, ETC. TO THE BEST PRACTICES AND AS APPROVED BY THE ENGINEER AND THE CITY.
13. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
14. DEMOLITION OF BUILDINGS SHALL INCLUDE THE BUILDING STRUCTURE, PAD, FOOTINGS, FOUNDATIONS, BASEMENT WALLS, BASEMENT FLOORS, TRUCK DOCKS, STEPS, DECKS, ALL ITEMS REMAINING IN BUILDING, ALL BUILDING UTILITY SERVICES, SIDEWALKS, AND BACKFILLING AND RESTORING REMAINING EXCAVATIONS, BASEMENTS AND TRENCHES PER SPECIFICATIONS.
15. ALL LIGHT POLE DEMOLITION SHALL INCLUDE FIXTURES, BASES AND WIRING.
16. ALL UTILITY DEMOLITION SHALL INCLUDE METERS, MANHOLES AND OTHER STRUCTURES ASSOCIATED WITH THE UTILITY SERVICE LINE.

PAVEMENT MARKING NOTES:

1. PAVEMENT MARKING PAINT: LATEX, WATER-BASE EMULSION, READY-MIXED, COMPLYING WITH FS TT-P-1952 WITH DRYING TIME OF LESS THAN 45 MINUTES.
2. DO NOT APPLY PAVEMENT MARKING PAINT UNTIL LAYOUT, COLORS AND PLACEMENT HAVE BEEN VERIFIED WITH THE ARCHITECT.
3. ALLOW PAVING TO AGE FOR 24 HOURS BEFORE MARKING.
4. SWEEP AND CLEAN SURFACE.
5. APPLY PAINT WITH MECHANICAL EQUIPMENT TO PRODUCE MARKINGS WITH UNIFORM STRAIGHT EDGES. PROVIDE A MINIMUM WET FILM THICKNESS OF 15 MILS.
6. THIS WORK SHALL CONSIST OF FURNISHING AND APPLYING PAINT ON PAVEMENT SURFACES, IN TRAFFIC LANES, PARKING BAYS, AREAS RESTRICTED TO HANDICAPPED PERSONS, CROSSWALKS, AND OTHER DETAIL PAVEMENT MARKINGS, IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS.
7. DETAILS NOT SHOWN SHALL BE IN CONFORMITY WITH THE STATE STANDARDS FOR TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, AND SIMILAR REQUIREMENTS ESTABLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
8. ALL PARKING LOT STRIPING SHALL BE SINGLE LINE 4" WIDE AS PER THE SITE PLANS.
9. PAINT FOR MARKING PAVEMENT SHALL CONFORM TO FEDERAL HIGHWAY MARKING STANDARDS. USE SHERWIN WILLIAMS PROMAR TRAFFIC MARKING PAINT, COLORS TO MATCH THE EXISTING ADJACENT INSTALLATIONS. USE FLAT BLACK, WHITE OR YELLOW, WHERE APPROPRIATE. UNLESS OTHERWISE DIRECTED, USE THE FOLLOWING:
    A. BLACKTOP OR BITUMINOUS ASPHALT PAVING: USE WHITE COLOR.
    B. PORTLAND CEMENT CONCRETE PAVING: USE YELLOW COLOR.
    C. HANDICAPPED ACCESSIBLE PARKING AND ENTRYWAYS: USE WHITE COLOR WITH WHITE STRIPES.
    D. PROVIDE PAINTED CURBS AT FIRE LANE DESIGNATIONS PER FIRE MARSHAL REQUIREMENTS.
10. APPLY ALL MARKINGS USING APPROVED MECHANICAL EQUIPMENT (WITH PROVISIONS FOR CONSTANT AGITATION OF PAINT), CAPABLE OF APPLYING THE MARKING WIDTHS AS SHOWN. USE PNEUMATIC SPRAY GUNS FOR HAND APPLICATION OF PAINT. ALL PAINTING EQUIPMENT AND OPERATIONS SHALL BE UNDER THE CONTROL OF EXPERIENCED TECHNICIANS THOROUGHLY FAMILIAR WITH EQUIPMENT AND MATERIALS AND MARKING LAYOUTS.
11. DETAIL PAVEMENT MARKINGS SHALL BE THAT MARKING, EXCLUSIVE OF ACTUAL TRAFFIC LANE MARKING, AT EXIT AND ENTRANCE ISLANDS AND TURNOUTS, ON CURBS, AT CROSSWALKS, AT PARKING BAYS AND AT SUCH OTHER LOCATIONS AS SHOWN. HANDICAPPED PARKING SPACES SHALL BE MARKED BY THE INTERNATIONAL HANDICAPPED SYMBOL AT INDICATED PARKING SPACES. USE A SUITABLE TEMPLATE THAT WILL PROVIDE A PAVEMENT MARKING WITH TRUE, SHARP EDGES AND ENDS.

EROSION & SEDIMENT CONTROL NOTES

1. PRIOR TO LAND DISTURBANCE ACTIVITIES, THE FOLLOWING SHALL OCCUR:
    A. DELINEATE THE OUTER LIMITS OF ANY NATURAL STREAM CORRIDOR DESIGNATED IN ACCORDANCE WITH THE CITY'S DESIGN AND CONSTRUCTION MANUAL SHALL BE APPLICABLE TO DEVELOPMENT IN THE ADP.
    B. CONSTRUCT A STABILIZED ENTRANCE/PARKING/DELIVERY AREA.
    C. INSTALL PERIMETER CONTROLS AND REQUEST THE INSPECTION OF THE PRECONSTRUCTION EROSION AND SEDIMENT CONTROL MEASURES DESIGNATED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN. LAND DISTURBANCE WORK SHALL NOT PROCEED UNTIL THERE IS A SATISFACTORY INSPECTION.
    D. IDENTIFY THE LIMITS OF CONSTRUCTION ON THE GROUND WITH EASILY RECOGNIZABLE INDICATIONS SUCH AS CONSTRUCTION STAKING, CONSTRUCTION FENCING, AND PLACEMENT OF PHYSICAL BARRIERS OR OTHER MEANS ACCEPTABLE TO THE CITY INSPECTOR AND IN CONFORMANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN.
2. THE SITE SHALL COMPLY WITH ALL REQUIREMENTS OF THE MISSOURI WATER POLLUTION CONTROL AND NPDES STORMWATER RUNOFF FROM CONSTRUCTION SITES GENERAL PERMIT, AND LEE'S SUMMIT STANDARDS AND SPECIFICATIONS LIMITED TO:
    A. STABILIZATION OF ANY DISTURBED AREA WHERE THE LAND DISTURBANCE ACTIVITY HAS CEASED FOR MORE THAN 14 DAYS.
    B. INSPECTIONS OF EROSION AND SEDIMENT CONTROL MEASURES SHALL BE PERFORMED TO MEET OR EXCEED THE MINIMUM INSPECTION FREQUENCY IN THE MISSOURI GENERAL PERMIT. AT A MINIMUM, INSPECTIONS SHALL BE PERFORMED DURING ALL PHASES OF CONSTRUCTION AT THE FOLLOWING INTERVALS:
        I AT LEAST ONCE EVERY 14 DAYS
        II BY THE END OF THE NEXT DAY, EXCLUDING WEEKENDS AND FEDERAL HOLIDAYS, AFTER A RAIN EVENT OF ½ INCH OR MORE.
    C. AN INSPECTION LOG SHALL BE MAINTAINED AND SHALL BE AVAILABLE FOR REVIEW BY THE REGULATORY AUTHORITY.
    D. THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE ROUTINELY UPDATED PER THE SWPPP AND NOI TO SHOW ALL CHANGES AND AMENDMENTS TO THE PLAN. A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE KEPT ON SITE AND MADE AVAILABLE FOR REVIEW BY THE REGULATORY AUTHORITY.
3. UNLESS OTHERWISE NOTED IN THE PLANS, ALL SEEDING MUST CONFORM TO THE CITY OF LEE'S SUMMIT STANDARDS AND SPECIFICATIONS.
4. EROSION AND SEDIMENT CONTROL SHALL BE PROVIDED FOR THE DURATION OF A PROJECT. ALL INSTALLED EROSION AND SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED IN A MANNER THAT PRESERVES THEIR EFFECTIVENESS. IF THE CITY DETERMINES THAT THE BMPS IN PLACE DO NOT PROVIDE ADEQUATE EROSION AND SEDIMENT CONTROL AT ANY TIME DURING THE PROJECT, ADDITIONAL OR ALTERNATE MEASURES THAT PROVIDE EFFECTIVE CONTROL SHALL BE REQUIRED. FAILURE TO DO SO IS A VIOLATION OF THE PROVISIONS OF OPMC CHAPTER 16.200.
5. SILT FENCES AND SEDIMENT CONTROL BMPS WHICH ARE SHOWN ALONG THE BACK OF CURB MUST BE INSTALLED WITHIN TWO WEEKS OF CURB BACKFILL AND PRIOR TO PLACEMENT OF BASE ASPHALT. EXACT LOCATIONS OF THESE EROSION CONTROL METHODS MAY BE FIELD ADJUSTED TO MINIMIZE CONFLICTS WITH UTILITY CONSTRUCTION; HOWEVER, ANTICIPATED DISTURBANCE BY UTILITY CONSTRUCTION SHALL NOT DELAY INSTALLATION.
6. THE ABOVE REQUIREMENTS ARE THE RESPONSIBILITY OF THE PERMITTEE FOR THE SITE. RESPONSIBILITY MAY BE TRANSFERRED TO ANOTHER PARTY BY THE PERMITEEE ACCORDING TO THE SWPPP, BUT THE PERMITTEE SHALL REMAIN LIABLE BY THE CITY OF LEE'S SUMMIT IF ANY OF THE ABOVE CONDITIONS ARE NOT MET.
7. APWA EROSION AND SEDIMENT CONTROL/BMPS USED ON THE PROJECT SHALL BE CONSTRUCTED, INSPECTED, AND MAINTAINED AT A MINIMUM TO APWA STANDARDS AND SPECIFICATIONS.
8. THE SITE SHALL COMPLY WITH ALL REQUIREMENTS OF THE MISSOURI WATER POLLUTION CONTROL AND NPDES STORMWATER RUNOFF FROM CONSTRUCTION SITES GENERAL PERMIT, OTHER PERMIT REQUIREMENTS, AND CITY OF LEE'S SUMMIT.
9. CONTRACTOR SHALL, BY HIS OWN INVESTIGATION, AND PRIOR TO BIDDING, SATISFY HIMSELF AS TO THE CONDITION OF EXISTING BMPS INCLUDING SEDIMENT TRAPS AND BASINS UNDER CURRENT OPERATION/NOI FROM THE DEMOLITION PLANS CONSTRUCTION DOCUMENTS. AT NOTICE TO PROCEED, BMPS, EXISTING PERMITS, SWPPP OPERATIONS, AND MAINTENANCE BECOMES THE CONTRACTOR'S RESPONSIBILITY.

SANITARY SEWER NOTES:

1. ALL SANITARY SEWER SERVICE PIPE SHALL BE PVC SDR-26. SEWER SERVICE LINE W/PUSH ON JOINTS.
2. INSTALL 6" ONE-WAY CLEANOUT 10' FROM BUILDING OR AS NOTED ON PLANS.
3. NO FOUNDATION DRAINS ARE PLANNED FOR THIS PROJECT. DOWNSPOUTS SHALL NOT BE CONNECTED TO SANITARY SEWER. DOWNSPOUTS WILL DISCHARGE AT GRADE USING SPLASHBLOCK OR TO PROPOSED STORM SEWER.
4. TEN FEET OF HORIZONTAL SEPARATION AND TWO FEET OF VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN WATER LINES AND THE SANITARY SEWER SERVICE LINE.
5. IN THE EVENT OF WORK IN OR ON THE SANITARY MAIN, ANY TREES OR PLANTINGS PLACED WITHIN THE SEWER EASEMENT MAY BE REMOVED WITHOUT REPLACEMENT OR COMPENSATION THERE-OF.
6. 90-DEGREE TURNS TO BE ACCOMPLISHED WITH TWO 45-DEGREE BENDS WITH A MINIMUM OF ONE FOOT OF PIPE BETWEEN THE 45-DEGREE BENDS.
7. FOR VERTICAL RISERS AND ENCASEMENTS, SEE SANITARY SEWER CONNECTION SHEETS.
8. SANITARY SERVICE LINES SHALL BE INSTALLED BY BUILDING PLUMBER AND IN ACCORDANCE WITH THE CURRENT SERVICE LINE DESIGN AND CONSTRUCTION STANDARDS.
9. ROOF DRAINS SHALL NOT BE CONNECTED TO THE SANITARY SEWER.
10. REPLACE/ADD BARREL SECTIONS AS REQUIRED TO MEET THE GRADE REQUIREMENTS.
11. MANHOLE STATIONS AND PIPE LENGTHS SHOWN ON PLANS ARE TO THE CENTER OF MANHOLES. DO NOT SCALE DRAWINGS.
12. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PAVEMENT OR SIDEWALKS DAMAGED DURING THE CONSTRUCTION OF THE SANITARY SEWER SERVICE LINE.

AMERICAN WITH DISABILITIES ACT. (ADA)

1. ADA PARKING SPACES, MARKINGS AND ACCESS TO THE BUILDING(S) SHALL COMPLY WITH ADA.
2. ALL CONSTRUCTION TRAFFIC, TEMPORARY TRAFFIC CONTROL DEVICES, AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170 www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLEAK
NUMBER PE-2009018764
02-8-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

GENERAL NOTES
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by:	OLSSON
checked by:	ENG
approved by:	ENG
QA/QC by:	ENG
project no.:	021-04157
drawing no.:	C_TTL01_02104157.dwg
date:	

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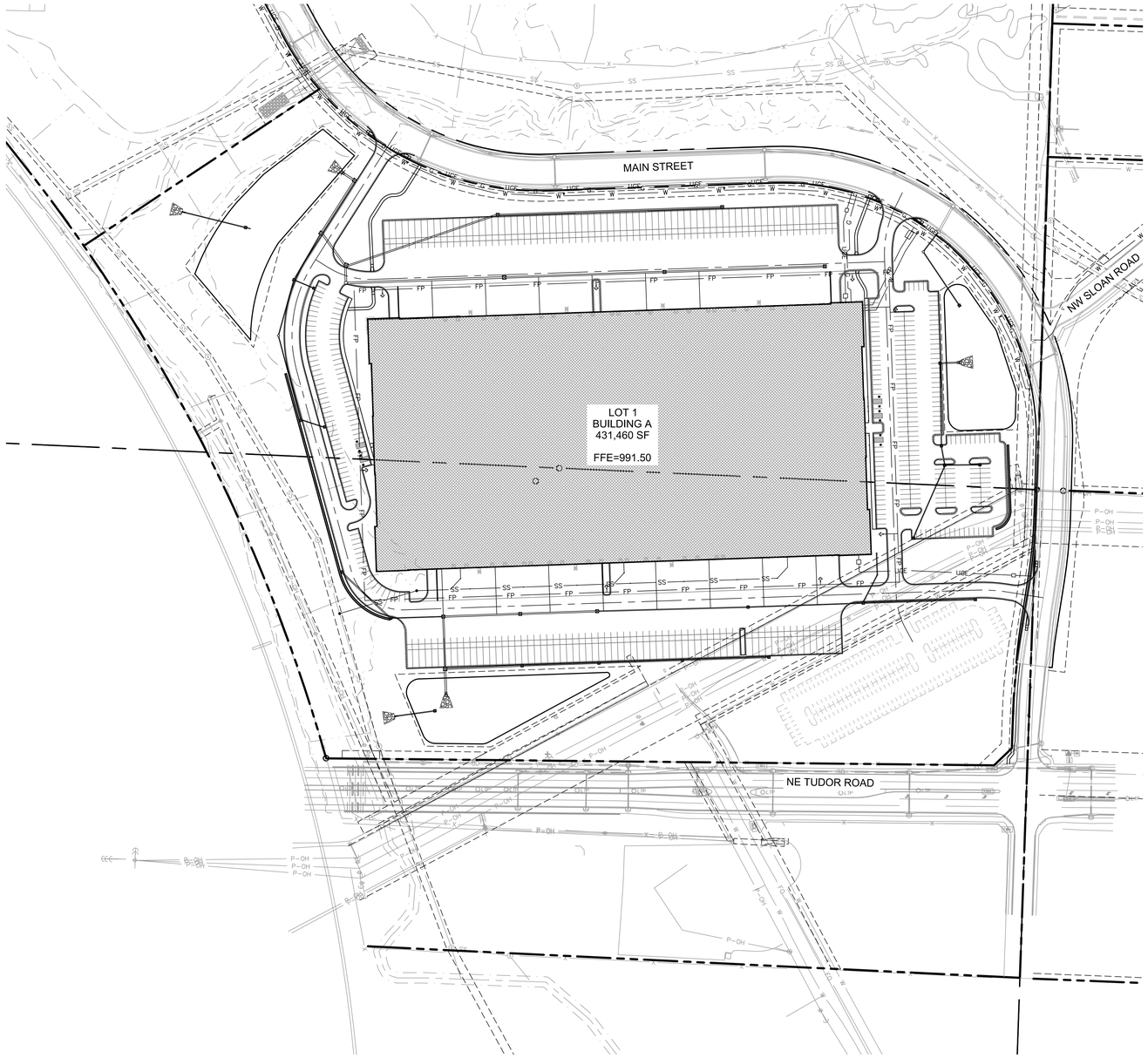


LEGEND

- PROPERTY LINE
- SECTION LINE
- FEMA FLOOD PLAIN LIMITS
- LOT LINE
- FENCE

PROPERTY DESCRIPTION

All that part of an unplatted tract of land, together with all that part of North Main Street right of way, all lying in the West Half of Section 31, Township 48 North, Range 31 West, lying in the City of Lee's Summit, Jackson County, Missouri, described by Patrick Ethan Ward, MO PLS-20050071, of Olsson MOLC-366, on October 14, 2021, as follows:

BEGINNING at the Northeast corner of the Southwest Quarter of Section 31, Township 48 North, Range 31 West; thence South 01 degree 59 minutes 47 seconds West, on the East line of said Southwest Quarter, a distance of 65.98 feet to a point on the West line of NW Sloan Street right of way, as established in Document 2013E0075031, said point also lying on a non-tangent curve; thence in a Southerly direction, departing said East line, on said West line and on a curve to the right whose initial tangent bears South 02 degrees 47 minutes 37 seconds West, having a radius of 970.00 feet, through a central angle of 6 degrees 27 minutes 07 seconds, an arc distance of 109.23 feet to a point of tangency; thence South 09 degrees 14 minutes 44 seconds West, continuing on said West line, a distance of 111.80 feet to a point of curvature; thence in a Southerly direction, continuing on said West line and on a curve to the left, having a radius of 1030.00 feet, through a central angle of 7 degrees 14 minutes 57 seconds, an arc distance of 130.32 feet to a point of tangency; thence South 01 degree 59 minutes 47 seconds West, continuing on said West line, a distance of 69.49 feet to a point on the North line of NE Tudor Road right of way, as established in said Document 2013E0075031; thence South 46 degrees 15 minutes 48 seconds West, departing said West line, on said North line, a distance of 46.09 feet to a point; thence North 89 degrees 24 minutes 16 seconds West, continuing on said North line, and on the North line of NW Tudor Road right of way, as established in Document 2013E0075030, a distance of 1249.23 feet to a point on the East line of Union Pacific Railroad right of way, as now established, said point also lying on a non-tangent curve; thence in a Northerly and Northwesterly direction, departing said North line, on said East line and on a curve to the left whose initial tangent bears North 15 degrees 46 minutes 27 seconds West, having a radius of 3203.90 feet, through a central angle of 22 degrees 48 minutes 11 seconds, an arc distance of 1275.12 feet to a point of tangency; thence North 38 degrees 34 minutes 39 seconds West, continuing on said East line, a distance of 738.40 feet to a point of curvature; thence in a Northwesterly direction, continuing on said East line and on a curve to the right, having a radius of 5981.13 feet, through a central angle of 2 degrees 39 minutes 22 seconds, an arc distance of 277.27 feet to a point on the North line of the South Half of the Northwest Quarter of said Section 31, said point also lying on a non-tangent line; thence South 87 degrees 40 minutes 30 seconds East, departing said East line, on said North line, a distance of 884.17 feet to a point on a non-tangent curve; thence in a Southeasterly direction, departing said North line, on a curve to the right whose initial tangent bears South 45 degrees 29 minutes 38 seconds East, having a radius of 544.00 feet, through a central angle of 16 degrees 50 minutes 44 seconds, an arc distance of 159.94 feet to a point of tangency; thence South 28 degrees 38 minutes 55 seconds East a distance of 437.58 feet to a point of curvature; thence in a Southeasterly and Easterly direction, on a curve to the left, having a radius of 476.00 feet, through a central angle of 63 degrees 19 minutes 59 seconds, an arc distance of 526.16 feet to a point of tangency; thence North 88 degrees 01 minute 06 seconds East a distance of 416.85 feet to a point of curvature; thence in an Easterly and Southeasterly direction, on a curve to the right, having a radius of 544.00 feet, through a central angle of 65 degrees 51 minutes 08 seconds, an arc distance of 625.24 feet to a point on a non-tangent line, said point also lying on the East line of said Northwest Quarter; thence South 01 degree 53 minutes 30 seconds West, on said East line, a distance of 338.00 feet to the POINT OF BEGINNING, containing 2,375,437 Square Feet or 54.5325 Acres, more or less.

BUILDING & SITE DATA

ZONING

NO. OF STORIES	BLDG HEIGHT	USE	BUILDING SQ. FT.	PARKING REQUIRED	PARKING PROVIDED	FLOOR AREA RATIO	LOT AREA
1	48 FT	BUILDING A WAREHOUSE	431,460 S.F.	1 STALL PER 1000 SF (432 STALLS)	320 STALLS (159 FUTURE STALLS)	0.26	37.90 ACRES

LOT 1 PROPOSED OPEN SPACE= 788,745 S.F. (18.107 ACRES) 47.86%

REQUIRED OPEN SPACE= REFERENCE LANDSCAPE PLAN

LOT 1 PROPOSED IMPERVIOUS AREA= 858,965 S.F. (19.719 ACRES)

PROPERTY OWNER/ DEVELOPER

SCANNELL PROPERTIES #603, LLC
8801 RIVER CROSSING BLVD, SUITE 300
INDIANAPOLIS, IN 46240
PH: 317-218-1648

ENGINEER/ LANDSCAPE ARCHITECT

OLSSON
7301 W. 133RD STREET, SUITE 200
OVERLAND PARK, KS 66213
PH: 913-381-1170
F: 913-381-1174

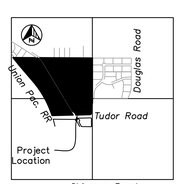
PROPOSED SITE USE

INDUSTRIAL

EXISTING & PROPOSED ZONING

SITE AREA

NET SITE AREA= 3,439,837 SQ. FT., (78.9678 AC±)



Chipman Road
Section 31, T48N, R31W
VICINITY MAP
Scale: 1" = 2000'

0' 50' 100' 200'
SCALE IN FEET

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN WARD
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
1	12.04.2021	CITY COMMENTS
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES
3	02.03.2022	CITY & UTILITIES COMMENTS

REVISIONS

GENERAL LAYOUT PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_GLP01_02104157.dwg
date:

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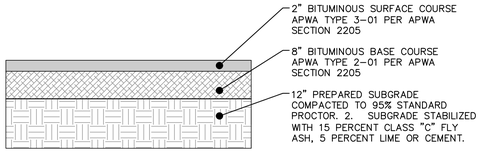
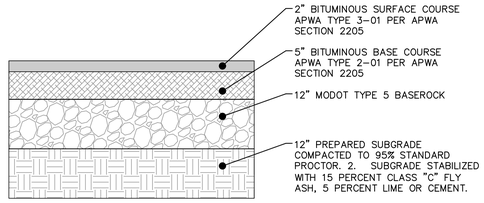


MEDIUM DUTY ASPHALT PAVEMENT SECTION

NOT TO SCALE
PER GEOTECHNICAL REPORT



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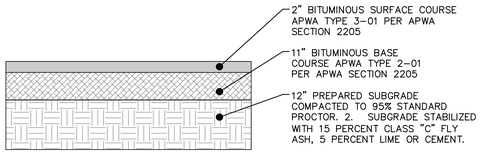

HEAVY DUTY ASPHALT PAVEMENT SECTION

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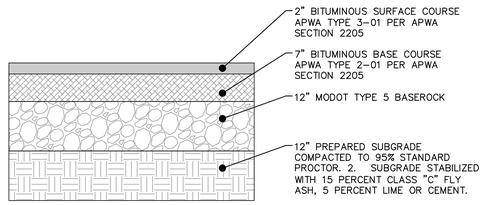

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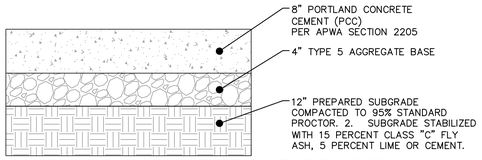

MEDIUM DUTY CONCRETE PAVEMENT SECTION

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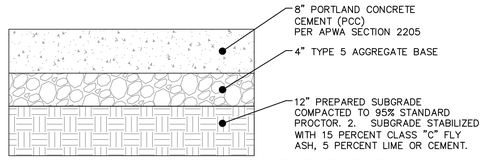

MEDIUM DUTY CONCRETE PAVEMENT SECTION

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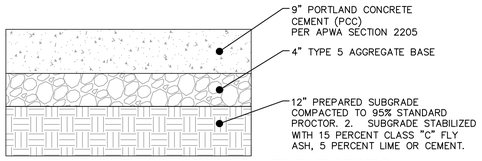

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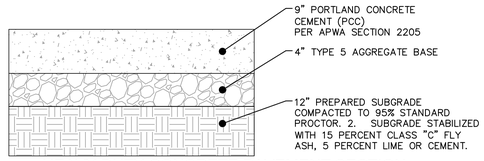

HEAVY DUTY CONCRETE PAVEMENT SECTION

NOT TO SCALE
PER GEOTECHNICAL REPORT

NOTE

1. ALL CONSTRUCTION, SITE PREPARATION, GRADING, AND EXCAVATION PROCEDURES SHALL CONFORM TO RECOMMENDATIONS AS OUTLINED IN THE GEOTECHNICAL REPORT INCLUDING ADDENDUMS. CONTRACTOR SHALL CONTACT ENGINEER WITH ANY DISCREPANCIES OR CONCERNS BASED ON ACTUAL SITE CONDITIONS.
2. GEOTECHNICAL REPORT GOVERNS ONLY IF IT MEETS OR EXCEEDS CITY REQUIREMENTS.
3. SUBGRADE STABILIZED WITH 15 PERCENT CLASS "C" FLY ASH, 5 PERCENT LIME OR CEMENT.

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAN
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.02.2022	CITY & EVERGY COMMENTS	

REVISIONS

TYPICAL ROADWAY & PAVEMENT SECTIONS
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
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date:

SHEET
C3.00

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_GLP01_02104157.dwg USER: lmoore
DATE: Feb 08, 2022 11:06am XREFS: C_PBASE_02104157 C_TBLK_02104157 C_XBASE_02104157

DIMENSION PLAN LEGEND

- PROPERTY LINE
- LOT LINE
- UTILITY EASEMENT
- BUILDING SET/BACK/LANDSCAPE BUFFER
- SAWCUT PAVEMENT FULL DEPTH
- ADA PATH – SIDEWALKS NOT DELINEATED AS ADA PATHS WILL NOT BE ADA COMPLIANT.
- PROPOSED STORM SEWER
- INSTALL STANDARD "WET" CURB & GUTTER (PER LEE'S SUMMIT STANDARD DETAIL)
- INSTALL STANDARD "DRY" CURB & GUTTER (PER LEE'S SUMMIT STANDARD DETAIL)
- INSTALL "ADA RAMP" CURB & GUTTER (PER LEE'S SUMMIT STANDARD DETAIL)
- INSTALL MEDIUM DUTY ASPHALT SEE PAVEMENT SECTION ON C3.00
- INSTALL HEAVY DUTY ASPHALT SEE PAVEMENT SECTION ON C3.00
- INSTALL HEAVY DUTY CONCRETE SEE PAVEMENT SECTION ON C3.00
- INSTALL CONCRETE SIDEWALK SEE PAVEMENT SECTION ON C3.00
- PROPOSED LIGHT POLE
- (XX) PROPOSED PARKING STALL COUNT

PROPOSED SIDEWALK. REFERENCE PUBLIC IMPROVEMENT PLANS.

PROPOSED SIDEWALK. REFERENCE PUBLIC IMPROVEMENT PLANS.

MAIN STREET

C4.01

C4.02

LOT 1
BUILDING A
431,460 SF

FFE=991.50

NW SLOAN ROAD

PROPOSED SIDEWALK. REFERENCE PUBLIC IMPROVEMENT PLANS.

PROPOSED SIDEWALK. REFERENCE PUBLIC IMPROVEMENT PLANS.

C4.04

C4.03

NE TUDOR ROAD

N

0' 50' 100' 200'
SCALE IN FEET

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAY
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
1	12.04.2021	CITY COMMENTS
2	01.07.2022	CITY COMMENTS #1 AND OWNER CHANGES
3	02.03.2022	CITY & EVERGY COMMENTS

REVISIONS

OVERALL DIMENSION PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_DIM02_02104157.dwg
date:

SHEET
C4.00

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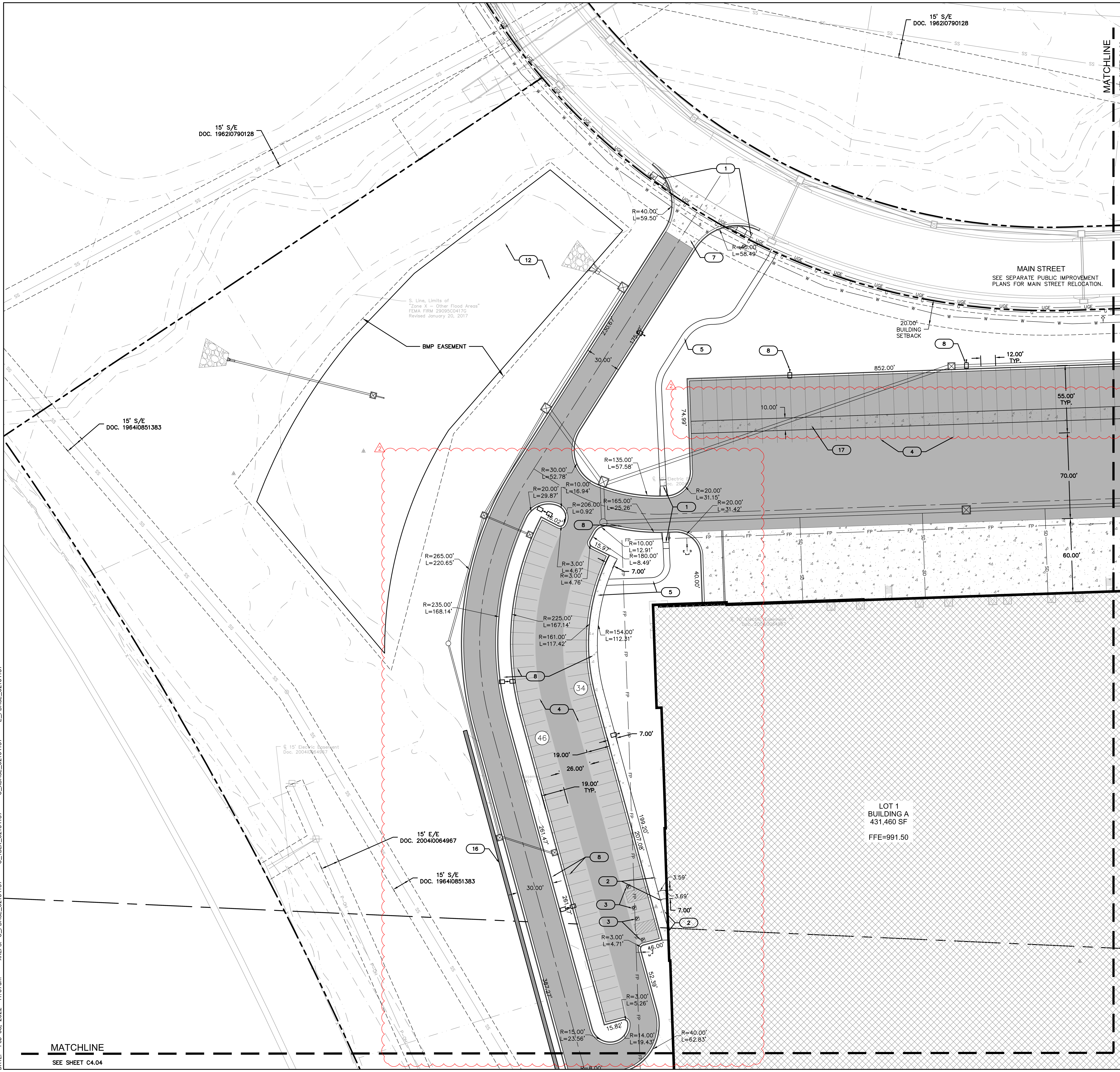

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KEYNOTES (#)

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11. PROPOSED TRAILER SPACING NUMBERING
12. PROPOSED DRY DETENTION BASIN
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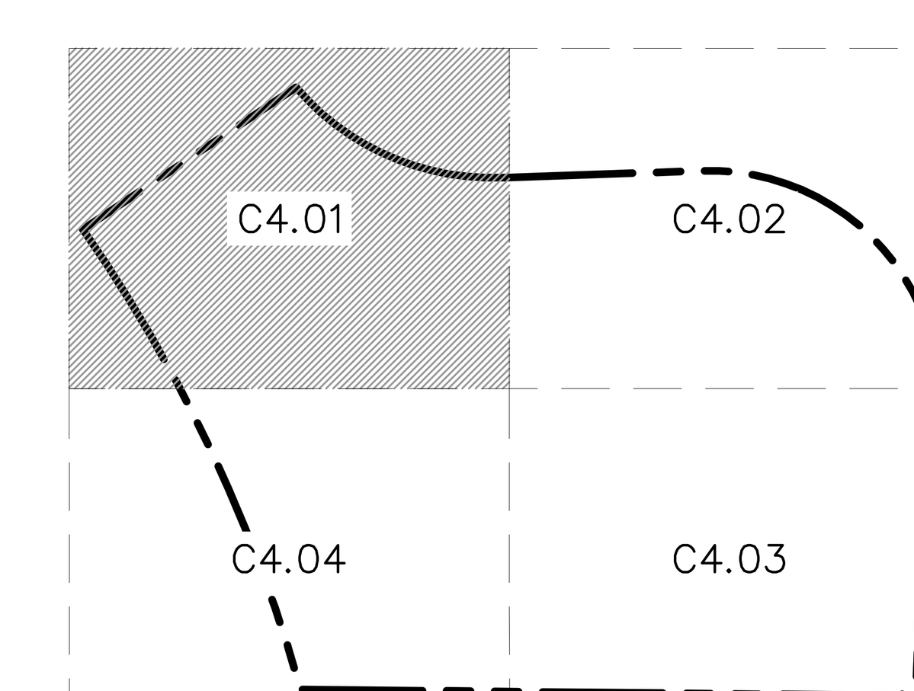
14. PROPOSED EV CHARGING STATION(SEE MEP/ARCH PLANS)
15. PROPOSED FIRE HYDRANT
16. PROPOSED RETAINING WALL WITH TRAFFIC RATED RAILING/FENCE.
17. PROPOSED TRAILER PARKING DOLLY STRIP.

0' 15' 30' 60'
SCALE IN FEET



KEY MAP
NOT TO SCALE

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

MITCHELL ALAN PLEAK NUMBER PE-2009018764 02-8-22 STATE OF MISSOURI PROFESSIONAL ENGINEER

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REVISIONS

2021

DIMENSION PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_DIM02_02104157.dwg
date:

SHEET
C4.01

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DATE: Feb 08, 2022 11:07am XREFS: C_PBASE_02104157 C_TBLK_02104157 C_XBASE_02104157 E_PBASE_02104157

MATCHLINE
SEE SHEET C4.01

15' S/E
DOC. 1962I0790128

15' S/E
DOC. 1962I0790128

MAIN STREET
SEE SEPARATE PUBLIC IMPROVEMENT PLANS FOR MAIN STREET RELOCATION.

20.00' BUILDING SETBACK

852.00'

10.00'

55.00'

12.00' TYP.

70.00'

60.00'

75.00'

R=40.00'
L=61.59'

R=215.00'
L=33.77'

R=20.00'
L=31.42'

13.47'

R=40.00'
L=55.33'

30.00'

30.00'

R=40.00'
L=79.07'

R=185.00'
L=41.18'

R=15.00'
L=23.56'

R=20.00'
L=31.42'

33.36'

29.00'

R=10.00'
L=15.71'

45.00'

14.00'

16.00'

R=4.00'
L=6.28'

6.00'

15.00'

7.00'

28.00'

R=10.00'
L=11.28'

R=4.00'
L=6.28'

R=10.00'
L=11.28'

18.00'
15.32'

R=3.00'
L=6.04'

R=3.00'
L=6.04'

20.00' BUILDING SETBACK

269.45'

232.64'

9.00'

19.00' TYP.

19.00' TYP.

19.00' TYP.

28.00'

28.00' TYP.

BMP EASEMENT

LOT 1
BUILDING A
431,460 SF

FFE=991.50

8.00'

8.00'

15.00'

16.00'

101.00'

R=3.00'
L=4.71'

R=1.00'
L=1.57'

R=7.00'
L=11.00'

R=8.00'
L=12.57'

12.50'

R=8.00'
L=8.47'

R=3.00'
L=4.71'

R=8.00'
L=10.96'

28.00'

R=8.00'
L=10.96'

R=8.00'
L=8.47'

22.00'

30.72'

22.00'

31.80'

R=3.00'
L=6.25'

R=3.00'
L=6.25'

R=3.00'
L=5.32'

R=3.00'
L=5.32'

127.62'

20' E/E
DOC. 1990I0962914

10' E/E
DOC. 1990I0962912

R=3.00'
L=5.38'

R=10.00'
L=13.48'

15.83'

18.00'

R=10.00'
L=13.48'

R=3.00'
L=5.32'

R=3.00'
L=5.32'

31.80'

22.00'

R=8.00'
L=10.96'

R=8.00'
L=10.96'

R=3.00'
L=5.32'

R=8.00'
L=10.96'

R=10.00'
L=15.71'

R=4.00'

R=32.00'
L=23.13'

MATCHLINE
SEE SHEET C4.03

DIMENSION PLAN LEGEND

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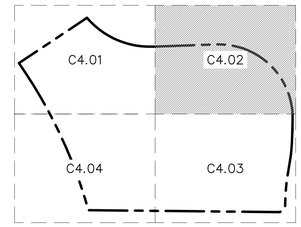

KEY MAP
NOT TO SCALE

N

0' 15' 30' 60'
SCALE IN FEET

olsson
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SCANNELL PROPERTIES

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MITCHELL ALAN PLAN
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REVISIONS

DIMENSION PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no. C_DIM02_02104157.dwg
date:

SHEET
C4.02

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_DIM02_02104157.dwg USER: imoore
DATE: Feb 08, 2022 11:07am XREFS: C_PBASE_02104157 C_TBLK_02104157 C_XBASE_02104157 E_PBASE_02104157

LOT 1
BUILDING A
431,460 SF

FFE=991.50

MATCHLINE
SEE SHEET C4.02

MATCHLINE
SEE SHEET C4.04

MAIN STREET

TUDOR ROAD

60.00'
30.00'
40.00'
12.00' TYP.
55.00' TYP.
10.00'
65.00'
816.00'
81.64'
72.18'
40.00'
28.00'
49.84'
116.27'
224.11'
22.00'
18.00'
9.00' TYP.
18.00' TYP.
7.00'
15.00'
5.38'

R=10.00' L=13.48'
R=4.00' L=6.28'
R=10.00' L=15.71'
R=3.00' L=4.71'
R=8.00' L=10.96'
R=3.00' L=4.41'
R=32.00' L=23.13'
R=20.00' L=31.42'
R=30.00' L=47.12'
R=315.00' L=60.34'
R=40.00' L=63.51'
R=285.00' L=54.59'
R=40.00' L=63.15'

10' E/E
DOC. 200010084247

100' E/E
DOC. 196210793380

10' E/E
DOC. 199010962912

25' E/E
DOC. 200410064967

10' E/E
DOC. 199010962911

20' W/E
DOC. 197910364969

5' W/E
DOC. 199610058573

15' W/E
DOC. 199610058573

10' E/E
DOC. 200010084247

DIMENSION PLAN LEGEND

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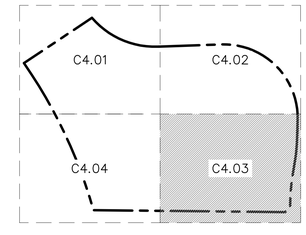

KEY MAP
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N

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PHASE I FINAL DEVELOPMENT PLAN

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NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
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SHEET
C4.03

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DATE: Feb 08, 2022 11:07am
XREFS: C_PBASE_02104157 C_TBLK_02104157 C_XBASE_02104157 E_PBASE_02104157
USER: lmoore

MATCHLINE
SEE SHEET C4.01

LOT 1
BUILDING A
431,460 SF

FFE=991.50

15' S/E
DOC. 1964I0851383

15' E/E
DOC. 2004I0064967

15' S/E
DOC. 1964I0851383

15' D/E
DOC. 2013e0075033

BMP EASEMENT

10' E/E
DOC. 1990I0962911

25' E/E
DOC. 2004I0064967

15' E/E
DOC. 2014e0071853

100' E/E
DOC. 1962I0793380

TUDOR ROAD

MATCHLINE
SEE SHEET C4.03

DIMENSION PLAN LEGEND

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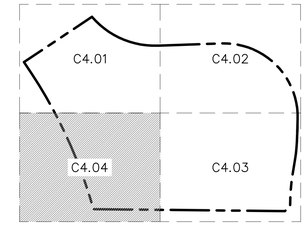

KEY MAP
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NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

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SHEET
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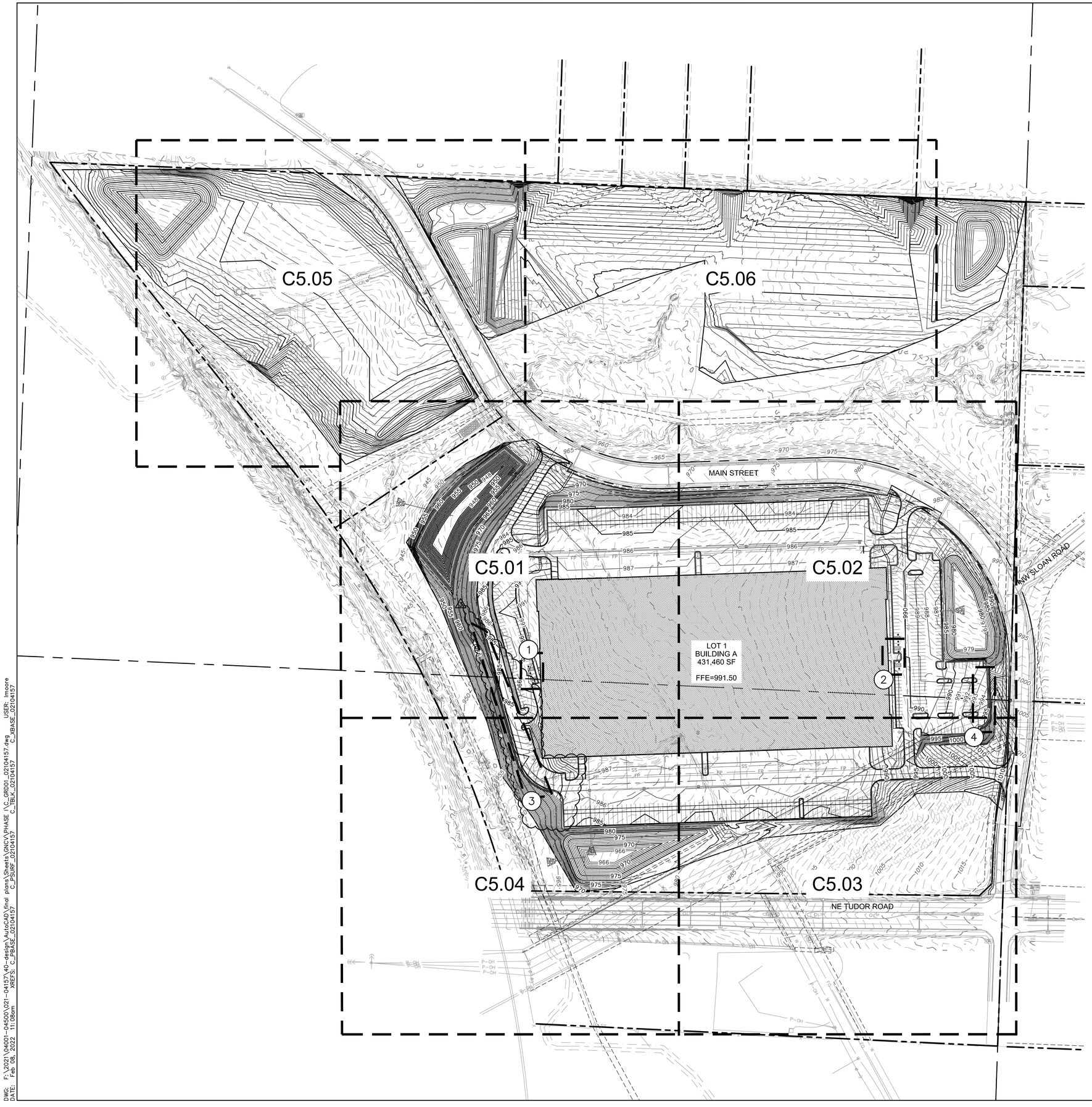
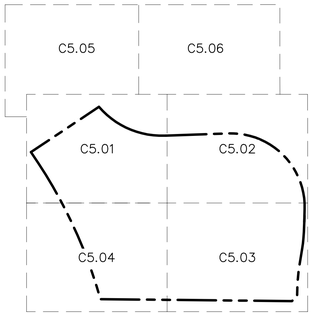


LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- UTILITY EASEMENT
- 950 — PROPOSED CONTOURS
- EXISTING CONTOURS
- GR,BR — GRADE BREAK LINE
- RIDGE — RIDGE LINE
- VALLEY — VALLEY LINE
- (X) — GRADING DETAIL LOCATIONS (SHEETS C509–C515)



KEY MAP
NOT TO SCALE

N

0' 50' 100' 200'
SCALE IN FEET

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAN
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	01.13.2022	CITY & EVERGY COMMENTS	

REVISIONS

OVERALL GRADING PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: GRD01_02104157.dwg
date:

SHEET
C5.00

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MATCHLINE
SEE SHEET C5.05

MATCHLINE
SEE SHEET C5.02

MATCHLINE
SEE SHEET C5.04

REFERENCE PUBLIC IMPROVEMENT PLAN SET FOR GRADING OF MAIN STREET

MAIN STREET

LOT 1
BUILDING A
431,460 SF

FFE=991.50

LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- UTILITY EASEMENT
- 950 — PROPOSED CONTOURS
- EXISTING CONTOURS
- GR.BR — GRADE BREAK LINE
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- (X) GRADING DETAIL LOCATIONS (SHEETS C5.05–C5.07)

SPOT ELEVATION LEGEND:

ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT ELEVATION UNLESS NOTED OTHERWISE. RE: PLAN VIEW, LEGEND AND DETAILS FOR CURB TYPE AND TO CALCULATE TOP OF CURB ELEVATION.

TC	TOP OF CURB
FG	FINISHED GRADE WITHIN GREENSPACE
TS	TOP OF STRUCTURE
FC	CURB DEPRESSED TO BE FLUSH WITH ADJACENT PAVEMENT
HP	HIGH POINT
LP	LOW POINT
ME±	MATCH EXISTING
FFE	FINISH FLOOR ELEVATION AT TOP OF SLAB
HFG	HIGH FINISHED GRADE
LFG	LOW FINISHED GRADE

NOTES:

1. CONTRACTOR TO REMOVE AND REPLACE ALL SIDEWALK NECESSARY FOR CONNECTION TO EXISTING.
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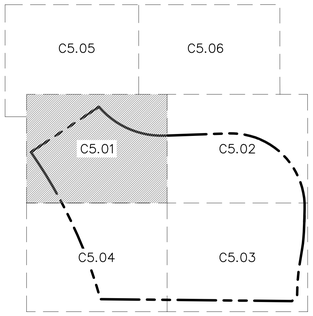

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N

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REVISIONS

GRADING PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing ©\GR002_02104157.dwg
date:

SHEET
C5.01

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_GR002_02104157.dwg USER: lmoore
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MATCHLINE
SEE SHEET C5.01

MATCHLINE
SEE SHEET C5.06

REFERENCE PUBLIC IMPROVEMENT PLAN SET FOR GRADING OF MAIN STREET

MAIN STREET

LOT 1
BUILDING A
431,460 SF

FFE=991.50

MATCHLINE
SEE SHEET C5.03

LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- UTILITY EASEMENT
- 950 PROPOSED CONTOURS
- EXISTING CONTOURS
- GR.BR GRADE BREAK LINE
- RIDGE RIDGE LINE
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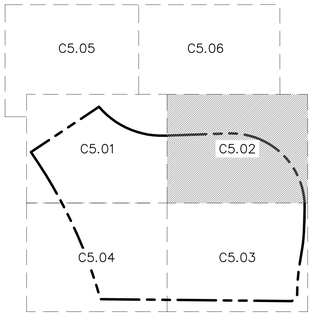

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REVISIONS

GRADING PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
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approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: GRD02_02104157.dwg
date:

SHEET
C5.02

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LOT 1
BUILDING A
431,460 SF

FFE=991.50

MATCHLINE
SEE SHEET C5.02

MATCHLINE
SEE SHEET C5.04

PROPOSED FLUME

MAIN STREET

NW TUDOR ROAD

LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- UTILITY EASEMENT
- 950 — PROPOSED CONTOURS
- EXISTING CONTOURS
- GR.BR — GRADE BREAK LINE
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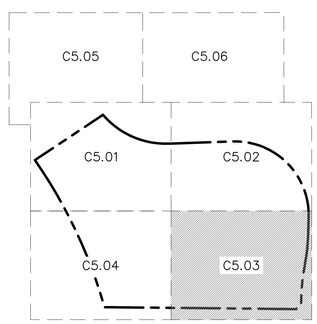

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REVISIONS

GRADING PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: GRD02_02104157.dwg
date:

SHEET
C5.03

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MATCHLINE
SEE SHEET C5.01

LOT 1
BUILDING A
431,460 SF

FFE=991.50

NW TUDOR ROAD

MATCHLINE
SEE SHEET C5.03

LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- UTILITY EASEMENT
- 950 PROPOSED CONTOURS
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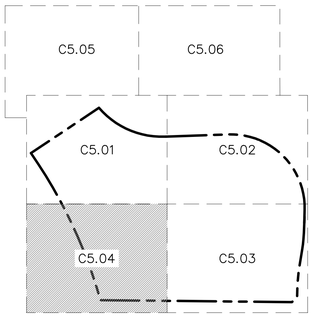

KEY MAP
NOT TO SCALE

N

0' 15' 30' 60'
SCALE IN FEET

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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLEAK
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
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REVISIONS

GRADING PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: GR002_02104157.dwg
date:

SHEET
C5.04

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_GR002_02104157.dwg USER: lmoore
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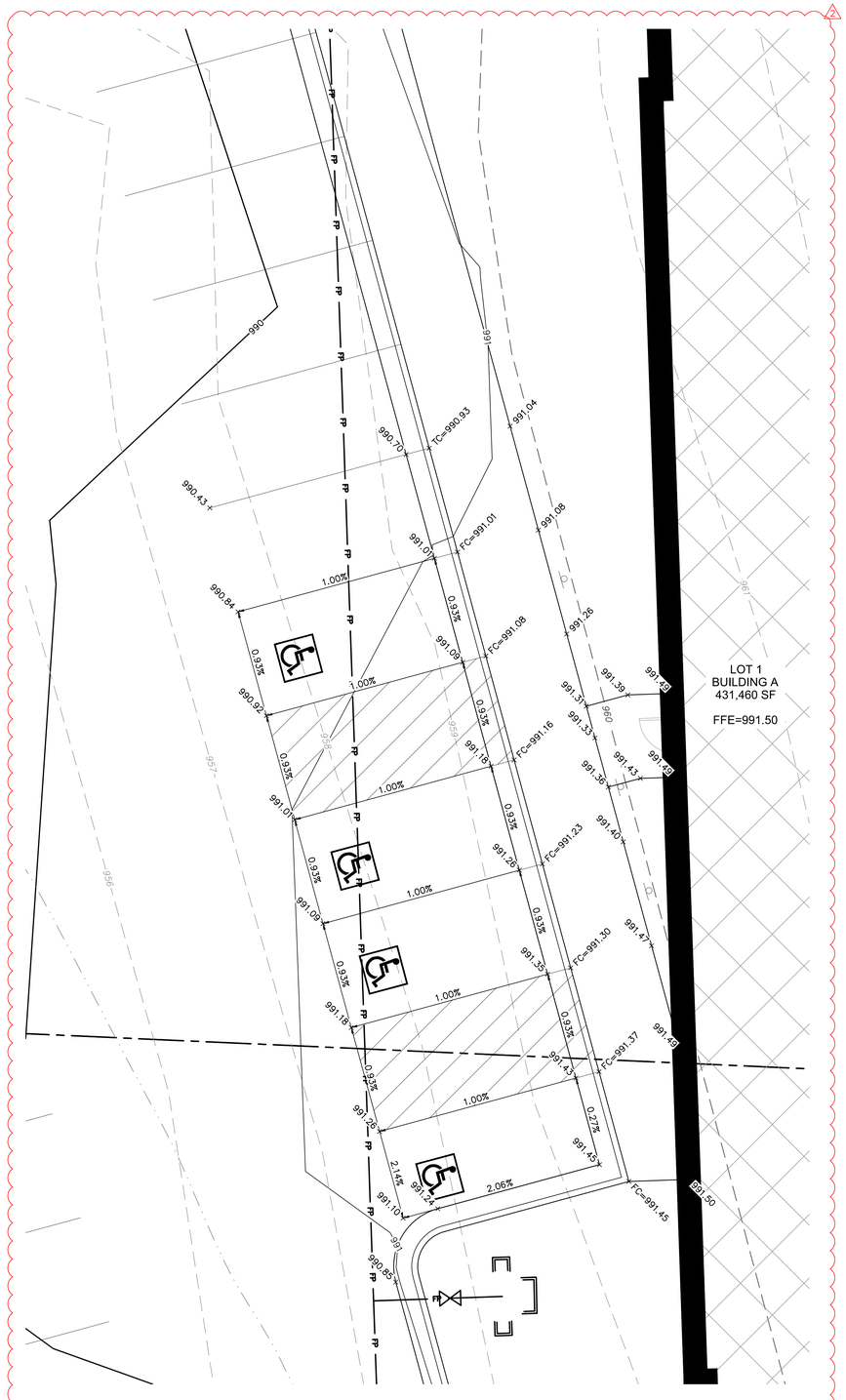
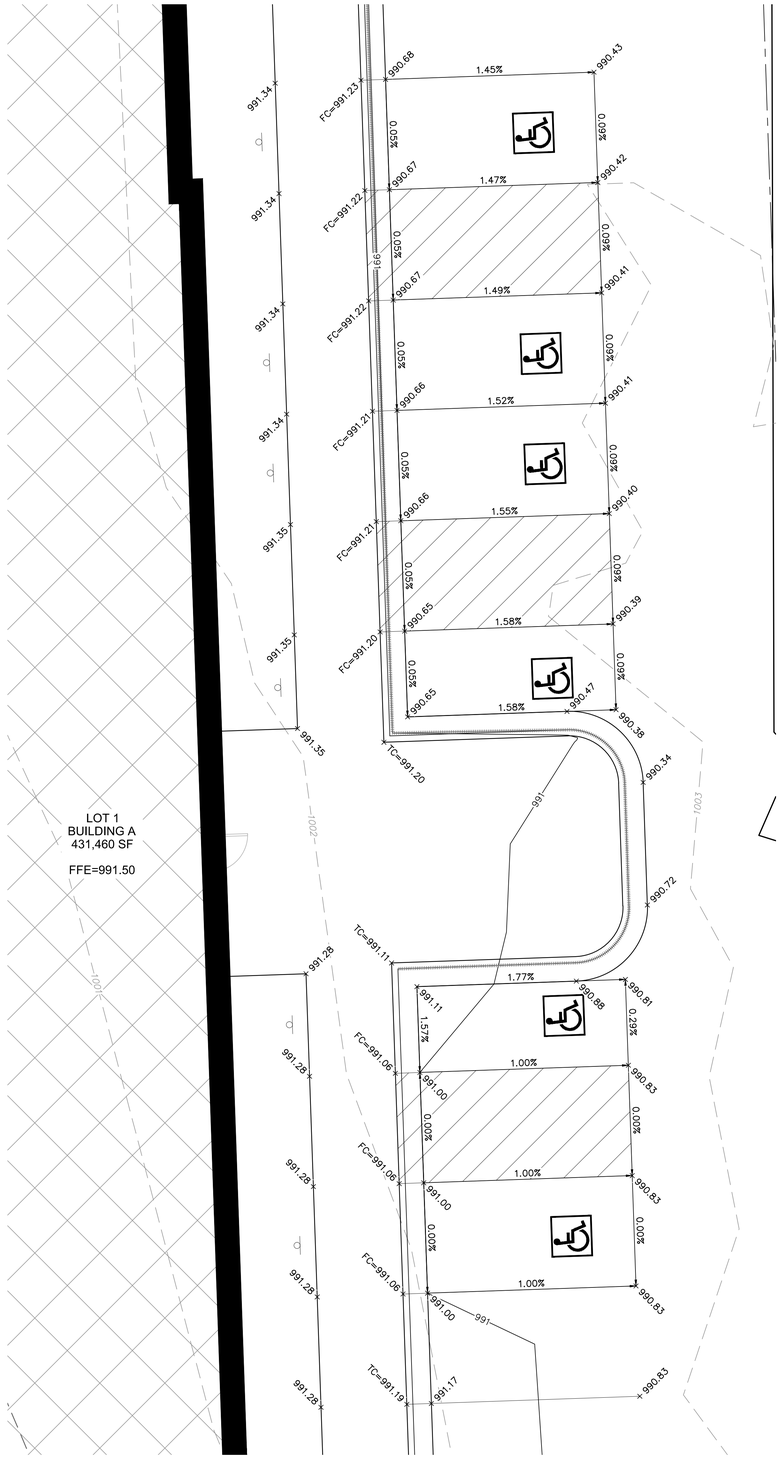


1 GRADING DETAIL



2 GRADING DETAIL

LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- UTILITY EASEMENT
- 950 — PROPOSED CONTOURS
- EXISTING CONTOURS
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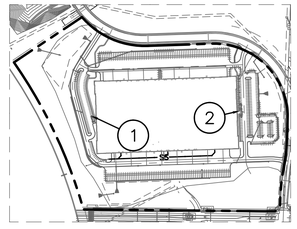

KEY MAP
NOT TO SCALE

N

0' 2.5' 5' 10'
SCALE IN FEET

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SCANNELL PROPERTIES

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MITCHELL ALAN PLAN
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

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REVISIONS

GRADING DETAIL
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
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project no.: 021-04157
drawing no.: GRD03_02104157.dwg
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SHEET
C5.05

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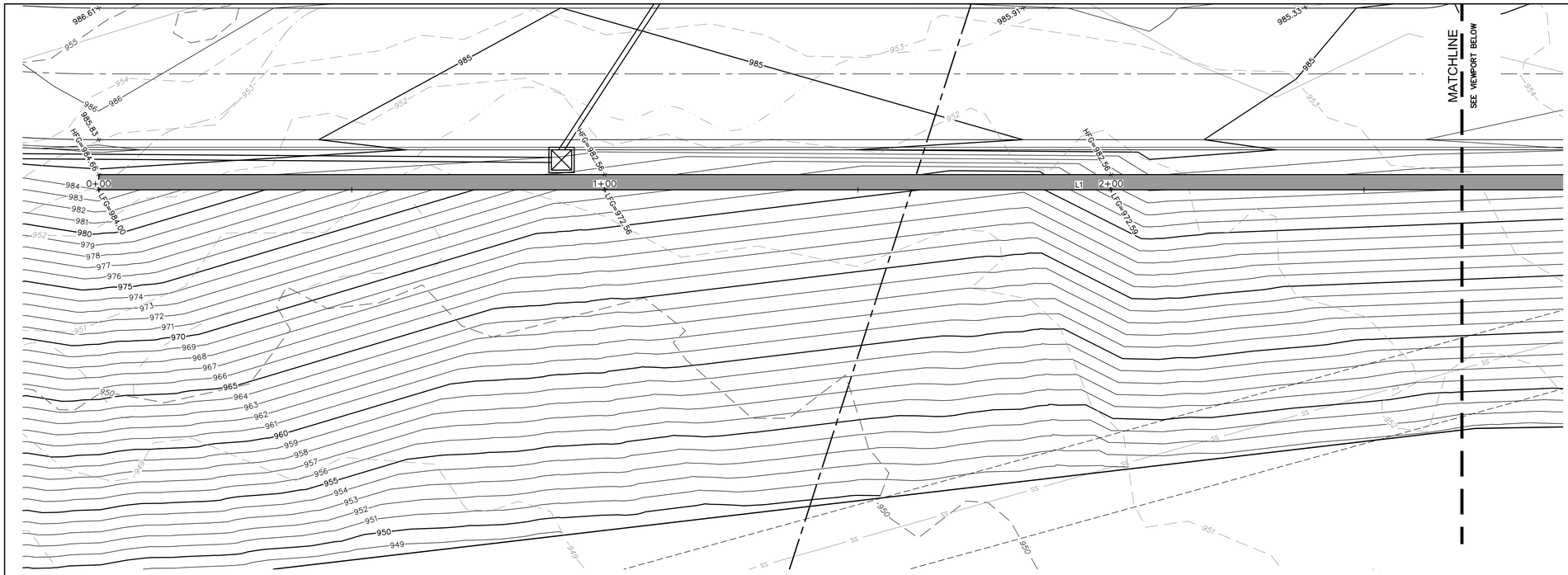

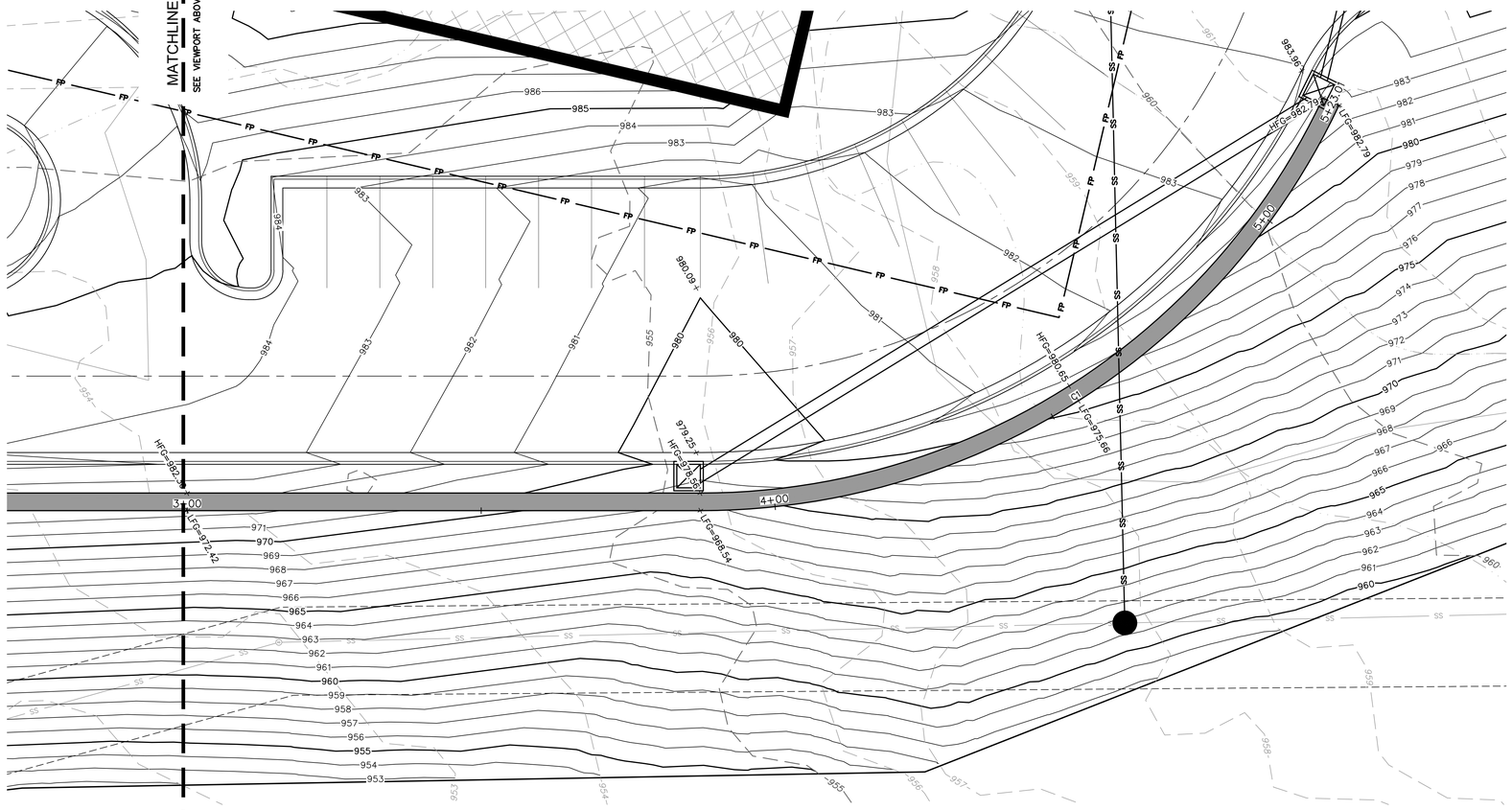

3 GRADING DETAIL 3 - RETAINING WALL AA

LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- UTILITY EASEMENT
- 950 PROPOSED CONTOURS
- EXISTING CONTOURS
- GR,BR GRADE BREAK LINE
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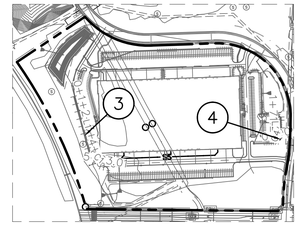
NOTE:

1) INFORMATION FOR RETAINING WALLS AA & BB SHOWN ON THE TABLES IS IN REFERENCE TO THE BOTTOM AND FRONT BLOCK OF WALL. THE BOTTOM AND FRONT BLOCK OF THE WALL LINE IS TO BE HELD DURING STAKING AND CONSTRUCTION.

2) ALL RETAINING WALL(S) ARE DESIGN BUILD BY THE CONTRACTOR. THE CONTRACTOR MUST PROVIDE THE WALL DESIGN PLANS AND GLOBAL STABILITY TO THE ENGINEER AND CITY OF LEE'S SUMMIT FOR APPROVAL. THE BUILDING PERMITS FOR THE PROJECT WILL NOT BE ISSUED UNTIL THE CITY OF LEE'S SUMMIT APPROVES THE WALL DESIGN. SEE DETAIL SHEET C8.02.



KEY MAP
NOT TO SCALE

N

0' 5' 10' 20'
SCALE IN FEET

RETAINING WALL AA									
ID #		STATION RANGE	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
L1		0+00.00 3+87.27	52716.0764 52342.4063	54704.2248 54805.9477	387.27'	S15°13'42"E			
C1	PC= PI= PT=	3+87.27 4+63.44 5+23.01	52342.4063 52268.9080 52255.7346	54805.9477 54825.9559 54900.9812	135.74'	S47°38'05"E	64°48'46"	76.17'	120.00'

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NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: GRD04_02104157.dwg
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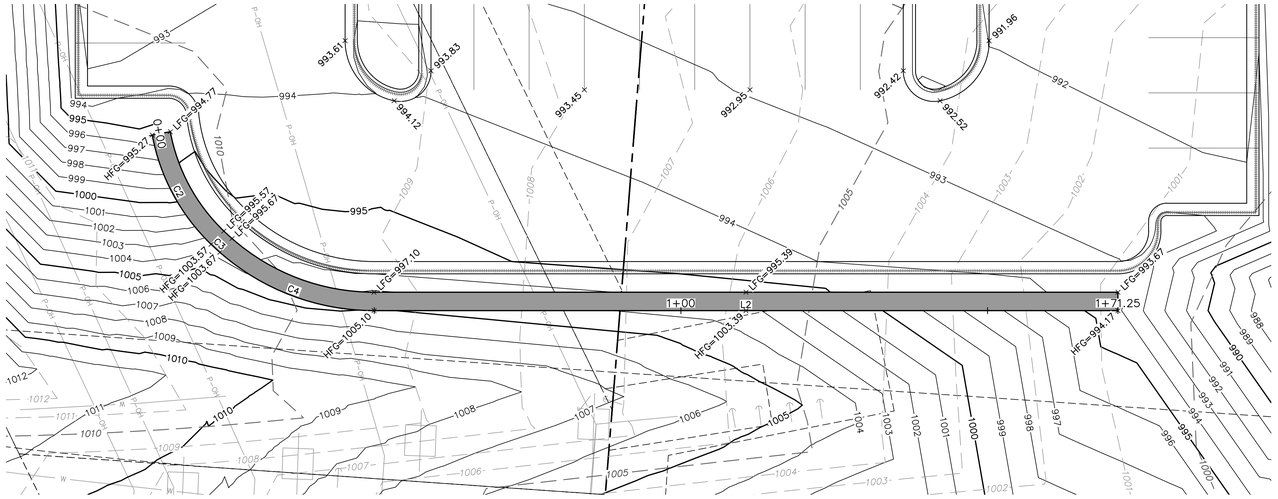
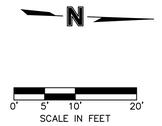


4 GRADING DETAIL 4 - RETAINING WALL BB



RETAINING WALL BB									
ID #		STATION RANGE	NORTHING	EASTING	LENGTH	LINE/CHORD BEARING	DELTA	TANGENT	RADIUS
C2	PC= PI= PT=	0+00.00 0+10.63 0+20.57	52424.8396 52427.1327 52435.0536	56034.6742 56045.0544 56052.1443	20.57'	N59°41'13"E	35°42'41"	10.63'	33.00'
C3	PC= PI= PT=	0+20.57 0+21.53 0+22.50	52435.0536 52435.7726 52436.5180	56052.1443 56052.7879 56053.4007	1.93'	N40°37'47"E	2°24'12"	0.96'	46.00'
C4	PC= PI= PT=	0+22.50 0+36.86 0+49.96	52436.5180 52447.6120 52461.9661	56053.4007 56062.5225 56062.0259	27.46'	N18°43'23"E	41°24'35"	14.36'	38.00'
L2		0+49.96 1+71.25	52461.9661 52583.1850	56062.0259 56057.8315	121.29'	N1°58'54"W			

LEGEND

- PROPERTY LINE
- SURROUNDING PROPERTY LINES
- UTILITY EASEMENT
- 950 — PROPOSED CONTOURS
- EXISTING CONTOURS
- GR,BR — GRADE BREAK LINE
- RIDGE — RIDGE LINE
- VALLEY — VALLEY LINE

SPOT ELEVATION LEGEND:

ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT ELEVATION UNLESS NOTED OTHERWISE. RE: PLAN VIEW, LEGEND AND DETAILS FOR CURB TYPE AND TO CALCULATE TOP OF CURB ELEVATION.

TC	TOP OF CURB
FG	FINISHED GRADE WITHIN GREENSPACE
TS	TOP OF STRUCTURE
FC	CURB DEPRESSED TO BE FLUSH WITH ADJACENT PAVEMENT
HP	HIGH POINT
LP	LOW POINT
ME±	MATCH EXISTING
FFE	FINISH FLOOR ELEVATION AT TOP OF SLAB
HFG	HIGH FINISHED GRADE
LFG	LOW FINISHED GRADE

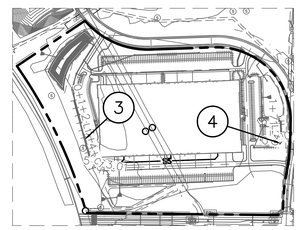
NOTES:

1. CONTRACTOR TO REMOVE AND REPLACE ALL SIDEWALK NECESSARY FOR CONNECTION TO EXISTING.
2. ALL ADA ACCESSIBLE SIDEWALK CROSS SLOPES SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.00% AND MAXIMUM LONGITUDINAL SLOPE OF 5.00%.
3. ALL ADA ACCESSIBLE PARKING AREAS SHALL NOT EXCEED 2.00% IN ANY DIRECTION.
4. CONTRACTOR TO PROVIDE FLAT A/C UNIT PADS FOR ALL A/C UNITS.
5. NO GRADES SHALL EXCEED 5:1 UNLESS OTHERWISE NOTES.
6. GRADING AND STORM SEWER IMPROVEMENTS SHALL BE STAKED, INCLUDING ALL HIGH POINTS AND KEY GRADE BREAKS.

NOTE:

1) INFORMATION FOR RETAINING WALLS AA & BB SHOWN ON THE TABLES IS IN REFERENCE TO THE BOTTOM AND FRONT BLOCK OF WALL. THE BOTTOM AND FRONT BLOCK OF THE WALL LINE IS TO BE HELD DURING STAKING AND CONSTRUCTION.

2) ALL RETAINING WALL(S) ARE DESIGN BUILD BY THE CONTRACTOR. THE CONTRACTOR MUST PROVIDE THE WALL DESIGN PLANS AND GLOBAL STABILITY TO THE ENGINEER AND CITY OF LEE'S SUMMIT FOR APPROVAL. THE BUILDING PERMITS FOR THE PROJECT WILL NOT BE ISSUED UNTIL THE CITY OF LEE'S SUMMIT APPROVES THE WALL DESIGN. SEE DETAIL SHEET C8.02.



KEY MAP
NOT TO SCALE

olsson
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Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN
NUMBER
PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

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2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.02.2022	CITY & OWNER COMMENTS	

REVISIONS

GRADING DETAIL - RETAINING WALL BB
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
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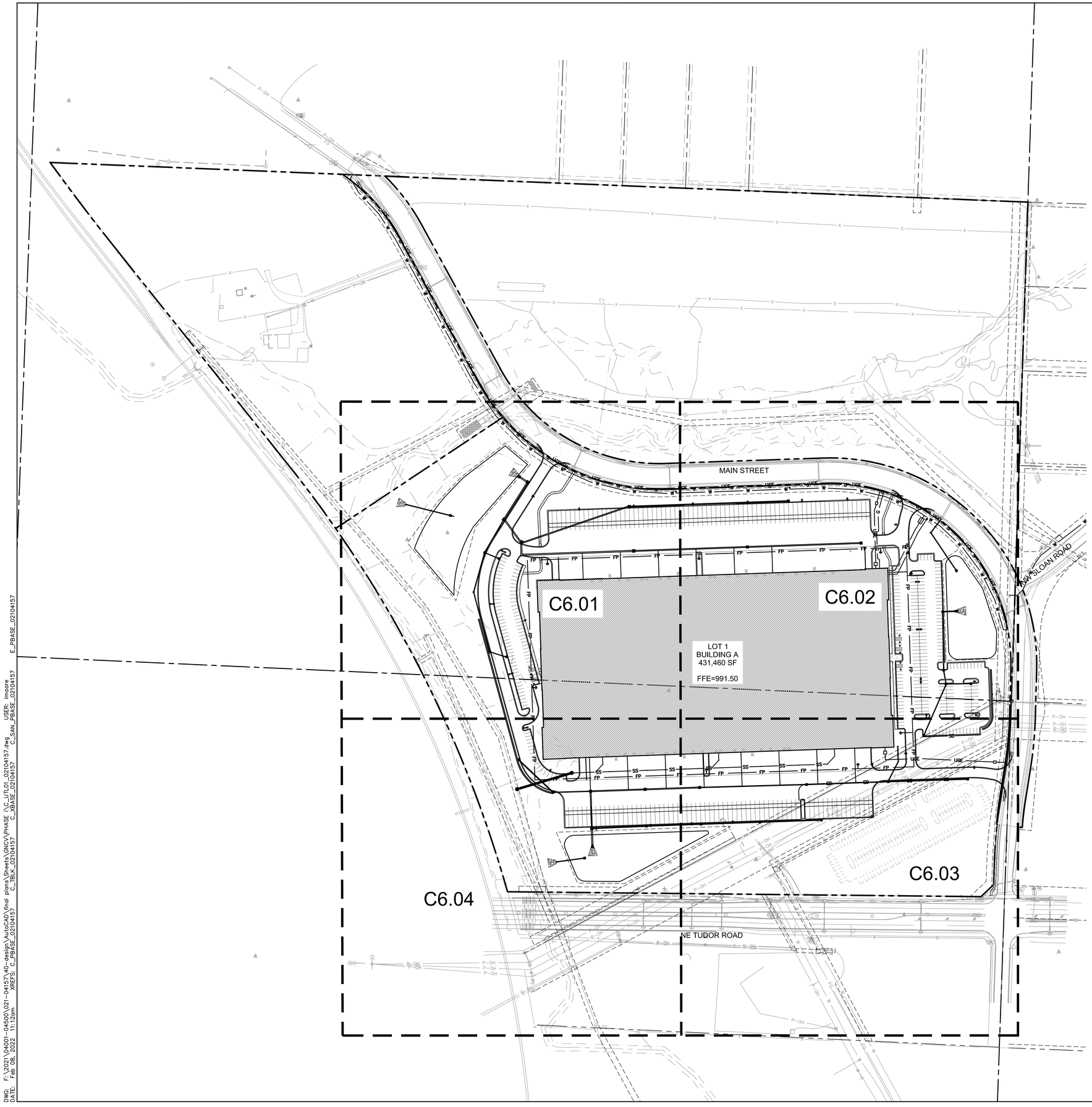

UTILITY PLAN LEGEND

- PROPERTY LINE
- EXISTING SANITARY SEWER
- EXISTING STORM
- EXISTING WATER PIPE
- EXISTING OVERHEAD POWER LINE
- EXISTING UNDERGROUND POWER LINE
- STORM SEWER
- STORM HEADER PIPE AND ROOF DRAINS
- UNDERGROUND POWER CONDUIT
- NATRUAL GAS PIPE
- CABLE TELEVISION CONDUIT
- WATER PIPE
- SANITARY SEWER SERVICE LINE
- SANITARY SEWER MAIN (PER SHEETS C6.08–C6.12)

NOTE:

1. NO GAS WELLS ARE PRESENT ON THE PROPERTY BASED ON THE "ENVIRONMENTAL IMPACT STUDY OF ABANDONED OIL AND GAS WELLS IN LEE'S SUMMIT, MISSOURI", BY EDWARD ALTON MAY, JR. DATED 1995.

0' 50' 100' 200'
SCALE IN FEET

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REVISIONS

OVERALL UTILITY PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

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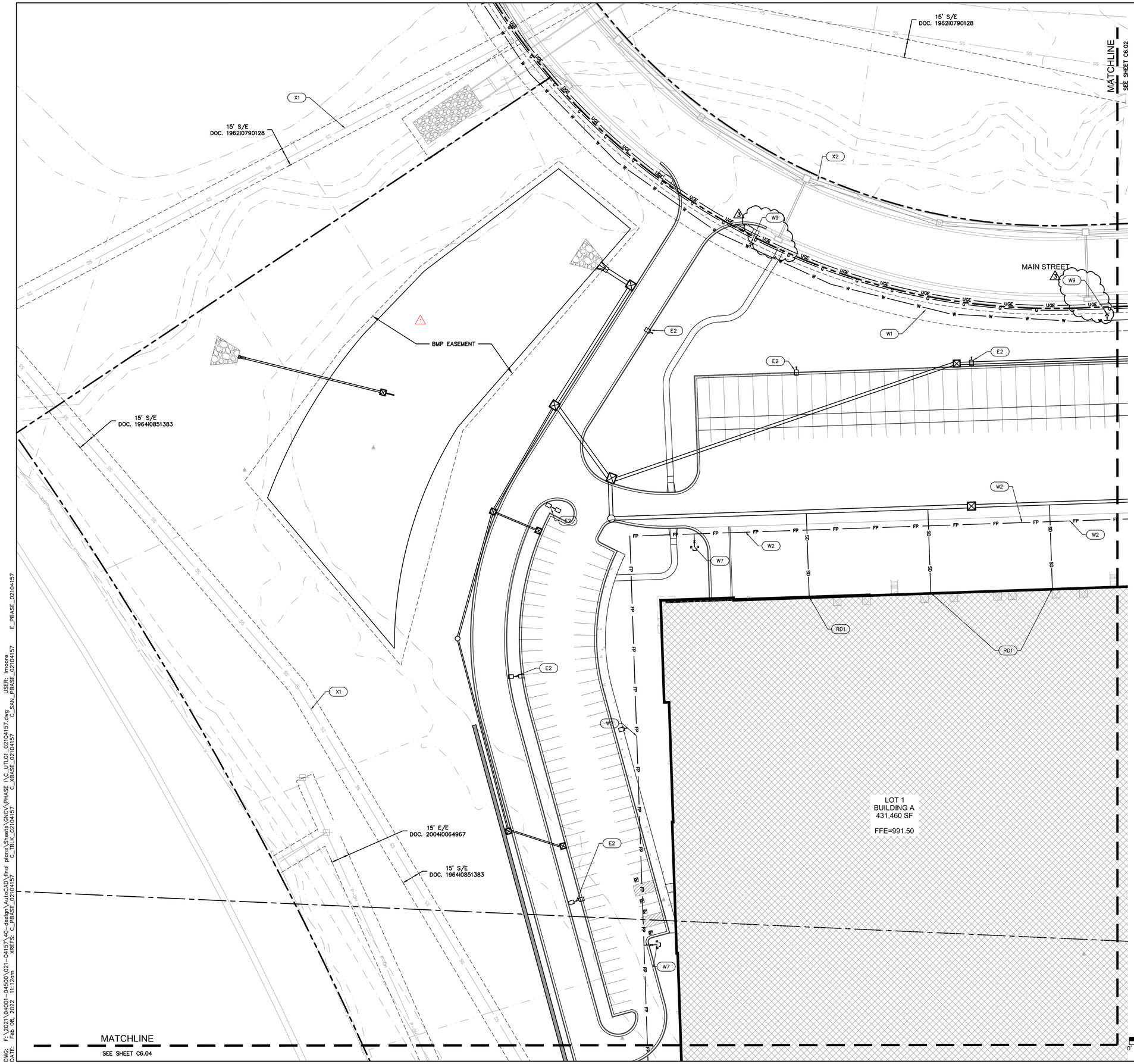

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W9 PUBLIC FIRE HYDRANTS. SEE SEPARATE PLANS.

GAS (G#)

G1 APPROXIMATE LOCATION OF PROPOSED GAS MAIN. CONTRACTOR SHALL COORDINATE WITH ENGINEER ON FINAL LOCATION OF GAS MAIN AND CONTACT ENGINEER WITH ANY CHANGES.

G2 INSTALL ±209 LF OF NEW GAS SERVICE TO PROPOSED GAS MAIN. COORDINATE WITH UTILITY COMPANY FOR EXACT LOCATION, ROUTING, AND CONNECTION.

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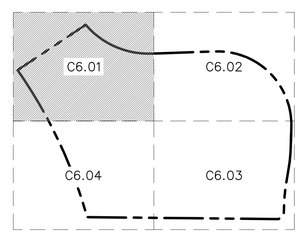

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0' 15' 30' 60'
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KEY MAP
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SCANNELL PROPERTIES

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REVISIONS

UTILITY PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

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SHEET
C6.01

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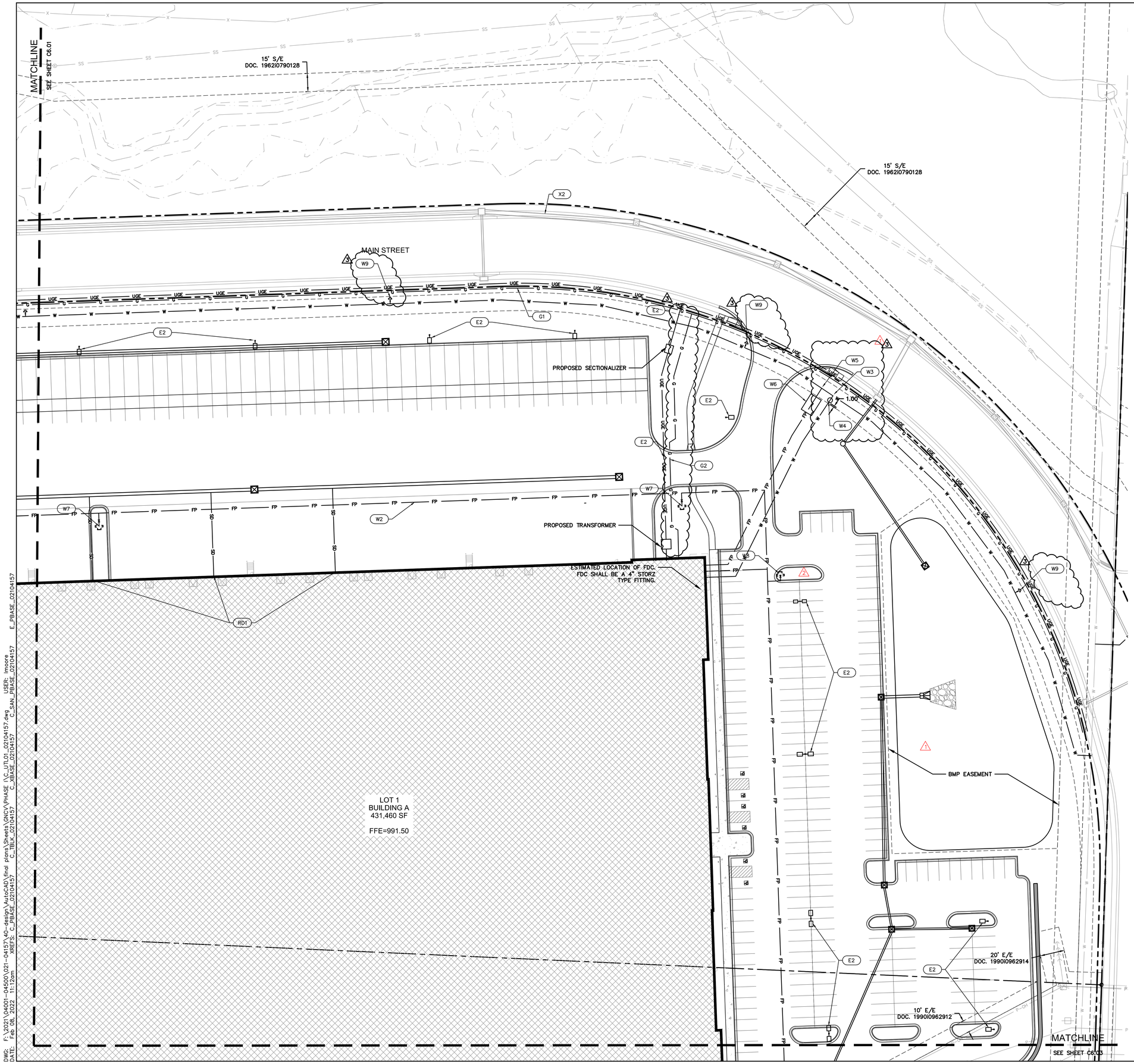

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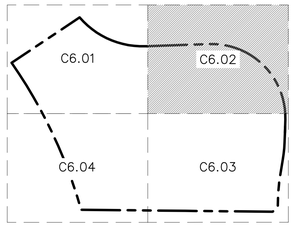

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UTILITY PLAN
PHASE I FINAL DEVELOPMENT PLAN
SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
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LOT 1
BUILDING A
431,460 SF

FFE=991.50

RD1

SS1

PROPOSED TRANSFORMERS

12" NYLOPLAST DRAIN BASINS WITH 12" HDPE PIPE

RD2

X3

E1

E2

E3

PROPOSED SECTIONALIZER

MATCHLINE
SEE SHEET C6.02

MAIN STREET

100' E/E
DOC. 196210793380

10' E/E
DOC. 199010962912

10' E/E
DOC. 200010084247

BMP EASEMENT

25' E/E
DOC. 200410064967

10' E/E
DOC. 199010962911

20' W/E
DOC. 197910364969

5' W/E
DOC. 199610058573

EXISTING FIRE HYDRANT IS TO BE RELOCATED UNLESS CITY DETERMINES OTHERWISE.

10' E/E
DOC. 200010084247

15' W/E
DOC. 199610058573

NW TUDOR ROAD

MATCHLINE
SEE SHEET C6.04

UTILITY PLAN LEGEND

- PROPERTY LINE
- SS — SS — EXISTING SANITARY SEWER
- EXISTING STORM
- W — W — EXISTING WATER PIPE
- P—OH — P—OH — EXISTING OVERHEAD POWER LINE
- P—UG — P—UG — EXISTING UNDERGROUND POWER LINE
- STORM SEWER
- SD — SD — STORM HEADER PIPE AND ROOF DRAINS
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- G — G — NATRUAL GAS PIPE
- CATV — CATV — CABLE TELEVISION CONDUIT
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- SS — SS — SANITARY SEWER SERVICE LINE
- SANITARY SEWER MAIN (PER SHEETS C6.08–C6.12)

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W9 PUBLIC FIRE HYDRANTS. SEE SEPARATE PLANS.

GAS (G#)

G1 APPROXIMATE LOCATION OF PROPOSED GAS MAIN. CONTRACTOR SHALL COORDINATE WITH ENGINEER ON FINAL LOCATION OF GAS MAIN AND CONTACT ENGINEER WITH ANY CHANGES.

G2 INSTALL ±209 LF OF NEW GAS SERVICE TO PROPOSED GAS MAIN. COORDINATE WITH UTILITY COMPANY FOR EXACT LOCATION, ROUTING, AND CONNECTION.

ELECTRIC (E#)

E1 INSTALL APPROXIMATELY 100± LF OF PRIMARY ELECTRICAL SERVICE PER EVERGY/LEE'S SUMMIT DESIGN STANDARDS AND SPECIFICATIONS. VERIFY CONDUIT SIZE AND ROUTING WITH CITY AND EVERGY. THE ALIGNMENT IS APPROXIMATE. CONTRACTOR SHALL COORDINATE ELECTRICAL SERVICE ROUTE DIRECTLY WITH CITY AND EVERGY.

E2 PROPOSED SITE LIGHTING. REFERENCE SITE LIGHTING PLANS FOR DETAILS.

E3 INSTALL APPROXIMATELY 1000± LF OF SECONDARY ELECTRICAL SERVICE PER EVERGY/LEE'S SUMMIT DESIGN STANDARDS AND SPECIFICATIONS. VERIFY CONDUIT SIZE AND ROUTING WITH CITY AND EVERGY. THE ALIGNMENT IS APPROXIMATE. CONTRACTOR SHALL COORDINATE ELECTRICAL SERVICE ROUTE DIRECTLY WITH CITY AND EVERGY.

STORM ROOF DRAINS (RD#)

RD1 INSTALL 12" HDPE FROM THE ROOF DRAIN TO STORM HEADER PIPE WITH A 1.0% MINIMUM SLOPE. MINIMUM COVER OF PIPE IS 2.5' AND SHALL COORDINATE WITH ALL OTHER IMPROVEMENTS. INCLUDE BENDS, FITTINGS, AND OTHER PARTS FOR INSTALLATION. SEE MEP PLANS FOR ROOF DRAIN LOCATIONS AND DETAILS.

RD2 INSTALL BACK OF CURB PERFORATED PIPE WITH SOCK AND TIE INTO CLOSEST PRIVATE STORM SEWER.

SANITARY SEWER SERVICE (SS#)

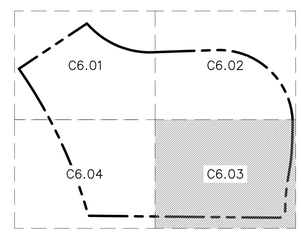
SS1 SANITARY SEWER SERVICE LINES. REFERENCE SHEETS C6.05 –C6.07 FOR INFORMATION ON SANITARY SEWER SERVICE LINES.

SS2 PRIVATE SANITARY SEWER MAIN EXTENSION. REFERENCE SHEETs C6.08 –C6.12 PRIVATE SANITARY SEWER SHEETS FOR MORE INFORMATION.

EXISTING UTILITIES (X#)

X1 EXISTING SANITARY SEWER MAIN
X2 EXISTING STORM SEWER
X3 EXISTING WATER MAIN

NOTE:
FDC SHALL BE LOCATED WITH 100' OF FIRE HYDRANT.



KEY MAP
NOT TO SCALE

N

0' 15' 30' 60'
SCALE IN FEET

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLEAK
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	05.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

UTILITY PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_UTL01_02104157.dwg
date:

SHEET
C6.03

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_UTL01_02104157.dwg USER: lmoore
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MATCHLINE
SEE SHEET C6.01

15' S/E
DOC. 1964I0851383

15' E/E
DOC. 2004I0064967

X1

LOT 1
BUILDING A
431,460 SF

FFE=991.50

RD1

SS1

SS2

E2

15' S/E
DOC. 1964I0851383

BMP EASEMENT

10' E/E
DOC. 1990I0962911

25' E/E
DOC. 2004I0064967

15' E/E
DOC. 2014e0071853

100' E/E
DOC. 1962I0793380

15' D/E
DOC. 2013e0075033

NW TUDOR ROAD

EXISTING TRANSMISSION LINE!!!!
DO NOT REMOVE!!!!!
COORDINATE WITH CITY AND ELECTRIC
COMPANY DURING CONSTRUCTION!!!!

MATCHLINE
SEE SHEET C6.03

UTILITY PLAN LEGEND

- PROPERTY LINE
- EXISTING SANITARY SEWER
- EXISTING STORM
- EXISTING WATER PIPE
- EXISTING OVERHEAD POWER LINE
- EXISTING UNDERGROUND POWER LINE
- STORM SEWER
- STORM HEADER PIPE AND ROOF DRAINS
- UNDERGROUND POWER CONDUIT
- NATRUAL GAS PIPE
- CABLE TELEVISION CONDUIT
- WATER PIPE
- SANITARY SEWER SERVICE LINE
- SANITARY SEWER MAIN (PER SHEETS C6.08–C6.12)

KEYNOTES

WATER (W#)

W1 APPROXIMATE LOCATION OF PROPOSED 12" PUBLIC WATERMAIN. CONTRACTOR SHALL COORDINATE WITH CITY ON FINAL LOCATION.

W2 APPROXIMATE LOCATION OF PROPOSED 10" PRIVATE PRESSURIZED FIRE PROTECTION LOOP. INSTALL 3,200 LF ± 10" C900 DR 14. CONTRACTOR SHALL COORDINATE WITH CITY ON FINAL LOCATION.

W3 DOMESTIC WATER SERVICE TAP. CONNECTION REQUIREMENTS TO BE DETERMINED. CONTRACTOR SHALL COORDINATE WITH CITY ON CONNECTION.

W4 INSTALL WATER METER PER CITY WATER STANDARDS AND SPECIFICATIONS.

W5 CONNECT TO MAIN 12"x 12" TEE, AND INSTALL 250± LF OF 12" C900 DR 14 FOR FIRE PROTECTION WATER SERVICE. CONTRACTOR SHALL COORDINATE WITH CITY ON CONNECTION.

W6 INSTALL DOUBLE CHECK VALVE ASSEMBLY IN VAULT TO MEET CITY WATER STANDARDS AND SPECIFICATIONS. TAMPER SWITCHES AND THEIR ASSOCIATED WIRING WILL BE PROVIDED FOR THE SHUT-OFF VALUES IN THE VAULT. COORDINATE INSTALL AND BACKFLOW PREVENTION WITH CITY WATER AND MEP PLANS.

W7 APPROXIMATE LOCATION OF PROPOSED YARD FIRE HYDRANT BY CONTRACTOR. YARD HYDRANTS SHALL MATCH CITY STANDARD AND DETAILS. SHALL BE PAINTED RED.

W8 APPROXIMATE LOCATION OF PROPOSED PRIVATE FIRE HYDRANT BY CONTRACTOR. PRIVATE HYDRANTS SHALL MATCH CITY STANDARD AND DETAILS. SHALL BE PAINTED YELLOW WITH A SILVER TOP.

W9 PUBLIC FIRE HYDRANTS. SEE SEPARATE PLANS.

GAS (G#)

G1 APPROXIMATE LOCATION OF PROPOSED GAS MAIN. CONTRACTOR SHALL COORDINATE WITH ENGINEER ON FINAL LOCATION OF GAS MAIN AND CONTACT ENGINEER WITH ANY CHANGES.

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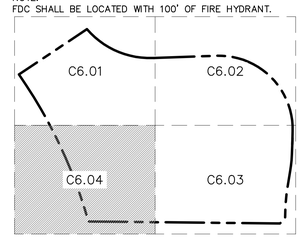
SS2 PRIVATE SANITARY SEWER MAIN EXTENSION. REFERENCE SHEETs C6.08 –C6.12 PRIVATE SANITARY SEWER SHEETS FOR MORE INFORMATION.

EXISTING UTILITIES (X#)

X1 EXISTING SANITARY SEWER MAIN
X2 EXISTING STORM SEWER
X3 EXISTING WATER MAIN

NOTE:
FDC SHALL BE LOCATED WITH 100' OF FIRE HYDRANT.



KEY MAP
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0' 15' 30' 60'
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SCANNELL PROPERTIES

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MITCHELL ALAN PLAN
NUMBER PE-2009016764
01-5-22
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REVISIONS

UTILITY PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
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project no.: 021-04157
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SHEET
C6.04

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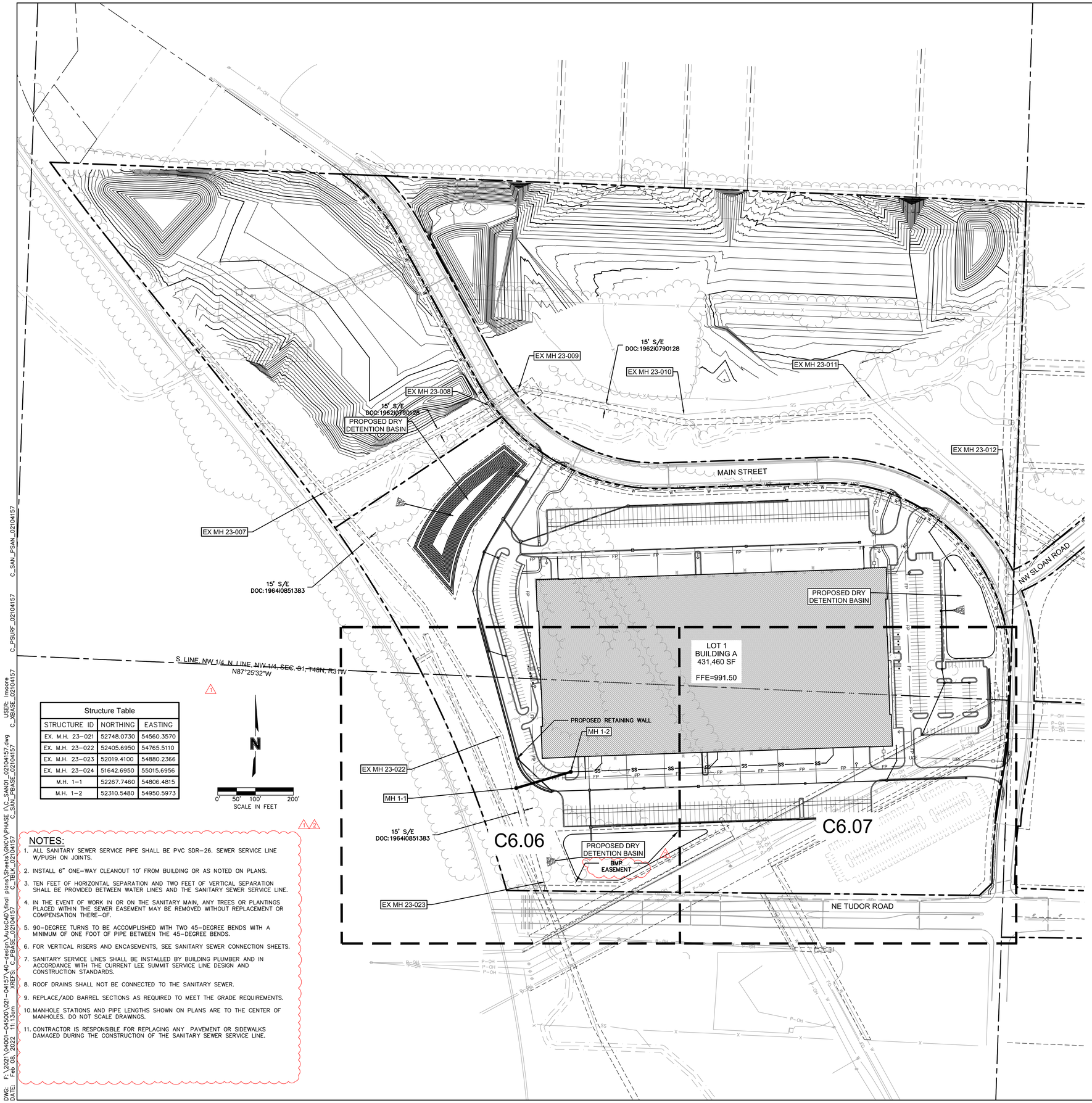


Structure Table		
STRUCTURE ID	NORTHING	EASTING
EX. M.H. 23-021	52748.0730	54560.3570
EX. M.H. 23-022	52405.6950	54765.5110
EX. M.H. 23-023	52019.4100	54880.2366
EX. M.H. 23-024	51642.6950	55015.6956
M.H. 1-1	52267.7460	54806.4815
M.H. 1-2	52310.5480	54950.5973

NOTES:

1. ALL SANITARY SEWER SERVICE PIPE SHALL BE PVC SDR-26. SEWER SERVICE LINE W/PUSH ON JOINTS.
2. INSTALL 6" ONE-WAY CLEANOUT 10' FROM BUILDING OR AS NOTED ON PLANS.
3. TEN FEET OF HORIZONTAL SEPARATION AND TWO FEET OF VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN WATER LINES AND THE SANITARY SEWER SERVICE LINE.
4. IN THE EVENT OF WORK IN OR ON THE SANITARY MAIN, ANY TREES OR PLANTINGS PLACED WITHIN THE SEWER EASEMENT MAY BE REMOVED WITHOUT REPLACEMENT OR COMPENSATION THERE-OF.
5. 90-DEGREE TURNS TO BE ACCOMPLISHED WITH TWO 45-DEGREE BENDS WITH A MINIMUM OF ONE FOOT OF PIPE BETWEEN THE 45-DEGREE BENDS.
6. FOR VERTICAL RISERS AND ENCASEMENTS, SEE SANITARY SEWER CONNECTION SHEETS.
7. SANITARY SERVICE LINES SHALL BE INSTALLED BY BUILDING PLUMBER AND IN ACCORDANCE WITH THE CURRENT LEE SUMMIT SERVICE LINE DESIGN AND CONSTRUCTION STANDARDS.
8. ROOF DRAINS SHALL NOT BE CONNECTED TO THE SANITARY SEWER.
9. REPLACE/ADD BARREL SECTIONS AS REQUIRED TO MEET THE GRADE REQUIREMENTS.
10. MANHOLE STATIONS AND PIPE LENGTHS SHOWN ON PLANS ARE TO THE CENTER OF MANHOLES. DO NOT SCALE DRAWINGS.
11. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PAVEMENT OR SIDEWALKS DAMAGED DURING THE CONSTRUCTION OF THE SANITARY SEWER SERVICE LINE.

SANITARY SEWER PLAN LEGEND

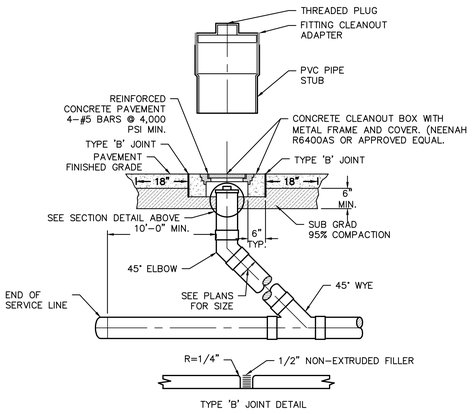
- PROPERTY LINE
- EXISTING SANITARY SEWER
- EXISTING STORM
- EXISTING WATER PIPE
- EXISTING OVERHEAD POWER LINE
- EXISTING UNDERGROUND POWER LINE
- STORM SEWER
- STORM HEADER PIPE AND ROOF DRAINS
- UNDERGROUND POWER CONDUIT
- NATRUAL GAS PIPE
- FIRE PROTECTION
- WATER PIPE
- UTILITY EASEMENT
- PROPOSED PRIVATE SANITARY SEWER (SEE SHEETS C6.08 & C6.09)
- PROPOSED SANITARY SEWER SERVICE LINE

EASEMENT/SETBACK LEGEND

D/E STORM DRAINAGE EASEMENT
S/B PROPERTY SETBACK
S/E SANITARY SEWER EASEMENT
U/E UTILITY EASEMENT
E/E ELECTRIC EASEMENT

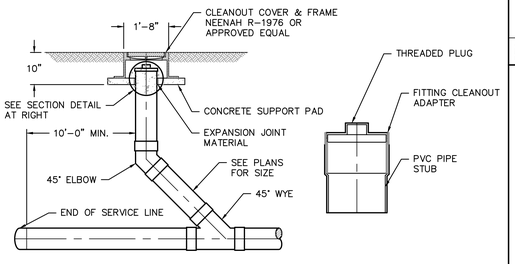
NOTE

FUTURE IMPROVEMENTS ARE SHOWN FOR REFERENCE ONLY.



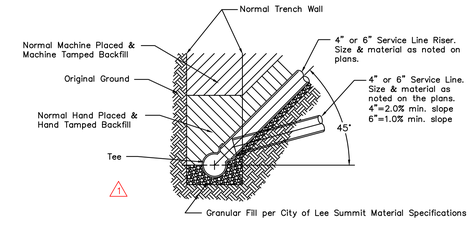
HEAVY DUTY ONE-WAY CLEANOUT (IN PAVEMENT) DETAIL

NOT TO SCALE



ONE-WAY WYE CLEANOUT (NOT IN PAVEMENT) DETAIL

NOT TO SCALE



TEE ORIENTATION AND RISER DETAIL

NOT TO SCALE

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Overland Park, KS 66213-4750
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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAKE
NUMBER PE-2009018764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
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REVISIONS

OVERALL SANITARY SEWER PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
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project no.: 021-04157
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SHEET
C6.05

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_SAN01_02104157.dwg
DATE: Feb 08, 2022 11:13am
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USER: lmoore

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE PLANS IN THEIR POSSESSION ARE THE MOST CURRENT VERSION ISSUED, ARE FULLY COORDINATED WITH ALL SUBCONTRACTORS, AND PRESENT ON SITE AT ALL TIMES. CURRENT PLANS PREPARED BY OLSSON MAY BE OBTAINED AT THE DIRECTION OF OLSSON'S CLIENT. DIRECT REQUESTS TO OLSSON MAY REQUIRE ADDITIONAL AUTHORIZATIONS, AGREEMENTS, AND/OR FEES. PLEASE CONTACT THE ENGINEER FOR INFORMATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS WRITTEN APPROVAL FROM ENGINEER, OWNER, AND DEVELOPER.
3. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
4. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING QUANTITIES AND ITEMS OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE WORK SHOWN IN THE PLANS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, PAYING ALL FEES, AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
7. THE CONTRACTOR SHALL NOT ENGAGE IN ACTIVITIES THAT MAY ENCROACH ON WATERS OF THE U.S., INCLUDING WETLANDS, UNTIL ANY NECESSARY PERMITS MAY BE OBTAINED. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL CONDITIONS DESCRIBED IN THE PERMIT.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, THE SAFETY OF ALL PERSONS INCLUDING VISITORS AND THE GENERAL PUBLIC, AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY THROUGHOUT THE PROJECT AND NOT BE LIMITED BY WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
9. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ALL UTILITY COMPANIES AND OBTAIN ANY RELEVANT INFORMATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE DURING CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REPAIRING ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES.
12. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER TO PERFORM A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.

REFERENCES

1. UNLESS EXPLICITLY DESCRIBED OTHERWISE WITHIN THESE PLANS THE FOLLOWING SHALL APPLY;
   A. ALL CONSTRUCTION, INCLUDING THOSE LISTED BELOW, SHALL CONFORM TO THE LATEST CODES AND ORDINANCES OF LEE'S SUMMIT, MISSOURI.
   B. ALL CONSTRUCTION IN MODOT RIGHT-OF-WAY SHALL CONFORM TO THE LATEST SPECIFICATIONS ADOPTED BY U.S. DEPARTMENT OF TRANSPORTATION AND MODOT.
   C. ALL TRAFFIC CONTROL SIGNAGE SHALL CONFORM WITH THE CURRENT EDITION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
   D. ALL UTILITY EXTENSIONS AND CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE UTILITY COMPANIES.
   E. ALL EXTERIOR PAVEMENT (PCC, ASPHALT, ETC.) SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS OF LEE'S SUMMIT, MISSOURI
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE DELIVERY MANAGER AND COORDINATING ANY MAILBOXES THAT MAY BE DISTURBED. FAILURE TO DO SO MAY SUBJECT THE CONTRACTOR TO PROSECUTION BY THE FEDERAL GOVERNMENT.

EXISTING CONDITIONS

1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE PROJECT AREA.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THEIR OWN INVESTIGATIONS AND MAKING THEIR OWN ASSUMPTIONS REGARDING SITE SURFACE AND SUBSURFACE CONDITIONS. THIS INCLUDES THE LOCATION AND CONSISTENCY OF ANY EXISTING ROCK LAYERS UNDERLYING THE PROJECT SITE. CONTACT THE ENGINEER REGARDING ANY DISCREPANCIES THAT MAY AFFECT THE ABILITY TO CONSTRUCT FROM THESE PLANS AS DESIGNED.
3. EXISTING CONDITIONS WERE DETERMINED THROUGH A VARIETY OF METHODS THAT MAY INCLUDE SURVEY, AERIAL IMAGERY, AVAILABLE RECORDS, GIS DATA, ETC. SUBSURFACE CONDITIONS ARE APPROXIMATE AND MAY NOT INCLUDE ALL UTILITIES AND OTHER SITE IMPROVEMENTS PRESENT ON SITE. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS WHEN CONFLICTS AND DISCREPANCIES ARE FOUND.

CONSTRUCTION

1. THE CONTRACTOR SHALL INSTALL TRAFFIC CONTROL WHILE WORKING IN THE PUBLIC RIGHT-OF-WAY AS SHOWN IN THESE PLANS. IF PLANS ARE NOT PROVIDED, CONTRACTOR SHALL COORDINATE AND PROVIDE CONTROLS TO THE SATISFACTION OF THE RIGHT-OF-WAY OWNER.
2. THE CONTRACTOR SHALL PROTECT ALL TREES OVER 3" CALIPER FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE ON THESE PLANS.
3. THE CONTRACTOR SHALL DISPOSE ALL WASTE MATERIAL RESULTING FROM THE PROJECT OFF-SITE AND IN STRICT CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES.
4. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS ARE TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED. NOT ALL ADJUSTMENTS ARE INDICATED IN THE PLANS.
5. THE CONTRACTOR SHALL STREET SWEEP OR OTHERWISE CLEAN ALL ACCESS ROUTES TO THE SITE AT CONCLUSION OF THE PROJECT.

SHOP DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING A MINIMUM OF 7 DAYS PRIOR TO THE REQUESTED DATE OF APPROVAL. ENGINEER SHALL REVIEW SHOP DRAWINGS OR SAMPLES CONFORMANCE WITH THE DESIGN FOR THIS PROJECT AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS. THE ENGINEER'S REVIEW SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS NOTIFIED ENGINEER OF EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND OBTAINED ENGINEER'S WRITTEN APPROVAL OF EACH SUCH VARIATION. PRIOR TO SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE REVIEWED AND VERIFIED:
   A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;
   B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;
   C. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;
   D. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.
   E. ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY COMPLETED THE ABOVE TASKS.
2. SHOP DRAWINGS AS DESCRIBED ABOVE ARE REQUIRED FOR, BUT NOT LIMITED TO, THE FOLLOWING:
   A. ALL SANITARY SEWER STRUCTURES TO BE INSTALLED WITH THIS PROJECT.
   B. ANY ITEMS IN THESE PLANS THAT ALLOW FOR AN "APPROVED EQUAL" ALTERNATIVE.

SANITARY SEWER GENERAL NOTES

1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH CITY OF LEE'S SUMMIT, MISSOURI.
2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. ALL STRUCTURE DIMENSIONS ARE TO INSIDE FACE OF STRUCTURE.
5. COORDINATES ARE PROVIDED AT THE CENTER OF STRUCTURE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING THE LID DURING INSTALLATION.
6. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF SANITARY SEWER.
7. SANITARY SEWER TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
8. MANHOLE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO ½ THE ADJACENT PIPE SECTION (INVERT TO CENTER). CHANGES IN DIRECTION OF FLOW SHALL BE MADE WITH A SMOOTH CURVE AND MAINTAIN SHAPE THROUGHOUT. CHANGES IN GRADE OF ADJACENT PIPES SHALL BE TRANSITIONED SMOOTHLY AND EVENLY THROUGH THE MANHOLE.
9. PIPE PENETRATIONS SHALL USE GASKETS TO ENSURE WATERTIGHT SEALS.
10. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.
11. SEWER LINE INSPECTIONS AND TESTING MUST BE SCHEDULED A MINIMUM OF TWO FULL BUSINESS DAYS IN ADVANCE. CONTRACTOR SHALL FURNISH ALL TESTING EQUIPMENT. TESTING SHALL INCLUDE
    A. MANDREL TEST OF ALL GRAVITY SEWERS. IF THE MANDREL TEST FAILS ON ANY SECTION OF PIPE, THAT SECTION SHALL BE UNCOVERED AND REPLACED.
    B. AIR PRESSURE TEST OF ALL GRAVITY SEWERS.
    C. VACUUM TEST OF ALL MANHOLES.
12. REFER TO SHEET SS3.02 FOR SANITARY DESIGN & SEWER LATERAL INFORMATION.
13. ALL SERVICE LINE CONNECTIONS SHALL BE MADE WITH AN 8"X8" PVC WYE, 8"PVC 45° BEND, AND THE APPROPRIATE LENGTH OF 8" PVC LATERAL (UNLESS OTHERWISE SHOWN) AND CAP. SEE DETAIL SHEET SS4.00.
14. MSFE= INDICATES LOWEST FLOOR SERVICEABLE BY PROPOSED SANITARY SEWER.
15. MAXIMUM DEVIATION FROM LATERAL STATION LOCATIONS AS CALLED OUT SHALL BE 2.0' TO AVOID PIPE JOINT.
16. SANITARY LATERALS ARE DESIGNED @ 2.00% SLOPE. IF RISER IS INDICATED, IT IS TO BE AT THE SANITARY MAIN, UNLESS OTHERWISE NOTED.
17. REFER TO CURRENT CITY SPECIFICATIONS FOR MINIMUM PIPE SLOPES.
18. CONTRACTOR MAY BE REQUIRED TO RECONSTRUCT PIPE AND STRUCTURE IF MINIMUM INVERT DROP OR PIPE SLOPE REQUIREMENTS ARE NOT MET.
19. SANITARY STRUCTURES SHALL BE PER CURRENT CITY DETAILS. IF CITY DOES NOT HAVE PUBLISHED DETAILS STRUCTURES SHALL BE PER CURRENT APWA SPECIFICATIONS.
20. GRAVITY SANITARY SEWER AND WATER LINES SHALL BE SEPARATED BY A MINIMUM OF 10' HORIZONTALLY WHEN PARALLEL AND 2' VERTICALLY WHEN CROSSING. WATER LINES SHALL CROSS ABOVE SANITARY SEWERS.

ESTIMATE OF QUANTITIES					
ITEM NO.	DESCRIPTION	QUANTITIY	UNIT	AS-BUILT QUANTITY	UNIT
1	CONNECT TO EXISTING SANITARY SEWER	1	EA.		EA.
2	10" PVC SDR-26 PIPE (MAIN LINE)	150.34	L.F.		L.F.
3	STANDARD 4'-0" I.D. MANHOLE (8' DEEP)	2	EA.		EA.

SUMMARY OF QUANTITIES AS INDICATED ABOVE AND ANY QUANTITIES AS SHOWN WITHIN THE PLANS HAVE BEEN PROVIDED FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR USE IN PREPARATION OF CONTRACT DOCUMENTS. QUANTITIES INTENDED FOR, BUT NOT LIMITED TO, THE PREPARATION OF PROPOSALS AND BID DOCUMENTS SHALL BE INDEPENDENTLY EVALUATED BY THE ESTIMATING PARTY BASED UPON THE CONTENTS OF THESE PLANS.

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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN
NUMBER
PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #1 AND OWNER CHANGES	
3	02.03.2022	CITY & UTILITIES COMMENTS	

REVISIONS

SANITARY GENERAL NOTES
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no: C_SAN02_GNL_02104157
date:

SHEET
C6.05A

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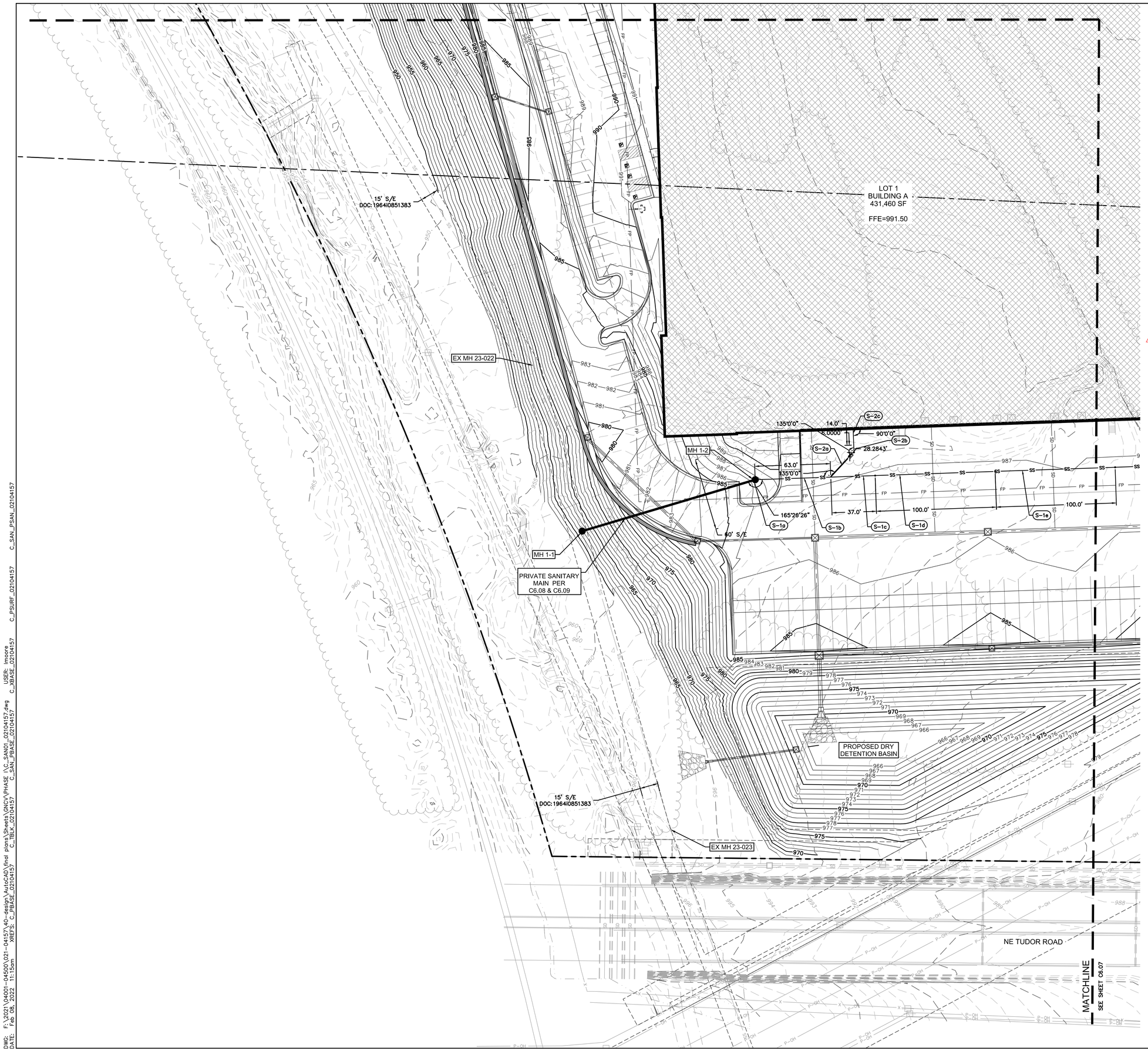

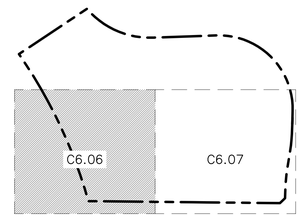

KEY MAP

NOT TO SCALE

SANITARY SEWER PLAN LEGEND

- PROPERTY LINE
- EXISTING SANITARY SEWER
- EXISTING STORM
- EXISTING WATER PIPE
- EXISTING OVERHEAD POWER LINE
- EXISTING UNDERGROUND POWER LINE
- STORM SEWER
- STORM HEADER PIPE AND ROOF DRAINS
- UNDERGROUND POWER CONDUIT
- NATRUAL GAS PIPE
- FIRE PROTECTION
- WATER PIPE
- UTILITY EASEMENT
- PROPOSED PRIVATE SANITARY SEWER (SEE SHEETS C6.08 & C6.09)
- PROPOSED SANITARY SEWER SERVICE LINE

NOTE

FUTURE IMPROVEMENTS ARE SHOWN FOR REFERENCE ONLY.

KEYNOTES

SANITARY SEWER (S-#)

1 – BUILDING A CONNECTION (CONTINUED ON NEXT SHEET)

a. PROPOSED MANHOLE. REFERENCE SHEETS C6.08 AND C6.09 FOR DETAILS.
INV. EL (OUT) @ MANHOLE (10" PVC)= 972.75
INV. EL (IN) @ MANHOLE (8" PVC)= 972.95

b. CONNECT TO MANHOLE AND INSTALL 63.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25%. THEN INSTALL WYE CONNECTION.
INV. EL @ WYE= 973.74
INV. EL @ STUB= 974.41

c. CONNECT TO WYE CONNECTION AND INSTALL 37.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25%. THEN INSTALL CLEANOUT IN PAVEMENT. REFERENCE CLEANOUT DETAIL PER SHEET C6.05.
INV. EL @ CLEANOUT=974.20

d. CONNECT TO CLEANOUT AND INSTALL 100.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25%. THEN INSTALL CLEANOUT IN PAVEMENT. REFERENCE CLEANOUT DETAIL PER SHEET C6.05.
INV. EL @ BUILDING=975.45

e. CONNECT TO CLEANOUT AND INSTALL 100.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25%. THEN INSTALL CLEANOUT IN PAVEMENT. REFERENCE CLEANOUT DETAIL PER SHEET C6.05.
INV. EL @ BUILDING=976.70

2 – BUILDING A CONNECTION

a. CONNECT TO WYE CONNECTION AND INSTALL 28.3 L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 2.00%. THEN INSTALL 45° BEND.
INV. EL @ 45° BEND= 974.98

b. CONNECT TO 45° BEND AND INSTALL CLEANOUT IN PAVEMENT. THEN CONNECT TO CLEANOUT AND INSTALL 8.49 FEET OF 8" PVC SDR-26 VERTICAL RISER (6.00 FT OF RISE). REFERENCE CLEANOUT AND RISER DETAILS PER SHEET C6.05.
INV @ 45° BEND= 974.98
INV @ END OF RISER= 980.98

c. CONNECT TO END OF RISER AND INSTALL 14.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 7.32%. THEN INSTALL REDUCER AS NEEDED AND CONNECT TO BUILDING WITH FERNCO STRONGBACK RC COUPLING FOR DISSIMILAR PIPE CONNECTION.
FG @ BUILDING=987.50
INV. EL @ BUILDING=982.00

0' 15' 30' 60'
SCALE IN FEET

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MITCHELL ALAN PLAH
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01-5-22
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2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	01.10.2022	CITY & ENGR COMMENTS	

REVISIONS

SANITARY SEWER CONNECTION PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing ID: C_SAN01_02104157.dwg
date:

SHEET
C6.06

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LOT 1
BUILDING A
431,460 SF

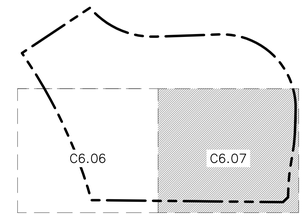
FFE=991.50

PROPOSED DRY DETENTION BASIN

MAIN STREET

NE TUDOR ROAD

MATCHLINE SEE SHEET C6.06



KEY MAP
NOT TO SCALE

SANITARY SEWER PLAN LEGEND

- PROPERTY LINE
- EXISTING SANITARY SEWER
- EXISTING STORM
- EXISTING WATER PIPE
- EXISTING OVERHEAD POWER LINE
- EXISTING UNDERGROUND POWER LINE
- STORM SEWER
- STORM HEADER PIPE AND ROOF DRAINS
- UNDERGROUND POWER CONDUIT
- NATRUAL GAS PIPE
- FIRE PROTECTION
- WATER PIPE
- UTILITY EASEMENT
- PROPOSED PRIVATE SANITARY SEWER (SEE SHEETS C6.08 & C6.09)
- PROPOSED SANITARY SEWER SERVICE LINE

NOTE

FUTURE IMPROVEMENTS ARE SHOWN FOR REFERENCE ONLY.

KEYNOTES

SANITARY SEWER (S-#)

1 – BUILDING A CONNECTION (CONTINUED FROM PREVIOUS SHEET)

f. CONNECT TO CLEANOUT AND INSTALL 69.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25% THEN INSTALL WYE CONNECTION.
INV. EL @ WYE= 977.57
INV. EL @ STUB= 978.24

g. CONNECT TO WYE CONNECTION AND INSTALL 31.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25% THEN INSTALL CLEANOUT IN PAVEMENT. REFERENCE CLEANOUT DETAIL PER SHEET C6.05.
INV. EL @ CLEANOUT= 977.95

h. CONNECT TO CLEANOUT AND INSTALL 100.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25% THEN INSTALL CLEANOUT IN PAVEMENT. REFERENCE CLEANOUT DETAIL PER SHEET C6.05.
INV. EL @ CLEANOUT= 979.21

i. CONNECT TO CLEANOUT AND INSTALL 100.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25% THEN INSTALL CLEANOUT IN GREENSPACE. REFERENCE CLEANOUT DETAIL PER SHEET C6.05.
INV. EL @ CLEANOUT= 980.46

j. CONNECT TO CLEANOUT AND INSTALL 75.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25% THEN INSTALL 45° BEND AND CLEANOUT IN GREENSPACE. REFERENCE CLEANOUT DETAIL PER SHEET C6.05.
INV. EL @ 45° BEND= 981.40

k. CONNECT TO 45° BEND AND INSTALL 28.3± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS AT 1.25% THEN INSTALL 45° BEND.
INV. EL @ 45° BEND= 981.75

l. CONNECT TO 45° BEND AND INSTALL 20.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 1.25% THEN INSTALL REDUCER AS NEEDED AND CONNECT TO BUILDING WITH FERNCO STRONGBACK RC COUPLING FOR DISSIMILAR PIPE CONNECTION.
FG @ BUILDING=989.00
INV. EL @ BUILDING=982.00

3 – BUILDING A CONNECTION

a. CONNECT TO WYE CONNECTION AND INSTALL 28.3 L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 2.00% THEN INSTALL 45° BEND.
INV. EL @ 45° BEND= 978.81

b. CONNECT TO 45° BEND AND INSTALL CLEANOUT IN PAVEMENT. THEN CONNECT TO CLEANOUT AND INSTALL 2.83 FEET OF 8" PVC SDR-26 VERTICAL RISER (2.00 FT OF RISE). REFERENCE RISER AND CLEANOUT DETAILS PER SHEET C6.05.
INV @ 45° BEND= 978.81
INV @ END OF RISER= 980.81

c. CONNECT TO END OF RISER AND INSTALL 18.0± L.F. OF 8" PVC SDR-26 W/ PUSH ON JOINTS @ 6.64% THEN INSTALL REDUCER AS NEEDED AND CONNECT TO BUILDING WITH FERNCO STRONGBACK RC COUPLING FOR DISSIMILAR PIPE CONNECTION.
FG @ BUILDING=987.50
INV. EL @ BUILDING=982.00

N

0' 15' 30' 60'
SCALE IN FEET

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STATE OF MISSOURI
MITCHELL ALAN PLAH
NUMBER PE-2009016764
12-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS W/ AND OWNER CHANGES	
3	05.03.2022	CITY & UTILITIES COMMENTS	

REVISIONS

SANITARY SEWER CONNECTION PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing ID: SAN01_02104157.dwg
date:

SHEET
C6.07

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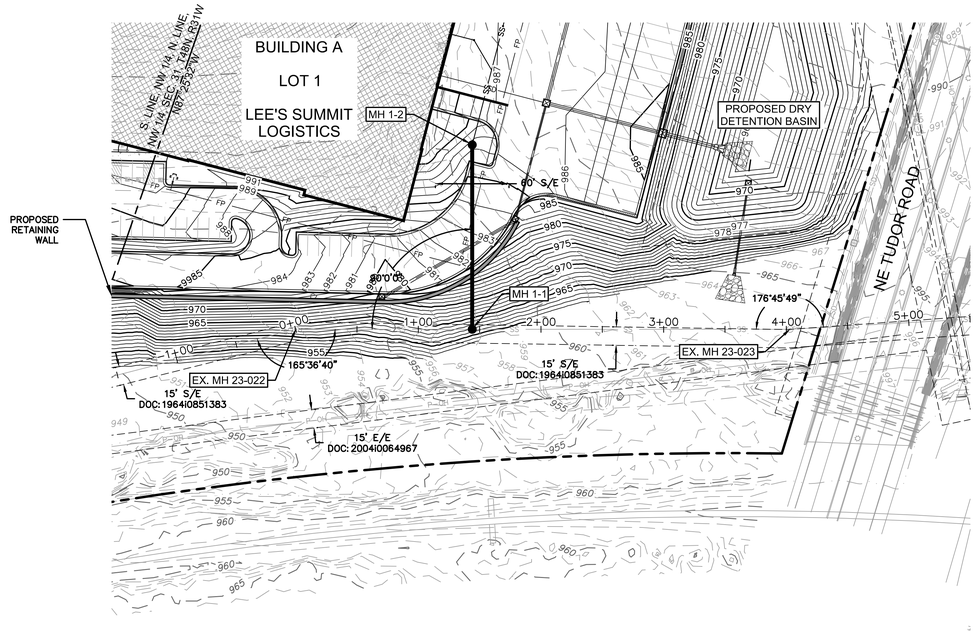

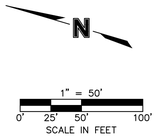

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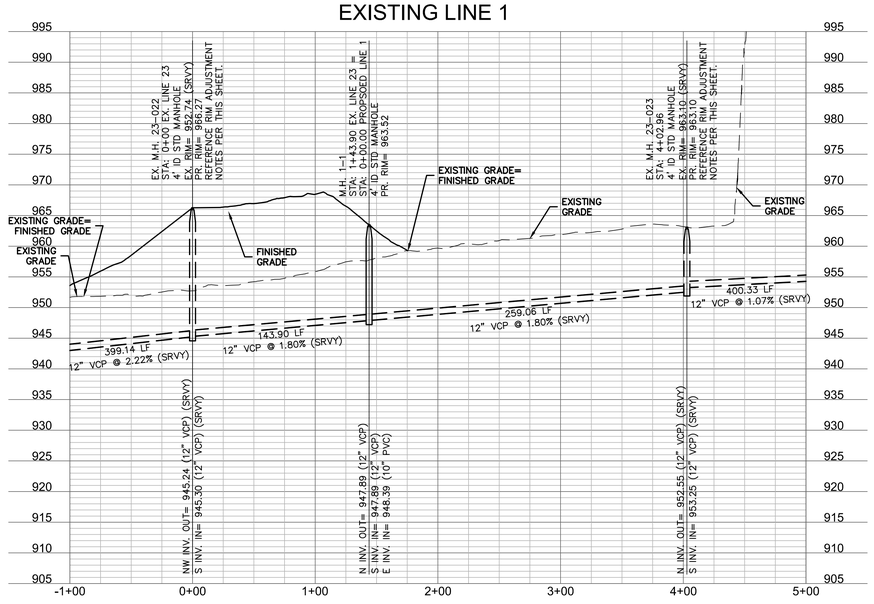

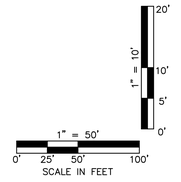

LEGEND

- PROPERTY LINE
- 830 EXISTING CONTOUR
- 830 PROPOSED CONTOUR

EASEMENT/SETBACK LEGEND

D/E STORM DRAINAGE EASEMENT
S/B PROPERTY SETBACK
S/E SANITARY SEWER EASEMENT
U/E UTILITY EASEMENT
E/E ELECTRIC EASEMENT

SANITARY SEWER NOTES:

1. ALL SANITARY SEWER SERVICE PIPE SHALL BE PVC SDR-26. SEWER SERVICE LINE W/PUSH ON JOINTS.
2. TEN FEET OF HORIZONTAL SEPARATION AND TWO FEET OF VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN WATER LINES AND THE SANITARY SEWER SERVICE LINE.
3. IN THE EVENT OF WORK IN OR ON THE UG SANITARY MAIN, ANY TREES OR PLANTINGS PLACED WITHIN THE SEWER EASEMENT MAY BE REMOVED WITHOUT REPLACEMENT OR COMPENSATION THERE-OF.
4. FOR VERTICAL RISERS AND ENCASEMENTS, SEE SANITARY SEWER CONNECTION SHEETS.
5. ROOF DRAINS SHALL NOT BE CONNECTED TO THE SANITARY SEWER.
6. REPLACE/ADD BARREL SECTIONS AS REQUIRED TO MEET THE GRADE REQUIREMENTS.
7. MANHOLE STATIONS AND PIPE LENGTHS SHOWN ON PLANS ARE TO THE CENTER OF MANHOLES. DO NOT SCALE DRAWINGS.
8. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PAVEMENT OR SIDEWALKS DAMAGED DURING THE CONSTRUCTION OF THE SANITARY SEWER MAIN.

RIM ADJUSTMENT NOTES:

1. REPLACE/ADD BARREL SECTIONS AS REQUIRED TO MEET THE GRADE REQUIREMENTS.

STRUCTURES	
ID	DESCRIPTION
EX. M.H. 23-022 0+00	4' ID STD MANHOLE EXISTING SANITARY SEWER – LINE 1 RIM= 966.27 52405.6950; 54765.5110 INV IN = 945.30 (12" VCP) INV OUT = 945.24 (12" VCP) N: 52405.695; E: 54765.511
EX. M.H. 23-023 4+02.96	4' ID STD MANHOLE EXISTING SANITARY SEWER – LINE 1 RIM= 963.10 52019.4100; 54880.2366 INV IN = 953.25 (12" VCP) INV OUT = 952.55 (12" VCP) N: 52019.410; E: 54880.237
M.H. 1-1 1+43.90	4' ID STD MANHOLE EXISTING SANITARY SEWER – LINE 1 RIM= 963.52 52267.7460; 54806.4815 INV IN = 947.89 (12" VCP) INV IN = 948.39 (10" PVC) INV OUT = 947.89 (12" VCP) N: 52267.746; E: 54806.481

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SCANNELL PROPERTIES

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MITCHELL ALAN PLEAK
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2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & FLOOD COMMENTS	

REVISIONS

EXISTING LINE 1 - PLAN & PROFILE
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no: C_SAN_PLP01_02104157
date:

SHEET C6.08

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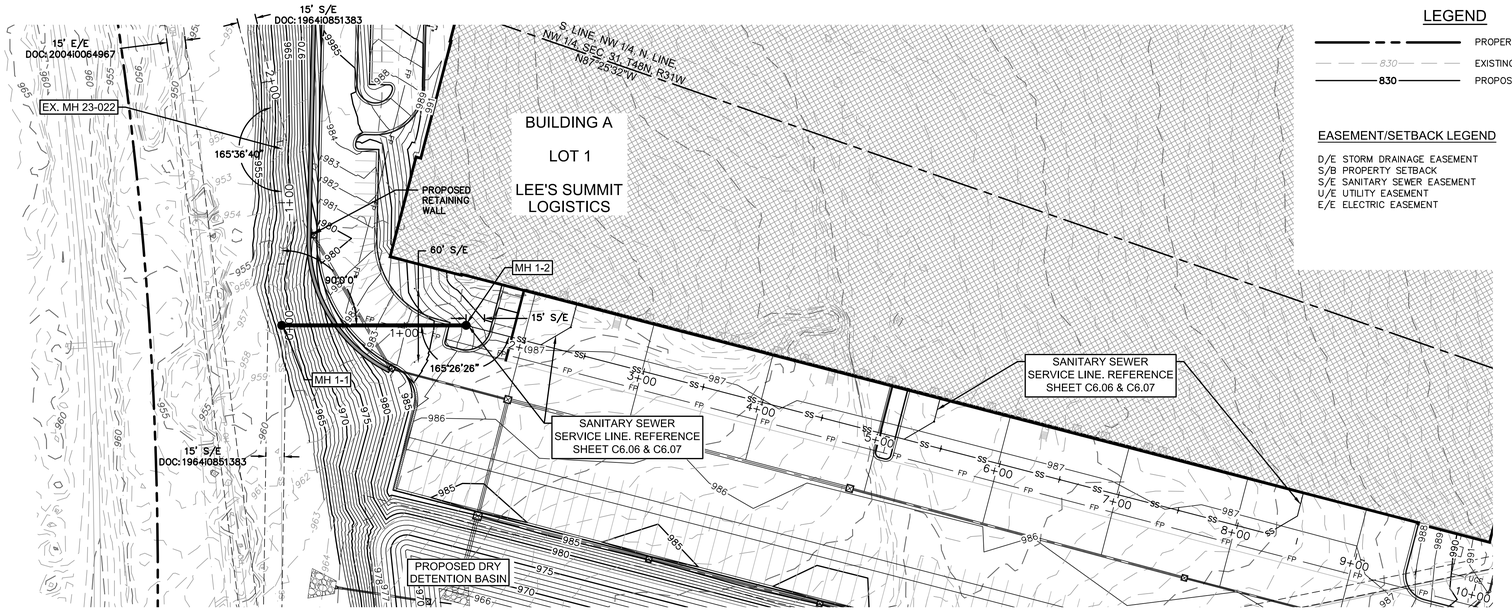
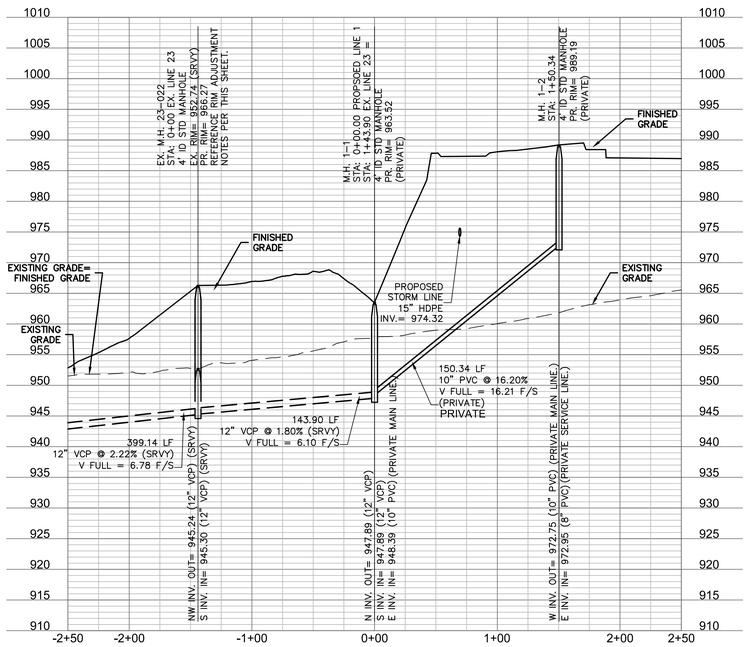


PROPOSED LINE 1



STRUCTURES	
ID	DESCRIPTION
EX. M.H. 23-022 0+00	4' ID STD MANHOLE EXISTING SANITARY SEWER – LINE 1 RIM= 966.27 52405.6950; 54765.5110 INV IN = 945.30 (12" VCP) INV OUT = 945.24 (12" VCP) N: 52405.695; E: 54765.511
M.H. 1-1 1+43.90	4' ID STD MANHOLE EXISTING SANITARY SEWER – LINE 1 RIM= 963.52 52267.7460; 54806.4815 INV IN = 947.89 (12" VCP) INV IN = 948.39 (10" PVC) INV OUT = 947.89 (12" VCP) N: 52267.746; E: 54806.481
M.H. 1-2 1+50.34	4' ID STD MANHOLE PROPOSED SANITARY SEWER – LINE 1 RIM= 989.19 52310.5480; 54950.5973 INV IN = 972.95 (8" PVC) INV OUT = 972.75 (10" PVC) N: 52310.548; E: 54950.597

1" = 10'
20' 10' 5' 0'
1" = 50'
0' 25' 50' 100'
SCALE IN FEET

SANITARY SEWER NOTES:

1. ALL SANITARY SEWER SERVICE PIPE SHALL BE PVC SDR-26. SEWER SERVICE LINE W/PUSH ON JOINTS.
2. TEN FEET OF HORIZONTAL SEPARATION AND TWO FEET OF VERTICAL SEPARATION SHALL BE PROVIDED BETWEEN WATER LINES AND THE SANITARY SEWER SERVICE LINE.
3. IN THE EVENT OF WORK IN OR ON THE UG SANITARY MAIN, ANY TREES OR PLANTINGS PLACED WITHIN THE SEWER EASEMENT MAY BE REMOVED WITHOUT REPLACEMENT OR COMPENSATION THERE-OF.
4. FOR VERTICAL RISERS AND ENCASEMENTS, SEE SANITARY SEWER CONNECTION SHEETS.
5. ROOF DRAINS SHALL NOT BE CONNECTED TO THE SANITARY SEWER.
6. REPLACE/ADD BARREL SECTIONS AS REQUIRED TO MEET THE GRADE REQUIREMENTS.
7. MANHOLE STATIONS AND PIPE LENGTHS SHOWN ON PLANS ARE TO THE CENTER OF MANHOLES. DO NOT SCALE DRAWINGS.
8. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY PAVEMENT OR SIDEWALKS DAMAGED DURING THE CONSTRUCTION OF THE SANITARY SEWER MAIN.

RIM ADJUSTMENT NOTES:

1. REPLACE/ADD BARREL SECTIONS AS REQUIRED TO MEET THE GRADE REQUIREMENTS.

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REVISIONS

PROPOSED LINE 1 - PLAN & PROFILE
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

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date:

SHEET C6.09

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Sanitary Sewer Design Information											
Upstream Manhole	Downstream Pipe Slope (%)	Downstream Pipe Diameter (in)	Proposed Cumulative Area (Ac.)	Future Cumulative Area (Ac.)	Peak Base Flow 50-Year Design (gpd)	Peak Inflitration Flow 50-Year Design (gpd)	Peak Inflow 50-Year Design (cfs)	Total Peak Flow (cfs)	Downstream Pipe Mannings N	Downstream Pipe Capacity (cfs)	Downstream Pipe Full Flow Velocity (fps)
EX MH 23-022	1.80%	12	304.38	0.00	456570.00	152190.000	4.007	4.949	0.014	4.44	5.65
MH 1-1	16.20%	10	39.38	0.00	59070.00	19690.000	0.948	1.070	0.014	8.19	15.01

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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN
NUMBER
PE-2000016764
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

2021

SANITARY DESIGN TABLES
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_SAN02_GNL_02104157
date:

SHEET
C6.10

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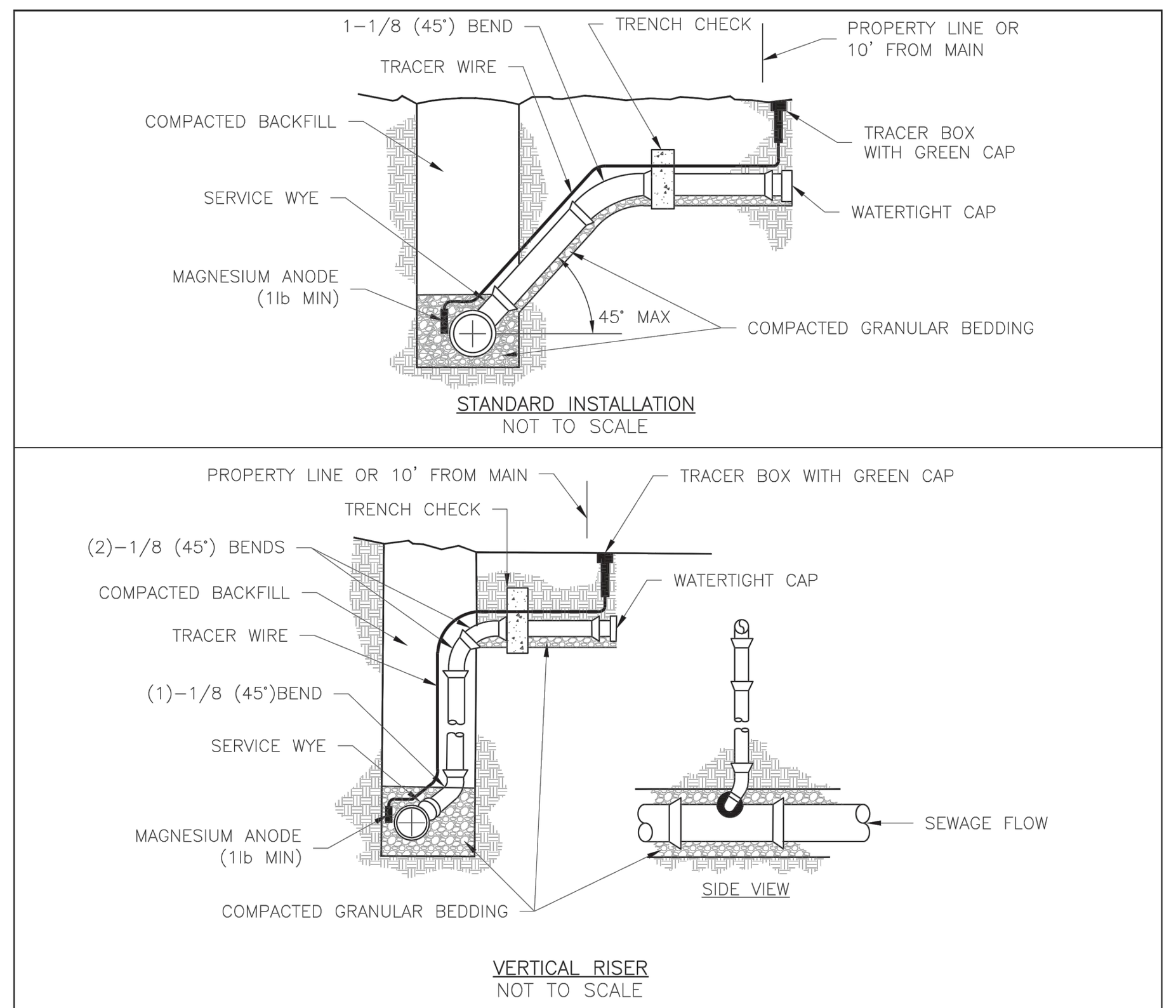
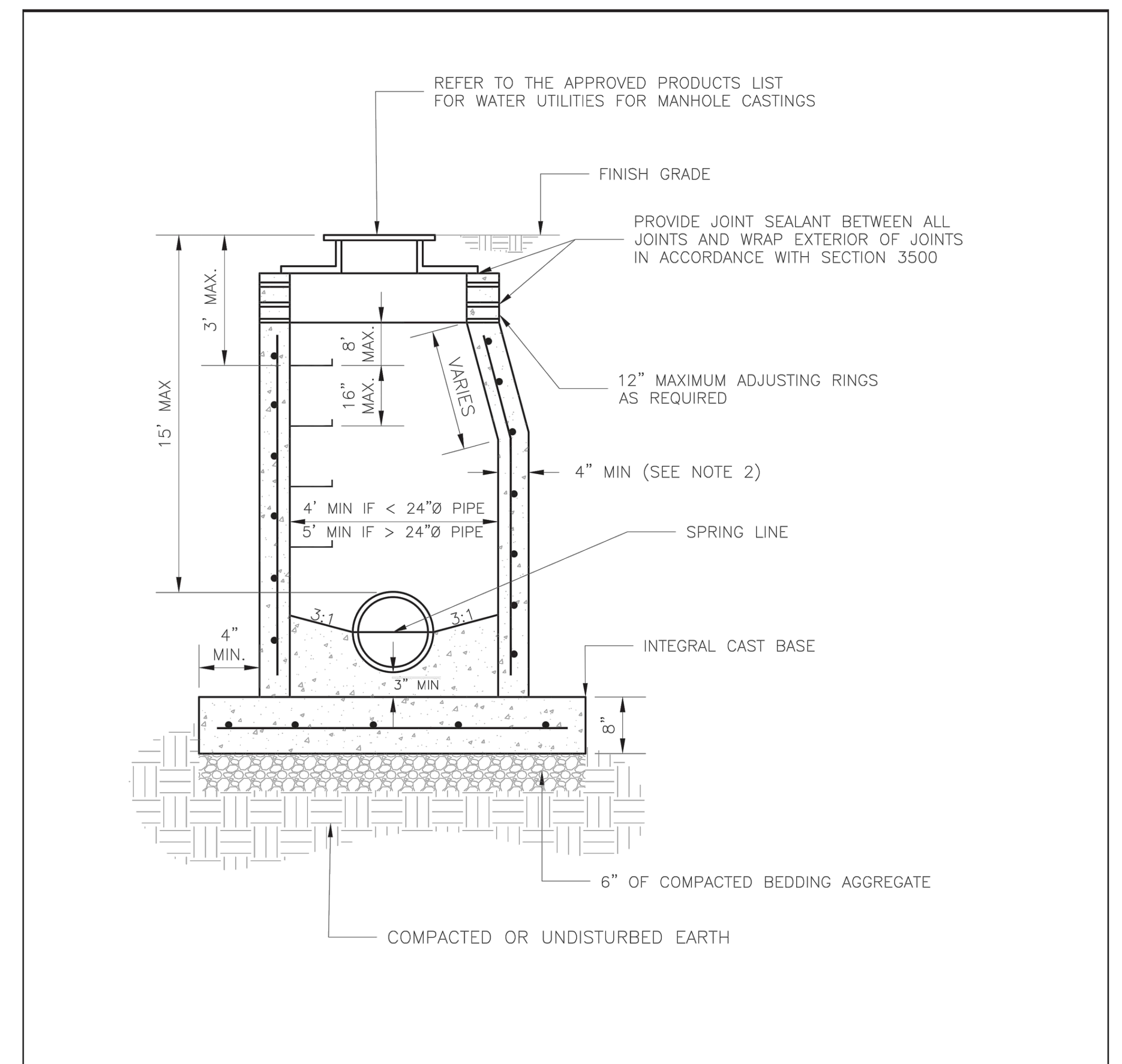


NOTES:

1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

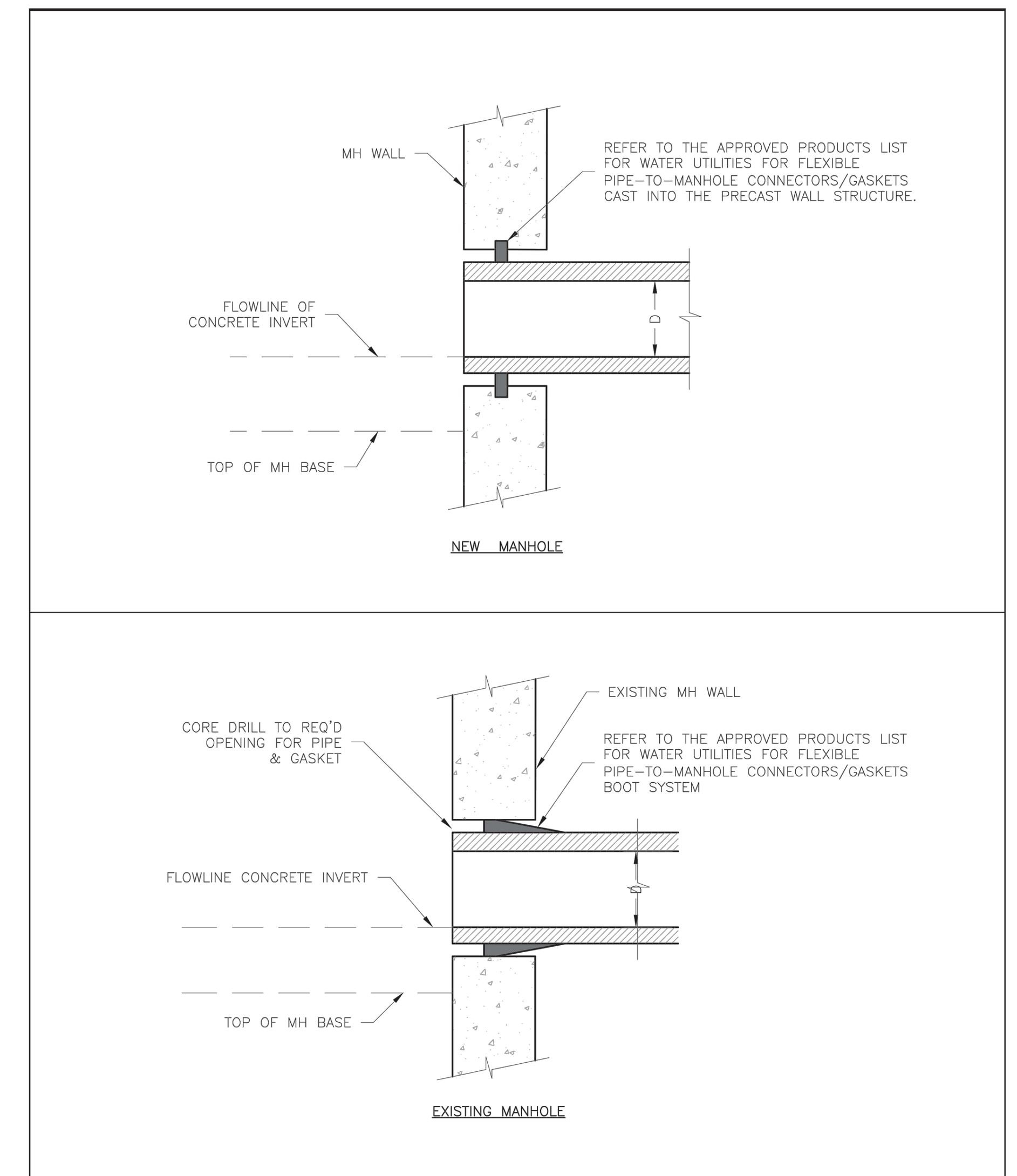
LS | **LEE'S SUMMIT** MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 12/2015
Drawn By: MJF
Checked By: DL
SANITARY SEWER STUB DETAIL
SAN-1



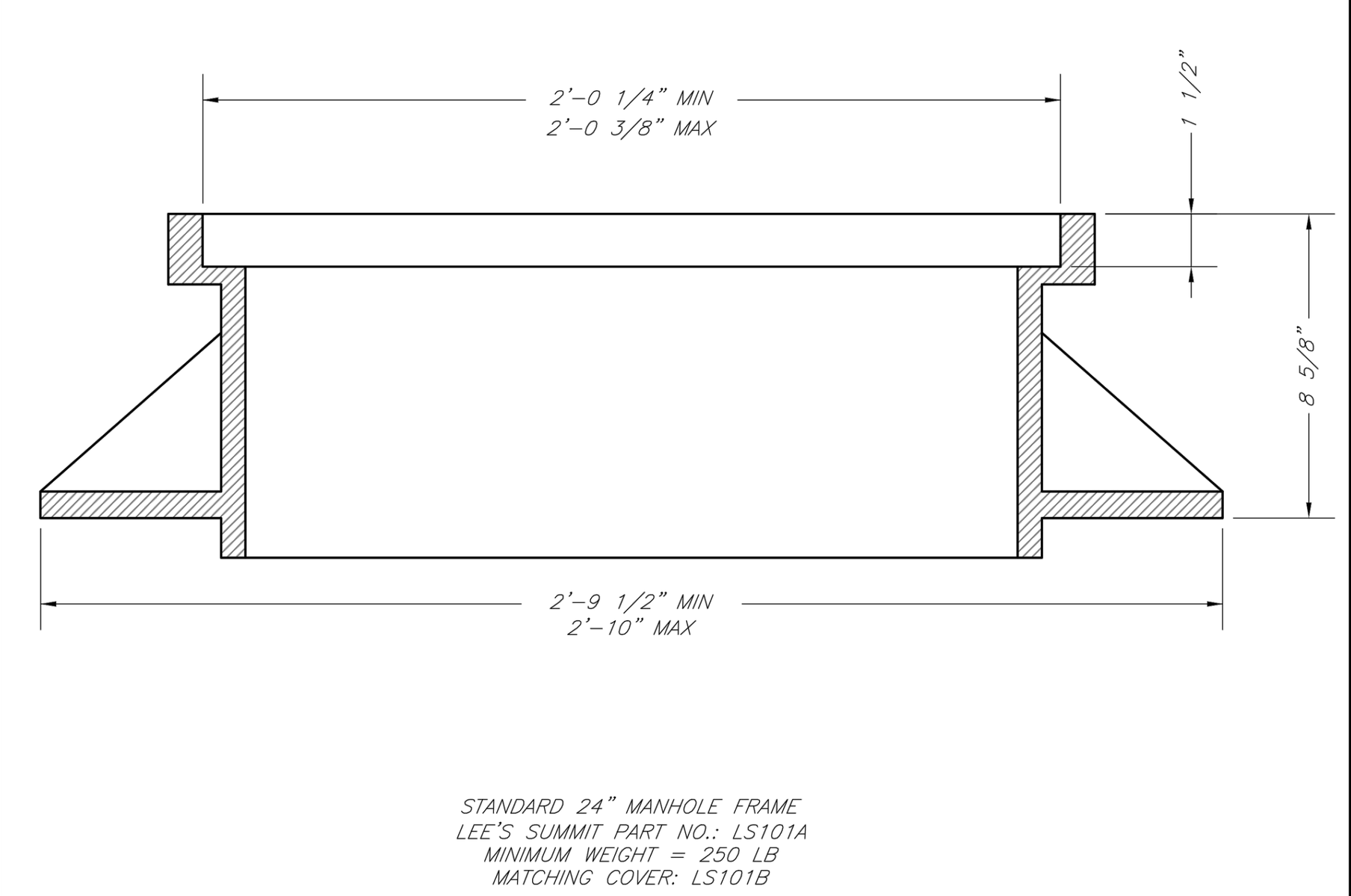
NOTES:

1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

LS | **LEE'S SUMMIT** MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 12/2015
Drawn By: SC
Checked By: DL
STANDARD SANITARY PRECAST MANHOLE
SAN-2

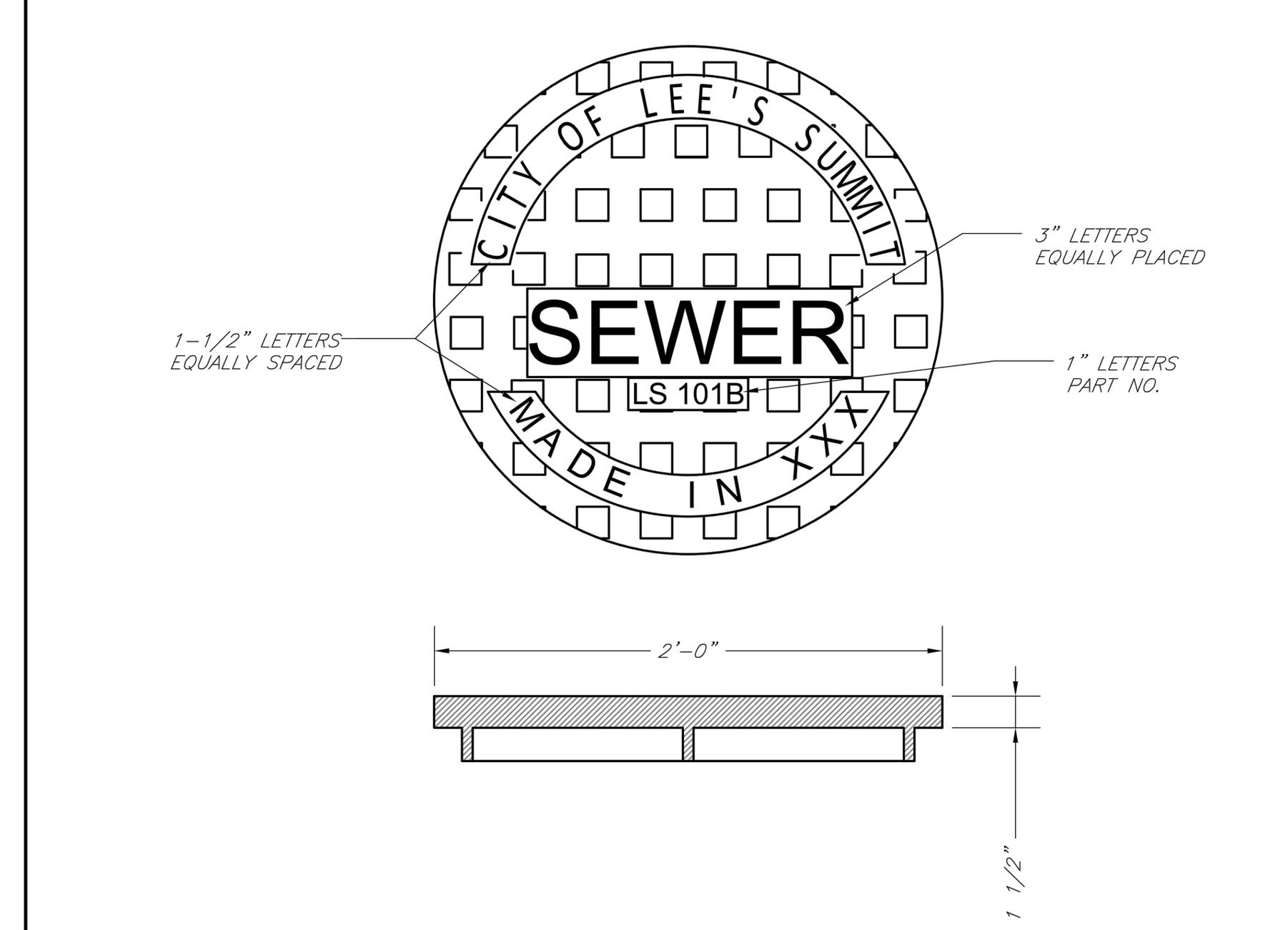


LS | **LEE'S SUMMIT** MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
Date: 02/2015
Drawn By: MJF
Checked By: DL
MANHOLE WALL CONNECTION
SAN-5



STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB
MATCHING COVER: LS101B

CITY OF LEE'S SUMMIT, MO
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
STANDARD 24" MANHOLE FRAME
Date: 09/16/04
Drawn By: JN
Checked By:
FILE: SANITARY SEWER-1
Rev: 01/04/07
Rev: 1/13



STANDARD 24" MANHOLE COVER
LEE'S SUMMIT PART NO: LS101B
MINIMUM WEIGHT = 160 LB
MATCHING FRAME: LS101A
NOTE: PICK HOLES NOT SHOWN

CITY OF LEE'S SUMMIT, MO
PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION
STANDARD 24" MANHOLE COVER
Date: 09/16/04
Drawn By: JN
Checked By:
FILE: SANITARY SEWER-2
Rev: 04/05/07
Rev: 12/12

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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN
NUMBER
PE-2000016364
02-08-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

SANITARY DETAILS SHEET
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_SAN02_GNL_02104157
date:

SHEET
C6.11

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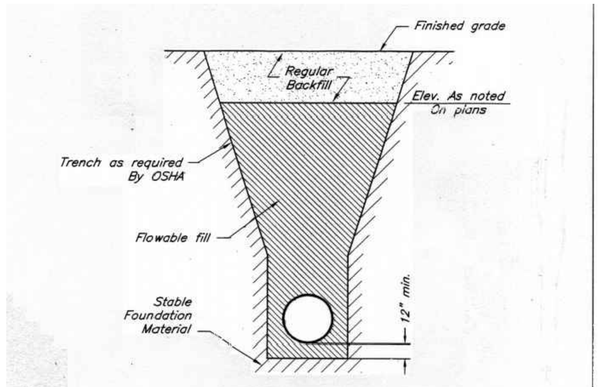


NOTES

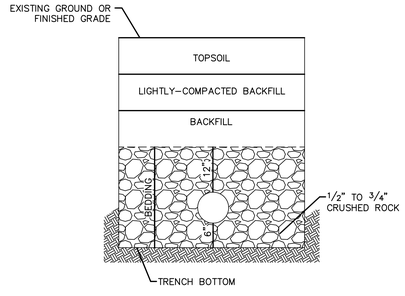
1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL BE A MINIMUM OF 2 FEET BELOW FINISHED GRADE.

Subject to revision without notice.

CITY OF LEE'S SUMMIT, MISSOURI

Date: 09/16/04	
Rev:	
Rev:	
Rev:	

TRENCH CHECK



UNDERGROUND PIPE INSTALLATION FOR SANITARY SEWER

NOTES:

1. A MINIMUM OF 36 INCHES OF COVER SHALL BE OVER THE TOP OF THE PIPE. THIS MINIMUM OF COVER SHALL BE FROM THE TOP OF PIPE TO THE FINISHED GRADE.
2. BEDDING AGGREGATE MATERIAL SHALL BE PER SECTION 6900 AND 2102 OF THE CITY DESIGN AND CONSTRUCTION MANUAL. BEDDING AGGREGATE SHALL BE PLACED FROM A LEVEL 6 INCHES BELOW THE BOTTOM OF THE PIPE TO A LEVEL 12 INCHES ABOVE THE TOP OF THE PIPE.
3. BACKFILL MATERIAL AND PLACEMENT SHALL BE PER SECTION 6900 AND 2102 OF THE CITY DESIGN AND CONSTRUCTION MANUAL.
4. TRENCHING SHALL BE IN ACCORDANCE WITH CURRENT OSHA REGULATIONS. SLOPES MUST NOT EXTEND BELOW TOP OF BEDDING.
5. MINIMUM AND MAXIMUM TRENCH WIDTHS SHALL BE IN ACCORDANCE WITH PIPE MANUFACTURERS RECOMMENDATION AS APPROVED ON ENGINEERING PLANS.

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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAY
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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2.	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3.	02.07.2022	CITY & EVERGY COMMENTS	

REVISIONS

SANITARY DETAILS SHEET
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no: C_SAN02_GNL_02104157
date:

SHEET C6.12

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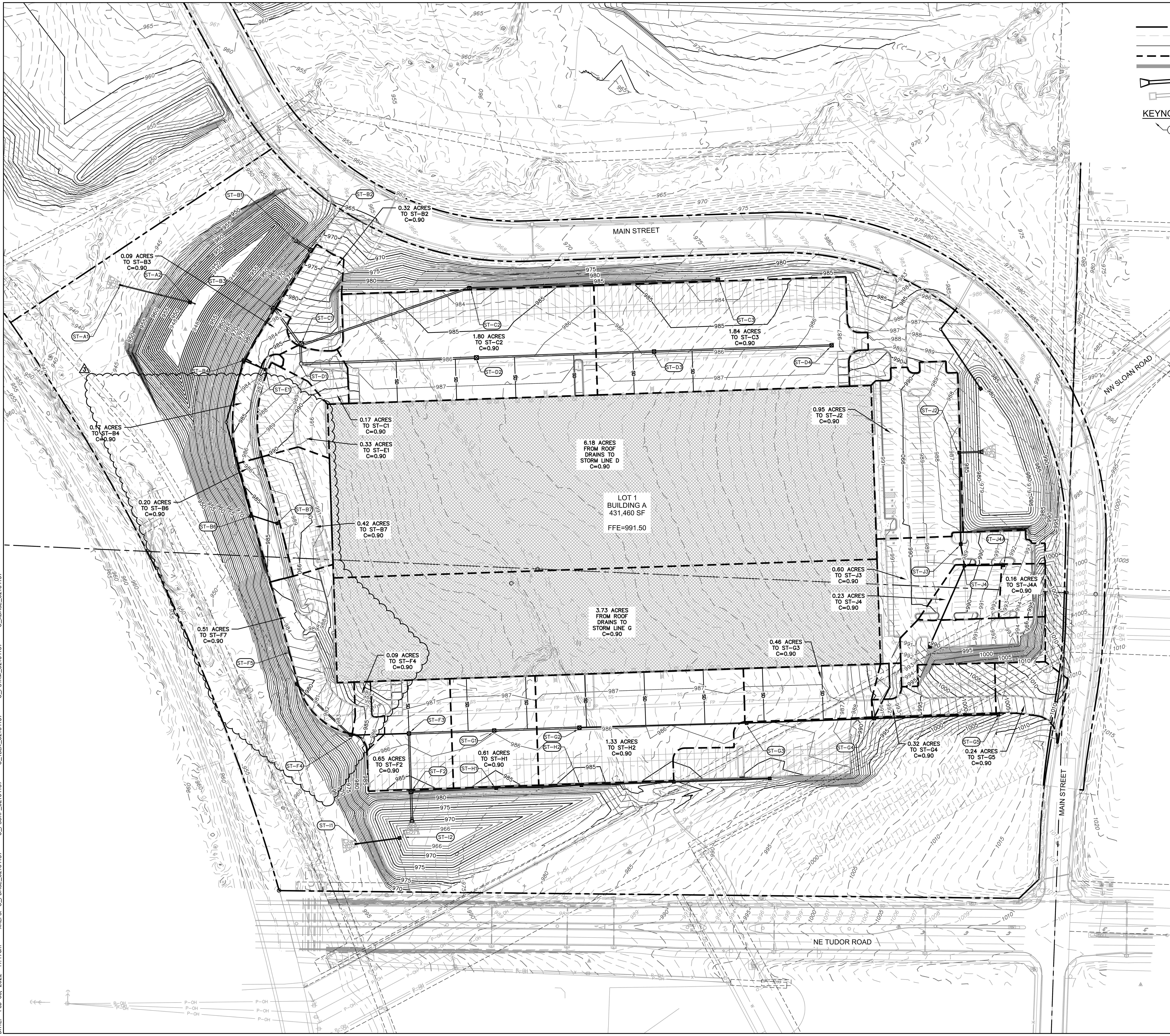

LEGEND

- PROPERTY LINE
- EXISTING CONTOUR (830)
- PROPOSED CONTOUR (830)
- PROPOSED DRAINAGE BOUNDARIES
- PROPOSED LANDSCAPE WALL
- STORM SEWER
- EXISTING STORM SEWER

KEYNOTE LEGEND FOR PROFILE

- (A–X) PROPOSED STORM STRUCTURE

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SCANNELL PROPERTIES

MITCHELL ALAN PLEAK
NUMBER PE-2009018764
02-8-22
STATE OF MISSOURI PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

OVERALL STORM PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by:	OLSSON
checked by:	ENG
approved by:	ENG
QA/QC by:	ENG
project no.:	021-04157
drawing no.:	C_STM01_02104157.dwg
date:	

SHEET
C7.00

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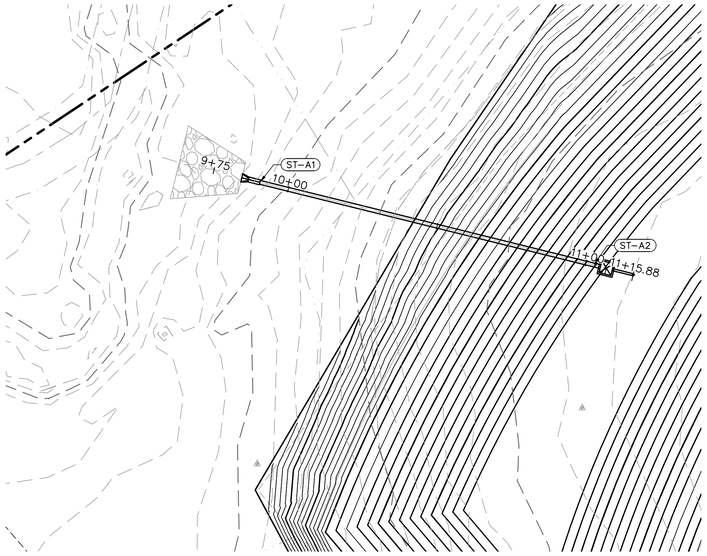
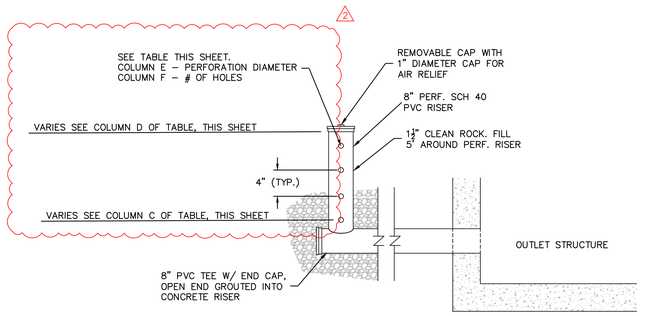
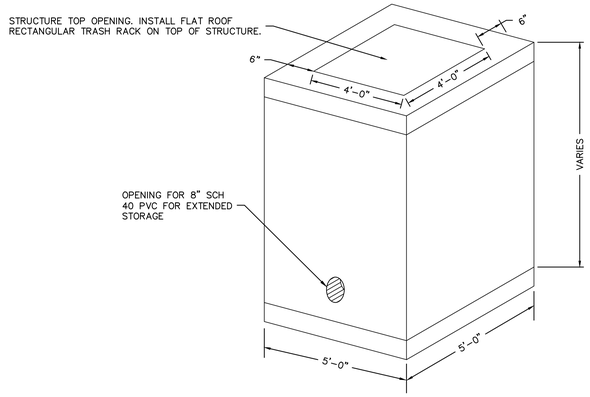


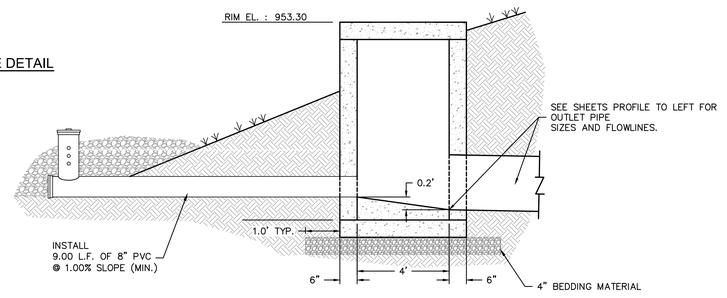


PERFORATED RISER PIPE DETAIL
N.T.S.



OUTLET STRUCTURE DETAIL
N.T.S.

NOTES:
1. BOTTOM TO BE POURED IN PLACE.
2. PIPE TO BE ON GRADE BEFORE BOTTOM IS CONSTRUCTED.
3. RAM-NEK ALL JOINTS (OR EQUAL).
4. #4 BARS @ 10" C.C. VERT. & HOR. IN WALLS & BOTTOM.
5. REINFORCING BARS SHALL BE CUT OR BENT AT PIPE OPENINGS.
6. ALL PIPES SHALL FIT FLUSH WITH INSIDE FACE OF BOX.
7. BOTTOM OF BOX TO BE FILLED WITH CONCRETE TO 6" ABOVE INVERT OF PIPE FORMING CHANNELS TOWARD OUTLET PIPE FROM ALL INLET PIPES.
8. ALL CONCRETE SHALL HAVE 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
9. ALL REINFORCING BARS TO BE DEFORMED BARS AND MEET REQUIREMENTS OF 1966 ASTM STANDARDS NO. A-615-68 MIN. GRADE 40.
10. MUST MAINTAIN 6" CLEARANCE BETWEEN THE PIPE AND WALLS FOR PRECAST BOXES.



SECTION THROUGH OUTLET STRUCTURE
N.T.S.

LEGEND

- PROPERTY LINE
- LOT LINES
- RIGHT-OF-WAY LINE
- SS — SANITARY SEWER SERVICE
- E — FUTURE ELECTRICAL LINE
- W — FUTURE DOMESTIC WATER SERVICE
- GAS — FUTURE GAS SERVICE
- COMM — FUTURE TELEPHONE SERVICE
- 999 — EXISTING GRADE CONTOUR
- 999 — FINISHED GRADE CONTOUR
- STORM SEWER
- 10-YEAR HGL
- 100-YEAR HGL

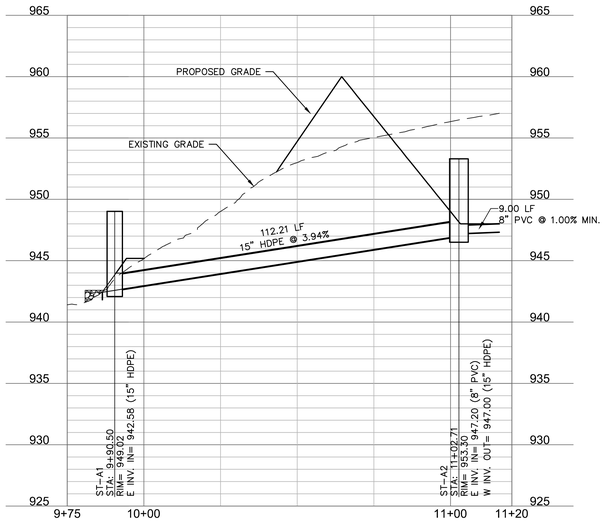
KEYNOTE LEGEND

- XX — PROPOSED STORM STRUCTURE
- CONTRACTOR SHALL PROVIDE 95% COMPACTED FILL TO AN ELEVATION OF 2'-0" (MIN.) OVER THE TOP OF PROPOSED PIPE ELEVATION AND TEMPORARY FILL

STORM STRUCTURE NOTES

1. CONTRACTOR TO PROVIDE STRUCTURAL DETAILS AND CALCULATIONS SEALED BY A LICENSED ENGINEER FOR STRUCTURES GREATER THAN 15' IN DEPTH.
2. NORTHING & EASTINGS SHOWN REPRESENT CENTER OF INLET STRUCTURES AND ENDS OF FLARED END SECTIONS.
3. SEE DETAILS IN THESE PLANS FOR INFORMATION ON STORM STRUCTURES.
4. ALL STORM SEWER PIPE TO BE HDPE, RCP CLASS III, OR PRE-APPROVED EQUIVALENT.
5. ALL AREA INLETS SHOULD BE CONSTRUCTED WITH 6" THROAT.

STORM LINE A (9+75 - 11+20)



STRUCTURES	
ID	DESCRIPTION
ST-A1	15" CONCRETE FLARED END SECTION WITH TOE WALL 9+90.50, 0.09' RT STORM LINE A INV IN = 942.58 (15" HDPE) N: 53017.967; E: 54517.822
ST-A2	4'X4' JUNCTION BOX REFERENCE DETAIL ON SHEET. 11+02.71, 0.02' RT STORM LINE A RIM= 953.30 INV IN = 947.20 (8" PVC) INV OUT = 947.00 (15" HDPE) N: 52990.996; E: 54626.742

OUTLET STRUCTURE AND PERFORATED RISER INFORMATION					
A	B	C	D	E	F
DETENTION FACILITY	STRUCTURE ID	BOTTOM PERFORATION ELEVATION	TOP ELEVATION OF PERFORATED PIPE	PERFORATION DIAMETER	# OF PERFORATION HOLES
B4	ST-A2	947.00	950.33	1-1/8" (1.1")	10

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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLATT
NUMBER PE-2009016764
PROFESSIONAL ENGINEER
01-5-22

REV. NO.	DATE	REVISIONS DESCRIPTION
1	12.04.2021	CITY COMMENTS
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES
3	02.02.2022	CITY & EVERGY COMMENTS

REVISIONS

STORM PLAN & PROFILE A
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

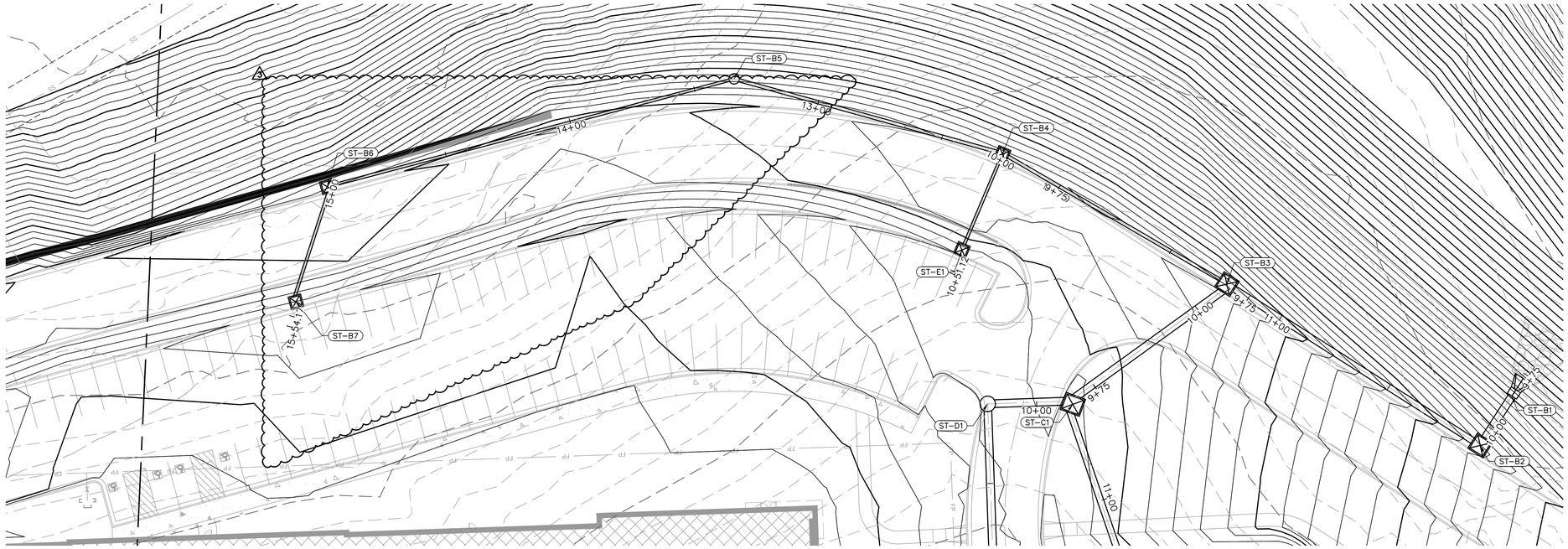
2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing dp:STM02_02104157.dwg
date:

SHEET
C7.01

0' 10' 20' 40'
SCALE IN FEET
10' 5' 2.5' 0'

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_STM02_02104157.dwg USER: lmoore
DATE: Feb 08, 2022 11:18am XREFS: C_PBASE_02104157 C_PSURF_02104157 C_TBLK_02104157 C_XBASE_02104157 C_PSTRM_02104157



0' 10' 20' 40'
SCALE IN FEET

LEGEND

- PROPERTY LINE
- LOT LINES
- RIGHT-OF-WAY LINE
- SS — SANITARY SEWER SERVICE
- E — FUTURE ELECTRICAL LINE
- W — FUTURE DOMESTIC WATER SERVICE
- GAS — FUTURE GAS SERVICE
- COMM — FUTURE TELEPHONE SERVICE
- 989 — EXISTING GRADE CONTOUR
- 999 — FINISHED GRADE CONTOUR
- STORM SEWER
- 10-YEAR HGL
- 100-YEAR HGL

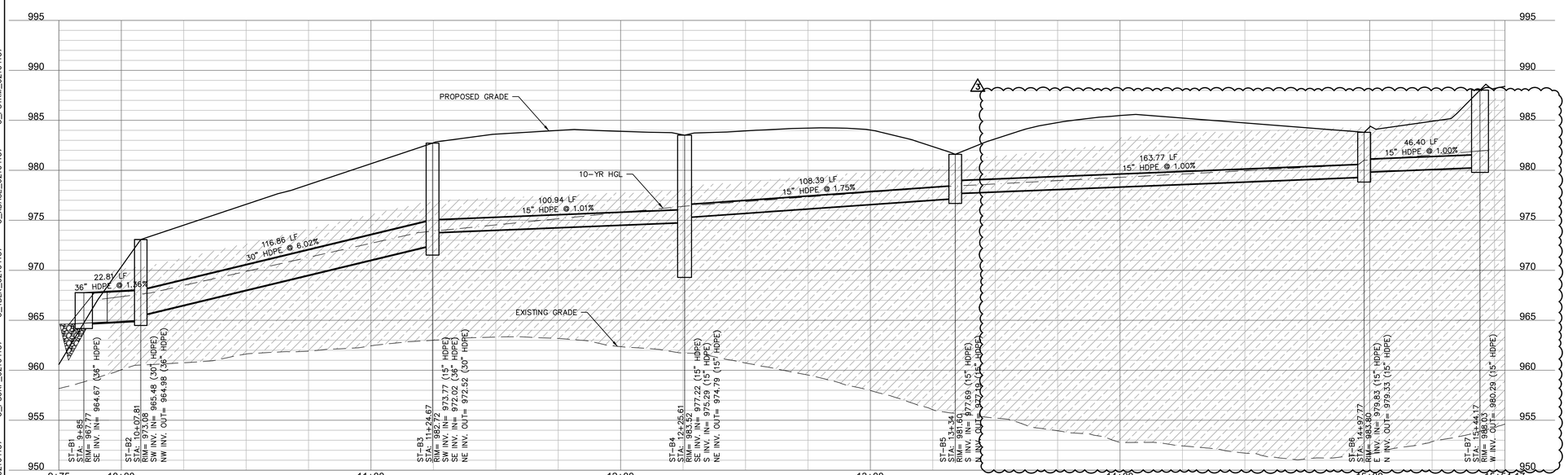
KEYNOTE LEGEND

- XX — PROPOSED STORM STRUCTURE
- CONTRACTOR SHALL PROVIDE 95% COMPACTED FILL TO AN ELEVATION OF 2'-0" (MIN.) OVER THE TOP OF PROPOSED PIPE ELEVATION AND TEMPORARY FILL

STORM STRUCTURE NOTES

1. CONTRACTOR TO PROVIDE STRUCTURAL DETAILS AND CALCULATIONS SEALED BY A LICENSED ENGINEER FOR STRUCTURES GREATER THAN 15' IN DEPTH.
2. NORTHING & EASTINGS SHOWN REPRESENT CENTER OF INLET STRUCTURES AND ENDS OF FLARED END SECTIONS.
3. SEE DETAILS IN THESE PLANS FOR INFORMATION ON STORM STRUCTURES.
4. ALL STORM SEWER PIPE TO BE HDPE, RCP CLASS III, OR PRE-APPROVED EQUIVALENT.
5. ALL AREA INLETS SHOULD BE CONSTRUCTED WITH 6" THROAT.

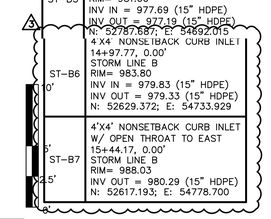
STORM LINE B (9+75 - 15+54.17)



0' 10' 20' 40'
SCALE IN FEET

STRUCTURES

ID	DESCRIPTION
ST-B1	36" CONCRETE FLARED END SECTION WITH TOE WALL 9+85, 0.00' RT STORM LINE B INV IN = 964.67 (36" HDPE) N: 53090.305; E: 54815.387
ST-B2	6'X6' NONSETBACK CURB INLET 10+07.81, 0.00' STORM LINE B RIM= 973.08 INV IN = 965.48 (30" HDPE) INV OUT = 964.98 (36" HDPE) N: 53077.980; E: 54834.581
ST-B3	6'X6' NONSETBACK CURB INLET 11+24.67, 0.00' STORM LINE B RIM= 982.72 INV IN = 973.77 (15" HDPE) INV IN = 972.02 (36" HDPE) INV OUT = 972.52 (30" HDPE) N: 52979.400; E: 54771.831
ST-B4	4'X4' NONSETBACK CURB INLET INSERT 30F SNOUT WITH 60" SUMP DEPTH 12+25.61, 0.00' STORM LINE B RIM= 983.52 INV IN = 977.22 (15" HDPE) INV IN = 975.29 (15" HDPE) INV OUT = 974.79 (15" HDPE) N: 52892.074; E: 54721.209
ST-B5	6' I.D. MANHOLE 13+34, 0.00' STORM LINE B RIM= 981.60 INV IN = 977.69 (15" HDPE) INV OUT = 977.19 (15" HDPE) N: 52787.687; E: 54692.015
ST-B6	4'X4' NONSETBACK CURB INLET 14+97.77, 0.00' STORM LINE B RIM= 983.80 INV IN = 979.83 (15" HDPE) INV OUT = 979.33 (15" HDPE) N: 52629.372; E: 54733.929
ST-B7	4'X4' NONSETBACK CURB INLET W/ OPEN THROAT TO EAST 15+44.17, 0.00' STORM LINE B RIM= 988.03 INV OUT = 980.29 (15" HDPE) N: 52617.193; E: 54778.700



0' 10' 20' 40'
SCALE IN FEET

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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAN
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	01.05.2022	CITY & EVERGY COMMENTS	

REVISIONS

STORM PLAN & PROFILE B
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: STM02_02104157.dwg
date:

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C7.02

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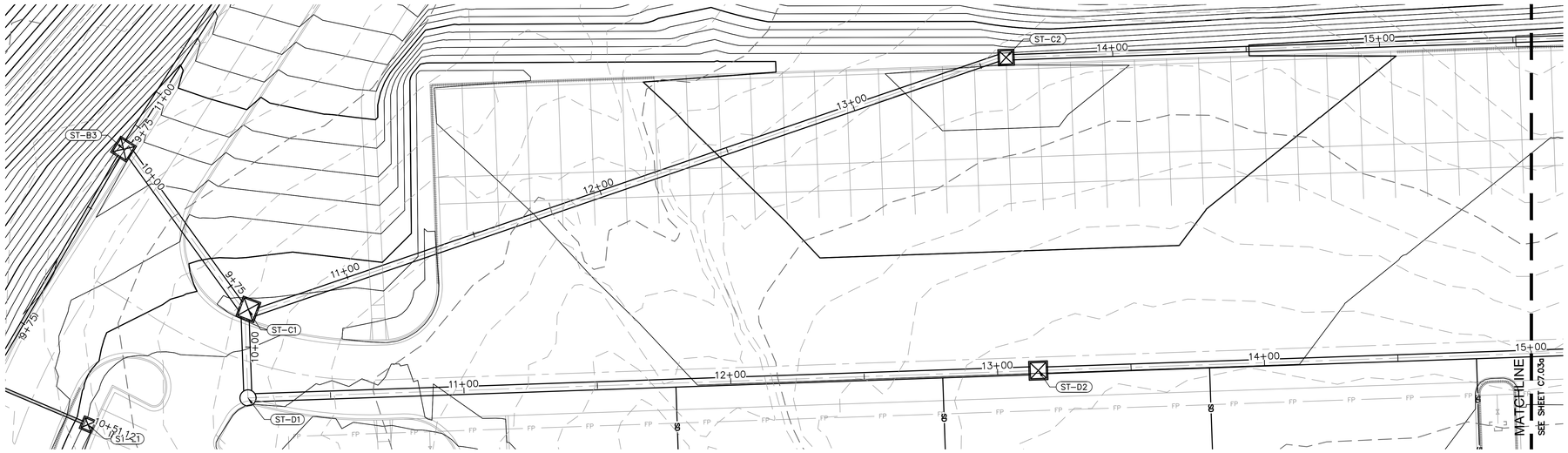

LEGEND

- PROPERTY LINE
- LOT LINES
- RIGHT-OF-WAY LINE
- SS — SANITARY SEWER SERVICE
- E — FUTURE ELECTRICAL LINE
- W — FUTURE DOMESTIC WATER SERVICE
- GAS — FUTURE GAS SERVICE
- COMM — FUTURE TELEPHONE SERVICE
- 999 — EXISTING GRADE CONTOUR
- 999 — FINISHED GRADE CONTOUR
- STORM SEWER
- 10-YEAR HGL
- 100-YEAR HGL

KEYNOTE LEGEND

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- CONTRACTOR SHALL PROVIDE 95% COMPACTED FILL TO AN ELEVATION OF 2'-0" (MIN.) OVER THE TOP OF PROPOSED PIPE ELEVATION AND TEMPORARY FILL

STORM STRUCTURE NOTES

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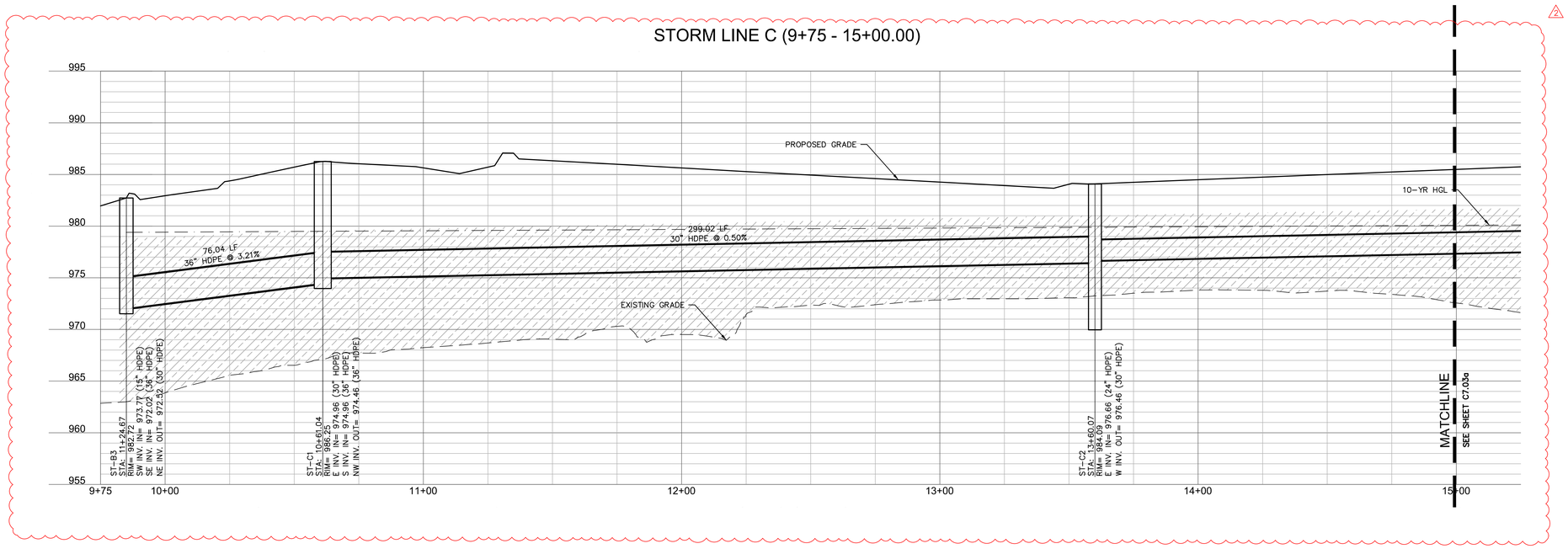
2. NORTHING & EASTINGS SHOWN REPRESENT CENTER OF INLET STRUCTURES AND ENDS OF FLARED END SECTIONS.
3. SEE DETAILS IN THESE PLANS FOR INFORMATION ON STORM STRUCTURES.
4. ALL STORM SEWER PIPE TO BE HDPE, RCP CLASS III, OR PRE-APPROVED EQUIVALENT.
5. ALL AREA INLETS SHOULD BE CONSTRUCTED WITH 6" THROAT.

N

0' 10' 20' 40'
SCALE IN FEET

STRUCTURES	
ID	DESCRIPTION
ST-C1	6'X7' NONSETBACK CURB INLET 10+61.04, 0.00' STORM LINE C RIM= 986.25 INV IN = 974.96 (30" HDPE) INV IN = 974.96 (36" HDPE) INV OUT = 974.46 (36" HDPE) N: 52919.441; E: 54818.600
ST-C2	5'X5' NONSETBACK CURB INLET INSERT 36FTB SNOUT WITH 75" SUMP DEPTH 13+60.07, 0.00' STORM LINE C RIM= 984.09 INV IN = 976.66 (24" HDPE) INV OUT = 976.46 (30" HDPE) N: 53013.717; E: 55102.372
ST-C3	5'X5' NONSETBACK CURB INLET 17+80.07, -0.09' LT STORM LINE C RIM= 983.89 INV OUT = 978.76 (24" HDPE) N: 53028.241; E: 55522.121



2

10'
5'
2.5'
0'

0' 10' 20' 40'
SCALE IN FEET

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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAKE
NUMBER PE-2009018764
PROFESSIONAL ENGINEER
01-5-22

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REVISIONS

STORM PLAN & PROFILE C
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: STM02_02104157.dwg
date:

SHEET
C7.03

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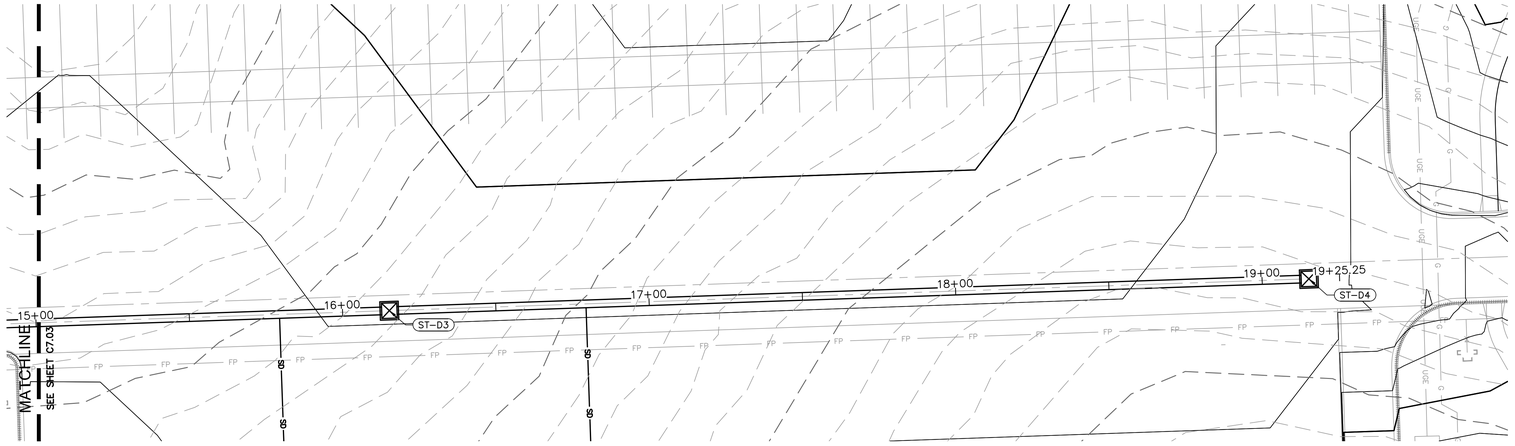

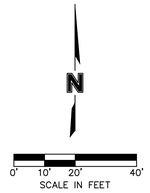

LEGEND

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- LOT LINES
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- SS — SANITARY SEWER SERVICE
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- W — FUTURE DOMESTIC WATER SERVICE
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- 999 — EXISTING GRADE CONTOUR
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KEYNOTE LEGEND

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STORM STRUCTURE NOTES

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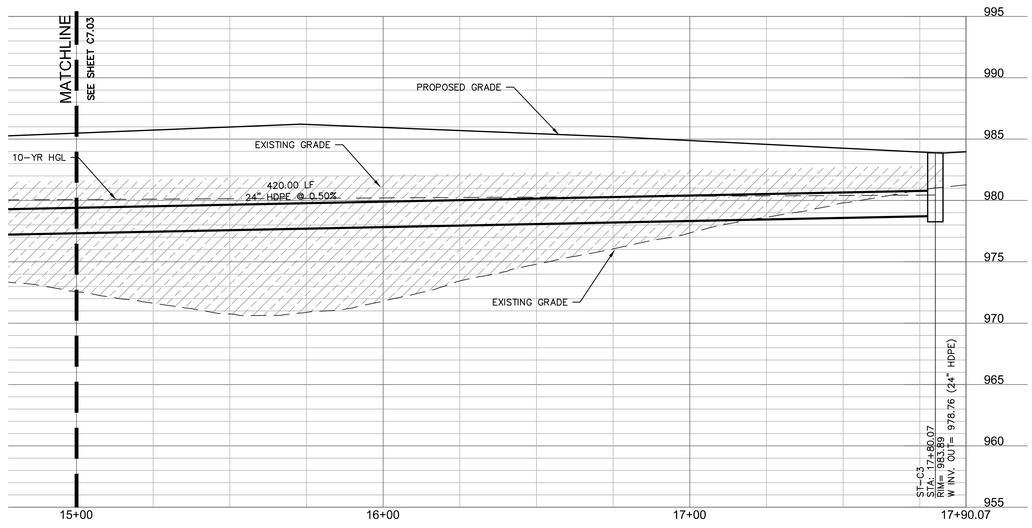
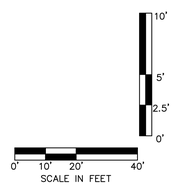
STORM LINE C CONT. (15+00.00 - 17+90.07)





STRUCTURES	
ID	DESCRIPTION
ST-C1	6'X7' NONSETBACK CURB INLET 10+61.04, 0.00' STORM LINE C RIM= 986.25 INV IN = 974.96 (30" HDPE) INV IN = 974.96 (36" HDPE) INV OUT = 974.46 (36" HDPE) N: 52919.441; E: 54818.600
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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAN
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

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3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

STORM PLAN AND PROFILE C CONT.
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_STM02_02104157.dwg
date:

SHEET C7.03A

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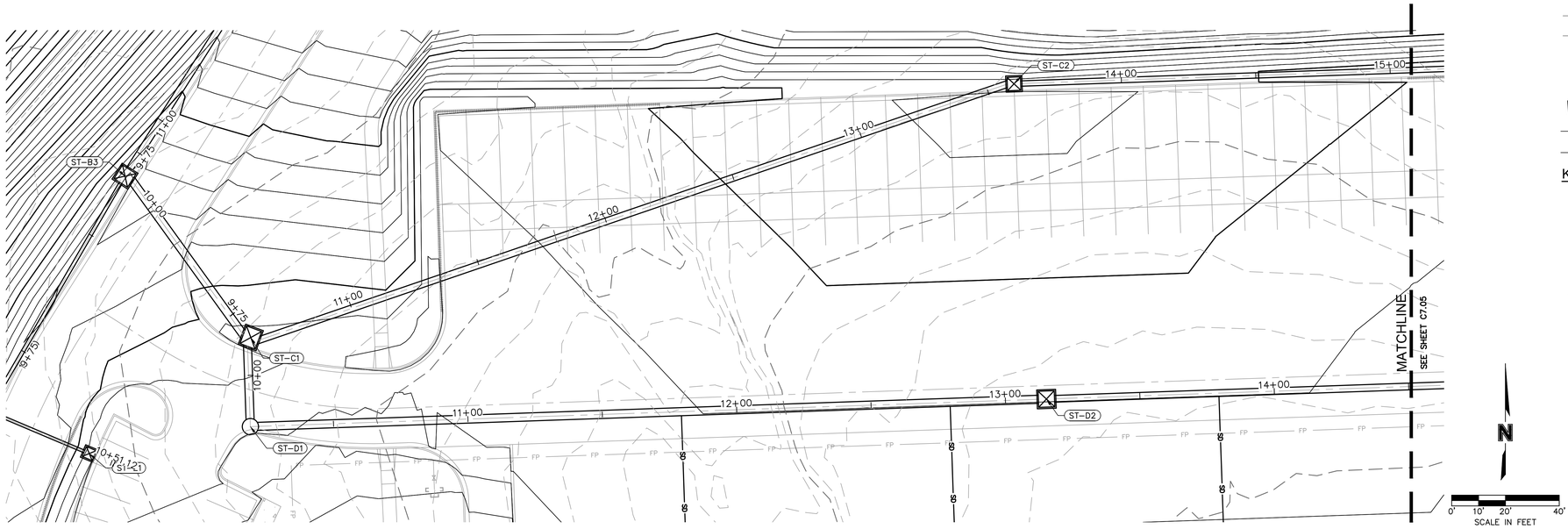

LEGEND

- PROPERTY LINE
- LOT LINES
- RIGHT-OF-WAY LINE
- SS — SANITARY SEWER SERVICE
- E — FUTURE ELECTRICAL LINE
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KEYNOTE LEGEND

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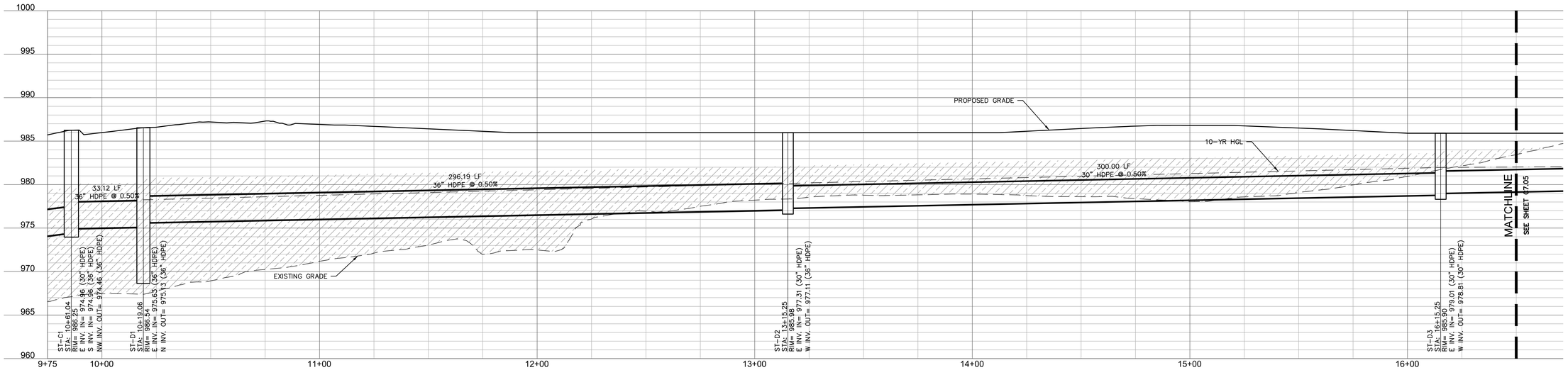
ID	DESCRIPTION
ST-C1	6'X7' NONSETBACK CURB INLET 10+61.04, 0.00' STORM LINE C RIM= 986.25 INV IN = 974.96 (30" HDPE) INV IN = 974.96 (36" HDPE) INV OUT = 974.46 (36" HDPE) N: 52919.441; E: 54818.600
ST-D1	6' I.D. MANHOLE INSERT 36FTB SNOUT WITH 75" SUMP DEPTH 10+19.06, 0.00' STORM LINE D RIM= 986.54 INV IN = 975.63 (36" HDPE) INV OUT = 975.13 (36" HDPE) N: 52886.322; E: 54818.421
ST-D2	6'X6' JUNCTION BOX 13+15.25, 0.00' STORM LINE D RIM= 985.98 INV IN = 977.31 (30" HDPE) INV OUT = 977.11 (36" HDPE) N: 52896.564; E: 55114.436

STORM LINE D (9+75 - 19+25.25)



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STATE OF MISSOURI
MITCHELL ALAN PLAY
NUMBER PE-2009016764
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PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
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3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

STORM PLAN & PROFILE D
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_STM02_02104157.dwg
date:

SHEET
C7.04

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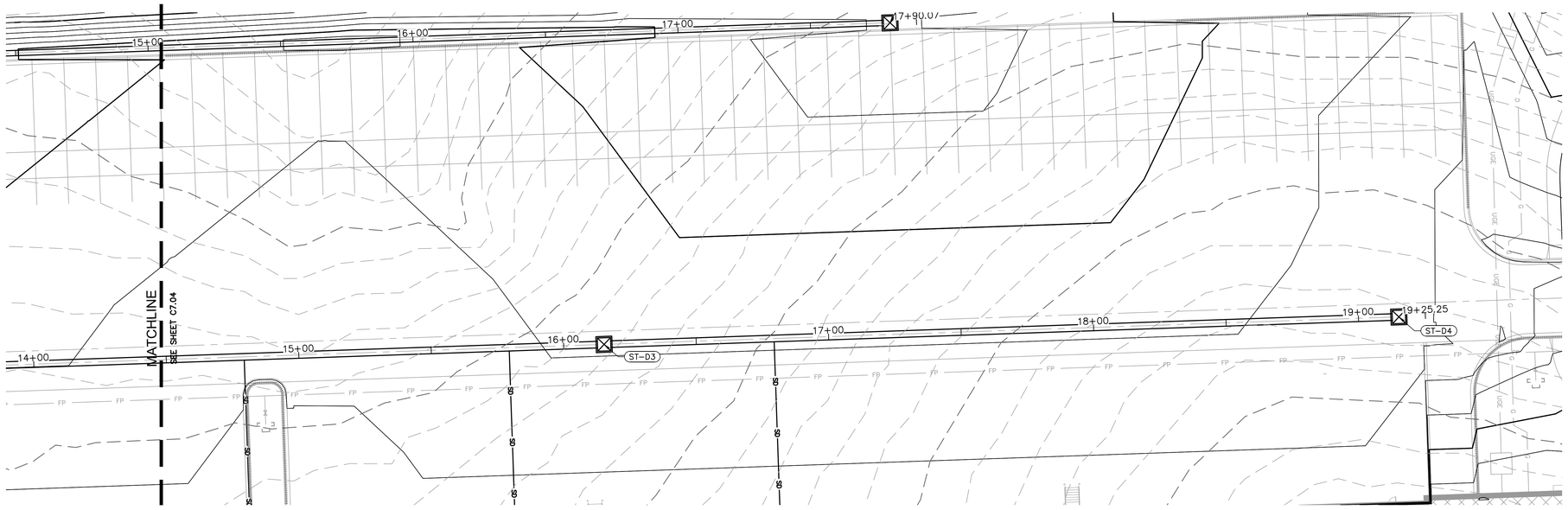

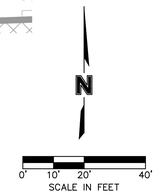

LEGEND

- PROPERTY LINE
- LOT LINES
- RIGHT-OF-WAY LINE
- SANITARY SEWER SERVICE
- FUTURE ELECTRICAL LINE
- FUTURE DOMESTIC WATER SERVICE
- FUTURE GAS SERVICE
- FUTURE TELEPHONE SERVICE
- EXISTING GRADE CONTOUR
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- 10-YEAR HGL
- 100-YEAR HGL

KEYNOTE LEGEND

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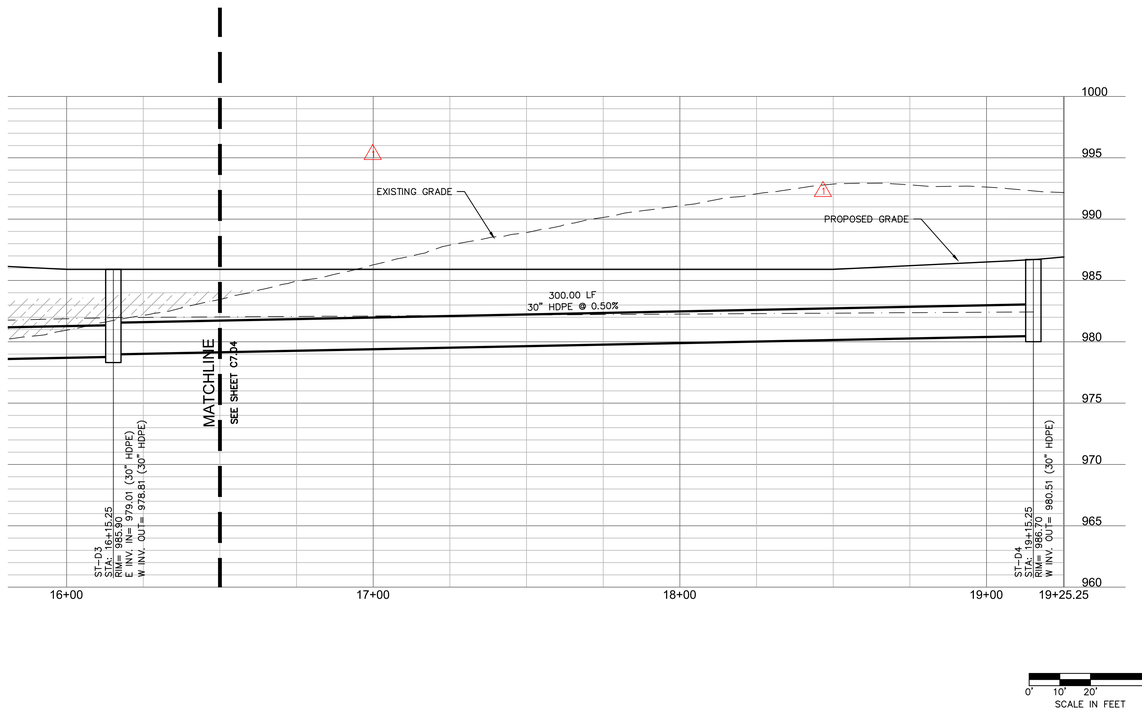

STRUCTURES	
ID	DESCRIPTION
ST-D3	6'X6' JUNCTION BOX 16+15.25, 0.00' STORM LINE D RIM= 985.90 INV IN = 979.01 (30" HDPE) INV OUT = 978.81 (30" HDPE) N: 52906.938; E: 55414.257
ST-D4	6'X6' JUNCTION BOX 19+15.25, 0.00' STORM LINE D RIM= 986.70 INV OUT = 980.51 (30" HDPE) N: 52917.313; E: 55714.078

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01-5-22
PROFESSIONAL ENGINEER

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REVISIONS

STORM PLAN & PROFILE D
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

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checked by: ENG
approved by: ENG
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project no.: 021-04157
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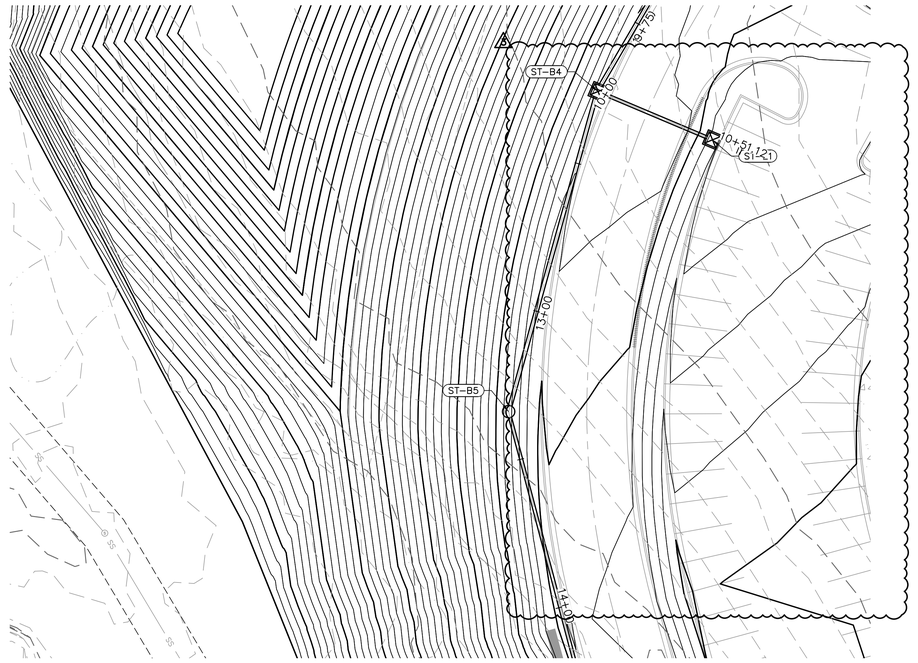

LEGEND

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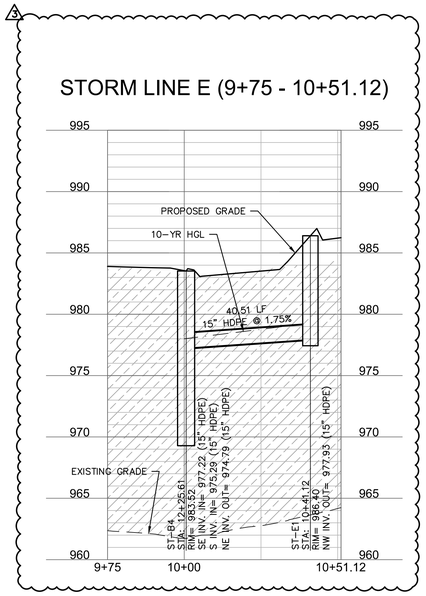
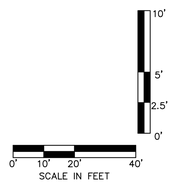
STRUCTURES	
ID	DESCRIPTION
ST-E1	4'X4' CURB/GRATE INLET 10+41.12, 0.00' STORM LINE E RIM= 986.40 INV OUT = 977.93 (15" HDPE) N: 52876.308; E: 54758.524





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LEE'S SUMMIT, MISSOURI

2021

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LEGEND

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- RIGHT-OF-WAY LINE
- SS — SANITARY SEWER SERVICE
- E — FUTURE ELECTRICAL LINE
- W — FUTURE DOMESTIC WATER SERVICE
- GAS — FUTURE GAS SERVICE
- COMM — FUTURE TELEPHONE SERVICE
- 999 — EXISTING GRADE CONTOUR
- 999 — FINISHED GRADE CONTOUR
- STORM SEWER
- 10-YEAR HGL
- 100-YEAR HGL

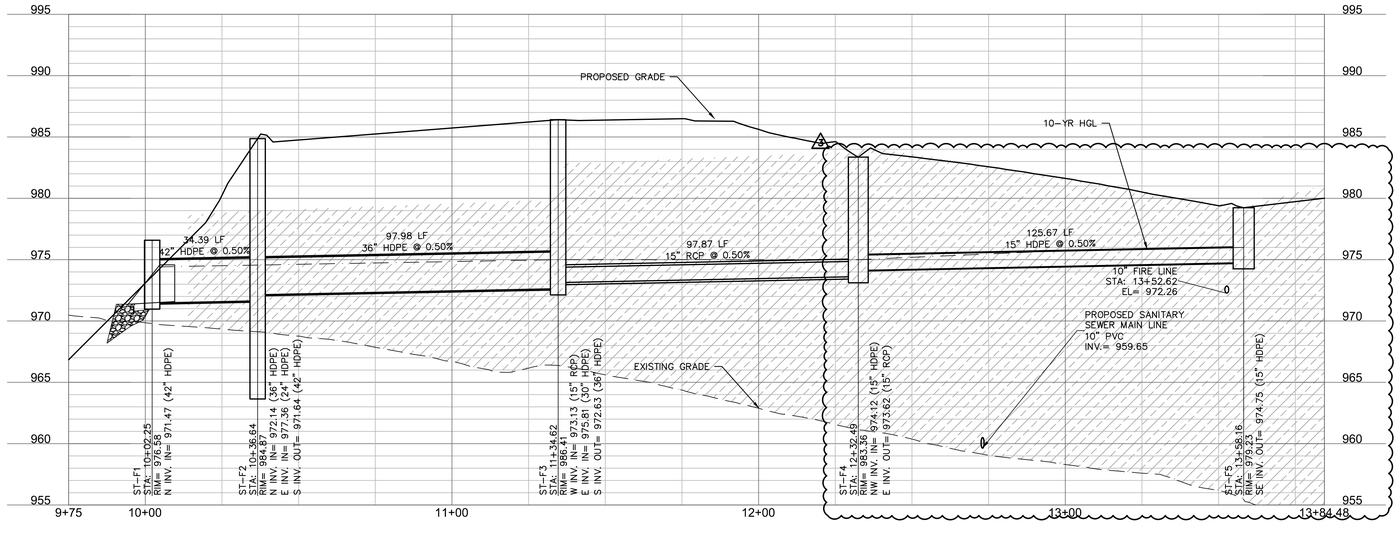
KEYNOTE LEGEND

- XX — PROPOSED STORM STRUCTURE
- CONTRACTOR SHALL PROVIDE 95% COMPACTED FILL TO AN ELEVATION OF 2'-0" (MIN.) OVER THE TOP OF PROPOSED PIPE ELEVATION AND TEMPORARY FILL

STORM STRUCTURE NOTES

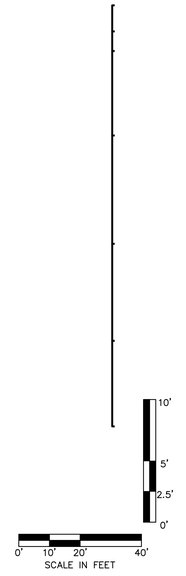
1. ALL ROOF DRAIN CONNECTIONS TO BE INCLUDED IN FUTURE PLAN SET.
2. CONTRACTOR TO PROVIDE STRUCTURAL DETAILS AND CALCULATIONS SEALED BY A LICENSED ENGINEER FOR STRUCTURES GREATER THAN 15' IN DEPTH.
3. NORTHING & EASTINGS SHOWN REPRESENT CENTER OF INLET STRUCTURES AND ENDS OF FLARED END SECTIONS.
4. SEE DETAILS IN THESE PLANS FOR INFORMATION ON STORM STRUCTURES.
5. ALL STORM SEWER PIPE TO BE HDPE, RCP CLASS III, OR PRE-APPROVED EQUIVALENT.
6. ALL AREA INLETS SHOULD BE CONSTRUCTED WITH 6" THROAT.

STORM LINE F (9+75 - 13+84.48)



STRUCTURES	
ID	DESCRIPTION
ST-F1	36" CONCRETE FLARED END SECTION WITH TOE WALL 10+02.25, 0.00' LT STORM LINE F INV IN = 971.47 (42" HDPE) N: 52129.936; E: 55005.032
ST-F2	7'X6' NONSETBACK CURB INLET INSERT 48FTB SNOUT WITH 90° SUMP DEPTH 10+36.64, 0.00' STORM LINE F RIM= 984.87 INV IN = 972.14 (36" HDPE) INV IN = 977.36 (24" HDPE) INV OUT = 971.64 (42" HDPE) N: 52164.302; E: 55003.842
ST-F3	6'X6' JUNCTION BOX 11+34.62, 0.00' STORM LINE F RIM= 986.41 INV IN = 973.13 (15" RCP) INV IN = 975.81 (30" HDPE) INV OUT = 972.63 (36" HDPE) N: 52262.226; E: 55000.453
ST-F4	6'X6' NONSETBACK CURB INLET 12+32.49, 0.00' STORM LINE F RIM= 983.36 INV IN = 974.12 (15" HDPE) INV OUT = 973.62 (15" RCP) N: 52259.754; E: 54902.614

STRUCTURES	
ID	DESCRIPTION
ST-F5	6'X6' NONSETBACK CURB INLET 13+58.16, 0.00' STORM LINE F RIM= 979.23 INV OUT = 974.75 (15" HDPE) N: 52345.882; E: 54811.102



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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAN
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	01.5.2022	CITY & UTILITY COMMENTS	

REVISIONS

STORM PLAN & PROFILE F
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: STM02_02104157.dwg
date:

SHEET
C7.07

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_STM02_02104157.dwg USER: lmoore
DATE: Feb 08, 2022 11:21am XREFS: C_PBASE_02104157 C_PSURF_02104157 C_TBLK_02104157 C_XBASE_02104157 C_PSTRM_02104157

LEGEND

- PROPERTY LINE
- LOT LINES
- RIGHT-OF-WAY LINE
- SS — SANITARY SEWER SERVICE
- E — FUTURE ELECTRICAL LINE
- W — FUTURE DOMESTIC WATER SERVICE
- GAS — FUTURE GAS SERVICE
- COMM — FUTURE TELEPHONE SERVICE
- 999 — EXISTING GRADE CONTOUR
- 999 — FINISHED GRADE CONTOUR
- STORM SEWER
- 10-YEAR HGL
- 100-YEAR HGL

KEYNOTE LEGEND

- XX — PROPOSED STORM STRUCTURE
- CONTRACTOR SHALL PROVIDE 95% COMPACTED FILL TO AN ELEVATION OF 2'-0" (MIN.) OVER THE TOP OF PROPOSED PIPE ELEVATION AND TEMPORARY FILL

STORM STRUCTURE NOTES

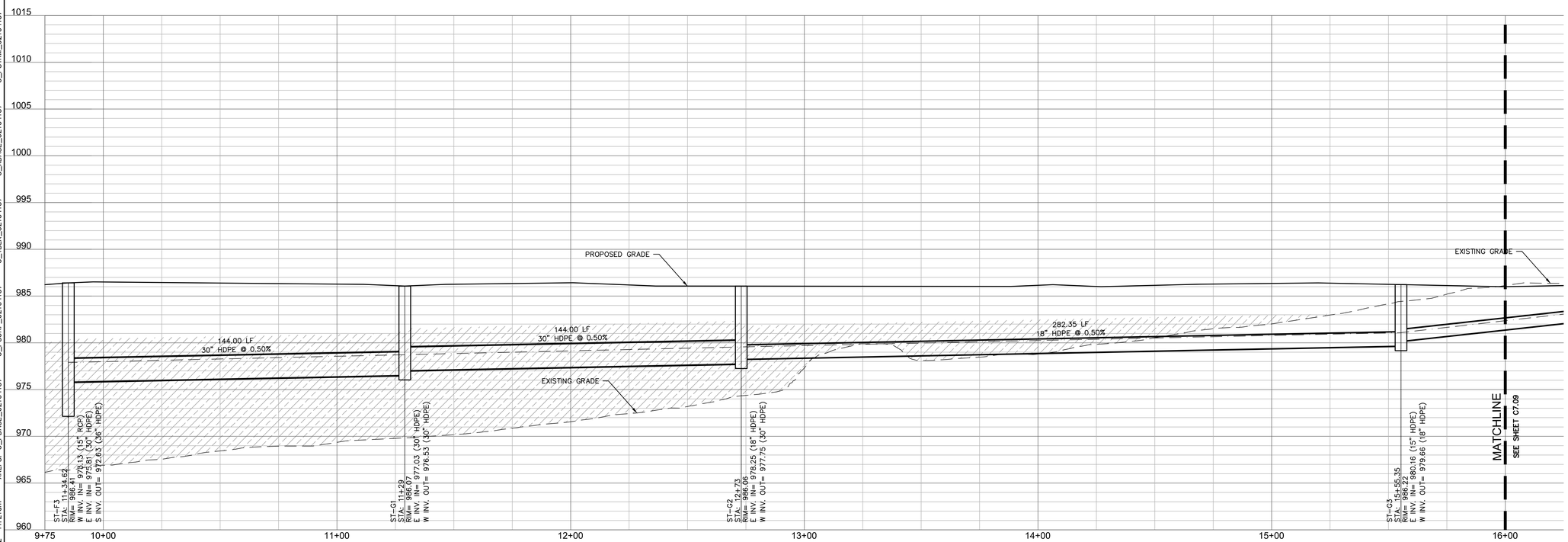
1. CONTRACTOR TO PROVIDE STRUCTURAL DETAILS AND CALCULATIONS SEALED BY A LICENSED ENGINEER FOR STRUCTURES GREATER THAN 15' IN DEPTH.
2. NORTHING & EASTINGS SHOWN REPRESENT CENTER OF INLET STRUCTURES AND ENDS OF FLARED END SECTIONS.
3. SEE DETAILS IN THESE PLANS FOR INFORMATION ON STORM STRUCTURES.
4. ALL STORM SEWER PIPE TO BE HDPE, RCP CLASS III, OR PRE-APPROVED EQUIVALENT.
5. ALL AREA INLETS SHOULD BE CONSTRUCTED WITH 6" THROAT.

N

0' 10' 20' 40'
SCALE IN FEET

STORM LINE G (9+75 - 19+90.23)

STRUCTURES	
ID	DESCRIPTION
ST-F3	6'X6' JUNCTION BOX 11+34.62, 0.00' STORM LINE F RIM= 986.41 INV IN = 973.13 (15" RCP) INV IN = 975.81 (30" HDPE) INV OUT = 972.63 (36" HDPE) N: 52262.226; E: 55000.453
ST-G1	6'X6' JUNCTION BOX 11+29, 0.00' STORM LINE G RIM= 986.07 INV IN = 977.03 (30" HDPE) INV OUT = 976.53 (30" HDPE) N: 52267.205; E: 55144.367
ST-G2	6'X6' JUNCTION BOX 12+73, 0.00' STORM LINE G RIM= 986.06 INV IN = 978.25 (18" HDPE) INV OUT = 977.75 (30" HDPE) N: 52272.185; E: 55288.281
ST-G3	6'X6' NONSETBACK CURB INLET 15+55.35, 0.00' STORM LINE G RIM= 986.22 INV IN = 980.16 (15" HDPE) INV OUT = 979.66 (18" HDPE) N: 52279.967; E: 55570.526



STORM LINE H (9+75 - 15+96.43)

0' 10' 20' 40'
SCALE IN FEET

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MITCHELL ALAN BLAIR
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01-5-22
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REVISIONS

STORM PLAN & PROFILE G
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
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project no.: 021-04157
drawing no.: C_STM02_02104157.dwg
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SHEET
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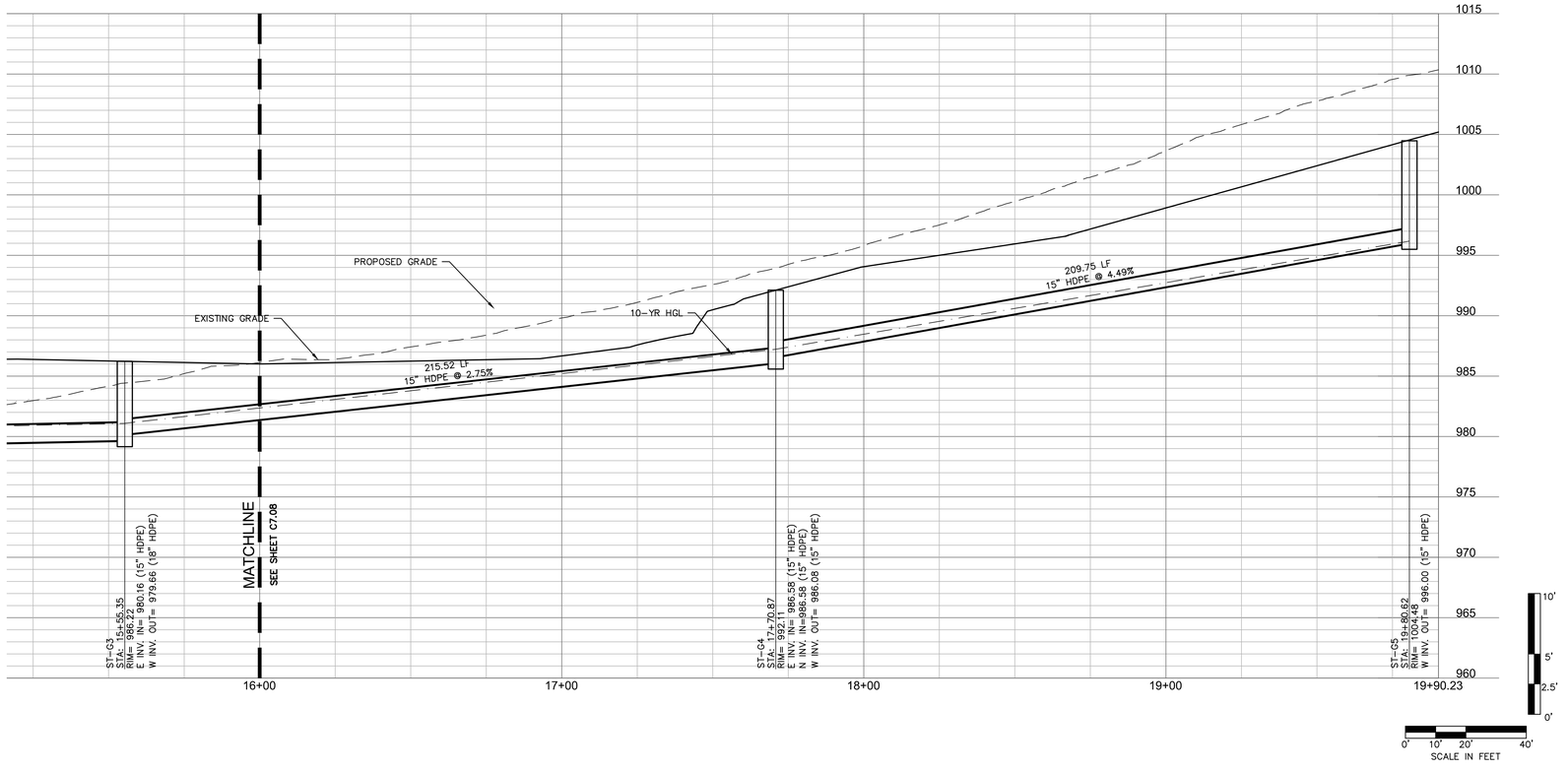
90.23)



LEGEND

- PROPERTY LINE
- LOT LINES
- RIGHT-OF-WAY LINE
- SANITARY SEWER SERVICE
- FUTURE ELECTRICAL LINE
- FUTURE DOMESTIC WATER SERVICE
- FUTURE GAS SERVICE
- FUTURE TELEPHONE SERVICE
- EXISTING GRADE CONTOUR
- FINISHED GRADE CONTOUR
- STORM SEWER
- 10-YEAR HGL
- 100-YEAR HGL

KEYNOTE LEGEND

- XX — PROPOSED STORM STRUCTURE
- CONTRACTOR SHALL PROVIDE 95% COMPACTED FILL TO AN ELEVATION OF 2'-0" (MIN.) OVER THE TOP OF PROPOSED PIPE ELEVATION AND TEMPORARY FILL

STORM STRUCTURE NOTES

1. CONTRACTOR TO PROVIDE STRUCTURAL DETAILS AND CALCULATIONS SEALED BY A LICENSED ENGINEER FOR STRUCTURES GREATER THAN 15' IN DEPTH.
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3. SEE DETAILS IN THESE PLANS FOR INFORMATION ON STORM STRUCTURES.
4. ALL STORM SEWER PIPE TO BE HDPE, RCP CLASS III, OR PRE-APPROVED EQUIVALENT.
5. ALL AREA INLETS SHOULD BE CONSTRUCTED WITH 6" THROAT.

N

0' 10' 20' 40'
SCALE IN FEET

STRUCTURES	
ID	DESCRIPTION
ST-G3	6'X6' NONSETBACK CURB INLET 15+55.35, 0.00' STORM LINE G RIM= 986.22 INV IN = 980.16 (15" HDPE) INV OUT = 979.66 (18" HDPE) N: 52279.967; E: 55570.526
ST-G4	5'X5' NONSETBACK CURB INLET 17+70.87, 0.00' STORM LINE G RIM= 992.11 INV IN = 986.58 (15" HDPE) INV OUT = 986.08 (15" HDPE) N: 52287.420; E: 55785.916
ST-G5	4'X4' NONSETBACK CURB INLET 19+80.62, -0.35' LT STORM LINE G RIM= 1004.48 INV OUT = 996.00 (15" HDPE) N: 52294.174; E: 55995.554

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REVISIONS

STORM PLAN & PROFILE G
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SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
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project no.: 021-04157
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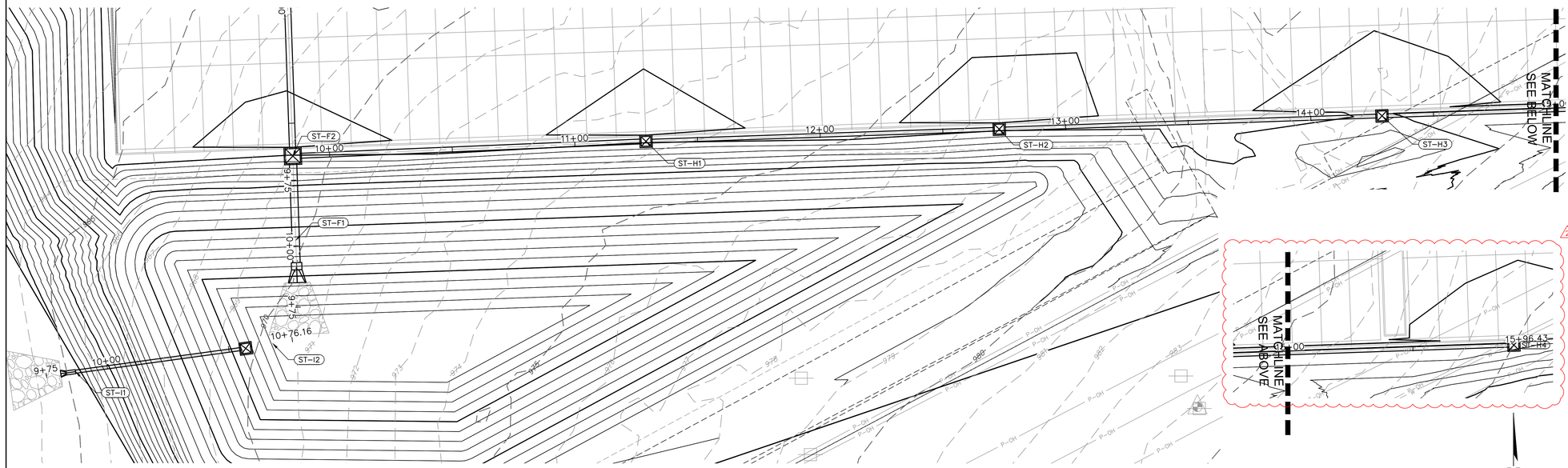

LEGEND

- PROPERTY LINE
- LOT LINES
- RIGHT-OF-WAY LINE
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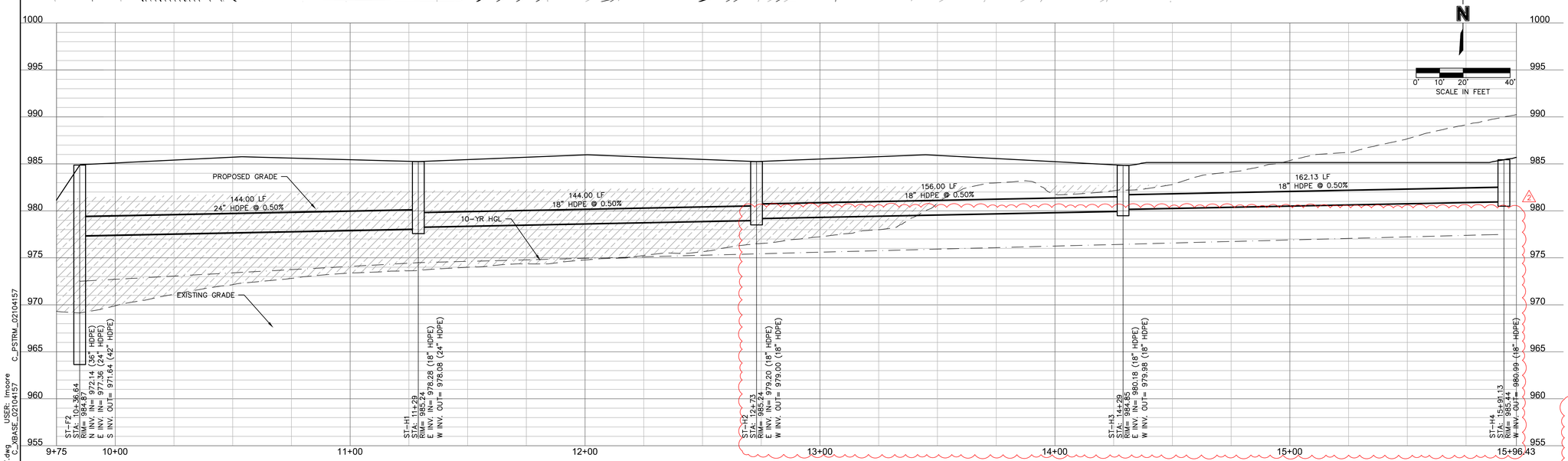
- W — FUTURE DOMESTIC WATER SERVICE
- GAS — FUTURE GAS SERVICE
- COMM — FUTURE TELEPHONE SERVICE
- 985 — EXISTING GRADE CONTOUR
- 990 — FINISHED GRADE CONTOUR
- STORM SEWER
- 10-YEAR HGL
- 100-YEAR HGL

KEYNOTE LEGEND

- (XX) — PROPOSED STORM STRUCTURE
- CONTRACTOR SHALL PROVIDE 95% COMPACTED FILL TO AN ELEVATION OF 2'-0" (MIN.) OVER THE TOP OF PROPOSED PIPE ELEVATION AND TEMPORARY FILL



STORM STRUCTURE NOTES

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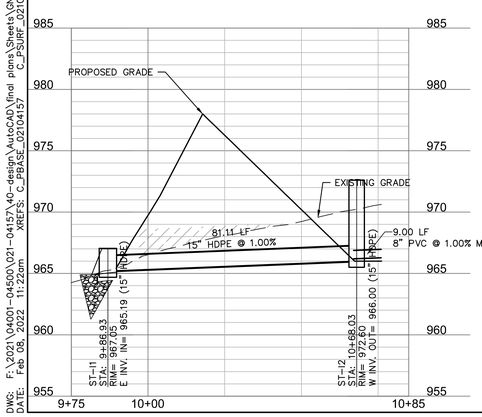
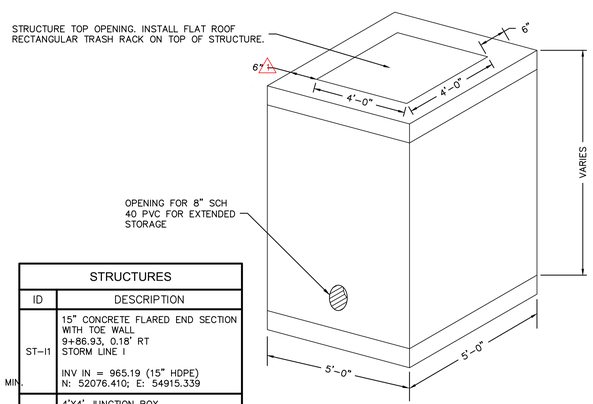
5. ALL AREA INLETS SHOULD BE CONSTRUCTED WITH 6" THROAT.

STRUCTURES	
ID	DESCRIPTION
ST-F2	7'X6' NONSETBACK CURB INLET INSERT 48FTB SNOUT WITH 90° SUMP DEPTH 10+36.64, 0.00' STORM LINE F RIM= 984.87 INV IN = 972.14 (36" HDPE) INV IN = 977.36 (24" HDPE) INV OUT = 971.64 (42" HDPE) N: 52164.302; E: 55003.842
ST-H1	6'X6' NONSETBACK CURB INLET 11+29, 0.00' STORM LINE H RIM= 985.24 INV IN = 978.28 (18" HDPE) INV OUT = 978.08 (24" HDPE) N: 52170.281; E: 55147.721
ST-H2	6'X6' NONSETBACK CURB INLET 12+73, 0.00' RT STORM LINE H RIM= 985.24 INV IN = 979.20 (18" HDPE) INV OUT = 979.00 (18" HDPE) N: 52175.260; E: 55291.635
ST-H3	6'X6' NONSETBACK CURB INLET 14+29, 0.00' RT STORM LINE H RIM= 984.85 INV IN = 980.18 (18" HDPE) INV OUT = 979.98 (18" HDPE) N: 52180.655; E: 55447.542
ST-H4	6'X6' NONSETBACK CURB INLET 15+91.13, 0.00' STORM LINE H RIM= 985.44 INV OUT = 980.99 (18" HDPE) N: 52186.262; E: 55609.570

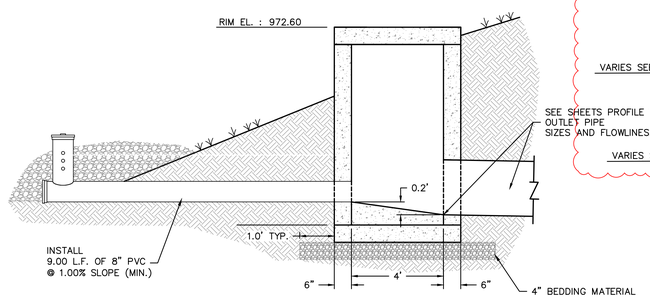
STORM LINE I (9+75 - 10+85)



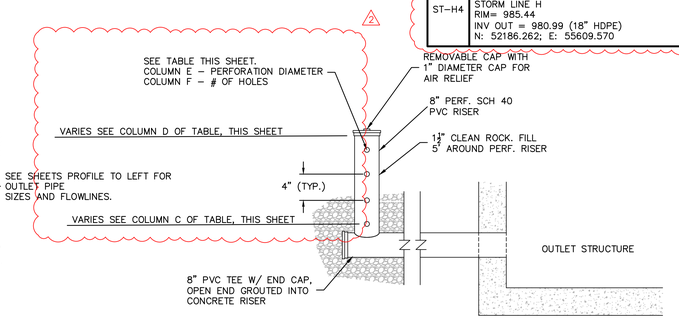
STRUCTURES	
ID	DESCRIPTION
ST-I1	15" CONCRETE FLARED END SECTION WITH TOE WALL 9+86.93, 0.18' RT STORM LINE I INV IN = 965.19 (15" HDPE) N: 52076.410; E: 54915.339
ST-I2	4'X4' JUNCTION BOX REFERENCE DETAIL ON SHEET. 10+68.03, 0.36' RT STORM LINE I RIM= 972.60 INV OUT = 966.00 (15" HDPE) N: 52087.965; E: 54995.617



OUTLET STRUCTURE DETAIL
N.T.S.

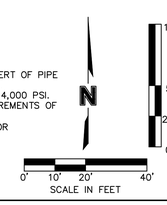


SECTION THROUGH OUTLET STRUCTURE
N.T.S.



PERFORATED RISER PIPE DETAIL

NOTES:
1. BOTTOM TO BE POURED IN PLACE T.S.
2. PIPE TO BE ON GRADE BEFORE BOTTOM IS CONSTRUCTED.
3. RAM-NEK ALL JOINTS (OR EQUAL).
4. #4 BARS @ 10" C.C. VERT. & HOR. IN WALLS & BOTTOM.
5. REINFORCING BARS SHALL BE CUT OR BENT AT PIPE OPENINGS.
6. ALL PIPES SHALL FIT FLUSH WITH INSIDE FACE OF BOX.
7. BOTTOM OF BOX TO BE FILLED WITH CONCRETE TO 6" ABOVE INVERT OF PIPE FORMING CHANNELS TOWARD OUTLET PIPE FROM ALL INLET PIPES.
8. ALL CONCRETE SHALL HAVE 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
9. ALL REINFORCING BARS TO BE DEFORMED BARS AND MEET REQUIREMENTS OF 1966 ASTM STANDARDS NO. A-615-68 MIN. GRADE 40.
10. MUST MAINTAIN 6" CLEARANCE BETWEEN THE PIPE AND WALLS FOR PRECAST BOXES.



OUTLET STRUCTURE AND PERFORATED RISER INFORMATION

A	B	C	D	E	F
DETENTION FACILITY	STRUCTURE ID	BOTTOM PERFORATION ELEVATION	TOP ELEVATION OF PERFORATED PIPE	PERFORATION DIAMETER	# OF PERFORATION HOLES
C1	ST-I2	966.00	971.67	13/16" (0.8")	17

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PHASE I FINAL DEVELOPMENT PLAN

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NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

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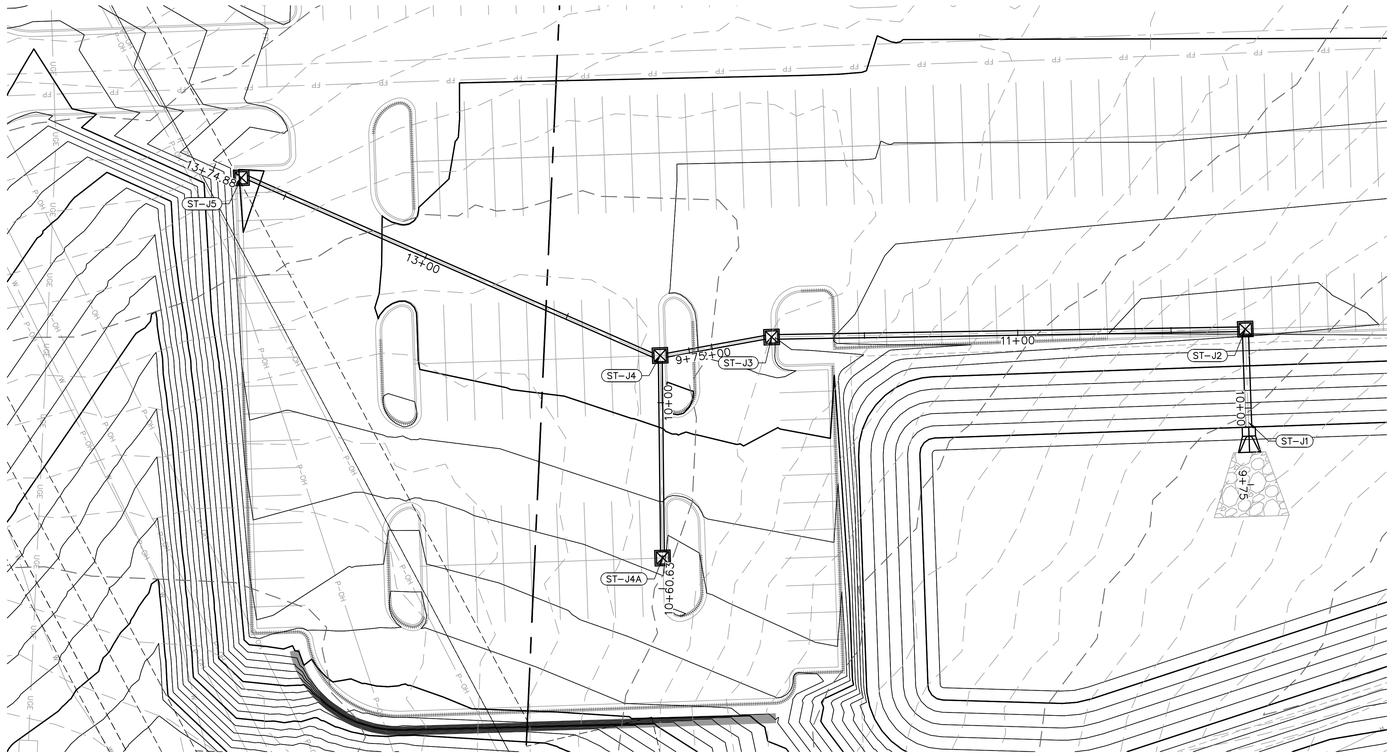

LEGEND

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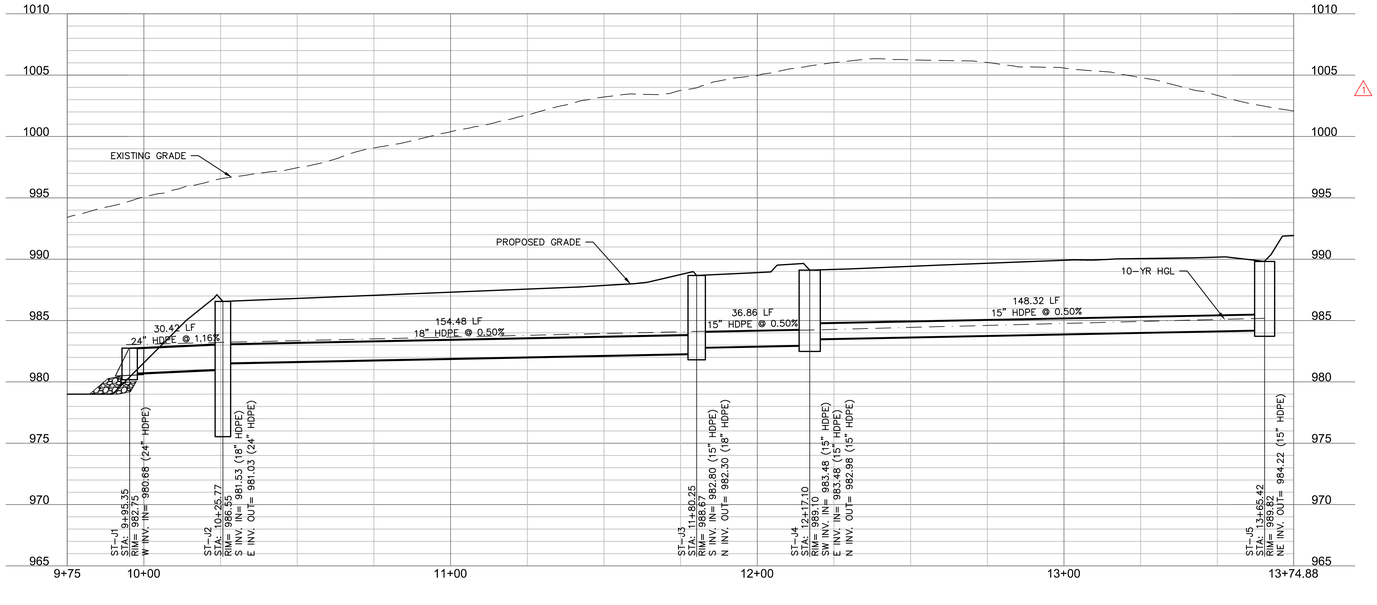
N

0' 10' 20' 40'
SCALE IN FEET

1

STORM LINE J (9+75 - 13+74.88)



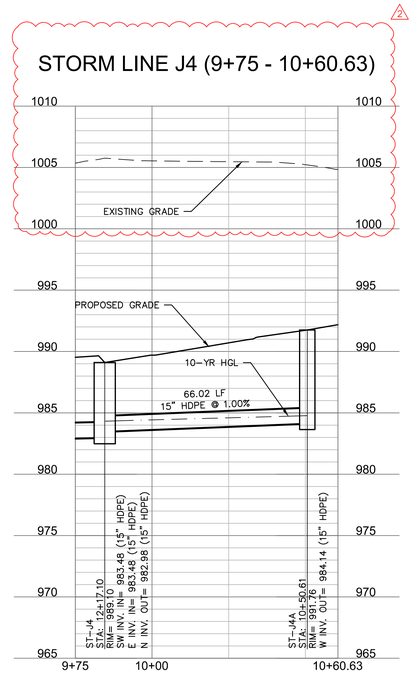
STRUCTURES	
ID	DESCRIPTION
ST–J1	24" CONCRETE FLARED END SECTION WITH TOE WALL 9+95.35, 0.00' STORM LINE J INV IN = 980.68 (24" HDPE) N: 52737.341; E: 55959.859
ST–J2	4'X4' CURB/GRATE INLET INSERT 30F SNOUT WITH 60" SUMP DEPTH 10+25.77, 0.00' STORM LINE J RIM= 986.55 INV IN = 981.53 (18" HDPE) INV OUT = 981.03 (24" HDPE) N: 52736.289; E: 55929.460
ST–J3	4'X4' CURB/GRATE INLET 11+80.25, 0.00' STORM LINE J RIM= 988.67 INV IN = 982.80 (15" HDPE) INV OUT = 982.30 (18" HDPE) N: 52581.835; E: 55932.053
ST–J4	4'X4' CURB/GRATE INLET 12+17.10, 0.00' STORM LINE J RIM= 989.10 INV IN = 983.48 (15" HDPE) INV IN = 983.48 (15" HDPE) INV OUT = 982.98 (15" HDPE) N: 52545.473; E: 55938.064

STRUCTURES	
ID	DESCRIPTION
ST–J4A	4'X4' CURB/GRATE INLET 10+50.61, 0.00' STORM LINE J4 RIM= 991.76 INV OUT = 984.14 (15" HDPE) N: 52546.304; E: 56004.075
ST–J5	4'X4' CURB/GRATE INLET 13+65.42, 0.20' RT STORM LINE J RIM= 989.82 INV OUT = 984.22 (15" HDPE) N: 52408.936; E: 55880.132

10'
5'
2.5'
0'
0' 10' 20' 40'
SCALE IN FEET

2

STORM LINE J4 (9+75 - 10+60.63)



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Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAN
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
1	12.04.2021	CITY COMMENTS
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES
3	01.03.2022	CITY & EVERGY COMMENTS

REVISIONS

STORM PLAN & PROFILE J
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

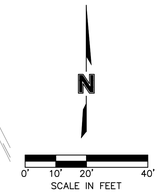
2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: STM02_02104157.dwg
date:

SHEET
C7.11

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_STM02_02104157.dwg USER: lmoore
DATE: Feb 08, 2022 11:23am XREFS: C_PBASE_02104157 C_PSURF_02104157 C_TBLK_02104157 C_XBASE_02104157 C_PSTRM_02104157

STRUCTURES	
ID	DESCRIPTION
EX. ST-G1	EXISTING MAIN STREET STORM STRUCTURE 9+75, 0.00' STORM LINE K RIM= 986.05 INV IN = 976.00 (15" HDPE) N: 52980.741; E: 55925.632
ST-K1	6' I.D. MANHOLE 10+20.50, 0.00' STORM LINE K RIM= 987.44 INV IN = 976.96 (15" HDPE) INV OUT = 976.46 (15" HDPE) N: 52944.576; E: 55898.019
ST-K2	4'X4' JUNCTION BOX REFERENCE DETAIL ON SHEET. 11+35.40, -0.01' LT STORM LINE K RIM= 982.00 INV OUT = 979.00 (15" HDPE) N: 52849.281; E: 55962.205



LEGEND

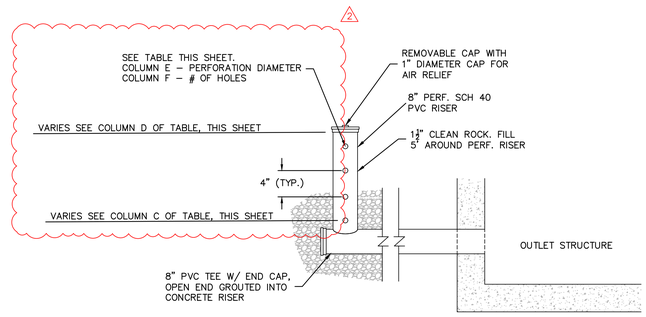
- PROPERTY LINE
- LOT LINES
- RIGHT-OF-WAY LINE
- SS — SANITARY SEWER SERVICE
- E — FUTURE ELECTRICAL LINE
- W — FUTURE DOMESTIC WATER SERVICE
- GAS — FUTURE GAS SERVICE
- COMM — FUTURE TELEPHONE SERVICE
- 999 — EXISTING GRADE CONTOUR
- 999 — FINISHED GRADE CONTOUR
- STORM SEWER
- 10-YEAR HGL
- 100-YEAR HGL

KEYNOTE LEGEND

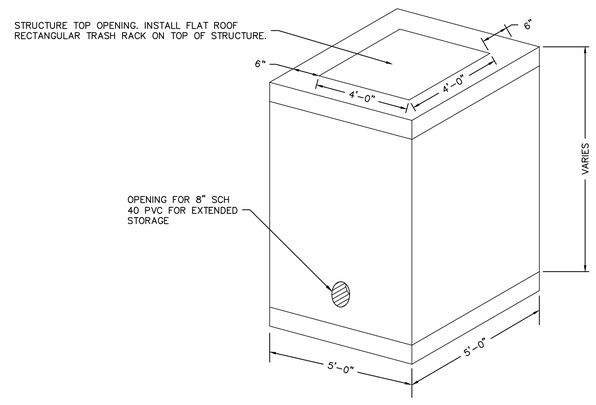
- XX — PROPOSED STORM STRUCTURE
- CONTRACTOR SHALL PROVIDE 95% COMPACTED FILL TO AN ELEVATION OF 2'-0" (MIN.) OVER THE TOP OF PROPOSED PIPE ELEVATION AND TEMPORARY FILL

STORM STRUCTURE NOTES

1. CONTRACTOR TO PROVIDE STRUCTURAL DETAILS AND CALCULATIONS SEALED BY A LICENSED ENGINEER FOR STRUCTURES GREATER THAN 15' IN DEPTH.
2. NORTHING & EASTINGS SHOWN REPRESENT CENTER OF INLET STRUCTURES AND ENDS OF FLARED END SECTIONS.
3. SEE DETAILS IN THESE PLANS FOR INFORMATION ON STORM STRUCTURES.
4. ALL STORM SEWER PIPE TO BE HDPE, RCP CLASS III, OR PRE-APPROVED EQUIVALENT.
5. ALL AREA INLETS SHOULD BE CONSTRUCTED WITH 6" THROAT.



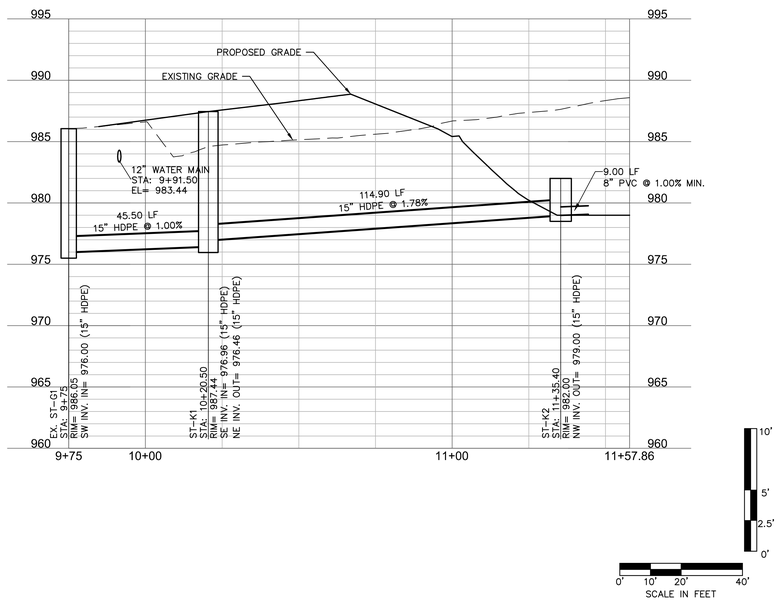
PERFORATED RISER PIPE DETAIL
N.T.S.

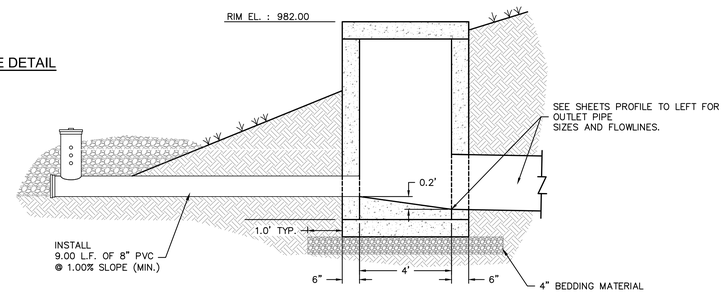


OUTLET STRUCTURE DETAIL
N.T.S.

NOTES:
1. BOTTOM TO BE POURED IN PLACE.
2. PIPE TO BE ON GRADE BEFORE BOTTOM IS CONSTRUCTED.
3. RAM-NEK ALL JOINTS (OR EQUAL).
4. #4 BARS @ 10" C.C. VERT. & HOR. IN WALLS & BOTTOM.
5. REINFORCING BARS SHALL BE CUT OR BENT AT PIPE OPENINGS.
6. ALL PIPES SHALL FIT FLUSH WITH INSIDE FACE OF BOX.
7. BOTTOM OF BOX TO BE FILLED WITH CONCRETE TO 6" ABOVE INVERT OF PIPE FORMING CHANNELS TOWARD OUTLET PIPE FROM ALL INLET PIPES.
8. ALL CONCRETE SHALL HAVE 28 DAY COMPRESSIVE STRENGTH OF 4,000 PSI.
9. ALL REINFORCING BARS TO BE DEFORMED BARS AND MEET REQUIREMENTS OF 1966 ASTM STANDARDS NO. A-615-68 MIN. GRADE 40.
10. MUST MAINTAIN 5" CLEARANCE BETWEEN THE PIPE AND WALLS FOR PRECAST BOXES.

STORM LINE K (9+75 - 11+57.86)





SECTION THROUGH OUTLET STRUCTURE
N.T.S.

OUTLET STRUCTURE AND PERFORATED RISER INFORMATION					
A	B	C	D	E	F
DETENTION FACILITY	STRUCTURE ID	BOTTOM PERFORATION ELEVATION	TOP ELEVATION OF PERFORATED PIPE	PERFORATION DIAMETER	# OF PERFORATION HOLES
B5	ST-K2	979.00	980.00	1-5/8" (1.6")	3

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SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAN
NUMBER PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

STORM PLAN & PROFILE K
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_STM02_02104157.dwg
date:

SHEET
C7.12

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_STM02_02104157.dwg USER: lmoore
DATE: Feb 08, 2022 11:23am XREFS: C_PBASE_02104157 C_PSURF_02104157 C_TBLK_02104157 C_XBASE_02104157 C_PSTRM_02104157

10 YEAR STORM CALCULATIONS

STORM SEWER PIPE AND STRUCTURE TABLE

TITLE: Lee's Summit Logistics
JOB #: 021-04157
DESIGN CONDITIONS: PRIVATE - 10 YEAR STORM EVENT

STRUCTURES		RUNOFF CALCULATIONS																	PIPE DESIGN													
FROM	TO	DIRECT AREA (ACRES)	TOTAL AREA (ACRES)	C	KC (K=1.0)	Tc (MIN)	FLOW TIME (MIN)	INTENSITY (IN/HR)	DESIGN Q (CFS)	DESCRIPTION	PIPE LENGTH (L.F.)	PIPE SLOPE (%)	PIPE DIA (IN)	Q FULL (CFS)	PIPE AREA (SQ.FT.)	V FULL (F/S)	DESIGN V (F/S)	Hw/D	MH TOP ELEVATION	UPSTREAM FLOWLINE	DOWNSTREAM FLOWLINE	DOWNSTREAM WATER ELEVATION	FRICTION HEAD (h f)	ENTRY LOSS COEFFICIENT (k)	ACTUAL ENTRY LOSS (k)	ENTRY LOSS (h m)	h f + h m (FT)	HW, INLET CONTROL	HW, OUTLET CONTROL	HYDRAULIC GRADE ELEV.	HYDRAULIC GRADE (MAX)	Comments
B8		0.26		0.90	0.90	5.0		7.35	1.72										989.21											984.59	987.71	
	B7		0.26	0.90	0.90	5.0	0.46	7.35	1.72		149.63	1.75	15	8.57	1.23	6.98	5.46	0.73		983.67	981.05	981.69	0.11	0.40	1.00	0.46	0.57	984.59	983.67			
B7		0.15		0.90	0.90	5.0		7.35	0.99										986.99											981.57	985.49	
	B6		0.41	0.90	0.90	5.5	0.10	7.21	2.66		36.71	1.75	15	8.57	1.23	6.98	6.16	0.82		980.55	979.91	980.72	0.06	0.40	0.40	0.24	0.30	981.57	981.01			
B6		0.25		0.90	0.90	5.0		7.35	1.65										986.66											980.73	985.16	
	B5		0.66	0.90	0.90	5.6	0.13	7.18	4.27		62.45	2.75	15	10.74	1.23	8.75	8.24	1.06		979.41	977.69	978.66	0.28	0.40	0.40	0.42	0.70	980.73	979.41			
B5		0.00		0.90	0.90	5.0		7.35	0.00										981.96											978.50	980.46	
	B4		0.66	0.90	0.90	5.7	0.26	7.15	4.25		108.57	1.75	15	8.57	1.23	6.98	6.95	1.05		977.19	975.29	976.33	0.47	0.40	0.40	0.30	0.78	978.50	977.19			
B4		0.24		0.90	0.90	5.0		7.35	1.59										983.51											976.50	982.01	
	B3		0.90	0.90	0.90	5.9	0.23	7.07	5.73		101.11	1.75	15	8.57	1.23	6.98	7.47	1.36		974.79	973.02	974.25	0.81	0.40	0.40	0.35	1.15	976.50	975.40			
B3		0.11		0.90	0.90	5.0		7.35	0.73										982.70											982.46	981.20	
	B2		11.21	0.90	0.90	6.2	0.09	7.01	70.71		116.86	6.00	30	100.74	4.91	20.52	22.17	3.98		972.52	965.51	968.28	3.50	0.40	0.40	3.05	6.55	982.46	974.83			
B2		0.32		0.90	0.90	5.0		7.35	2.12										973.04											971.05	971.54	
	B1		11.21	0.90	0.90	6.3	0.03	6.98	70.46		23.41	1.75	36	88.47	7.07	12.52	13.87	1.99		965.08	964.67	967.33	0.26	0.40	0.40	1.19	1.46	971.05	968.79			
					0.00			9.31																								
C3		1.84		0.90	0.90	5.0		7.35	12.18										983.89			976.66								980.70	982.39	
	C2		1.84	0.90	0.90	5.0	1.25	7.35	12.18		420.00	0.50	24	16.04	3.14	5.11	5.61	0.97		978.76	976.66		1.23	0.40	1.00	0.49	1.72	980.70	978.76			
C2		1.80		0.90	0.90	5.0		7.35	11.91										984.09			974.96								979.00	982.59	
	C1		3.64	0.90	0.90	6.2	0.76	6.99	22.89		299.07	0.50	30	29.08	4.91	5.92	6.55	1.02		976.46	974.96		0.94	0.40	1.00	0.67	1.60	979.00	976.46			
C1		0.14		0.90	0.90	5.0		7.35	0.93										986.25			973.70								979.56	984.75	
	B3		10.20	0.90	0.90	7.0	0.12	6.78	62.24		75.97	1.00	36	66.88	7.07	9.46	10.72	1.70		974.46	973.70		0.67	0.40	0.40	0.71	1.38	979.56	974.46			
					0.00			9.31											982.7													
D4		2.43		0.90	0.90	5.0		7.35	16.08										986.70											982.61	985.20	
	D3		2.43	0.90	0.90	5.0	0.82	7.35	16.08		300.00	0.50	30	29.08	4.91	5.92	6.06	0.84		980.51	979.01	981.02	0.46	0.40	1.00	0.57	1.04	982.61	982.05			
D3		2.02		0.90	0.90	5.0		7.35	13.37										985.90											981.96	984.40	
	D2		4.45	0.90	0.90	5.8	0.74	7.11	28.46		300.00	0.50	30	29.08	4.91	5.92	6.74	1.21		978.81	977.31	980.23	1.46	0.40	0.40	0.28	1.74	981.82	981.96			
D2		1.72		0.90	0.90	5.0		7.35	11.38										985.98											980.29	984.48	
	D1		6.17	0.90	0.90	6.6	0.66	6.90	38.31		296.19	0.50	36	47.29	7.07	6.69	7.43	1.06		977.11	975.63	978.69	0.98	0.40	0.40	0.34	1.33	980.29	980.02			
D1		0.00		0.90	0.90	5.0		7.35	0.00										987.10											978.34	985.60	
	C1		6.42	0.90	0.90	7.2	0.07	6.72	38.84		33.04	0.50	36	47.29	7.07	6.69	7.45	1.07		975.13	974.96	977.67	0.11	0.40	0.40	0.34	0.46	978.34	978.13			
E1		0.25		0.90	0.90	5.0		7.35	1.65										988.44											984.14	986.94	
	D1		0.25	0.90	0.90	7.3	0.40	6.70	1.51		125.00	1.75	15	8.57	1.23	6.98	5.25	0.72		983.24	981.05	982.04	0.07	0.40	1.00	0.43	0.50	984.14	983.24			
F7		0.04		0.90	0.90	5.0		7.35	0.26										989.56											984.84	988.06	
	F6		0.04	0.90	0.90	7.7	0.23	6.60	0.24		34.92	1.00	15	6.48	1.23	5.28	2.53	0.67		984.00	983.65	983.91	0.00	0.40	1.00	0.10	0.10	984.84	984.01			
F6		0.23		0.90	0.90	5.0		7.35	1.52										989.33											984.05	987.83	
	F5		0.27	0.90	0.90	7.9	0.40	6.55	1.59		104.17	1.00	15	6.48	1.23	5.28	4.37	0.72		983.15	982.11	982.78	0.06	0.40	1.00	0.30	0.36	984.05	983.15			
F5		0.00		0.90	0.90	5.0		7.35	0.00										988.89											982.51	987.39	
	F4		0.27	0.90	0.90	8.3	0.22	6.45	1.57		57.81	1.00	15	6.48	1.23	5.28	4.34	0.72		981.61	981.03	981.70	0.03	0.40	0.40	0.12	0.15	982.51	981.85			
F4		0.23		0.90	0.90	5.0		7.35	1.52										987.32											981.59	985.82	
	F3		0.50	0.90	0.90	8.6	0.32	6.40	2.88		97.95	1.00	15	6.48	1.23	5.28	5.12	0.85		980.53	979.55	980.47	0.20	0.40	1.00	0.41	0.60	981.59	981.08			
F3		1.06		0.90	0.90	5.0		7.35	7.01										986.41											978.74	984.91	
	F2		5.72	0.90	0.90	8.9	0.18	6.32	32.56		97.87	1.00	30	41.13	4.91	8.38	9.27	1.37		975.31	974.33	976.98	0.62	0.40	0.40	0.53	1.16	978.74	978.14			
F2		0.65		0.90	0.90	5.0		7.35	4.30										984.87											977.60	983.37	
	F1		8.31	0.90	0.90	9.0	0.06	6.28	47.00		34.50	1.00	36	66.88	7.07	9.46	10.23	1.26		973.83	973.48	975.97	0.17	0.40	0.40	0.65	0.82	977.60	976.79			
G5		0.24		0.90	0.90	5.0		7.35	1.59										1004.48											996.89	1002.98	
	G4		0.24	0.90	0.90	9.1	0.49	6.27	1.35		209.36	4.50	15	13.74	1.23	11.20	7.15	0.71		996.00	986.58	987.07	0.09	0.40	1.00	0.79	0.89	996.89	996.00			
G4		0.32		0.90	0.90	5.0		7.35	2.12										993.22											987.17	991.72	
	G3		0.56	0.90	0.90	9.6	0.47	6.16	3.11		215.13	2.75	15	10.74	1.23	8.75	7.56	0.87		986.08	980.16	980.98	0.50	0.40	1.00	0.89	1.39	987.17	986.08			
G3		0.46		0.90	0.90	5.0		7.35	3.04										987.20											981.06	985.70	
	G2		1.02	0.90	0.90	10.1	1.02	6.06	5.57		282.75	0.50	18	7.45	1.77	4.21	4.61	0.93		979.66	978.25	979.67	0.80	0.40	1.00	0.33	1.13	981.06	980.81			
G2		2.08		0.90	0.90	5.0		7.35	13.76										986.05											979.87	984.55	
	G1		3.10	0.90	0.90	11.1	0.39	5.86	16.34		144.00	0.50	30	29.08	4.91	5.92	6.08	0.85		977.75	977.03	979.05	0.23	0.40	1.00	0.57	0.81	979.87	979.86			
G1		1.06		0.90	0.90	5.0		7.35	7.01										986.07											978.98	984.57	
	F3		4.16	0.90	0.90	11.5	0.37	5.78	21.64		144.00	0.50	30	29.08	4.91	5.92	6.48	0.98		976.53	975.81	978.05	0.40	0.40	0.40	0.26	0.66	978.98	978.72			
H2		1.33		0.90	0.90	5.0		7.35	8.80										985.24											980.89	983.74	
	H1		1.33	0.90	0.90	11.9	0.50	5.71	6.83		144.00	0.50	18	7.45	1.77	4.21	4.77	1.07		979.00	978.28	979.92	0.62	0.40	1.00	0.35	0.97	980.60	980.89			
H1		0.61		0.90	0.90	5.0		7.35	4.04										985.24											979.81	983.74	
	F2		1.94	0.90	0.90	12.4	0.45	5.62	9.81		144.00	0.50	24	16.04	3.14	5.11	5.35	0.86		978.08	977.36	979.13	0.27	0.40	0.40	0.18	0.45	979.81	979.58			
J5		0.44		0.90	0.90	5.0		7.35	2.91										989.82											985.18	988.32	
	J4		0.44	0.90	0.90	12.8	0.67	5.54	2.19		147.41	0.50	15	4.58	1.23	3.73	3.69	0.77		984.22	983.48	984.39	0.17	0.40	1.00	0.21	0.38	985.18	984.77			
J4		0.23		0.90	0.90	5.0		7.35	1.52										989.10											984.38	987.60	
	J3		0.83	0.90	0.90	13.5	0.15	5.42	4.05		36.86	0.50	15	4.58	1.23	3.73	4.21	1.02		982.98	982.80	984.12	0.15	0.40	0.40	0.11	0.26	984.25	984.38			
J3		0.60		0.90	0.90	5.0		7.35	3.97										988.67											984.23	987.17	
	J2		1.43	0.90	0.90	13.6	0.54	5.40	6.95		154.84	0.50	18	7.45	1.77	4.21	4.78	1.08		982.30	981.53	983.19	0.68	0.40	1.00	0.35	1.04	983.92	984.23			
J2		0.95		0.90	0.90	5.0		7.35	6.29										986.55											983.25	985.05	
	J1		2.38	0.90	0.90	14.2	0.07	5.31	11.37		30.82	1.15	24	24.33	3.14	7.74	7.60	0.93		981.03	980.68	982.28	0.08	0.40	1.00	0.90	0.98	982.89	983.25			
J4A		0.16		0.90	0.90	5.0		7.35	1.06										991.75											984.99	990.25	
	J4		0.16	0.90	0.90	14.2	0.31	5.30	0.76		66.02	1.00	15	6.48	1.23	5.28	3.54	0.68		984.14	983.48	984.41	0.01	0.40	1.00	0.19	0.20	984.99	984.61			

100 YEAR STORM CALCULATIONS

STORM SEWER PIPE AND STRUCTURE TABLE

TITLE: Lee's Summit Logistics
JOB #: 021-04157
DESIGN CONDITIONS: PRIVATE - 100 YEAR STORM EVENT

STRUCTURES		RUNOFF CALCULATIONS																	PIPE DESIGN													
FROM	TO	DIRECT AREA (ACRES)	TOTAL AREA (ACRES)	C	KC (K=1.25)	Tc (MIN)	FLOW TIME (MIN)	INTENSITY (IN/HR)	DESIGN Q (CFS)	DESCRIPTION	PIPE LENGTH (L.F.)	PIPE SLOPE (%)	PIPE DIA (IN)	Q FULL (CFS)	PIPE AREA (SQ.FT.)	V FULL (F/S)	DESIGN V (F/S)	Hw/D	MH TOP ELEVATION	UPSTREAM FLOWLINE	DOWNSTREAM FLOWLINE	DOWNSTREAM WATER ELEVATION	FRICTION HEAD (h f)	ENTRY LOSS COEFFICIENT (k)	ACTUAL ENTRY LOSS (k)	ENTRY LOSS (h m)	h f + h m (FT)	HW, INLET CONTROL	HW, OUTLET CONTROL	HYDRAULIC GRADE ELEV.	HYDRAULIC GRADE (MAX)	Comments
B8		0.26		0.90	1.00	5.0		10.32	2.68										989.21											984.70	987.71	
	B7		0.26	0.90	1.00	5.0	0.40	10.32	2.68		149.63	1.75	15	8.57	1.23	6.98	6.18	0.82		983.67	981.05	981.86	0.26	0.40	1.00	0.59	0.85	984.70	983.67			
B7		0.15		0.90	1.00	5.0		10.32	1.55										986.99											981.85	985.49	
	B6		0.41	0.90	1.00	5.4	0.09	10.16	4.16		36.71	1.75	15	8.57	1.23	6.98	6.93	1.04		980.55	979.91	980.94	0.15	0.40	0.40	0.30	0.45	981.85	981.39			
B6		0.25		0.90	1.00	5.0		10.32	2.58										986.66											981.43	985.16	
	B5		0.66	0.90	1.00	5.5	0.11	10.12	6.68		62.45	2.75	15	10.74	1.23	8.75	9.21	1.61		979.41	977.69	978.92	0.68	0.40	0.40	0.53	1.20	981.43	980.13			
B5		0.00		0.90	1.00	5.0		10.32	0.00										981.96											979.20	980.46	
	B4		0.66	0.90	1.00	5.6	0.23	10.08	6.65		108.57	1.75	15	8.57	1.23	6.98	7.70	1.61		977.19	975.29	976.64	1.16	0.40	0.40	0.37	1.53	979.20	978.17			
B4		0.24		0.90	1.00	5.0		10.32	2.48										983.51											977.76	982.01	
	B3		0.90	0.90	1.00	5.8	0.23	9.98	8.99		101.11	1.75	15	8.57	1.23	6.98	7.32	2.38		974.79	973.02	974.85	1.98	0.40	0.40	0.33	2.31	977.76	977.16			
B3		0.11		0.90	1.00	5.0		10.32	1.14										982.70											#VALUE!	981.20	
	B2		11.21	0.90	1.00	6.1	0.09	9.90	110.93		116.86	6.00	30	100.74	4.91	20.52	22.60	8.81		972.52	965.51	#VALUE!	8.61	0.40	0.40	3.17	11.78	994.54	#VALUE!			
B2		0.32		0.90	1.00	5.0		10.32	3.30										973.04											976.84	971.54	
	B1		11.21	0.90	1.00	6.2	0.02	9.86	110.56		23.41	1.75	36	88.47	7.07	12.52	15.64	3.92		965.08	964.67	968.31	0.65	0.40	0.40	1.52	2.17	976.84	970.47			
					0.00			12.93																								
C3		1.84		0.90	1.00	5.0		10.32	18.99										983.89			976.66								981.56	982.39	
	C2		1.84	0.90	1.00	5.0	1.16	10.32	18.99		420.00	0.50	24	16.04	3.14	5.11	6.05	1.40		978.76	976.66		2.99	0.40	1.00	0.57	3.56	981.56	978.76			
C2		1.80		0.90	1.00	5.0		10.32	18.58										984.09			974.96								980.27	982.59	
	C1		3.64	0.90	1.00	6.2	0.68	9.86	35.90		299.07	0.50	30	29.08	4.91	5.92	7.31	1.52		976.46	974.96		2.31	0.40	1.00	0.83	3.14	980.27	976.46			
C1		0.14		0.90	1.00	5.0		10.32	1.45										986.25			973.70								984.13	984.75	
	B3		10.20	0.90	1.00	6.8	0.09	9.61	98.02		75.97	1.00	36	66.88	7.07	9.46	13.87	3.22		974.46	973.70		1.65	0.40	0.40	1.19	2.85	984.13	974.46			
					0.00			12.93											982.7													
D4		2.43		0.90	1.00	5.0		10.32	25.08										986.70											983.47	985.20	
	D3		2.43	0.90	1.00	5.0	0.75	10.32	25.08		300.00	0.50	30	29.08	4.91	5.92	6.65	1.09		980.51	979.01	981.66	1.13	0.40	1.00	0.69	1.82	983.23	983.47			
D3		2.02		0.90	1.00	5.0		10.32	20.85										985.90											985.00	984.40	
	D2		4.45	0.90	1.00	5.8	0.55	10.02	44.58		300.00	0.50	30	29.08	4.91	5.92	9.08	1.98		978.81	977.31	980.92	3.57	0.40	0.40	0.51	4.08	983.77	985.00			
D2		1.72		0.90	1.00	5.0		10.32	17.75										985.98											982.79	984.48	
	D1		6.17	0.90	1.00	6.3	0.58	9.81	60.51		296.19	0.50	36	47.29	7.07	6.69	8.56	1.64		977.11	975.63	979.89	2.45	0.40	0.40	0.46	2.91	982.04	982.79			
D1		0.00		0.90	1.00	5.0		10.32	0.00										987.10											980.17	985.60	
	C1		6.42	0.90	1.00	6.9	0.06	9.60	61.60		33.04	0.50	36	47.29	7.07	6.69	8.72	1.68		975.13	974.96	978.60	0.28	0.40	0.40	0.47	0.76	980.17	979.35			
E1		0.25		0.90	1.00	5.0		10.32	2.58										988.44											984.23	986.94	
	D1		0.25	0.90	1.00	6.9	0.35	9.57	2.39		125.00	1.75	15	8.57	1.23	6.98	5.99	0.79		983.24	981.05	982.14	0.17	0.40	1.00	0.56	0.73	984.23	983.24			
F7		0.04		0.90	1.00	5.0		10.32	0.41										989.56											984.84	988.06	
	F6		0.04	0.90	1.00	7.3	0.20	9.45	0.38		34.92	1.00	15	6.48	1.23	5.28	2.89	0.67		984.00	983.65	983.97	0.00	0.40	1.00	0.13	0.13	984.84	984.10			
F6		0.23		0.90	1.00	5.0		10.32	2.37										989.33											984.16	987.83	
	F5		0.27	0.90	1.00	7.5	0.35	9.38	2.53		104.17	1.00	15	6.48	1.23	5.28	4.95	0.81		983.15	982.11	982.97	0.16	0.40	1.00	0.38	0.54	984.16	983.51			
F5		0.00		0.90	1.00	5.0		10.32	0.00										988.89											982.61	987.39	
	F4		0.27	0.90	1.00	7.8	0.20	9.26	2.50		57.81	1.00	15	6.48	1.23	5.28	4.94	0.80		981.61	981.03	981.89	0.09	0.40	0.40	0.15	0.24	982.61	982.12			
F4		0.23		0.90	1.00	5.0		10.32	2.37										987.32											981.93	985.82	
	F3		0.50	0.90	1.00	8.0	0.29	9.20	4.60		97.95	1.00	15	6.48	1.23	5.28	5.72	1.12		980.53	979.55	980.76	0.50	0.40	1.00	0.51	1.01	981.93	981.77			
F3		1.06		0.90	1.00	5.0		10.32	10.94										986.41											981.47	984.91	
	F2		5.72	0.90	1.00	8.3	0.15	9.10	52.07		97.87	1.00	30	41.13	4.91	8.38	10.61	2.46		975.31	974.33	977.99	1.59	0.40	0.40	0.70	2.29	981.47	980.28			
F2		0.65		0.90	1.00	5.0		10.32	6.71										984.87											980.35	983.37	
	F1		8.31	0.90	1.00	8.5	0.05	9.05	75.24		34.50	1.00	36	66.88	7.07	9.46	10.64	2.17		973.83	973.48	977.12	0.44	0.40	0.40	0.70	1.15	980.35	978.26			
G5		0.24		0.90	1.00	5.0		10.32	2.48										1004.48											996.96	1002.98	
	G4		0.24	0.90	1.00	8.5	0.43	9.04	2.17		209.36	4.50	15	13.74	1.23	11.20	8.16	0.77		996.00	986.58	987.21	0.24	0.40	1.00	1.04	1.27	996.96	996.00			
G4		0.32		0.90	1.00	5.0		10.32	3.30										993.22											987.57	991.72	
	G3		0.56	0.90	1.00	9.0	0.42	8.90	4.99		215.13	2.75	15	10.74	1.23	8.75	8.57	1.20		986.08	980.16	981.21	1.30	0.40	1.00	1.14	2.44	987.57	986.08			
G3		0.46		0.90	1.00	5.0		10.32	4.75										987.20											982.80	985.70	
	G2		1.02	0.90	1.00	9.4	0.93	8.77	8.95		282.75	0.50	18	7.45	1.77	4.21	5.06	1.35		979.66	978.25	980.33	2.08	0.40	1.00	0.40	2.47	981.69	982.80			
G2		2.08		0.90	1.00	5.0		10.32	21.47										986.05											981.07	984.55	
	G1		3.10	0.90	1.00	10.3	0.36	8.50	26.36		144.00	0.50	30	29.08	4.91	5.92	6.70	1.13		977.75	977.03	979.77	0.60	0.40	1.00	0.70	1.30	980.57	981.07			
G1		1.06		0.90	1.00	5.0		10.32	10.94										986.07											980.31	984.57	
	F3		4.16	0.90	1.00	10.7	0.34	8.40	34.96		144.00	0.50	30	29.08	4.91	5.92	7.12	1.48		976.53	975.81	978.95	1.05	0.40	0.40	0.32	1.37	980.23	980.31			
H2		1.33		0.90	1.00	5.0		10.32	13.73										985.24											982.64	983.74	
	H1		1.33	0.90	1.00	11.0	0.38	8.31	11.05		144.00	0.50	18	7.45	1.77	4.21	6.26	1.71		979.00	978.28	980.42	1.61	0.40	1.00	0.61	2.22	981.56	982.64			
H1		0.61		0.90	1.00	5.0		10.32	6.30										985.24											980.56	983.74	
	F2		1.94	0.90	1.00	11.4	0.41	8.21	15.93		144.00	0.50	24	16.04	3.14	5.11	5.80	1.18		978.08	977.36	979.63	0.72	0.40	0.40	0.21	0.93	980.44	980.56			
J5		0.44		0.90	1.00	5.0		10.32	4.54										989.82											985.41	988.32	
	J4		0.44	0.90	1.00	11.8	0.60	8.10	3.56		147.41	0.50	15	4.58	1.23	3.73	4.12	0.94		984.22	983.48	984.69	0.45	0.40	1.00	0.26	0.72	985.39	985.41			
J4		0.23		0.90	1.00	5.0		10.32	2.37										989.10											985.14	987.60	
	J3		0.83	0.90	1.00	12.4	0.11	7.95	6.60		36.86	0.50	15	4.58	1.23	3.73	5.38	1.59		982.98	982.80	984.57	0.39	0.40	0.40	0.18	0.57	984.97	985.14			
J3		0.60		0.90	1.00	5.0		10.32	6.19										988.67											986.13	987.17	
	J2		1.43	0.90	1.00	12.5	0.40	7.92	11.33		154.84	0.50	18	7.45	1.77	4.21	6.41	1.76		982.30	981.53	983.67	1.82	0.40	1.00	0.64	2.46	984.94	986.13			
J2		0.95		0.90	1.00	5.0		10.32	9.81										986.55											983.97	985.05	
	J1		2.38	0.90	1.00	12.9	0.06	7.83	18.63		30.82	1.15	24	24.33	3.14	7.74	8.51	1.37		981.03	980.68	982.63	0.21	0.40	1.00	1.13	1.34	983.77	983.97			
J4A		0.16		0.90	1.00	5.0		10.32	1.65										991.75											985.02	990.25	
	J4		0.16	0.90	1.00	13.0	0.27	7.81	1.25		66.02	1.00	15	6.48	1.23	5.28	4.08	0.70		984.14	983.48	984.49	0.03	0.40	1.00	0.26	0.28	985.02	984.77			

olsson
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Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL
PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN BLEAK
NUMBER PE-2009016764
02-8-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

STORM CALCULATIONS
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

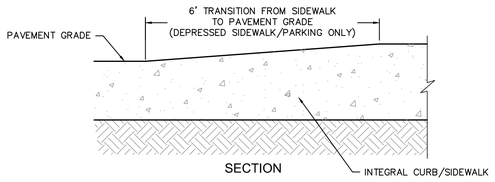
LEE'S SUMMIT, MISSOURI

2021

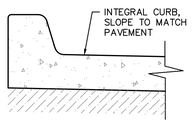
drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: STM01_02104157.dwg
date:

SHEET
C7.13

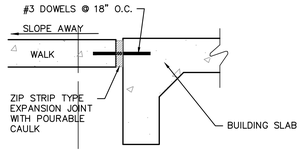
DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_STM01_02104157.dwg USER: lmoore
DATE: Feb 08, 2022 11:24am XREFS: C_PBASE_02104157 C_PSURF_02104157 C_TBLK_02104157 C_PSTRM_02104157 C_XBASE_02104157



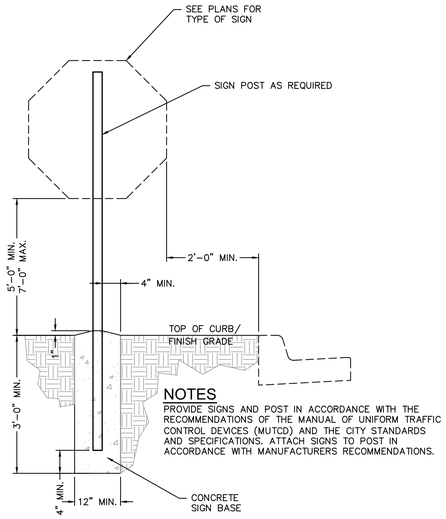
DEPRESSED SIDEWALK TRANSITION DETAIL



INTEGRAL CONCRETE
CURB & GUTTER DETAIL

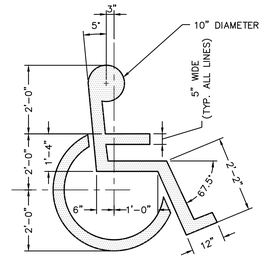


SIDEWALK TO BUILDING
SLAB CONNECTION DETAIL
NOT TO SCALE



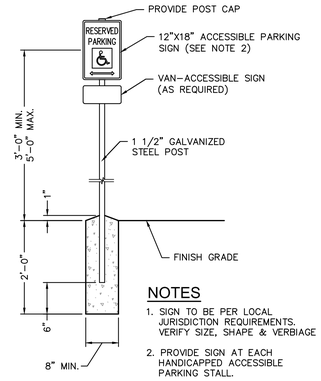
NOTES
PROVIDE SIGNS AND POST IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE CITY STANDARDS AND SPECIFICATIONS. ATTACH SIGNS TO POST IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

TYPICAL STREET SIGN DETAIL
NOT TO SCALE



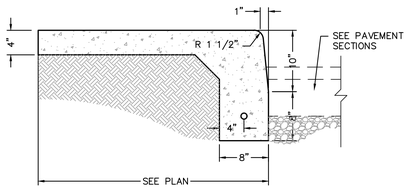
PROVIDE PAINTED SYMBOL AT EACH DESIGNATED ACCESSIBLE PARKING STALL. CENTER SYMBOL IN EACH STALL.

ACCESSIBLE PARKING SYMBOL
NOT TO SCALE



NOTES
1. SIGN TO BE PER LOCAL JURISDICTION REQUIREMENTS. VERIFY SIZE, SHAPE & VERBIAGE
2. PROVIDE SIGN AT EACH HANDICAPPED ACCESSIBLE PARKING STALL.

ACCESSIBLE PARKING
SPACE SIGNAGE
NOT TO SCALE

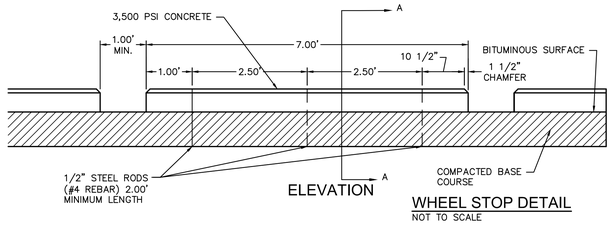


GENERAL NOTES:

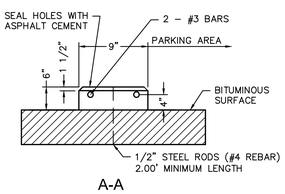
1. 3/4" ISOLATION JOINTS WITH 5/8" DIA. X 2' SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 1" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. FIX DOWEL BARS WITH BAR SUPPORTS.
4. DEPTH OF CURB SHALL BE A MINIMUM OF 8" THROUGH HANDICAP ACCESSIBLE RAMP.

"TURN DOWN" INTEGRAL CURB
NOT TO SCALE

NOTE:
ANCHOR RODS TO BE SLEEVED OF GREASED THRU CONCRETE CURBS TO PERMIT RELOCATION OF CURBS.



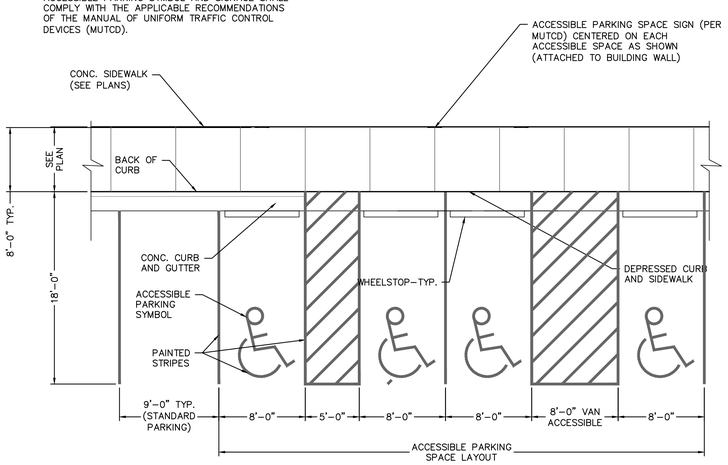
ELEVATION



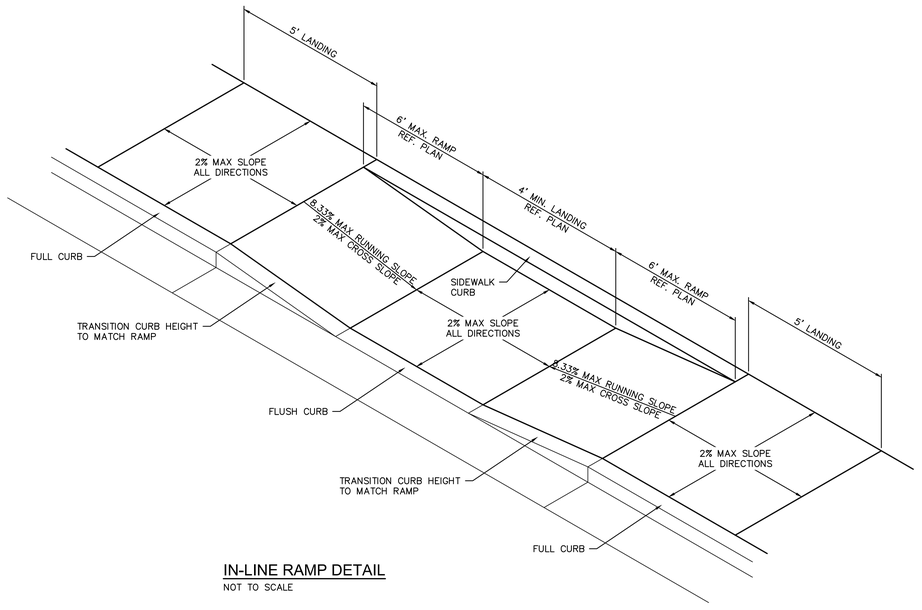
A-A

WHEEL STOP DETAIL
NOT TO SCALE

NOTE
ACCESSIBLE PARKING SYMBOL AND SIGNAGE SHALL COMPLY WITH THE APPLICABLE RECOMMENDATIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).



TYPICAL ADA PARKING SPACE LAYOUT DETAIL
NOT TO SCALE



IN-LINE RAMP DETAIL
NOT TO SCALE

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN
RILEY
NUMBER
PE-2009016764
01-5-22
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

STANDARD DETAILS
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

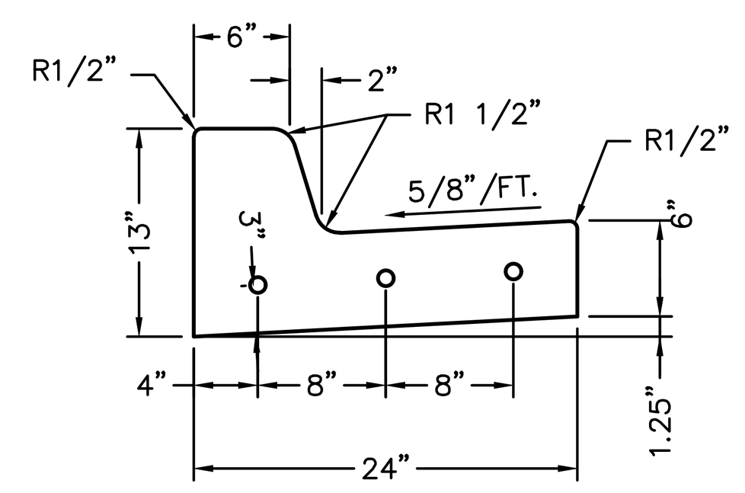
drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_DTL01_02104157.dwg
date:

SHEET
C8.00

DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_DTL01_02104157.dwg USER: lmoore
DATE: Feb 08, 2022 11:24am XREFS: C_PBASE_02104157 C_TBLK_02104157 T_PSTRM_02104157 C_PROW_02104157 T_PBASE_02104157

GENERAL NOTES:

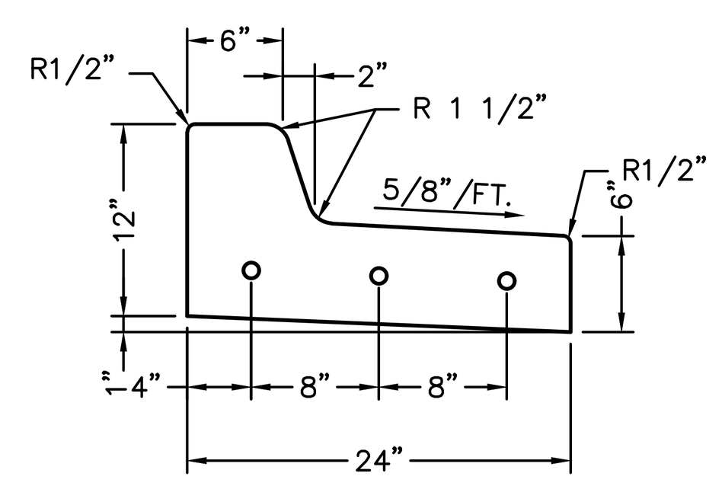
1. 3/4" ISOLATION JOINTS WITH 5/8" DIA. X 2' SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 1" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. FIX DOWEL BARS WITH BAR SUPPORTS.
4. DEPTH OF CURB SHALL BE A MINIMUM OF 8" THROUGH HANDICAP ACCESSRAMP.



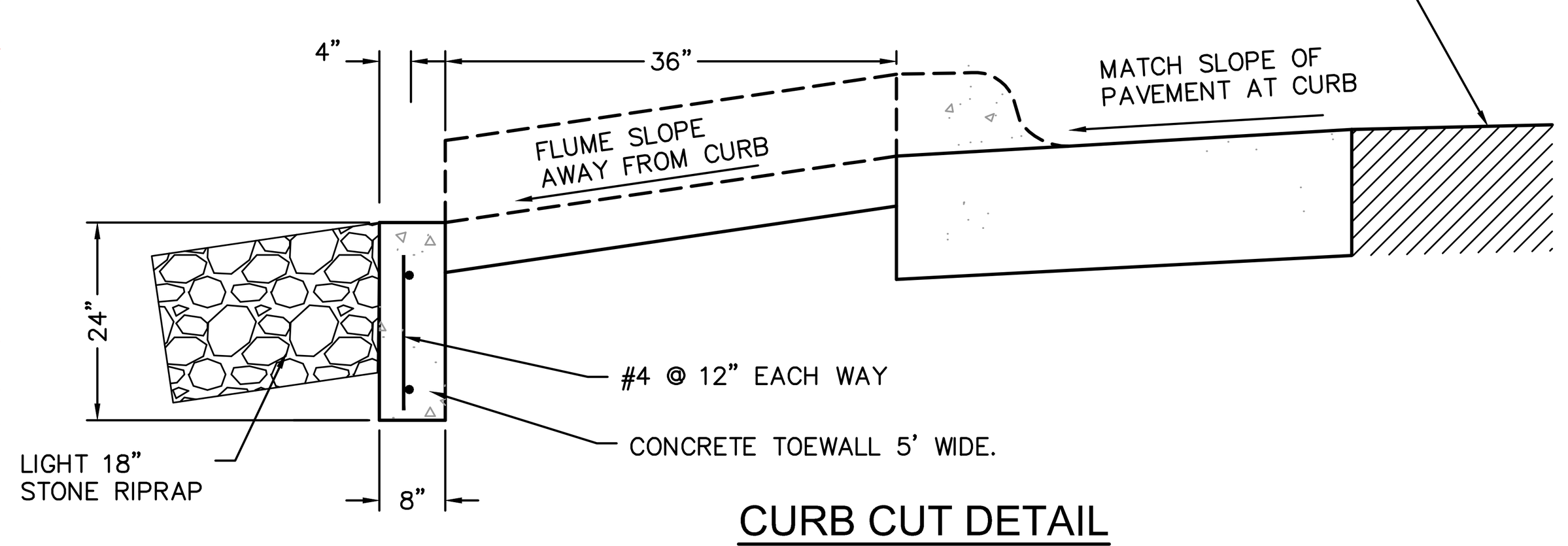
STRAIGHT BACK CURB & GUTTER
NOT TO SCALE

GENERAL NOTES:

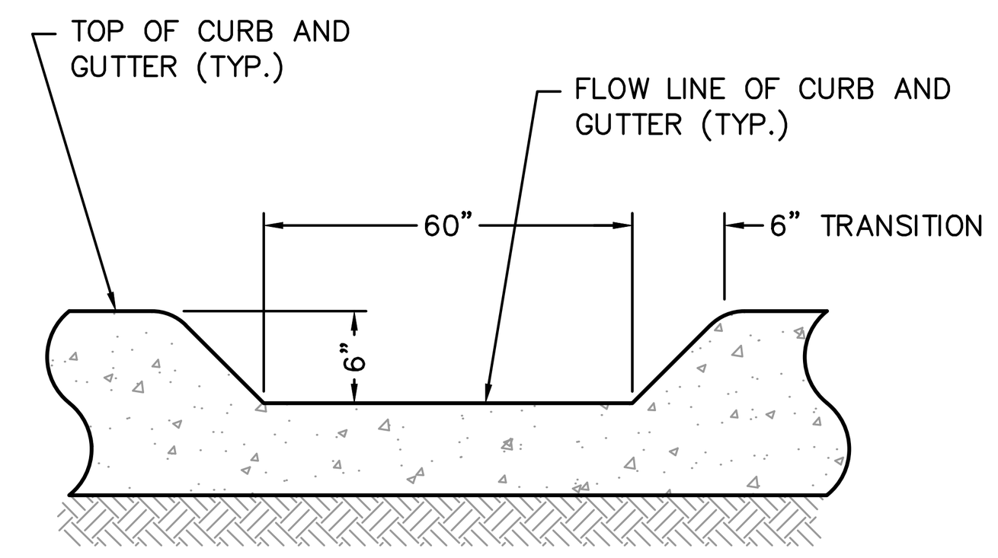
1. 3/4" ISOLATION JOINTS WITH 5/8" DIA. X 2' SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 1" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. FIX DOWEL BARS WITH BAR SUPPORTS.
4. DEPTH OF CURB SHALL BE A MINIMUM OF 8" THROUGH HANDICAP ACCESSIBLE RAMP.



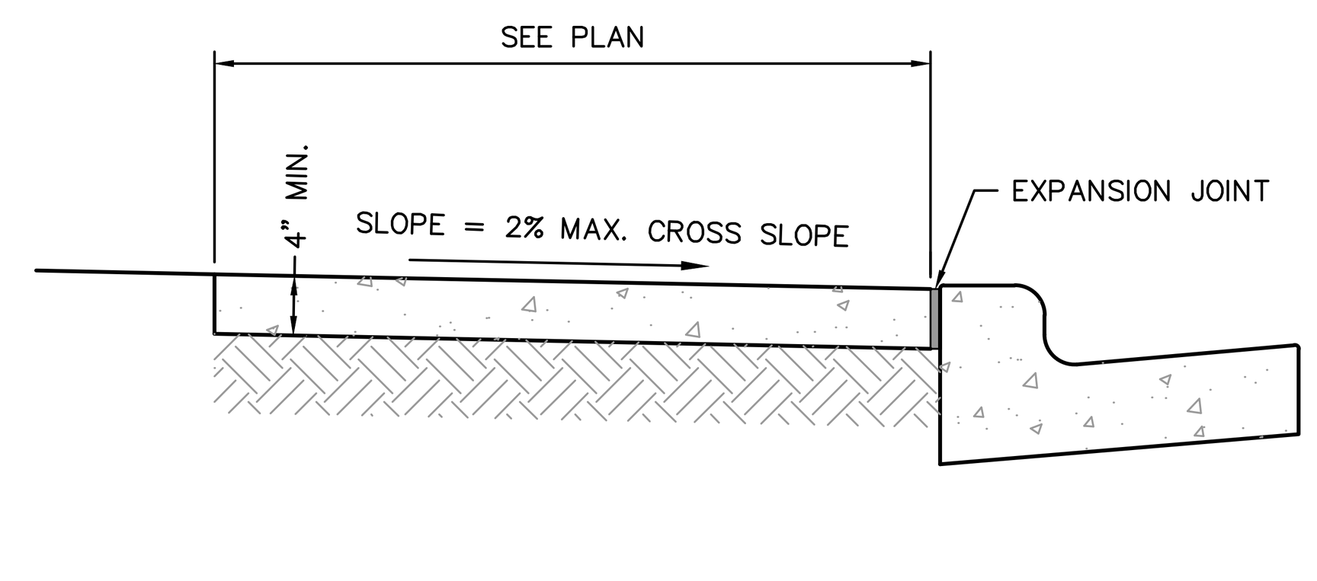
STRAIGHT BACK DRY CURB & GUTTER
NOT TO SCALE



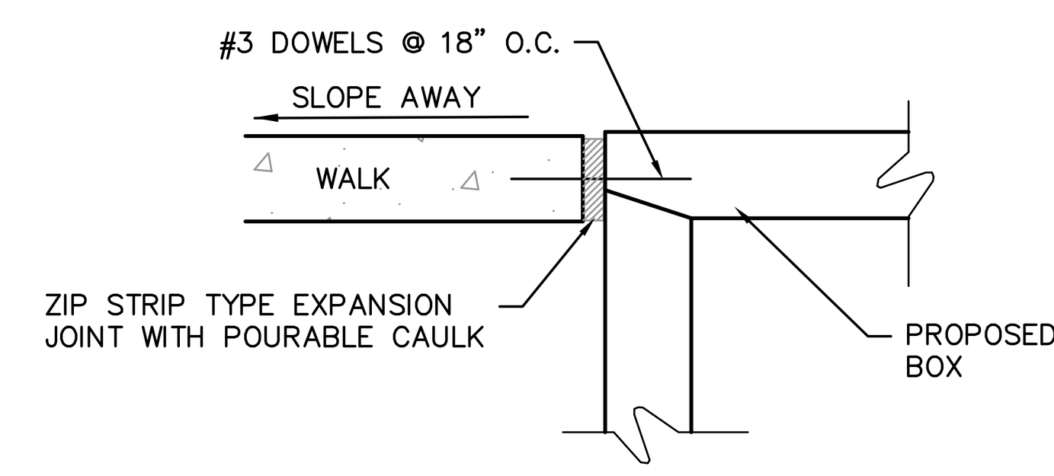
CURB CUT DETAIL
NOT TO SCALE



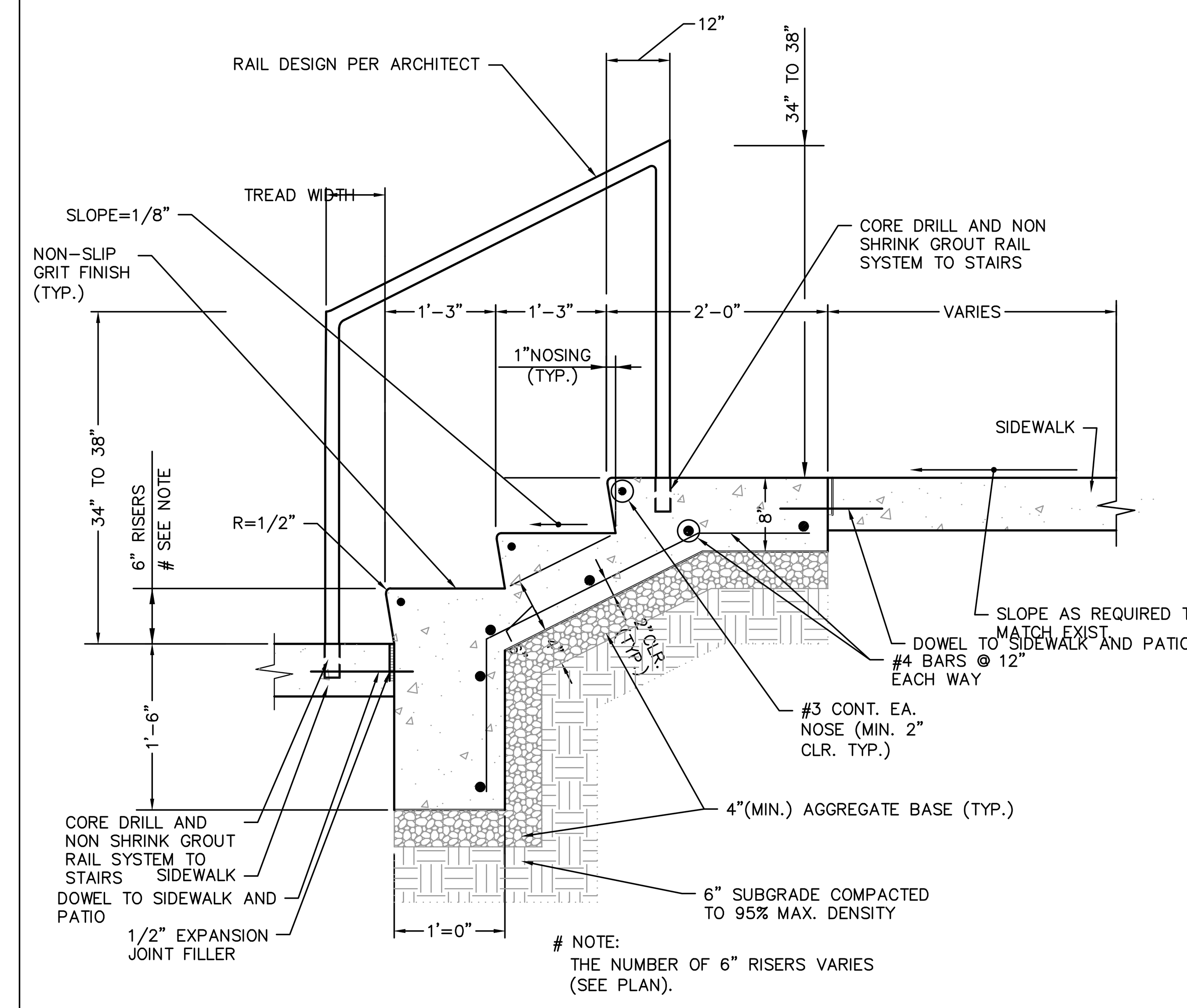
FRONT ELEVATION



STANDARD CONCRETE WALK DETAIL
NOT TO SCALE

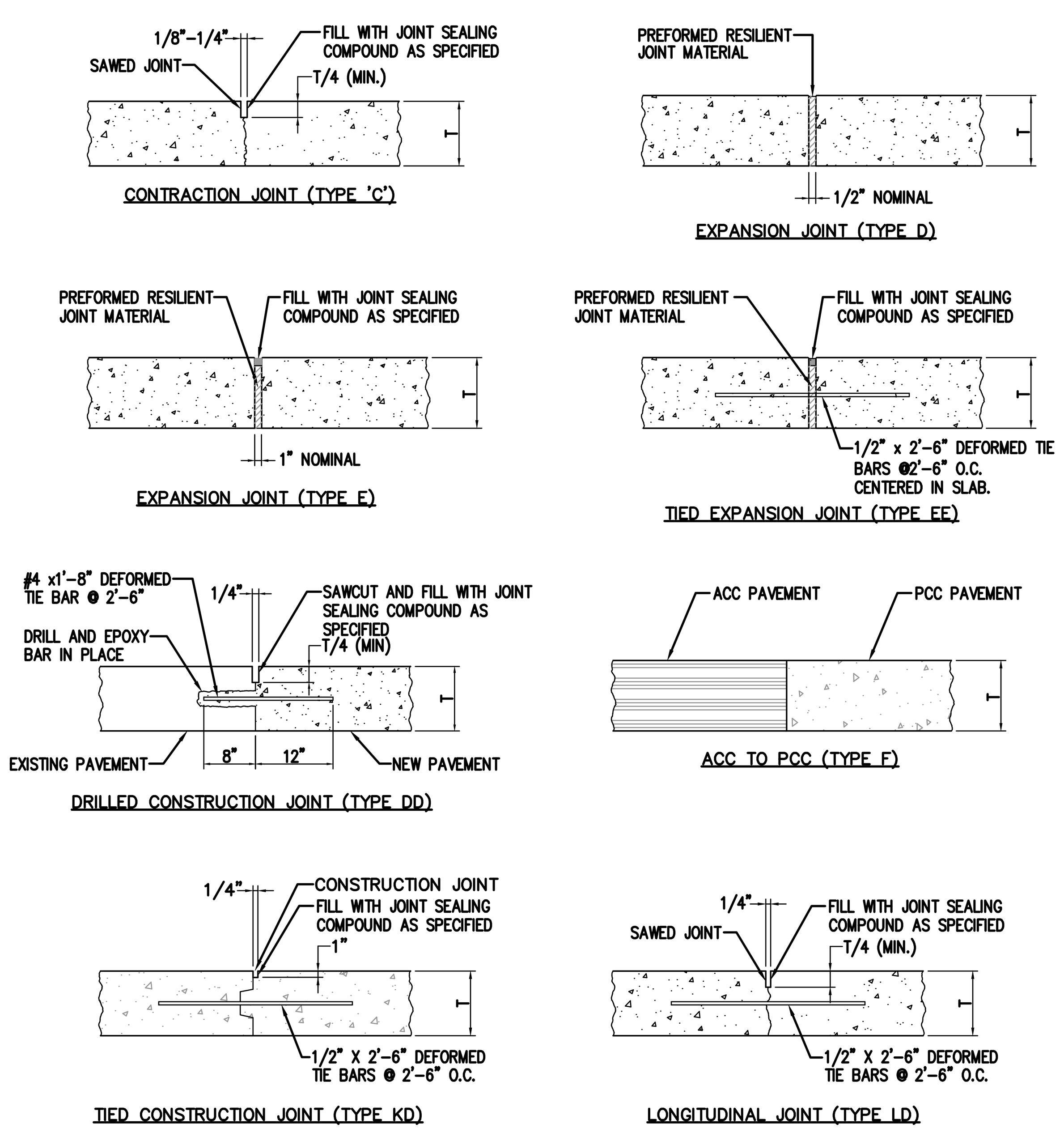


SIDEWALK TO STORM BOX CONNECTION DETAIL
NOT TO SCALE



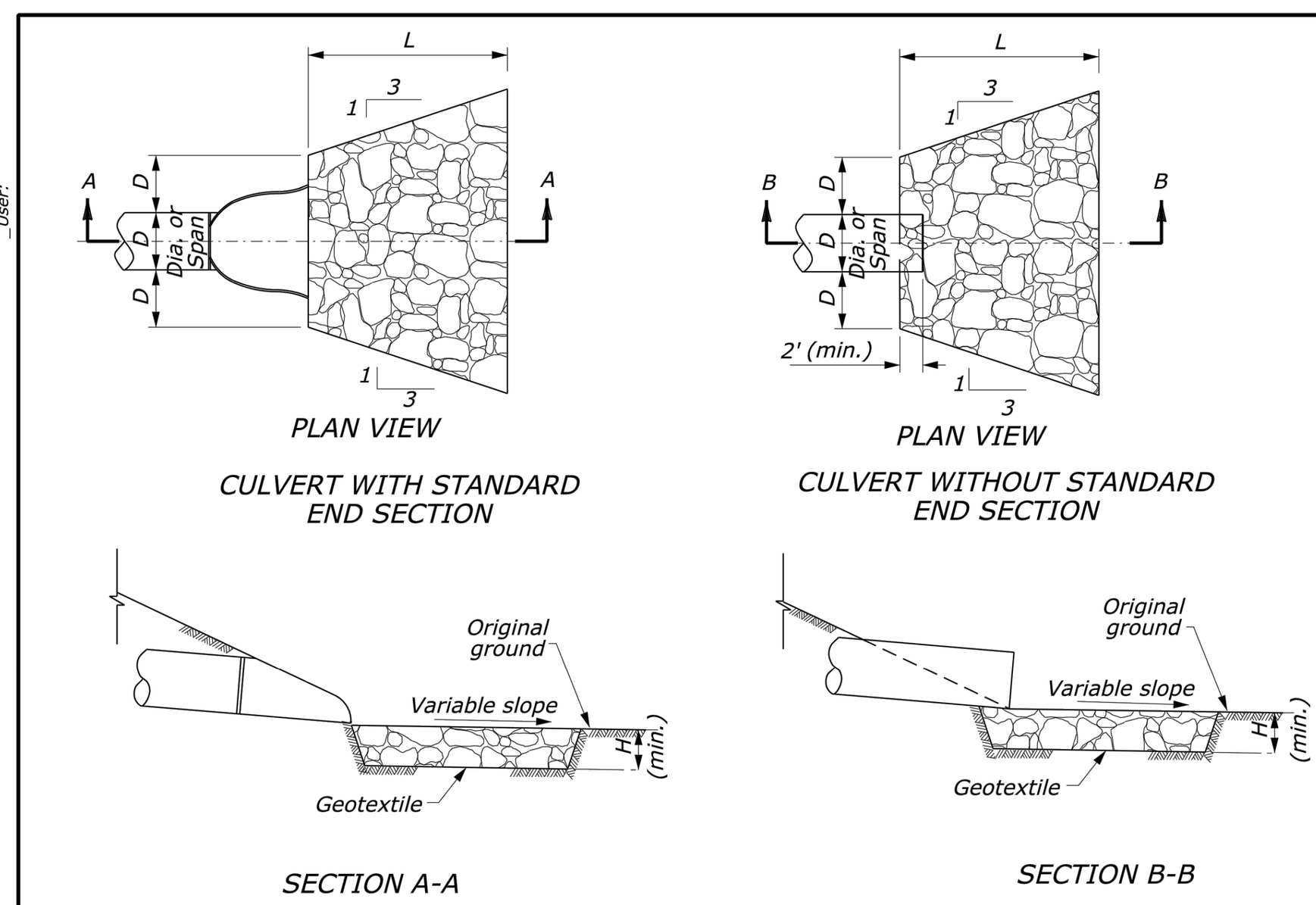
NOTE:
THE NUMBER OF 6" RISERS VARIES (SEE PLAN).

CONCRETE STAIR DETAIL



PAVEMENT JOINT DETAILS
NOT TO SCALE

STATE	PROJECT	SHEET NUMBER

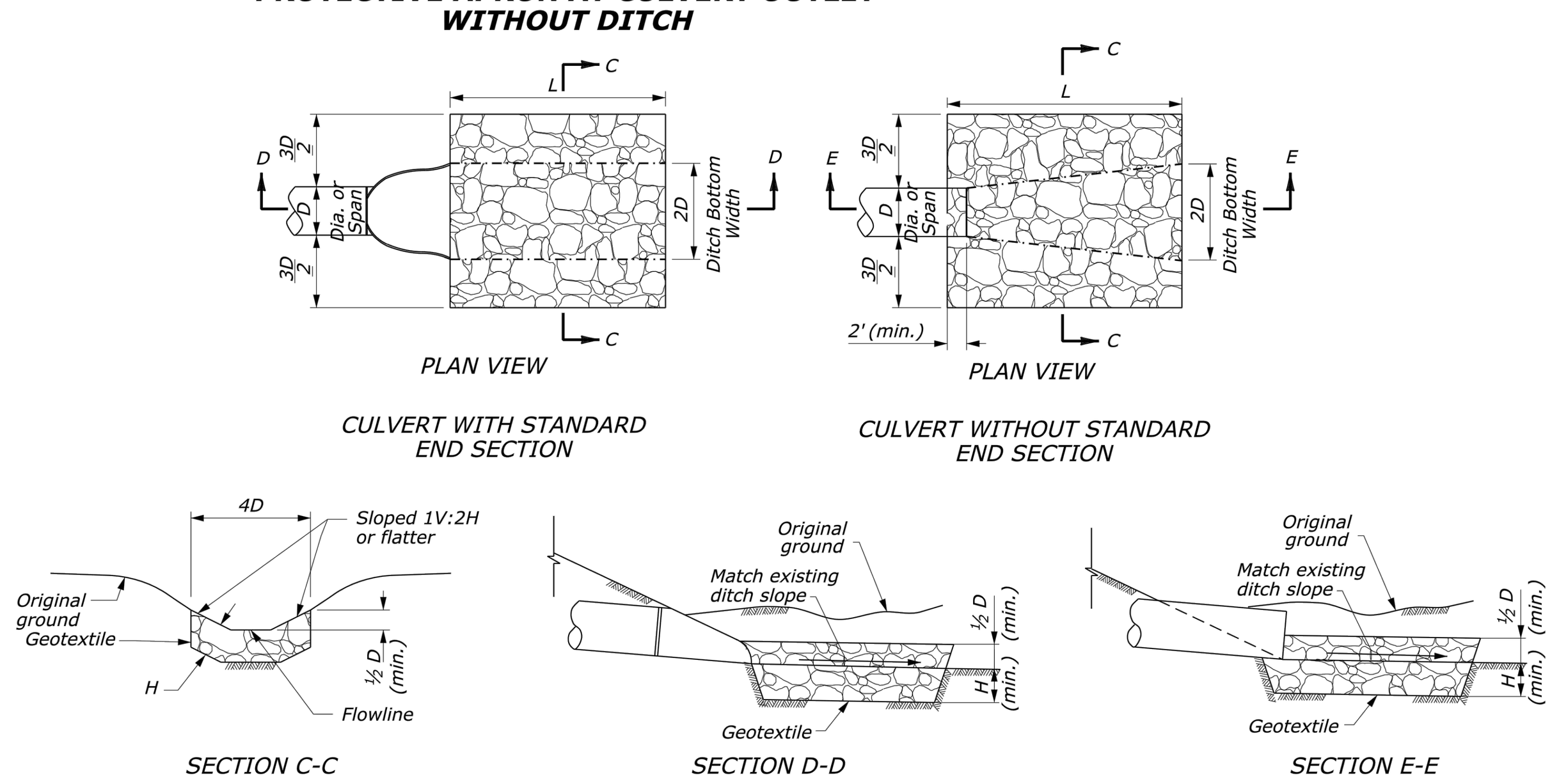


PROTECTIVE APRON AT CULVERT OUTLET WITHOUT DITCH

OUTLET WITHOUT DITCH PROTECTIVE APRON DIMENSIONS AND ESTIMATED QUANTITIES						
	CULVERT SIZE D (inches)	RIPRAP CLASS	LENGTH OF APRON L (feet)	DEPTH OF APRON H (feet)	ESTIMATED RIPRAP QUANTITY (CY)	ESTIMATED GEOTEXTILE QUANTITY (SY)
WITH END SECTION	12	2	4	1.5	1	5
	18	2	6	1.5	2.2	9
	24	2	8	1.5	3.9	14
	30	3	12.5	2	10.9	28
	36	3	16	2	15.6	37
	42	4	21	2.5	34.1	63
	48	4	24	2.5	44.5	79
WITHOUT END SECTION	12	2	6	1.5	1.7	8
	18	2	8	1.5	3.2	12
	24	2	10	1.5	5.2	17
	30	3	14.5	2	13.3	33
	36	3	17	2	18.5	43
	42	4	23	2.5	38.7	70
	48	4	26	2.5	49.8	87

NOTE:

1. Use for aprons serving culverts with slopes of less than 10%.
2. Furnish geotextile conforming to Subsection 714.01(a).
3. Excavation for placement of riprap will not be measured for payment.



PROTECTIVE APRON AT CULVERT OUTLET WITH DITCH

OUTLET WITH DITCH PROTECTIVE APRON DIMENSIONS AND ESTIMATED QUANTITIES						
	CULVERT SIZE D (inches)	RIPRAP CLASS	LENGTH OF APRON L (feet)	DEPTH OF APRON H (feet)	ESTIMATED RIPRAP QUANTITY (CY)	ESTIMATED GEOTEXTILE QUANTITY (SY)
WITH END SECTION	12	2	4	1.5	0.9	5
	18	2	6	1.5	2	8
	24	2	8	1.5	3.6	13
	30	3	12.5	2	9.3	24
	36	3	15	2	13.4	32
	42	4	21	2.5	27.3	53
	48	4	24	2.5	35.6	65
WITHOUT END SECTION	12	2	6	1.5	1.4	6
	18	2	8	1.5	2.7	10
	24	2	10	1.5	4.5	15
	30	3	14.5	2	10.8	27
	36	3	17	2	15.2	36
	42	4	23	2.5	29.9	57
	48	4	26	2.5	38.6	70

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
CENTRAL FEDERAL LANDS HIGHWAY DIVISION

U.S. CUSTOMARY DETAIL

PLACED RIPRAP AT CULVERT OUTLETS

NO SCALE

DETAIL C251-50

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170 www.olsson.com

SCANNELL PROPERTIES

MITCHELL ALAN PLEAK NUMBER PE-2000016364 02-08-22

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
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REVISIONS

2021

STANDARD DETAILS
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
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DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_DTL01_02104157.dwg USER: lmoore
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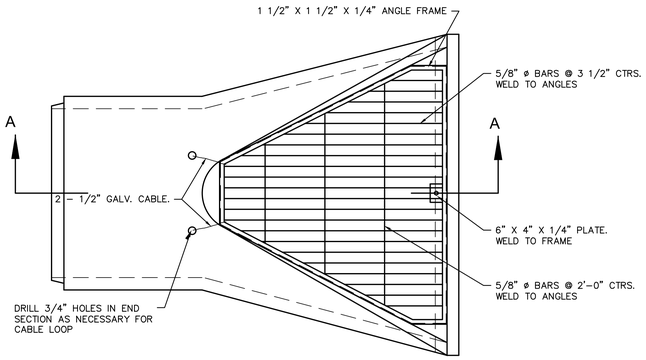
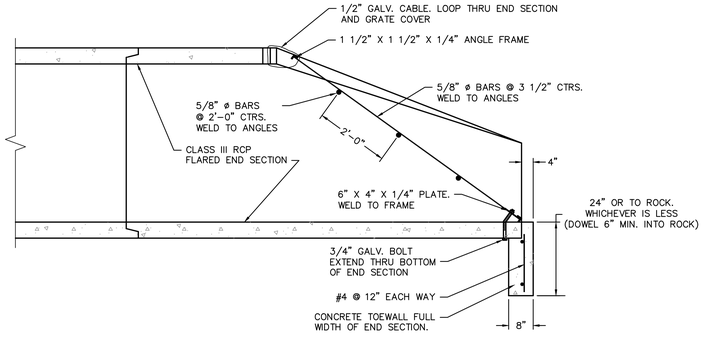


PLANVIEW

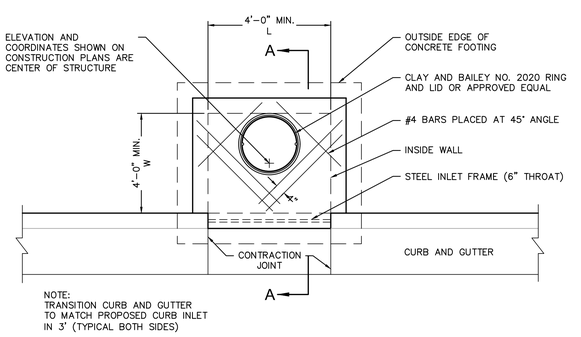
END SECTION NOTES

1. GRATE COVER DETAIL SHALL BE ADJUSTED AS NECESSARY TO FIT END SECTION PROVIDED.
2. MAXIMUM OPENING THRU END SECTION SHALL BE NO GREATER THAN 6". ADJUST DETAIL AS NECESSARY.
3. ALL METAL SURFACES SHALL BE HOT DIP ZINC COATED IN ACCORDANCE WITH ASTM A-123.
4. USE CITY APPROVED CONCRETE THROUGHOUT.
5. ALL CONCRETE AND MATERIALS USED IN THIS WORK SHALL MEET THE REQUIREMENTS OF THE GOVERNING BODY.
6. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
7. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF ±1/8" SHALL BE PERMITTED.
8. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
9. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.
10. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.
11. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.

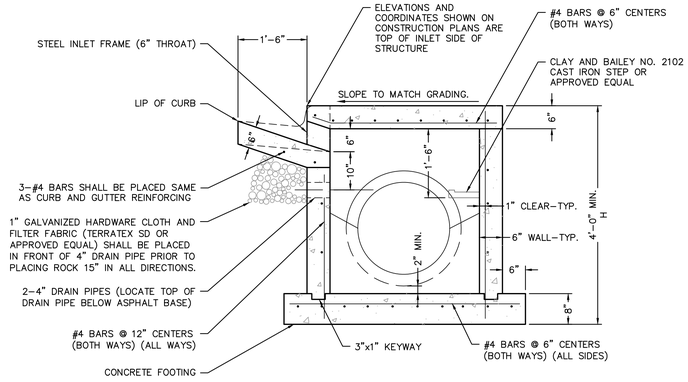


SECTION A-A
END SECTION TOE WALL & GRATE

NOT TO SCALE



PLAN



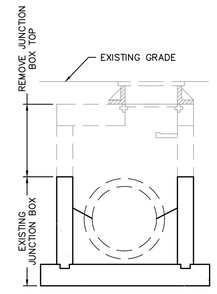
SECTION A-A

NON-SETBACK CURB INLET

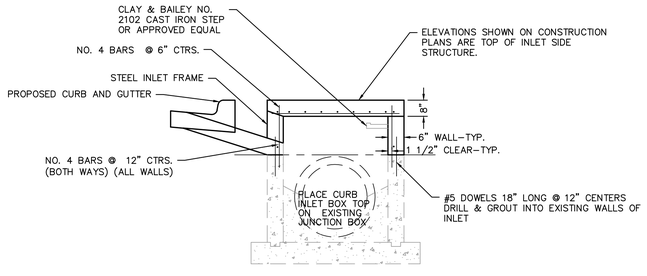
NOT TO SCALE

NON-SETBACK CURB INLET NOTES

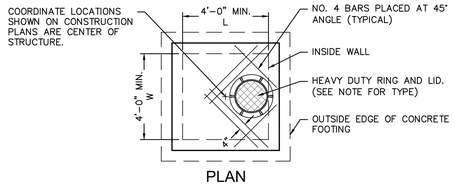
1. USE CITY APPROVED CONCRETE THROUGHOUT.
2. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION.THE SECOND DIMENSION IS THE "W" DIMENSION.
3. FLOOR OF INLET SHALL BE SHAPED TO PROVIDE SMOOTH FLOW.
4. EXPANSION JOINTS SHALL BE EITHER HOT OR COLD POURED JOINT SEALING COMPOUND, OR PREMOLDED EXPANSION JOINT FILLER.
5. STEEL INLET FRAME SPACERS SHALL BE PLACED AT EQUAL SPACINGS NOT TO EXCEED 4'-0".
6. CAST IRON STEPS TO BE CLAY & BAILEY 2102 OR APPROVED EQUAL. STEEL CORE, PLASTIC COATED STEPS MAY BE USED (M.A. IND.,INC. NO. PS1-PF, PS2-PF, OR APPROVED EQUAL). CAST IRON STEPS SHALL BE SPACED AT 1'-4" O.C. VERTICALLY.
7. BEVEL ALL EXPOSED EDGES WITH TRIANGULAR MOLDING.
8. ON-GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
9. ALL STORM SEWER STRUCTURES SHALL BE PRECAST. PRECAST SHOP DRAWINGS SHALL BE APPROVED BY THE DESIGN ENGINEER.
10. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
11. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF ±1/8" SHALL BE PERMITTED.
12. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
13. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE.
14. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.
15. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION.
16. THE BOTTOM SLAB SHALL BE AT LEAST 24 HOURS OLD BEFORE PLACING SIDEWALL CONCRETE. ALL SIDEWALL FORMS SHALL REMAIN IN PLACE A MINIMUM OF 24 HOURS AFTER SIDEWALLS ARE POURED BEFORE REMOVAL, AND AFTER REMOVAL SHALL BE IMMEDIATELY TREATED WITH MEMBRANE CURING COMPOUND.
17. ALL CURB INLET TOPS ARE TO BE CONSTRUCTED AFTER FINAL CURB STRING LINE HAS BEEN APPROVED BY THE ENGINEER AND PRIOR TO CURB CONSTRUCTION, OR AS DIRECTED BY THE CITY ENGINEER.
18. RCP CONNECTIONS TO PRECAST STRUCTURE SHALL MEET ALL CITY STANDARDS.
19. BACKFILL AROUND STRUCTURES SHALL BE COMPACTED AND SHALL BE OF THE MATERIAL SPECIFIED PER CITY STANDARDS.
20. NON-SETBACK CURB INLET TO BE USED ONLY WITH THE APPROVAL OF THE CITY ENGINEER.



EXISTING JUNCTION BOX TOP



CURB INLET



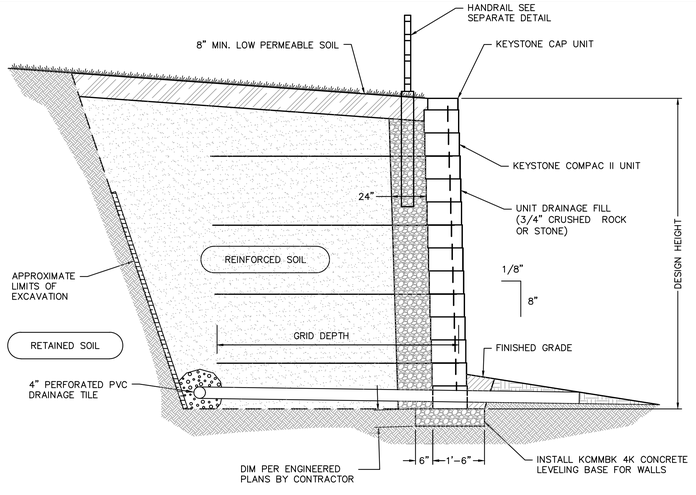
PLAN

NOTES:

1. REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CITY STANDARDS.
2. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. TOLERANCE OF ± 1/8" SHALL BE PERMITTED.
3. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
4. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL BAR SUPPORTS @ 3'-0" MAXIMUM SPACING.
5. LOCATE MH RING OVER OUTLET. STEPS SHALL BE SPACED AT 1'-4" O.C. VERTICALLY.
6. BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER OR 1/2" TOOLED EDGE.
7. MANHOLE RING AND COVER SHALL BE IN ACCORDANCE WITH CITY STANDARDS.

JUNCTION BOX TO CURB INLET CONVERSION DETAIL

NOT TO SCALE

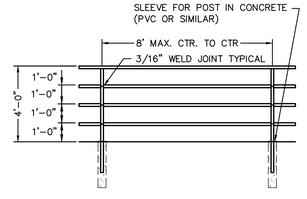


SEGMENTAL RETAINING WALL

NOT TO SCALE

RETAINING WALL NOTES

1. RETAINING WALL SHALL BE "VERSA-LOK MOSAIC RETAINING WALL (NONWEATHERED) AND THE COLOR SHALL BE PALOMINO GRAY". THE DETAILS PROVIDED HERE ARE FOR GENERAL GUIDANCE ONLY. THE WALL SHALL BE "DESIGN-BUILD" PROVIDED COMPLETE IN-PLACE BY THE CONTRACTOR.
2. THE MODULAR WALL UNITS SHALL HAVE A STRAIGHT FACE WITH SPLIT FINISH TEXTURE. COLOR SHALL BE "PALOMINO GRAY".
3. THE WALL SHALL BE DESIGNED BY THE INSTALLER ACCORDING TO THE WALL UNIT MANUFACTURER'S DESIGN CRITERIA. THE DESIGN SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER AS A SHOP DRAWING FOR REVIEW. ALL DESIGN CALCULATIONS AND DESIGN CRITERIA, (ANGLE OF FRICTION, SOIL WEIGHT, ETC.), SHALL BE SUBMITTED WITH THE SHOP DRAWING. ALL DESIGN MUST BE SEALED BY A QUALIFIED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSOURI.
4. FACTORS OF SAFETY SHALL BE AS FOLLOWS:
   - 1.5 AGAINST REINFORCEMENT GRID PULLOUT OR RUPTURE
   - 1.5 AGAINST EXTERNAL SLIDING FAILURE
   - 2.0 AGAINST OVERTURNING
5. THE DESIGN, DIMENSIONS, AND MATERIAL SHOWN IN THIS DETAIL ARE GENERAL IN NATURE. THE AGGREGATE MATERIALS, GEOGRID SYSTEM, AND INSTALLATION SHALL BE AS WALL UNIT MANUFACTURER'S REQUIREMENTS.
6. SEE SPECIFICATIONS FOR MATERIAL SELECTION AND OTHER REQUIREMENTS.
7. WALL DESIGN SHALL INCLUDE GLOBAL STABILITY.
8. RETAINING WALL SHALL PROVIDE POSITIVE INTERLOCKING BETWEEN BLOCKS AND GRID.



NOTES:

1. ALL RAILING SHALL BE 2" SQUARE STEEL PIPE.
2. ALL EXPOSED STEEL SHALL BE PRIMED WITH ZINC OXIDE PAINT AND PAINTED WITH TWO COAT OF HIGH GLOSS EXTERIOR DARK BROWN PAINT. SUBMIT SAMPLE TO ARCHITECT PRIOR TO PAINTING FOR APPROVAL.
3. SPACING AND LOCATION AS SHOWN ON DETAILS.
4. SPACING OF VERTICAL POSTS SHALL BE EQUAL THROUGHOUT EACH SECTION OF THE HANDRAIL.

METAL PIPE HANDRAIL DETAIL

NOT TO SCALE

olsson
7301 West 133rd Street, Suite 200
Overland Park, KS 66213-4750
TEL 913.381.1170
www.olsson.com

SCANNELL PROPERTIES

STATE OF MISSOURI
MITCHELL ALAN PLAN
NUMBER PE-2009018764
01-5-22
PROFESSIONAL ENGINEER

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SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
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QA/QC by: ENG
project no.: 021-04157
drawing no.: C_DT_01_02104157.dwg
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SHEET
C8.02

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DATE: Feb 08, 2022 11:25am XREFS: C_PBASE_02104157 C_TBLK_02104157 T_PSTRM_02104157 C_PROW_02104157 T_PBASE_02104157

REINFORCEMENT SCHEDULE, BASE	
SECTION	
"A"	#4's @ 6" E.W.

REINFORCEMENT SCHEDULE, WALLS			
SECTION	WIDTH ("W")	HOR.	VERT.
"A"	4'	#4's @ 9"	#4's @ 10"
	BETWEEN 4' & 7'	#6's @ 9"	#4's @ 10"
	GREATER THAN 7'	#5's @ 4 1/2"	#4's @ 10"

TABLE OF "T" & "N" DIMENSIONS				
SECTION	WIDTH ("W")	"T"	"N"	"D"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	8"
	GREATER THAN 7'	6" + PIPE THICKNESS	8"	8"

REINFORCEMENT SCHEDULE, TOP		
DIMENSIONS	STEEL	SPECIAL PATTERN
L = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
L = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER
W = 7' OR GREATER	#4'S @ 6" E.W.	DIAGONAL @ COVER
L = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER
W = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER

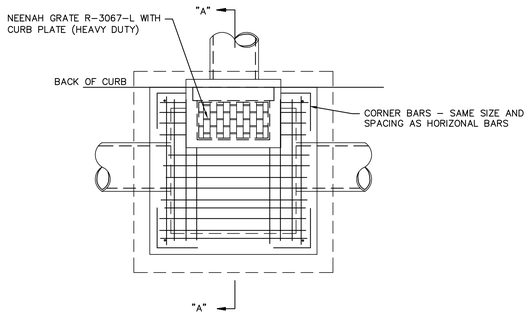
TABLE OF "W" DIMENSIONS							
PIPE SIZE	SKEW OF CROSS DRAIN			PIPE SIZE	SKEW OF CROSS DRAIN		
SINGLE	STRAIGHT	30°	45°	SINGLE	STRAIGHT	30°	45°
24"	4'–0"	4'–0"	4'–10"	DOUBLE	FOR "A" SECTION ONLY		
30"	4'–0"	4'–7"	5'–8"	24"	7'–0"	7'–10"	9'–5"
36"	4'–0"	5'–3"	6'–5"	30"	8'–2"	9'–2"	11'–0"
42"	5'–3"	5'–11"	7'–3"	36"	9'–4"	10'–6"	12'–6"
48"	5'–10"	6'–7"	8'–0"	42"	10'–6"	11'–10"	14'–2"
60"	7'–0"	7'–10"	9'–8"	48"	11'–8"	13'–2"	15'–10"

GENERAL NOTES:

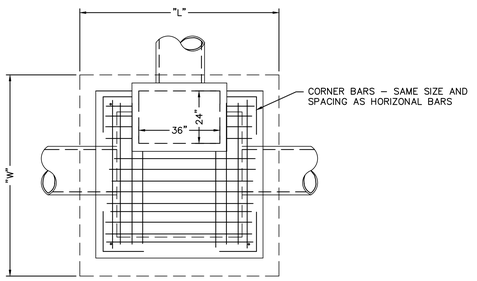
1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
2. ALL #4 & #5 REINFORCING BARS TO HAVE 1 1/2" COVER, LARGER SIZES TO HAVE 2" COVER.
3. SEE GRADING AND DRAINAGE PLAN FOR PIPE SIZES, LOCATIONS, AND FLOW LINES.
4. PIPES SHALL CONNECT TO THE ENDS OR SIDES OF THE INLET. CONNECTION SHALL NOT BE MADE AT CORNERS OF BOX.
5. ALL REINFORCING BARS TO BE GRADE 40.
6. A 2' MINIMUM INTERIOR WALL WIDTH IS REQUIRED FOR SIDES WITHOUT PIPES AND A 4' MINIMUM IS REQUIRED FOR SIDES WITH PIPES.

CURB/GRATE INLET NOTES:

1. CONCRETE USED IN THIS WORK SHALL BE APPROVED BY THE CITY.
2. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
3. EXPANSION JOINTS SHALL BE EITHER HOT OR COLD POURED JOINT SEALING COMPOUND, OR PREMOLDED EXPANSION JOINT FILLER.
4. INSTALL ANGLE IRON FACE ON ALL INLETS.
5. STEEL INLET FRAME SPACERS SHALL BE PLACED AT EQUAL SPACINGS NOT TO EXCEED 4'–0".
6. CAST IRON STEPS TO BE CLAY & BAILEY 2102 OR APPROVED EQUAL. STEEL CORE, PLASTIC COATED STEPS MAY BE USED (M.A. IND.,INC. NO. PS1–PF, PS2–PF, OR APPROVED EQUAL). CAST IRON STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY. THE DISTANCE FROM THE LAST STEP TO THE TOP OF CONCRETE INVERT SHOULD BE A MAXIMUM OF 24".
7. BEVEL ALL EXPOSED EDGES WITH 3/4" TRIANGULAR MOLDING.
8. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
9. ALL STORM SEWER STRUCTURES SHALL BE PRECAST. PRECAST SHOP DRAWINGS SHALL BE APPROVED BY THE DESIGN ENGINEER.
10. REINFORCING STEEL SHALL BE NEW BILLET, MINIMUM GRADE 40 AS PER ASTM A615, AND SHALL BE BENT COLD.
11. ALL DIMENSIONS RELATIVE TO REINFORCING STEEL ARE TO CENTERLINE OF BARS. 2" CLEARANCE SHALL BE PROVIDED THROUGHOUT UNLESS NOTED OTHERWISE. ALL LAP SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAMETERS IN LENGTH.
12. ALL DOWELS SHALL BE ACCURATELY PLACED AND SECURELY TIED IN PLACE PRIOR TO PLACEMENT OF BOTTOM SLAB CONCRETE. STICKING OF DOWELS INTO FRESH OR PARTIALLY HARDENED CONCRETE WILL NOT BE ACCEPTABLE. ALL REINFORCING STEEL SHALL BE SUPPORTED ON FABRICATED STEEL.
13. BAR SUPPORTS @ 3'–0" MAXIMUM SPACING. DO NOT SCALE THESE DRAWINGS FOR DIMENSIONS OR CLEARANCES.
14. ANY QUESTIONS REGARDING DIMENSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION. THE BOTTOM SLAB SHALL BE AT LEAST 24 HOURS OLD BEFORE PLACING SIDEWALL CONCRETE.
15. ALL SIDEWALL FORMS SHALL REMAIN IN PLACE A MINIMUM OF 24 HOURS AFTER SIDEWALLS ARE POURED BEFORE REMOVAL, AND AFTER REMOVAL SHALL BE IMMEDIATELY TREATED WITH MEMBRANE CURING COMPOUND.

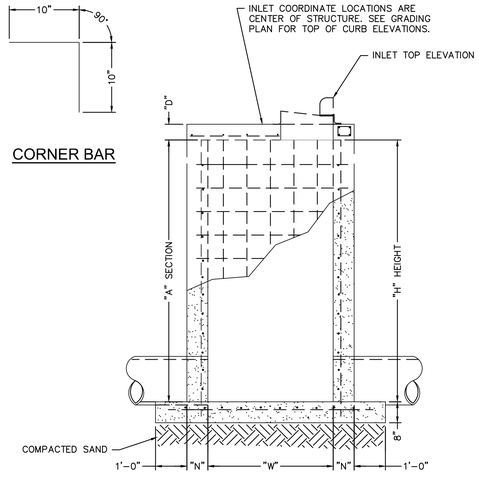


PLAN OF GRATE INLET TYPE 2



TOP VIEW

CORNER BAR



SECTION A-A

STANDARD STORM SEWER CURB/GRATE INLET
NOT TO SCALE

TABLE OF FILL DEPTHS BELOW PIPE		
D ⚠1	"A" MIN. IN SOIL	"A" MIN. IN ROCK
27" & SMALLER	6"	6"
30"TO 66"	6"	9"
66" & LARGER	6"	12"

TABLE OF TRENCH WIDTHS		
PIPE SIZE (INCHES)	MINIMUM TRENCH WIDTH (INCHES)	MINIMUM SIDE WALL CLEARANCE (INCHES)
18	35	6
21	39	6 1/2
24	44	7
27	49	8
30	54	8 1/2
33	58	9
36	64	10
42	73	11
48	83	12 1/2
54	92	13 1/2
60	102	15
66	109	15

LEGEND

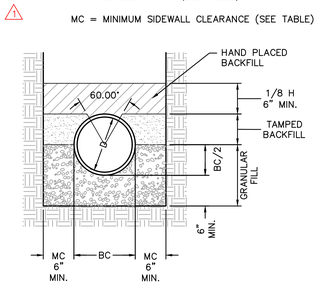
BC = OUTSIDE DIAMETER OF PIPE

H = BACKFILL COVER ABOVE TOP OF PIPE

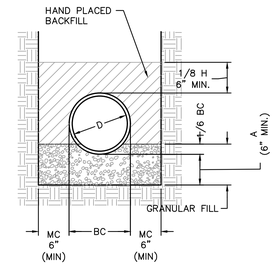
D = NOMINAL PIPE DIAMETER

A = FILL BELOW PIPE (SEE TABLE)

MC = MINIMUM SIDEWALL CLEARANCE (SEE TABLE) ⚠1



CLASS B
FIRST CLASS BEDDING

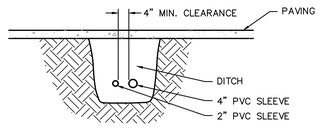


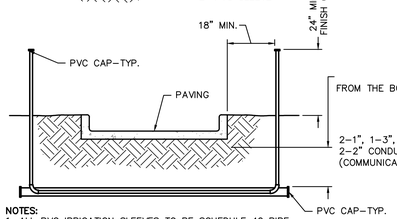
CLASS C
ORDINARY BEDDING

BEDDING NOTES

1. GRANULAR FILL TO BE CRUSHED STONE OR PEA GRAVEL WITH NOT LESS THAN 95% PASSING 1/2" SIEVE AND NOT LESS THAN 95% TO BE RETAINED ON A #4 SIEVE, TO BE PLACED IN NOT MORE THEN 6" LAYERS AND COMPACTED BY SLICING WITH A SHOVEL.
2. TAMPED BACKFILL SHALL BE FINELY DIVIDED JOB EXCAVATED MATERIAL FREE FROM DEBRIS, ORGANIC MATERIAL AND STONES, COMPACTED TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO STANDARD METHOD T–99. GRANULAR FILL MAY BE SUBSTITUTED FOR ALL OR PART OF TAMPED BACKFILL.
3. HAND PLACED BACKFILL SHALL BE FINELY DIVIDED MATERIAL FREE FROM DEBRIS AND STONES.

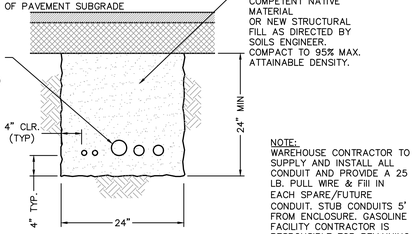
STORM SEWER TRENCH DETAIL
NOT TO SCALE





NOTES:
1. ALL PVC IRRIGATION SLEEVES TO BE SCHEDULE 40 PIPE.
2. ALL JOINTS TO BE SOLVENT WELDED AND WATERTIGHT.
3. EXTEND THE SMALLER SLEEVE TO 24" MIN. ABOVE FINISH GRADE.
4. MECHANICALLY TAMP TO 95% PROCTOR DENSITY.
5. CONTRACTOR TO PROVIDE CONDUIT FOR IRRIGATION SYSTEM AND FUTURE SITE LIGHTING THROUGHOUT THE PROPOSED SITE.

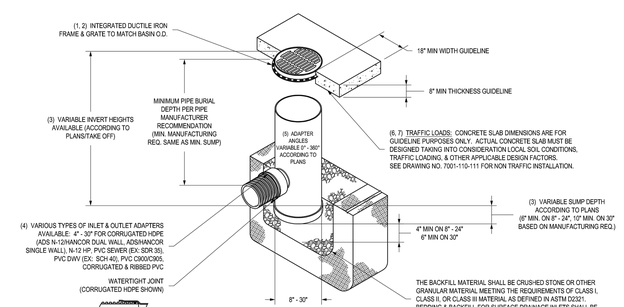
CONDUIT DETAIL
NOT TO SCALE



CONDUIT TRENCH DETAIL
NOT TO SCALE

NOTE:
WAREHOUSE CONTRACTOR TO SUPPLY AND INSTALL ALL CONDUIT AND PROVIDE A 25 LB. PULL WIRE & Fill IN EACH SPARE/FUTURE CONDUIT. STUB CONDUITS 5' FROM ENCLOSURE. GASOLINE FACILITY CONTRACTOR IS RESPONSIBLE FOR REMAINING 5' AND CONNECTIONS AT ENCLOSURE.

NYLOPLAST DRAIN BASIN WITH STANDARD GRATE



1 - 8" - 30" STANDARD GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 12" - 30" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05. 8" & 10" STANDARD GRATES FIT DIRECTLY ONTO DRAIN BASINS WITH THE USE OF A PVC BODY TOP - SEE DRAWING NO. 7001-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RIBERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 12" - 30" STANDARD GRATES SHALL MEET H-20 LOAD RATING.
7 - 8" & 10" STANDARD GRATES ARE RATED FOR LIGHT DUTY APPLICATIONS ONLY; NO CONCRETE COLLAR NEEDED FOR LIGHT DUTY RATING.

DRAWN BY	EBC	MATERIAL	
DATE	1-23-06		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	03-11-16		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

Nyloplast — 3128 VERONA AVE BUFORD, GA 30518 PHN (770) 932-2443 FAX (770) 932-2490 www.nyloplast-us.com

TITLE: DRAIN BASIN WITH STANDARD GRATE QUICK SPEC INSTALLATION DETAIL

DWG NO. 7001-110-144 REV H

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SCANNELL PROPERTIES

STATE OF MISSOURI — MITCHELL ALAN PLAN — NUMBER PE-2009016764 — 01-5-22 — PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	07.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	09.02.2022	CITY & OLSSON COMMENTS	

REVISIONS

STANDARD DETAILS
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_DTL01_02104157.dwg
date:

SHEET
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DWG: F:\2021\04001-04500\021-04157\40-design\AutoCAD\final plans\Sheets\GNCV\PHASE I\C_DTL01_02104157.dwg USER: lmoore
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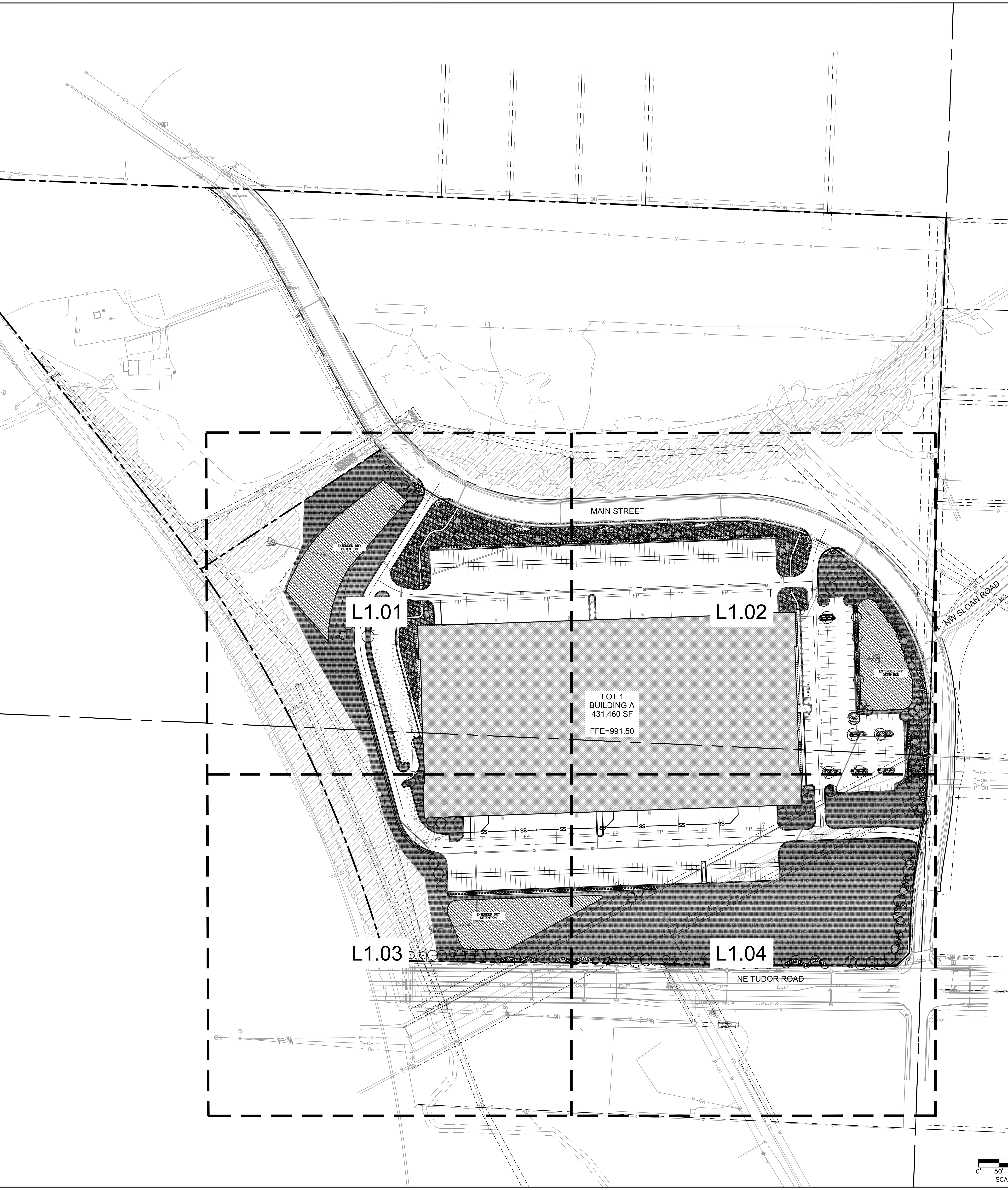

LANDSCAPE CALCULATIONS - LOT 1

OPEN YARD AREAS
1 TREE AND 2 SHRUBS PER 5,000 SF OF TOTAL LOT AREA EXCLUDING BUILDING FOOTPRINT AREA AND TRACTS.
1,008,818 SF /5,000 SF
201.76 TREES REQUIRED
77 TREES PROVIDED
**SEE PLAN FOR EXISTING TREE MASSES TO REMAIN
403.5 SHRUBS REQUIRED
469 SHRUBS PROVIDED

STREET FRONTAGE REQUIREMENT
MAIN STREET (SOUTH SIDE)
1,334 LF
1 TREE / 30' OF STREET FRONTAGE
44.46 TREES REQUIRED
44 TREES PROVIDED
1 SHRUB PER 20' OF STREET FRONTAGE
67 SHRUBS REQUIRED
67 SHRUBS PROVIDED

TUDOR ROAD
1,215 LF
1 TREE / 30' OF STREET FRONTAGE
40 TREES REQUIRED
40 TREES PROVIDED
1 SHRUB PER 20' OF STREET FRONTAGE
60 SHRUBS REQUIRED
60 SHRUBS PROVIDED

BUFFER–EAST SIDE
ALONG ABUTTING LAND USES REQUIRES MEDIUM IMPACT SCREENING.
1 SHADE TREE / 1,000 SF
12 SHADE TREES REQUIRED
6 SHADE TREES PROVIDED
1 ORNAMENTAL TREE / 500 SF
24 ORNAMENTAL TREES REQUIRED
37 ORNAMENTAL TREES PROVIDED
1 EVERGREEN TREE / 300 SF
40 EVERGREEN TREES REQUIRED
43 EVERGREEN TREES PROVIDED
1 SHRUB / 200 SF
60 SHRUBS REQUIRED
67 SHRUBS PROVIDED
** ADJUSTMENTS MADE DUE TO OVERHEAD POWERLINES

PLANT SCHEDULE

DECIDUOUS TREES	BOTANICAL / COMMON NAME	SIZE	CALIPER		QTY
	ACER MIYABEI 'STATE STREET' MIYABEI MAPLE	B & B	3"		9
	EUCOMMIA ULMOIDES HARDY RUBBER TREE	B & B	3"		12
	GINKGO BILOBA 'PRINCETON SENTRY' PRINCETON SENTRY GINKGO	B & B	3"		5
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER LOCUST	B & B	3"		14
	PLATANUS X ACERIFOLIA 'EXCLAMATION' TM EXCLAMATION LONDON PLANE TREE	B & B	3"		29
	QUERCUS BICOLOR SWAMP WHITE OAK	B & B	3"		5
	QUERCUS MACROCARPA BURR OAK	B & B	3"		3
	QUERCUS SHUMARDII SHUMARD RED OAK	B & B	3"		26
	TAXODIUM DISTICHUM 'SHAWNEE BRAVE' TM BALD CYPRESS	B & B	3"		5
	TILIA AMERICANA 'BOULEVARD' BOULEVARD LINDEN	B & B	3"		5
	ULMUS PROPINQUA 'EMERALD SUNSHINE' EMERALD SUNSHINE ELM	B & B	3"		7
	ZELKOVA SERRATA 'MUSASHINO' SAWLEAF ZELKOVA	B & B	3"		11
EVERGREEN TREES	BOTANICAL / COMMON NAME	SIZE	CALIPER		QTY
	JUNIPERUS VIRGINIANA 'CANAERTII' CANAERTI JUNIPER	B&B, 8' HT.			32
	PICEA ABIES NORWAY SPRUCE	B&B, 8' HT.			22
ORNAMENTAL TREES	BOTANICAL / COMMON NAME	SIZE	CALIPER		QTY
	ACER TATARICUM 'HOT WINGS' HOT WINGS TATARIAN MAPLE	B&B, 8' HT.			2
	AMELANCHIER CANADENSIS 'AUTUMN BRILLIANCE' AUTUMN BRILLIANCE SERVICEBERRY	B & B	3"		25
	CERCIS CANADENSIS EASTERN REDBUD	B & B	3"		26
	MALUS X 'PRAIRIFIRE' PRAIRIFIRE CRABAPPLE	B & B	3"		8
SHRUBS	BOTANICAL / COMMON NAME	SIZE			
	BUXUS X 'GREEN VELVET' BOXWOOD	5 GAL			22
	CORNUS STOLONIFERA 'FARROW' TM ARCTIC FIRE RED TWIG DOGWOOD	5 GAL			45
	DIERVILLA RIVULARIS 'KODIAK ORANGE' KODIAK ORANGE BUSH–HONEYSUCKLE	5 GAL			58
	JUNIPERUS CHINENSIS 'GOLD LACE' GOLD LACE JUNIPER	5 GAL			67
	JUNIPERUS CHINENSIS 'SEA GREEN' SEA GREEN JUNIPER	5 GAL			358
	PANICUM VIRGATUM 'NORTH WIND' NORTHWIND SWITCH GRASS	1 GAL			80
	RHUS AROMATICA 'GRO–LOW' GRO–LOW FRAGRANT SUMAC	5 GAL			72
	VIBURNUM LANTANA 'MOHICAN' MOHICAN WAYFARING TREE	5 GAL			55
	VIBURNUM NUDUM 'WINTERTHUR' WINTERTHUR VIBURNUM	5 GAL			110
GROUND COVERS	BOTANICAL / COMMON NAME	CONT		SPACING	
	FESTUCA TURF TYPE TALL FESCUE BLEND	SEED			507,237 SF
	FESTUCA TURF TYPE TALL FESCUE BLEND	SOD			71,349 SF
NATIVE VEGETATION	BOTANICAL / COMMON NAME	CONT		SPACING	
	PANICUM VIRGATUM SWITCH GRASS	SEED			99,023 SF

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SCANNELL PROPERTIES

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

OVERALL LANDSCAPE PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by:	OLSSON
checked by:	ENG
approved by:	ENG
QA/QC by:	ENG
project no.:	021-04157
drawing no.:	C_LSC01_02104157.dwg
date:	

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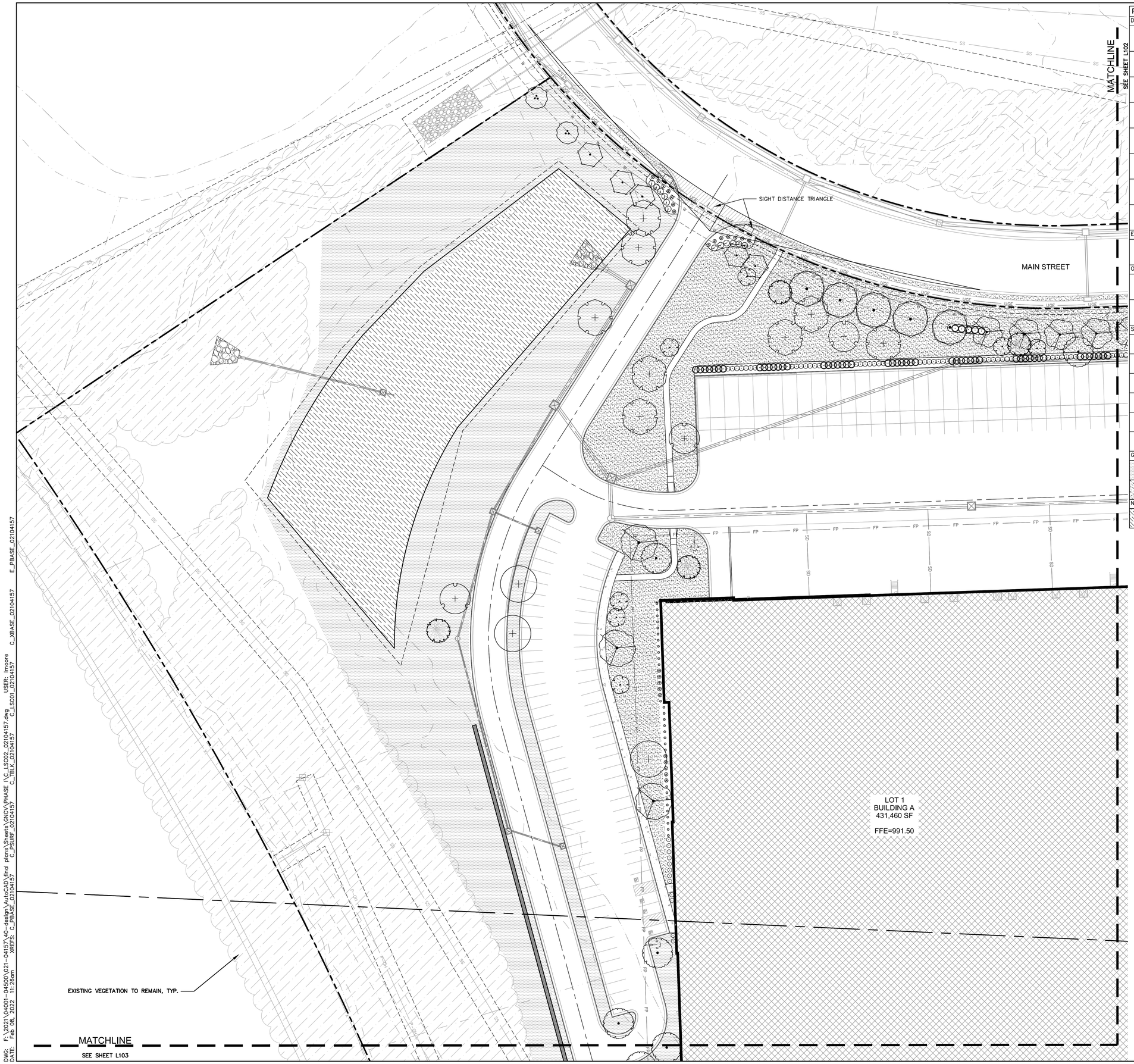
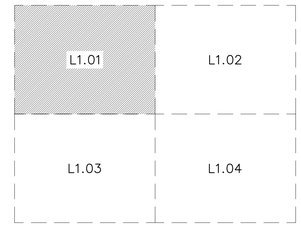


PLANT SCHEDULE L1.01		
DECIDUOUS TREES	BOTANICAL / COMMON NAME	QTY
	ACER MIYABEI 'STATE STREET' MIYABEI MAPLE	5
	EUCOMMIA ULMOIDES HARDY RUBBER TREE	3
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER LOCUST	3
	PLATANUS X ACERIFOLIA 'EXCLAMATION' TM EXCLAMATION LONDON PLANE TREE	8
	QUERCUS MACROCARPA BURR OAK	3
	QUERCUS SHUMARDII SHUMARD RED OAK	4
	TILIA AMERICANA 'BOULEVARD' BOULEVARD LINDEN	4
	ZELKOVA SERRATA 'MUSASHINO' SAWLEAF ZELKOVA	5
EVERGREEN TREES	BOTANICAL / COMMON NAME	QTY
	PICEA ABIES NORWAY SPRUCE	4
ORNAMENTAL TREES	BOTANICAL / COMMON NAME	QTY
	CERCIS CANADENSIS EASTERN REDBUD	2
	MALUS X 'PRAIRIFIRE' PRAIRIFIRE CRABAPPLE	7
SHRUBS	BOTANICAL / COMMON NAME	QTY
	BUXUS X 'GREEN VELVET' BOXWOOD	12
	DIERVILLA RIVULARIS 'KODIAK ORANGE' KODIAK ORANGE BUSH-HONEYSUCKLE	24
	JUNIPERUS CHINENSIS 'GOLD LACE' GOLD LACE JUNIPER	12
	JUNIPERUS CHINENSIS 'SEA GREEN' SEA GREEN JUNIPER	54
	PANICUM VIRGATUM 'NORTH WIND' NORTHWIND SWITCH GRASS	29
	VIBURNUM NUDUM 'WINTERTHUR' WINTERTHUR VIBURNUM	44
GROUND COVERS	BOTANICAL / COMMON NAME	
	FESTUCA TURF TYPE TALL FESCUE BLEND	SEED
	FESTUCA TURF TYPE TALL FESCUE BLEND	SOD
NATIVE VEGETATION	BOTANICAL / COMMON NAME	QTY
	PANICUM VIRGATUM SWITCH GRASS	40,043 SF

SEE SHEET L1.0 FOR COMPLETE PLANT SCHEDULE FOR SIZE AND TOTAL QUANTITIES.

NOTE: ALL EQUIPMENT MUST BE SCREENED WHETHER OR NOT INDICATED ON PLANS. FIELD ADJUSTMENTS MAY BE NECESSARY TO ACCOMMODATE SITE CONDITIONS EQUIPMENT AND LANDSCAPE. COORDINATE WITH LANDSCAPE ARCHITECT FOR ADEQUATE SCREENING. MUST MEET CITY REQUIREMENTS.



KEY MAP
NOT TO SCALE

N

0' 15' 30' 60'
SCALE IN FEET

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SCANNELL PROPERTIES

STATE OF MISSOURI
NUMBER
LANDSCAPE ARCHITECT

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & OWNER COMMENTS	

LANDSCAPE PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing #: L_LSC02_02104157.dwg
date:

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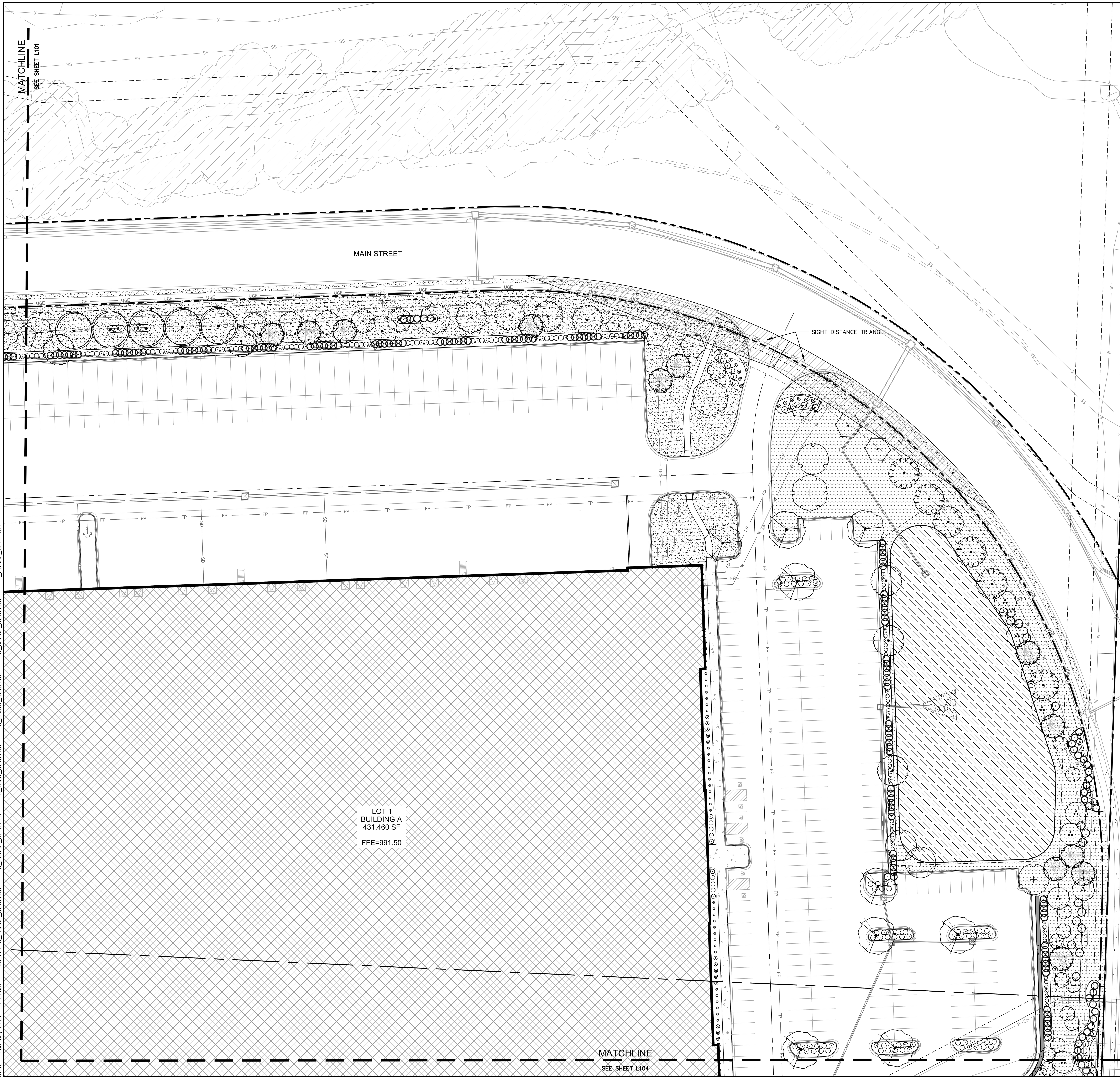
DATE: Feb 08, 2022 11:26am XREFS: C_PBASE_02104157 C_PSURF_02104157 C_TBLK_02104157 C_LSC01_02104157 C_XBASE_02104157 E_PBASE_02104157



PLANT SCHEDULE L1.02

DECIDUOUS TREES	BOTANICAL / COMMON NAME	QTY
	EUCOMMIA ULMOIDES HARDY RUBBER TREE	4
	GINKGO BILOBA 'PRINCETON SENTRY' PRINCETON SENTRY GINKGO	5
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER LOCUST	9
	PLATANUS X ACERIFOLIA 'EXCLAMATION' TM EXCLAMATION LONDON PLANE TREE	2
	QUERCUS BICOLOR SWAMP WHITE OAK	5
	QUERCUS SHUMARDII SHUMARD RED OAK	6
	TAXODIUM DISTICHUM 'SHAWNEE BRAVE' TM BALD CYPRESS	5
	TILIA AMERICANA 'BOULEVARD' BOULEVARD LINDEN	1
	ULMUS PROPINQUA 'EMERALD SUNSHINE' EMERALD SUNSHINE ELM	6
	ZELKOVA SERRATA 'MUSASHINO' SAWLEAF ZELKOVA	6
EVERGREEN TREES	BOTANICAL / COMMON NAME	QTY
	JUNIPERUS VIRGINIANA 'CANAERTII' CANAERTI JUNIPER	16
	PICEA ABIES NORWAY SPRUCE	12
ORNAMENTAL TREES	BOTANICAL / COMMON NAME	QTY
	AMELANCHIER CANADENSIS 'AUTUMN BRILLIANCE' AUTUMN BRILLIANCE SERVICEBERRY	12
	CERCIS CANADENSIS EASTERN REDBUD	8
	MALUS X 'PRAIRIFIRE' PRAIRIFIRE CRABAPPLE	1
SHRUBS	BOTANICAL / COMMON NAME	QTY
	BUXUS X 'GREEN VELVET' BOXWOOD	10
	CORNUS STOLONIFERA 'FARROW' TM ARCTIC FIRE RED TWIG DOGWOOD	45
	DIERVILLA RIVULARIS 'KODIAK ORANGE' KODIAK ORANGE BUSH-HONEYSUCKLE	34
	JUNIPERUS CHINENSIS 'GOLD LACE' GOLD LACE JUNIPER	28
	JUNIPERUS CHINENSIS 'SEA GREEN' SEA GREEN JUNIPER	159
	PANICUM VIRGATUM 'NORTH WIND' NORTHWIND SWITCH GRASS	45
	RHUS AROMATICA 'GRO-LOW' GRO-LOW FRAGRANT SUMAC	72
	VIBURNUM NUDUM 'WINTERTHUR' WINTERTHUR VIBURNUM	66
GROUND COVERS	BOTANICAL / COMMON NAME	
	FESTUCA TURF TYPE TALL FESCUE BLEND	SEED
	FESTUCA TURF TYPE TALL FESCUE BLEND	SOD
NATIVE VEGETATION	BOTANICAL / COMMON NAME	QTY
	PANICUM VIRGATUM SWITCH GRASS	27,204 SF

SEE SHEET L1.0 FOR COMPLETE PLANT SCHEDULE FOR SIZE AND TOTAL QUANTITIES.

NOTE: ALL EQUIPMENT MUST BE SCREENED WHETHER OR NOT INDICATED ON PLANS. FIELD ADJUSTMENTS MAY BE NECESSARY TO ACCOMMODATE SITE CONDITIONS EQUIPMENT AND LANDSCAPE. COORDINATE WITH LANDSCAPE ARCHITECT FOR ADEQUATE SCREENING. MUST MEET CITY REQUIREMENTS.

KEY MAP
NOT TO SCALE

N

0' 15' 30' 60'
SCALE IN FEET

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SCANNELL PROPERTIES

STATE OF MISSOURI — SETH REECE — NUMBER LA-2009... — LANDSCAPE ARCHITECT — 2/8/22

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	12.04.2021	CITY COMMENTS	
2	01.07.2022	CITY COMMENTS #2 AND OWNER CHANGES	
3	02.03.2022	CITY & EVERGY COMMENTS	

REVISIONS

2021

LANDSCAPE PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: C_LSC02_02104157.dwg
date:

SHEET
L1.02

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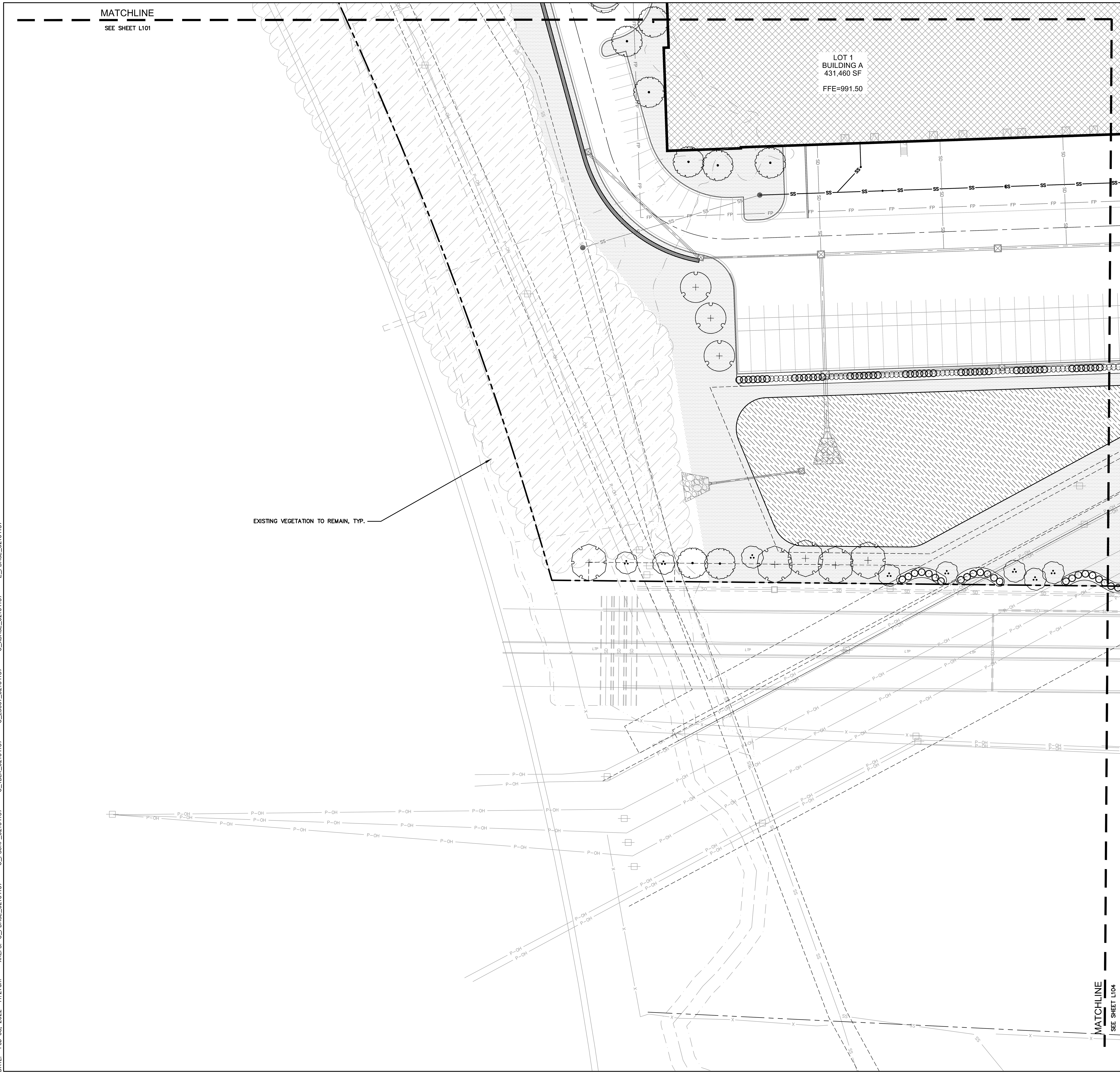

PLANT SCHEDULE L1.03		
DECIDUOUS TREES	BOTANICAL / COMMON NAME	QTY
	EUCOMMIA ULMOIDES HARDY RUBBER TREE	2
	PLATANUS X ACERIFOLIA 'EXCLAMATION' TM EXCLAMATION LONDON PLANE TREE	5
	QUERCUS SHUMARDII SHUMARD RED OAK	6
ORNAMENTAL TREES	BOTANICAL / COMMON NAME	QTY
	CERCIS CANADENSIS EASTERN REDBUD	8
SHRUBS	BOTANICAL / COMMON NAME	QTY
	JUNIPERUS CHINENSIS 'SEA GREEN' SEA GREEN JUNIPER	71
	VIBURNUM LANTANA 'MOHICAN' MOHICAN WAYFARING TREE	32
GROUND COVERS	BOTANICAL / COMMON NAME	
	FESTUCA TURF TYPE TALL FESCUE BLEND	SEED
NATIVE VEGETATION	BOTANICAL / COMMON NAME	QTY
	PANICUM VIRGATUM SWITCH GRASS	31,776 SF

SEE SHEET L1.0 FOR COMPLETE PLANT SCHEDULE FOR SIZE AND TOTAL QUANTITIES.

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LANDSCAPE PLAN
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
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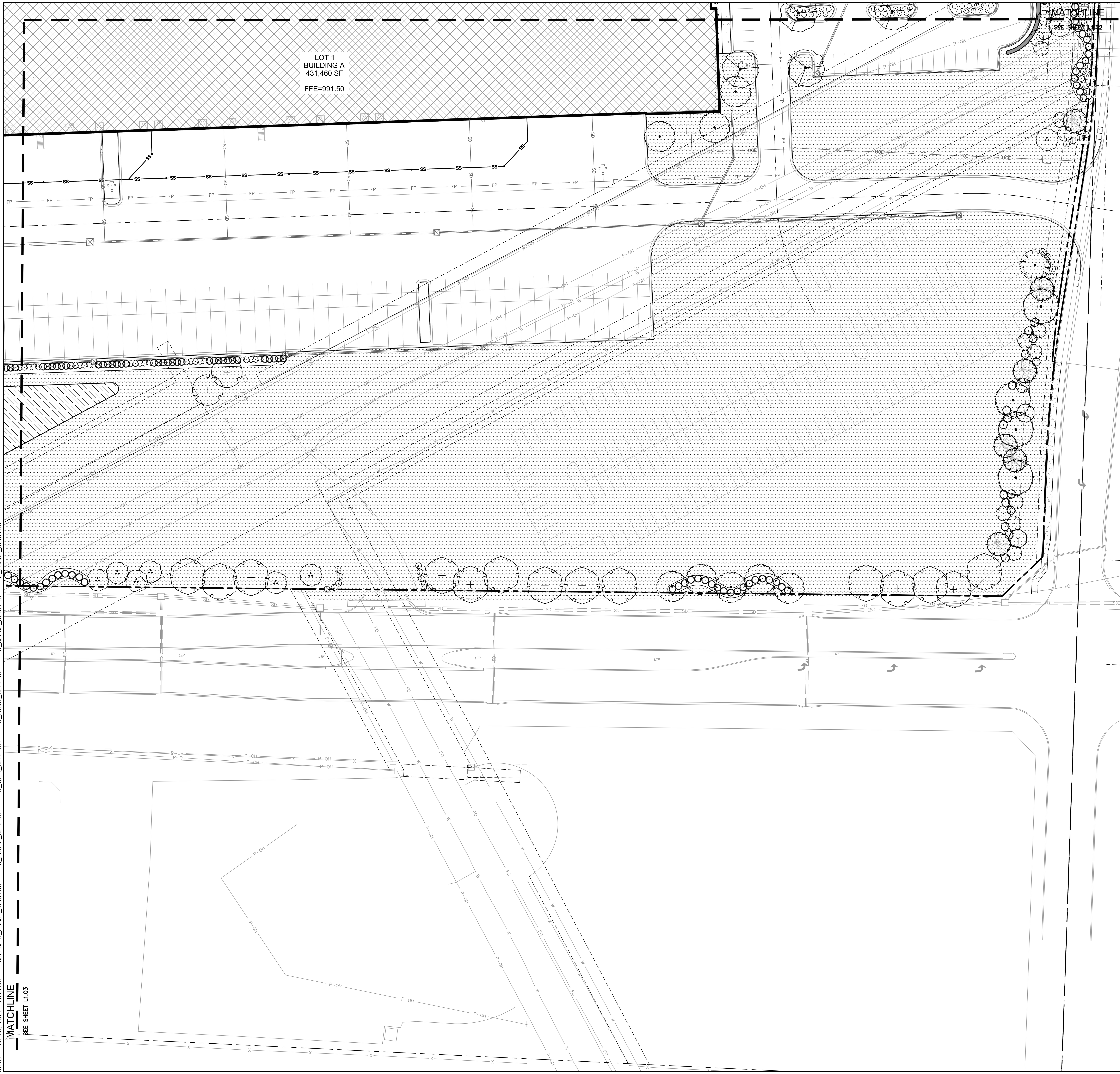

PLANT SCHEDULE L1.04		
DECIDUOUS TREES	BOTANICAL / COMMON NAME	QTY
	ACER MIYABEI 'STATE STREET' MIYABEI MAPLE	4
	EUCOMMIA ULMOIDES HARDY RUBBER TREE	3
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER LOCUST	2
	PLATANUS X ACERIFOLIA 'EXCLAMATION' TM EXCLAMATION LONDON PLANE TREE	14
	QUERCUS SHUMARDII SHUMARD RED OAK	10
	ULMUS PROPINQUA 'EMERALD SUNSHINE' EMERALD SUNSHINE ELM	1
EVERGREEN TREES	BOTANICAL / COMMON NAME	QTY
	JUNIPERUS VIRGINIANA 'CANAERTII' CANAERTI JUNIPER	16
	PICEA ABIES NORWAY SPRUCE	6
ORNAMENTAL TREES	BOTANICAL / COMMON NAME	QTY
	ACER TATARICUM 'HOT WINGS' HOT WINGS TATARIAN MAPLE	2
	AMELANCHIER CANADENSIS 'AUTUMN BRILLIANCE' AUTUMN BRILLIANCE SERVICEBERRY	13
	CERCIS CANADENSIS EASTERN REDBUD	8
SHRUBS	BOTANICAL / COMMON NAME	QTY
	JUNIPERUS CHINENSIS 'GOLD LACE' GOLD LACE JUNIPER	27
	JUNIPERUS CHINENSIS 'SEA GREEN' SEA GREEN JUNIPER	74
	PANICUM VIRGATUM 'NORTH WIND' NORTHWIND SWITCH GRASS	6
	VIBURNUM LANTANA 'MOHICAN' MOHICAN WAYFARING TREE	23
GROUND COVERS	BOTANICAL / COMMON NAME	
	FESTUCA TURF TYPE TALL FESCUE BLEND	SEED

SEE SHEET L1.0 FOR COMPLETE PLANT SCHEDULE FOR SIZE AND TOTAL QUANTITIES.

NOTE: ALL EQUIPMENT MUST BE SCREENED WHETHER OR NOT INDICATED ON PLANS. FIELD ADJUSTMENTS MAY BE NECESSARY TO ACCOMMODATE SITE CONDITIONS EQUIPMENT AND LANDSCAPE. COORDINATE WITH LANDSCAPE ARCHITECT FOR ADEQUATE SCREENING. MUST MEET CITY REQUIREMENTS.

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SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

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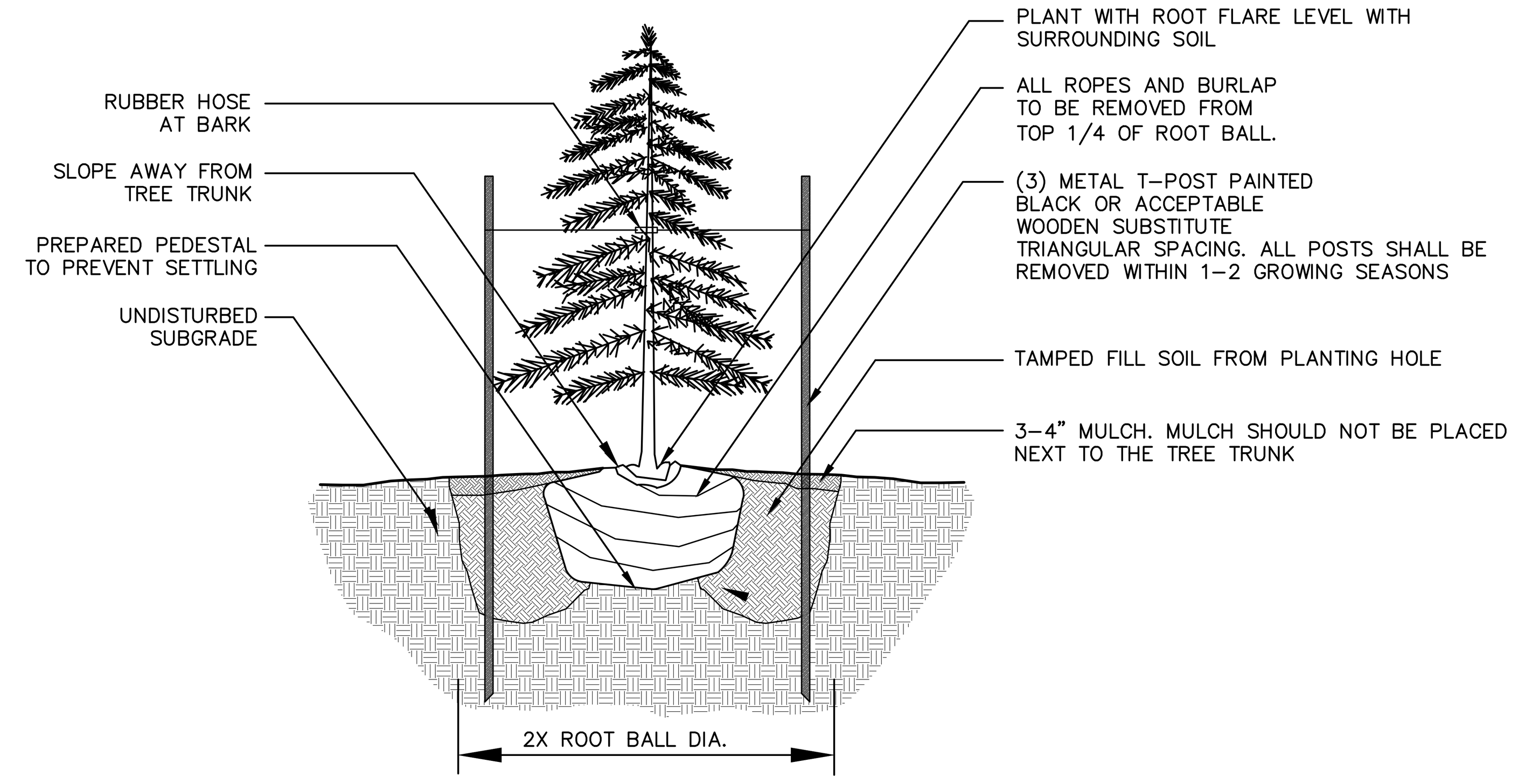
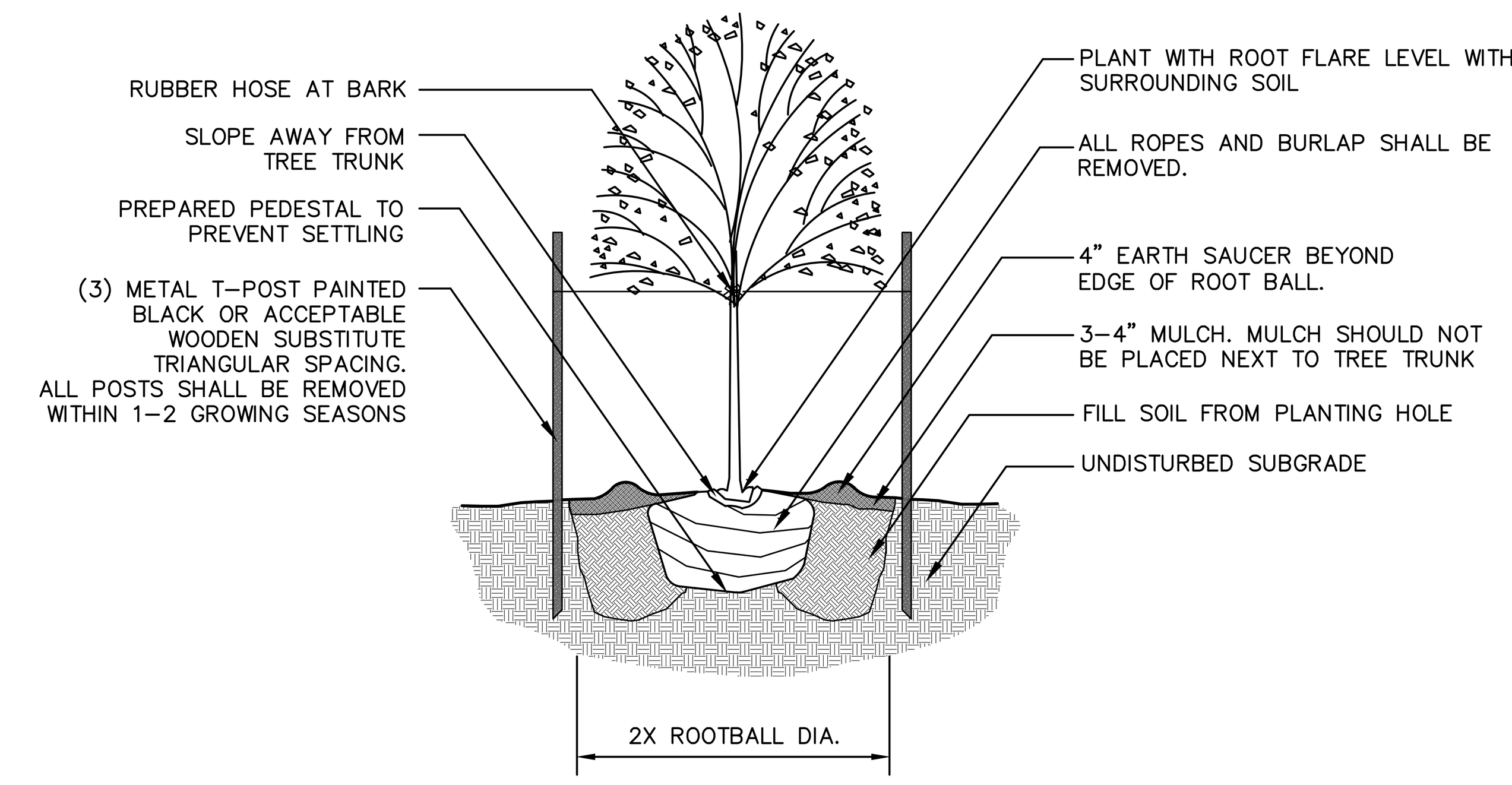


NOTES:
1. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING
2. IN AREAS OF TURF, SURROUND BED WITH 6' DIAMETER OF MULCH

1 Evergreen Tree Planting Detail
not to scale

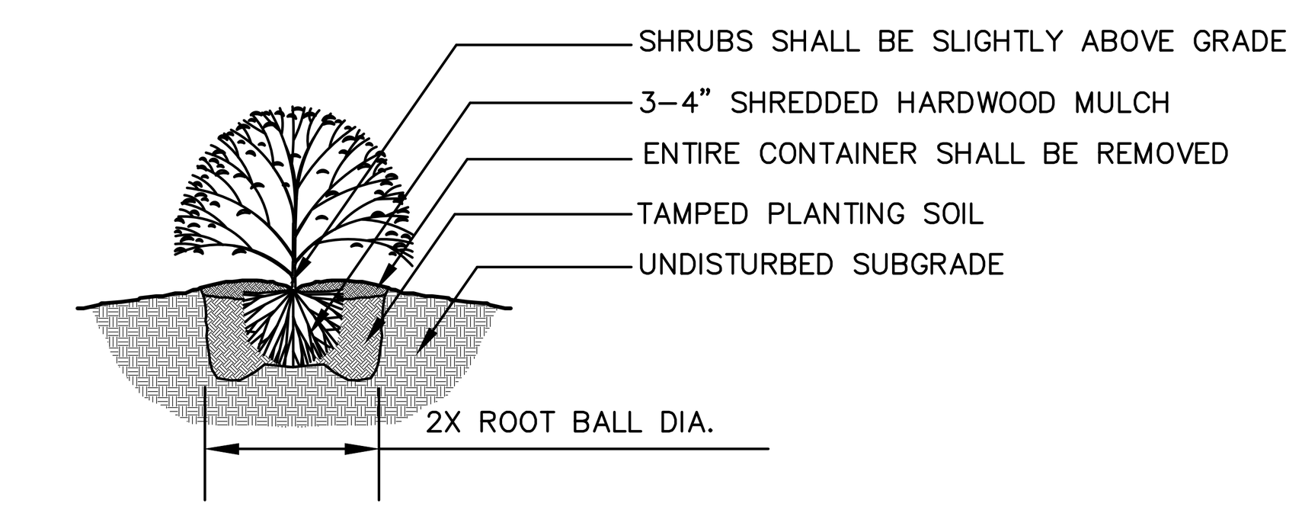


NOTES:
1. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING
2. IN AREAS OF TURF, SURROUND BED WITH 6' DIAMETER OF MULCH

2 Deciduous Tree Planting Detail
not to scale

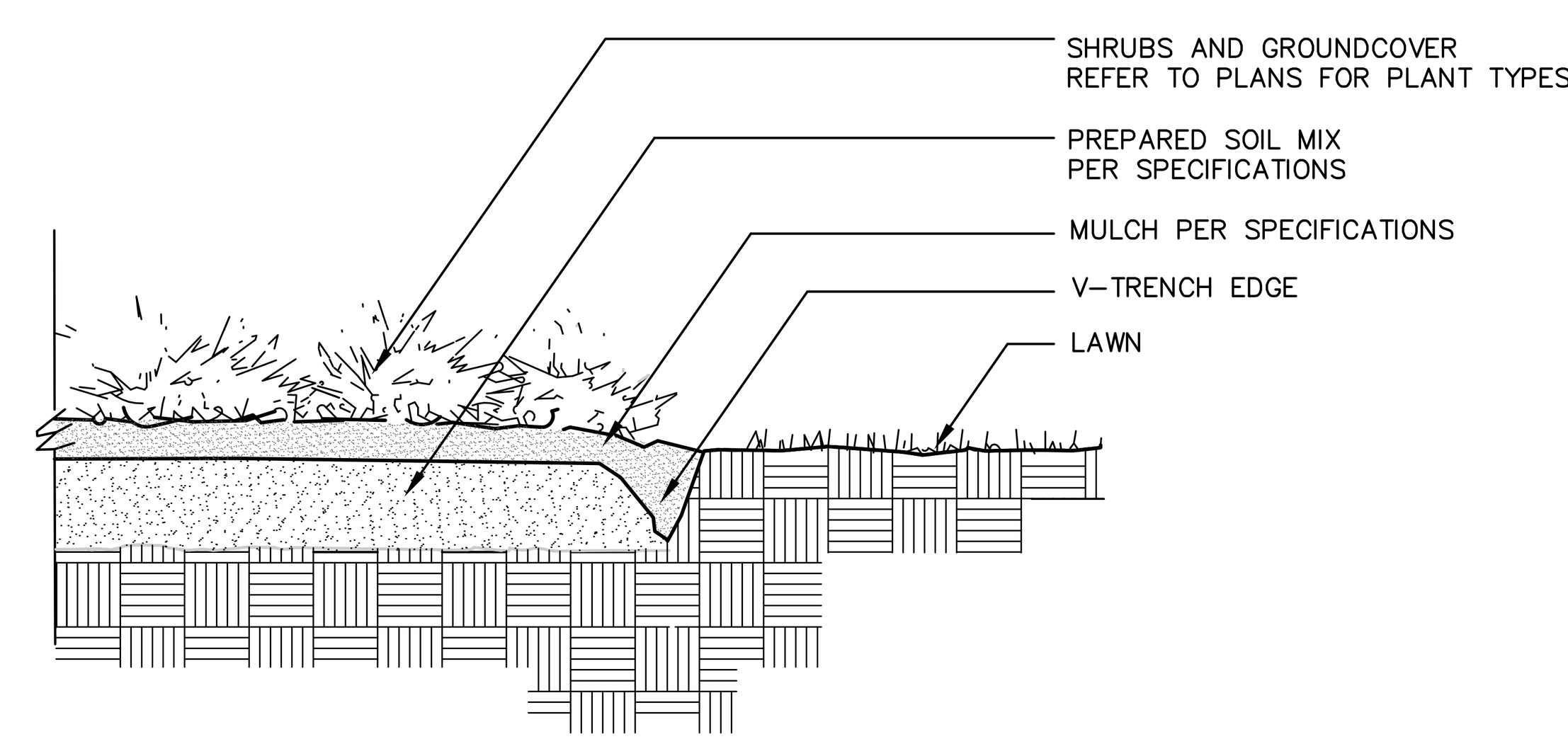
PLANTING NOTES

1. ALL WORK SHALL BE COORDINATED WITH THE WORK OF OTHER TRADES.
2. LOCATE AND FLAG ALL UNDERGROUND UTILITIES PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL PROTECT EXISTING OVERHEAD AND UNDERGROUND UTILITIES. ANY DAMAGE TO SUCH SHALL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
3. PLANTS AND OTHER MATERIALS ARE QUANTIFIED AND SUMMARIZED FOR THE CONVENIENCE OF THE CITY AND LOCAL GOVERNING BODIES. CONFIRM AND INSTALL SUFFICIENT QUANTITIES TO COMPLETE THE WORK AS DRAWN.
4. PLAN IS SUBJECT TO CHANGES BASED ON PLANT SIZE AND MATERIAL AVAILABILITY. ALL CHANGES OR SUBSTITUTIONS MUST BE APPROVED BY THE CITY OF LEE'S SUMMIT, MO AND THE LANDSCAPE ARCHITECT.
5. ALL PLANT MATERIAL SHALL BE NURSERY GROWN TO MEET MINIMUM SIZE AS SPECIFIED IN THE AMERICAN STANDARD FOR NURSERY STOCK ESTABLISHED BY THE AMERICAN NURSERY & LANDSCAPE ASSOCIATION (ANLA). THE LANDSCAPE ARCHITECT OR OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
6. ALL TREES SHALL BE CALIPERED AND ANY UNDERSIZED TREES SHALL BE REJECTED. SPECIFIED CALIPER MEASUREMENT FOR TREES SHALL BE MEASURED AT 12" ABOVE THE GRADE.
7. PLANTING OF TREES, SHRUBS, SODDED AND SEEDED TURFGRASS SHALL BE COMMENCED DURING EITHER THE SPRING (MARCH 15–JUNE 15) OR FALL (SEPTEMBER 1 - OCTOBER 15) PLANTING SEASON AND WITH WATER AVAILABLE FOR IRRIGATION PURPOSES.
8. CONTRACTOR SHALL STAKE OR MARK ALL PLANT MATERIAL LOCATIONS PRIOR TO INSTALLATION. CONTRACTOR SHALL HAVE THE LANDSCAPE ARCHITECT APPROVE ALL STAKING PRIOR TO INSTALLATION. FIELD ADJUSTMENTS MAY BE NECESSARY BASED UPON FIELD CONDITIONS (I.E. ROOT BALL AND DROP INLET CONFLICT). ALL ADJUSTMENTS MUST BE APPROVED BY THE LANDSCAPE ARCHITECT.
9. THE LANDSCAPE CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS AND MATERIALS INJURIOUS TO PLANT GROWTH FROM PLANTING PITS AND BEDS PRIOR TO BACKFILLING WITH PLANTING MIX.
10. A PRE-EMERGENT HERBICIDE SHALL BE APPLIED TO ALL SHRUB BEDS PRIOR TO THE INSTALLATION OF ANY PLANT MATERIAL.
11. BACKFILL ALL PLANTING BEDS TO A MINIMUM 12-INCH DEPTH WITH PLANTING SOIL MIX. PLANTING SOIL MIX SHALL CONSIST OF ONE (1) PART PERLITE, ONE (1) PART PEAT MOSS, AND TWO (2) PARTS CLEAN LOAM TOPSOIL. THOROUGHLY MIX PLANTING SOIL COMPONENTS PRIOR TO PLACEMENT.
12. ALL LANDSCAPE PLANTING AREAS, EXCLUDING TURF AREAS SHALL BE MULCHED WITH A MINIMUM OF 3-4" SHREDDED HARDWOOD MULCH UNLESS OTHERWISE NOTED ON PLANS.
13. V-TRENCH LANDSCAPE EDGING IS TO BE USED ON ALL LANDSCAPE BEDS ABUTTING SODDED AREAS.
14. ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH A HIGH-EFFICIENCY, AUTOMATIC IRRIGATION SYSTEM ACHIEVING 100% EVEN COVERAGE OF ALL LANDSCAPE AREAS. IRRIGATION SYSTEM SHALL BE DESIGN-BUILD TO MEET ALL CITY REQUIREMENTS.
15. LANDSCAPE CONTRACTOR IS TO BE RESPONSIBLE FOR WATERING ALL PLANT MATERIALS UNTIL THE TIME THE PERMANENT IRRIGATION SYSTEM IS FULLY FUNCTIONAL AND ACCEPTANCE OF THE PROJECT HAS TAKEN PLACE. ANY MATERIAL WHICH DIES, OR DEFOLIATES (PRIOR TO ACCEPTANCE OF THE WORK) WILL BE PROMPTLY REMOVED AND REPLACED.
16. THE CONTRACTOR WILL COMPLETELY GUARANTEE ALL WORK FOR A PERIOD OF ONE YEAR BEGINNING AT THE DATE OF ACCEPTANCE. CONTRACTOR WILL MAKE ALL REPLACEMENTS PROMPTLY (AS PER DIRECTION OF OWNER).



NOTES:
1. MINIMUM ROOT SPREAD TO BE IN ACCORDANCE WITH ANLA STANDARDS
2. PRUNE DAMAGED LIMBS OR ROOTS AFTER INSTALLATION
3. MAKE SURE ROOTS DO NOT DRY OUT DURING INSTALLATION
4. SOAK GENEROUSLY TO COMPACT AND SETTLE

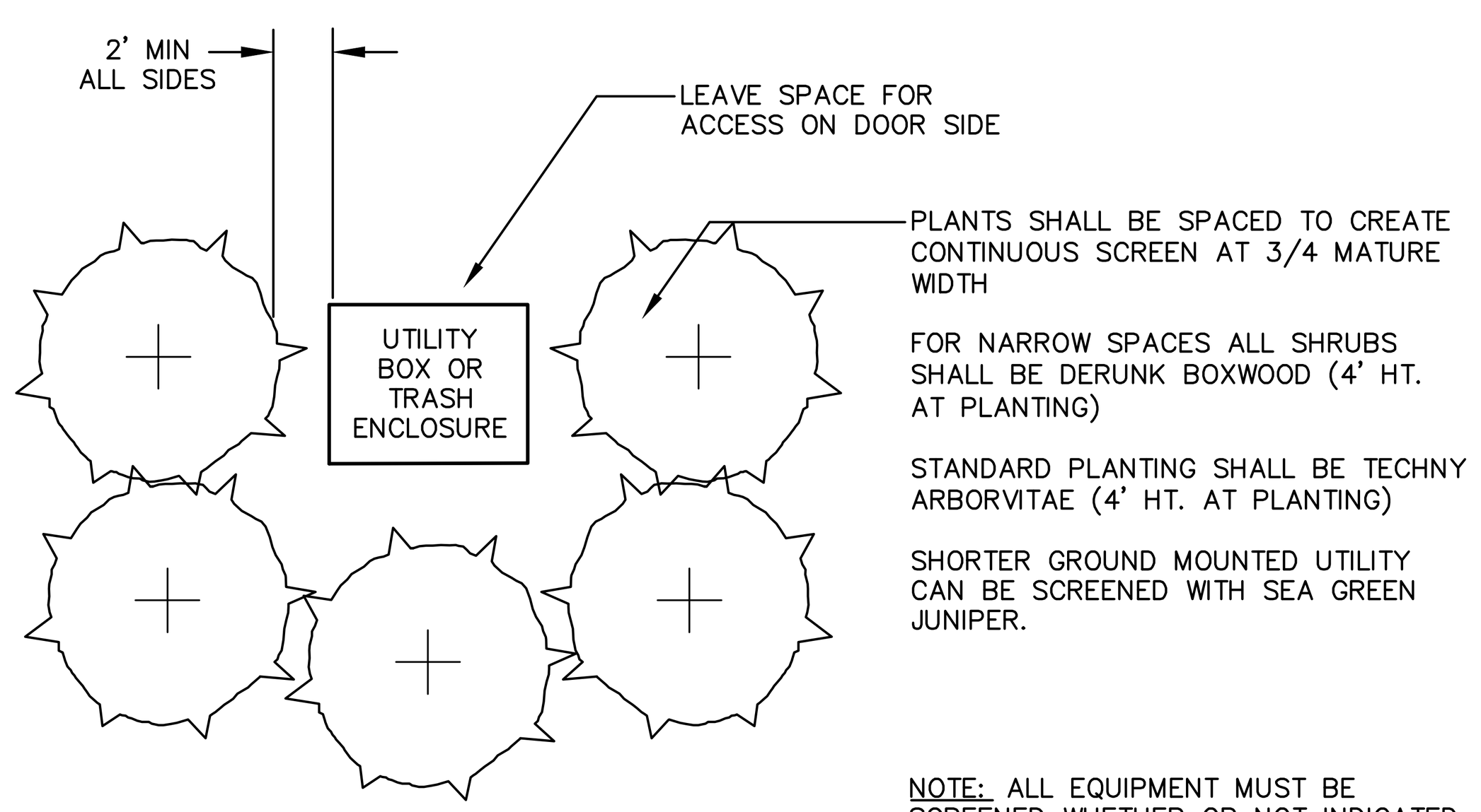
3 Shrub Planting Detail
not to scale



4 V-Trench Edging Detail
not to scale

SODDING NOTES

1. ALL DISTURBED AREAS SHALL BE SODDED WITH TURF-TYPE TALL FESCUE SOD WITH A MINIMUM OF 3 CULTIVARS.
2. ALL LAWN AREAS SHALL RECEIVE A MINIMUM 6-INCH DEPTH OF TOPSOIL COMPACTED TO 85% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT.
3. THE ENTIRE SURFACE TO BE SODDED SHALL BE REASONABLY SMOOTH AND FREE FROM STONES, ROOTS, OR OTHER DEBRIS.
4. SOD SHALL BE MACHINE STRIPPED AT A UNIFORM SOIL THICKNESS OF APPROXIMATELY ONE INCH (PLUS OR MINUS 1/4-INCH). THE MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH, AND SHALL BE DETERMINED AT THE TIME OF CUTTING IN THE FIELD. PRECAUTIONS SHALL BE TAKEN TO PREVENT DRYING AND HEATING. SOD DAMAGED BY HEAT AND DRY CONDITIONS, AND SOD CUT MORE THAN 18 HOURS BEFORE BEING INCORPORATED INTO THE WORK SHALL NOT BE USED.
5. HANDLING OF SOD SHALL BE DONE IN A MANNER THAT WILL PREVENT TEARING, BREAKING, DRYING AND OTHER DAMAGE. PROTECT EXPOSED ROOTS FROM DEHYDRATION. DO NOT DELIVER MORE SOD THAN CAN BE LAID WITHIN 24 HOURS.
6. MOISTEN PREPARED SURFACE IMMEDIATELY PRIOR TO LAYING SOD. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE INSTALLING SOD. FERTILIZE, HARROW OR RAKE FERTILIZER IN THE TOP 1-1/2-INCHES OF TOPSOIL, AT A UNIFORM RATE OF ONE POUND OF NITROGEN PER 1000 S.F.
7. SOD SHALL BE CAREFULLY PLACED IN THE DIRECTION PARALLEL WITH THE SLOPE OF THE AREA TO BE SODDED. SOD STRIPS SHALL BE BUTTED TOGETHER BUT NOT OVERLAPPED WITH THE SEAMS STAGGERED ON EACH ROW.
8. FERTILIZER SHALL BE 20-10-5 COMMERCIAL FERTILIZER OF THE GRADE, TYPE, AND FORM SPECIFIED AND SHALL COMPLY WITH THE RULES OF THE STATE OF MISSOURI DEPT. OF AGRICULTURE. FERTILIZER SHALL BE IDENTIFIED ACCORDING TO THE PERCENT N, P, K, IN THAT ORDER.
9. ALL SOD ON SLOPES GREATER THAN 5:1 AND WITHIN DETENTION AREAS SHALL BE STAKED.
10. SATURATE SOD WITH FINE WATER SPRAY WITHIN TWO HOURS OF PLANTING. DURING FIRST WEEK AFTER PLANTING, WATER DAILY OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A MINIMUM DEPTH OF FOUR INCHES BELOW SOD.
11. CONTRACTOR SHALL PROVIDE FULL MAINTENANCE FOR SODDED TURF GRASS FOR A PERIOD OF 30 DAYS AFTER THE DATE OF FINAL ACCEPTANCE. AT THE END OF THE MAINTENANCE PERIOD, A HEALTHY, WELL-ROOTED, EVEN-COLORED, VIABLE TURF MUST BE ESTABLISHED. THE TURF GRASS SHALL BE FREE OF WEEDS, OPEN JOINTS, BARE AREAS, AND SURFACE IRREGULARITIES.



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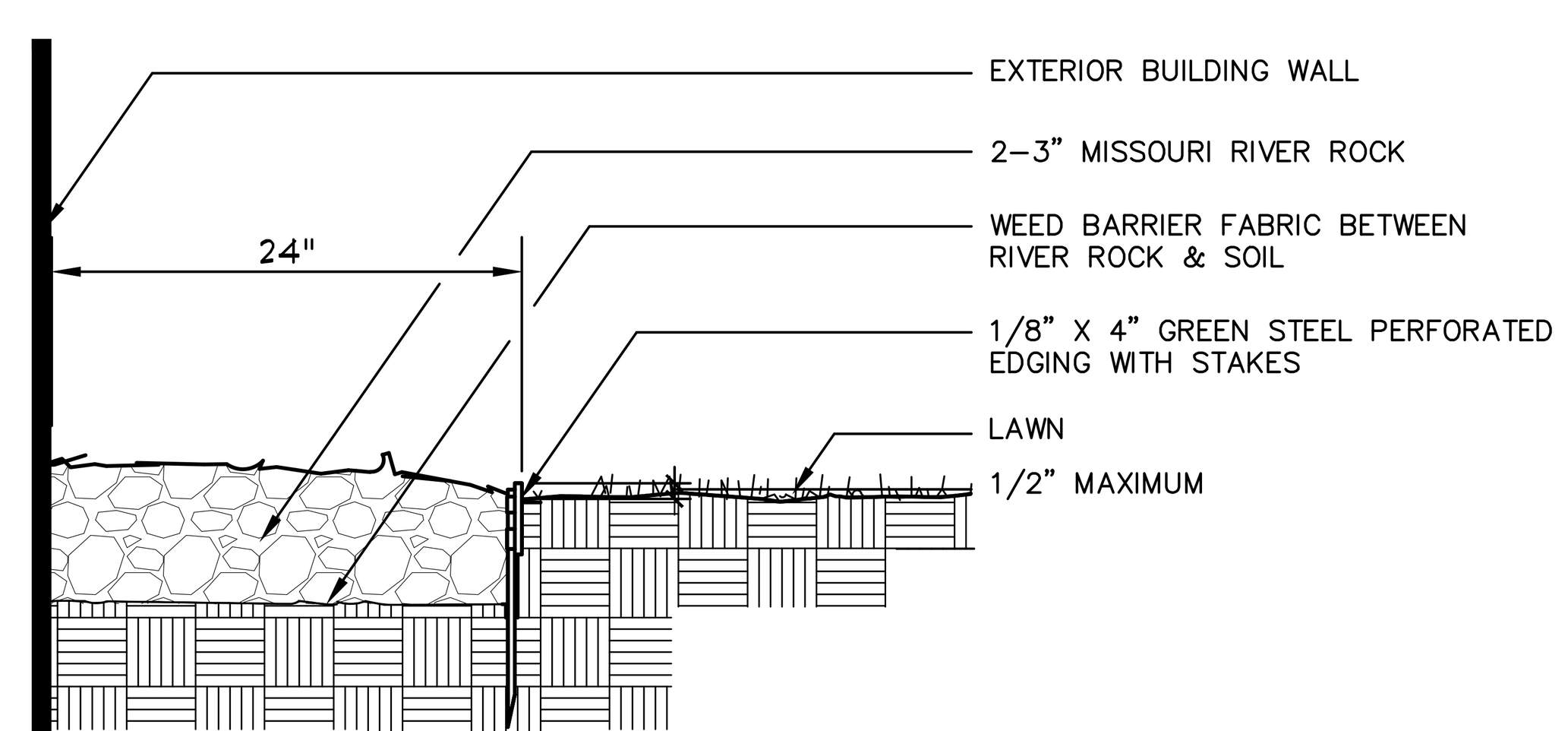
6 Ground Mounted Mechanical Equipment Screening Detail
not to scale



7 Mow Strip Detail
not to scale

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LANDSCAPE NOTES & DETAILS
PHASE I FINAL DEVELOPMENT PLAN

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

2021

LEE'S SUMMIT, MISSOURI

drawn by: OLSSON
checked by: ENG
approved by: ENG
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project no.: 021-04157
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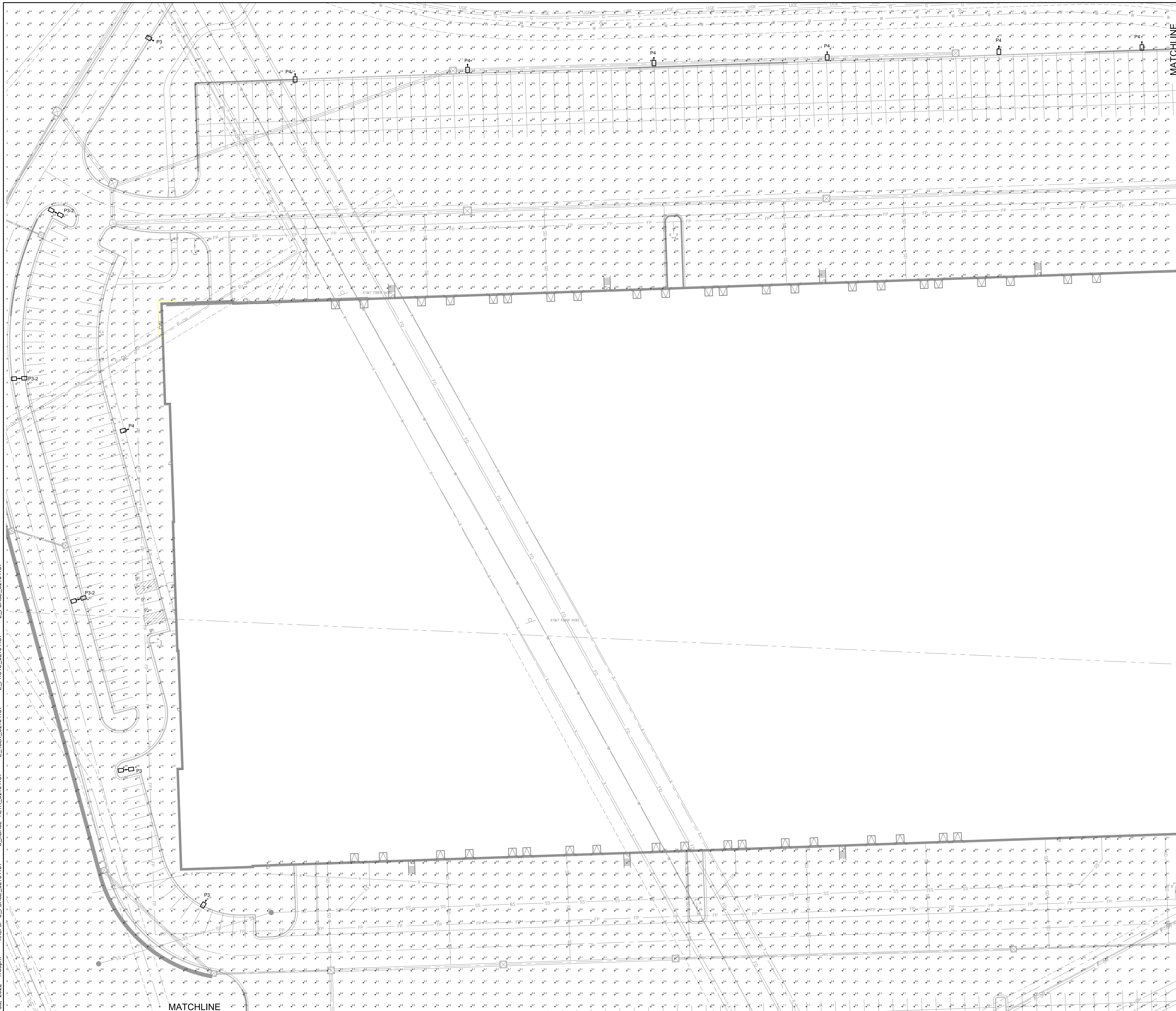
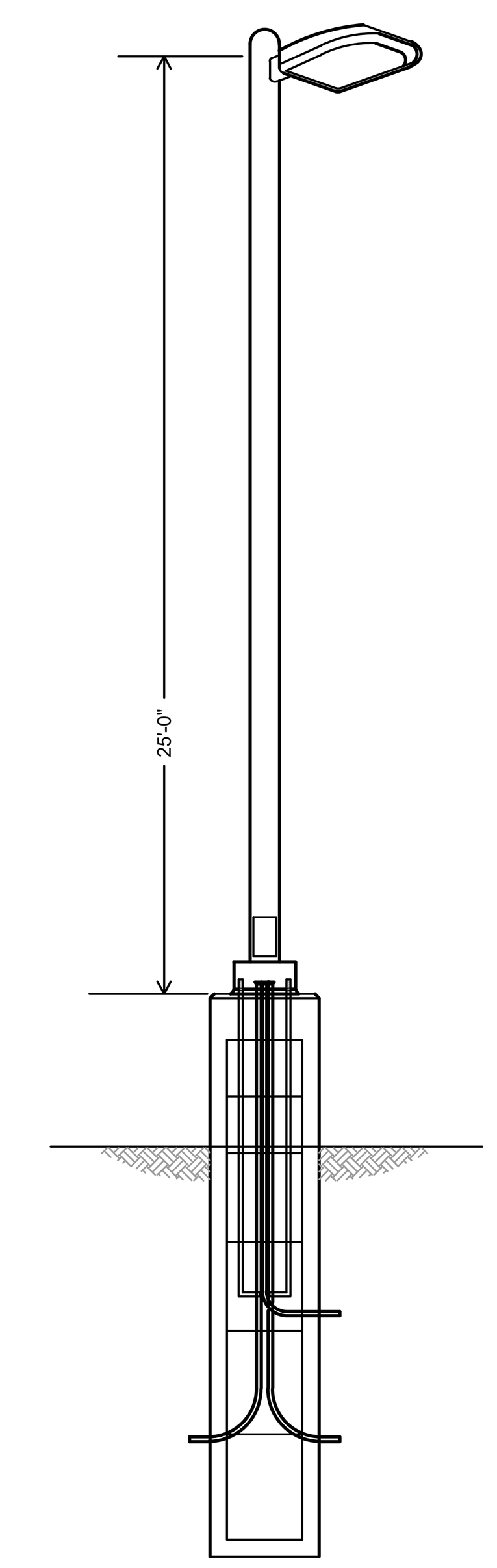


1 SITE LIGHTING PHOTOMETRICS PLAN
SCALE: 1" = 20'-0"



2 LIGHT POLE DETAIL
SCALE: NOT TO SCALE

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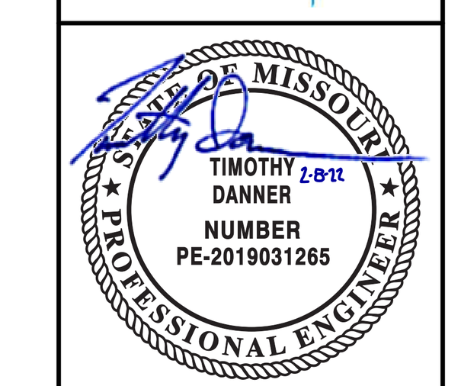

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SITE LIGHTING PHOTOMETRICS PLAN
PHASE I CONSTRUCTION DOCUMENTS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

2021

LEE'S SUMMIT, MISSOURI

drawn by: OLSSON
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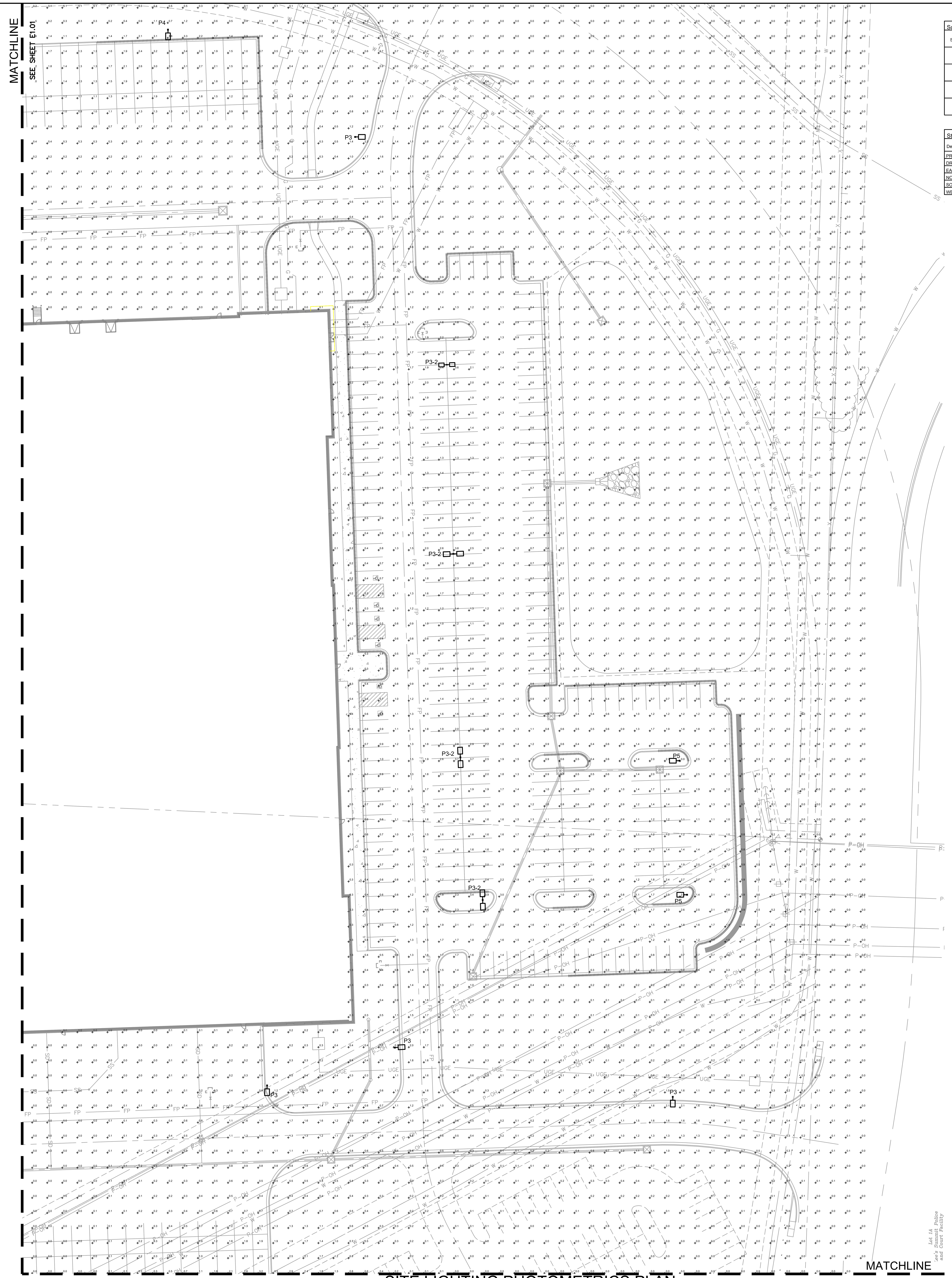

SITE LIGHTING PHOTOMETRICS PLAN

SCALE: 1" = 20'-0"

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Number Lamps	Lumens Per Lamp	Light Loss Factor	Wattage
	P4	11	Lithonia Lighting	DSX1 LED P8 40K T4M MVOLT HS	DSX1 LED P8 40K T4M MVOLT with houseside shield	1	18424	0.9	207
	P3-2	8	Lithonia Lighting	DSX1 LED P3 40K T3M MVOLT	DSX1 LED P3 40K T3M MVOLT	1	12214	0.9	204
	P5	2	Lithonia Lighting	DSX1 LED P3 40K T5S MVOLT	DSX1 LED P3 40K T5S MVOLT	1	13088	0.9	102
	P3	7	Lithonia Lighting	DSX1 LED P3 40K T3M MVOLT	DSX1 LED P3 40K T3M MVOLT	1	12214	0.9	102

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
PROPERTY LINE	+	0.0 fc	0.3 fc	0.0 fc	N/A	N/A
DRIVE	✳	0.4 fc	4.1 fc	0.3 fc	11.0:1	3.7:1
EAST PARKING	✳	1.2 fc	3.9 fc	0.3 fc	13.0:1	4.0:1
NORTH PARKING	✳	1.5 fc	4.1 fc	0.3 fc	13.7:1	5.0:1
SOUTH PARKING	✳	1.1 fc	2.9 fc	0.0 fc	N/A	N/A
WEST PARKING	✳	1.3 fc	3.0 fc	0.3 fc	10.0:1	4.3:1

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TEL 913.381.1170
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SCANNELL PROPERTIES

TIMOTHY DANNER NUMBER PE-2019031265 PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SITE LIGHTING PHOTOMETRICS PLAN
PHASE I CONSTRUCTION DOCUMENTS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET
LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: E_NSITE_02104157
date:

SHEET
E1.02

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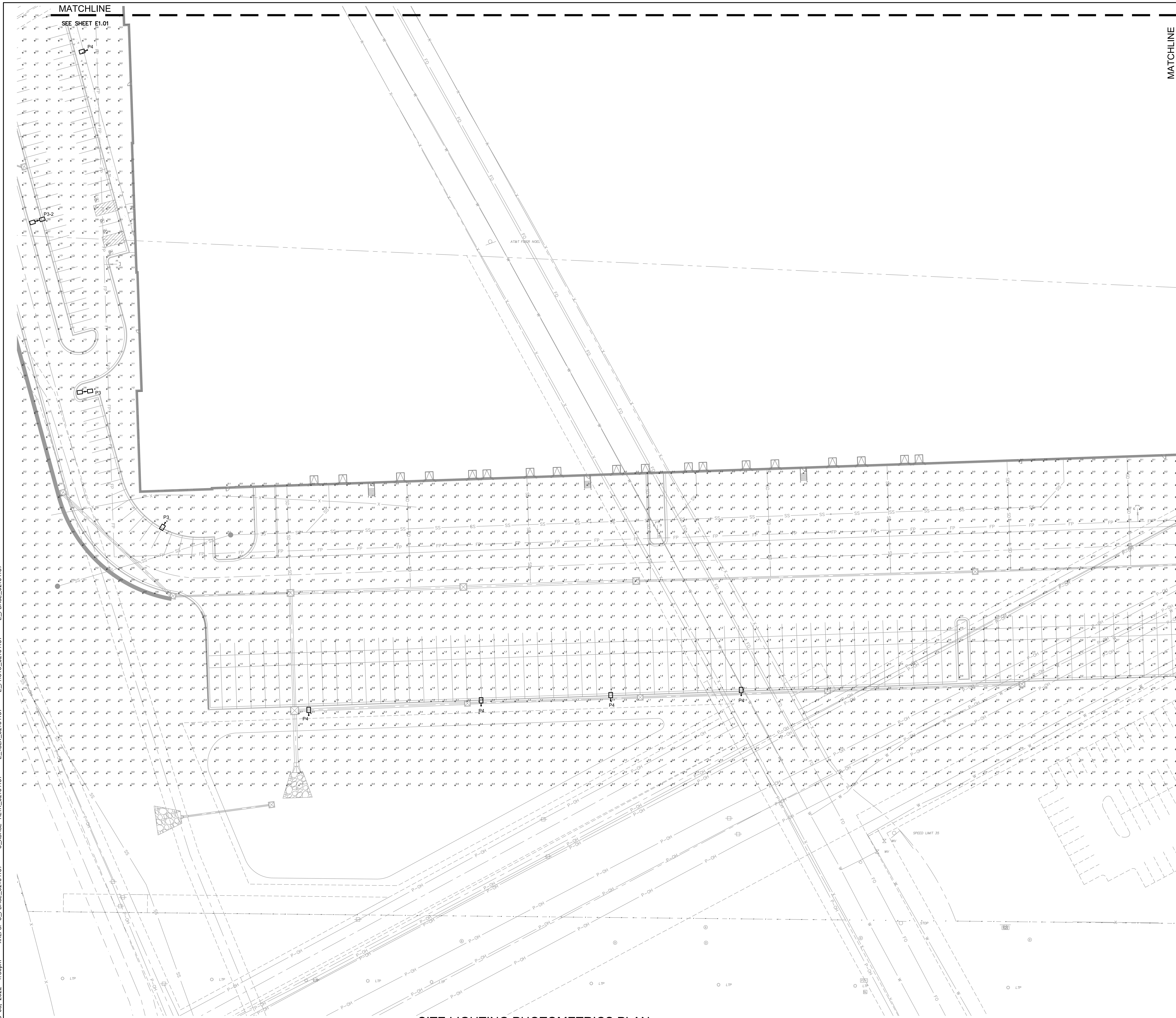

SITE LIGHTING PHOTOMETRICS PLAN

SCALE: 1" = 20'-0"

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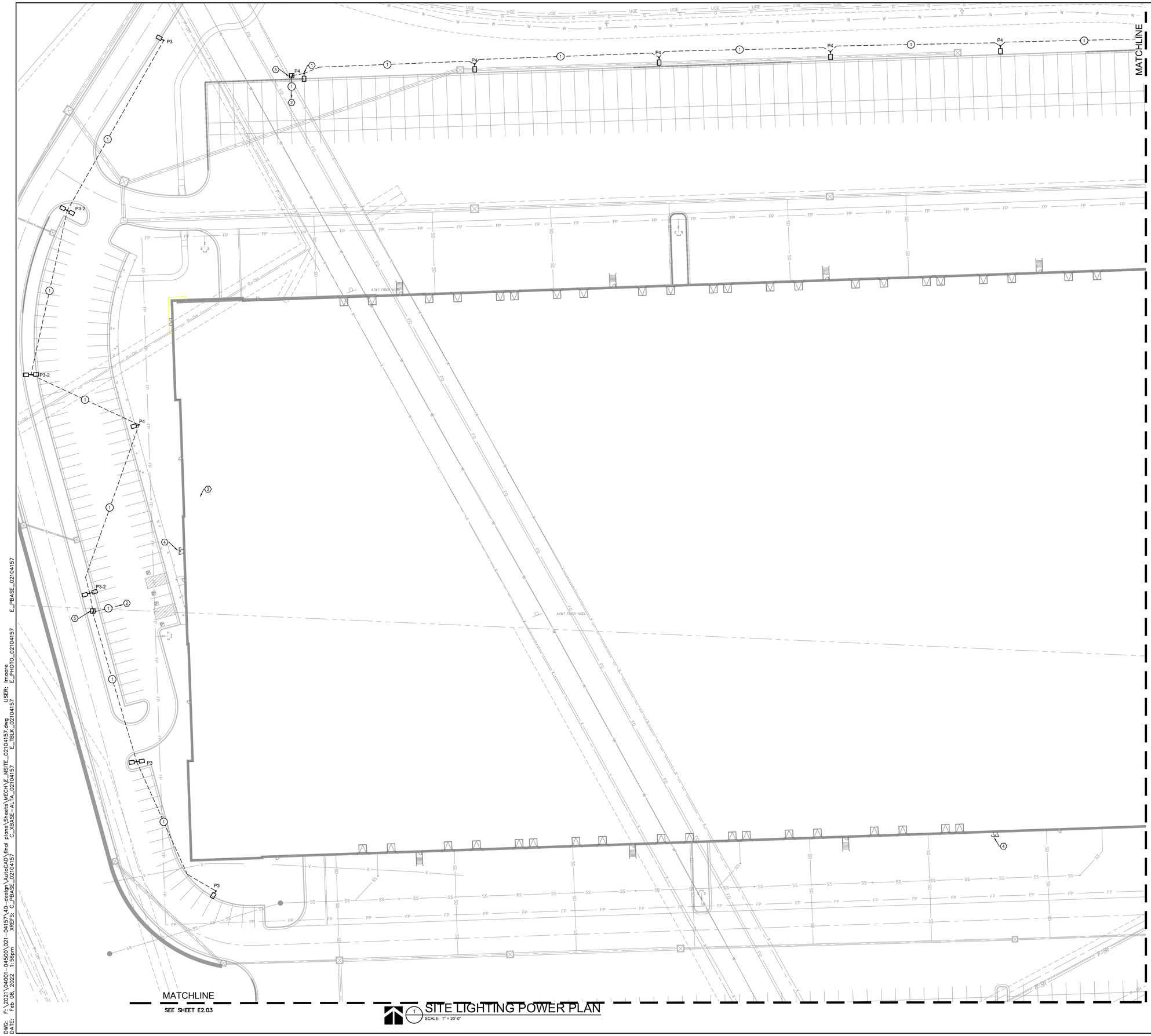

GENERAL NOTES

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B. INFORMATION SHOWN ON THIS DRAWING CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATION OF TYPE AND LOCATION OF ALL UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

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D. PROVIDE EQUIPMENT GROUNDING CONDUCTOR THROUGHOUT EACH BRANCH CIRCUIT. CONDUCTOR MAY NOT BE INDICATED GRAPHICALLY.

⎔ SHEET KEYNOTES

1. AREA LED LIGHT FIXTURE ON POLE WITH CONCRETE BASE. REFER TO LIGHT FIXTURE SCHEDULE AND LIGHT POLE BASE DETAIL FOR ADDITIONAL INFORMATION. (TYP.)
2. ROUTE LIGHTING HOMERUN PANEL TO 20A/1P CIRCUIT BREAKER TO PANELBOARD IN BUILDING.
3. APPROXIMATE LOCATION OF PANELBOARD FOR NEW LIGHTING CIRCUITS. REFER TO BUILDING INTERIOR PLANS FOR EXACT LOCATION AND CONTROL SCHEME. EXTERIOR LIGHTING CIRCUITS TO BE CONTROLLED BY TIME CLOCK/PHOTOCELL.
4. REFER TO BUILDING INTERIOR PLANS FOR ROUTING LIGHTING CIRCUITS IN BUILDING.
5. IN GRADE JUNCTION BOX. REFER TO JUNCTION BOX DETAILS FOR ADDITIONAL INFORMATION. DETERMINE EXACT LOCATION AND QUANTITY FOR ROUTING NEW LIGHTING CIRCUITS.

○ SHEET KEYNOTES

1. (2)-#10 AND (1)-#10 GROUND IN 1" CONDUIT.

SITE LIGHTING POWER PLAN
SCALE: 1" = 20'-0"

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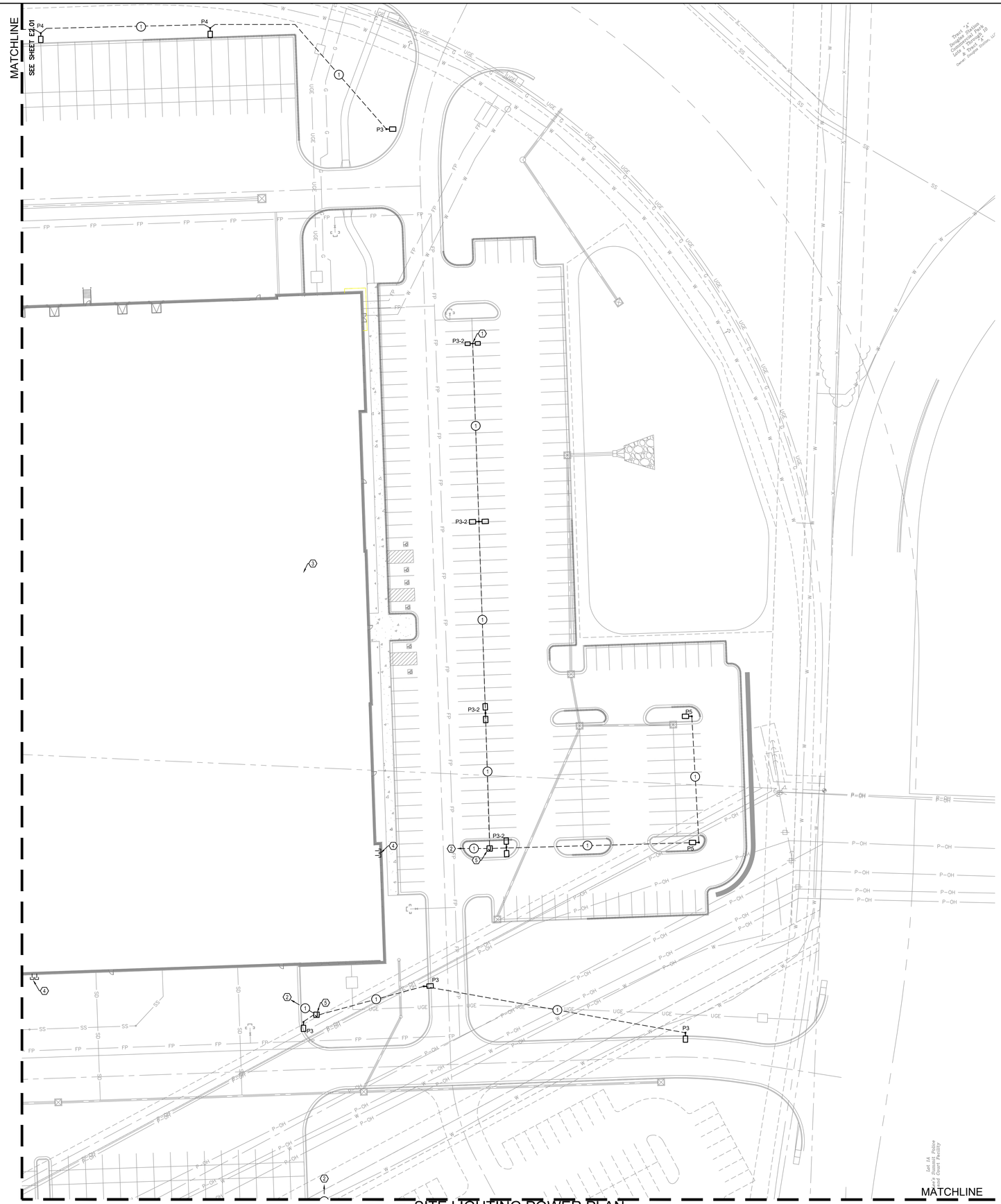

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MATCHLINE
SEE SHEET C4.02

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P4 P3-2 P3 P4 P4 P4 P4

AT&T FIBER NOC

SPEED LIMIT 35

STOP

1 SITE LIGHTING POWER PLAN
SCALE: 1" = 20'-0"

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LEE'S SUMMIT, MISSOURI

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LIGHTING FIXTURE SCHEDULE

SYMBOL	TYPE	DESCRIPTION	MANUFACTURER AND MODEL	LAMPS	LUMENS	COLOR TEMP / CRI	DRIVER / BALLAST	VOLTAGE / WATTAGE	LOCATION
	P4	AREA LED LIGHT FIXTURE WITH 25'-0" POLE AND CONCRETE BASE.	LITHONIA# DSX1-LED-P8-40K-T4M-MVOLT-SPA-DBLXD POLE# SSS-25-5G-DM19AS-DBLXD	LED	24,000	4000K / 80	0-10V DIMMING	MVOLT 207	PARKING LOT
	P3-2	DOUBLE HEAD AREA LED LIGHT FIXTURE WITH 25'-0" POLE AND CONCRETE BASE.	LITHONIA# DSX1-LED-P3-40K-T3M-MVOLT-SPA-DBLXD POLE# SSS-25-5G-DM28AS-DBLXD	LED	12,500	4000K / 80	0-10V DIMMING	MVOLT 204	PARKING LOT
	P5	AREA LED LIGHT FIXTURE WITH 25'-0" POLE AND CONCRETE BASE.	LITHONIA# DSX1-LED-P3-40K-T5S-MVOLT-SPA-DBLXD POLE# SSS-25-5G-DM19AS-DBLXD	LED	13,000	4000K / 80	0-10V DIMMING	MVOLT 102	PARKING LOT
	P3	AREA LED LIGHT FIXTURE WITH 25'-0" POLE AND CONCRETE BASE.	LITHONIA# DSX1-LED-P3-40K-T3M-MVOLT-SPA-DBLXD POLE# SSS-25-5G-DM19AS-DBLXD	LED	12,500	4000K / 80	0-10V DIMMING	MVOLT 102	PARKING LOT

NOTES:
A. PROVIDE ALL COMPONENTS TO MAKE A COMPLETE ASSEMBLY. THIS WOULD INCLUDE, BUT NOT BE LIMITED TO, ARM, MOUNTING BRACKETS, POLE BASE COVER, ANCHOR BOLTS, TEMPLATE, BASE, HAND HOLE, SEPARATE CIRCUIT OUTLET, ETC.

B. PROVIDE CONCRETE BASE, PER DETAIL.

GENERAL NOTES

G1. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UNDERGROUND STRUCTURES AND UTILITIES BEFORE CONSTRUCTING NEW FOUNDATIONS.

G2. THE CONTRACTOR SHALL FOLLOW WRITTEN DIMENSIONS ONLY. DO NOT SCALE DRAWINGS.

G3. EXCAVATE SHAFTS FOR DRILLED FOUNDATIONS TO INDICATED ELEVATIONS. REMOVE LOOSE DEBRIS, MATERIALS AND/OR MUCK TO MAKE BOTTOM SURFACES LEVEL WITHIN ACI 336.1 TOLERANCES.

G4. CONSTRUCTION TOLERANCES:
A. BOTTOM DIAMETER: MINUS ZERO, PLUS 6 INCHES, MEASURED IN ANY DIRECTION.
B. MAXIMUM VARIATION FROM PLUMB: 1:40.
C. MAXIMUM BOTTOM LEVEL: PLUS OR MINUS 2 INCHES.

G5. AT NO ADDITIONAL COST, CASE PIER SHAFTS AS NECESSARY. PROTECT EXCAVATED WALLS WITH TEMPORARY WATERTIGHT STEEL CASINGS OF SUFFICIENT LENGTH TO PREVENT WATER INTRUSION, CAVE-INS, DISPLACEMENT OF SURROUNDING EARTH, INJURY TO PERSONNEL AND DAMAGE TO CONSTRUCTION OPERATIONS. MAINTAIN EXCAVATIONS IN ESSENTIALLY DRY CONDITION, USING PUMPS WHERE NECESSARY. REMOVE WATER TO A MAXIMUM DEPTH OF 6 INCHES FROM EXCAVATED SHAFT PRIOR TO CONCRETE PLACEMENT.

G6. CONVEY CONCRETE FROM THE MIXER TO PLACE OF DEPOSIT BY BEST INDUSTRY METHODS THAT WILL PREVENT SEGREGATION AND LOSS OF MATERIAL. SIZE AND DESIGN THE EQUIPMENT FOR CONVEYING CONCRETE TO ENSURE UNIFORM, CONTINUOUS PLACEMENT OF CONCRETE. PLACE CONCRETE IN ACCORDANCE WITH ACI 318. PLACE CONCRETE IN A CONTINUOUS OPERATION AND WITHOUT SEGREGATION INTO DRY EXCAVATIONS WHENEVER POSSIBLE. USE ALL PRACTICABLE MEANS TO OBTAIN A DRY EXCAVATION BEFORE AND DURING CONCRETE PLACEMENT.

G7. WHEN PULLING CASING, MAINTAIN LEVEL OF CONCRETE ABOVE BOTTOM OF CASING GREATER OR EQUAL TO LEVEL OF GROUND KEEP BOTTOM OF CASING AT LEAST 10 FEET BELOW TOP OF CONCRETE. PREVENT IN-SITU MATERIALS FROM FALLING INTO AND MIXING WITH CONCRETE. PULL CASING IN SHORT SLOW VERTICAL LIFTS (ESSENTIALLY CONTINUOUS), MAINTAINING PLUMB ALIGNMENT AND SUFFICIENT HEAD OF CONCRETE.

G8. ALL CONCRETE SHALL BE CLASS KCMMB 4000

G9. ALL REINFORCING SHALL BE STRUCTURAL GRADE 60 PER ASTM-A615 AND HAVE AT LEAST 3" OF CONCRETE COVER.

G10. ANCHOR BOLTS ARE TO BE FURNISHED BY THE FOUNDATION CONTRACTOR UNLESS OTHERWISE NOTED. CONTRACTOR SHALL PLACE ALL REBAR SO AS TO NOT INTERFERE WITH ANCHOR BOLTS.

G11. ALL ABOVE GRADE FOUNDATION SURFACES SHALL BE STEEL TROWEL FINISHED UNLESS OTHERWISE NOTED.

G12. EACH PIER FOUNDATION SHALL BE CONSTRUCTED IN A SINGLE CONTINUOUS POUR.

G13. NO EXCAVATION OR VIBRATION-INDUCING ACTIVITIES ARE ALLOWED WITHIN 3 PIER DIAMETERS OF A SUBJECT PIER UNTIL AT LEAST 24 HOURS HAVE ELAPSED SINCE THE TIME OF CONCRETE PLACEMENT. COVER ALL EXCAVATIONS BETWEEN OPERATIONS. REMOVE FOREIGN AND LOOSE MATERIAL FROM APPROVED EXCAVATION.

G14. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND/OR SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS DURING EXCAVATION AND FOUNDATION CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE OF THE PROJECT LIMITS CAUSED BY CONSTRUCTION TECHNIQUES IS THE RESPONSIBILITY OF THE CONTRACTOR.

FOUNDATION DESIGN LIMITATIONS

L1. THIS FOUNDATION WAS DESIGNED FOR A MINIMUM LATERAL SOIL DEFORMATION MODULUS OF 0.50 KSI

L2. THIS FOUNDATION WAS DESIGNED FOR A MINIMUM LATERAL SOIL UNDRAINED SHEAR STRENGTH OF 0.50 KSF

L3. THIS FOUNDATION WAS DESIGNED FOR A MAXIMUM ALLOWABLE LATERAL DEFLECTION OF 1/2 INCH OVERALL AT GRADE ELEVATION

L4. THIS FOUNDATION WAS DESIGNED WITH AN ASSUMED DEPTH TO ROCK GREATER THAN TWENTY FEET FROM FINISHED GRADE

L5. THIS FOUNDATION WAS DESIGNED WITH AN ASSUMED WATER TABLE LOCATED AT THE SOIL SURFACE.

L6. THIS FOUNDATION WERE NOT DESIGNED TO WITHSTAND THE EFFECTS OF SCOURING.

L7. IF CONDITIONS OTHER THAN THOSE SPECIFIED HEREIN ARE PRESENT AT THE SITE, INCLUDING NON-COHESIVE SOILS FOUND IN BORINGS, PLEASE CONTACT THE ENGINEER OF RECORD.

STRUCTURAL CONCRETE

CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF:
ACI 301 - "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
ACI 302 - "RECOMMENDED PRACTICE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION"
ACI 304 - "ACI MANUAL OF CONCRETE INSPECTION"
ACI 311 - "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING, AND PLACING CONCRETE"
ACI 315 - "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT"
ACI 318 - "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
ACI 347 - "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"

ALL HOOKS SHALL BE "STANDARD" PER ACI SPECIFICATIONS.

EARTHWORK

E1. THE CONTRACTOR MUST PROVIDE SURFACE DRAINAGE AND PUMPS TO PROTECT ALL EXCAVATION FROM FLOODING. FLOODING OF ANY EXCAVATION AFTER APPROVAL OF THE SUBGRADE WILL BE CAUSE FOR RE-PREPARATION OF THE SUBGRADE.

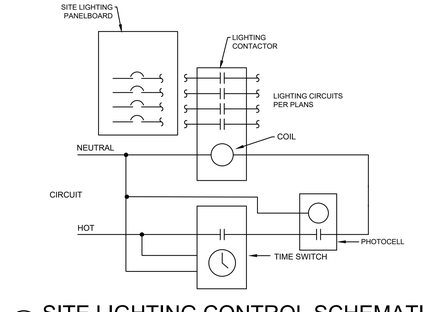
E2. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY WATER, FROST, OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT STRUCTURE.

E3. REFER TO THE GEOTECH REPORT FOR SUBSURFACE CONDITIONS AND CONSTRUCTION CONSIDERATIONS.

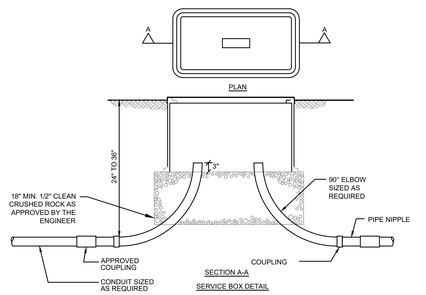
LIGHT FOUNDATION DATA		
MOUNTING HEIGHT	A	B
UP TO 30'	2'-0"	6'-0"

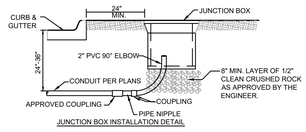
CONCRETE CLASS "KCMMB 4000"

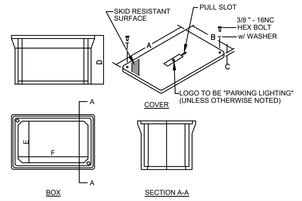
HEAVY HEX GALVANIZED NUTS: (AASHTO M291, GR A)
FLAT WASHERS GALVANIZED: (AASHTO M293)



3 SITE LIGHTING CONTROL SCHEMATIC
SCALE: NOT TO SCALE







TYPE	DIMENSION (IN.)					
	A	B	C	D	E	F
I-JUNCTION	12 7/8	12 7/8	3/4	12 3/4	9 3/4 - 10 1/2	9 3/4 - 10 1/2
II-JUNCTION	18 - 18 1/2	11 1/4 - 11 1/2	1 3/4 - 2	12	9 1/2 - 10 1/4	16 1/2 - 17 1/4
I-SERVICE	35 5/8	24	3	24	22 1/4	33 7/8
II-SERVICE	1 47 5/8	30 1/8	3	24	22 1/8	45 5/8

*NOTE: THE TYPE II SERVICE BOX SHALL HAVE A TWO-PIECE OVERLAPPING COVER.

1. TYPE I JUNCTION BOXES SHALL BE RATED FOR NO LESS THAN 15,000 lbs. VERTICAL TEST LOAD AND NO LESS THAN 8000 lbs. COVER LOAD OVER A 10"x10" AREA.
2. TYPE II JUNCTION BOXES SHALL BE RATED FOR NO LESS THAN 22,500 lbs. VERTICAL TEST LOAD AND NO LESS THAN 8000 lbs. COVER LOAD OVER A 10"X10" AREA.
3. TYPE I SERVICE BOXES SHALL BE RATED FOR NO LESS THAN 22,500 lbs. VERTICAL TEST LOAD AND NO LESS THAN 8000 lbs. COVER LOAD OVER A 10"x10" AREA.
4. MATERIAL TO BE AN AGGREGATE CONSISTING OF SAND AND GRAVEL BOUND TOGETHER WITH A POLYMER AND REINFORCED WITH CONTINUOUS WOVEN GLASS STRANDS. IT SHALL HAVE THE FOLLOWING PROPERTIES.

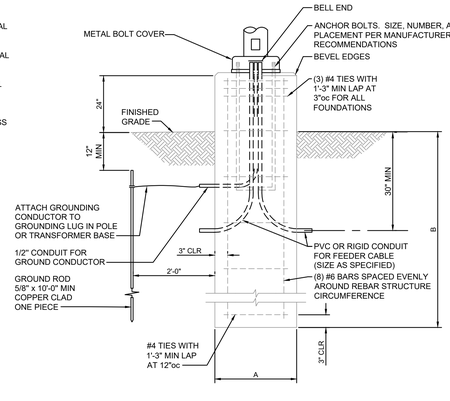
COMPRESSIVE STRENGTH-11,000 psi ASTM C-109

TENSILE STRENGTH-1,700 psi ASTM C-496

FLEXURAL STRENGTH-7,500 psi ASTM D-79O 5.

5. ATTACH 1c #10 THHN/THWN STRANDED COPPER SYSTEM GROUND TO 1/2" x 8'-0" GROUND ROD IN SERVICE BOX. MULTIPLE #10 GROUND CABLES INTRODUCED AT SIGNAL POLES SHALL BE TERMINATED AT GROUND ROD WITH AN ADDITIONAL CLAMP.

FIBERGLASS REINFORCED POLYMER CONCRETE JUNCTION BOX DETAILS
2 SCALE: NOT TO SCALE



1 CONCRETE LIGHT POLE BASE
SCALE: NOT TO SCALE

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SCANNELL PROPERTIES

STATE OF MISSOURI
TIMOTHY J. DANNER
NUMBER PE-2019031265
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SITE LIGHTING DETAILS
PHASE I CONSTRUCTION DOCUMENTS

SCANNELL DEVELOPMENT LEE'S SUMMIT LOGISTICS
NORTHWEST CORNER OF TUDOR ROAD AND MAIN STREET

LEE'S SUMMIT, MISSOURI

2021

drawn by: OLSSON
checked by: ENG
approved by: ENG
QA/QC by: ENG
project no.: 021-04157
drawing no.: NDET_02104157.dwg
date:

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DATE: Feb 08, 2022 1:58pm XREFS: E_TBLK_02104157

SECTION 260000 ELECTRICAL

1. GENERAL CONDITIONS:

   A. THIS CONTRACTOR SHALL INSPECT THE SITE WHERE THIS WORK IS TO BE PERFORMED AND FULLY FAMILIARIZE HIMSELF WITH ALL CONDITIONS RELATED TO THIS PROJECT.

   B. THIS CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMANENT AND TEMPORARY PERMITS AND LICENSES AND SHALL MAKE ALL DEPOSITS AND PAY ALL FEES REQUIRED FOR THE PERFORMANCE OF WORK UNDER THIS SECTION OTHER THAN THOSE DEPOSITS OR FEES WHICH ARE FULLY REFUNDABLE TO THE OWNER.

   C. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF ALL SYSTEMS AND COMPONENTS COVERED UNDER THIS SECTION. WHERE LOCAL CONDITIONS NECESSITATE A REARRANGEMENT, THE CONTRACTOR SHALL PREPARE, AND SUBMIT FOR APPROVAL, DRAWINGS OF THE PROPOSED REARRANGEMENT. THIS CONTRACTOR SHALL CAREFULLY INVESTIGATE THE STRUCTURAL AND FINISH CONDITIONS AFFECTING ALL OF HIS WORK AND SHALL ARRANGE SUCH WORK ACCORDINGLY, FURNISHING SUCH FITTINGS AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS AT NO ADDITIONAL COST TO THE OWNER.

   D. THIS CONTRACTOR SHALL VERIFY ALL DIMENSIONS. DRAWINGS SHALL NOT BE SCALED TO DETERMINE DIMENSIONS.

   E. SPECIFICATIONS AND DRAWINGS ARE COMPLEMENTARY AND WHAT IS CALLED FOR IN ONE SHALL BE AS BINDING AS IF CALLED FOR BY BOTH.

   F. FURNISH LABOR, MATERIALS, EQUIPMENT AND SERVICES REQUIRED AS SHOWN ON THE DRAWINGS AND SPECIFIED IN DIVISION 15.

   G. ALL WORK SHALL BE COMPLETE AND SHALL BE LEFT IN OPERATING CONDITION.

   H. INCLUDE ALL PARTS AND LABOR WHICH ARE INCIDENTAL AND NECESSARY FOR A COMPLETE AND OPERABLE INSTALLATION EVEN THOUGH NOT SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS. .

   I. REQUEST INSPECTIONS AS REQUIRED BY REGULATING AGENCIES AND/OR REGULATIONS. PAY ALL CHARGES FOR INSPECTIONS BY REGULATING AGENCIES OF INSTALLATIONS OF PLANS SPECIFICATIONS.

   J. PROVIDE THE OWNER WITH A CERTIFICATE OF FINAL INSPECTION AND APPROVAL BY ENFORCEMENT AUTHORITIES.

   K. FURNISH: TO OBTAIN, COORDINATE, SUBMIT THE NECESSARY DRAWINGS, DELIVER TO THE JOB SITE IN NEW CONDITION READY FOR INSTALLATION, UNLOAD AND UNPACK, AND GUARANTEE.

   L. INSTALL: TO RECEIVE AT THE JOB SITE, STORE, ASSEMBLE, ERECT, SET IN PLACE, ANCHOR, APPLY, FINISH, PROTECT, CLEAN, TEST, START-UP, AND MAKE READY FOR OWNER'S USE.

   M. PROVIDE: TO FURNISH AND INSTALL.

   N. PROVIDE NEW MATERIAL AND EQUIPMENT, UNLESS NOTED OTHERWISE. PROTECT EQUIPMENT AND MATERIAL FROM DAMAGE, DIRT AND THE WEATHER.

   O. THE ENGINEER RESERVES THE RIGHT TO REJECT MATERIAL OR WORKMANSHIP NOT IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, BEFORE OR AFTER INSTALLATION, AT NO ADDITIONAL COST TO THE OWNER.

   P. REFINISH ALL ELECTRICAL EQUIPMENT DAMAGED DURING SHIPPING, INSTALLATION AND/OR PRIOR TO FINAL ACCEPTANCE TO ITS ORIGINAL CONDITION. REMOVE ALL RUST; PRIME, AND PAINT PER MANUFACTURER'S RECOMMENDATIONS FOR FINISH EQUAL TO ORIGINAL.

   Q. PROTECT OPENINGS AND EQUIPMENT FROM OBSTRUCTION, BREAKAGE, MISUSE, DAMAGE OR BLEMISHES. PROTECT MATERIALS AND EQUIPMENT IMMEDIATELY UPON RECEIPT AT THE JOB SITE OR IMMEDIATELY AFTER THEY HAVE BEEN REMOVED FROM THEIR SHIPPING CONTAINERS. UNLESS NOTED OTHERWISE, KEEP THEM CLEAN AND UNDAMAGED UNTIL FINAL ACCEPTANCE OF THE ENTIRE PROJECT BY THE OWNER. WHEN A PORTION OF THE BUILDING IS OCCUPIED BY THE OWNER BEFORE SUBSTANTIAL COMPLETION OF THE ENTIRE PROJECT, MAKE ARRANGEMENTS TO TRANSFER RESPONSIBILITY FOR PROTECTION AND HOUSEKEEPING FOR THE OCCUPIED PORTION.

   R. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO ELECTRICAL EQUIPMENT, MATERIALS OR WORK UNTIL FINAL ACCEPTANCE OF THE ENTIRE PROJECT BY THE OWNER.

   S. KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIAL OR RUBBISH, CAUSED BY HIS EMPLOYEES OR WORK, AT ALL TIMES. REMOVE RUBBISH, TOOLS, SCAFFOLDING, AND SURPLUS MATERIALS FROM AND ABOUT THE BUILDING, AND LEAVE WORK AREAS "BROOM CLEAN" OR ITS EQUIVALENT DAILY. CLEAN ELECTRICAL EQUIPMENT AND REMOVE TEMPORARY IDENTIFICATION.

   T. OPERATE EQUIPMENT AND SYSTEMS IN ALL THEIR OPERATING MODES, TO VERIFY PROPER OPERATION, PRIOR TO FINAL FIELD OBSERVATION AND OWNER INSTRUCTIONS. PREPARE A PRE-INSPECTION REPORT AND SUBMIT TO THE ENGINEER AND OWNER FOR REVIEW.

   U. TEST ALL INSTALLED ELECTRICAL EQUIPMENT AND CABLES REQUIRED BY CONSTRUCTION DOCUMENTS ACCORDING TO THE REQUIREMENTS OF THE MOST CURRENT EDITION OF THE INTERNATIONAL ELECTRICAL TESTING ASSOCIATION, INC. (NETA). IF ACCEPTABLE PERFORMANCE OF ANY TEST IS NOT ACHIEVED, MAKE THE NECESSARY CORRECTIONS AND THE TEST SHALL BE REPEATED UNTIL ACCEPTABLE PERFORMANCE IS ACHIEVED. PROVIDE WRITTEN REPORTS OF ALL TESTS, WITH FAILURES IDENTIFIED, TO ENGINEER.

   V. FULLY INSTRUCT THE OWNER'S DESIGNATED PERSONNEL IN THE OPERATION OF EACH ELECTRICAL SYSTEM AT THE TIME IT IS PUT INTO SERVICE. PROVIDE INSTRUCTION USING COMPETENT INSTRUCTORS AND FACTORY TRAINED PERSONNEL.

   W. CONTRACTOR SHALL INSTALL ALL MATERIALS AND EQUIPMENT AS PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND/OR RECOMMENDATIONS.

   X. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL EQUIPMENT INDICATED AND/OR REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM. A FORM INDICATING ALL SHOP DRAWINGS TO BE PROVIDED AS PART OF THE PROJECT SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER PRIOR TO ANY SHOP DRAWING SUBMITTAL REVIEW.

   Y. THIS SPECIFICATION SHALL INCORPORATE ALL PROJECT REQUIREMENTS AND RESPONSIBILITIES INDICATED WITHIN THE FRONT-END OF THE PROJECT MANUAL.

2. LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES:

   A. ALL WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, THE NATIONAL FIRE PROTECTION ASSOCIATION CODES, THE NATIONAL ELECTRICAL SAFETY CODE, LOCAL BUILDING CODE, AND ALL APPLICABLE LOCAL LAWS, REGULATIONS, ORDINANCES, STATUTES AND CODES. SHOULD ANY WORK SHOWN ON THE DRAWINGS OR SPECIFIED HEREIN BE OF LOWER STANDARD, THE CONTRACTOR SHALL REFER THE POINTS IN QUESTION TO THE ENGINEER FOR APPROVAL.

3. SCOPE OF WORK:

   A. WORK UNDER THIS SECTION SHALL CONSIST OF FURNISHING ALL LABOR, MATERIAL AND ASSOCIATED SERVICES REQUIRED TO COMPLETELY CONSTRUCT AND LEAVE ALL SYSTEMS OPERATIONAL AS SHOWN ON THE DRAWINGS AND HEREIN DESCRIBED.

   B. ALL WORK PERFORMED UNDER THIS SECTION SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER.

4. MATERIALS AND EQUIPMENT REVIEW:

   A. AS SOON AS POSSIBLE AFTER THE AWARD OF THE CONTRACT, THIS CONTRACTOR SHALL SUBMIT FOR REVIEW SHOP DRAWINGS FOR ALL EQUIPMENT TO BE FURNISHED FOR THIS PROJECT. SUBMITTALS SHALL HIGHLIGHT THE MANUFACTURER'S NAME, MODEL NUMBER, DESCRIPTIVE ENGINEERING DATA AND ALL NECESSARY INFORMATION AS TO FINISH, MATERIAL GAUGES AND ACCESSORIES.

   B. ALL PORTIONS OF THE SHOP DRAWINGS THAT ARE INTENDED TO BE REVIEWED SHALL BE HIGHLIGHTED. ANY PORTION NOT CALLED OUT SHALL BE ASSUMED TO BE EXCLUDED FROM THE JOB.

5. GUARANTEE:

   A. THIS CONTRACTOR SHALL GUARANTEE COMPLETE SYSTEM OPERATION AND THAT THE APPARATUS FURNISHED AND INSTALLED WILL BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS AND WILL GIVE SATISFACTORY SERVICE. THE CONTRACTOR AGREES TO REPLACE, WITHOUT EXPENSE TO THE OWNER, ANY PART OF THE INSTALLATION WHICH PROVES OR BECOMES DEFECTIVE WITHIN ONE YEAR AFTER THE SYSTEM IS ACCEPTED.

6. COORDINATION:

   A. THIS CONTRACTOR SHALL EXAMINE ALL ARCHITECTURAL, MECHANICAL, STRUCTURAL AND OTHER DRAWINGS RELATED TO THIS PROJECT, AND IT SHALL BE HIS RESPONSIBILITY TO COORDINATE THE ELECTRICAL WORK WITH OTHER TRADES.

7. AS-BUILT DRAWINGS:

   A. THIS CONTRACTOR SHALL PREPARE COMPLETE AS-BUILT DRAWINGS OF ALL ELECTRICAL SYSTEMS AND TURN OVER TO THE ENGINEER REVISED ELECTRONIC CAD FILES.

   B. THIS CONTRACTOR SHALL PREPARE AND SUBMIT TO THE OWNER'S REPRESENTATIVE FIVE BOUND SETS OF MANUFACTURER'S LITERATURE FOR ALL EQUIPMENT TO BE INSTALLED ON THIS PROJECT SHOWING ALL DETAILS OF EQUIPMENT, REPLACEMENT PART DATA AND MAINTENANCE INSTRUCTIONS.

8. EXCAVATION:

   A. ALL EXCAVATION AND BACKFILL REQUIRED FOR THE INSTALLATION OF ELECTRICAL WORK SHALL BE THE COMPLETE RESPONSIBILITY OF THE CONTRACTOR.

   B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER LAYOUT AND THE ESTABLISHMENT OF ALL LINES AND LEVELS REQUIRED FOR THE EXECUTION OF THE WORK.

   C. WHEN SERVICES ARE TO BE RUN SIDE-BY- SIDE, A COMMON TRENCH MAY BE USED PROVIDING THE REQUIRED VERTICAL AND HORIZONTAL SEPARATION BETWEEN THE VARIOUS SERVICES ARE MAINTAINED AND PROVIDING THE METHODS OF BEDDING AND BACKFILL MEET THE APPROVAL OF THE ENGINEER. CONTRACTORS INVOLVED SHALL MAKE THEIR OWN AGREEMENT AS TO THE SHARING OF THE COST OF THE COMMON TRENCHING AND BACKFILL WORK.

   D. LOCATE EXISTING UNDERGROUND UTILITIES IN AREAS OF EXCAVATION WORK. SHOULD UNCHARTED, OR INCORRECTLY CHARTED, PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONSULT UTILITY ENGINEER IMMEDIATELY FOR DIRECTIONS. COOPERATE WITH OWNER AND UTILITY COMPANIES IN KEEPING RESPECTIVE SERVICES AND FACILITIES IN OPERATION. REPAIR DAMAGED UTILITIES TO SATISFACTION OF UTILITY OWNER.

9. EXTERIOR AND FOUNDATION WALLS:

   A. ALL PIPING THROUGH EXTERIOR OR FOUNDATION WALLS SHALL PASS THROUGH SCHEDULE 40 GALVANIZED STEEL SLEEVES WHICH SHALL BE LARGE ENOUGH TO ALLOW FOR CAULKING MATERIAL. NO SLEEVES ARE PERMITTED THROUGH CONCRETE STRUCTURAL MEMBERS. ALL SLEEVES SHALL BE COORDINATED AND APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.

10. FLOORS:

   A. ALL PIPING THROUGH FLOORS SHALL BE PROVIDED WITH SCHEDULE 40 GALVANIZED STEEL PIPE SLEEVES, EXTENDING 2 INCHES ABOVE FLOOR.

11. CUTTING:

   A. ALL CUTTING OF EXISTING CONCRETE FLOORS/SLABS ON GRADE IN THE INTERIOR OF THE BUILDING SHALL BE PERFORMED BY "SAW CUTTING".

12. PATCHING:

   A. ON CONCRETE, PATCH THE OPENING WITH CONCRETE, FINISHED SMOOTH WITH ADJACENT SURFACES.

13. IDENTIFICATION OF SWITCHES AND APPARATUS:

   A. ALL CABINETS, SAFETY SWITCHES, AND OTHER APPARATUS USED FOR OPERATION AND CONTROL OF CIRCUITS, APPLIANCES, AND EQUIPMENT UNDER THIS CONTRACT SHALL BE PROPERLY IDENTIFIED BY MEANS OF ENGRAVED PLASTIC PLATES BLACK WITH WHITE LETTERS.

14. GROUNDING:

   A. ALL FEEDERS AND BRANCH CIRCUITS SHALL CONTAIN GROUND WIRES.

   B. ALL CONDUCTORS, MOTOR FRAMES, RACEWAYS, CABINETS, ETC., THAT REQUIRE GROUNDING SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, THOSE OF THE SERVING UTILITY AND LOCAL AUTHORITIES HAVING JURISDICTION.

15. CONDUIT:

   A. ALL ELECTRICAL POWER WIRING, INCLUDING LOW VOLTAGE WIRING, SHALL BE INSTALLED IN CONDUIT AS HEREIN SPECIFIED. NO CONDUIT OR TUBING OF LESS THAN 3/4 INCH NOMINAL SIZE SHALL BE USED.

   B. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 AS MANUFACTURED BY CARLON OR APPROVED EQUAL. ALL CONDUITS SHALL BE INSTALLED WITH MINIMUM 36" INCH COVER.

   C. CONDUIT INSTALLED ABOVE GROUND EXTERIOR SHALL BE GALVANIZED RIGID STEEL AS MANUFACTURED BY THE ALLIED TUBE AND CONDUIT CORPORATION OR APPROVED EQUAL. CONDUIT SHALL BE SHERARDIZED OR HOT-DIP GALVANIZED INSIDE AND OUTSIDE INCLUDING ENDS AND THREADS AND ENAMELED OR LACQUERED INSIDE IN ADDITION TO GALVANIZING.

   D. WHEN PVC CONDUITS PENETRATE CONCRETE FLOOR CONSTRUCTION, CONTRACTOR SHALL USE RIGID STEEL ELBOWS AND EXTENSION. PVC CONDUIT/FITTINGS SHALL NOT BE PERMITTED TO BE EXPOSED ABOVE THE FLOOR.

   E. THIN WALL TUBING SHALL BE REPUBLIC "ELECTRUNITE E.M.T." OR APPROVED EQUAL. SHALL BE INSTALLED INDOORS.

   F. ALL FITTINGS SHALL BE OF THE COMPRESSION TYPE AND SHALL BE WATERTIGHT.

   G. CONDUIT FOR INTERIOR WIRING, IN GENERAL, SHALL BE THINWALL TUBING UNLESS OTHERWISE NOTED.

   H. RACEWAYS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET AND FITTING TO FITTING. A RUN OF CONDUIT BETWEEN OUTLETS OR FITTINGS SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER-BENDS INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE OUTLET OR FITTING. THE RADIUS OF BENDS SHALL NEVER BE SHORTER THAN THAT OF THE CORRESPONDING TRADE ELBOW. THE SYS- TEM SHALL BE COMPLETE WITH OUTLETS, DISTRIBUTION BOXES, ETC., SMOOTH INSIDE AND MECHANICALLY SECURE IN PLACE. APPROVED STRAPS, HANGERS, OR SUPPORTS SHALL BE USED TO SECURE CONDUITS IN PLACE. CONDUITS SHALL, IN GENERAL, BE SUPPORTED AT INTERVALS NOT EXCEEDING 10'-0" AND WITHIN 3'-0" OF EACH OUTLET BOX, JUNCTION BOX, CABINET OR FITTING.

   I. CONDUITS SHALL BE PROTECTED DURING CONSTRUCTION; PLUG AND KEEP CLEAN AND DRY. CONDUIT ENDS SHALL BE BUTTED IN CENTERS OF COUPLINGS. NO CRACKS OR FLATTENED SECTIONS WILL BE PERMITTED AT BENDS OR ELSEWHERE. ALL ENDS OF CONDUIT SHALL BE REAMED TO REMOVE ROUGH EDGES. RUNNING THREADS WILL NOT BE PERMITTED.

   J. CONDUITS SHALL BE CONCEALED WITHIN THE WALLS, CEILINGS, AND FLOORS WHERE POSSIBLE AND UNLESS OTHERWISE NOTED. EXPOSED CONDUIT SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE BUILD- ING LINES.

18. WIRE AND CABLE:

   A. WIRE AND CABLE SHALL BE AMERICAN INSULATED WIRE CORP., GENERAL CABLE CORP., SENATOR WIRE AND CABLE CORP. SOUTHWIRE OR APPROVED EQUAL, OF SIZES AS SHOWN ON THE DRAWINGS OR HEREIN SPECIFIED.

   B. ALL CONDUCTORS SHALL BE COPPER.

   C. NO. 10 AWG AND SMALLER CONDUCTORS SHALL BE SOLID WITH INSULATION AND NO. 8 AWG AND LARGER CONDUCTORS SHALL BE STRANDED WITH TYPE THHN/THWN INSULATION EXCEPT THAT CONDUCTORS WITHIN 3 INCHES OF LIGHT FIXTURE BALLASTS SHALL HAVE RHH, THHN, OR EQUAL INSULATION RATED FOR 90 DEGREES C. APPLICATION.

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