The LINC Outdoor Basketball Courts Lincoln University Jefferson City, Missouri









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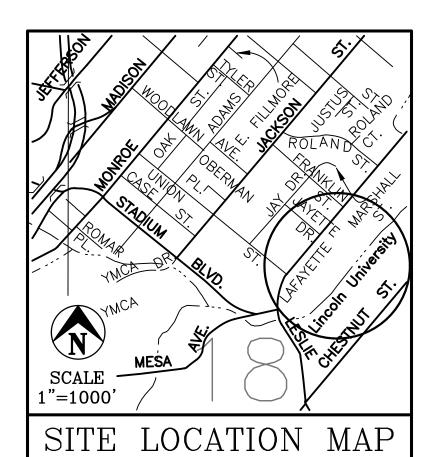
ENGINEERING — SURVEYING — MATER

GIS SERVICES — GPS SERVI

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Professional JEFFERSON CITY, MISSO

SON CITY, MISSOURI 6510 Phone (573) 634-3455 Fax (573) 634-8898



U N I V E R S I MISSOURI

BID SET - 12/05/2022

DRAWING INDEX

G-100	COVER SHEET
G-101	PROJECT SPECIFICATIONS
G-102	PROJECT SPECIFICATIONS AND BMP DETAILS
C-100	EXISTING TOPOGRAPHY AND DEMOLITION PLAN
C-101	GRADING PLAN
C-102	CIVIL SITE PLAN
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C-201	RETAINING WALL PROFILES AND DETAILS
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E-101	ELECTRICAL LIGHTING PLAN
E-501	ELECTRICAL DETAILS

A. Where fill materials are specified by reference to a specific standard, test and analyze A.

B. If tests indicate materials do not meet specified requirements, change material and

samples for compliance before delivery to site.

PART 3 EXECUTION

excavation. Provide temporary means and methods, as required, to maintain surface

water diversion until no longer needed, or as directed by Engineer.

A. Excavate to accommodate construction operations.

3.03 EXCAVATING

Site Rock: Solid mineral material with a volume in excess of 1/3 cubic yard or solid

B. Trench Rock: Solid mineral material with a volume in excess of 1/6 cubic yard or

without drilling.

solid material that cannot be removed with a 0.1 cubic yard capacity power shovel

material that cannot be removed with a 3/4 cubic yard capacity power shovel without

B. Cut out soft areas of subgrade not capable of compaction in place. Backfill with

fill material.

C. Compact subgrade to density equal to or greater than requirements for subsequent

E. Provide temporary means and methods to remove all standing or ponding water from

Protect site features to remain, including but not limited to bench marks, survey

control points, existing structures, fences, sidewalks, paving, and curbs, from damage

areas prior to grading.

by grading equipment and vehicular traffic.

DRN. BY: CKD. BY:
BKM

SCALE: NONE

SHEET TITLE

PROJECT

SPECIFICATIONS

SHEET NUMBER

2 OF 11 SHEETS

PRINTS ISSUED

REVISIONS:

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OF MISC

BRIAN K.

PE-2003015009

Brian K. McMillian, PE - Engineer

MO# PE-2003015009

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December 5, 2022

B. Product Data: Provide data on joint filler, admixtures, and curing compound.

PART 2 PRODUCTS 2.01 PAVING ASSEMBLIES

A. Comply with applicable requirements of ACI 301.

A. See Section 013300 - Submittals, for submittal procedures

B. City of Jefferson Standard Concrete Mix for all parking, driveways and sidewalks.

2.02 FORM MATERIALS

A. Form Materials: Conform to ACI 301. B. Joint Filler: Preformed; non-extruding bituminous type (ASTM D1751) of sponge rubber or cork (ASTM D1752).

1. Thickness: 1/2 inch. 2.03 CONCRETE MATERIALS

A. Obtain cementitious materials from same source throughout.

B. Concrete Materials: Provide in accordance with Municipality of City of Jefferson City Public Works standards.

2.04 ACCESSORIES

A. Curing Compound: ASTM C309, Type 1, Class A.

B. Slab Isolation Joint Filler: 1/2 inch thick, height equal to slab thickness, with removable top section that will form 1/2 inch deep sealant pocket after

1. Material: ASTM D1751, cellulose fiber.

2.05 CONCRETE MIX DESIGN 1. Use City of Jefferson Standard Street Mix

2.06 MIXING

A. Transit Mixers: Comply with ASTM C94/C94M.

3.00 TOLERANCES

A. Maximum Variation of Surface Flatness: 1/4 inch in 10 ft. B. Maximum Variation From True Position: 1/4 inch.

3.10 FIELD QUALITY CONTROL

A. Testing Agency: Contractor will engage a qualified testing and inspecting agency to sample materials, perform tests, and submit test reports during concrete placement. Sampling and testing for quality control may include thos specified in this Article.

B. Testing Services: Testing of composite samples of frest concrete obtained according to ASTM C 172 shall be performed according to the following 1. Testing Frequency: Obtain at least 1 composite sample for each 100

cu.yd. or 5,000 sqft. of fraction thereof of each concrete mix placed each day a. When frequency of testing will provide fewer than five

compressive-strength tests for each concrete mixture, testing shall 3.02 FERTILIZING be conducted from at least five randomly selected batches or from

A. Apply fertilizer at a rate of 600 lbs per acre... each batch if fewer than five are used.

2. Slump: ASTM C 143/C143M; one test at point of placement for each composite sample but not less than one test for each day's pour of each concrete mix. Perform additional tests when concrete consistency appears to change

3. Air Content: ASTM C 231, pressure method; one test for each composite sample but not less than one test for each day's pour of each concrete mix

4. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below and when 80 deg F and above, and one test for each composite sample. 5. Compressive-Strength Tests: ASTM C 39/C 39M; test 1 specimen at

7 days and 2 specimens at 28 days. a. A compressive-strength test shall be teh average compressive strength from 2 specimens obtained from same composite sample

C. Strength of concrete mix will be satisfactory if average of any 3 consecutive compressive-strength tests equals or exceeds specified

compressive strength and no compressive-strength test value falls below specified compressive strength by more than 500 psi. D. Test results shall be reported in writing to the Ower, concrete manufacturer and Contractor within 48 hours of testing. Reports of

compressive-strength tests shall contain State of Missouri Project identification name and number, date of concrete placement, name of concrete testing and inspecting agency, location of concrete batch in Work, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7 and

Additional Tests: Testing and inspecting agency shall make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths or other requirements have not been met, as directed by Owner.

Remove and replace concrete pavement wher etest results indicate that it does ot comply with specified requirements.

G. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.11 PROTECTION

A. Immediately after placement, protect pavement from premature drying, excessive hot or cold temperatures, and mechanical injury

B. Do not permit pedestrian traffic over pavement until 75 percent design strength of concrete has been achieved.

C. Protect pavement from damage. Exclude traffic from pavement for at least 14 days after placement, unless cleared for earlier use by the Engineer. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they

END OF SECTION

SECTION 329219 - SEEDING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preparation of subsoil

B. Placing topsoil. C. Seeding, mulching and fertilizer.

D. Maintenance.

1.02 RELATED REQUIREMENTS A. Section 312200 - Grading: Topsoil material.

B. Section 312200 - Grading: Preparation of subsoil and placement of topsoil in preparation for the work of this section.

C. Section 312323 - Fill: Topsoil material.

1.03 DEFINITIONS

A. Weeds: Include Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

1.04 SUBMITTALS

A. See Section 013300 - Submittals, for submittal procedures.

B. Seed mixture data.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver grass seed mixture in sealed containers. Seed in damaged packaging is not acceptable. Deliver seed mixture in containers showing percentage of seed mix, year of production, net weight, date of packaging, and location of packaging.

B. Deliver fertilizer in waterproof bags showing weight, chemical analysis, and name of manufacturer.

PART 2 PRODUCTS

2.01 SEED MIXTURE

A. Seed Mixture: Fescue, 97 percent pure live seed.

2.02 SOIL MATERIALS

A. Topsoil: Fertile, agricultural soil, typical for locality, capable of sustaining vigorous plant growth, taken from drained site; free of rocks, PART 2 PRODUCTS subsoil, clay or impurities, plants, weeds and roots; pH value of minimum 5.4 and maximum 7.0.

2.03 ACCESSORIES

A. Mulching Material: Oat or wheat straw, free from weeds, foreign matter detrimental to plant life, and dry. Hay or chopped cornstalks are not acceptable.

B. Fertilizer: 19-19-19 Blend; recommended for grass, with fifty percent of the elements derived from organic sources; of proportion necessary to eliminate any deficiencies of topsoil, as indicated by analysis.

C. Water: Clean, fresh and free of substances or matter that could inhibit 2.02 SPORTS NETTING vigorous growth of grass.

D. Erosion Fabric: As indicated on drawings

PART 3 EXECUTION

A. Prepare subgrade in accordance with Section 312200.

B. Place topsoil in accordance with Section 312200.

B. Apply after smooth raking of topsoil and prior to roller compaction. C. Do not apply fertilizer at same time or with same machine as will be

D. Lightly water to aid the dissipation of fertilizer.

Apply seed at a rate of 8 lbs per 1000 sq ft evenly in two intersecting directions. Rake in lightly.

Do not seed areas in excess of that which can be mulched on same

C. Do not sow immediately following rain, when ground is too dry, or during windy periods.

D. Immediately following seeding and compacting, apply mulch to a thickness of 1/8 inches. Maintain clear of shrubs and trees.

Apply water with a fine spray immediately after each area has been mulched. Saturate to 4 inches of soil. Following germination, immediately re-seed areas without germinated seeds that are larger than 4 by 4 inches.

3.04 HYDROSEEDING

A. Do not hydroseed area in excess of that which can be mulched on

B. Immediately following seeding, apply mulch to a thickness of 1/8 inches. Maintain clear of shrubs and trees. Apply water with a fine spray immediately after each area has been

mulched. Saturate to 4 inches of soil. D. Following germination, immediately re-seed areas without germinated

seeds that are larger than 4 by 4 inches.

END OF SECTION

SECTION 116803- ATHLETIC EQUIPMENT

PART1 GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. This Section includes the following athletic equipment:

Basketball Goals Sports Netting

Tile Sports Playing Surface (Alternate Bid) Acrylic Sports Playing Surface (Base Bid)

B. Related Sections include the following:

Section 03 30 00 "Cast-in-Place Concrete" for all poured in SportMaster Color System.

1.03 PERFORMANCE REQUIREMENTS

A. Structural Performance: Design and install all equipment to meet or exceed all applicable governing codes

1.04 SUBMITTALS

Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, features, and finishes. Include details of anchors, hardware, and fastenings. If applicable, include assembly, disassembly, and storage instructions.

B. Product Certificates: For each type of athletic equipment, signed by product manufacture C. Manufacturer Certificates: Signed by manufacturers certifying that they

D. Qualification Data: For installer and professional engineer. E. Operation and Maintenance Data: For Athletic Equipment and Athletic Surfaces to include in operation and maintenance manuals including

comply with requirements. Include evidence of manufacturing experience.

1.05 QUALITY ASSURANCE

warranties.

Installer Qualifications: A qualified installer employing workers trained and approved by manufacturer.

B. Source Limitations: Obtain each type of athletic equipment through one source from a single manufacturer. C. Standards: Provide athletic equipment complying with or exceeding

requirements of authorities having jurisdiction. D. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 01 Sections for project management

1.06 PROJECT CONDITIONS

and coordination

A. Field Measurements: Verify dimensions by field measurements.

1.07 WARRANTIES Special Warranty: Manufacturer agrees to repair or replace components of athletic operations, including painting, have been completed. equipment and finishes that fail in materials or workmanship within specified warranty period

Warranty Period: Five years from date of Substantial Completion or as specifically listed in Part 2.

2.01 BASKETBALL GOALS A. Provide at locations and quantities shown on drawings.

1. Product: Subject to compliance with requirements, provide the following or approved equal:

AALCO Manufacturing G66 Gooseneck Outdoor Basketball goal. 2. Description: 6' Offset basketball goal with rectangular glass

Provide 15' tall sports netting along the east side of the basketball

backboard and NCAA breakway rim. Posts painted black.

courts along the new retaining wall approximately 140.0'. 1. Product Description: 15' tall black sports sport netting with $1\frac{3}{4}$ " knot-less netting and wire cables at the top and bottom of

> Support posts shall be designed by supplier and shall be black. Due to the retaining wall location, net should be designed with only two posts, one at each end and the bottom of the net may be attached to the top of the wall.

2.03 BASKETBALL TILE SURFACE (ALTERNATE BID)

Basis of Design: Versa-Court "Game Outdoor" Tile System. Similar products may be reviewed and approved.

A. Provide interlocking tile system for two full size basketball courts as shown on the plans.

a. Colors: Main court: Titanium, Free Throw Lane and boundary areas: Navy Blue, Lines: White B. Installation shall be done by an entity experienced in sports court layout. Installer shall inspect the concrete surface to ensure all grades

and finishes meet requirements for this product.

1. Product Description: Versa-Court "Game Outdoor"

2.04 BASKETBALL ACRYLIC SURFACE (BASE BID)

BASIS OF DESIGN PRODUCT NAME SportMaster Color Coating Systems over concrete sport surfaces.

SCOPE:

Similar products may be approved.

1.1 The following specifications pertain to the application of SportMaster Color Coating Systems over concrete sport surfaces. Refer to Product Technical Data sheets for specific mixing and application instructions. 1.2 SportMaster color coating systems are designed for use on properly built sport surfaces. Refer to the American Sports Builders Association for recommended guidelines on construction of athletic & recreational surfaces. 1.3 The concrete surface must be constructed with a suitable vapor barrier beneath the slab and adequate perimeter drainage to prevent moisture accumulation beneath the surface.

2. SURFACE PREPARATION:

2.1 New concrete surfaces must cure 28 days. Concrete surfaces should have a medium broom finish or similar roughened texture. They must never be steel trowelled. If using a shot blaster to achieve texture, a shot blast profile of CSP 3 or 4 is recommended. 2.2 Thoroughly remove all dust, dirt, debris and loose 2.3 Etch concrete surface with muriatic phosphoric acid

solution. Rinse clean with water after etching is

complete 2.4 Fill all cracks with SportMaster CrackMagic, Acrylic Crack Patch, Acrylic Patch Binder or other suitable crack fillers. 2.5 Repair spalled areas and level depressions or "bird baths" (1/8 inch or deeper) with SportMaster Acrylic Patch Binder or Acrylic Resurfacer patching mix.

2.6 Apply SportMaster Acrylic Adhesion Promoter or suitable

primer over new or uncoated surfaces. 2.7 Apply one (1) or more coats of Acrylic Resurfacer to provide a smooth underlayment for application of the

3. APPLICATION OF SPORTMASTER COLOR SYSTEM: 3.1 Over properly prepared concrete surface apply a minimum of two coats of SportMaster Color Concentrate or ColorPlus System in accordance with manufacturer's mixing and application instructions.

4. LINE MARKINGS:

4.1 Line markings shall be laid out according to dimensions shown based upon a regulation basketball court. 4.2 After masking tape has been laid apply SportMaster Stripe Rite line primer to seal voids between masking tape and court surface to prevent "bleed under" when SportMaster Line Paint is applied. 4.3 Apply a minimum of one coat of SportMaster Line Paint.

5.1 All work shall be performed in a workmanlike manner.

All containers and debris shall be removed from job

PART 3 EXECUTION

corrected.

when completed.

GENERAL

3.01 EXAMINATION Examine areas and conditions with Installer and Owner present. Layout all components with installation tolerances, operational clearances, and other conditions affecting performance in field prior to actual installation.

Verify critical dimensions. Inspect all surfaces and materials in which athletic equipment is to be installed for any unsatisfactory conditions. B. Proceed with installation only after unsatisfactory conditions have been

3.02 INSTALLATION, GENERAL

General: Comply with manufacturer's written installation instructions. Complete equipment field assembly, where required.

B. Unless otherwise indicated, install athletic equipment after other finishing C. Permanently Placed Athletic Equipment and Components: Rigid, level, plumb, square, and true; anchored securely to supporting structure; positioned at locations and elevations indicated on Shop Drawings; in proper relation to adjacent

Finish Grade Elevation: Coordinate installed heights of equipment with specified finish grades. D. Anchoring to In-Place Construction: Use anchors and fasteners where

necessary for securing built-in and permanently placed athletic equipment to

structural support and for properly transferring load to in-place construction.

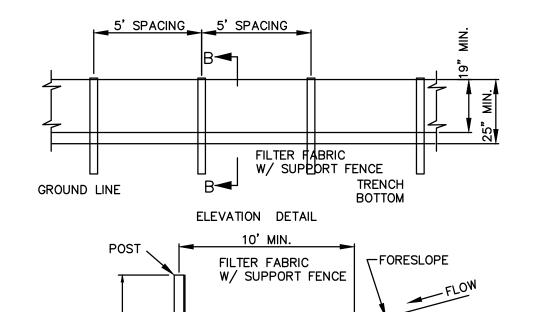
3.04 CLEANING AND PROTECTION

construction; and aligned with field layout.

A. After completing athletic equipment installation, inspect components. Remove spots, dirt, and debris and touch up damaged shop-applied finishes

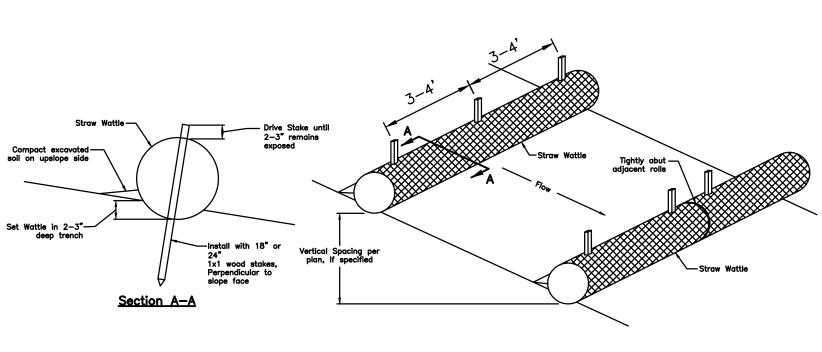
according to manufacturer's written instructions. B. Provide final protection and maintain conditions acceptable to manufacturer and Installer that ensure athletic equipment is without damage or deterioration at time of Substantial Completion.

C. Replace athletic equipment and finishes that cannot be cleaned and repaired, in a manner approved by Architect, before time of Substantial Completion. END OF SECTION 116803



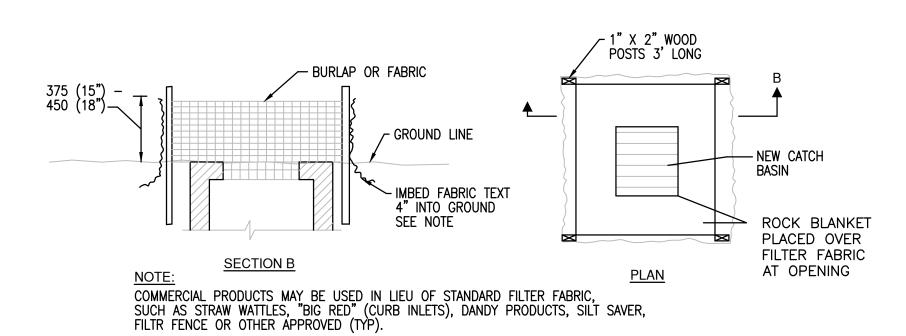
4" MIN. WIDTH TRENCH & COMPACTED BACKFILL TYPICAL B-B

FABRIC SILT FENCE



STRAW WATTLE DETAIL

SEDIMENT BARRIER FENCE



CATCH BASIN PROTECTION DETAIL NOT TO SCALE

Erosion Control Notes:

This Site is less than 1 acre and does not require a Missouri DNR Land Disturbance Permit. Nevertheless, Best Management Practices should be followed to minimize stormwater pollution from this work. As a result, a Stormwater Pollution Prevention Plan has been developed for this property and is outlined below.

1. The Contractor shall install erosion control measures as shown on the drawings prior to beginning earthwork operations.

2. The Contractor shall maintain all silt control measures during construction.

All silt shall remain on site and surrounding streets shall be kept clear of all mud and debris.

4. A sedimentation barrier is to be installed as shown. The barrier shall be constructed of a continuous silt fence or straw wattles installed as detailed on this sheet.

5. Accumulated sediment shall be removed and the sedimentation barriers maintained as needed to prevent sedimentation bypass of the barrier.

6. Slopes are to be left in a rough condition during grading.

7. Curb inlet sedimentation barriers are to be installed around inlets and weirs where sedimentation is a concern. Inlet barriers shall be either block and gravel, or secured straw bales, or silt fence.

8. Erosion control measures are to remain in place until 70% ground cover has been established.

9. Sediment is to be removed from storm water drainage systems.

10. Contractor is responsible for installing any additional erosion control as he/she deems necessary or as required by the Owner, City of Jefferson, State of Missouri DNR, United State EPA or the Engineer.

11. The Contractor shall provide all materials, tools, equipment and labor as necessary to install and maintain adequate erosion and siltation controls required to prevent soil erosion from leaving the project site. It shall be the Contractor's sole responsibility to ensure that methods utilized are adequate and comply with requirements of the specifications and governmental agencies having jurisdiction over the work.

12. The Contractor shall have the responsibility for resolving complaints in the event that complaints or damage claims are filed due to damages occurring adjacent to or downstream from property by sediment resulting from erosion on the project site.

13. At completion of site grading and other related construction activities, all disturbed areas within the project site that do not receive paving shall be seeded, mulched and fertilized as indicated on the plans.

14. Topsoil is to be placed in areas unsuitable for vegetative growth.

15. Temporarily seed any disturbed areas which will not be brought to final grade within 30 days. 16. All access to the site is paved and it is not anticipated a construction entrance will be required. However, if a stabilized entrance into the site is needed, the following specifications should be followed:

Stone size - Use 2" stone or reclaimed or recycled equivalent

Length - as required, but not less than 50 feet.

CONSTRUCTION ENTRANCE NOTES

Thickness - Not less than six (6) inches. Width - Twenty (20) foot minimum, but not less than the full width at points where ingress or egress occurs.

Filter Cloth - Will be placed over the entire area prior to placing of stone.

Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 3:1 slopes shall be permitted.

Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanout of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.

Washing - Wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.

Periodic inspection as needed maintenance shall be provided after each rain.

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SHEET TITLE **PROJECT SPECIFICATIONS** and BMP DETAILS

3 OF 11 SHEETS

December 5, 2022

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PE-2003015009 Brian K. McMillian, PE - Engineer MO# PE-2003015009

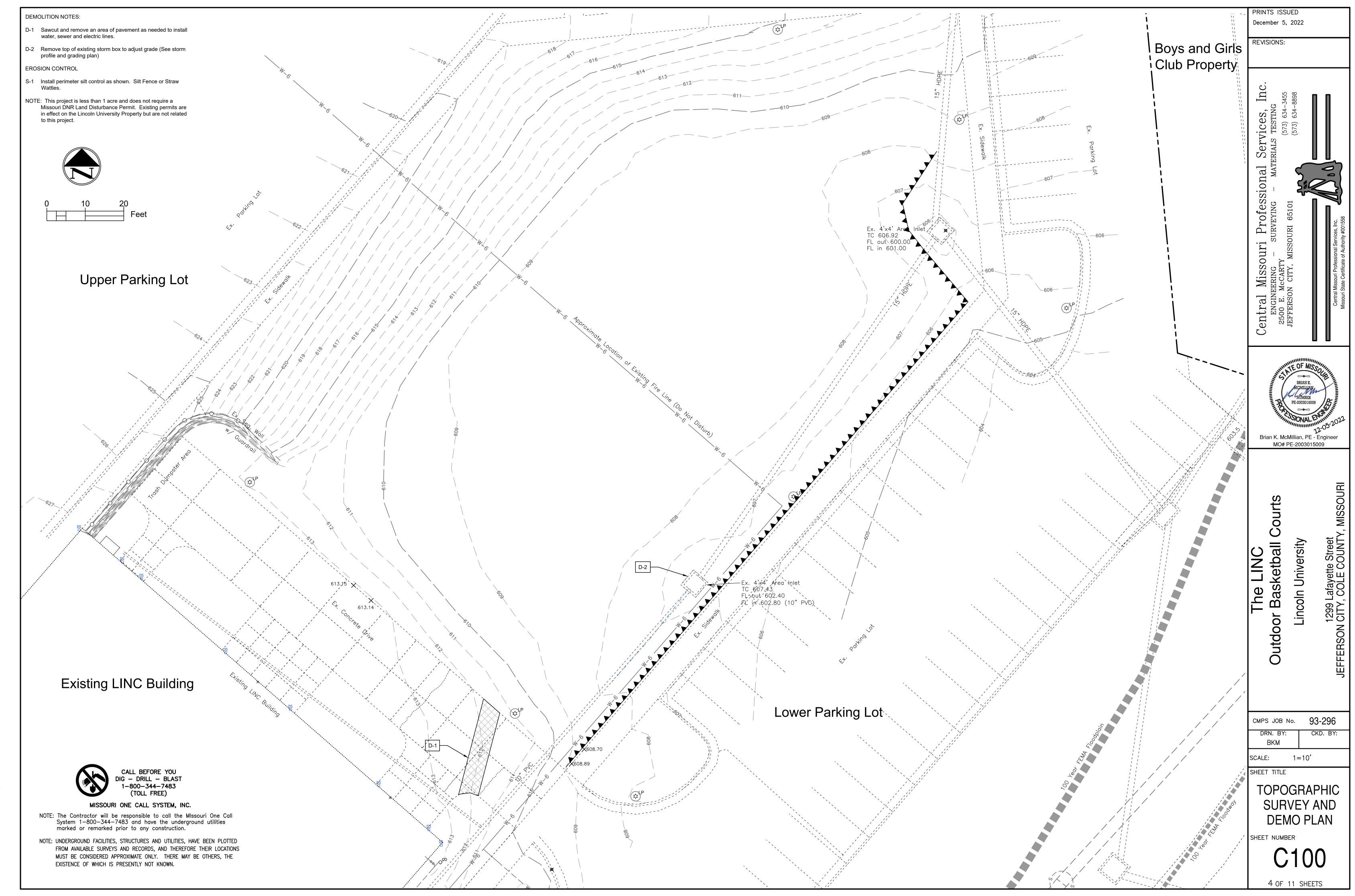
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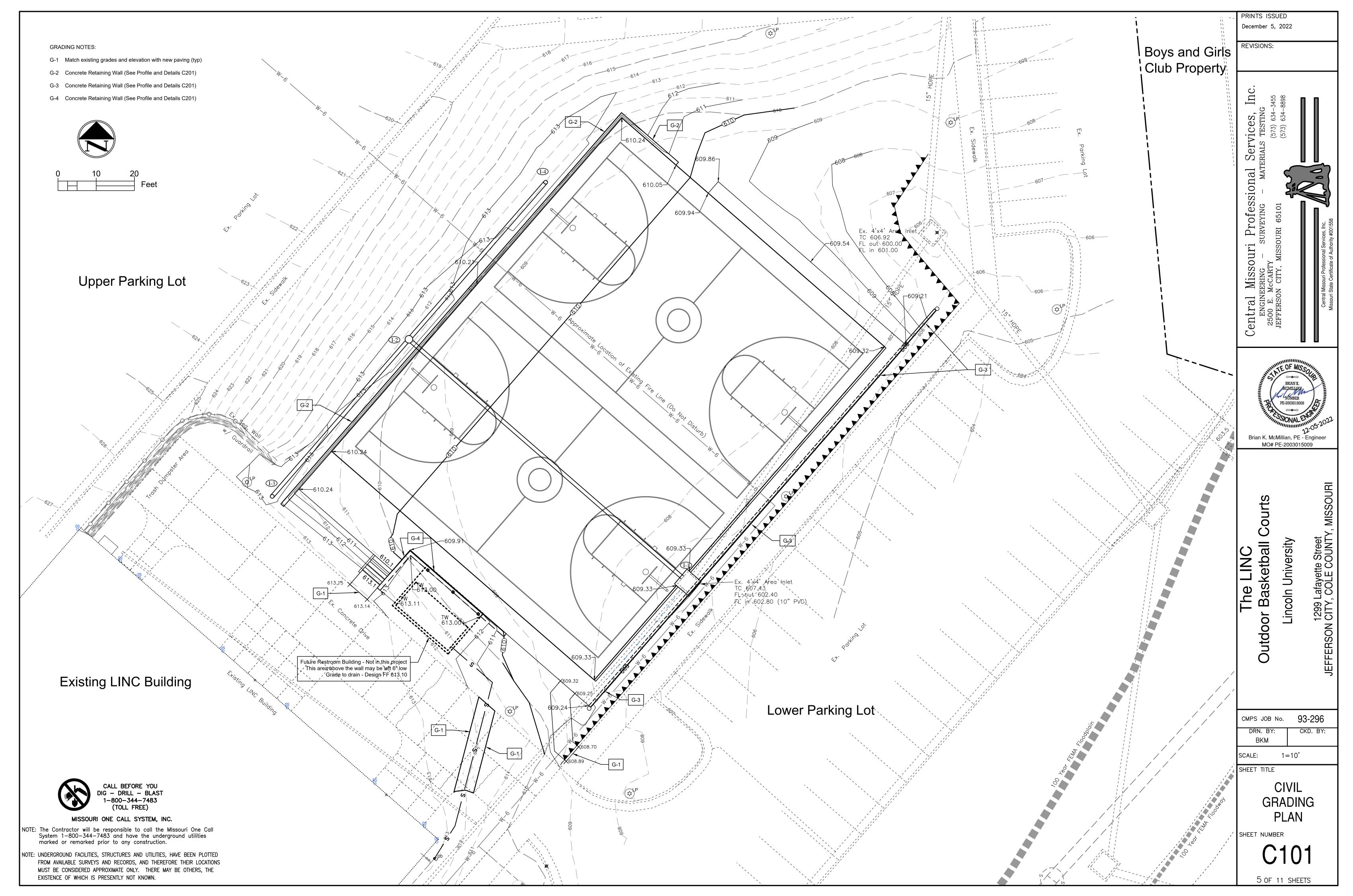
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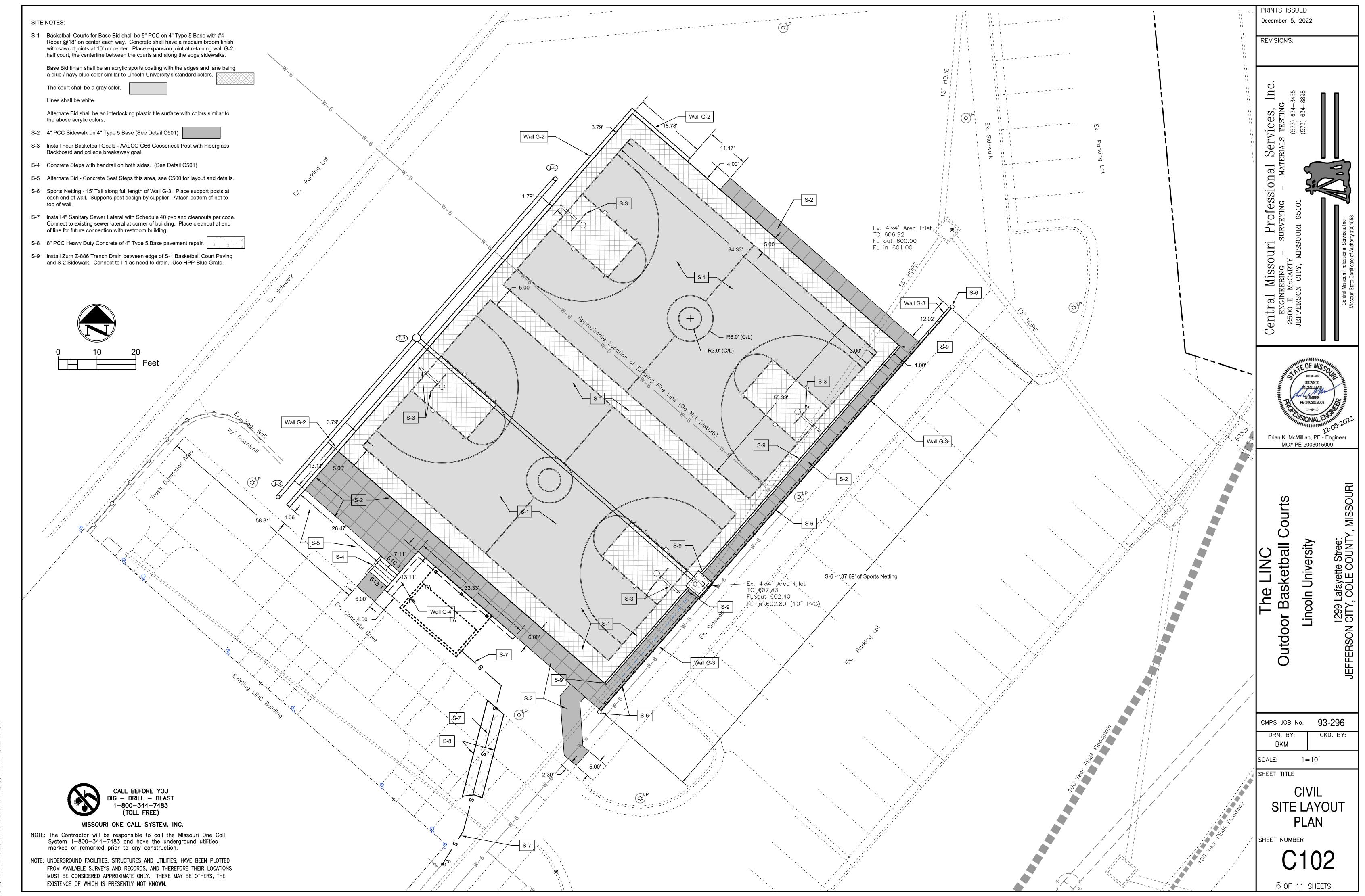
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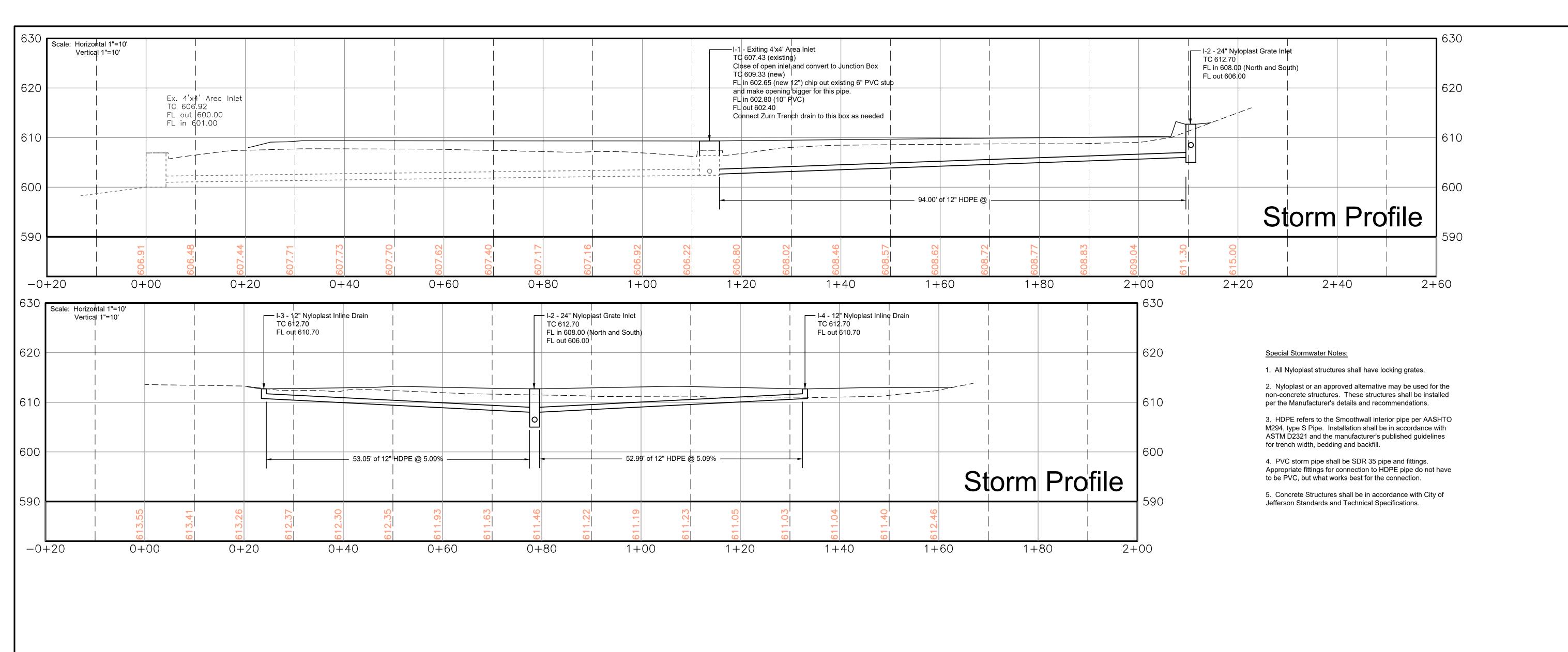


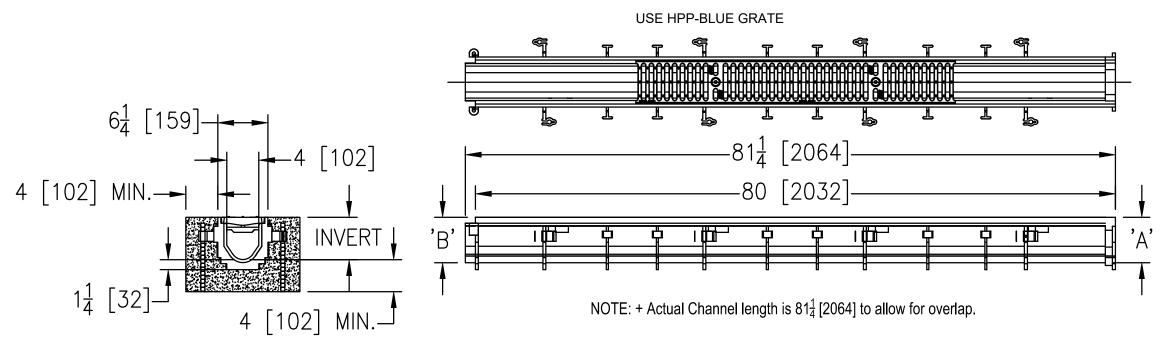


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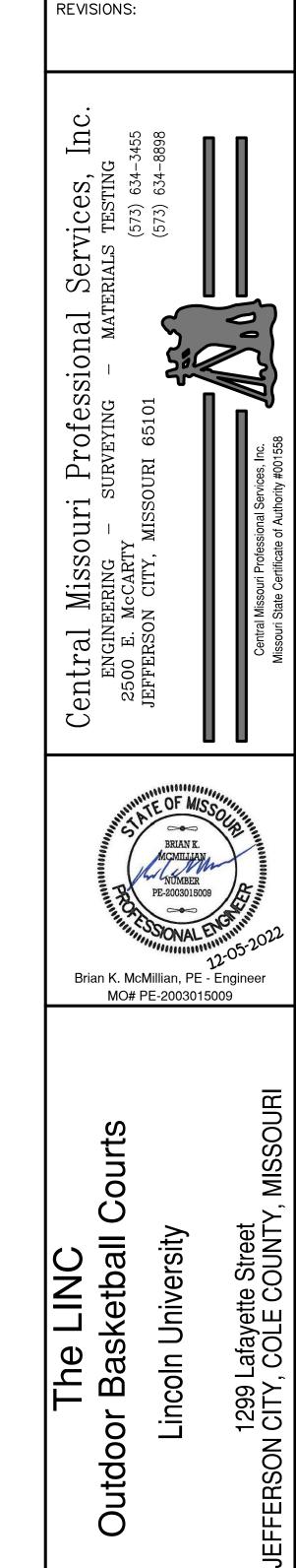


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TYPICAL TRENCH DRAIN DETAIL - ZURN Z886 No Scale



PRINTS ISSUED

December 5, 2022

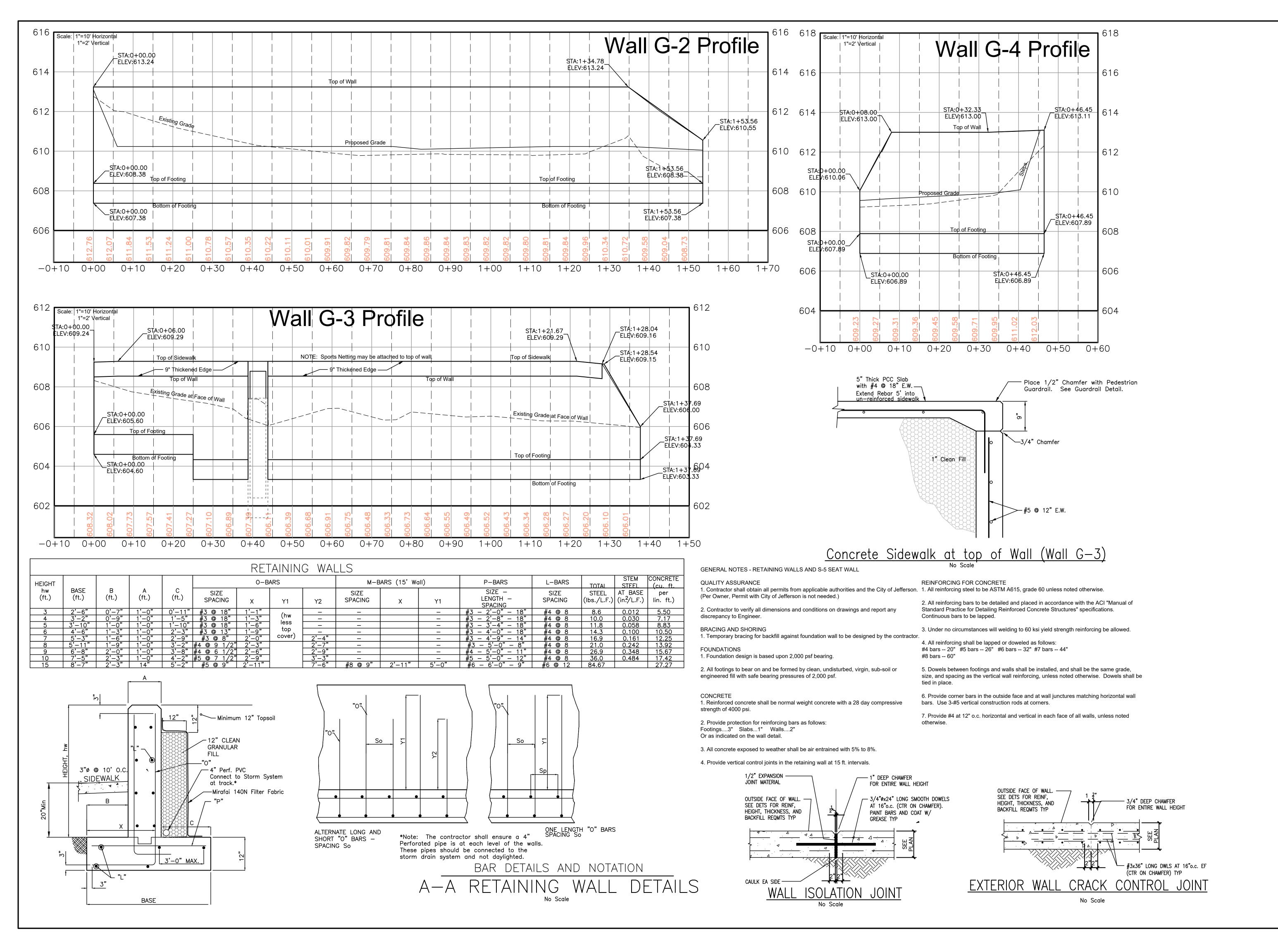
Outdoor Basketball Courts Lincoln University The LINC

93-296 CMPS JOB No. CKD. BY: SCALE: 1=10' SHEET TITLE STORM

PROFILES AND **DETAILS**

SHEET NUMBER

7 OF 11 SHEETS



PRINTS ISSUED December 5, 2022

REVISIONS:

Services, I Erials testing (573) 634-34 (573) 634-88

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Lafayette Street, COLE COUNTY, 1299 | CITY,

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VARIES SCALE:

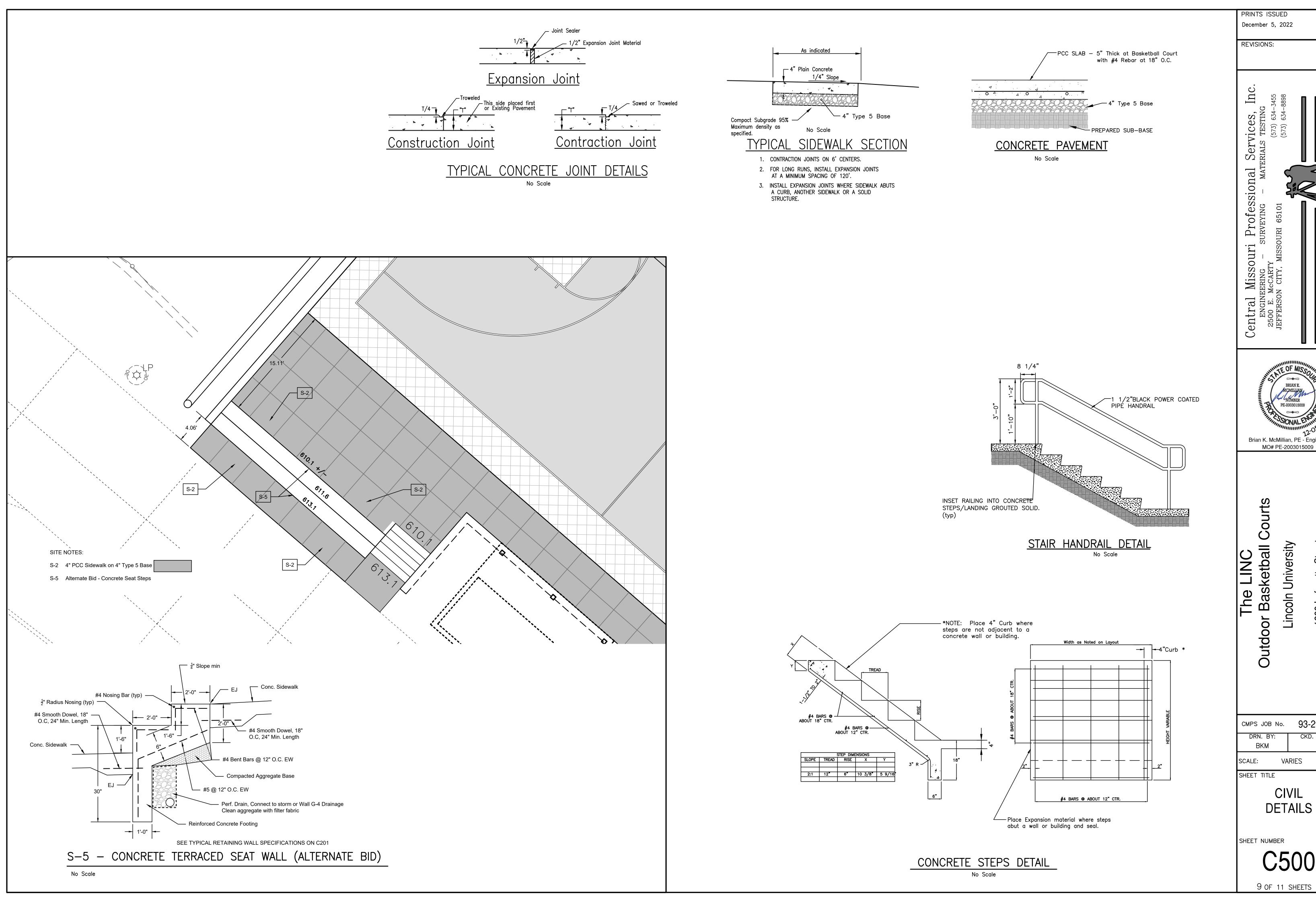
Outdoor

SHEET TITLE

RETAINING WALL PROFILES AND **DETAILS**

SHEET NUMBER

8 OF 11 SHEETS



MO# PE-2003015009

1299 Lafayette Street CITY, COLE COUNTY,

93-296 CKD. BY:

CIVIL

C500

				LIGHTING FIX	XTURE SC	HE	DUL	E.				
			FIXTURE	DATA				LAMI	P DATA			
	TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUI	MBER	MTG 1	VOLTS VA	LAMP QTY	WATTS TYPE ②	REMARK		
	А	GALN GALLEON II LED LUMINAIRE	McGRAW EDISON	GALN-SA9C-740-U- (KW IND.) SSP25-4.0-1		Р	208 486	0	486 LED	CONTROL WITH LCP	AND TIME	R CONTROL RELAY
	В	WALL MOUNTED LED WALL PACK	LUMARK COOPER	WPLLED25-PC-	WPL/VS	W	120 80	1	80 LED	PROVIDE WITH INTERMOUNT AT ~9'-6"A		O CELL
NOTE: 1		AC – AIRCRAFT CAE C – COVE E CH – CHAIN HUNG	Р	- GROUND - POLE - PENDANT MOUNT	R – RECESSI S – SURFACI SC – SURFACI	Ε	ING		ST - STE W - WAI U - UN	LL	- - -	
NOTE: 2 LAMP TY		CF – COMPACT FLU FL – FLUORESCENT H – HALOGEN	MH	- PULSE START - METAL HALIDE - MERCURY VAPOR	HPS – HIGH PF IN – INCANDE LED – LIGHT E	SCENT	-		- - -		- - -	

FIXTURES IN SCHEDULE ARE TO BE FROM THAT MANUFACTURER OR APPROVED EQUAL

STATISTICS									
Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	LLF	LUMENS	MTG. HT.
Calc Zone #1	+	14.42 fc	28.6 fc	6.4 fc	4.5:1	2.3:1	0.90	41488	28' *

* = 25' POLE WITH 3' PIER - SEE DETAIL 2/E501



NOTE

N INDICATES KEYED NOTES

ALL WORK SHALL BE DONE IN STRICT CONFORMANCE WITH THE LOCAL BUILDING CODES AND REGULATIONS AND CURRENT NEC. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY ELECTRICAL PERMITTING FEES AND COORDINATION WITH LOCAL AUTHORITY ON INSTALLATION INSPECTIONS.

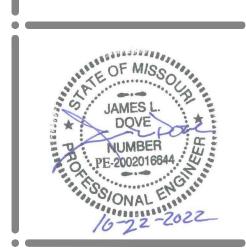
2 GUARANTEE ALL WORKMANSHIP AND MATERIALS FOR A MINIMUM OF ONE YEAR FROM FINAL ACCEPTANCE UNLESS OTHERWISE STATED IN CONSTRUCTION SPECIFICATIONS.

- REMOVE EXISTING LIGHT AND LIGHT POLE AND RETURN TO OWNER. BASE TO REMAIN FOR REUSE. LIGHT AND POLE TO BE REPLACED WITH NEW TYPE "A" FIXTURE. SEE LIGHT FIXTURE SCHEDULE.
- ELC TO INTERCEPT AND SEVER EXISTING UNDERGROUND CONDUIT FEEDING POWER TO THE EXISTING PARKING LOT POLE LIGHTS. INSTALL AN ELECTRICAL QUAZITE BOX OR EQUAL GROUND BOX WHERE CONDUIT IS SEVERED. EXISTING CIRCUIT IS TO BE RECONFIGURED TO CONTINUE FEEDING THE REMAINING PARKING LOT POLE LIGHTS. A NEW CIRCUIT IS TO BE INSTALLED TO FEED POWER TO THE TWO OLD POLE LOCATIONS AND THE TWO NEW POLE LIGHTS. UTILIZE EXISTING CONDUIT WHERE AVAILABLE AND INSTALL NEW CONDUIT WHERE REQUIRED.
- INSTALL ONE NEW 20A/2P AND FOUR 20A/1P BREAKERS IN EXISTING ELECTRICAL PANEL P10. 20A/2P FOR LIGHTING CIRCUITS (32,34). PULL A NEUTRAL FROM PANEL P10 TO LIGHTING CONTACTOR ABOVE TO DERIVE 120V CONTROL VOLTAGE FOR LIGHTING CONTROLS. INSTALL TWO 20A/1P BREAKERS FOR FUTURE RESTROOM ROOM CIRCUIT (36,38), INSTALL ONE 20A/1P BREAKER IN PANEL P10 FOR FUTURE PAVILION CIRCUIT (40), AND INSTALL ONE 20A/1P BREAKER IN PANEL P10 FOR WALL PACK LIGHTING CIRCUIT (42).
- INSTALL (1) 1 1/4" EMT CONDUIT WITH (2) #6 CU THWN & (1) #8 CU THWN GRND, LIGHTING CIRCUIT (32,34) AND (2) #10 CU THWN & (1) #10 CU GROUND FOR PUSH BUTTON CONTROL CIRCUIT. INSTALL FROM PANEL P10 TO LIGHTING CONTACTOR PANEL ABOVE PANEL P10 AND THEN TO NEW NEMA 3R EXTERIOR WALL BOX AND THEN TO NEW QUAZITE GROUND BOX. SEE DETAIL 1—E501 FOR LIGHTING CONTROLS DIAGRAM. INSTALL (3) 3/4" SPARE CONDUITS FROM PANEL P10 THRU NEMA 3R WALL BOX TO QUAZITE GROUND BOX FOR FUTURE CIRCUITS.
- ADD A PHOTO CELL AT EXTERIOR NEMA 3R WALL BOX IN LINE WITH THE PUSH BUTTON CIRCUIT TO PREVENT COURT LIGHTS FROM COMING ON OUTSIDE THE HOURS OF DARKNESS.
- (8) INSTALL NEW NEMA 3R EXTERIOR WALL BOX, NEAR GROUND LEVEL AND EXTEND CONDUIT AND CONDUCTORS FROM CONTACTOR PANEL TO NE NEMA 3R WALL BOX.
- 1) INSTALL (1) 1 1/4" PVC CONDUIT WITH LIGHTING CIRCUIT AND (3) 3/4" SPARE PVC CONDUITS WITH PULL ROPES FOR FUTURE CIRCUITS, FROM NEMA 3R WALL BOX, BELOW GRADE, TO NEW QUAZITE GROUND BOX. COORDINATE WITH CIVIL DRAWINGS ON UTILIZING THE SAME SAW CUT AND TRENCH AS THE NEW SANITARY LINE.
- INSTALL (2) #12 CU THWN & (1) #12 CU GRND IN (1) 3/4" PVC CONDUIT TO NEW 4X4 TREATED POST NEAR STAIRS FOR NEW PUSH BUTTON LIGHTING CONTROL SWITCH. INSTALL POST 3' BELOW GRADE AND 4' ABOVE GRADE. MOUNT SINGLE GANGE BELL BOX TO POST WITH PUSH BUTTON. INSTALL WEATHER RESISTANT SIGN ABOVE SWITCH WITH THE WORDS "COURT LIGHTS". TIMER SWITCH IS TO BE WIRED IN PARALLEL WITH THE LCP, SUCH THAT EITHER CAN TURN THE COURT LIGHTS ON. COORDINATE SWITCH LOCATION WITH OWNER.
- CONDUCTORS FROM THE FIRST QUAZITE BOX TO EACH OF THE EXISTING POLE LOCATIONS CAN BE REDUCED TO 2-#10 CU THWN & 1-#10 CU THWN GRND. THE EXISTING CIRCUIT FOR THE PARKING LOT LIGHTING IS TO BE REPAIRED AS NEEDED TO MAINTAIN THE PARKING LOT LIGHTING. WIRES ARE ONLY TO BE SPLICE AT POLE HAND HOLES OR QUAZITE GROUND BOXES, NO ADDITIONAL SPLICES ARE ACCEPTABLE.
- INSTALL (1) 1 1/4" PVC CONDUIT WITH (2) #8 CU THWN & (1) #10 CU THWN GRND, LIGHTING CIRCUIT (32,34). INSTALL (1) 3/4" PVC CONDUIT FOR FUTURE PAVILION CIRCUIT.
- (13) INSTALL QUAZITE GROUND BOX OR EQUIVALENT.
- (14) RUN (2) #8 CU THWN & (1) #10 CU THWN GRND TO EACH OF THE NEW POLE LOCATIONS FOR NEW LIGHT FIXTURES.
- STUB OUT 5' OF 3/4" PVC CONDUIT, TURN UP ABOVE GRADE AND CAP FOR FUTURE RESTROOM OR PAVILION CIRCUIT. INSTALL PULL ROPE AND TAG IN GROUND BOX.
- 16 COORDINATE ALL WORK WITH CIVIL PLANS AND UNIVERSITY PERSONNEL.
- 17 ELC SHALL BE RESPONSIBLE FOR LOCATING ANY EXISTING SITE UTILITIES. IF CONDUIT ROUTE CHANGES DUE TO UNFORESEEN UTILITIES AND OBSTRUCTIONS CONTACT ENGINEER TO COORDINATE NEW ROUTING.
- 18 INSTALL TWO NEW TYPE "B" WALL PACKS ON BUILDING TO PROVIDE LIGHTING BETWEEN BUILDING AND COURT AREA. INSTALL (2) #12 CU THHN & (1) #12 CU THHN GRND IN 1/2" EMT TO PANEL P10-42.

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Design By: JLD
Drawn By: MDS
Checked By: JLD

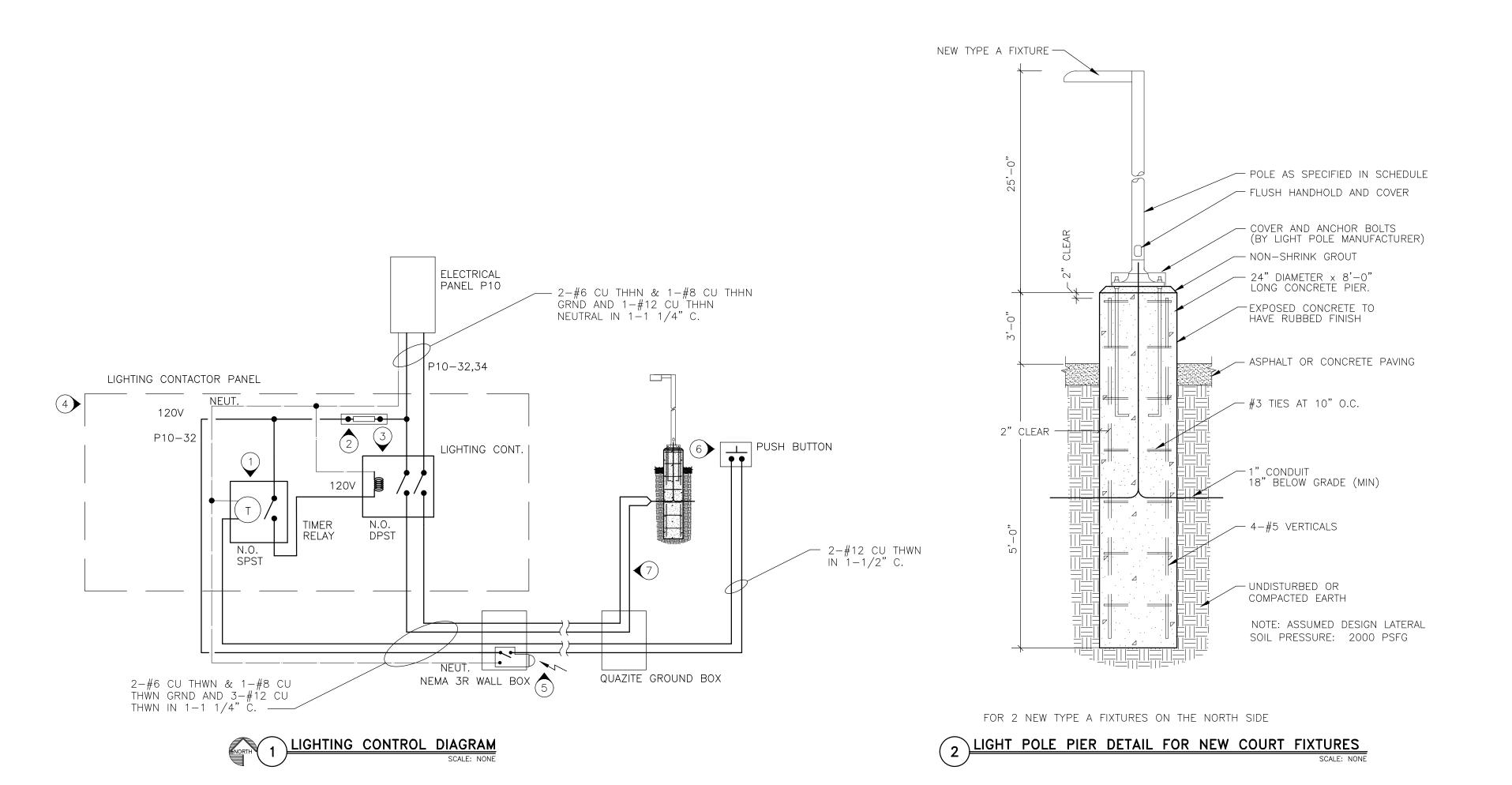
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ELECTRICAL LIGHTING PLAN

Date: 2022.12.05

E101

PANEL DESIGNATION: P10															
VOLTAGE: 208 3PHASE 4WIRE	PANEL LOCATION: SOUTH EAST CORNER OF BLDG							TOTAL VOLT	AMPS THIS F	PANEL		4048			
MAINS: 200 A _ CB X MLO	MOU	NTING:	FLUSH X	SURFACE	PANEL SPACES: 42			TOTAL CONNECTED LOAD (AMPS)				11			
					C	ONNECTED	LOAD	CKT.	C	ONNECTED L	OAD				
CIRCUIT DESIGNATION	WIRE	TRIP	Α	В	С	NO.	Α	В	С	TRIP	WIRE	CIRCUIT DESIGNATION			
						1 2				20A/1P	#12	159 LIGHTING			
EMON-DEMON SUB METER		20A/3P				3 4				20A/2P		ICE MACHINE			
						5 6									
SPARE		20A/1P				7 8				40A/2P		COFFEE MAKER			
SPARE		20A/1P				9 10									
SPARE		20A/1P				11 12				20A/1P		SPARE			
SPARE		20A/1P				13 14				20A/1P		SPARE			
SPARE		20A/1P				15 16				20A/1P		SPARE			
SPARE		20A/1P				17 18				20A/1P		SPARE			
SPARE		20A/1P				19 20				20A/1P		SPARE			
SPARE		20A/1P				21 22				20A/1P		SPARE			
SPARE		20A/1P				23 24				20A/1P		SPARE			
SPARE		20A/1P				25 26				20A/1P		SPARE			
SPARE		100A/2P				27 28				20A/1P		SPARE			
						29 30				20A/1P		SPARE SPARE			
SPACE						31 32	1944			30A/2P	#6	COURT LIGHTING			
SPACE						33 34		1944			#6				
SPACE						35 36				20A/1P	#12	FUTURE COURT BATH RM			
SPACE						37 38				20A/1P		FUTURE COURT BATH RM			
SPACE						39 40				20A/1P		FUTURE PAVALIAN			
SPACE						41 42			160	20A/1P		BUILDING WALL PACK LTS			
			0				1944			PHA	ASE A	1944			
				0				1944		PHA	ASE B	1944			
					0				160	PHA	ASE C	160			



NOTE (N) INDICATES KEYED NOTES

SUPPLY AND INSTALL A TIMING RELAY WITH RELAY SOCKET BASE, ADJUSTABLE FROM 1 TO 60 MINUTES. SUPPLY VOLTAGE 120V, TIMING MODE ON-DELAY. SCHNEIDER 9050JCK OR EQUIVALENT.

2 SUPPLY AND INSTALL A BUSSMANN FUSE BLOCK BMM603-1SQ W/ CVRI-CCM-QC COVER OR EQUIVALENT. SUPPLY WITH A KTK-5, 600V 5A FAST ACTING MIDGET

3 SUPPLY AND INSTALL A TWO POLE LIGHTING CONTACTOR WITH 120V COIL, SCHNEIDER 8903L020V02 OR EQUIVALENT.

(4) SUPPLY AND INSTALL A NEMA 1 JUNCTION BOX ABOVE PANEL P10, SIZED TO HOUSE LIGHTING CONTROLS.

5 INSTALL INTERMATIC STEM MOUNTED PHOTO CELL EK4136S OR EQUIVALENT IN LINE WITH PUSHBUTTON TO PREVENT COURT LIGHTS FROM COMING ON DURING DAYLIGHT HOURS.

SUPPLY AND INSTALL A MOMENTARY PUSHBUTTON WITH SINGLE POLE CONTACT, HARMONY XB5AA31 OR EQUIVALENT. INSTALL ON 4X4 TREATED POST NEAR STAIRS TO COURTS. TRANSITION TO RIDGID CONDUIT ABOVE GRADE AND MOUNT PUSHBUTTON IN A SINGLE GANG BELL BOX WITH WEATHER PROOF COVER. SUPPLY LABEL AT BUTTON THAT READS "COURT LIGHTS".

(7) SEE NOTES ON SITE LIGHTING PLAN FOR WIRE AND CONDUIT TO POLE LIGHTS.

(8) INSTALL A NEW 20A/2P BREAKER IN EXISTING ELECTRICAL PANEL P10 FOR LIGHTING CIRCUITS (32,34). INSTALL TWO 20A/1P BREAKERS FOR FUTURE RESTROOM ROOM CIRCUIT (36, 38), INSTALL ONE 20A/1P BREAKER IN PANEL P10 FOR WALL PACK CIRCUIT (42).

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Checked By: JLD

sion Date

Scale: VARIES

ELECTRICAL DETAILS

Date: **2022.12.05**

E501

NEW PAVING OR TOP SOIL & GRASS
PAVING OR FINISHED GRADE

UNDER EARTH: BACK FILL
(EXCAVATED MATERIAL) FREE OF
ROCK OR GRAVEL LARGER THAN 3"
COMPACTED TO 95% DENSITY.

UNDER PAVT: MODOT TYPE 1 OR 5
GRANULAR MATERIAL IN 8" MAX
LIFTS COMPACTED TO 95% DENSITY

UNEXCAVATED SOIL

DETECTABLE WARNING TAPE

BACK FILL FREE OF ROCK OR GRAVEL
LARGER THAN 3/4". (TYP.)

NEW SCHEDULE 40 PVC PIPE

1 24" MINIMUM
2
2
CONDUIT CHASE FOR ELECTRIC.
SEE SITE PLAN FOR SIZING.

3 UTILITY TRENCH DETAIL
SCALE: NONE

11 of 11 SHEETS