PARAGON STAR SOCCER COMPLEX

10201 View High Drive, Lee's Summit, MO

January 18, 2019

FINAL DEVELOPMENT PLAN

SHEET INDEX

CIVIL

C-100 GENERAL LAYOUT
C-101 GENERAL LAYOUT
C-200 GRADING PLAN
C-201 GRADING PLAN
C-202 GRADING PLAN
C-203 GRADING PLAN
C-204 GRADING PLAN
C-205 GRADING PLAN
C-206 GRADING PLAN
C-207 GRADING PLAN
C-208 GRADING PLAN
C-300 DIMENSION PLAN
C-301 DIMENSION PLAN
C-302 DIMENSION PLAN
C-303 DIMENSION PLAN
C-304 DIMENSION PLAN
C-305 DIMENSION PLAN
C-306 DIMENSION PLAN
C-307 DIMENSION PLAN
C-308 DIMENSION PLAN
C-400 UTILITY PLAN
C-401 UTILITY PLAN
C-402 UTILITY PLAN
C-403 UTILITY PLAN
C-404 UTILITY PLAN
C-405 UTILITY PLAN
C-406 UTILITY PLAN
C-407 UTILITY PLAN
C-408 UTILITY PLAN
C-500 CONSTRUCTION DETAILS
C-501 CONSTRUCTION DETAILS
C-502 CONSTRUCTION DETAILS
C-503 UTILITY DETAILS
C-504 STORM SEWER DETAILS
C-505 STORM SEWER DETAILS
C-600 STORM SEWER PROFILES
C-601 STORM SEWER PROFILES
C-602 STORM SEWER PROFILES
C-700 DRAINAGE MAP
C-800 DRAINAGE CALCULATIONS
C-900 EROSION CONTROL PLAN
C-901 EROSION CONTROL PLAN
C-902 EROSION CONTROL PLAN
C-903 EROSION CONTROL PLAN
C-904 EROSION CONTROL PLAN
C-905 EROSION CONTROL PLAN
C-906 EROSION CONTROL PLAN
C-907 EROSION CONTROL PLAN
C-1000 EROSION CONTROL NOTES
C-1001 EROSION CONTROL DETAILS
C-1002 EROSION CONTROL DETAILS

PLAYING FIELD

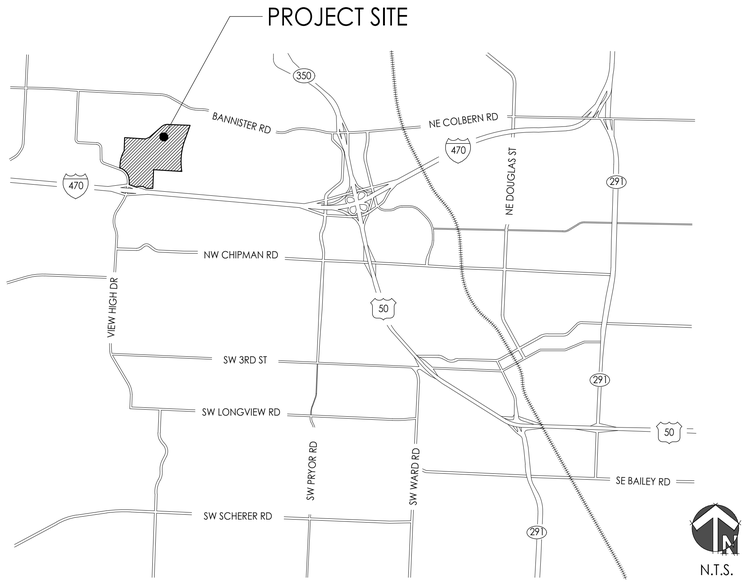
PF-101 FIELD 1 & 2 MATERIALS & DETAILS
PF-102 FIELD 3 & 4 MATERIALS & DETAILS
PF-103 FIELD 5 & 6 MATERIALS & DETAILS
PF-104 FIELD 7 & 8 MATERIALS & DETAILS
PF-105 FIELD 9 & 10 MATERIALS & DETAILS

LANDSCAPE & IRRIGATION

L-001 OVERALL SITE PLAN
L-500 LANDSCAPE PLAN
L-501 LANDSCAPE PLAN
L-502 LANDSCAPE PLAN
L-503 LANDSCAPE PLAN
L-504 LANDSCAPE PLAN
L-505 LANDSCAPE PLAN
L-506 LANDSCAPE PLAN
L-507 LANDSCAPE PLAN
L-508 LANDSCAPE SCHEDULE
L-700 SITE DETAILS
L-800 PLANTING DETAILS

ELECTRICAL

E-000 ELECTRICAL SYMBOLS & LEGENDS
E-100 ELECTRICAL SITE PLAN
E-200 PHOTOMETRIC PLAN
E-300 ELECTRICAL ONE-LINE DIAGRAM
P-000 PLUMBING SYMBOLS & NOTES
P-001 PLUMBING SITE PLAN



PLANS PREPARED BY

GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Engineering Corp 000133

LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
816.207.6019
www.land3studio.com
MO Landscape Arch Corp 2008001860

Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Landscape Arch Corp (Applied)

Henderson Engineers, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Engineering Corp 000556

OWNER

Paragon Star, LLC
801 NW Commerce Drive
Lee's Summit, MO 64086
855.802.6800
www.paragonstarusa.com

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex
Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

COVER

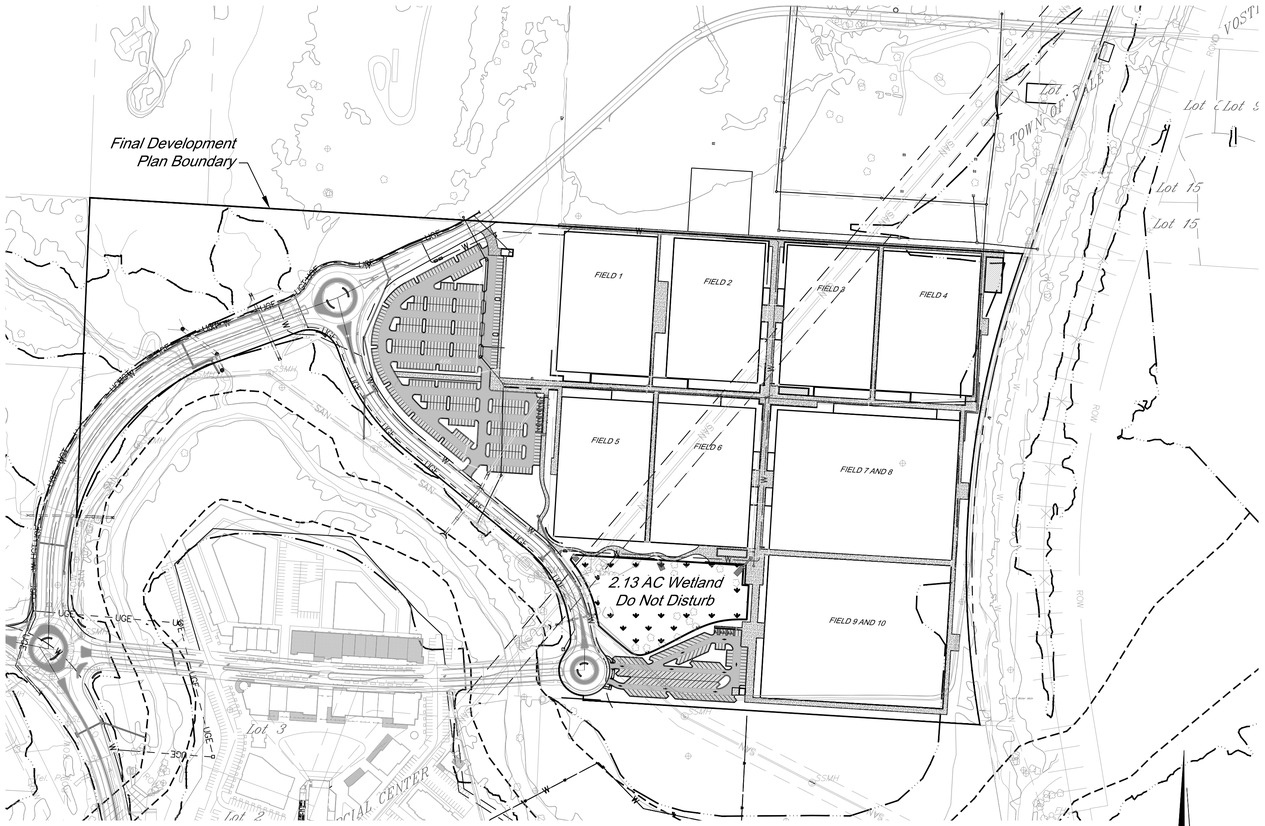
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: EDD,RWB

SHEET NO:

000

G:\Archive\2016\1197-PARAGON STAR\DRAWINGS\CAD\SHEETS\000_COVER.dwg 1/17/2019 3:49:33 PM ERIC DAVIS 1:1
DESIGNS, ARRANGEMENTS, AND PLANS INDICATED OR REPRESENTED BY THIS DRAWING ARE OWNED BY AND THE INTELLECTUAL PROPERTY OF LAND3 STUDIO, L.L.C., AND WERE CREATED, EVOLVED, AND DEVELOPED FOR USE ON AND IN CONNECTION WITH THE SPECIFIED PROJECT. NONE OF THESE DESIGNS, ARRANGEMENTS, OR PLANS SHALL BE USED, REPRODUCED, OR PUBLISHED BY ANY METHOD, IN WHOLE OR IN PART, OR DISCLOSED TO ANY PERSON, FIRM, OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN PERMISSION OF LAND3 STUDIO, L.L.C.

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0200.dwg Layout: C-100 General Layout -- Thursday, January 17, 2019, 3:31pm -- Copyright 2019, George Butler Associates, Inc.
Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



Boundary Description:

All that part of the Northwest Quarter of Section 34, Township 48 North, Range 32 West, of the 5th P.M., and all of GRAHAM COMMERCIAL CENTER, a subdivision in the in the City of Lee's Summit, Jackson County, Missouri, being more particularly described as follows:

BEGINNING at the Northwest corner of said Northwest Quarter of Section 34; thence South 86°33'45" East, along the North line of said Northwest Quarter, a distance of 2611.91 feet, to a point on the Westerly Right-of-Way line of Union Pacific Railroad, as now established; thence South 18°46'13" West, departing said North line, along said Westerly Right-of-Way line, a distance of 76.95 feet, to a point of curvature; thence Southwesterly and Southeasterly, continuing along said Westerly Right-of-Way line, along a curve to the left, having a radius of 2508.01 feet, and a central angle of 28°06'45", a distance of 1230.57 feet, to a point of tangency; thence South 09°20'32" East, continuing along said Westerly Right-of-Way line, a distance of 30.31 feet, to a point on the South line of the North half of said Northwest Quarter; thence South 86°26'21" East, continuing along said Westerly Right-of-Way line, and along said South line of the North half of the Northwest Quarter, a distance of 16.41 feet; thence South 09°20'32" East, departing said South line of the North half of the Northwest Quarter, continuing along said Westerly Right-of-Way line, a distance of 354.98 feet, to a point on the East line of said Northwest Quarter; thence South 02°29'17" West, continuing along said Westerly Right-of-Way line, and along said East line of the Northwest Quarter, a distance of 468.48 feet, to a point on the North Right-of-Way line of Interstate 470, as now established; thence North 85°05'37" West, departing said Westerly Right-of-Way line, along said North Right-of-Way line of Interstate 470, a distance of 899.87 feet; thence North 75°10'03" West, continuing along said North Right-of-Way line, a distance of 203.04 feet; thence South 77°15'22" West, continuing along said North Right-of-Way line, a distance of 228.93 feet, to a point on the East line of the Southwest Quarter of said Northwest Quarter, said point also being the Southeast corner of said GRAHAM COMMERCIAL CENTER; thence continuing South 77°15'22" West, continuing along said North Right-of-Way line, and along the South line of said subdivision, a distance of 1.94 feet; thence South 88°33'58" West, continuing along said North Right-of-Way line, and along said South line of said subdivision, a distance of 181.11 feet; thence North 85°01'31" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 100.18 feet; thence North 60°06'43" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 165.44 feet; thence North 85°08'16" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 199.96 feet; thence South 60°28'02" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 97.23 feet; thence North 69°50'05" West, continuing along said North Right-of-Way line, and said South line of said subdivision, a distance of 342.03 feet, to the Southwest corner of said subdivision; thence North 30°28'52" West, continuing along said North Right-of-Way line, and along the West line of said subdivision, a distance of 87.88 feet; thence North 07°21'08" East, continuing along said North Right-of-Way line and it's transition to the East Right-of-Way line of View High Drive, as now established, and said West line of said subdivision, a distance of 106.53 feet; thence North 20°25'39" East, departing said West line of said subdivision, continuing along said East Right-of-Way line of View High Drive, a distance of 185.39 feet; thence North 45°30'34" West, continuing along said East Right-of-Way line, a distance of 129.40 feet; thence North 12°40'32" West, continuing along said East Right-of-Way line, a distance of 278.96 feet, to a point on said South line of the North half of the Northwest Quarter; thence North 86°26'21" West, continuing along said East Right-of-Way line, and along said South line of the North half of the Northwest Quarter, a distance of 130.00 feet, to the Southwest corner of said North half of the Northwest Quarter; thence North 02°25'47" East, along the West line of said Northwest Quarter, a distance of 1316.45 feet, to the POINT OF BEGINNING, containing 5,217,462.56 square feet or 119.78 acres, more or less.

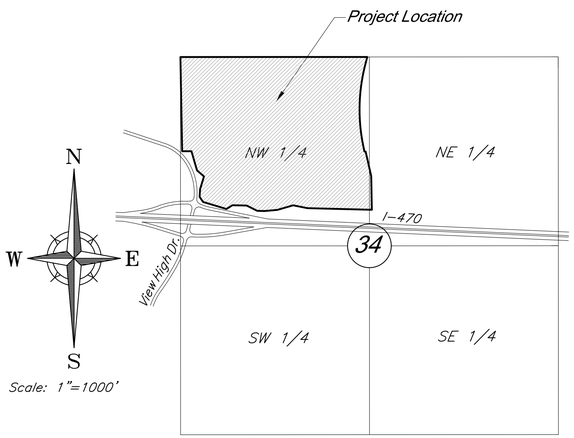
See Sheet C-101 for dimensioned boundary.

Project Benchmark:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive.
EL=833.80

Floodplain:

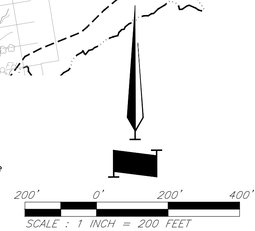
According to FEMA Flood Insurance Rate Map (FIRM) Community Panel No. 29095C0404G, effective Date 1/20/17, the tract lies partially within an area designated as Special Flood Hazard Areas. Special Flood Hazard Areas defined on portions of the site include regulatory floodway, Zone AE (with depths identified on site from 810 to 811), and 0.2% Annual Chance Flood Hazard Areas.



Scale: 1"=1000'

VICINITY MAP

Section 33 & 34-T48N-R32W



General Notes:

1. All Construction shall conform to the City of Lee's Summit Technical Specifications in effect at the time of the City's approval date shown on the approved plans and incorporated herein by reference.
2. All traffic control shall be the responsibility of the Contractor and shall be in conformance with the Manual of Uniform Traffic Control Devices (MUTCD).
3. Property Corners and/or Section corners disturbed or damaged by construction activities shall be reset by a Registered Land Surveyor licensed in the state of Missouri, at the Contractor's expense.
4. The Contractor shall be responsible for the restoration of the Right-of-Way and for damaged improvements such as curbs, driveways, sidewalks, street light and traffic signal junction boxes, traffic signal equipment, irrigation systems, etc. Damaged improvements shall be repaired in conformance with the latest City standards and to the City's satisfaction.
5. All work shall be confined within easements and/or construction limits as shown on the plans.
6. The Contractor shall, prior to the commencement of work, investigate surface and subsurface conditions to be encountered across the site and notify the Engineer if any discrepancies or changed conditions are noted.
7. All trash and debris identified on site shall be properly handled and disposed of in accordance with state of Missouri regulations.
8. All measurements on these plans are horizontal distances, not slope distances.
8. This project will include numerous activities occurring on site including storm sewer, sanitary sewer, grading, erosion control, etc. Contractor shall coordinate his work with other contractors on site.
9. Initial construction staking will be performed by GBA – Refer to Bid Documents.
10. All concrete shall be KCMMB 4,000 psi.

Permitting:

11. Contractor is responsible for obtaining all required permits, paying all fees, and for otherwise complying with all applicable regulations governing the work.
12. No work shall be completed within the existing floodway until the CLOMR has been issued.
13. The U.S. Corps of Engineers Section 404 permit has been issued for this project. All work shall adhere to the terms and conditions of this permit, including the preservation of 2.13 Acres of the existing wetland.
14. All work within KCMO city limits shall adhere to KCMO Site disturbance requirements.

Erosion Control:

15. The Contractor is responsible for providing erosion and sediment control BMP's to prevent sediment from reaching paved areas, storm sewer systems, drainage courses, and adjacent properties. In the event the prevention measures are not effective, the contractor shall remove any debris, silt, or mud and restore the Right-Of-Way, or adjacent properties to original or better condition.
16. Contractor shall ensure that all construction shall conform to the requirements of the Stormwater Pollution Prevention Plan (SWPPP) a copy of which shall be maintained and updated on site by the Contractor.
17. The Contractor shall sod all disturbed areas within the Public Street Right-of-Way unless otherwise noted in the plans.
18. No trees shall be damaged or removed without prior authorization from owner unless otherwise shown on this plan.

Earthwork:

19. Slopes shall be constructed to a maximum slope of 3:1 (Horiz:Vert) unless specifically noted otherwise in the referenced Geotechnical reports.
20. Refer to "Geotechnical Engineering Report – Paragon Star Roadways and Borrow Site" Dated December 8, 2016 – along with Addendum #1 dated 1/4/17, and "Geotechnical Engineering Report – Soccer Fields" Dated July 27, 2016 prepared by Terracon Consultants, Inc. for grading recommendations and boring logs. All earthwork shall conform to the recommendations of the Reports.
21. Unless otherwise noted, all spot elevations and contours are shown to "finish" grade surface.
22. All temporary slopes and excavations should conform to Occupational Safety and Health Administration (OSHA) standards for the Construction Industry (29 CFR part 1026, subpart P).
23. Earthwork for this phase of development is intended to balance. Contractor to cut only enough fill material from the borrow source at the north end of the project as required to accomplish the fills shown on this plan set.
24. All Permanent seeded shall be dressed with 12" topsoil and permanent seed. All other disturbed areas shall be seeded with the temporary seed mix.
25. Earthwork quantities shown on the plans assume 15% shrinkage for all fill material. The Contractor shall perform the fill to achieve the grades shown on the drawings. The determination of the actual adjustment of fill required due to shrink/swell of various materials shall be the responsibility of the Contractor.

Utility:

26. All Manholes, Catch Basins, Utility Valves, Meter Pits, and other utility equipment shall be adjusted or rebuilt to grade as required.
27. Prior to beginning work, the Contractor shall notify all utility companies who have facilities in the vicinity of the project area of the work to be performed.

Storm Sewer:

28. All RCP shall be Class III.
29. All HDPE Pipe shall be ADS N-12 or equivalent. Pipe shall meet AASHTO M294.
30. Pipe Lengths are called out from center of structure to center of structure.
31. Drainage across the project site during construction shall be the Contractor's responsibility. Surface drainage shall be controlled to reduce or prevent the flow of surface water onto adjacent grounds. Contractor shall control downstream erosion and silting during construction. Flexibility is given to to the Contractor to make minor grading revisions along roads or between building pads to improve drainage during construction, with prior approval of the engineer.
32. Prior to ordering precast storm sewer structures, Contractor shall provide shop drawings to the Engineer for review and approval.

Utility Contacts

Sanitary Sewers	Mr. Jeff Thorn, PE City of Lee's Summit Water Utilities 1200 SE Hamblen Road Lee's Summit, MO 64063 (816) 969-1922 email: jeff.thorn@cityofLS.net Mr. Jeff Shook Little Blue Valley Sewer District 21101 East 78 Highway Independence, MO 64057 (816) 285-1522 email: jshook@lbvsd.net Kansas City, MO Public Works Department (816) 513-2600 Kansas City, MO Water Services Department (816) 513-2215	Gas	Mr. Donnie Richards Missouri Gas Energy 7500 E 35th Terrace Kansas City, MO 64129 (816) 472-9464 Fax (816) 472-3488 email: donnie.richards@sug.com
		Cable Television	Mr. Greg Thomas Time Warner Cable 8221 W. 119th Street Overland Park, KS 66213 (913) 643-1950 email: greg.thomas@twcable.com
		Telephone	Ms. Glenda Charles AT&T 1425 Oak Street Kansas City, MO 64106 (816) 365-1669 Fax (816) 275-1109 email: gc6954@att.com
Water	Mr. Jeff Thorn, PE City of Lee's Summit Water Utilities 1200 SE Hamblen Road Lee's Summit, MO 64063 (816) 969-1922 email: jeff.thorn@cityofLS.net	Electric Service	Mr. Nathan Michael Kansas City Power & Light P.O. Box 418679 Kansas City, MO 64141 (816) 220-5210 Fax (816) 245-3623 email: Nathan.Michael@kcpl.com
Missouri One Call System	1-800-344-7483 (DIG-RITE)		

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

General Layout

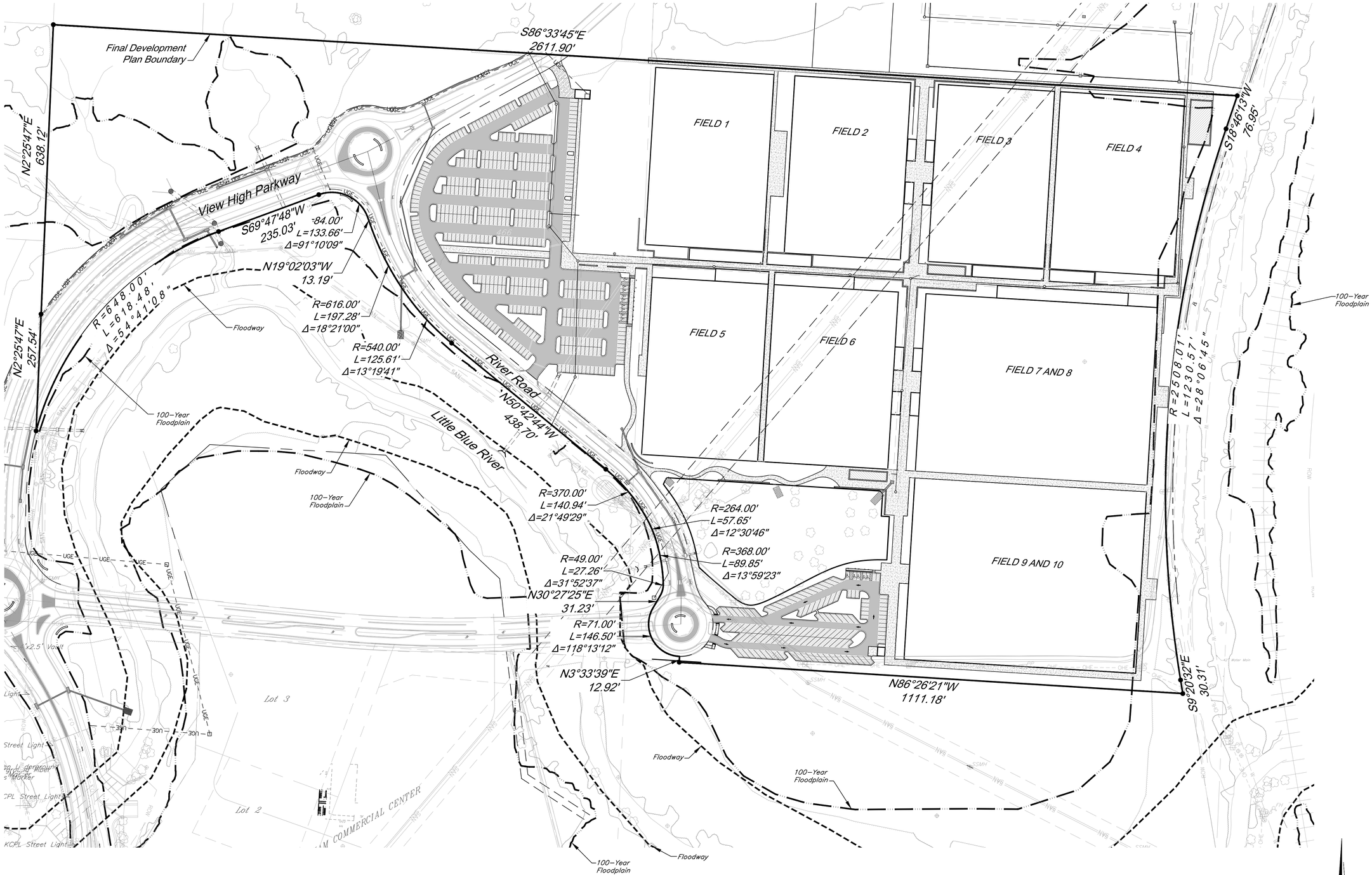
JOB NO: 1197 SCALE:

DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-100

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0200.dwg Layout: C-101 General Layout -- Thursday, January 17, 2019, 3:31pm -- Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059



Project Benchmark:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

SCALE : 1 INCH = 100 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

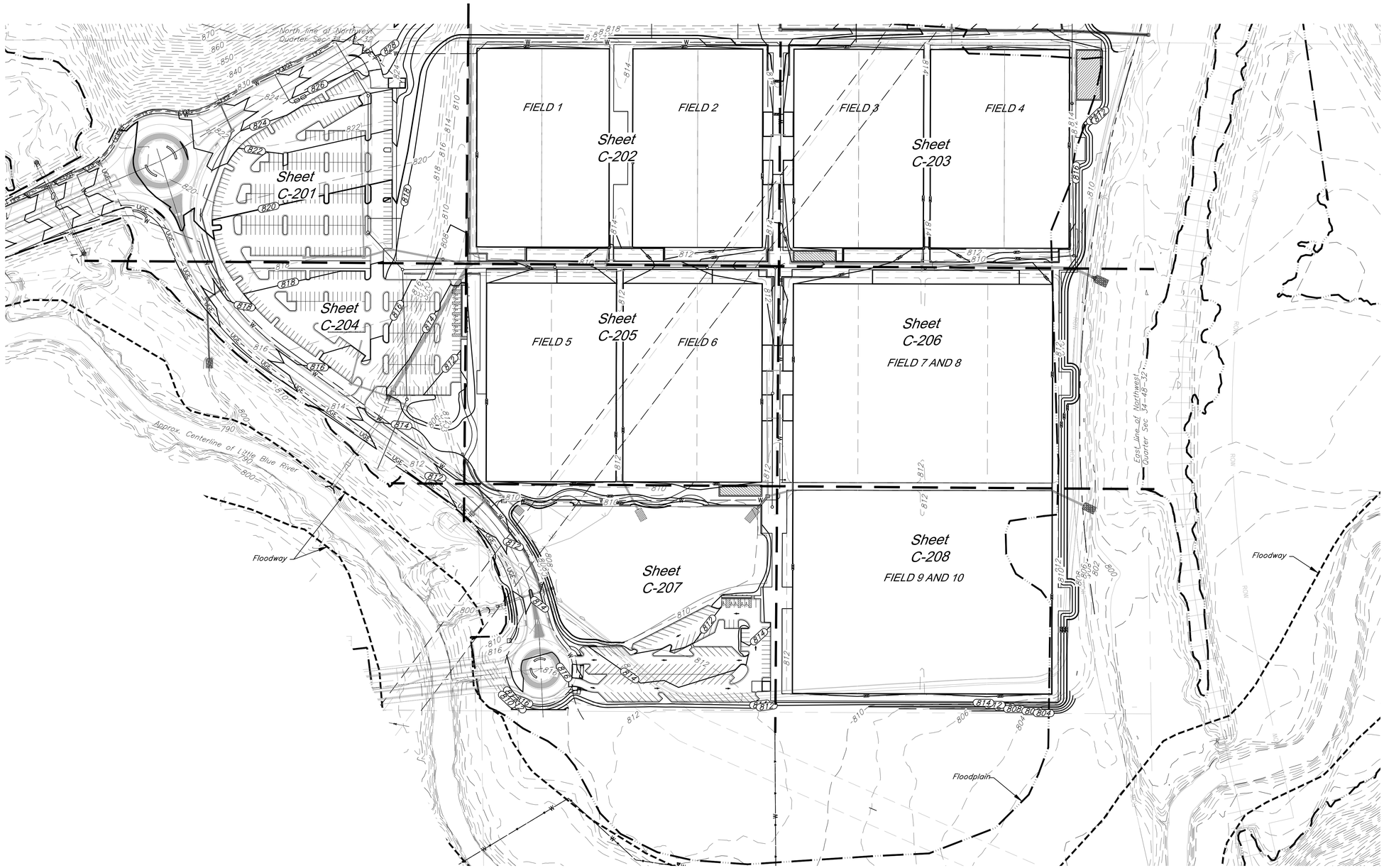
General Layout

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-101

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0701.dwg Layout: C-200 Grading Plan -- Thursday, January 17, 2019, 3:33pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS PURSUANT TO SECTION 327.411, RSMO, ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



LEGEND

- 900 — Existing Contour
- 900 — Proposed Contour
- 900.00 — Proposed Spot Grade
- TC 900.00 — Proposed Top of Curb Grade
- Drainage Flow Arrow
- Drainage Swale

100' 0' 100' 200'
SCALE : 1 INCH = 100 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

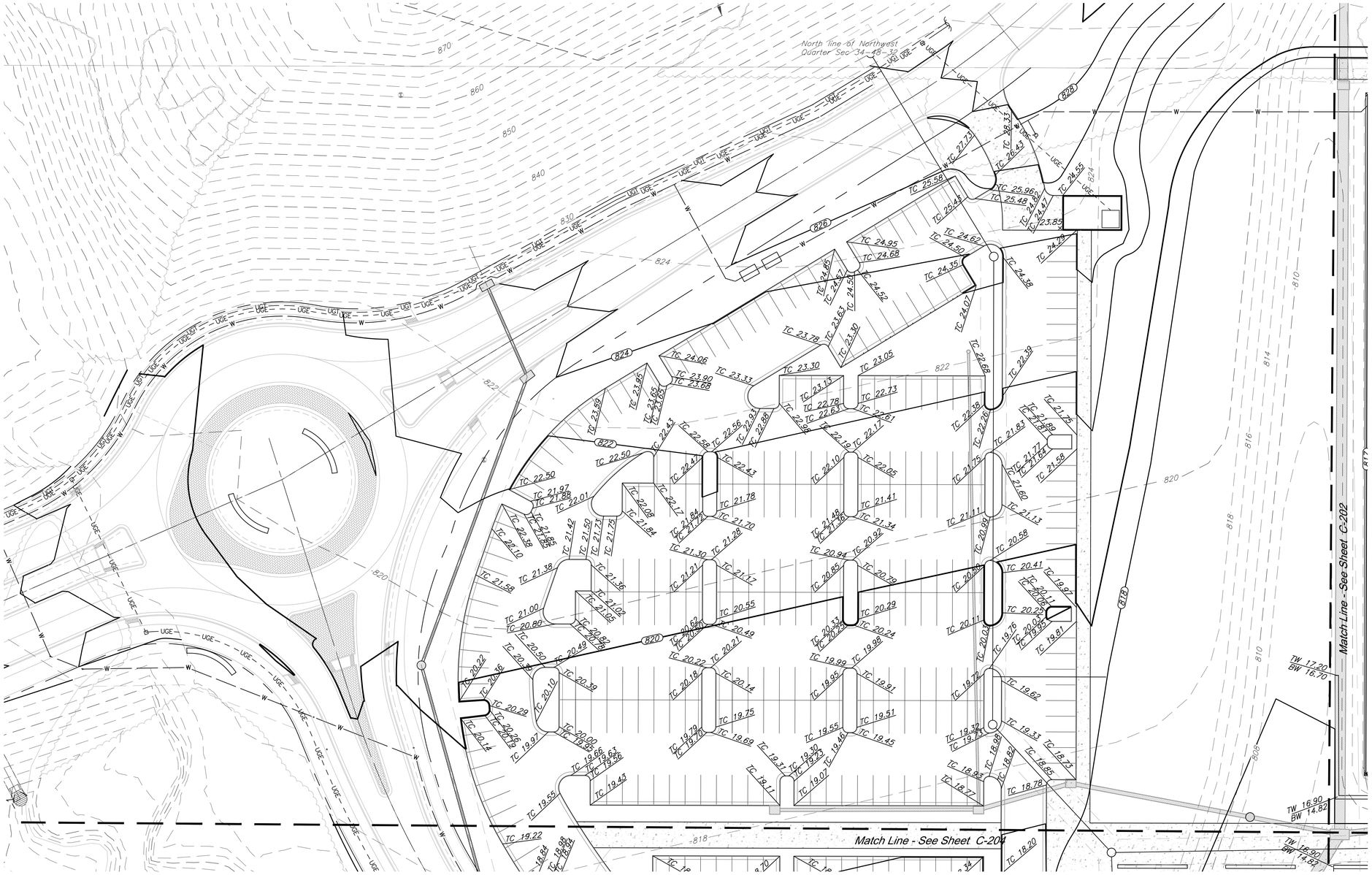
Grading Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

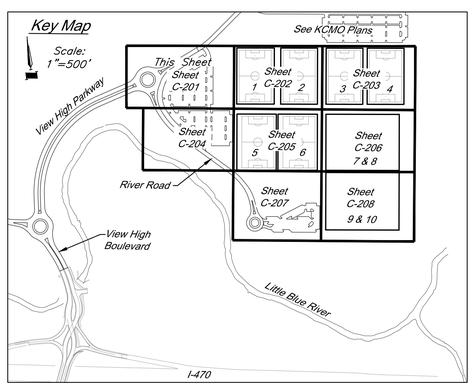
C-200

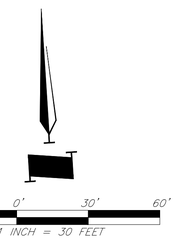
G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0701.dwg Layout: C-201 Grading Plan -- Thursday, January 17, 2019, 3:33pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS PURSUANT TO SECTION 327.411, RSMO, ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



Notes:

1. *TW and BW elevations noted on plans are to the top of the wall and to the surface grade at the base of wall. Any additional depth of wall required for structural purposes is the responsibility of the structural Engineer designing the wall.*
2. *All ADA accessible parking spaces are to be constructed at 2.0% maximum slope in any direction. ADA accessible routes shall be constructed with 2.0% maximum cross slope and a maximum 5.0% longitudinal slope.*
3. *All earthwork shall adhere to the Geotechnical Report*





LEGEND

- Existing Contour
- Proposed Contour
- Proposed Spot Grade
- Proposed Top of Curb Grade
- Drainage Flow Arrow
- Drainage Swale

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

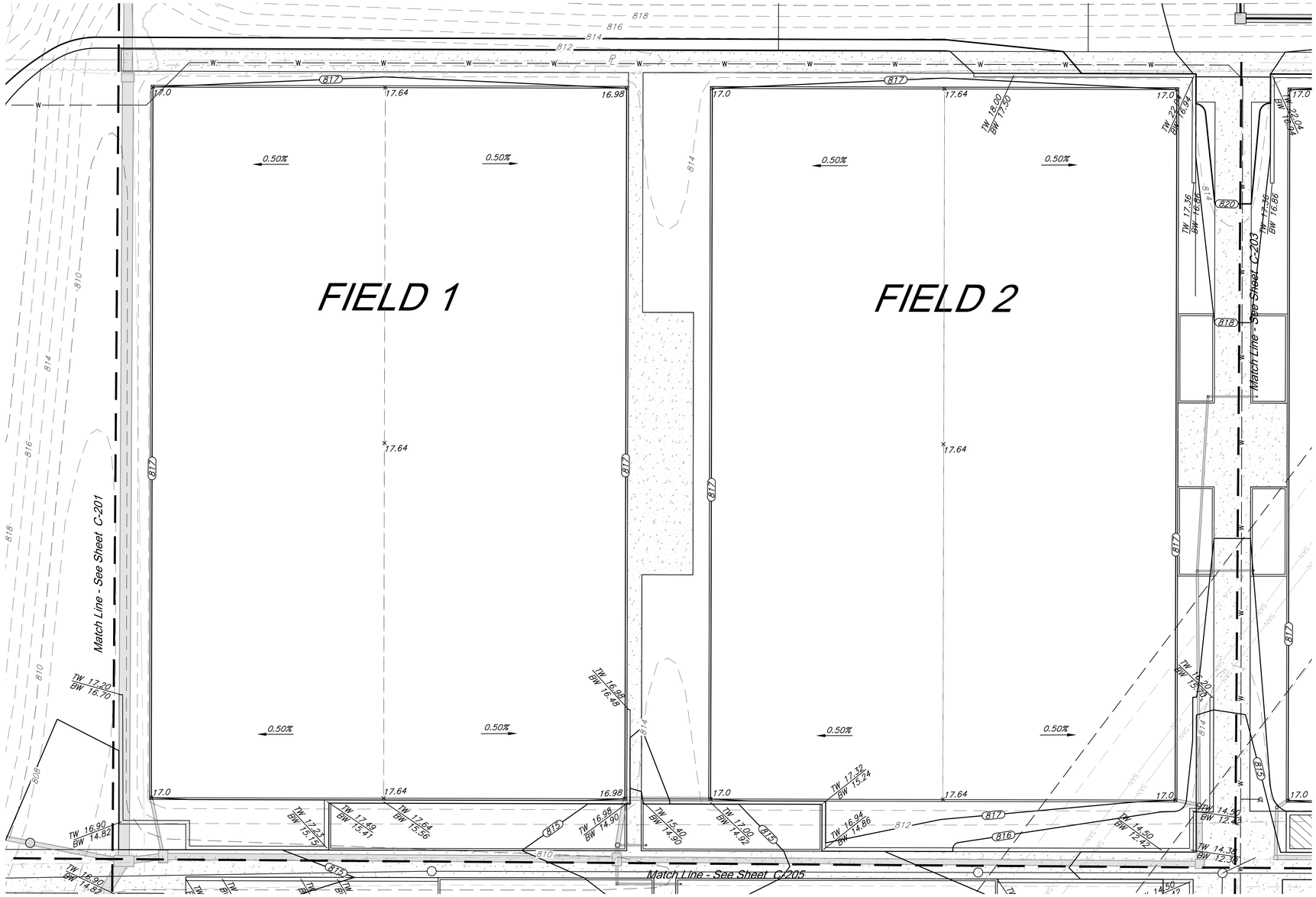
DRAWING TITLE:

Grading Plan

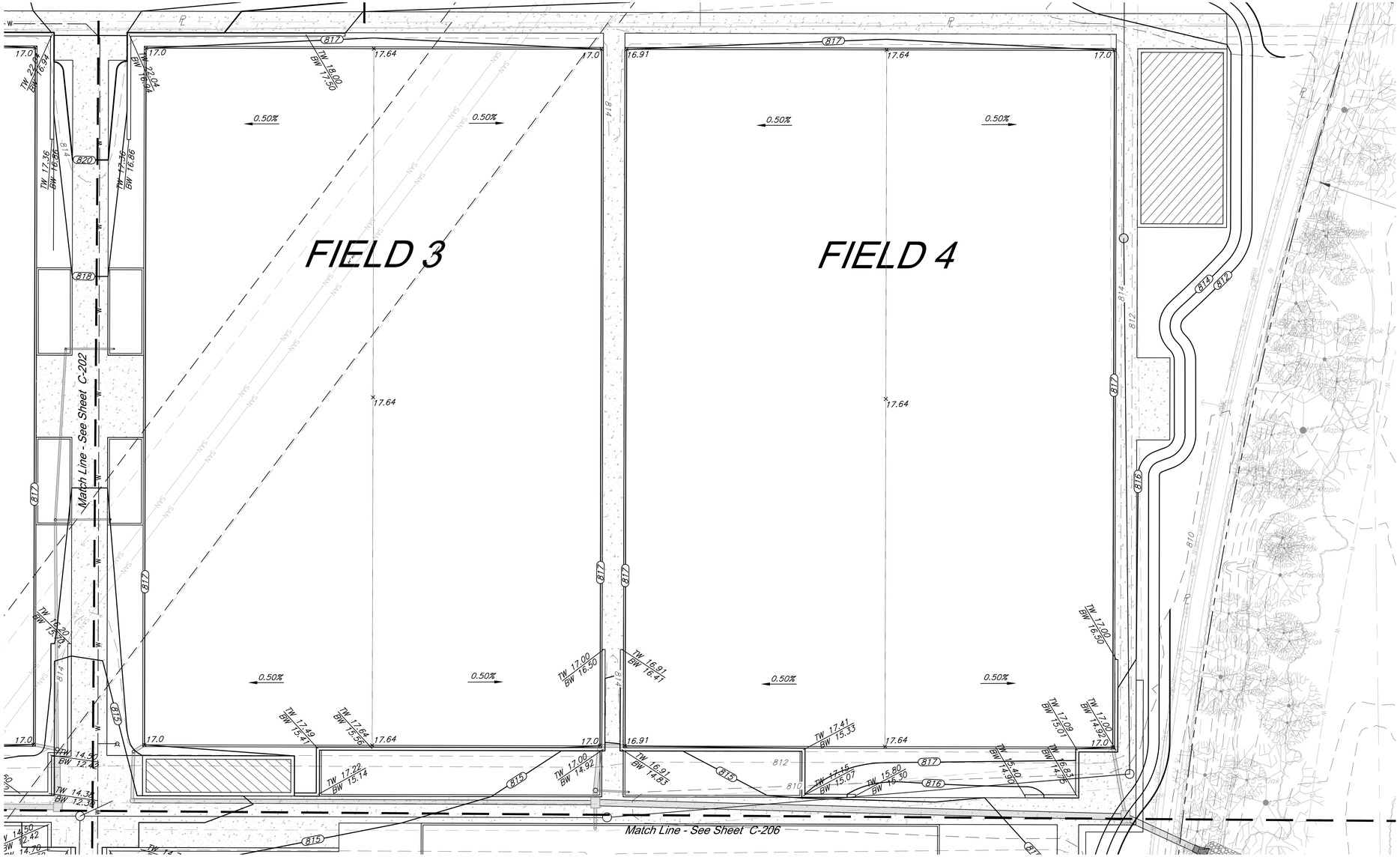
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

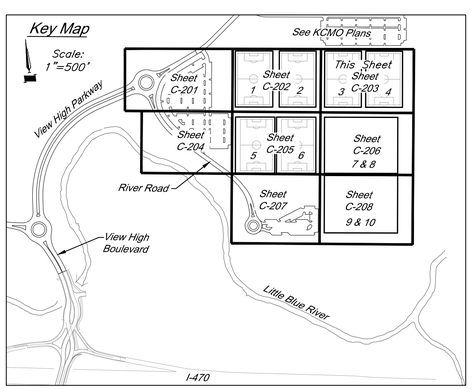
SHEET NO:

C-201


FIELD 1
FIELD 2
0.50%
17.64
17.0
16.98
Match Line - See Sheet C-201
Match Line - See Sheet C-203
Match Line - See Sheet C-205
TW 17.20 BW 16.70
TW 16.90 BW 14.82
TW 16.68 BW 16.49
TW 17.49 BW 15.41
TW 17.64 BW 15.56
TW 17.23 BW 15.15
TW 16.98 BW 14.90
TW 15.40 BW 14.90
TW 17.00 BW 14.92
TW 16.94 BW 14.86
TW 17.32 BW 15.24
TW 18.00 BW 17.50
TW 17.36 BW 16.86
TW 16.64 BW 16.04
TW 15.20 BW 13.70
TW 14.50 BW 12.42
TW 14.38 BW 12.30
TW 14.50 BW 12.42
TW 14.50 BW 12.42
TW 14.50 BW 12.42

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0701.dwg Layout: C-203 Grading Plan -- Thursday, January 17, 2019, 3:35pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Notes:

1. *TW and BW elevations noted on plans are to the top of the wall and to the surface grade at the base of wall. Any additional depth of wall required for structural purposes is the responsibility of the structural Engineer designing the wall.*
2. *All ADA accessible parking spaces are to be constructed at 2.0% maximum slope in any direction. ADA accessible routes shall be constructed with 2.0% maximum cross slope and a maximum 5.0% longitudinal slope.*
3. *All earthwork shall adhere to the Geotechnical Report*

LEGEND

- 900 — *Existing Contour*
- 900 — *Proposed Contour*
- 900.00 — *Proposed Spot Grade*
- TC 900.00 — *Proposed Top of Curb Grade*
- *Drainage Flow Arrow*
- *Drainage Swale*

30' 0' 30' 60'

SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of 1470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

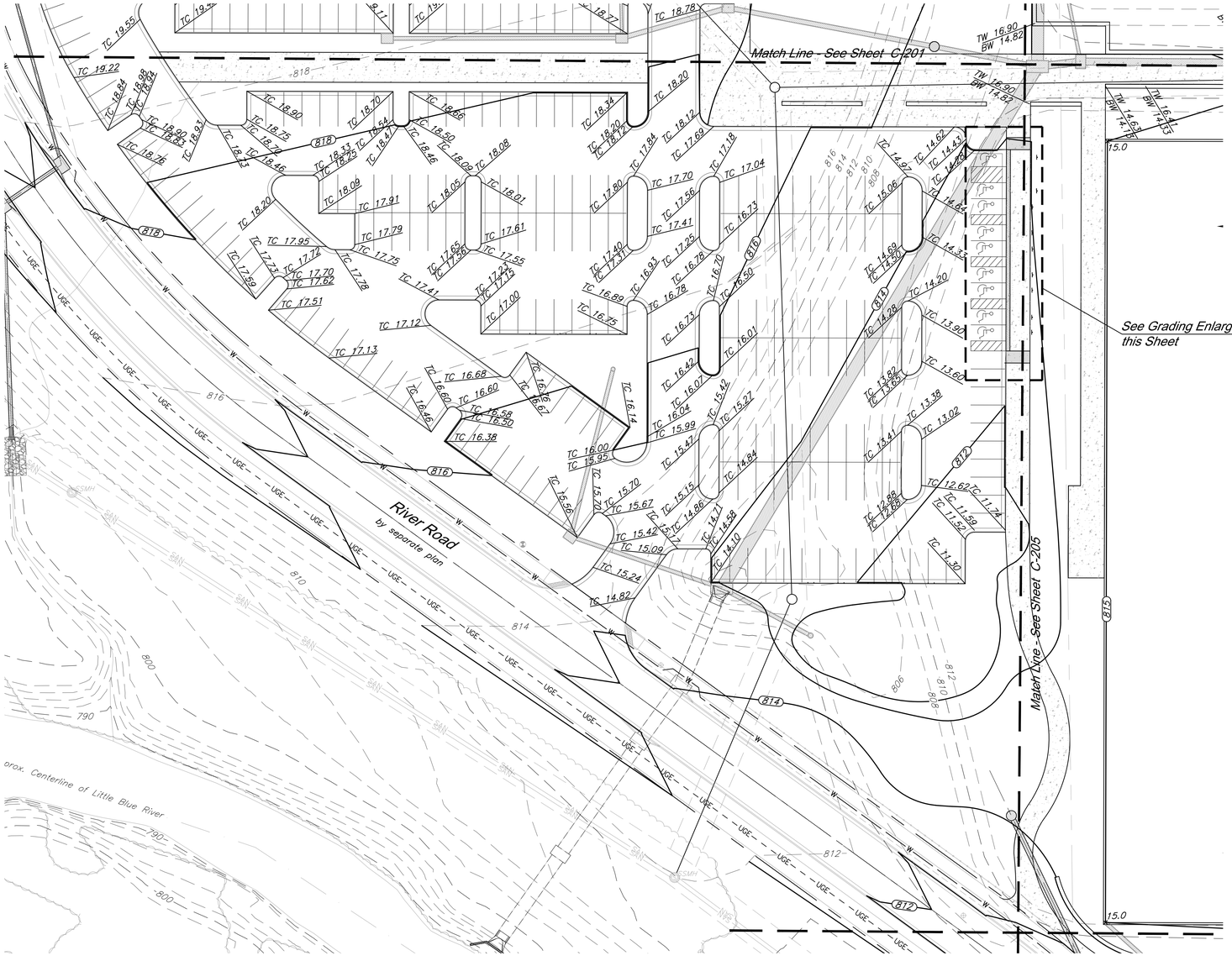
DRAWING TITLE:

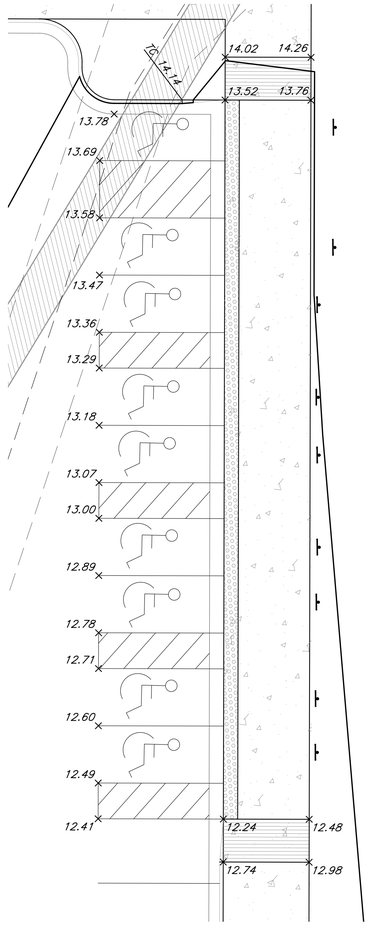
Grading Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

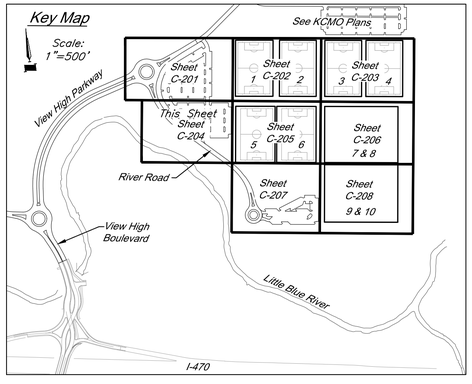
SHEET NO:

C-203





GRADING ENLARGEMENT
Scale: 1"=10'



Notes:

1. TW and BW elevations noted on plans are to the top of the wall and to the surface grade at the base of wall. Any additional depth of wall required for structural purposes is the responsibility of the structural Engineer designing the wall.
2. All ADA accessible parking spaces are to be constructed at 2.0% maximum slope in any direction. ADA accessible routes shall be constructed with 2.0% maximum cross slope and a maximum 5.0% longitudinal slope.
3. All earthwork shall adhere to the Geotechnical Report

LEGEND

- 900 — Existing Contour
- 900 — Proposed Contour
- 900.00 — Proposed Spot Grade
- TC 900.00 — Proposed Top of Curb Grade
- Drainage Flow Arrow
- Drainage Swale

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive.
EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Grading Plan

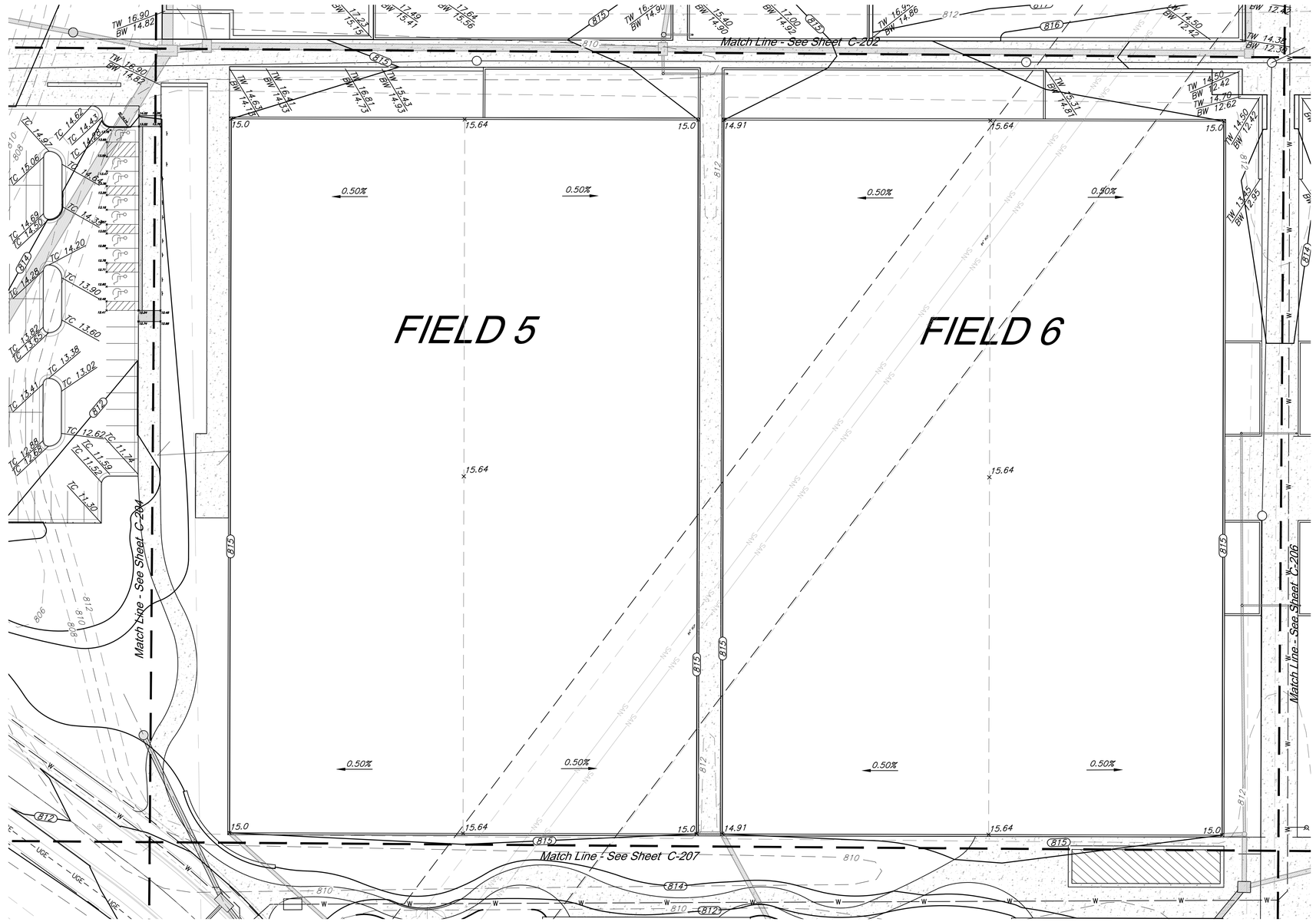
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

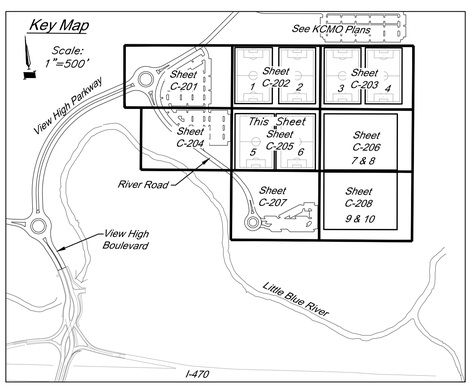
SHEET NO:

C-204

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0701.dwg Layout: C-204 Grading Plan -- Thursday, January 17, 2019, 3:35pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0701.dwg Layout: C-205 Grading Plan -- Thursday, January 17, 2019, 3:36pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Notes:

1. *TW and BW elevations noted on plans are to the top of the wall and to the surface grade at the base of wall. Any additional depth of wall required for structural purposes is the responsibility of the structural Engineer designing the wall.*
2. *All ADA accessible parking spaces are to be constructed at 2.0% maximum slope in any direction. ADA accessible routes shall be constructed with 2.0% maximum cross slope and a maximum 5.0% longitudinal slope.*
3. *All earthwork shall adhere to the Geotechnical Report*

LEGEND

- 900 — *Existing Contour*
- 900 — *Proposed Contour*
- 900.00 — *Proposed Spot Grade*
- TC 900.00 — *Proposed Top of Curb Grade*
- *Drainage Flow Arrow*
- *Drainage Swale*

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of 1470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

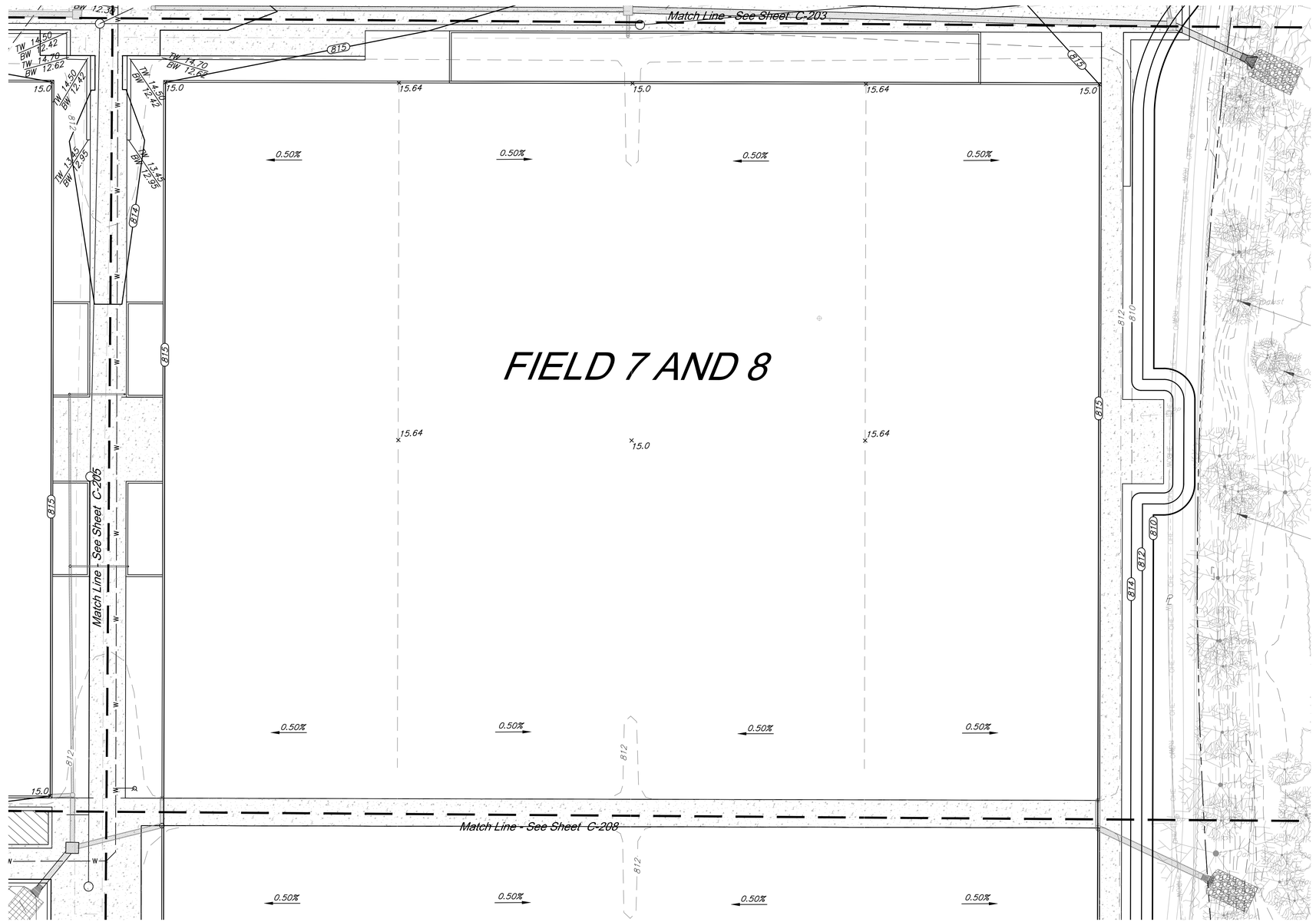
Grading Plan

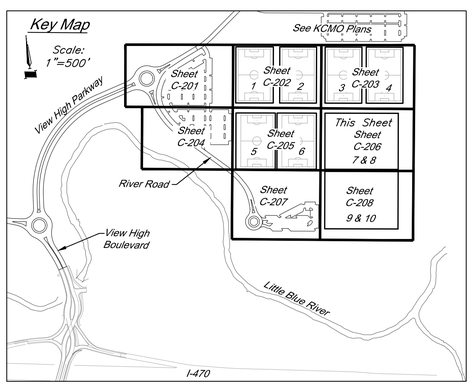
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-205

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0701.dwg Layout: C-206 Grading Plan -- Thursday, January 17, 2019, 3:37pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Notes:

1. *TW and BW elevations noted on plans are to the top of the wall and to the surface grade at the base of wall. Any additional depth of wall required for structural purposes is the responsibility of the structural Engineer designing the wall.*
2. *All ADA accessible parking spaces are to be constructed at 2.0% maximum slope in any direction. ADA accessible routes shall be constructed with 2.0% maximum cross slope and a maximum 5.0% longitudinal slope.*
3. *All earthwork shall adhere to the Geotechnical Report*

LEGEND

900 — Existing Contour	Drainage Flow Arrow
900 Proposed Contour	Drainage Swale
900.00 Proposed Spot Grade	
TC 900.00 Proposed Top of Curb Grade	

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of 1470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

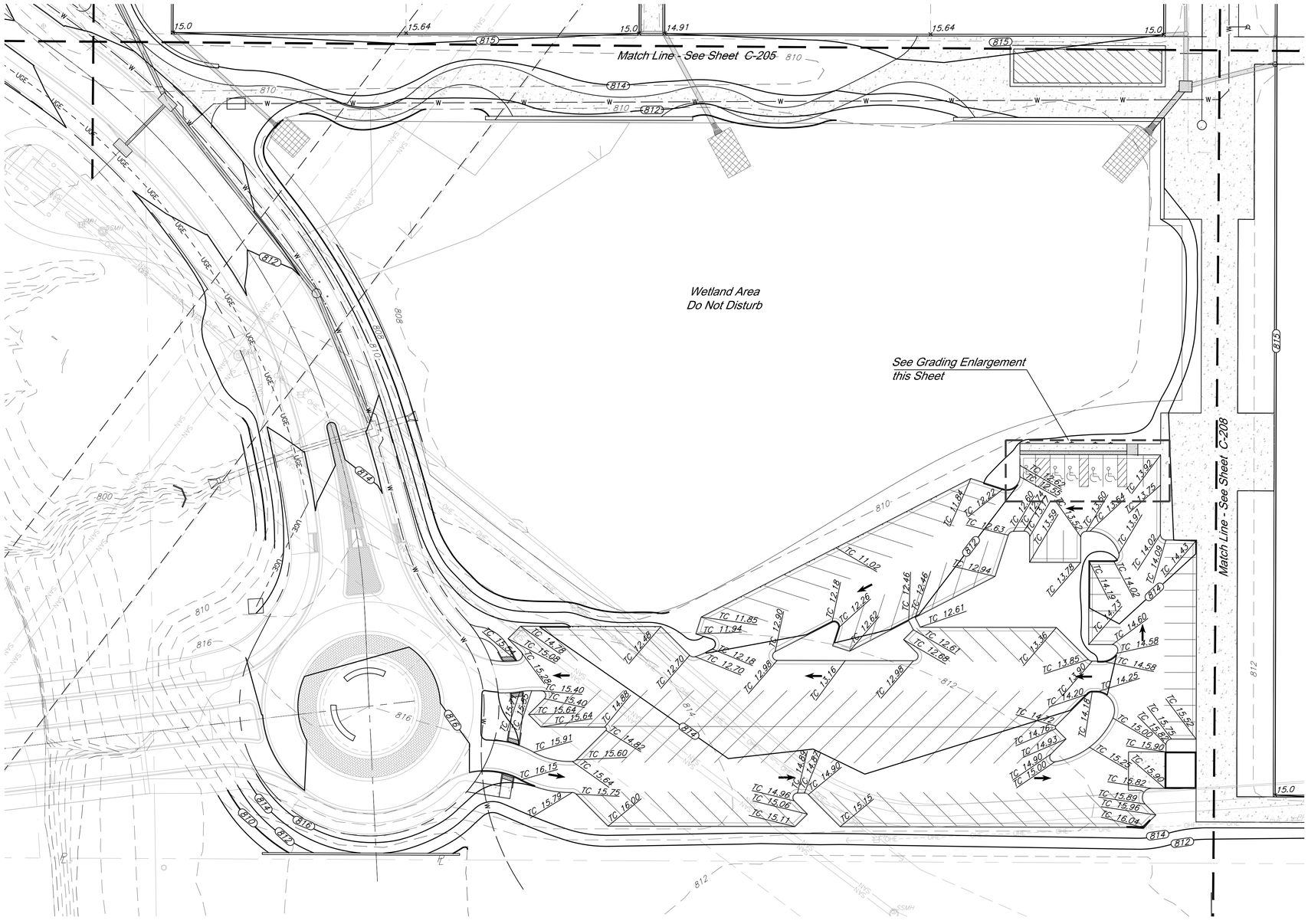
Grading Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

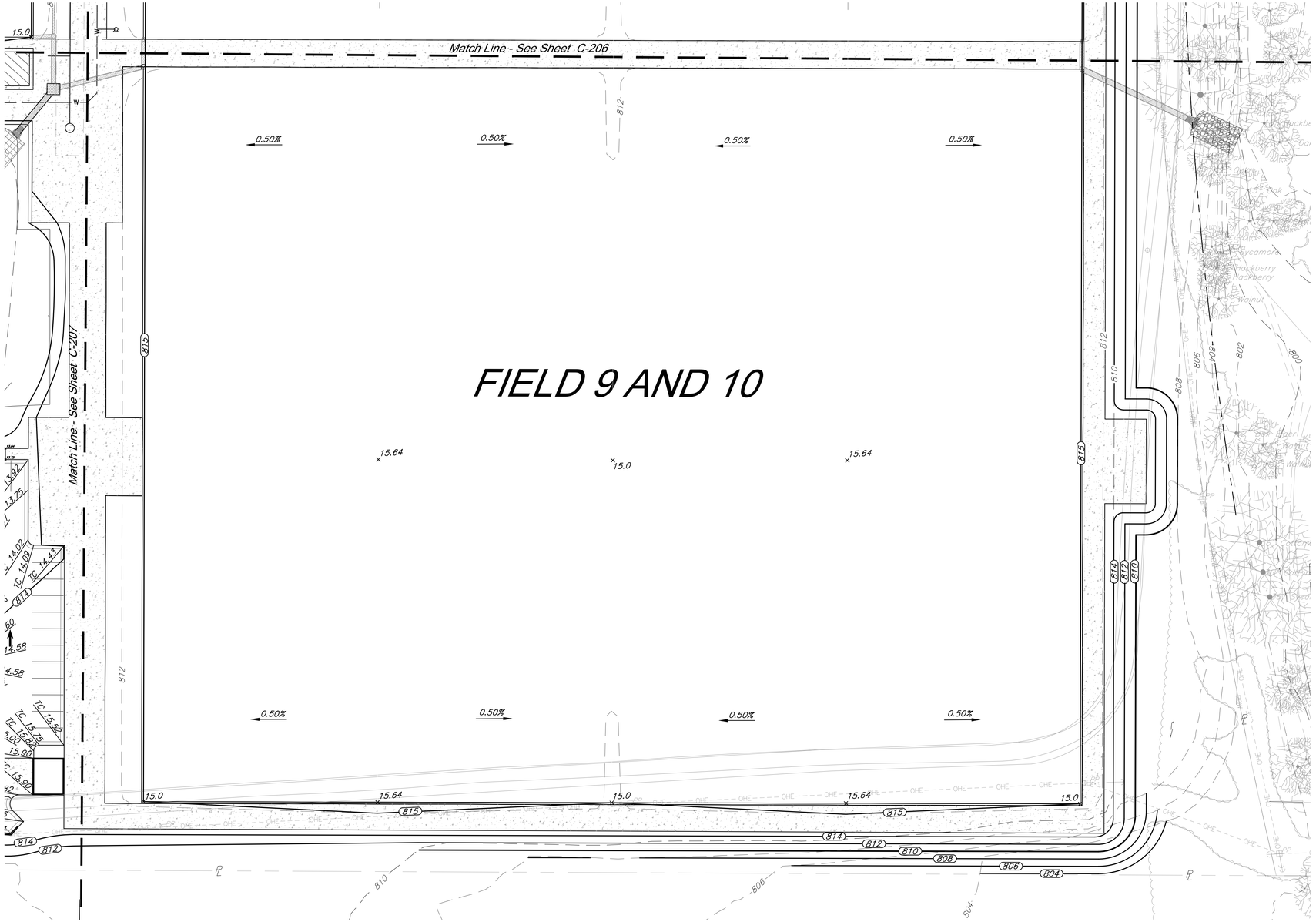
SHEET NO:

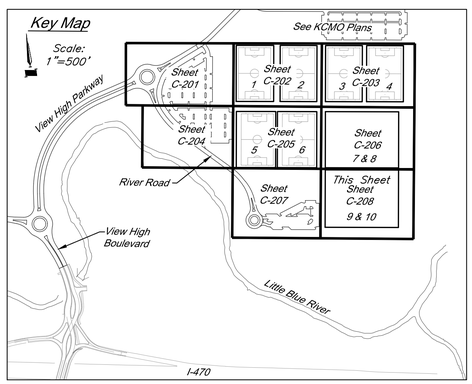
C-206

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0701.dwg Layout: C-207 Grading Plan -- Thursday, January 17, 2019, 3:38pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0701.dwg Layout: C-208 Grading Plan -- Thursday, January 17, 2019, 3:38pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Notes:

1. *TW and BW elevations noted on plans are to the top of the wall and to the surface grade at the base of wall. Any additional depth of wall required for structural purposes is the responsibility of the structural Engineer designing the wall.*
2. *All ADA accessible parking spaces are to be constructed at 2.0% maximum slope in any direction. ADA accessible routes shall be constructed with 2.0% maximum cross slope and a maximum 5.0% longitudinal slope.*
3. *All earthwork shall adhere to the Geotechnical Report*

LEGEND

- 900 — *Existing Contour*
- 900 — *Proposed Contour*
- 900.00 — *Proposed Spot Grade*
- TC 900.00 — *Proposed Top of Curb Grade*
- *Drainage Flow Arrow*
- *Drainage Swale*

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

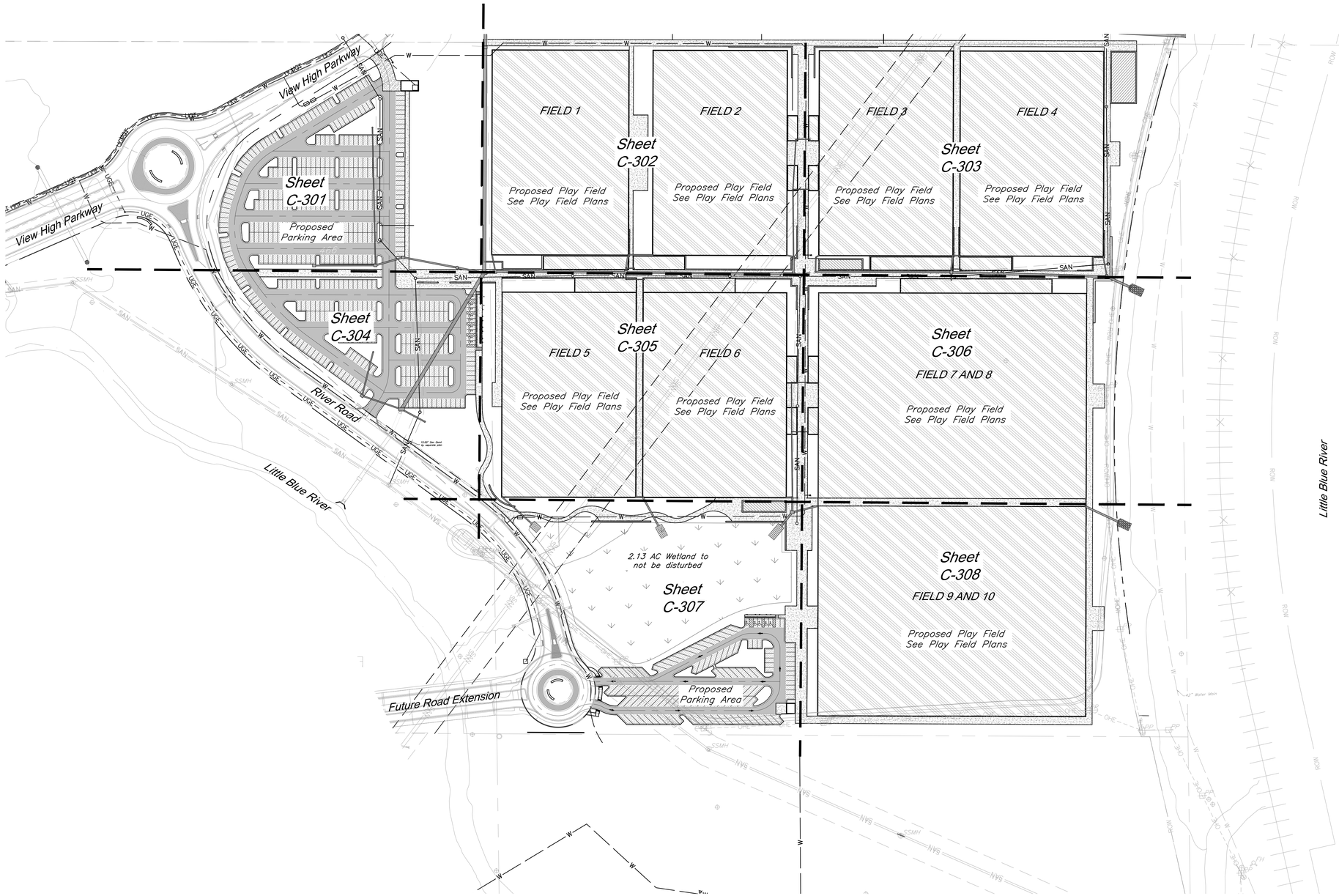
Grading Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-208

C:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0801.dwg Layout: C-300 Dimension Plan -- Thursday January 17, 2019, 3:40pm -- Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THE PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THE PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



LEGEND

- Proposed Concrete Pavement
- Proposed HD Asphalt Surface
- Proposed LD Asphalt Surface
- Artificial Turf Area See Playing Field Plans
- Proposed Water Line
- Proposed Storm Sewer
- Existing Storm Sewer Structure & Pipe
- Existing Sanitary Sewer

100' 0' 100' 200'
SCALE : 1 INCH = 100 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

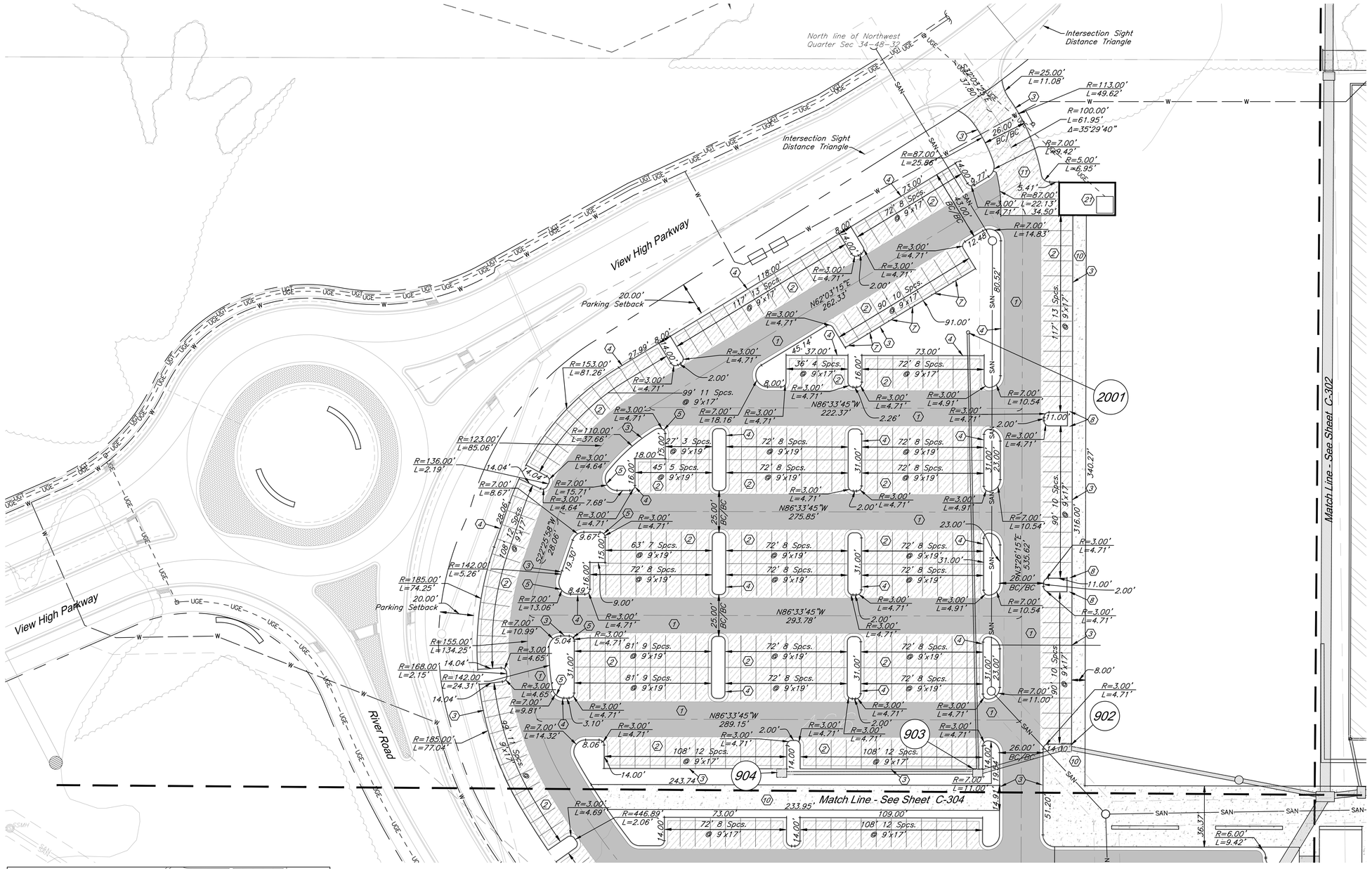
Dimension Plan

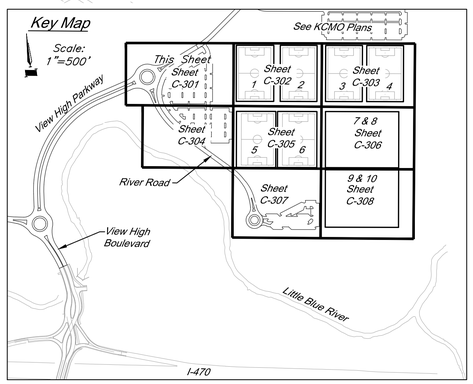
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-300

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720CD801.dwg Layout: C-301 Dimension Plan -- Thursday, January 17, 2019, 3:40pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





CONSTRUCTION NOTES:

1. Construct HD Asphalt Pavement
2. Construct LD Asphalt Pavement
3. Construct CG-1 Curb and Gutter
4. Construct CG-1 "Dry" Curb and Gutter
5. Transition Curb Types
7. Construct 3' Width Curb Cut at 15' O.C. See Construction Details.
8. Construct 2' Width Curb Cut and Conc. Flume. See Construction Details.
10. Construct 6" Depth Conc. Sidewalk. See Construction Details.
21. Construct Dumpster per Architect and Landscape Plans

DIMENSION NOTES:

1. All curbs are to be Type CG-1 or Type CG-1 Dry unless shown otherwise.
2. All pavement and concrete shall be cleanly sawcut to full depth prior to removal.
3. Unless otherwise specified, all dimensions are to the back of curb and dimension ties to property line are measured at right angles to property lines.
4. See sheets C-500-C-505 for construction details.

LEGEND

- Proposed Concrete Pavement
- Proposed HD Asphalt Surface
- Proposed LD Asphalt Surface
- Artificial Turf Area See Playing Field Plans
- Proposed Water Line
- Proposed Storm Sewer
- Existing Storm Sewer Structure & Pipe
- Existing Sanitary Sewer

SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

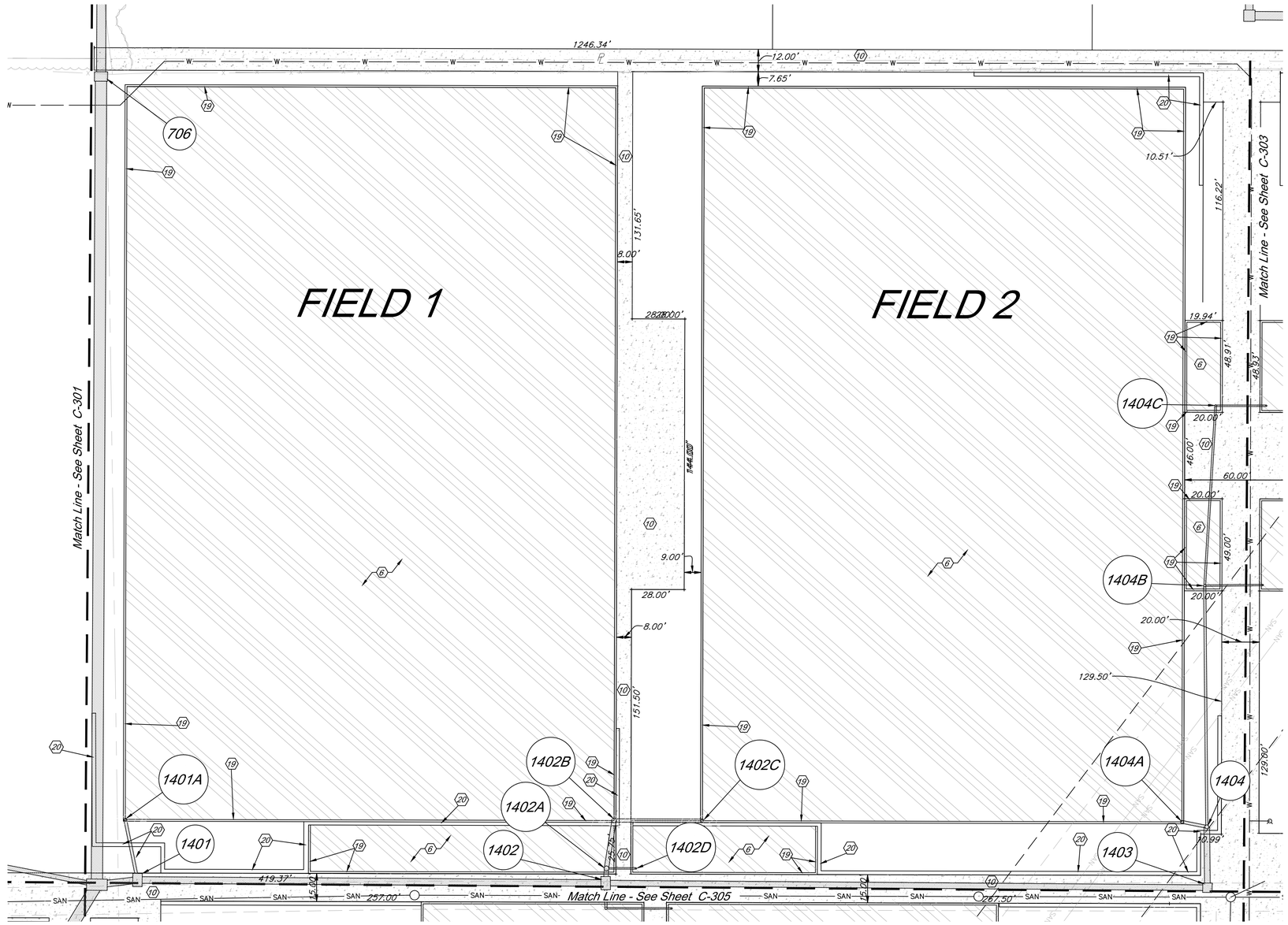
Dimension Plan

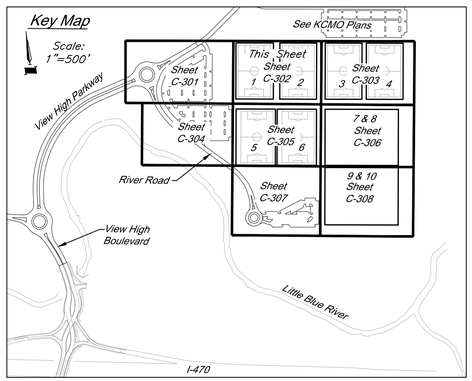
JOB NO: 1197 SCALE:

DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-301





CONSTRUCTION NOTES:

(8) See Playing Field Plans for Field Details

(10) Construct 6" Depth Conc. Sidewalk. See Construction Details.

(19) 12" Conc. Field Edge. See Playing Field Plans for details.

(20) Limestone Block Wall per Construction Details, Grading Plan, and Landscape Plans

LEGEND

- Proposed Concrete Pavement
- Proposed HD Asphalt Surface
- Proposed LD Asphalt Surface
- Artificial Turf Area See Playing Field Plans
- W — Proposed Water Line
- Proposed Storm Sewer
- Existing Storm Sewer Structure & Pipe
- SAN — Existing Sanitary Sewer
- SSMH

Note: See Sheets C-500-C-505 for construction details.

30' 0' 30' 60'

SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Dimension Plan

JOB NO: 1197 SCALE:

DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

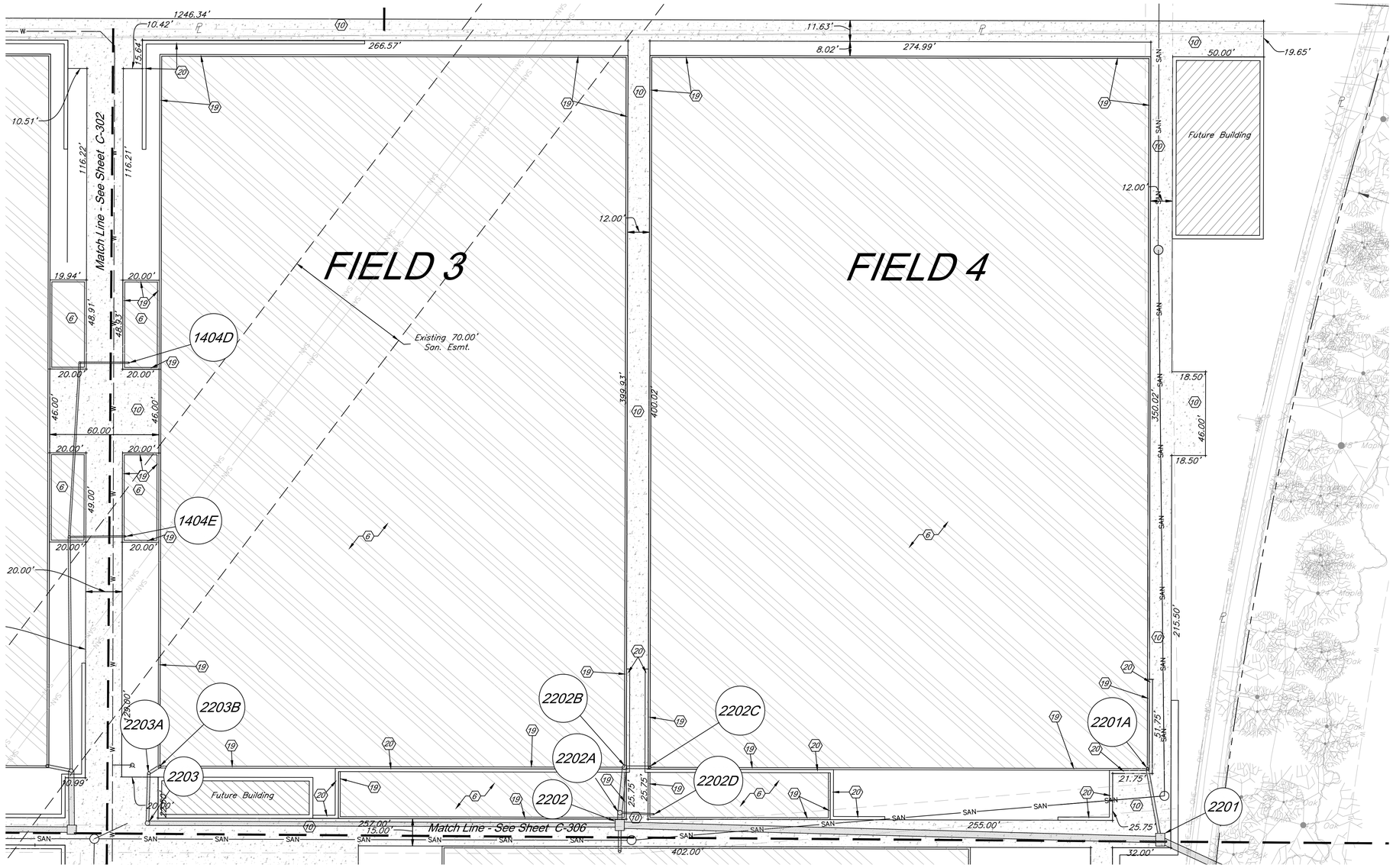
C-302

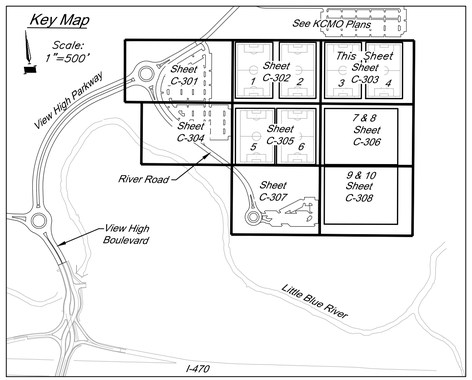
G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720CC0801.dwg Layout: C-302 Dimension Plan -- Thursday, January 17, 2019, 3:41pm -- Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059

Copyright 2019, George Butler Associates, Inc.

THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720CD801.dwg Layout: C-303 Dimension Plan -- Thursday, January 17, 2019, 3:42pm -- Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





CONSTRUCTION NOTES:

(6) See Playing Field Plans for Field Details

(10) Construct 6" Depth Conc. Sidewalk. See Construction Details.

(19) 12" Conc. Field Edge. See Playing Field Plans for details.

(20) Limestone Block Wall per Construction Details, Grading Plan, and Landscape Plans

LEGEND

- Proposed Concrete Pavement
- Proposed HD Asphalt Surface
- Proposed LD Asphalt Surface
- Artificial Turf Area See Playing Field Plans
- W — Proposed Water Line
- Proposed Storm Sewer
- Existing Storm Sewer Structure & Pipe
- SAN — Existing Sanitary Sewer
- SSMH

Note: See Sheets C-500–C-505 for construction details.

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Dimension Plan

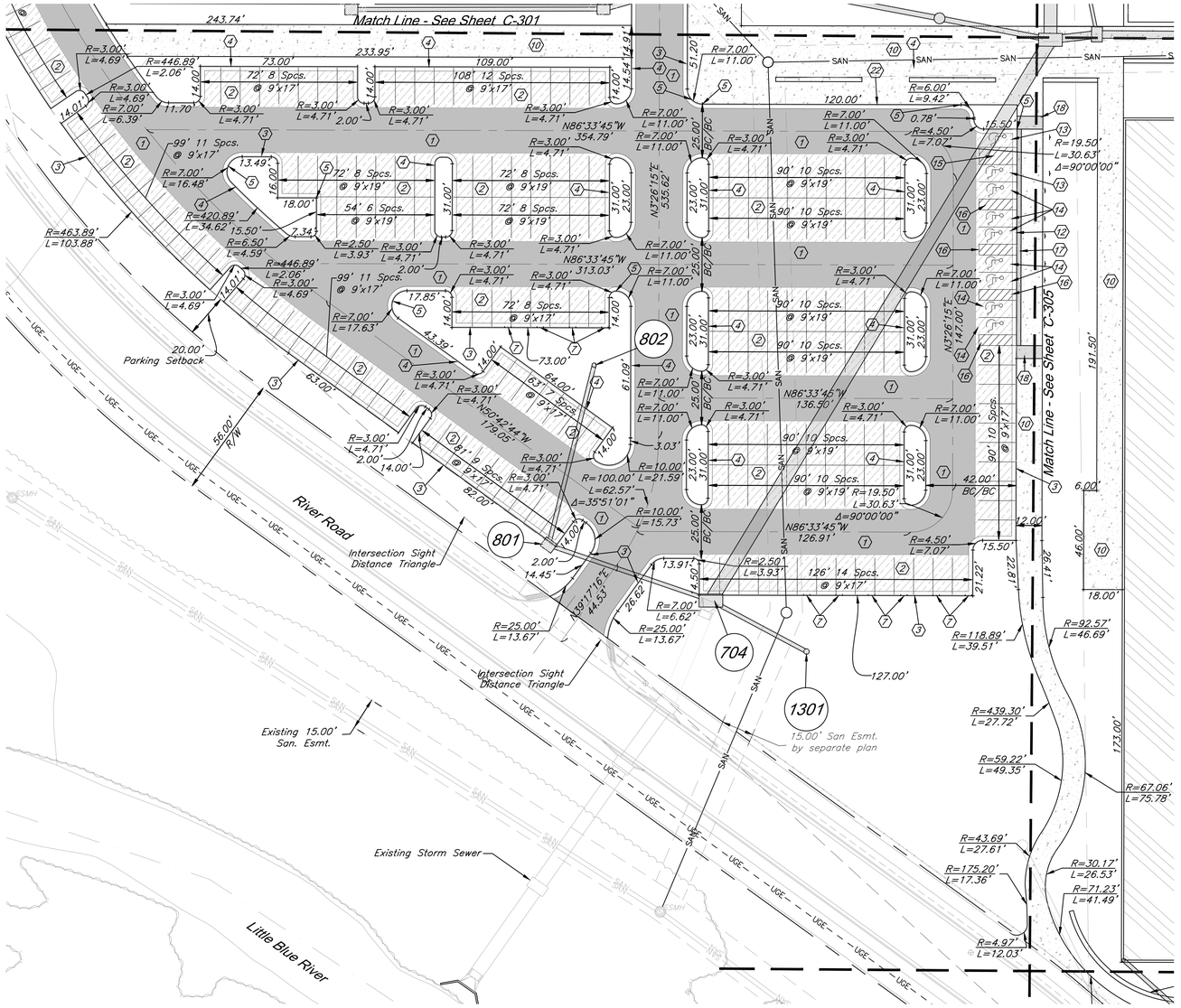
JOB NO: 1197 SCALE:

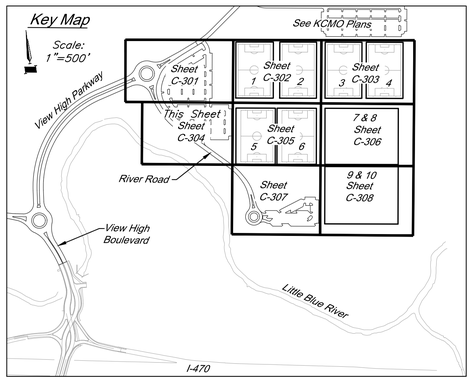
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-303

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720CD801.dwg Layout: C-304 Dimension Plan -- Thursday January 17, 2019, 3:42pm -- Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES PURSUANT TO SECTION 327.411, RSMO, ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Note: See Sheets C-500-C-505 for construction details.

CONSTRUCTION NOTES:

1. Construct HD Asphalt Pavement
2. Construct LD Asphalt Pavement
3. Construct CG-1 Curb and Gutter
4. Construct CG-1 "Dry" Curb and Gutter
5. Transition Curb Types
7. Construct 3' Width Curb Cut at 15' O.C. See Construction Details.
10. Construct 6" Depth Conc. Sidewalk. See Construction Details.
12. 2' Width Flat Curb
13. Construct 8'x17' Van Accessible ADA Parking Space w/ stop block, signage, and pavement markings per construction details. Max cross slope=2%.
14. Construct 8'x17 ADA Parking Space w/ stop block, signage, and pavement markings per construction details. Max cross slope=2%.
15. Construct 8'x17' ADA Access Aisle
16. Construct 5'x17' ADA Access Aisle
17. 2' ADA Detectable Warning per construction details.
18. ADA Ramp
22. Construct Mountable Curb

LEGEND

- Proposed Concrete Pavement
- Artificial Turf Area See Playing Field Plans
- Proposed HD Asphalt Surface
- Proposed LD Asphalt Surface
- W — Proposed Water Line
- Proposed Storm Sewer
- Existing Storm Sewer Structure & Pipe
- SAN — SSMH — Existing Sanitary Sewer

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

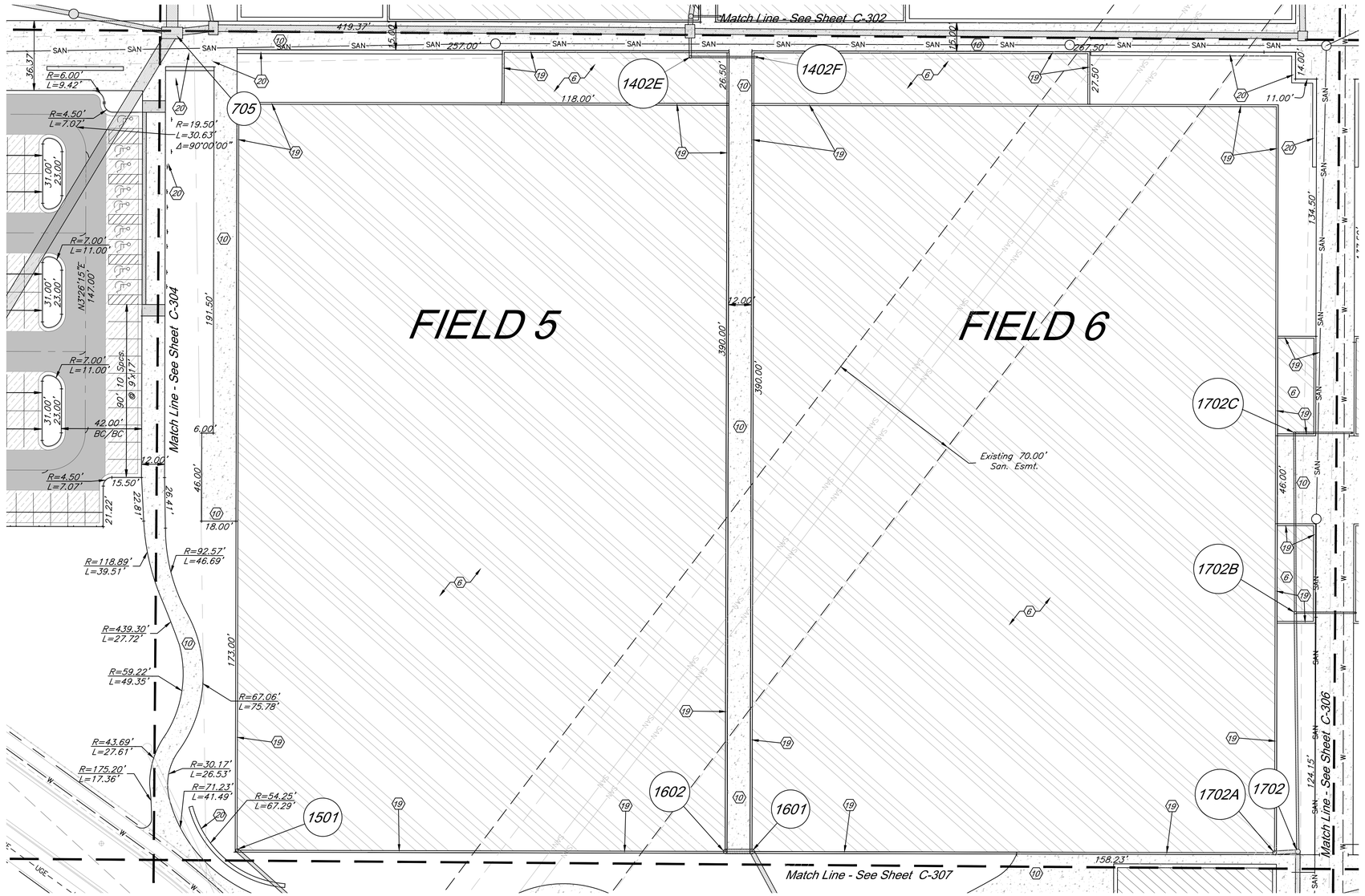
PROFESSIONAL SEAL:

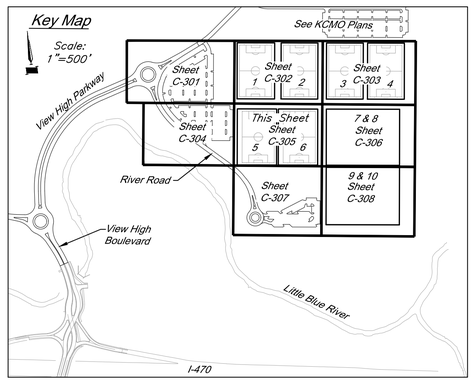
DRAWING TITLE:
Dimension Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:
C-304

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720CD801.dwg Layout: C-305 Dimension Plan -- Thursday, January 17, 2019, 3:43pm -- Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Note: See Sheets C-500–C-505 for construction details.

CONSTRUCTION NOTES:

(6) See Playing Field Plans for Field Details

(10) Construct 6" Depth Conc. Sidewalk. See Construction Details.

(19) 12" Conc. Field Edge. See Playing Field Plans for details.

(20) Limestone Block Wall per Construction Details, Grading Plan, and Landscape Plans

LEGEND

- Proposed Concrete Pavement
- Proposed HD Asphalt Surface
- Proposed LD Asphalt Surface
- Artificial Turf Area See Playing Field Plans
- W — Proposed Water Line
- Proposed Storm Sewer
- Existing Storm Sewer Structure & Pipe
- SAN — Existing Sanitary Sewer
- SSMH

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

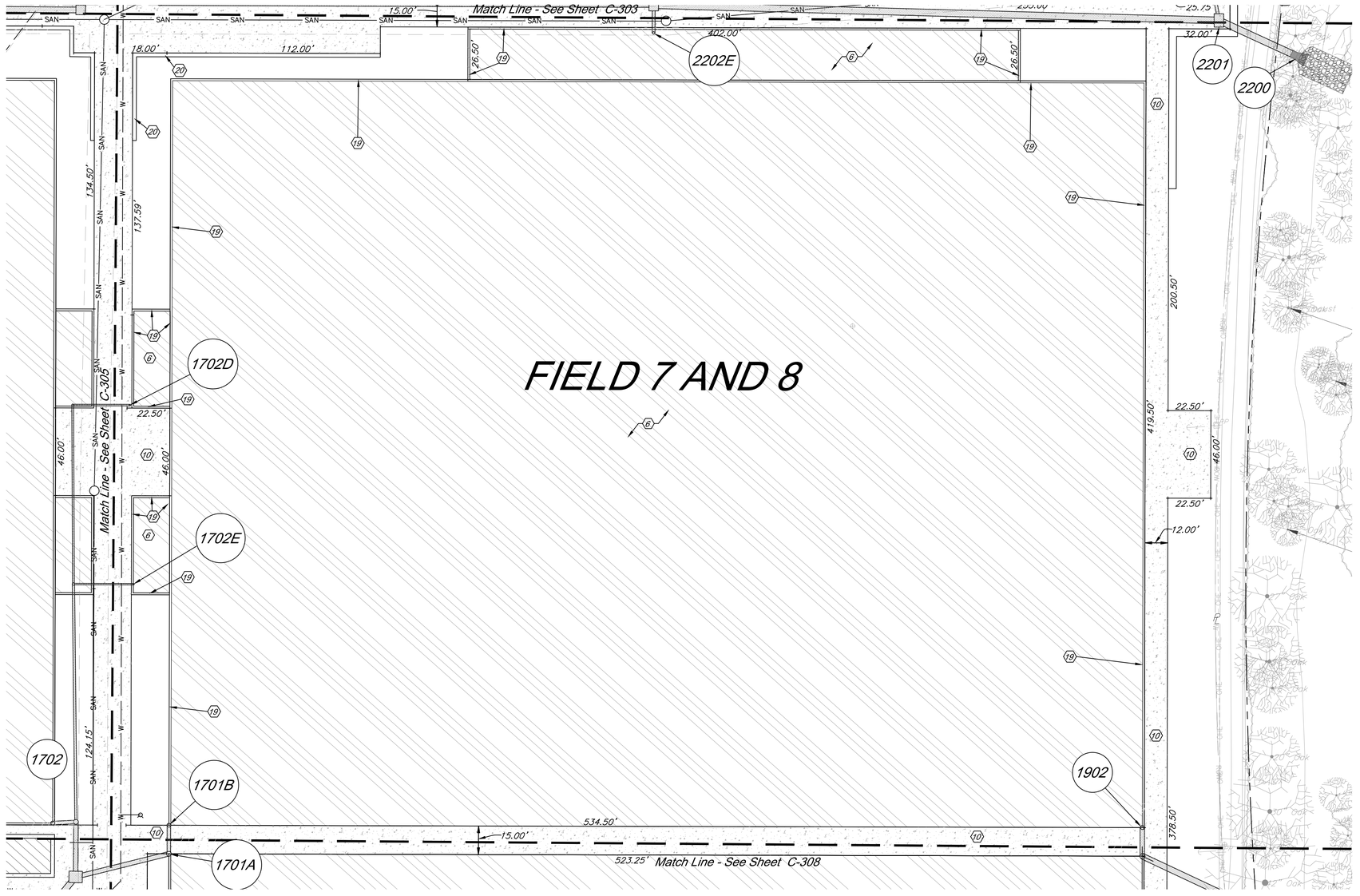
Dimension Plan

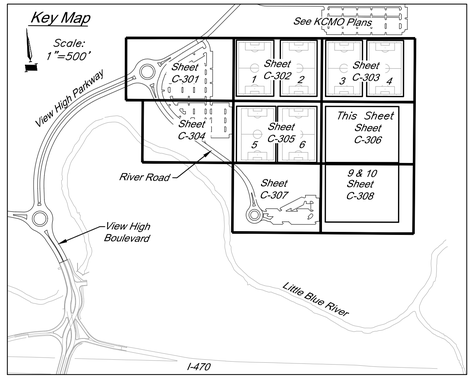
JOB NO: 1197 SCALE:

DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-305





CONSTRUCTION NOTES:

(6) See Playing Field Plans for Field Details

(10) Construct 6" Depth Conc. Sidewalk. See Construction Details.

(19) 12" Conc. Field Edge. See Playing Field Plans for details.

(20) Limestone Block Wall per Construction Details, Grading Plan, and Landscape Plans

LEGEND

- Proposed Concrete Pavement
- Proposed HD Asphalt Surface
- Proposed LD Asphalt Surface
- Artificial Turf Area See Playing Field Plans
- W — Proposed Water Line
- Proposed Storm Sewer
- Existing Storm Sewer Structure & Pipe
- SAN — Existing Sanitary Sewer
- SSMH

Note: See Sheets C-500-C-505 for construction details.

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Dimension Plan

JOB NO: 1197 SCALE:

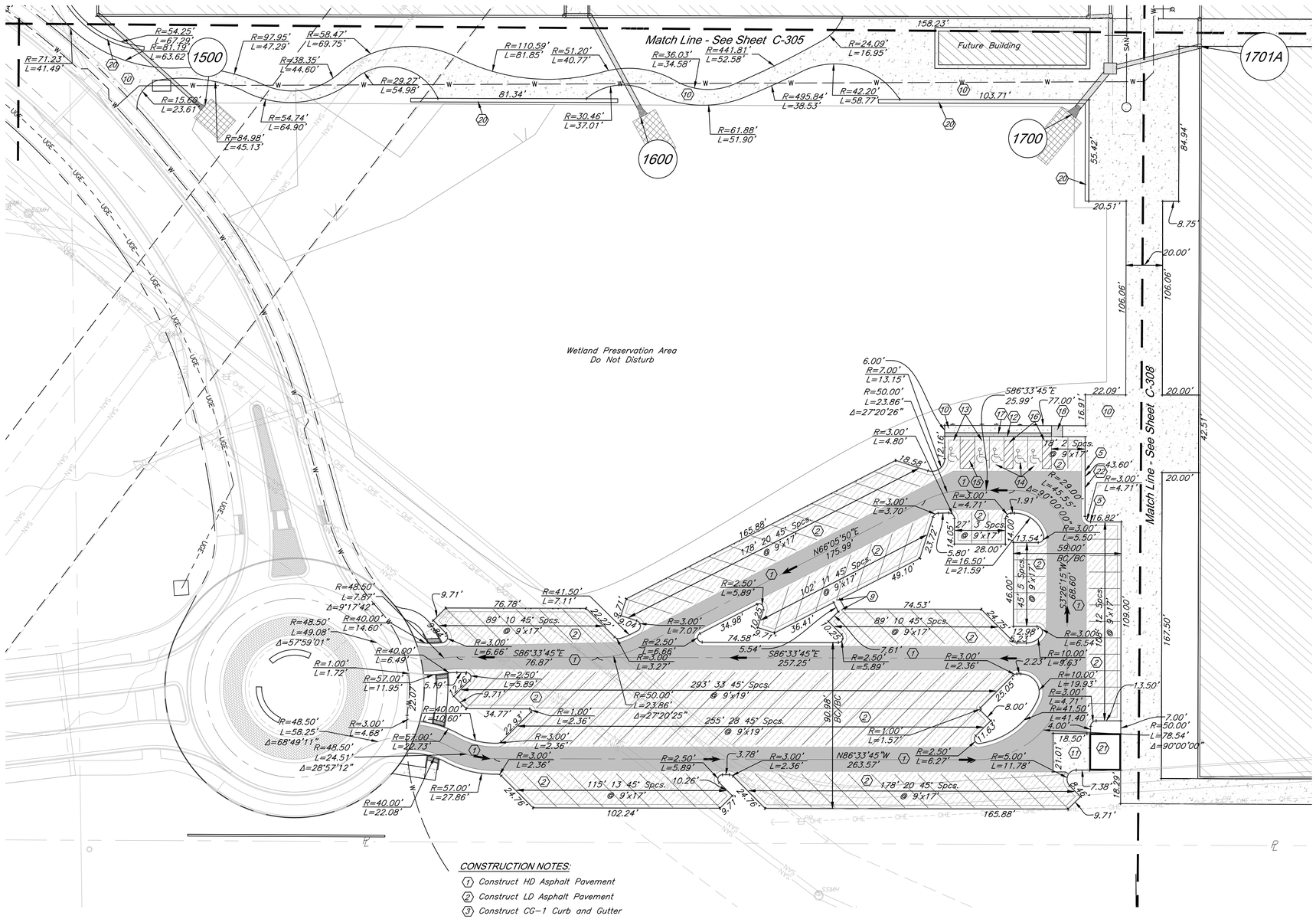
DATE: 01.18.2019 DRAWN BY: CEL

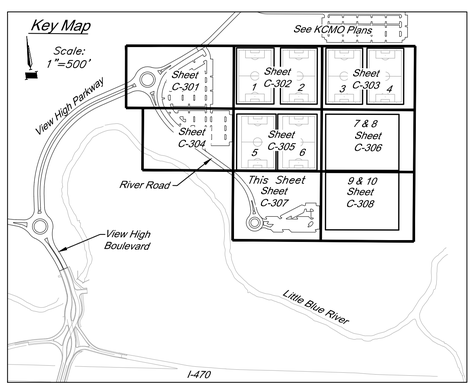
SHEET NO:

C-306

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0801.dwg Layout: C-306 Dimension Plan -- Thursday, January 17, 2019, 3:44pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059

THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





CONSTRUCTION NOTES:

1. Construct HD Asphalt Pavement
2. Construct LD Asphalt Pavement
3. Construct CG-1 Curb and Gutter
4. Construct CG-1 "Dry" Curb and Gutter
5. Transition Curb Types
9. Construct 3' Width Curb Cut and Conc. Flume. See Construction Details.
10. Construct 6" Depth Conc. Sidewalk. See Construction Details.
12. 2' Width Flat Curb
13. Construct 8'x17' Van Accessible ADA Parking Space w/ stop block, signage, and pavement markings per construction details. Max cross slope=2%.
14. Construct 8'x17 ADA Parking Space w/ stop block, signage, and pavement markings per construction details. Max cross slope=2%.
15. Construct 8'x17' ADA Access Aisle
16. Construct 5'x17' ADA Access Aisle
17. 2' ADA Detectable Warning per construction details.
18. ADA Ramp
21. Construct Dumpster per Architect and Landscape Plans
22. Construct Mountable Curb

LEGEND

- Proposed Concrete Pavement
- Proposed HD Asphalt Surface
- Proposed LD Asphalt Surface
- Artificial Turf Area See Playing Field Plans
- W — Proposed Water Line
- Proposed Storm Sewer
- Existing Storm Sewer Structure & Pipe
- SAN — Existing Sanitary Sewer

SSMH

Note: See Sheets C-500-C-505 for construction details.

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St. Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Dimension Plan

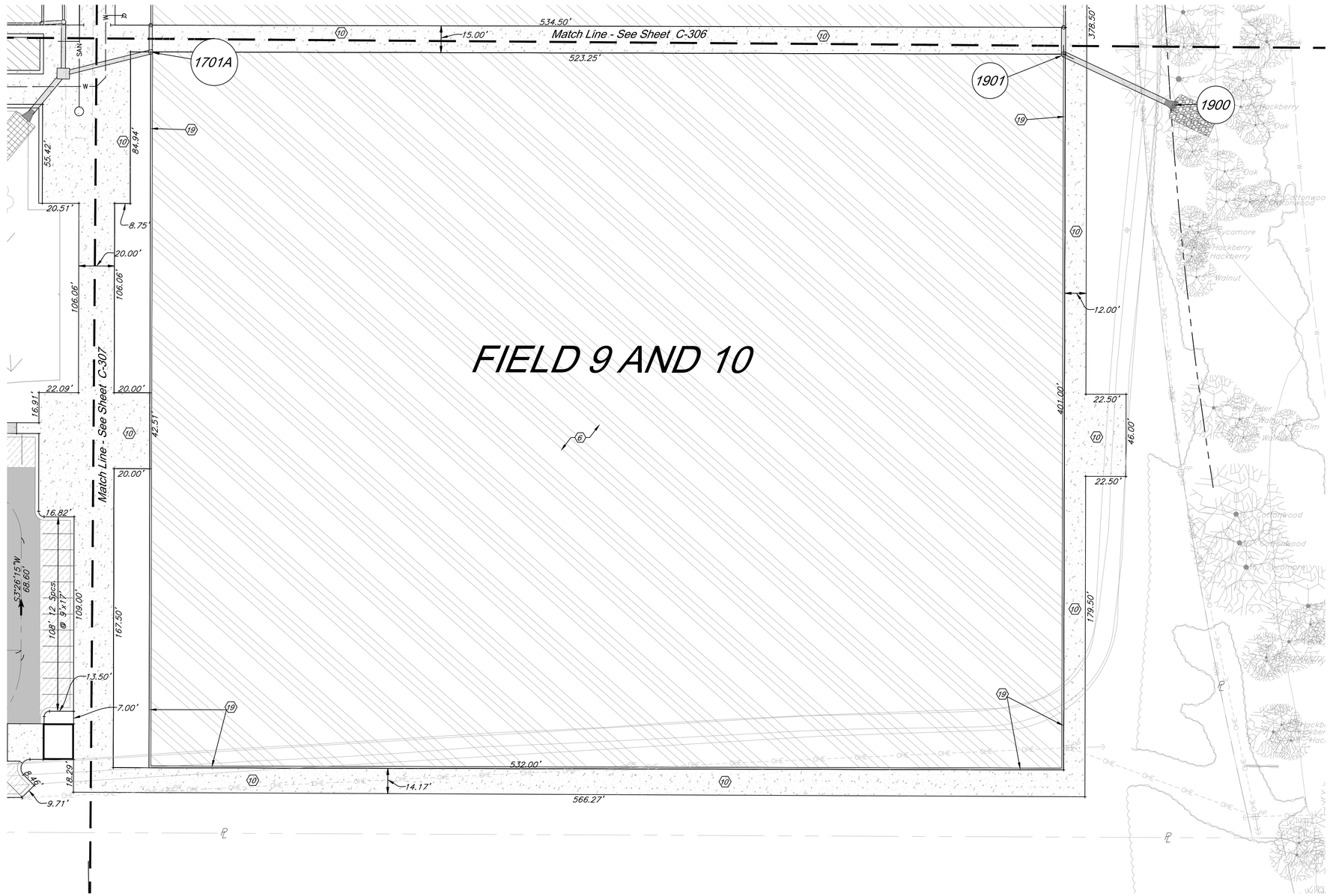
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

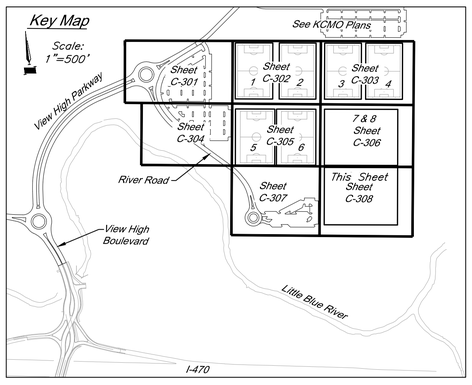
SHEET NO:

C-307

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0801.dwg Layout: C-307 Dimension Plan -- Thursday, January 17, 2019, 3:44pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMO) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720CD801.dwg Layout: C-308 Dimension Plan -- Thursday, January 17, 2019, 3:45pm -- Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





CONSTRUCTION NOTES:

(6) See Playing Field Plans for Field Details

(10) Construct 6" Depth Conc. Sidewalk. See Construction Details.

(19) 12" Conc. Field Edge. See Playing Field Plans for details.

LEGEND

- Proposed Concrete Pavement
- Proposed HD Asphalt Surface
- Proposed LD Asphalt Surface
- Artificial Turf Area See Playing Field Plans
- W — Proposed Water Line
- Proposed Storm Sewer
- Existing Storm Sewer Structure & Pipe
- SAN — SSMH — Existing Sanitary Sewer

Note: See Sheets C-500–C-505 for construction details.

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

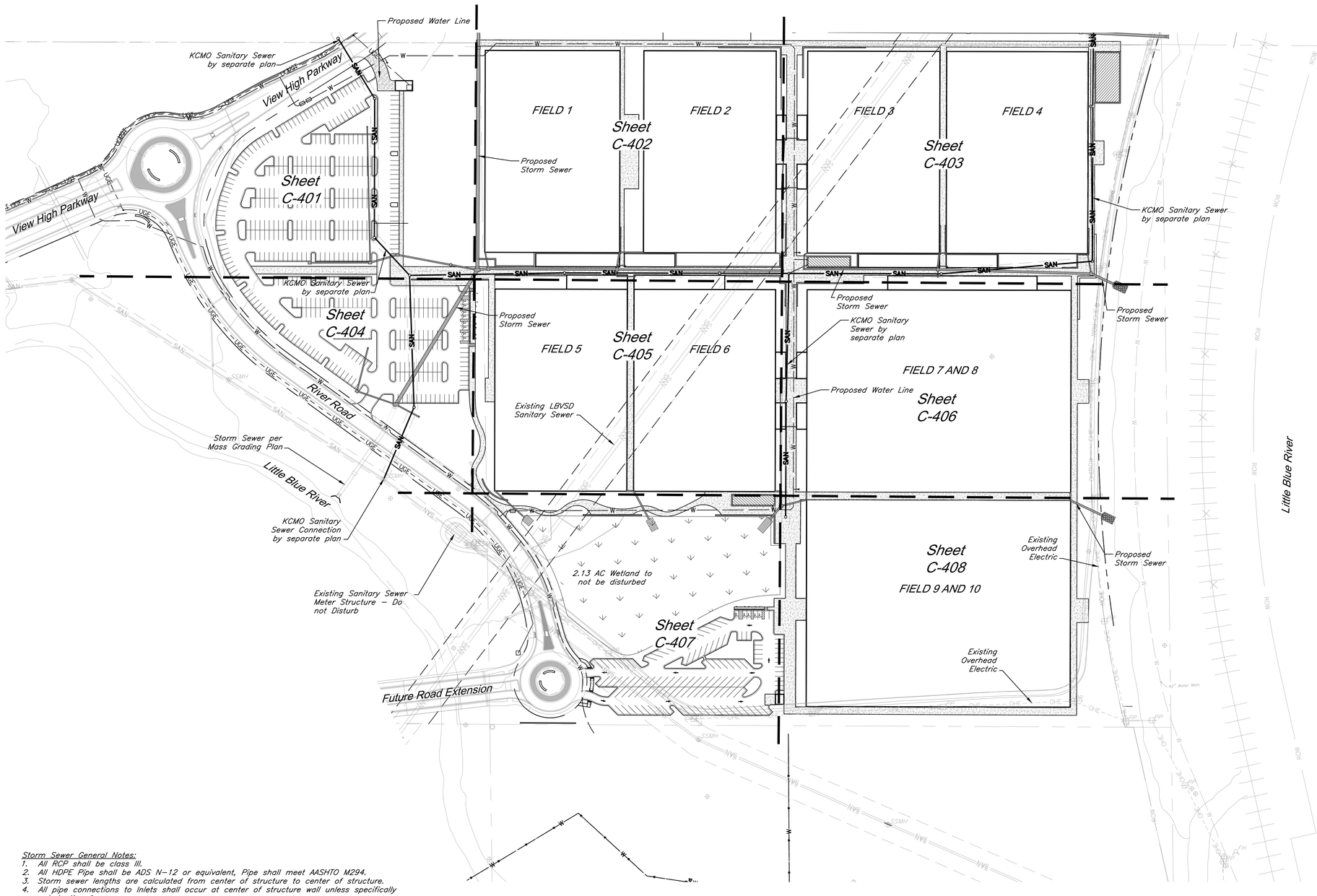
Dimension Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-308

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0901.dwg Layout: C-400 Utility Plan -- Thursday January 17, 2019, 3:46pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THE PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THE PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



CAUTION!

Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.

Storm Sewer General Notes:

1. *All RCP shall be class III.*
2. *All HDPE Pipe shall be ADS N–12 or equivalent, Pipe shall meet AASHTO M294.*
3. *Storm sewer lengths are calculated from center of structure to center of structure.*
4. *All pipe connections to Inlets shall occur at center of structure wall unless specifically noted otherwise.*
5. *All work shall conform to City of Lee's Summit, MO standards.*
6. *Precast structures shall be constructed with KCMMB 4,000 psi concrete. Shop drawings shall be submitted to the Engineer for review prior to casting.*
7. *All in grade inlets shall match adjacent slope.*
8. *Drainage across the project site during construction shall be the Contractor's responsibility. Surface drainage shall be controlled to reduce or prevent the flow of surface water onto adjacent grounds. Contractor shall control downstream erosion and silting during construction. Flexibility is given to to the Contractor to make minor grading revisions along roads or between building pads to improve drainage during construction, with prior approval of the engineer.*
9. *See Sheets Sheets C–500–C–505 for construction details.*
10. *All water line shall be retrained joint C900 PVC.*
11. *All joints, fittings, tees, and bends required for construction shall be subsidiary to these plans.*

Utility Legend

CATV Ped.	Cable TV Pedestal	W.M.	Water Meter
P.P.	Power Pole	FO	Fiber Optic Line
	Guy Anchor	FP	Fire Protection Line
EMH	Electrical Manhole	G	Gas Line
	Electrical Transformer	OHE	Over Head Electric
G.M.	Gas Meter	OHT	Over Head Telephone
	Curb Inlet	OHTV	Over Head Cable TV
SSMH	Sanitary Sewer Manhole	℄	Property Line
C.O.	Sanitary Cleanout	ROW	Right–of–Way Line
L.P.	Light Pole	SAN	Existing Sanitary Sewer Line
	Boring Hole	UGE	Underground Electric
	Sign	UGT	Underground Telephone
Tel. Ped.	Telephone Pedestal	UGTV	Underground Cable TV
T.S.	Traffic Signal Post	W	Water Line
RMH	Traffic Manhole		Proposed Storm Sewer
F.H.	Fire Hydrant		Future Storm Sewer
		SAN	Proposed Sanitary Sewer Line

SCALE : 1 INCH = 100 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Utility Plan

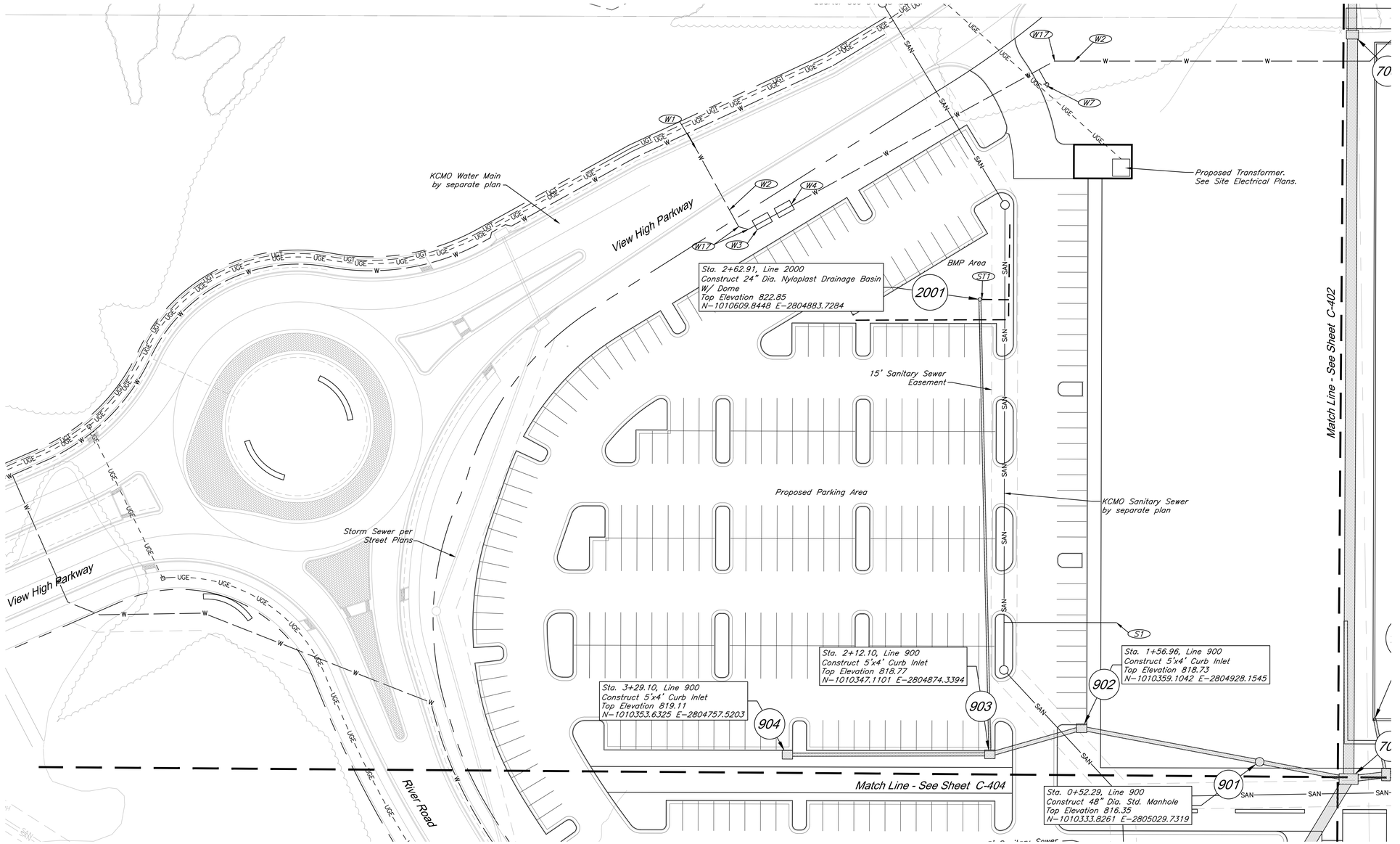
JOB NO: 1197 SCALE:

DATE: 01.18.2019 DRAWN BY: CEL

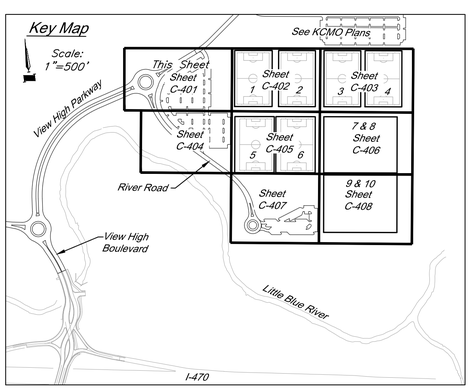
SHEET NO:

C-400

G:\127201\Civil 3D\Production Drawings\Construction Site Plans\127200900.dwg Layout: C-401 Utility Plan -- Thursday January 17, 2019, 3:47pm -- Copyright 2019, George Butler Associates, Inc.
Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



CAUTION!
Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.



Water Construction Notes:

- (W1) Connect 6" C900 PVC Water Line via 8"x8"x6" Tee. Construct Thrust Block.
- (W2) Furnish and Install 6" C900 PVC Water Line at 42" minimum cover.
- (W3) Install Backflow Preventer in concrete vault. Backflow preventer to be sized by MEP.
- (W4) Install Water Meter in concrete vault. Water Meter to be sized by MEP.
- (W7) Install 6" Fire Hydrant Assembly. See Detail.
- (W17) Install 45° Bend W/ Thrust Block

Storm Sewer Construction Notes:

- (ST1) Connect Perforated 4" HDPE Underdrain to structure 2001, ℄=819.30 Install 150 LF perforated 4" HDPE pipe @ min. 1% as shown. See construction details.

Sanitary Sewer Construction Notes:

- (S1) Existing E.O.S ℄= 811.91

Utility Legend

- Existing Cable TV Pedestal
- Existing Power Pole
- Existing Guy Anchor
- Existing Electrical Manhole
- Existing Electrical Transformer
- Existing Gas Meter
- Existing Curb Inlet
- Existing Sanitary Sewer Manhole
- Existing Sanitary Cleanout
- Existing Light Pole
- Existing Boring Hole
- Existing Sign
- Existing Telephone Pedestal
- Existing Traffic Signal Post
- Existing Traffic Manhole
- Existing Fire Hydrant
- Existing Water Meter
- Existing Fiber Optic Line
- Existing Fire Protection Line
- Existing Gas Line
- Existing Over Head Electric
- Existing Over Head Telephone
- Existing Over Head Cable TV
- Property Line
- Right-of-Way Line
- Existing Sanitary Sewer Line
- Existing Underground Electric
- Existing Underground Telephone
- Existing Underground Cable TV
- Existing Water Line
- Proposed Storm Sewer
- Existing Storm Sewer
- Underdrain

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St. Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

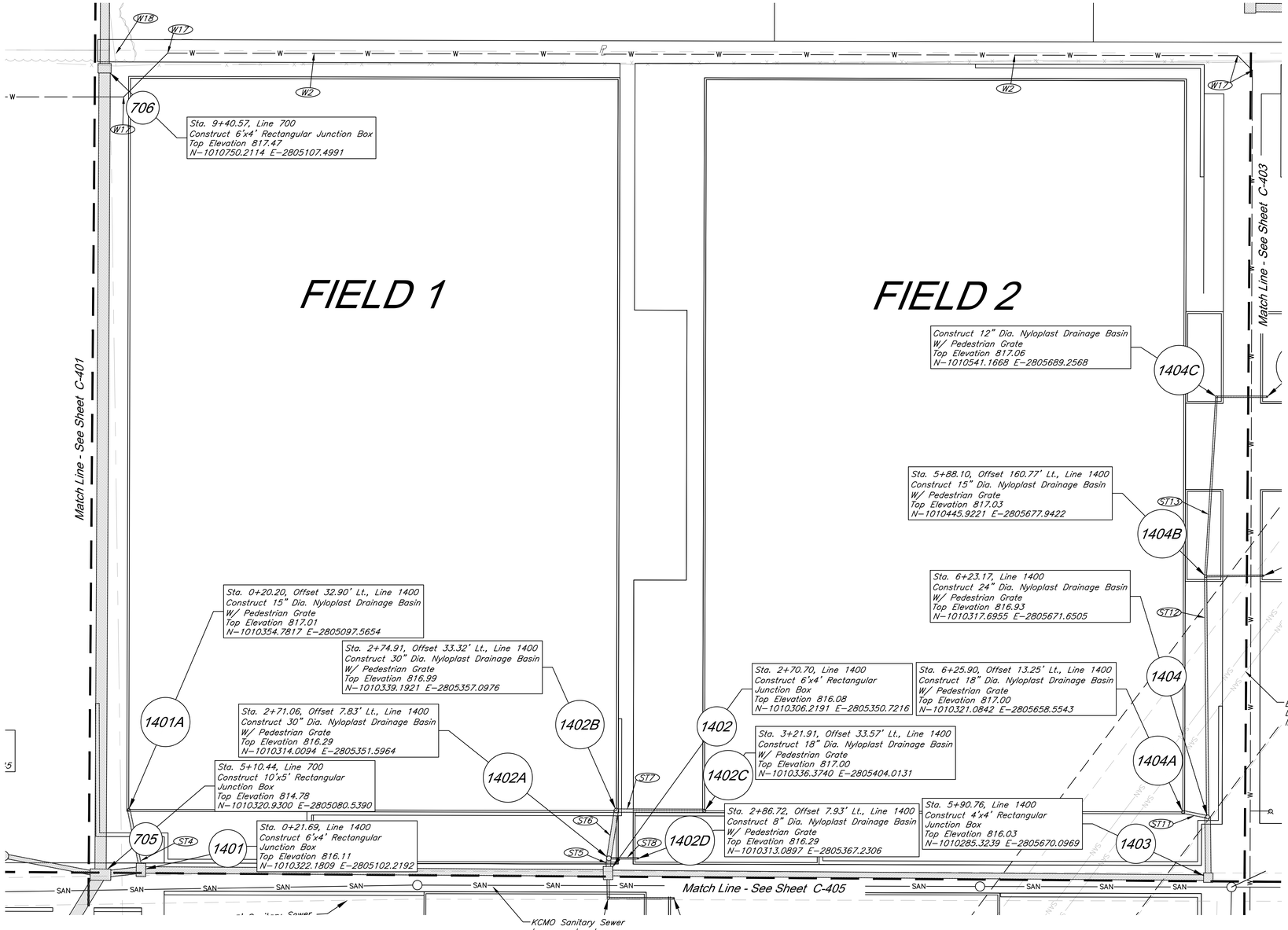
PROFESSIONAL SEAL:

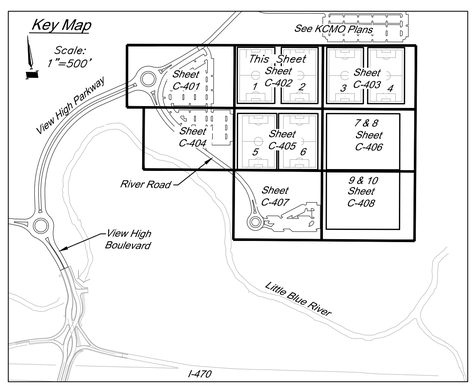
DRAWING TITLE:
Utility Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:
C-401

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0900.dwg Layout: C-402 Utility Plan -- Thursday, January 17, 2019, 3:48pm -- Architect 00212, Professional Engineer 0001.33, Professional Land Surveyor 000059
-- Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THE PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Storm Sewer Construction Notes:

- (ST4) Connect 15" HDPE to Structure 1401, ℄ 812.38 Install 32.9 LF NE @ 1% to Structure 1401A, ℄ 812.71
- (ST5) Connect 24" HDPE to Structure 1402, ℄ 811.90 Install 7.84 LF N @ 0.5% to Structure 1402A, ℄ 811.94
- (ST6) Connect 24" HDPE to Structure 1402A, ℄ 812.14 Install 25.8 LF N @ 0.5% to Structure 1402B, ℄ 812.27
- (ST7) Connect 18" HDPE to Structure 1402B, ℄ 812.43 Install 47 LF E @ 0.5% to Structure 1402C, ℄ 812.66
- (ST8) Connect 8" HDPE to Structure 1402A, ℄ 813.92 Install 15.7 LF N @ 0.5% to Structure 1402D, ℄ 814.00
- (ST11) Connect 15" HDPE to Structure 1404, ℄ 812.59 Install 13.5 LF N @ 0.5% to Structure 1404A, ℄ 812.66
- (ST12) Connect 12" HDPE to Structure 1404, ℄ 812.64 Install 128.38 LF N @ 1% to Structure 1404B, ℄ 813.92
- (ST13) Connect 10" HDPE to Structure 1404B, ℄ 814.12 Install 95.91 LF N @ 0.5% to Structure 1404C, ℄ 814.60

Water Construction Notes:

- (W2) Furnish and Install 6" C900 PVC Water Line at 42" minimum cover.
- (W17) Install 45° Bend W/ Thrust Block.
- (W18) Install 20 LF. Conc. Encasement on Waterline, Centered on Crossing.

Utility Legend

- Exsiting Cable TV Pedestal
- Existing Power Pole
- Existing Guy Anchor
- Existing Electrical Manhole
- Existing Electrical Transformer
- Existing Gas Meter
- Existing Curb Inlet
- Existing Sanitary Sewer Manhole
- Existing Sanitary Cleanout
- Existing Light Pole
- Existing Boring Hole
- Existing Sign
- Existing Telephone Pedestal
- Existing Traffic Signal Post
- Existing Traffic Manhole
- Existing Fire Hydrant
- Existing Water Meter
- Existing Fiber Optic Line
- Existing Fire Protection Line
- Existing Gas Line
- Existing Over Head Electric
- Existing Over Head Telephone
- Existing Over Head Cable TV
- Property Line
- Right-of-Way Line
- Existing Sanitary Sewer Line
- Existing Underground Electric
- Existing Underground Telephone
- Existing Underground Cable TV
- Existing Water Line
- Proposed Storm Sewer
- Existing Storm Sewer
- Underdrain

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CAUTION!
Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

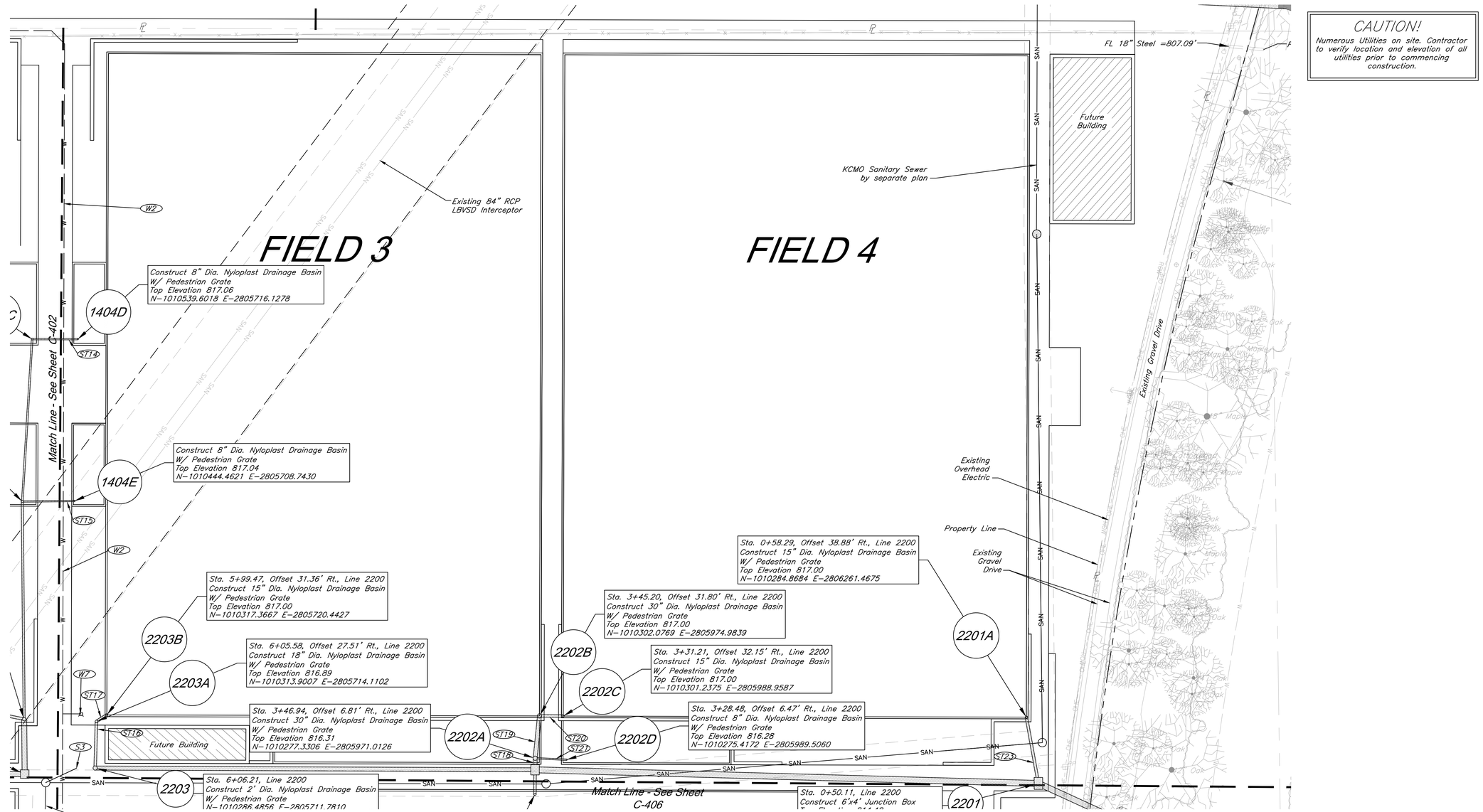
Utility Plan

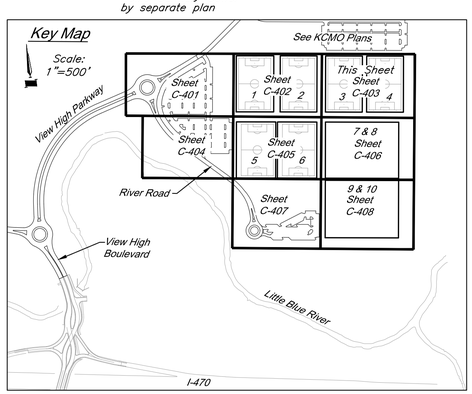
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-402

Copyright 2019, George Butler Associates, Inc. -- G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C900.dwg Layout: C-403 Utility Plan -- Thursday January 17, 2019, 3:48pm -- Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THE PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THE PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Storm Sewer Construction Notes:

ST14 Connect 8" HDPE to Structure 1404C, ℄ 814.87
Install 26.9 LF E @ 0.5% to Structure 1404D, ℄ 815.00

ST15 Connect 8" HDPE to Structure 1404B, ℄ 814.85
Install 30.8 LF E @ 0.5% to Structure 1404E, ℄ 815.00

ST16 Connect 15" HDPE to Structure 2203, ℄ 811.86
Install 27.5 LF N @ 1% to Structure 2203A, ℄ 812.14

ST17 Connect 15" HDPE to Structure 2203A, ℄ 812.66
Install 7.2 LF NE @ 0.5% to Structure 2203B, ℄ 812.70

ST18 Connect 24" HDPE to Structure 2202, ℄ 811.96
Install 6.8 LF N @ 0.5% to Structure 2202A, ℄ 812.00

ST19 Connect 24" HDPE to Structure 2202A, ℄ 812.17
Install 25.1 LF N @ 0.5% to Structure 2202B, ℄ 812.30

ST20 Connect 15" HDPE to Structure 2202B, ℄ 812.45
Install 14 LF E @ 0.5% to Structure 2202C, ℄ 812.52

ST21 Connect 8" HDPE to Structure 2202A, ℄ 813.90
Install 18.6 LF E @ 0.5% to Structure 2202D, ℄ 814.00

ST23 Connect 15" HDPE to Structure 2201, ℄ 812.00
Install 39.7 LF NW @ 1.75% to Structure 2201A, ℄ 812.70

Water Construction Notes:

W2 Furnish and Install 6" C900 PVC Water Line at 42" minimum cover.

W7 Install 6" Fire Hydrant Assembly. See Detail.

Sanitary Sewer Construction Notes:

S3 Existing E.O.S ℄= 811.58

Utility Legend

- Exsiting Cable TV Pedestal
- Existing Power Pole
- Existing Guy Anchor
- Existing Electrical Manhole
- Existing Electrical Transformer
- Existing Gas Meter
- Existing Curb Inlet
- Existing Sanitary Sewer Manhole
- Existing Sanitary Cleanout
- Existing Light Pole
- Existing Boring Hole
- Existing Sign
- Existing Telephone Pedestal
- Existing Traffic Signal Post
- Existing Traffic Manhole
- Existing Fire Hydrant
- Existing Water Meter
- Existing Fiber Optic Line
- Existing Fire Protection Line
- Existing Gas Line
- Existing Over Head Electric
- Existing Over Head Telephone
- Existing Over Head Cable TV
- Property Line
- Right-of-Way Line
- Existing Sanitary Sewer Line
- Existing Underground Electric
- Existing Underground Telephone
- Existing Underground Cable TV
- Existing Water Line
- Proposed Storm Sewer
- Existing Storm Sewer
- Underdrain

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CAUTION!
Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

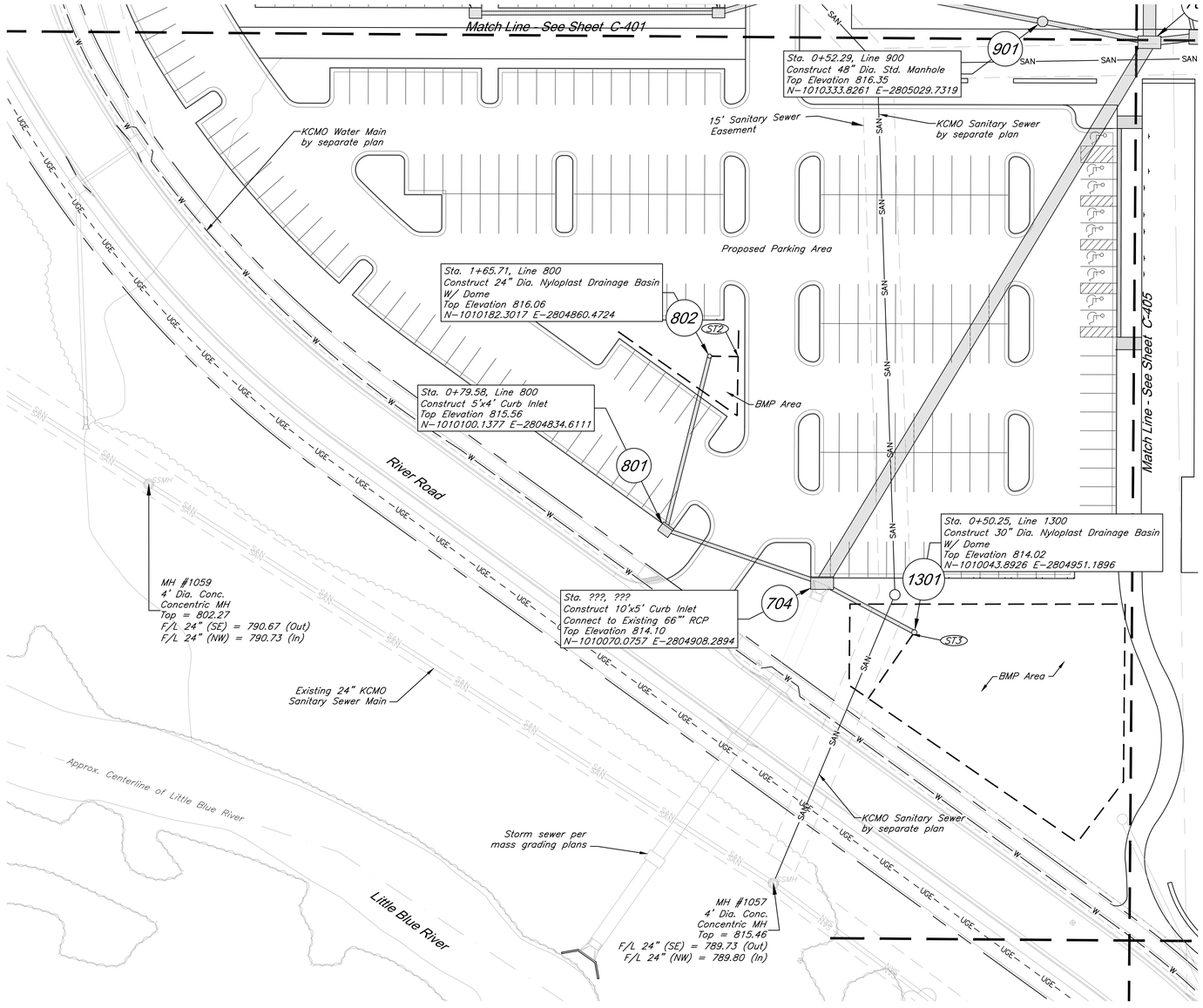
PROFESSIONAL SEAL:

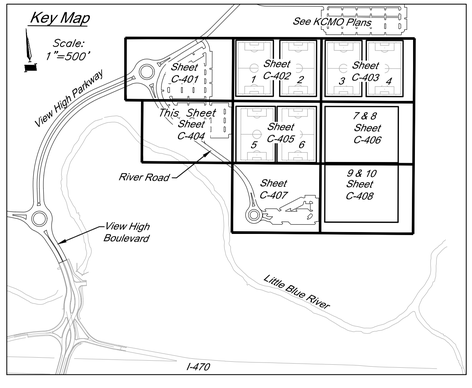
DRAWING TITLE:
Utility Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:
C-403

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0900.dwg Layout: C-404 Utility Plan -- Thursday January 17, 2019, 3:49pm -- Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059 -- Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Storm Sewer Construction Notes:

(ST2) Connect Perforated 4" HDPE Underdrain to structure 802, E_t=812.00. Install 120 LF perforated 4" HDPE pipe @ min. 1% as shown. See construction details.

(ST3) Connect Perforated 4" HDPE Underdrain to structure 1301, E_t=808.50. Install 440 LF perforated 4" HDPE pipe @ min. 1% as shown. See construction details.

Utility Legend

- Exsiting Cable TV Pedestal
- Existing Power Pole
- Existing Guy Anchor
- Existing Electrical Manhole
- Existing Electrical Transformer
- Existing Gas Meter
- Existing Curb Inlet
- Existing Sanitary Sewer Manhole
- Existing Sanitary Cleanout
- Existing Light Pole
- Existing Boring Hole
- Existing Sign
- Existing Telephone Pedestal
- Existing Traffic Signal Post
- Existing Traffic Manhole
- Existing Fire Hydrant
- Existing Water Meter
- Existing Fiber Optic Line
- Existing Fire Protection Line
- Existing Gas Line
- Existing Over Head Electric
- Existing Over Head Telephone
- Existing Over Head Cable TV
- Property Line
- Right-of-Way Line
- Existing Sanitary Sewer Line
- Existing Underground Electric
- Existing Underground Telephone
- Existing Underground Cable TV
- Existing Water Line
- Proposed Storm Sewer
- Existing Storm Sewer
- Underdrain

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CAUTION!
Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

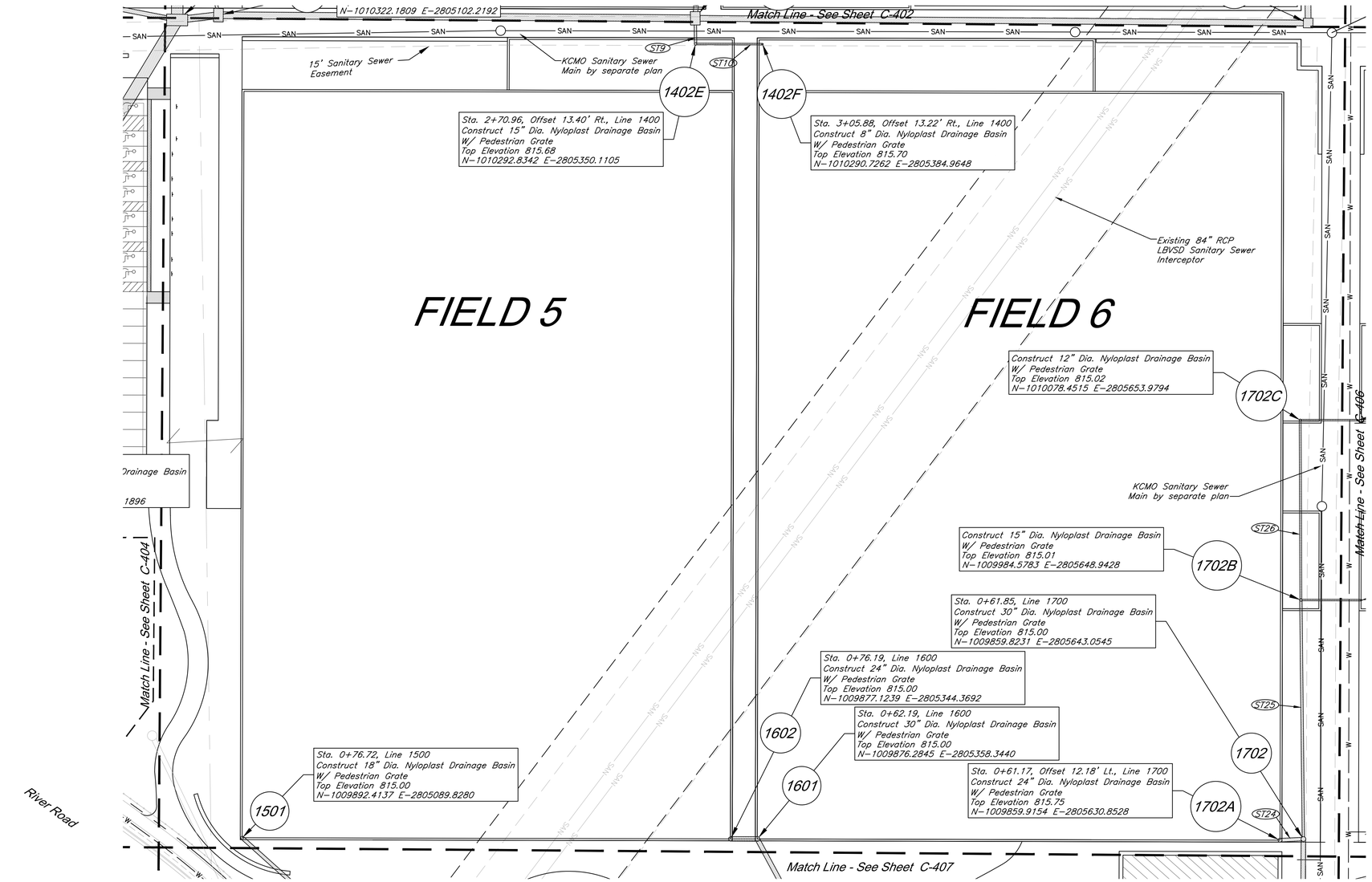
Utility Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

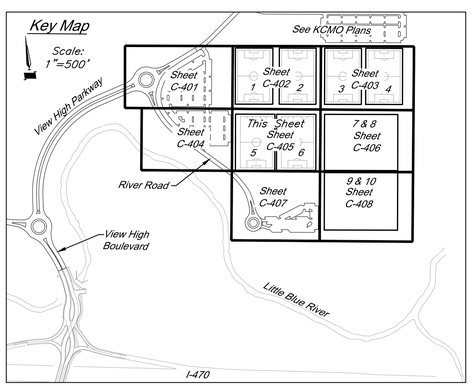
C-404

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0900.dwg Layout: C-405 Utility Plan -- Thursday, January 17, 2019, 3:49pm -- Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059



CAUTION!

Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.



Storm Sewer Construction Notes:

ST9 Connect 12" HDPE to Structure 1402, ℄ 812.93
Install 13.4 LF S @ 0.53% to Structure 1402E, ℄ 813.00

ST10 Connect 8" HDPE to Structure 1402E, ℄ 813.32
Install 34.9 LF E @ 0.5% to Structure 1402F, ℄ 813.50

ST24 Connect 18" HDPE to Structure 1701, ℄ 810.89
Install 12.2 LF NW @ 0.5% to Structure 1701A, ℄ 810.95

ST25 Connect 12" HDPE to Structure 1701, ℄ 811.86
Install 124.89 LF N @ 0.5% to Structure 1701D, ℄ 812.48

ST26 Connect 10" HDPE to Structure 1701D, ℄ 812.68
Install 94.0 LF N @ 0.5% to Structure 1701E, ℄ 813.15

Utility Legend

- Exsiting Cable TV Pedestal
- Existing Power Pole
- Existing Guy Anchor
- Existing Electrical Manhole
- Existing Electrical Transformer
- Existing Gas Meter
- Existing Curb Inlet
- Existing Sanitary Sewer Manhole
- Existing Sanitary Cleanout
- Existing Light Pole
- Existing Boring Hole
- Existing Sign
- Existing Telephone Pedestal
- Existing Traffic Signal Post
- Existing Traffic Manhole
- Existing Fire Hydrant
- Existing Water Meter
- Existing Fiber Optic Line
- Existing Fire Protection Line
- Existing Gas Line
- Existing Over Head Electric
- Existing Over Head Telephone
- Existing Over Head Cable TV
- Property Line
- Right-of-Way Line
- Existing Sanitary Sewer Line
- Existing Underground Electric
- Existing Underground Telephone
- Existing Underground Cable TV
- Existing Water Line
- Proposed Storm Sewer
- Existing Storm Sewer
- Underdrain

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

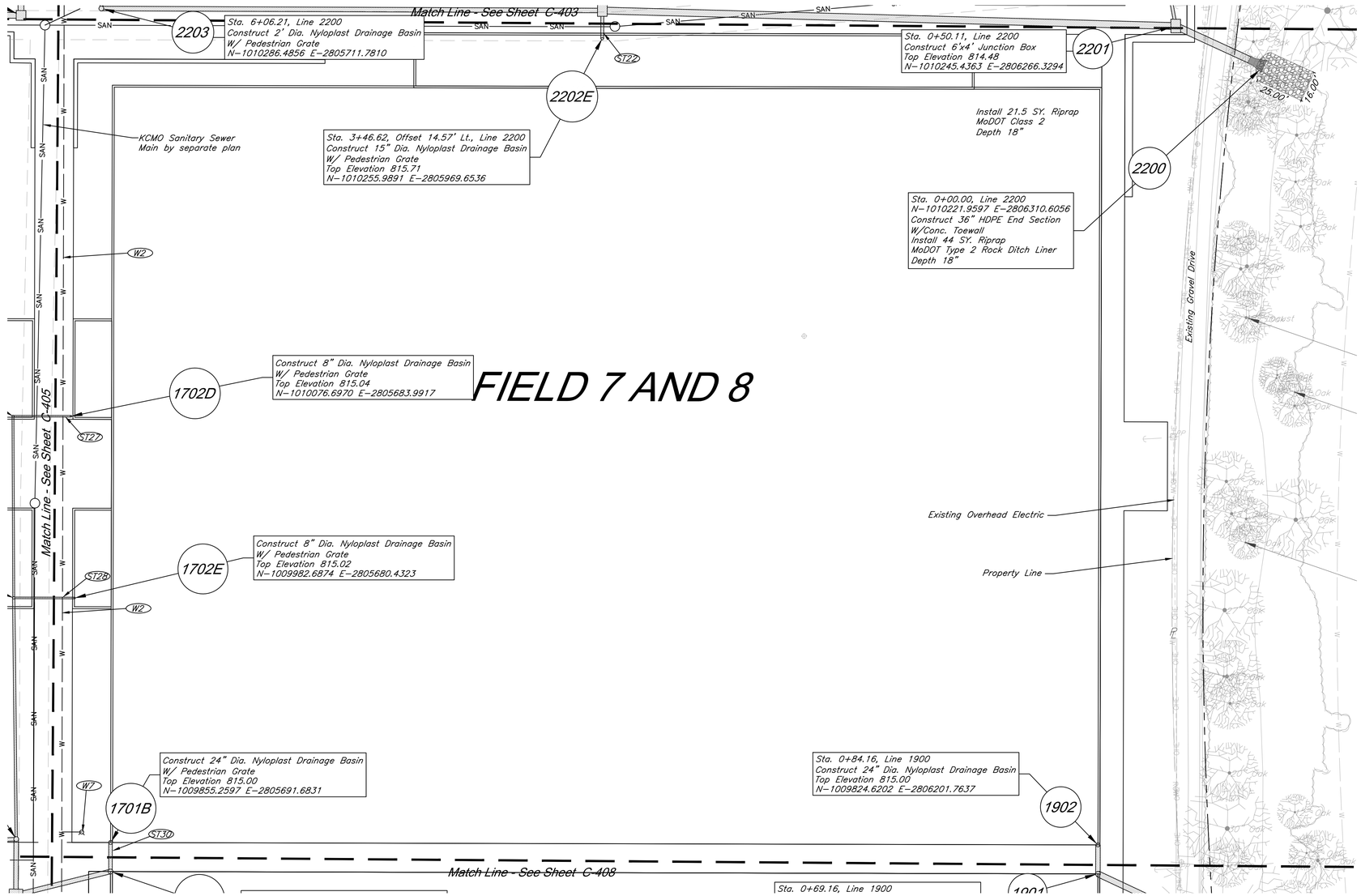
DRAWING TITLE:

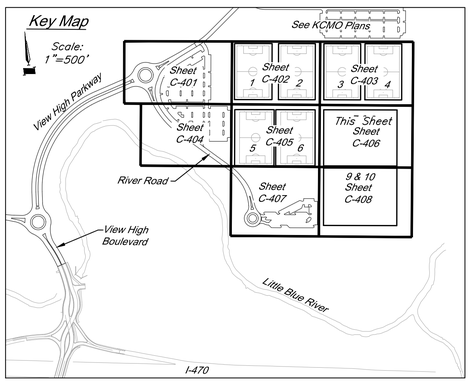
Utility Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-405





Storm Sewer Construction Notes:

ST22 Connect 15" HDPE to Structure 2202, ℄ 813.43
Install 14.58 LF E @ 0.5% to Structure 2202E, ℄ 813.50

ST27 Connect 8" HDPE to Structure 1701E, ℄ 813.35
Install 30.6 LF E @ 0.5% to Structure 1701F, ℄ 813.50

ST28 Connect 8" HDPE to Structure 1701D, ℄ 813.34
Install 31.6 LF E @ 0.5% to Structure 1701G, ℄ 813.50

ST30 Connect 18" HDPE to Structure 1701B, ℄ 810.87
Install 15.0 LF N @ 0.5% to Structure 1701C, ℄ 810.95

Water Construction Notes:

W2 Furnish and Install 6" C900 PVC
Water Line at 42" minimum cover.

W7 Install 6" Fire Hydrant Assembly.
See Detail.

CAUTION!
Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.

Utility Legend

CATV Ped.	Exsiting Cable TV Pedestal
P.P.	Existing Power Pole
	Existing Guy Anchor
EMH	Existing Electrical Manhole
E.M.	Existing Electrical Transformer
G.M.	Existing Gas Meter
	Existing Curb Inlet
SSMH	Existing Sanitary Sewer Manhole
C.O.	Existing Sanitary Cleanout
L.P.	Existing Light Pole
	Existing Boring Hole
Tel. Ped.	Existing Sign
	Existing Telephone Pedestal
T.S.	Existing Traffic Signal Post
TRMH	Existing Traffic Manhole
F.H.	Existing Fire Hydrant
W.M.	Existing Water Meter
FO	Existing Fiber Optic Line
FP	Existing Fire Protection Line
G	Existing Gas Line
OHE	Existing Over Head Electric
OHT	Existing Over Head Telephone
OHTV	Existing Over Head Cable TV
℄	Property Line
ROW	Right-of-Way Line
SAN	Existing Sanitary Sewer Line
UGE	Existing Underground Electric
UGT	Existing Underground Telephone
UGTV	Existing Underground Cable TV
W	Existing Water Line
	Proposed Storm Sewer
	Existing Storm Sewer
	Underdrain

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Utility Plan

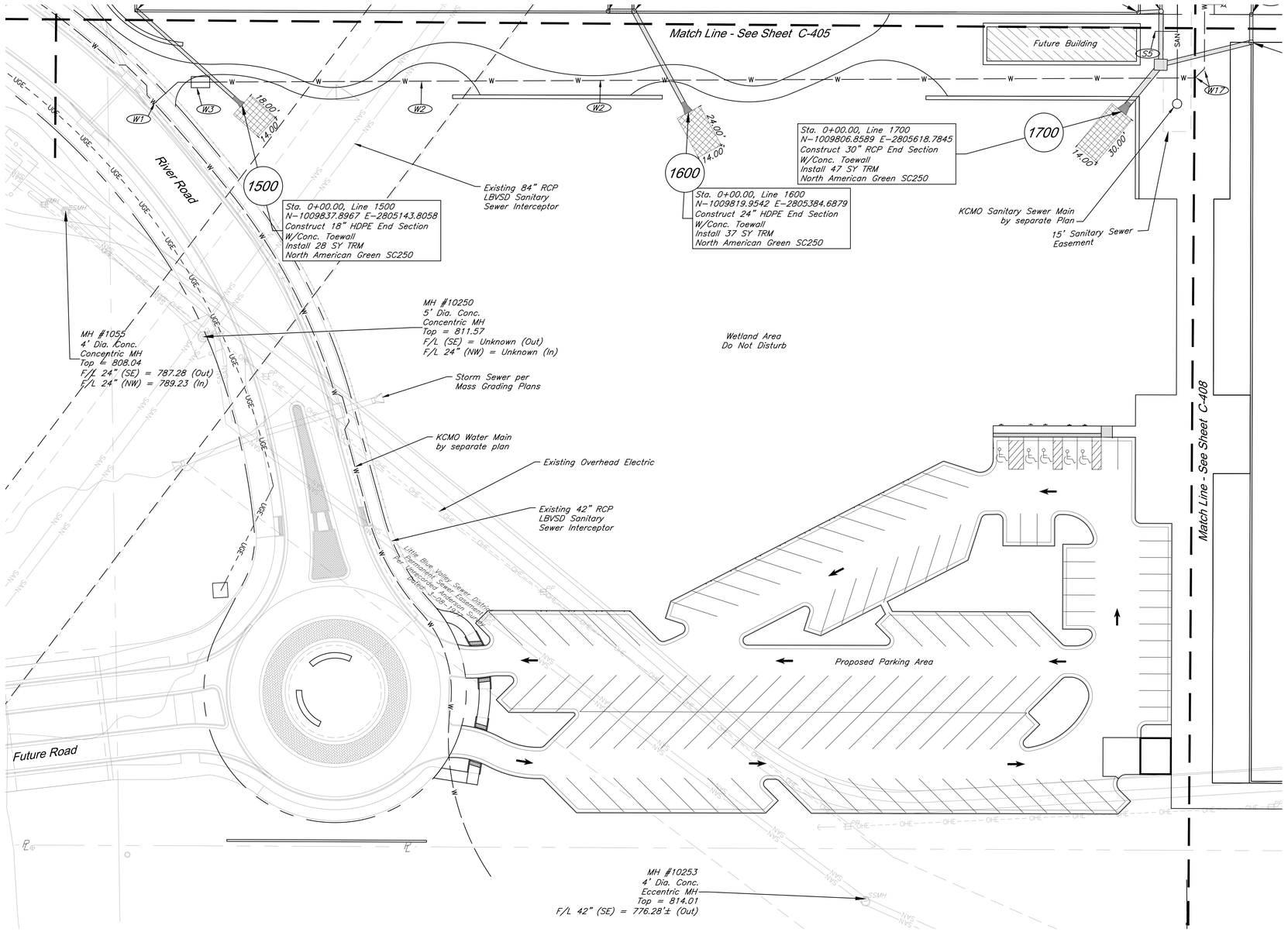
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

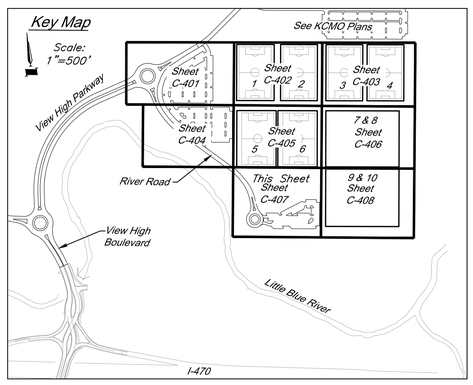
SHEET NO:

C-406

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0900.dwg Layout: C-406 Utility Plan -- Thursday, January 17, 2019, 3:50pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES PURSUANT TO SECTION 327.411, RSMO) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C0900.dwg Layout: C-407 Utility Plan -- Thursday, January 17, 2019, 3:51pm -- Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059





Water Construction Notes:

- (W1) Connect 6" C900 PVC Water Line via 8"x8"x6" Tee. Construct Thrust Block.
- (W2) Furnish and Intstall 6" C900 PVC Water Line at 42" minimum cover.
- (W3) Install Backflow Preventer in concrete vault. Backflow preventer to be sized by MEP.
- (W17) Install 45° Bend W/ Thrust Block.

Sanitary Sewer Construction Notes:

- (S5) Existing E.O.S ℄ 808.56

Utility Legend

- Exsiting Cable TV Pedestal
- Existing Power Pole
- Existing Guy Anchor
- Existing Electrical Manhole
- Existing Electrical Transformer
- Existing Gas Meter
- Existing Curb Inlet
- Existing Sanitary Sewer Manhole
- Existing Sanitary Cleanout
- Existing Light Pole
- Existing Boring Hole
- Existing Sign
- Existing Telephone Pedestal
- Existing Traffic Signal Post
- Existing Traffic Manhole
- Existing Fire Hydrant
- Existing Water Meter
- Existing Fiber Optic Line
- Existing Fire Protection Line
- Existing Gas Line
- Existing Over Head Electric
- Existing Over Head Telephone
- Existing Over Head Cable TV
- Property Line
- Right-of-Way Line
- Existing Sanitary Sewer Line
- Existing Underground Electric
- Existing Underground Telephone
- Existing Underground Cable TV
- Existing Water Line
- Proposed Storm Sewer
- Existing Storm Sewer
- Underdrain

SCALE : 1 INCH = 30 FEET

CAUTION!
Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Utility Plan

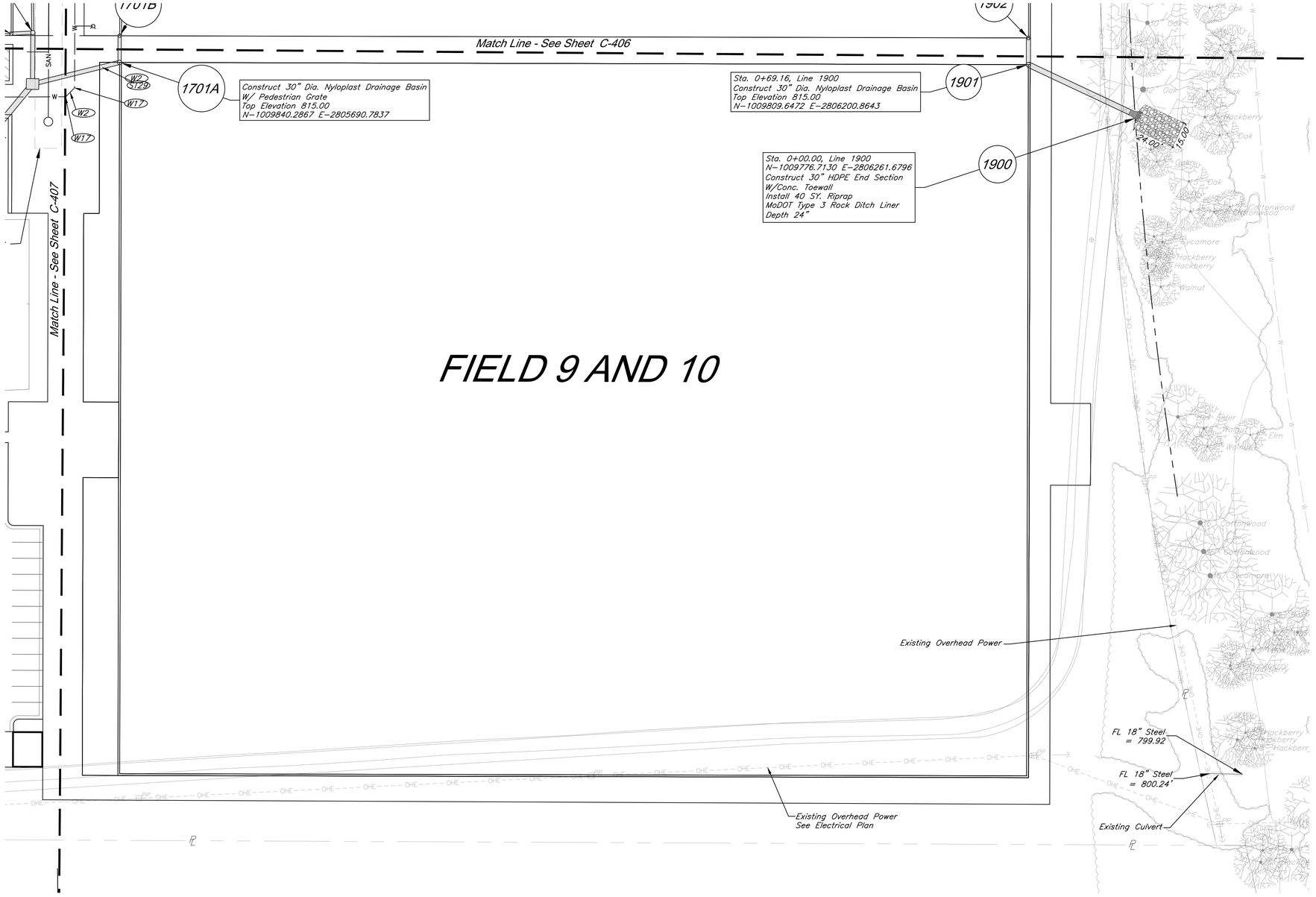
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-407

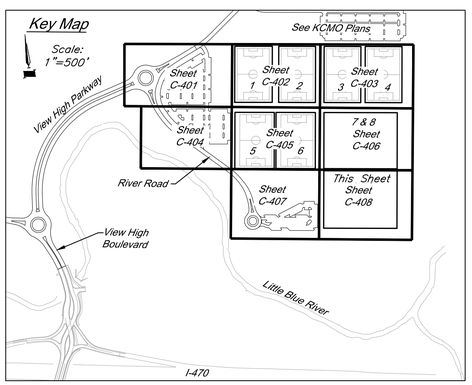
G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C3D00.dwg Layout: C-408 Utility Plan -- Thursday, January 17, 2019, 3:51pm -- Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS PURSUANT TO SECTION 327.411, RSMO, ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059



CAUTION!

Numerous Utilities on site. Contractor to verify location and elevation of all utilities prior to commencing construction.



Water Construction Notes:

(W2) Furnish and Install 6" C900 PVC Water Line at 42" minimum cover.

(W17) Install 45° Bend W/ Thrust Block.

Storm Sewer Construction Notes:

(ST29) Connect 24" HDPE to Structure 1701, ℄ 810.45
Install 50.4 LF E @ 0.6% to Structure 1701B, ℄ 810.76

Utility Legend

CATV Ped.	Exsiting Cable TV Pedestal
P.P.	Existing Power Pole
	Existing Guy Anchor
E.M.H.	Existing Electrical Manhole
	Existing Electrical Transformer
G.M.	Existing Gas Meter
	Existing Curb Inlet
S.S.M.H.	Existing Sanitary Sewer Manhole
S.O.	Existing Sanitary Cleanout
L.P.	Existing Light Pole
	Existing Boring Hole
	Existing Sign
Tel. Ped.	Existing Telephone Pedestal
T.S.	Existing Traffic Signal Post
T.R.M.H.	Existing Traffic Manhole
F.H.	Existing Fire Hydrant
W.M.	Existing Water Meter
FO	Existing Fiber Optic Line
FP	Existing Fire Protection Line
G	Existing Gas Line
OHE	Existing Over Head Electric
OHT	Existing Over Head Telephone
OHTV	Existing Over Head Cable TV
℄	Property Line
ROW	Right-of-Way Line
SAN	Existing Sanitary Sewer Line
UGE	Existing Underground Electric
UGT	Existing Underground Telephone
UGTV	Existing Underground Cable TV
W	Existing Water Line
	Proposed Storm Sewer
	Existing Storm Sewer
	Underdrain

30' 0' 30' 60'

SCALE : 1 INCH = 30 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Utility Plan

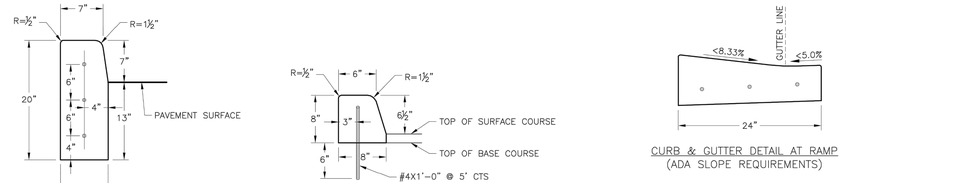
JOB NO: 1197 SCALE:

DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-408

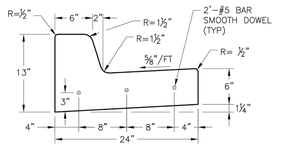
G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C2100.dwg Layout: C-500 Construction Details -- Thursday, January 17, 2019, 3:51pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THE PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



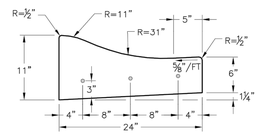
STRAIGHT CURB
(TYPE C–1)

DOWELLED CURB
(TYPE DC)

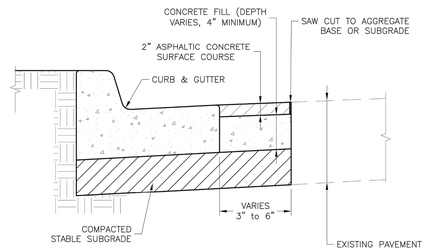
CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)



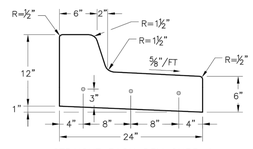
STRAIGHT BACK CURB & GUTTER
(TYPE CG–1)



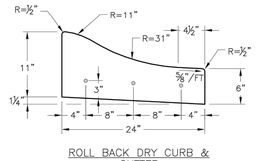
ROLL BACK CURB & GUTTER
(TYPE CG–2)



CURB REPLACEMENT DETAIL



STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG–1 DRY)



ROLL BACK DRY CURB & GUTTER
(TYPE CG–2 DRY)

GENERAL NOTES

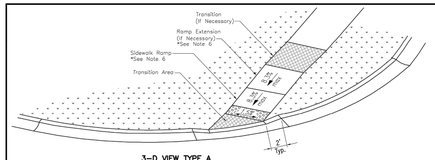
1. ¾" ISOLATION JOINTS WITH 3 (2'–#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: CURB & GUTTER DETAIL

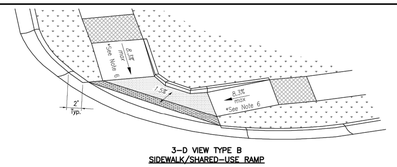
Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-4

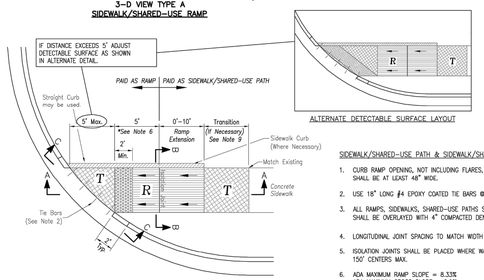


3–D VIEW TYPE A
SIDEWALK/SHARED–USE RAMP

LEGEND
R SIDEWALK RAMP
TS TURNING SPACE
DETECTABLE WARNING SURFACE
T TRANSITION



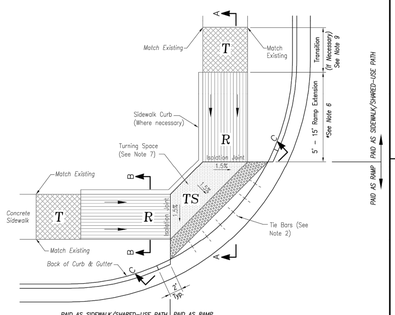
3–D VIEW TYPE B
SIDEWALK/SHARED–USE RAMP



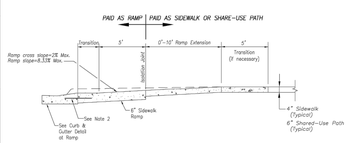
TYPE A SIDEWALK/SHARED–USE RAMP
Not to Scale

SIDEWALK/SHARED–USE PATH & SIDEWALK/SHARED–USE RAMP NOTES:

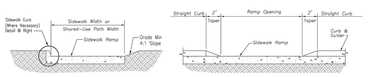
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED–USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
ADA MAXIMUM CROSS SLOPE = 2.0%
*ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5%, SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



TYPE B SIDEWALK/SHARED–USE RAMP
Not to Scale



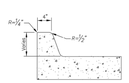
SECTION A–A



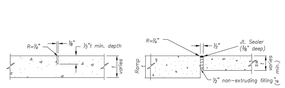
SECTION B–B

SECTION C–C

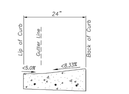
TYPE A & B SIDEWALK RAMP
Not to Scale



SIDEWALK CURB DETAIL
Not to Scale



JOINT DETAILS
Not to Scale



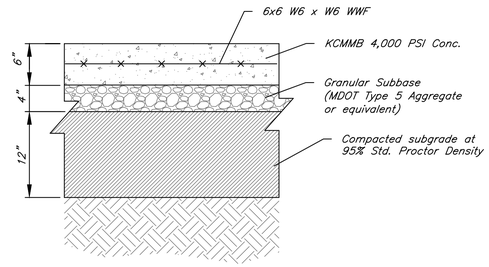
CURB & GUTTER DETAIL AT RAMP
Not to Scale

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

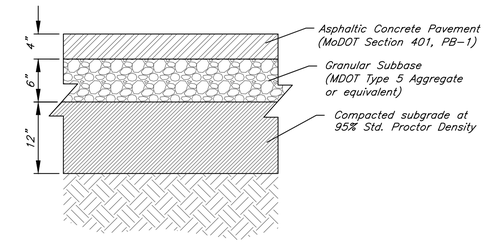
Project: STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name: ADA RAMP RETROFIT DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

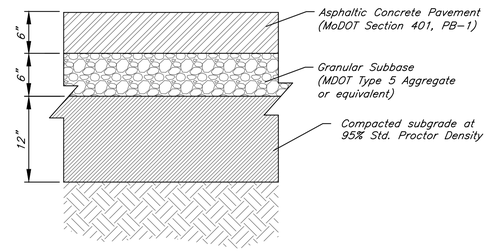
GEN-3A



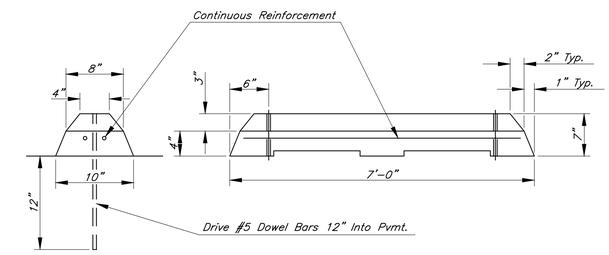
CONCRETE PAVEMENT SECTION
Not To Scale



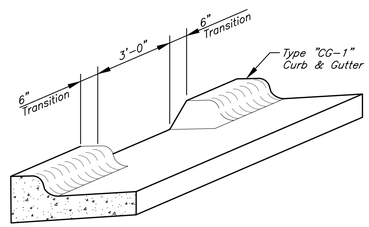
LIGHT DUTY ASPHALT PAVEMENT SECTION
Not To Scale



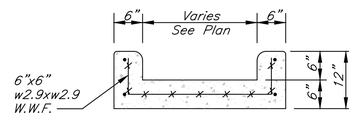
HEAVY DUTY ASPHALT PAVEMENT SECTION
Not To Scale



PRECAST CONCRETE STOP BLOCK
Not to Scale



TYPICAL CURB CUT DETAIL
Not To Scale



Section

CONCRETE FLUME
Not To Scale

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

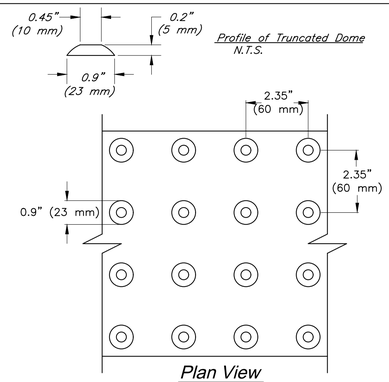
DRAWING TITLE:

Construction Details

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-500



Profile of Truncated Dome
N.T.S.

Plan View
N.T.S.

Detectable Warnings:

1. Curb ramps shall have detectable warnings extending the full length and width of the curb ramp.
2. Detectable warnings shall consist of raised truncated domes with a diameter of nominal 0.9 in (23 mm), a height of nominal 0.2 in (5 mm) and a center-to-center spacing of nominal 2.35 in (60 mm) and shall contrast visually with adjoining surfaces, either light-on-dark, or dark-on-light.

   The material used to provide contrast shall be an integral part of the walking surface and should contrast by at least 70%. Contrast in percent is determined by:

   Contrast = [(B1 – B2)/B1] x 100

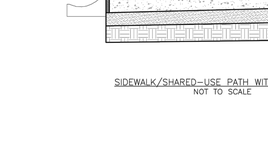
   where B1 = light reflectance value (LRV) of the lighter area and B2 = light reflectance value (LRV) of the darker area.

   Note that in any application both white and black are never absolute; thus, B1 never equals 100 and B2 is always greater than 0.

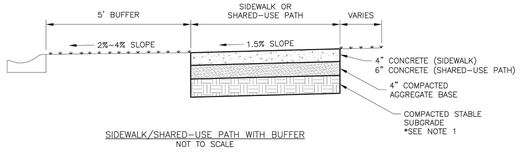
3. If a walk crosses or adjoins a vehicular way, and the walking surfaces are not separated by curbs, railings, or other elements between the pedestrian areas and vehicular areas, the boundary between the areas shall be defined by a continuous detectable warning which is 36 in (915 mm) wide.
4. Contractor shall install Detectable Warnings in compliance with current ADA standards.

DETECTABLE WARNINGS

N.T.S.



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE



SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:

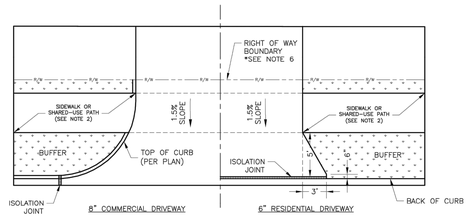
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS AND SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALKS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN EXPANSION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK, BUT NO GREATER THAN 10 FT.
6. SHARED-USE PATH WIDTH SHALL BE 10 FT. WIDE.
7. SIDEWALK FINISHING (NO PICTURE FRAMING) AS DIRECTED BY CITY INSPECTOR.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SIDEWALK/SHARED-USE PATH DETAIL

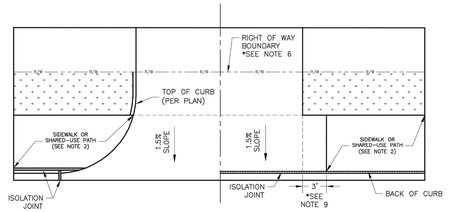
Date: 04/17
Drawn By: MJF
Checked By: DL

GEN-2



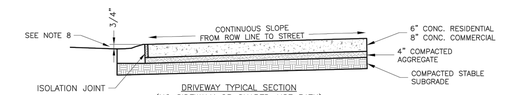
8" COMMERCIAL DRIVEWAY — 6" RESIDENTIAL DRIVEWAY

DRIVEWAY WITH BUFFER
NOT TO SCALE

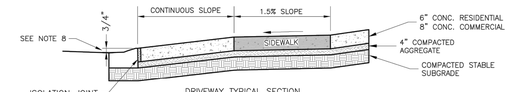


8" COMMERCIAL DRIVEWAY — 6" RESIDENTIAL DRIVEWAY

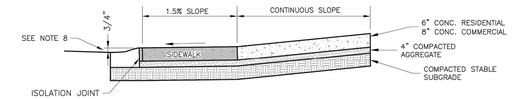
DRIVEWAY WITHOUT BUFFER
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(NO SIDEWALK OR SHARED-USE PATH)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)
NOT TO SCALE



DRIVEWAY TYPICAL SECTION
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)
NOT TO SCALE

GENERAL NOTES

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS AND DRIVEWAY APPROACHES, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CC-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
9. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
10. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

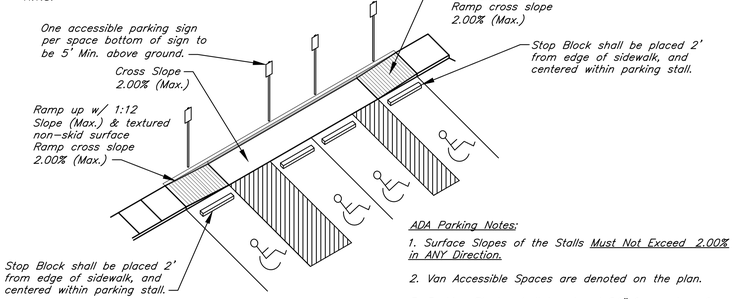
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Sheet Name: DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-1

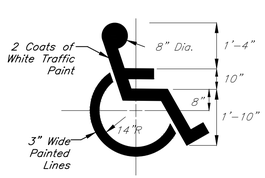


ADA PARKING DETAIL

Not to Scale

ADA Parking Notes:

1. Surface Slopes of the Stalls Must Not Exceed 2.00% in ANY Direction.
2. Van Accessible Spaces are denoted on the plan.
3. Parking Blocks shall be placed 24" from edge of sidewalk to center line of parking block.

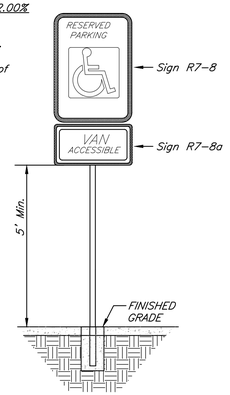


ACCESSIBLE PARKING SYMBOL DETAIL

Not to Scale

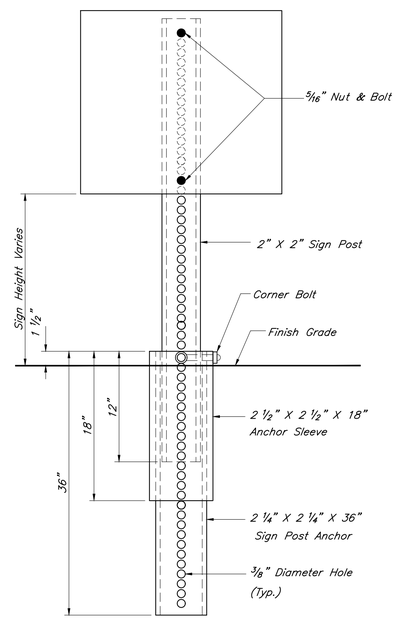
ADA Sign Notes:

1. Accessible Sign (R7-8) Shall be mounted on a pole or other structure 5'-6" above the parking surface, at the head of the parking space, and shall be at least 12"x18" in area.
2. Supplemental Accessible Sign (R7-8a) shall be used on all required Van Accessible Spaces.
3. Signs shall be blue with white lettering.



TYPICAL ACCESSIBLE SIGNAGE

Not to Scale



Pavement Installation Sequence

1. Sign post anchor driven into subgrade prior to the placement of the pavement.
2. Anchor sleeve driven into subgrade over the sign post anchor prior to the placement of the pavement.
3. Insert sign post into the sign post anchor and bolt in place.

Ground Installation Sequence

1. Sign post anchor driven into the ground.
2. Anchor sleeve driven into the ground over the sign post anchor.
3. Insert sign post into the sign post anchor and bolt in place.

Note:
In all installations the first hole above the finished grade level in all three units must be in line for insertion of the corner bolt.

All corner bolts and nuts for fastening the signs and sign post assembly shall comply the applicable ANSI standards and ASTM testing requirements and shall be subidiary items.

All Components shall be galvanized.

BREAK-AWAY SIGN POST DETAIL

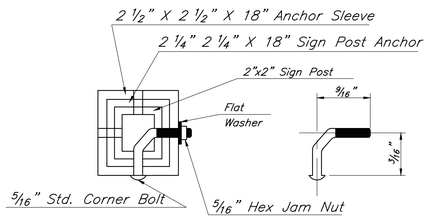
Not to Scale

Sign Notes:

1. All letter, number & symbol sizes, spacing & colors, and the sign colors shall conform to the current "Manual On Uniform Traffic Control Devices."
2. Sign blank material shall be as follows:

Signs 36"X36" or greater	0.100" thick
Guide Signs	0.125" thick
All other signs	0.080" thick

3. All sign mounting hardware shall be galvanized.
4. All sign faces shall be fabricated using ASTM Type III Prismatic reflective sheeting.



SECTION A-A

5/16" CORNER BOLT DETAIL (all bolts)

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

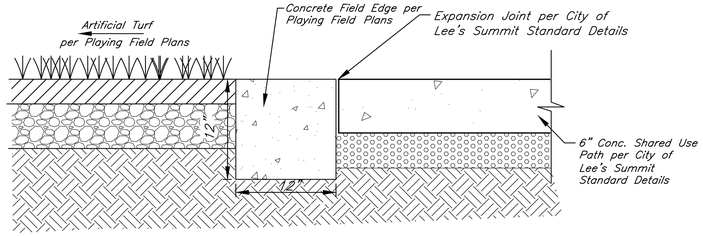
DRAWING TITLE:
Construction Details

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:
C-501

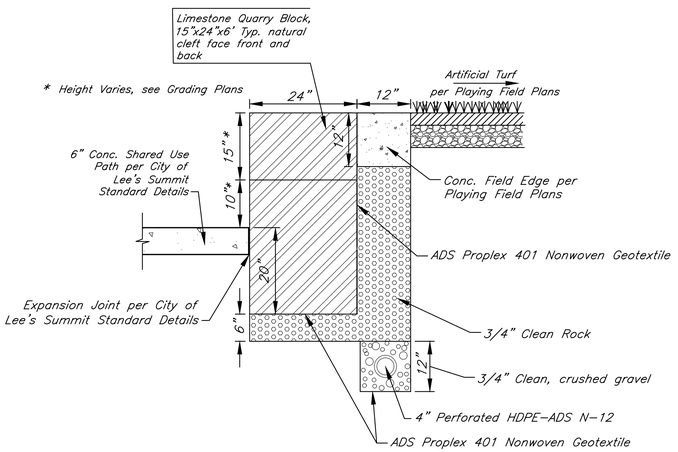
G:\12220\Civil 3D\Production Drawings\Construction Site Plans\12220C2100.dwg Layout: C-501 Construction Details -- Thursday, January 17, 2019, 3:52pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C2100.dwg Layout: C-502 Construction Details -- Thursday, January 17, 2019, 3:52pm -- Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THE PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THE PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059



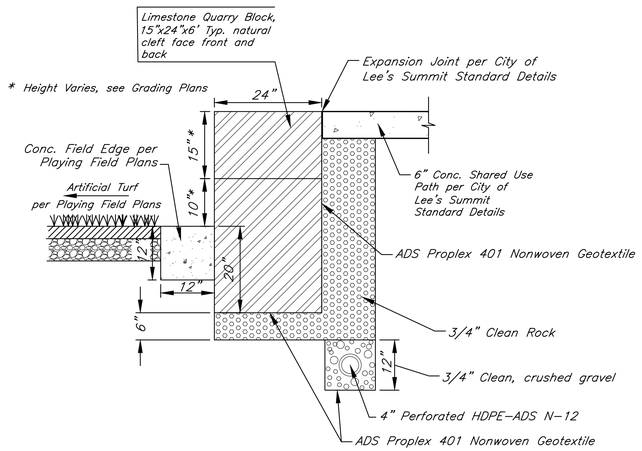
CONCRETE FIELD EDGE DETAIL

To be used between artificial turf installation. See Playing Field Plan.
Not to Scale



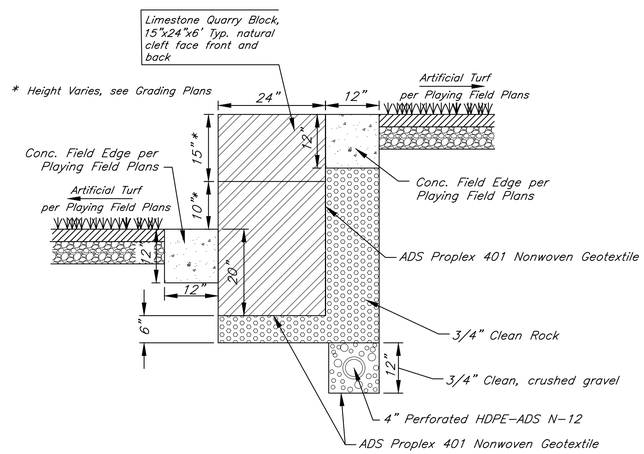
LIMESTONE WALL DETAIL ADJACENT FIELD AND WALK

Not to Scale



LIMESTONE WALL DETAIL ADJACENT FIELD AND WALK

Not to Scale



LIMESTONE WALL DETAIL TWO ADJACENT FIELDS

Not to Scale

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

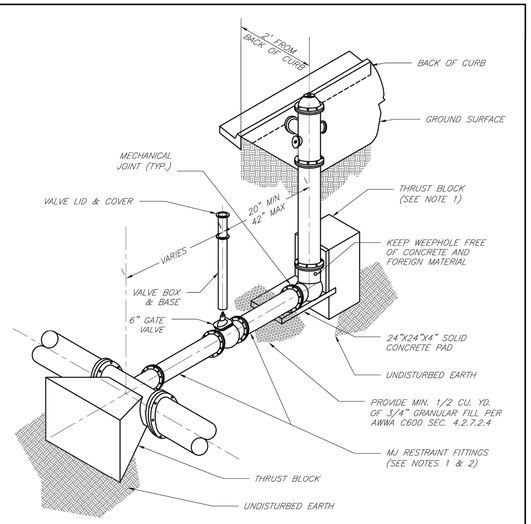
Construction Details

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-502

C:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720c2100.dwg Layout: C-503 Utility Details -- Thursday, January 17, 2019, 3:52pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



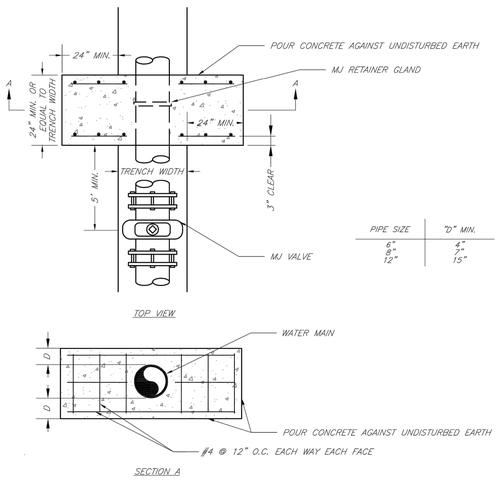
NOTES:

1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT INSTALLATION – STRAIGHT SET

Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-7
Rev:	1/14
Rev:	



TOP VIEW

SECTION A

NOTE:

THIS DETAIL NOT TO BE USED FOR PIPE GREATER THAN 12"

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STRADDLE BLOCK

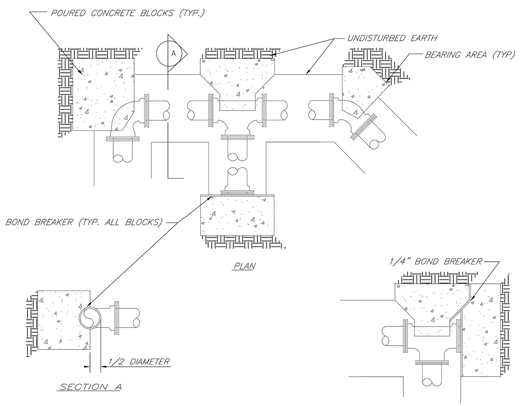
Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-3
Rev:	1/14
Rev:	

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8

NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



SECTION A

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HORIZONTAL THRUST BLOCKS

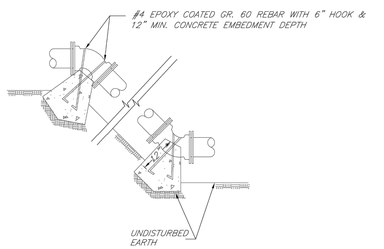
Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-1
Rev:	1/14
Rev:	

REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4

NOTES:

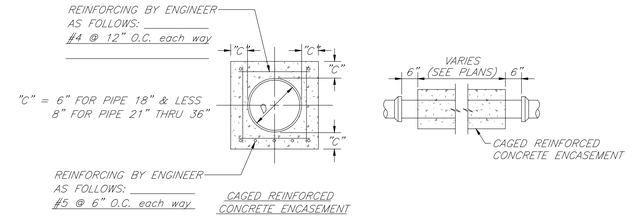
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VERTICAL THRUST BLOCKS

Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	WAT-2
Rev:	1/14
Rev:	

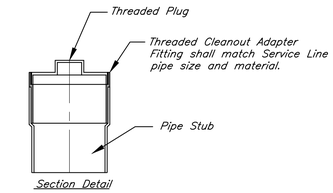


"C" = 6" for pipe 18" & less 8" for pipe 21" thru 36"

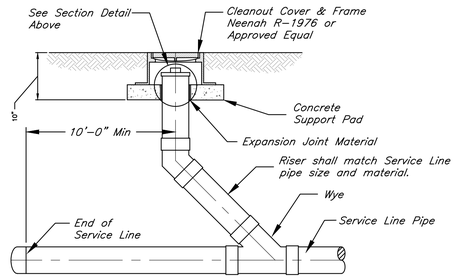
CAGED REINFORCED CONCRETE ENCASEMENT

Not to Scale

Notes:
1. All encasements shall be centered on the crossing.
2. All concrete shall be KCMMB 4K



Section Detail



CLEANOUT DETAIL

No Scale

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

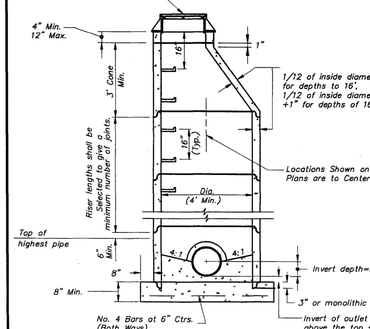
DRAWING TITLE:

Utility Details

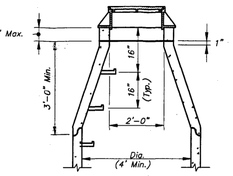
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-503

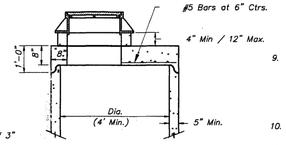


STANDARD PRECAST MANHOLE (ECCENTRIC CONE)



STANDARD PRECAST MANHOLE (CONCENTRIC CONE)

(See Eccentric Cone For Other Details)



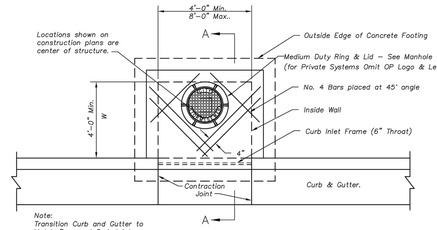
STANDARD PRECAST MANHOLE (SHALLOW TYPE)

(See Eccentric Cone For Other Details)

GENERAL NOTES:

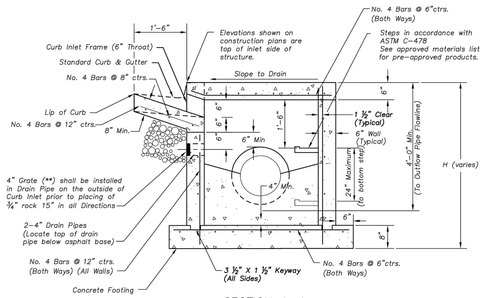
1. *All manholes are to be precast concrete and of Eccentric Cone type unless otherwise specified.*
2. *Manhole top adjustments shall be accomplished by the use of concrete adjustment rings.*
3. *Top of manhole casting shall be set flush and on same slope as finished surface or as directed by the Engineer.*
4. *Reinforcement in all sections shall equal or exceed A.S.T.M. C-478 specifications.*
5. *The engineer shall designate modifications for manholes with special designs.*
6. *The inside diameter of the manhole shall be 4'-0" for pipe diameters from 12" thru 24", 5'-0" for pipe diameters from 27" thru 36", and 6'-0" for pipe diameters 42" thru 48".*
8. *Clearance Tolerance of Pipe Openings: The Maximum Allowable Pipe Opening on a Horizontal Axis Shall be the Outside Diameter of the Pipe Plus 12". The Maximum Allowable Pipe Opening on Vertical Axis Shall be the Outside Diameter Plus 8". The Minimum Clearance Between the Outside Surface of an Installed pipe and the Concrete of the Manhole Shall be 2".*
9. *Installation of Pipe Openings: All required pipe openings shall be plant cast in manhole units. Field alterations of openings will be permitted provided walls are scored with a masonry saw to a depth sufficient to sever reinforcing steel. A chipping hammer may then be used to remove the concrete. Minimum distance between any two adjacent pipes shall be 4".*
10. *No direct payment for shaping floor or connecting pipes as shown on plans.*
11. *Ring & Cover to be Neenah R-1736, Clay & Bailey #2008, Deeter #1316, or approved equal. (Casting may vary by municipality, refer to plans & contract documents.)*
12. *Sanitary Sewers shall be coated and conform to Section 2600.*

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METROPOLITAN CHAPTER
APWA — MANHOLE DETAILS	STANDARD DRAWING NUMBER MH - 1 ADOPTED: APRIL 17, 1996



PLAN

Not to Scale



SECTION A–A

Not to Scale

NON–SETBACK CURB INLET (6"THROAT)

Non–Setback Curb Inlet Notes

General

1. *Overland Park Municipal Code (OPMC) and Overland Park Design and Construction Standards Manual (OPDCSM) are incorporated, except as otherwise noted.*
2. *All storm sewer structures shall be pre–cast or poured in place. If pre–cast structures are used for publicly financed, maintained or administered construction, the tops shall be poured in place and the wall steel shall be left exposed to a height 2" below the finish top elevation, or as directed by the City Engineer.*
3. *Pre–cast shop drawings are to be approved by the City Engineer for publicly financed or administered projects. Pre–cast shop drawings for privately financed projects are to be submitted to the Engineering Services Division of the Planning and Development Services Department upon request.*
4. *Do not scale these drawings for dimensions or clearances. Any questions regarding dimensions shall be brought to the attention of the City Engineer prior to construction.*
5. *On–grade inlets shall conform to the street grade. Sump inlets shall be level.*
6. *The first dimension listed in the construction notes is the "L" dimension. The second dimension is the "W" dimension. The concrete thickness and reinforcement shown is for boxes with ("L"+"H") and ("W"+"H") less than or equal to 20. For boxes with either of these calculations greater than 20, a special design is required.*

Concrete

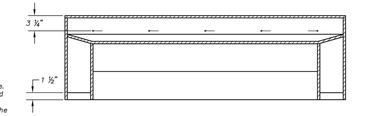
7. *Concrete used in this work shall be KCMMB4K, as approved by the Kansas City Metropolitan Materials Board, and shall meet the requirements of the Overland Park Municipal Code.*
8. *Inlet floors shall be shaped with non–reinforced concrete inverts to provide smooth flow.*
9. *Bevel all exposed edges with ¾" triangular molding.*

Reinforcing Steel

10. *Reinforcing steel shall be new billet, minimum Grade 60 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 +/– ½" shall be permitted.*
12. *All lap splices not shown shall be a minimum of 40 bar diameters in length.*
13. *All reinforcing steel shall be supported on fabricated steel bar supports @ 3'–0" maximum spacing.*
14. *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.*

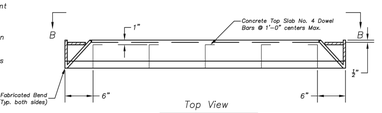
Construction

15. *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.*
16. *All curb inlet tops are to be contructed after final curb string line has been approved by the engineer and prior to curb construction or as directed by the city engineer.*
17. *Pipe connections to pre–cast structures shall have a minimum of 6" of concrete around the entire pipe within 2' of the structure.*
18. *Material selection and compaction requirements for backfill around structures shall be as specified in the Manual of Infrastructure Standards for Right of Way Restoration, as promulgated by the City Engineer.*



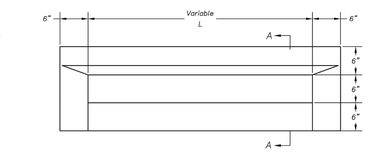
Rear View (Section B–B)

Not to Scale



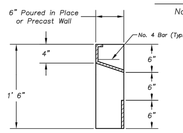
Top View

Not to Scale



Front View

Not to Scale



Side View (Section A–A)

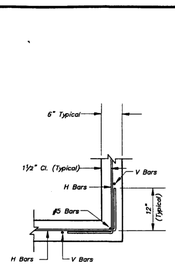
Not to Scale

Curb Inlet Frame Notes

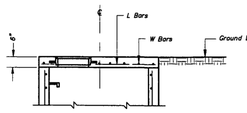
1. *All welds shall be performed in accordance with appropriate AWS Specifications and Procedures.*
2. *All welds on exposed surfaces shall be dressed so as to provide a pleasing finished appearance.*
3. *All flat steel shall be 7 Gage or 3/16" thick.*
4. *The entire frame shall be hot dip zinc coated in accordance with ASTM A–123.*

NON-SETBACK CURB INLET DETAIL

No Scale

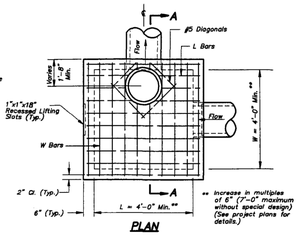


CORNER DETAIL



SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)

NOTE: Ring & Cover to be Neenah R–1537, Clay & Bailey #2020, Deeter #2016, or approved equal. (Casting may vary by municipality, refer to plans & contract documents.)



** Increase in multiples of 6" (7'–0" maximum without special design) (See project plans for details.)

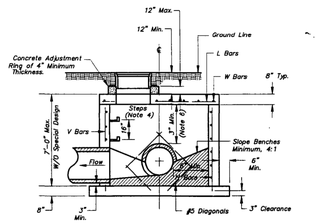
PLAN

GENERAL NOTES:

1. *Locate ring and cover over outlet.*
2. *All work and materials shall conform to Section 2600 APWA.*
3. *Use ¾" Chamfer strip or ½" R edger tool on all exposed concrete corners.*
4. *Steps required at 16" O.C. when depth from top of casting to invert exceeds 4'.*
5. *Boxouts will not be allowed to project through the Corners of the structure and the minimum distance between boxouts is 6" with 1 corner bar.*
6. *The minimum reinforcing shall be 1 H–Bar over a cast–in place pipe and 2 H–Bars over a precast boxout.*
7. *Limit opening height to 6" with No. 5 galvanized bars extending to corner rebars.*
8. *Show field inlet orientation on plans plus number and size of openings locating point at center of structure.*
9. *O.R. = one half outside pipe diameter (O.D.).*
10. *Reinforcing of covers in streets require special design.*
11. *Ring & Cover to be Neenah R–1736, Clay & Bailey #2008, Deeter #1312, or approved equal. (Casting may vary by municipality, refer to plans & contract documents.)*

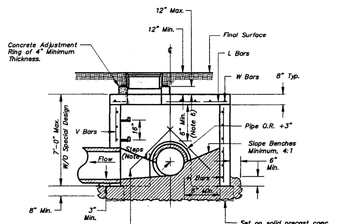
REINFORCING

BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6



SECTION A–A

(Cast In Place)



Set on solid precast conc. blocks. Foundation and invert shall be poured monolithic, unless soil conditions require pouring base slab before setting structure.

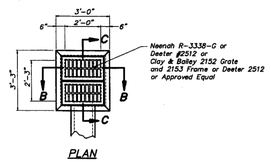
SECTION A–A

(Precast)

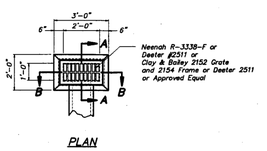
AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METROPOLITAN CHAPTER
APWA — JUNCTION BOX DETAILS	STANDARD DRAWING NUMBER JB – 1 ADOPTED: APRIL 17, 1996

NOTE:

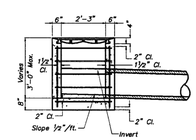
1. Location point at center of inlet.
2. A separate top slab may be utilized.
3. Not recommended for use in areas with bicycle traffic.



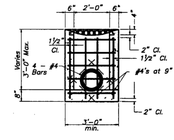
PLAN



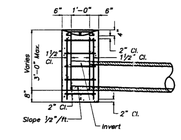
PLAN



SECTION C–C



SECTION B–B



SECTION A–A

DOUBLE GRATE INLET DETAILS | **SINGLE GRATE INLET DETAILS**

AMERICAN PUBLIC WORKS ASSOCIATION	KANSAS CITY METROPOLITAN CHAPTER
APWA — GRATE INLET DETAILS	STANDARD DRAWING NUMBER GI–1 ADOPTED: APRIL 17, 1996

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Storm Sewer Details

JOB NO: 1197 SCALE:

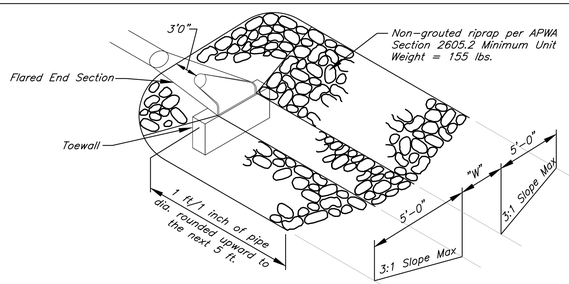
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-504

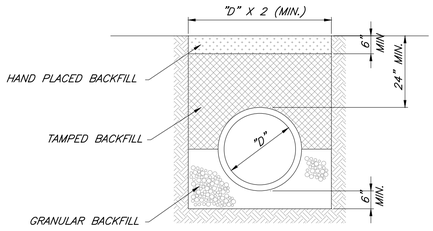
G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C2200.dwg Layout: C-504 Storm Sewer Details -- Thursday January 17, 2019, 3:52pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059

THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

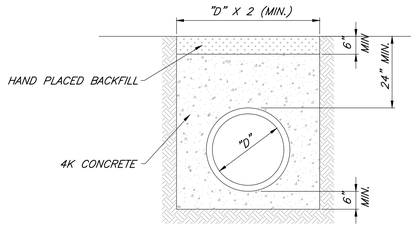


OUTLET EROSION PROTECTION - RIPRAP

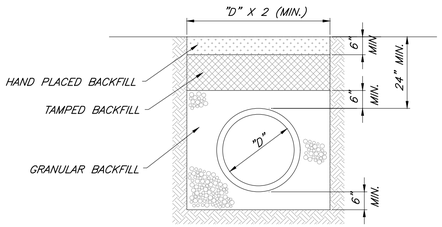
Not to Scale



FIRST CLASS BEDDING (RCP) CLASS B



CONCRETE ENCASEMENT CLASS A



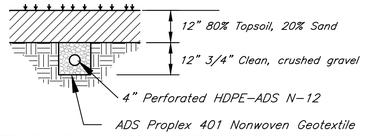
HDPE/PVC PIPE BEDDING CLASS C

NOTES:

1. GRANULAR FILL SHALL BE 1/2" CLEAN ROCK, PLACED IN 6" LIFTS AND COMPACTED BY SLICING WITH A SHOVEL.
2. TAMPED FILL SHALL BE FINELY DIVIDED, JOB EXCAVATED MATERIAL FREE OF DEBRIS, ORGANIC MATERIAL, AND STONES, COMPACTED TO TYPE AA MR-5 COMPACTION.
3. HAND PLACED FILL SHALL BE FINELY DIVIDED MATERIAL, FREE OF DEBRIS AND STONES, COMPACTED TO TYPE AA MR-5 COMPACTION.
4. ALL PIPE SHALL BE INSPECTED PRIOR TO BACKFILL. ALL PIPE COVERED PRIOR TO INSPECTION SHALL BE UNCOVERED AT THE CONTRACTORS EXPENSE.

PIPE BEDDING DETAILS

No Scale

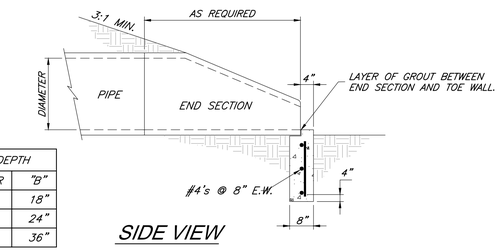


TYPICAL UNDERDRAIN DETAIL

Not to Scale

END SECTION NOTES:

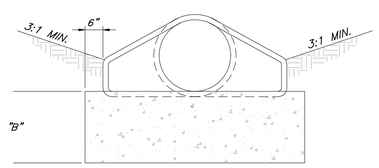
1. THE DEPTH OF THE TOE WALL SHALL BE PER TABLE. IF BEDROCK IS ENCOUNTERED A MINIMUM OF 12" INTO BEDROCK IS REQUIRED.
2. ALL CONCRETE SHALL BE KCMMB-4K.



TABLE

TOE WALL DEPTH	
PIPE DIAMETER	"B"
12" - 21"	18"
24" - 48"	24"
54" - 66"	36"

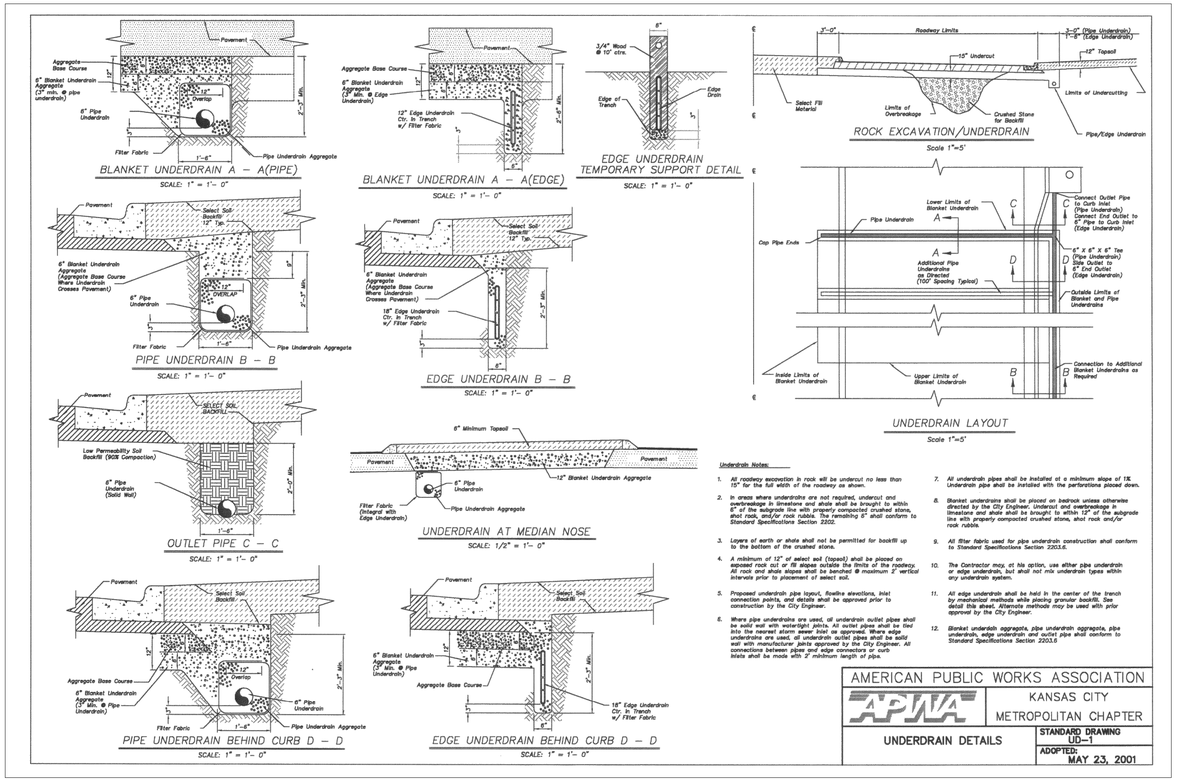
SIDE VIEW



FRONT VIEW

END SECTION DETAIL

NOT TO SCALE



Section 2721

Engineered Surface Drainage Products

GENERAL
PVC surface drainage inlets shall include the drain basin type as indicated on the contract drawing and referenced within the contract specifications. The ductile iron grates for each of these fittings are to be considered an integral part of the surface drainage inlet and shall be furnished by the same manufacturer. The surface drainage inlets shall be as manufactured by Nyloplast a division of Advanced Drainage Systems, Inc., or prior approved equal.

MATERIALS
The drain basins required for this contract shall be manufactured from PVC pipe stock, utilizing a thermoforming process to reform the pipe stock to the specified configuration. The drainage pipe connection stubs shall be manufactured from PVC pipe stock and formed to provide a watertight connection with the specified pipe system. This joint tightness shall conform to ASTM D3212 for joints for drain and sewer plastic pipe using flexible elastomeric seals. The flexible elastomeric seals shall conform to ASTM F477. The pipe bell spigot shall be joined to the main body of the drain basin or catch basin. The raw material used to manufacture the pipe stock that is used to manufacture the main body and pipe stubs of the surface drainage inlets shall conform to ASTM D1784 cell class 12454.

The grates and frames furnished for all surface drainage inlets shall be ductile iron for structure sizes 8", 10", 12", 15", 18", 24", 30" and 36" and shall be made specifically for each basin so as to provide a round bottom flange that closely matches the diameter of the surface drainage inlet. Grates for drain basins shall be capable of supporting various wheel loads as specified by Nyloplast. 12" and 15" square grates will be hinged to the frame using pins. Ductile iron used in the manufacture of the castings shall conform to ASTM A536 grade 70-50-05. Grates and covers shall be provided painted black.

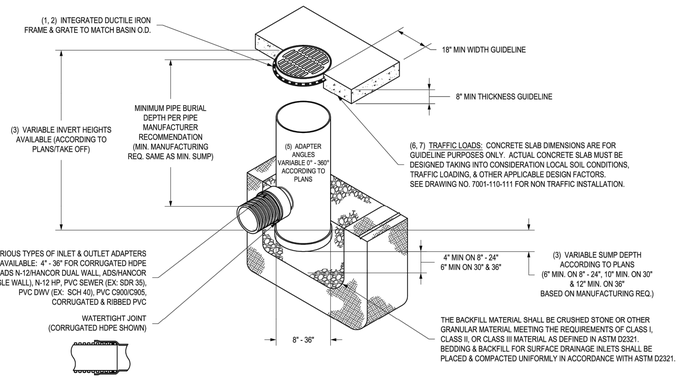
INSTALLATION
The specified PVC surface drainage inlet shall be installed using conventional flexible pipe backfill materials and procedures. The backfill material shall be crushed stone or other granular material meeting the requirements of class 1, class 2, or class 3 material as defined in ASTM D2321. Bedding and backfill for surface drainage inlets shall be well placed and compacted uniformly in accordance with ASTM D2321. The drain basin body will be cut at the time of the final grade. No brick, stone or concrete block will be required to set the grate to the final grade height. For load rated installations, a concrete slab shall be poured under and around the grate and frame. The concrete slab must be designed taking into consideration local soil conditions, traffic loading, and other applicable design factors. For other installation considerations such as migration of fines, ground water, and soft foundations refer to ASTM D2321 guidelines.

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST. ©2011 NYLOPLAST

DRAWN BY	CJA	MATERIAL	
DATE	3-10-00		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	02-21-18		
DWG SIZE	A	SCALE 1:1	SHEET 1 OF 1

Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com
TITLE: 8 IN - 36 IN DRAIN BASIN SPECIFICATIONS
DWG NO. 7001-110-011 REV J

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. RISERS 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" - 36").
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.

THIS PRINT DISCLOSES SUBJECT MATTER IN WHICH NYLOPLAST HAS PROPRIETARY RIGHTS. THE RECEIPT OR POSSESSION OF THIS PRINT DOES NOT CONFER, TRANSFER, OR LICENSE THE USE OF THE DESIGN OR TECHNICAL INFORMATION SHOWN HEREIN REPRODUCTION OF THIS PRINT OR ANY INFORMATION CONTAINED HEREIN, OR MANUFACTURE OF ANY ARTICLE HEREFROM, FOR THE DISCLOSURE TO OTHERS IS FORBIDDEN, EXCEPT BY SPECIFIC WRITTEN PERMISSION FROM NYLOPLAST. ©2011 NYLOPLAST

DRAWN BY	EBC	MATERIAL	
DATE	1-23-06		
REVISED BY	NMH	PROJECT NO./NAME	
DATE	06-12-18		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

Nyloplast
3130 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 J

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Storm Sewer Details

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

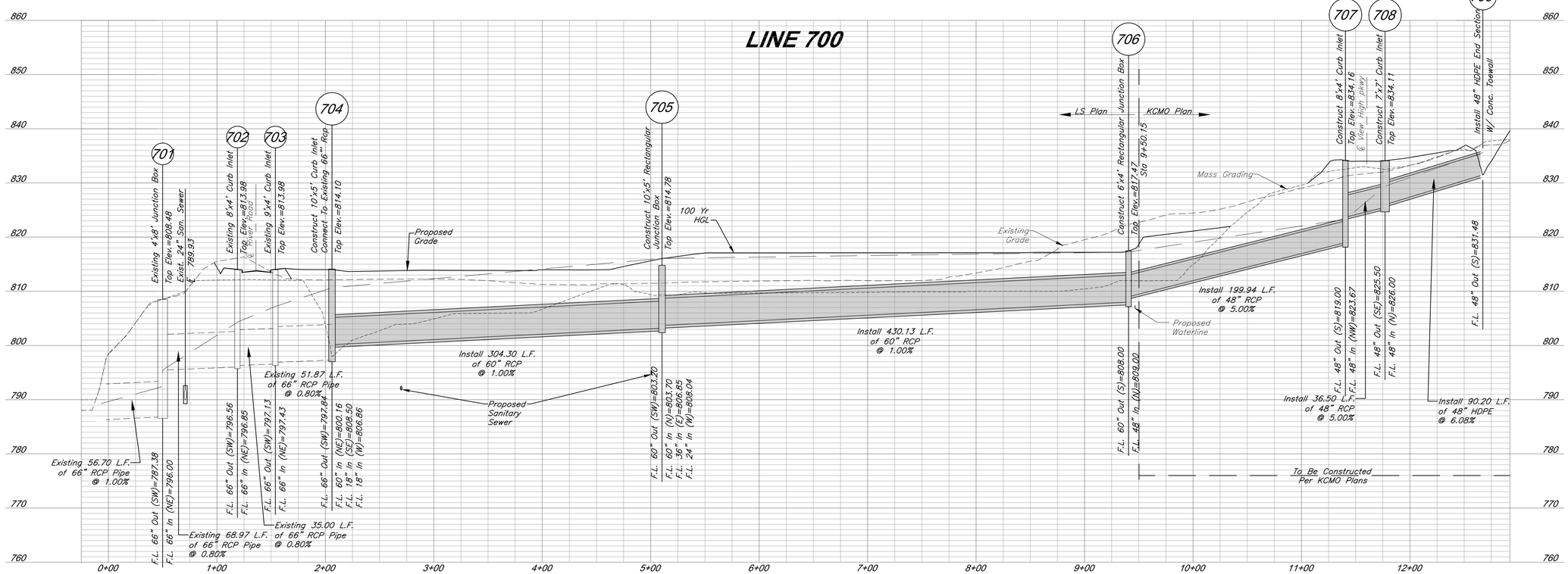
SHEET NO:

C-505

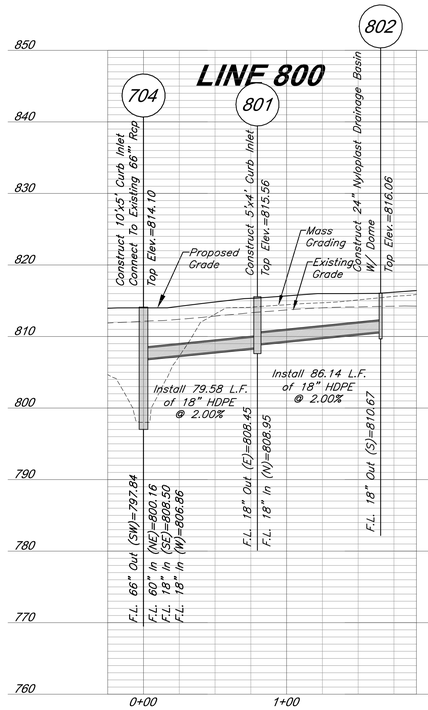
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THE PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMO) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
G:\1272\Civil 3D\Production Drawings\Construction Site Plans\1272002200.dwg Layout: C-505 Storm Sewer Details -- Thursday January 17, 2019, 3:32pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C1400.dwg Layout: C-600 Storm Sewer Profiles -- Thursday, January 17, 2019, 3:53pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

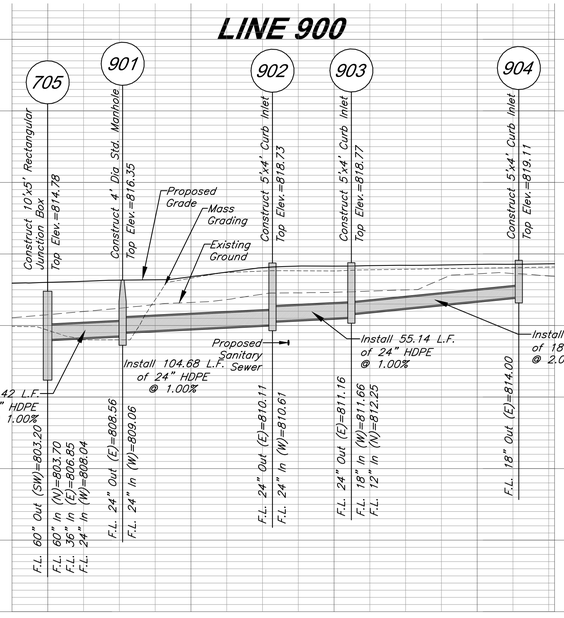
LINE 700



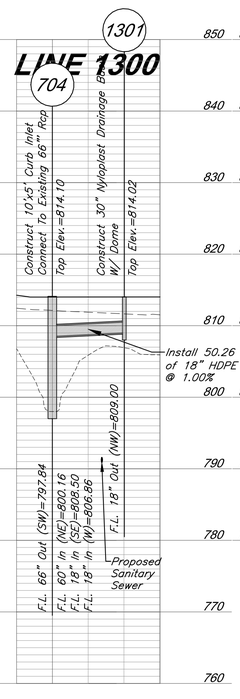
LINE 800



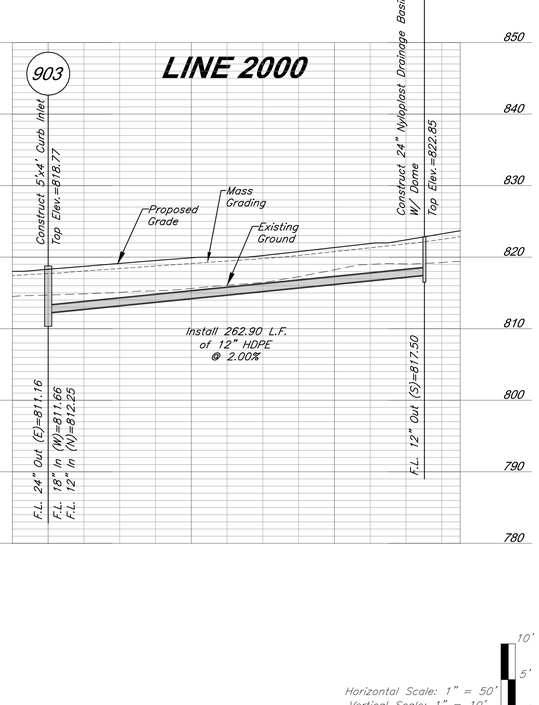
LINE 900



LINE 1300



LINE 2000



Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 10'

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

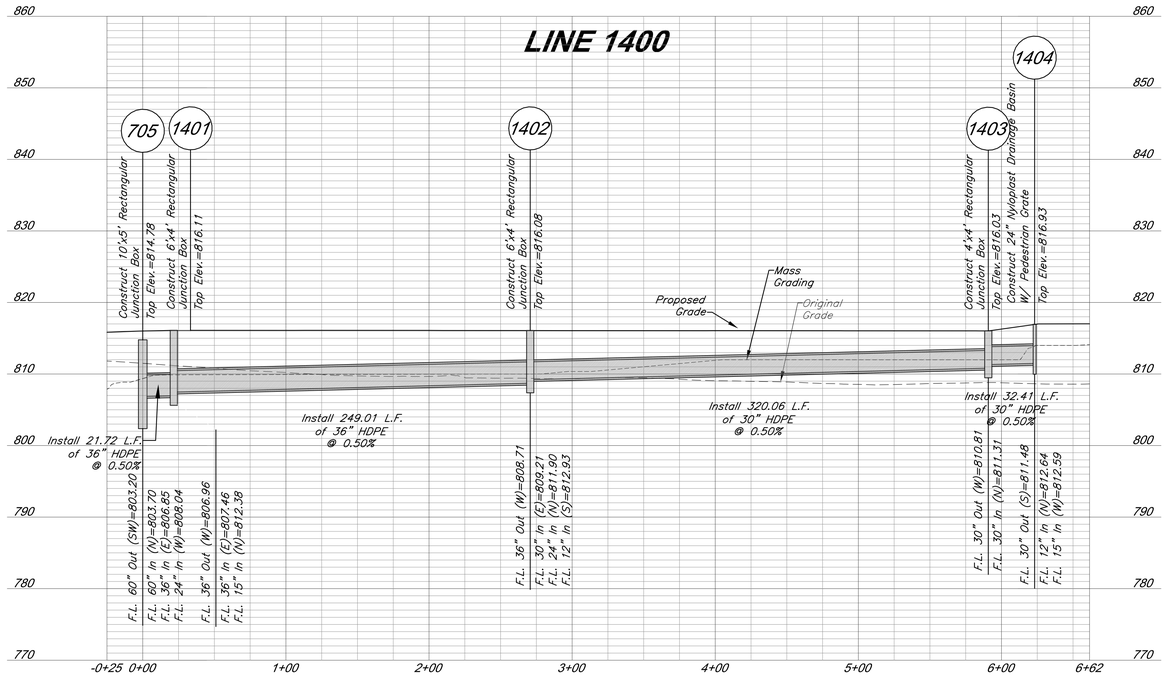
Storm Sewer Profiles

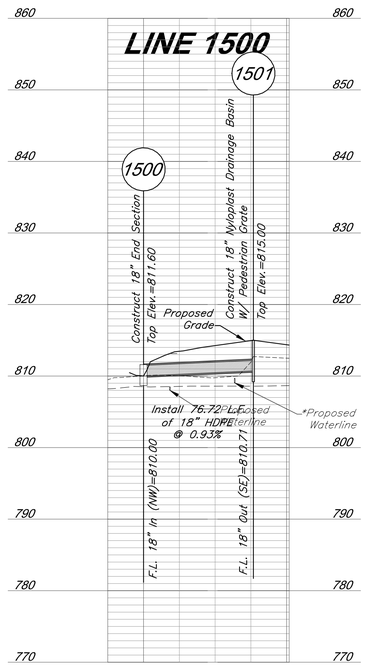
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

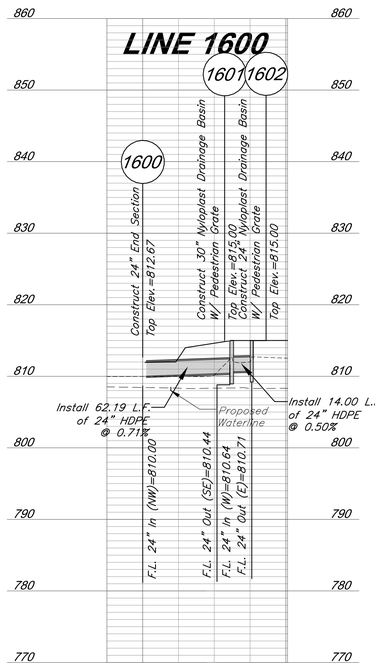
SHEET NO:

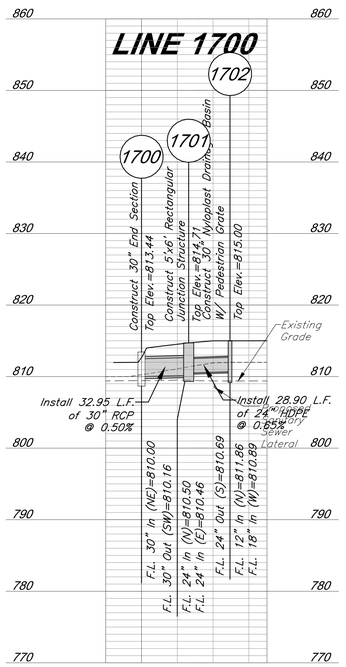
C-600

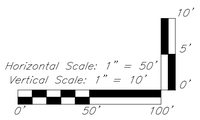
G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C1400.dwg Layout: C-601 Storm Sewer Profiles -- Thursday, January 17, 2019, 3:53pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 0001.33, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.











CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Storm Sewer Profiles

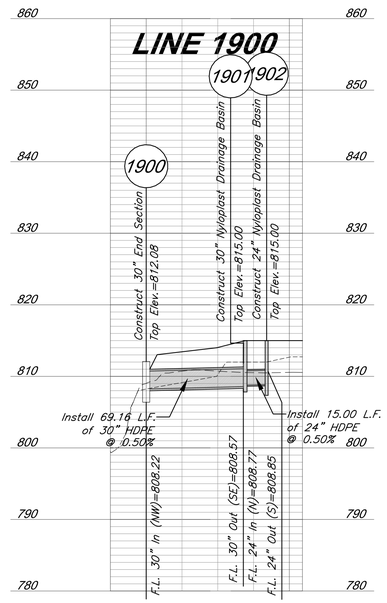
JOB NO: 1197 SCALE:

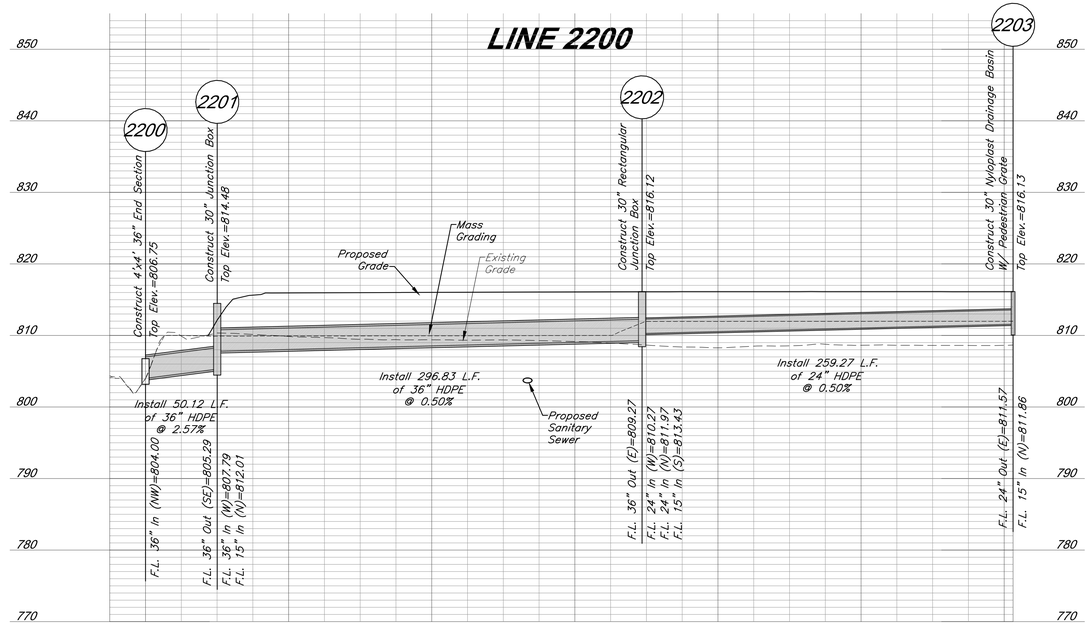
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-601

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C1400.dwg Layout: C-602 Storm Sewer Profiles -- Thursday, January 17, 2019, 3:53pm -- Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





Horizontal Scale: 1" = 50'
Vertical Scale: 1" = 10'

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Storm Sewer Profiles

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-602

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C2000.dwg Layout: C-700 Drainage Map -- Thursday, January 17, 2019, 3:54pm -- Copyright 2019, George Butler Associates, Inc.
Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS PURSUANT TO SECTION 327.411, RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



Legend

- 800 — Proposed Contours
- 800 — Existing Contour
- Proposed Drainage Area
- 0.28 Acres — Drainage Area
- Proposed Storm Sewer
- Future Storm Sewer

100' 0' 100' 200'

SCALE : 1 INCH = 100 FEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Drainage Map

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-700

10 Year Storm | Preliminary - Subject to Change Upon Final Design | Culverts have been designed to the 100 year Storm

Structures		Runoff Calculations									Pipe Design								Design Checks									
From	To	Direct Area (acre)	Line In (acre)	Total Area (acre)	C	K	Tc (min)	Flow Time (min)	Intensity (in/hr)	Design Q (cfs)	Description	Pipe length (lin ft)	Pipe Slope Slope, %	Pipe dia (in)	Manning's n Value	Q full (cfs)	Pipe Area, sf	V full fps	Design V fps	Hw/D	outlet head, H	HW, Inlet Control, (ft)	HW, Outlet Control, (ft)	Inlet Top Elevation	upstream flowline	downstream flowline	Invert Drop (ft)	Downstream water elevation	Hydraulic Grade Elev. (Calculated)	Hydraulic Grade (allowable)	Comments
Line 700 (100 Yr)	709	17.12			0.51	1.25	18.92		6.61	72.2	End Section													N/A					835.49	836.00	
	708			17.12	0.51	1.25	18.92	0.07	6.61	72.2	RCP	90.20	6.08	48	0.013	355.14	12.57	28.26	20.62	1.0	1.12	835.49	830.72		831.50	826.01			829.60		
	708	0.42			0.80	1.25	5.50		10.12	4.2	Curb Inlet													834.22			0.5		829.60	832.39	
	707			17.54	0.52	1.25	18.99	0.03	6.60	74.8	RCP	36.50	5.00	48	0.013	322.06	12.57	25.63	20.84	1.0	0.88	829.60	824.05		825.51	823.69			823.17		
	707	0.22			0.90	1.25	6.21		9.84	2.4	Curb Inlet													834.16			4.67		823.17	832.33	
	706			17.76	0.52	1.25	19.02	0.16	6.59	76.4	RCP	199.94	5.00	48	0.013	322.06	12.57	25.63	20.84	1.0	1.94	823.17	813.91		819.02	809.02			811.97		
	706	0.00			0.80	1.25	5.00		10.32	0.0	Junction Box													817.47			1		811.97	815.64	
	705			17.76	0.52	1.25	19.18	0.62	6.57	76.1	RCP	430.13	1.00	60	0.013	261.14	19.63	13.30	11.60	0.8	1.09	811.97	810.90		808.02	803.72			809.81		
	705	0.00	10.91		0.67	1.25	5.85		9.98	0.0	Curb Inlet													814.78			0.5		809.81	813.45	
	704			28.67	0.64	1.25	19.80	0.35	6.46	149.1	RCP	304.65	1.00	60	0.013	261.14	19.63	13.30	14.43	1.1	3.28	808.87	809.81		803.22	800.17			806.53		
	704	0.66	2.49		0.86	1.25	5.00		10.32	7.3	Curb Inlet													814.1			2.3		806.53	812.77	
	703			31.82	0.66	1.25	20.15	0.06	6.41	168.3	RCP	51.87	0.80	60	0.013	233.57	19.63	11.90	14.78	1.3	1.85	804.13	806.53		797.85	797.44			804.68		
	703	0.25			0.90	1.25	5.00		10.32	2.9	Curb Inlet													813.98			0.3		804.68	812.15	
	702			32.07	0.66	1.25	20.21	0.04	6.40	169.8	RCP	35.00	0.80	60	0.013	233.57	19.63	11.90	14.80	1.3	1.72	803.47	804.68		797.14	796.86			802.96		
	702	0.29			0.90	1.25	5.00		10.32	3.4	Curb Inlet													813.98			0.3		802.96	812.15	
	701			32.36	0.66	1.25	20.25	0.08	6.39	171.7	RCP	68.97	0.80	60	0.013	233.57	19.63	11.90	14.84	1.3	2.09	802.96	795.86		796.56	796.01			793.77		
	701	0.00			0.90	1.25	5.00		10.32	0.0	Junction Box													808.48			8.63		793.77	807.15	
	700			32.07	0.67	1.25	20.25	0.06	6.39	171.7	RCP	56.70	1.00	60	0.013	261.14	19.63	13.30	14.84	1.3	1.97	793.77	791.28		787.38	786.81			789.31		
																												789.31		
Line 700 (25 Yr)	709	17.12			0.51	1.10	18.92		5.38	51.7	End Section													N/A					834.85	836.00	
	708			17.12	0.51	1.10	18.92	0.07	5.38	51.7	RCP	90.20	6.08	48	0.013	355.14	12.57	28.26	20.62	0.8	0.57	834.85	829.49		831.50	826.01			828.92		
	708	0.42			0.80	1.10	5.50		8.35	3.1	Curb Inlet													834.22			0.5		828.92	832.39	
	707			17.54	0.52	1.10	18.99	0.03	5.37	53.6	RCP	36.50	5.00	48	0.013	322.06	12.57	25.63	20.84	0.9	0.45	828.92	822.90		825.51	823.69			822.45		
	707	0.22			0.90	1.10	6.21		8.12	1.8	Curb Inlet													834.16			4.67		822.45	832.33	
	706			17.76	0.52	1.10	19.02	0.16	5.37	54.7	RCP	199.94	5.00	48	0.013	322.06	12.57	25.63	20.84	0.9	0.99	822.45	812.67		819.02	809.02			811.68		
	706	0.00			0.80	1.10	5.00		8.53	0.0	Junction Box													817.47			1		811.68	815.64	
	705			17.76	0.52	1.10	19.18	0.62	5.34	54.5	RCP	430.13	1.00	60	0.013	261.14	19.63	13.30	11.60	0.7	0.56	811.68	808.31		808.02	803.72			807.75		
	705	0.00	10.91		0.67	1.10	5.85		8.24	0.0	Curb Inlet													814.78			0.5		807.75	813.45	
	704			28.67	0.64	1.10	19.80	0.35	5.26	106.8	RCP	304.65	1.00	60	0.013	261.14	19.63	13.30	14.43	0.9	1.68	807.75	804.98		803.22	800.17			803.30		
	704	0.66	2.49		0.86	1.10	5.00		8.53	5.3	Curb Inlet													814.1			2.3		803.30	812.77	
	703			31.82	0.66	1.10	20.15	0.06	5.21	120.4	RCP	51.87	0.80	60	0.013	233.57	19.63	11.90	14.78	1.0	0.95	802.70	803.30		797.85	797.44			802.35		
	703	0.25			0.90	1.10	5.00		8.53	2.1	Curb Inlet													813.98			0.3		802.35	812.15	
	702			32.07	0.66	1.10	20.21	0.04	5.20	121.5	RCP	35.00	0.80	60	0.013	233.57	19.63	11.90	14.80	1.0	0.88	802.02	802.35		797.14	796.86			801.47		
	702	0.29			0.90	1.10	5.00		8.53	2.4	Curb Inlet													813.98			0.3		801.47	812.15	
	701			32.36	0.66	1.10	20.25	0.08	5.20	122.9	RCP	68.97	0.80	60	0.013	233.57	19.63	11.90	14.84	1.0	1.07	801.47	793.36		796.56	796.01			792.29		
	701	0.00			0.90	1.10	5.00		8.53	0.0	Junction Box													808.48			8.63		792.29	807.15	
	700			32.07	0.67	1.10	20.25	0.06	5.20	122.9	RCP	56.70	1.00	60	0.013	261.14	19.63	13.30	14.84	1.0	1.01	792.29	790.32		787.38	786.81			789.31		
																												789.31		
Line 800	804	0.52			0.90	1.00	5.00		7.35	3.4	Area Inlet													816.06					811.83	814.73	
	801			0.52	0.90	1.00	5.00	0.16	7.35	3.4	HDPE	86.14	2.00	18	0.01	19.36	1.77	10.96	9.07	0.8	0.27	811.83	810.53		810.67	808.95			810.25		
	801	0.68			0.90	1.00	5.50		7.20	4.4	Curb Inlet													815.12			0.5		810.25	813.79	
	705			1.20	0.90	1.00	5.16	0.12	7.30	7.9	HDPE	79.58	2.00	18	0.01	19.36	1.77	10.96	10.64	1.2	1.36	810.25	808.97		808.45	806.86			807.61		Connect to Line 700
																												807.61		
Line 900	904	0.74			0.74	1.00	5.00		7.35	4.0	Area Inlet													819.11					815.57	817.78	
	903			0.74	0.74	1.00	5.00	0.24	7.35	4.0	HDPE	117.00	2.00	18	0.01	19.36	1.77	10.96	8.02	0.8	0.48	815.22	815.57		814.00	811.66			815.09		
	903	0.86	0.32		0.80	1.00	5.00		7.35	5.1	Area Inlet													818.77			0.5		815.09	817.44	
	902			1.92	0.78	1.00	5.24	0.09	7.28	10.9	HDPE	55.14	1.00	24	0.01	29.49	3.14	9.39	10.17	0.9	0.50	812.98	815.09		811.16	810.61			814.59		
	902	0.89			0.80	1.00	5.50		7.20	5.1	Area Inlet													818.73			0.5		814.59	817.40	
	901			2.81	0.78	1.00	5.33	0.15	7.25	16.0	HDPE	104.77	1.00	24	0.01	29.49	3.14	9.39	11.52	1.2	1.64	812.48	814.59		810.11	809.06			812.95		
	901	0.00	2.01		0.80	1.00	5.50		7.20	0.0	Manhole													816.35			0.5		812.95	815.02	
	802			4.82	0.79	1.00	5.49	0.07	7.21	27.5	HDPE	52.42	1.00	24	0.01	29.49	3.14	9.39	11.78	2.2	3.13	812.95	812.17		808.56	808.04			809.04			Connect to Line 700
																												809.04		
Line 1300	1301	1.29			0.70	1.00	5.00		7.35	6.6	Area Inlet													814.00					810.57	812.17	
	3304			1.29	0.70	1.00	5.00	0.10	7.35	6.6	HDPE	50.26	1.00	18	0.01	13.69	1.77	7.75	8.36	1.0	0.71	810.57	809.96		809.00	808.50			809.25			Connect to Line 700
																												809.25		
Line 1400	1405	1.14			0.84	1.00	7.54		6.64	6.4	Area Inlet													817.04					814.39	815.71	
	1403			1.14	0.84	1.00	0.00	0.11	9.31	8.9	HDPE	32.41	0.50	30	0.01	37.81	4.91	7.70	5.13	0.7	0.10	813.27	814.39		811.47	811.30			814.29		
	1403	0.81			0.86	1.00	6.84		6.83	4.8	Curb Inlet													816.45			0.5		814.29	815.12	
	1402			1.95	0.85	1.00	0.11	0.80	9.26	15.3	HDPE	320.06	0.50	30	0.01	37.81	4.91	7.70	6.68	0.8	1.17	812.87	814.29		810.80	809.20			813.13		
	1402	3.00			0.90	1.00	6.87		6.82	18.4	Curb Inlet													816.39			0.5		813.13	815.06	
	1401			4.95	0.88	1.00	0.90	0.39	8.88	38.7	HDPE	249.01	0.50	36	0.01	61.48	7.07	8.70	10.67	1.1	2.41	811.91	813.13		808.70	807.46			810.72		
	1401	1.14			0.90	1.00	5.56		7.18	7.4	Curb Inlet													816.16			0.5		810.72	814.83	Connect to Line 700
	1400			6.09	0.88	1.00	1.29	0.03	8.71	46.9	HDPE	21.72	0.50	36	0.01	61.48	7.07	8.70	11.66	1.3	1.06	810.72	809.41		806.96	806.85			808.35		
																												808.35		
Line 1500	1501	1.14			0.86	1.00	5.00		7.35	7.2	Area Inlet													815.00					812.62	813.67	
	1500			1.14	0.86	1.00	5.00	0.21	7.35	7.2	HDPE	76.72	1.24	18	0.01	15.25	1.77	8.63	6.04	1.1	1.11	812.62	811.86		810.95	810.00			810.75		
																												810.75		
Line 1600	1602	1.14			0.90	1.00	5.00		7.35	7.5	Area Inlet													815.00					813.13	813.68	
	1601			1.14	0.90	1.00	5.00	0.04	7.35	7.5	HDPE	14.00	1.00	24	0.01	29.49	3.14	9.39	6.64	0.8	0.14	812.52	813.13		810.95	810.81			812.99		
	1601	1.30			0.90	1.00	5.00		7.35	8.6	Area Inlet													815.00			0.21		812.99	813.67	
	1600			2.44	0.90	1.00	5.04	0.08	7.34	16.1	HDPE	34.80	1.72	24	0.01	38.67	3.14	12.31	7.51	1.2	0.88	812.99	811.88		810.60	810.00			811.00		
																												811.00		
Line 1700	1602	1.64			0.90	1.00	5.00		7.35	10.9	Area Inlet													815.00					813.33	813.68	
	1601			1.64	0.90	1.00	5.00	0.07	7.35	10.9	HDPE	28.90	0.65	24	0.01	23.77	3.14	7.57	7.39	0.9	0.37	812.37	813.33		810.55	810.36			812.96		
	1601	2.31			0.90	1.00	5.00		7.35	15.3	Area Inlet													814.71			0.2		812.96	813.38	
	1600			3.95	0.90	1.00	5.07	0.07	7.33	26.1	RCP	32.95	0.50	30	0.013	29.08	4.91	5.92	8.29	1.1	0.82	812.96	812.07		810.16	810.00			811.25		
																												811.25		
Line 1900	1902	3.43			0.90	1.00	5.79		7.12	22.0	Area Inlet													815.00					815.76	813.67	
	1901			3.43	0.90	1.00	5.79	0.04	7.12	22.0	HDPE	15.00	0.50	24	0.01	20.85	3.14	6.64	6.23	1.6	1.22	812.83	815.76		809.55	809.47			814.54		
	1901	3.85			0.90	1.00	5.79		7.12	24.7	Area Inlet													815.00			0.2		814.54	813.67	
	1900			7.28	0.90	1.00	5.79	0.15	7.12	46.6	HDPE	76.00	0.50	30	0.01	37.81	4.91	7.70	8.49	2.1	3.85	814.54	813.99		809.27	808.89			810.14		
																												810.14		
Line 2000	2001	0.32			0.80	1.00	5.00		7.35	1.9	Area Inlet													822.85					818.40	821.52	
	902			0.32	0.80	1.00	5.00	0.57	7.35	1.9	HDPE	262.40	2.00	12	0.01	6.57	0.79	8.36	7.65	0.9	1.72	818.40	814.47		817.50	812.25			812.75			Connect to Line 900
																												812.75		
Line 2200	2204	1.42			0.90	1.00	5.00		7.35	9.4	Area Inlet													816.13					813.22	814.80	
	2203			1.42	0.90	1.00	5.00	0.72	7.35	9.4	HDPE	251.02	0.50	24	0.01	20.85	3.14	6.22	5.84	0.8	1.12	813.22	813.05		811.53	810.27			811.93		
	2203	3.01			0.90	1.00	5.00		7.35	19.9	Area Inlet													816.12			1		811.93	814.79	
	2202			4.43	0.90	1.00	5.72	0.71	7.14	28.5	HDPE	296.83	0.50	36	0.01	61.48	7.07	8.61	6.97	0.9	1.50	811.93	809.85		809.27	807.79			808.35		
	2202	1.40			0.90	1.00	5.00		7.35	9.3	Area Inlet													814.00			2.5		808.35	812.67	
	2200			5.83	0.90	1.00	6.43	0.10	6.94	36.4	HDPE	50.12	2.57	36	0.01	139.38	7.07	19.72	8.11	1.0	0.82	808.35	806.32		805.29	804.00			805.50		
	2200																											805.50		

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Drainage Calculations

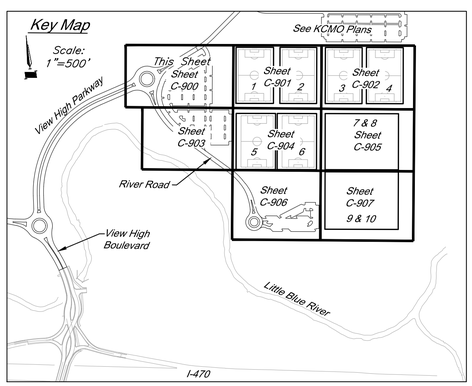
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-800

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720c2000.dwg Layout: C-800 Drainage Calculations -- Thursday, January 17, 2019, 3:54pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





EROSION CONTROL STAGING CHART

Project Phase	Reference No.	Description	Remove After Phase:	Notes
1 – Place Erosion Control Prior to Land Disturbance	(1)	Install Perimeter Silt Fence	4	Install as shown on plans
	(2)	Construct Gravel Construction Entrance	4	Install as shown on plans
	(3)	Construct Concrete Wash-out	4	Install as shown on plans
	(4)	Install Adjacent Inlet Protection	4	Install as shown on plans
2 – After Stripping, Grubbing, and Mass Grading	(5)	Install Interior Silt Fence	4	Install as shown on plans
	(6)	Install Straw Wattles	4	Install as shown on plans
3 – After Storm Sewer Construction	(7)	Install Inlet Protection	4	Install as shown on plans
4 – Final Grading, Paving, and Landscaping	(8)	Install Erosion Control Blanket	N/A	Install as shown on plans
	(9)	Final Grading, Seeding, Sodding, and Landscaping of all disturbed areas	N/A	Interior erosion control measures and inlet protection may be removed once seed and sodded areas are established to cover 80% of the site.

Erosion Control Legend

- Straw Wattle
- Sediment Fence
- Temporary Construction Entrance
- Inlet Sediment Trap
- Concrete Wash-out

30' 0' 30' 60'

SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St. Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

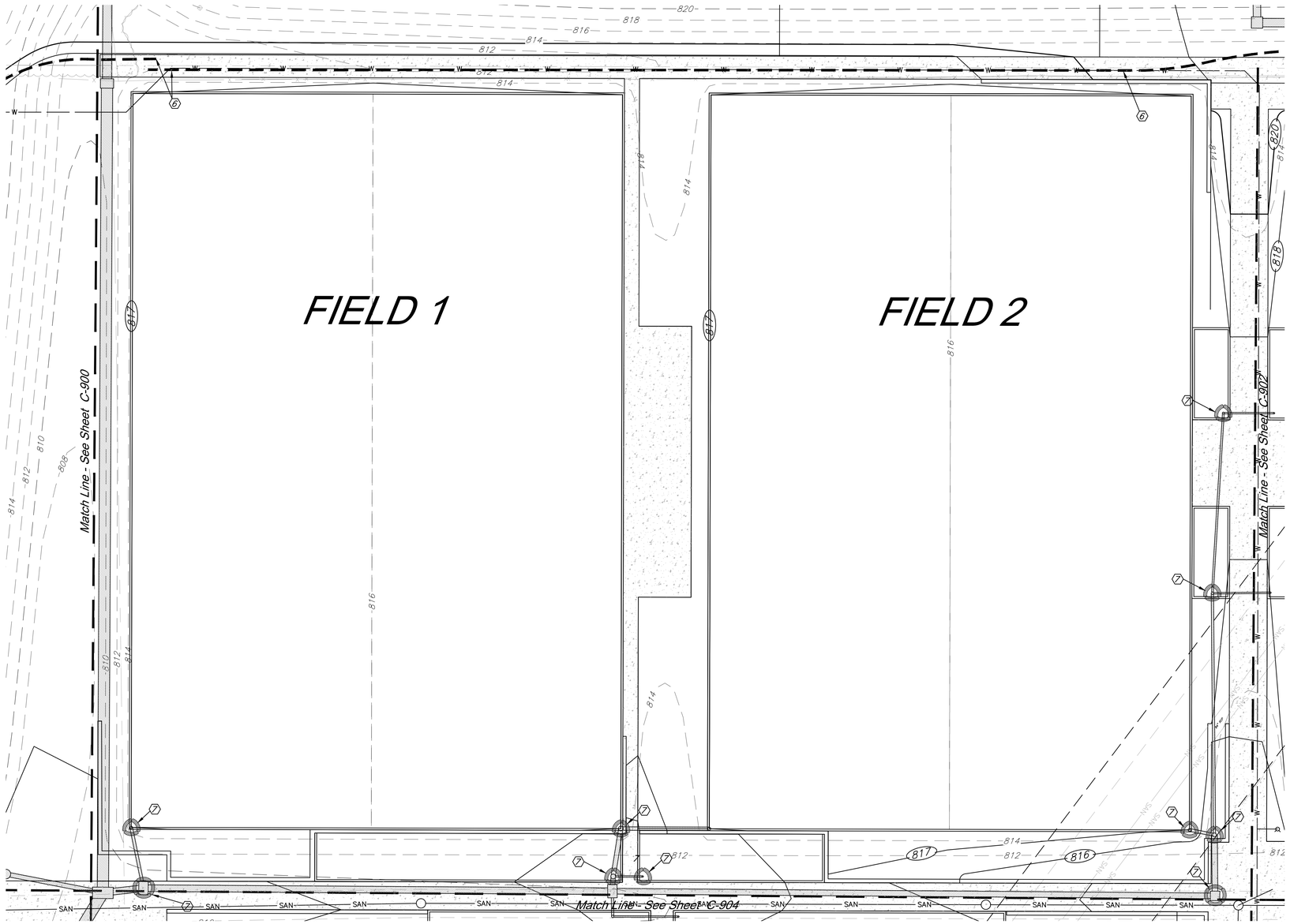
Erosion Control Plan

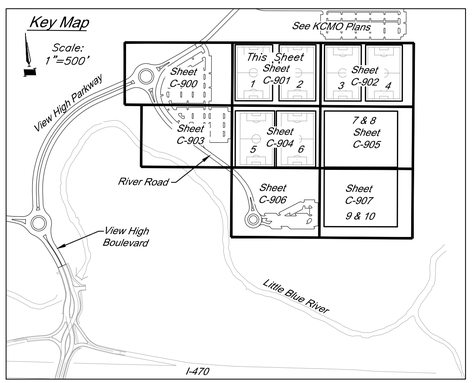
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-900

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4000.dwg Layout: C-900 Erosion Control Plan -- Thursday, January 17, 2019, 3:56pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





EROSION CONTROL STAGING CHART

Project Phase	Reference No.	Description	Remove After Phase:	Notes
1 – Place Erosion Control Prior to Land Disturbance	1	Install Perimeter Silt Fence	4	Install as shown on plans
	2	Construct Gravel Construction Entrance	4	Install as shown on plans
	3	Construct Concrete Wash-out	4	Install as shown on plans
	4	Install Adjacent Inlet Protection	4	Install as shown on plans
2 – After Stripping, Grubbing, and Mass Grading	5	Install Interior Silt Fence	4	Install as shown on plans
	6	Install Straw Wattles	4	Install as shown on plans
3 – After Storm Sewer Construction	7	Install Inlet Protection	4	Install as shown on plans
4 – Final Grading, Paving, and Landscaping	8	Install Erosion Control Blanket	N/A	Install as shown on plans
	9	Final Grading, Seeding, Sodding, and Landscaping of all disturbed areas	N/A	Interior erosion control measures and inlet protection may be removed once seed and sodded areas are established to cover 80% of the site.

Erosion Control Legend

- Straw Wattle
- Sediment Fence
- Inlet Sediment Trap

30' 0' 30' 60'

SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of 1470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Erosion Control Plan

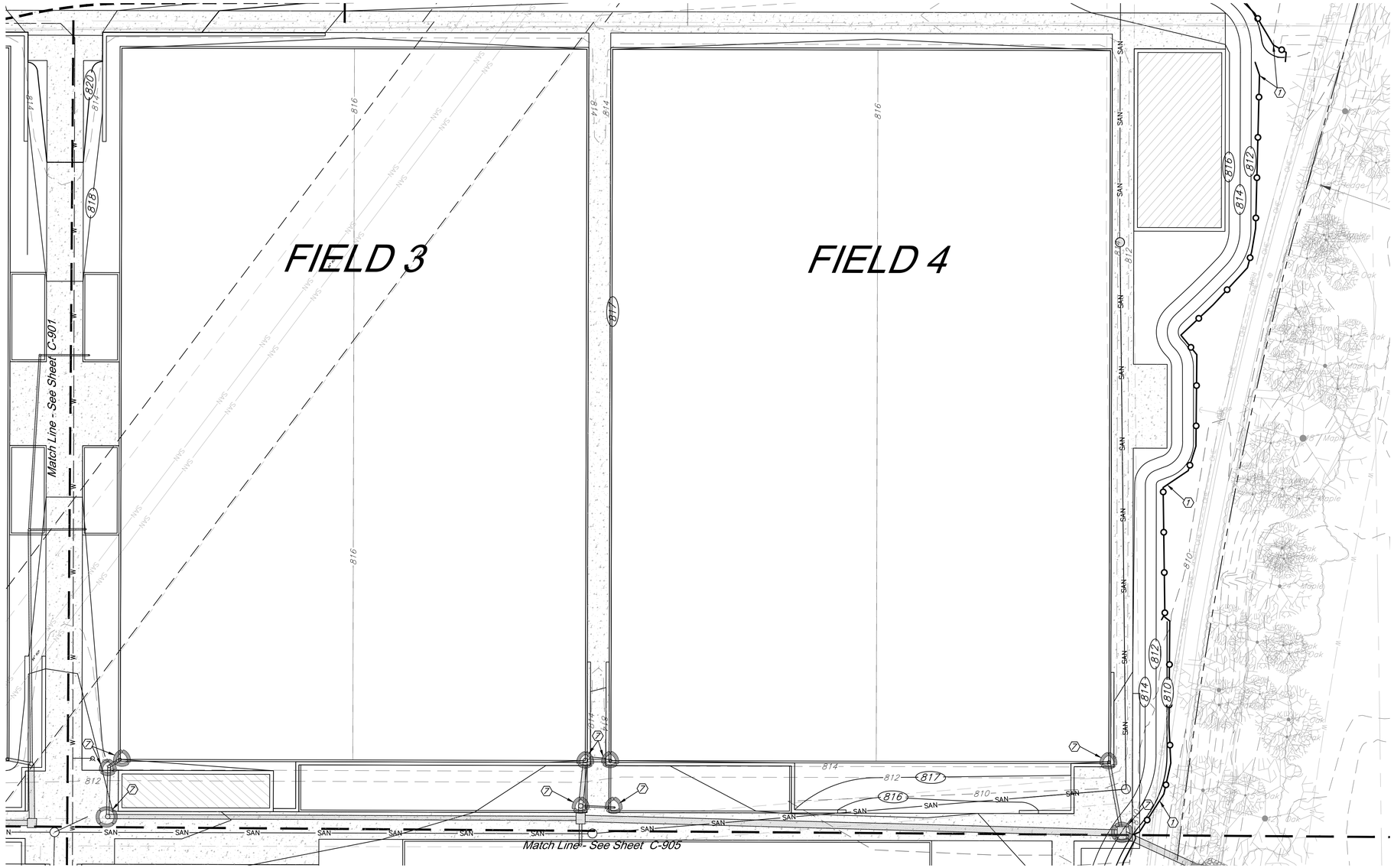
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

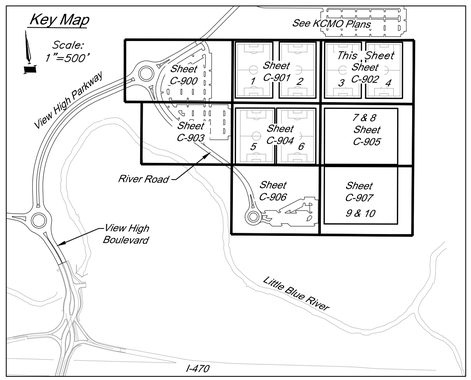
SHEET NO:

C-901

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4000.dwg Layout: C-901 Erosion Control Plan -- Thursday January 17, 2019, 3:57pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4000.dwg Layout: C-902 Erosion Control Plan -- Thursday January 17, 2019, 3:58pm -- Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059





EROSION CONTROL STAGING CHART

Project Phase	Reference No.	Description	Remove After Phase:	Notes
1 – Place Erosion Control Prior to Land Disturbance	1	Install Perimeter Silt Fence	4	Install as shown on plans
	2	Construct Gravel Construction Entrance	4	Install as shown on plans
	3	Construct Concrete Wash-out	4	Install as shown on plans
	4	Install Adjacent Inlet Protection	4	Install as shown on plans
2 – After Stripping, Grubbing, and Mass Grading	5	Install Interior Silt Fence	4	Install as shown on plans
	6	Install Straw Wattles	4	Install as shown on plans
3 – After Storm Sewer Construction	7	Install Inlet Protection	4	Install as shown on plans
4 – Final Grading, Paving, and Landscaping	8	Install Erosion Control Blanket	N/A	Install as shown on plans
	9	Final Grading, Seeding, Sodding, and Landscaping of all disturbed areas	N/A	Interior erosion control measures and inlet protection may be removed once seed and sodded areas are established to cover 80% of the site.

Erosion Control Legend

- Straw Wattle
- Sediment Fence
- Inlet Sediment Trap

30' 0' 30' 60'
SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

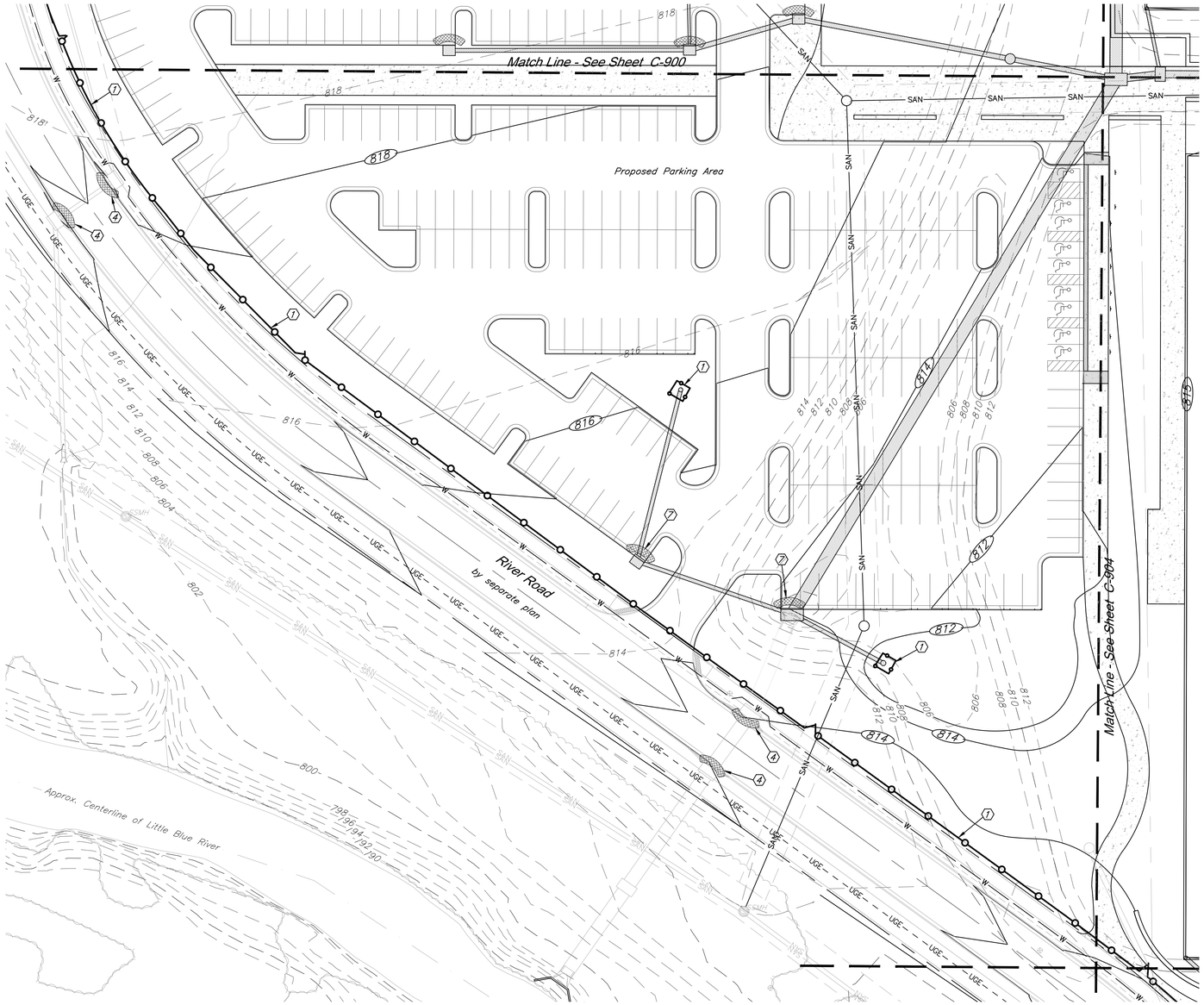
Erosion Control Plan

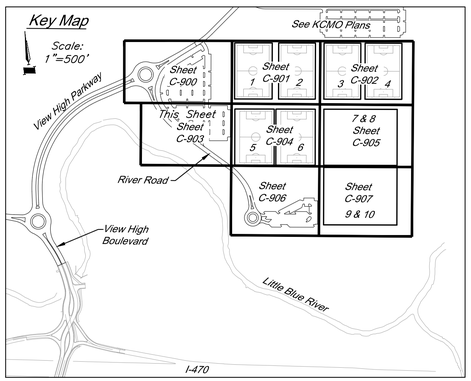
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-902

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4000.dwg Layout: C-903 Erosion Control Plan -- Thursday January 17, 2019, 3:58pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





EROSION CONTROL STAGING CHART

Project Phase	Reference No.	Description	Remove After Phase:	Notes
1 – Place Erosion Control Prior to Land Disturbance	1	Install Perimeter Silt Fence	4	Install as shown on plans
	2	Construct Gravel Construction Entrance	4	Install as shown on plans
	3	Construct Concrete Wash-out	4	Install as shown on plans
	4	Install Adjacent Inlet Protection	4	Install as shown on plans
2 – After Stripping, Grubbing, and Mass Grading	5	Install Interior Silt Fence	4	Install as shown on plans
	6	Install Straw Wattles	4	Install as shown on plans
3 – After Storm Sewer Construction	7	Install Inlet Protection	4	Install as shown on plans
4 – Final Grading, Paving, and Landscaping	8	Install Erosion Control Blanket	N/A	Install as shown on plans
	9	Final Grading, Seeding, Sodding, and Landscaping of all disturbed areas	N/A	Interior erosion control measures and inlet protection may be removed once seed and sodded areas are established to cover 80% of the site.

Erosion Control Legend

- Straw Wattle
- Sediment Fence
- Inlet Sediment Trap

30' 0' 30' 60'

SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

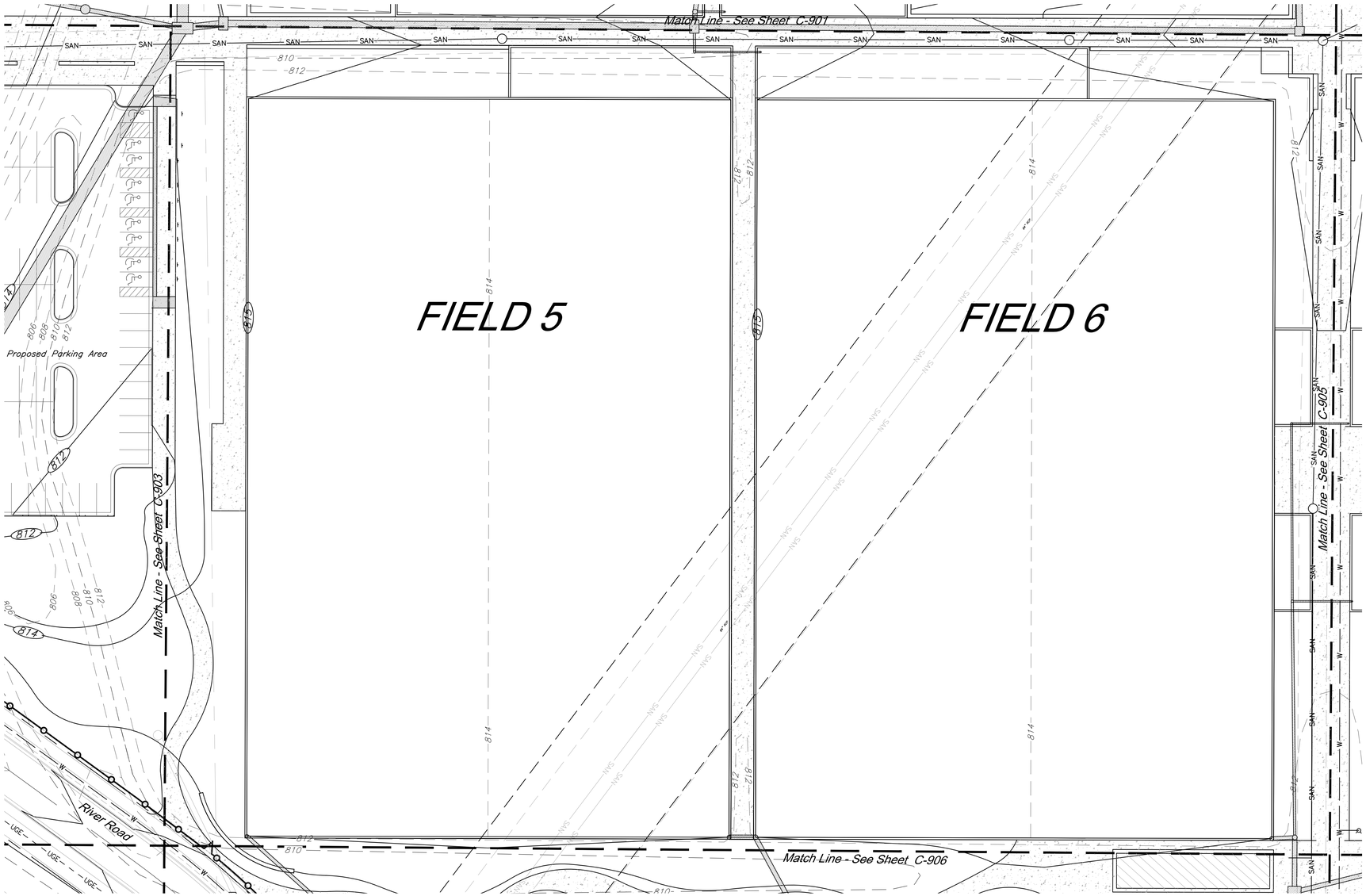
DRAWING TITLE:

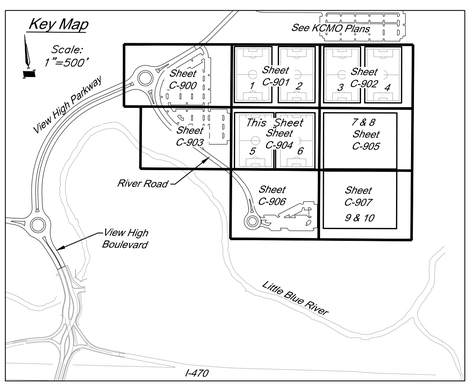
Erosion Control Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-903





EROSION CONTROL STAGING CHART

Project Phase	Reference No.	Description	Remove After Phase:	Notes
1 – Place Erosion Control Prior to Land Disturbance	1	Install Perimeter Silt Fence	4	Install as shown on plans
	2	Construct Gravel Construction Entrance	4	Install as shown on plans
	3	Construct Concrete Wash-out	4	Install as shown on plans
	4	Install Adjacent Inlet Protection	4	Install as shown on plans
2 – After Stripping, Grubbing, and Mass Grading	5	Install Interior Silt Fence	4	Install as shown on plans
	6	Install Straw Wattles	4	Install as shown on plans
3 – After Storm Sewer Construction	7	Install Inlet Protection	4	Install as shown on plans
4 – Final Grading, Paving, and Landscaping	8	Install Erosion Control Blanket	N/A	Install as shown on plans
	9	Final Grading, Seeding, Sodding, and Landscaping of all disturbed areas	N/A	Interior erosion control measures and inlet protection may be removed once seed and sodded areas are established to cover 80% of the site.

Erosion Control Legend

- Straw Wattle
- Sediment Fence
- Inlet Sediment Trap

30' 0' 30' 60'

SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

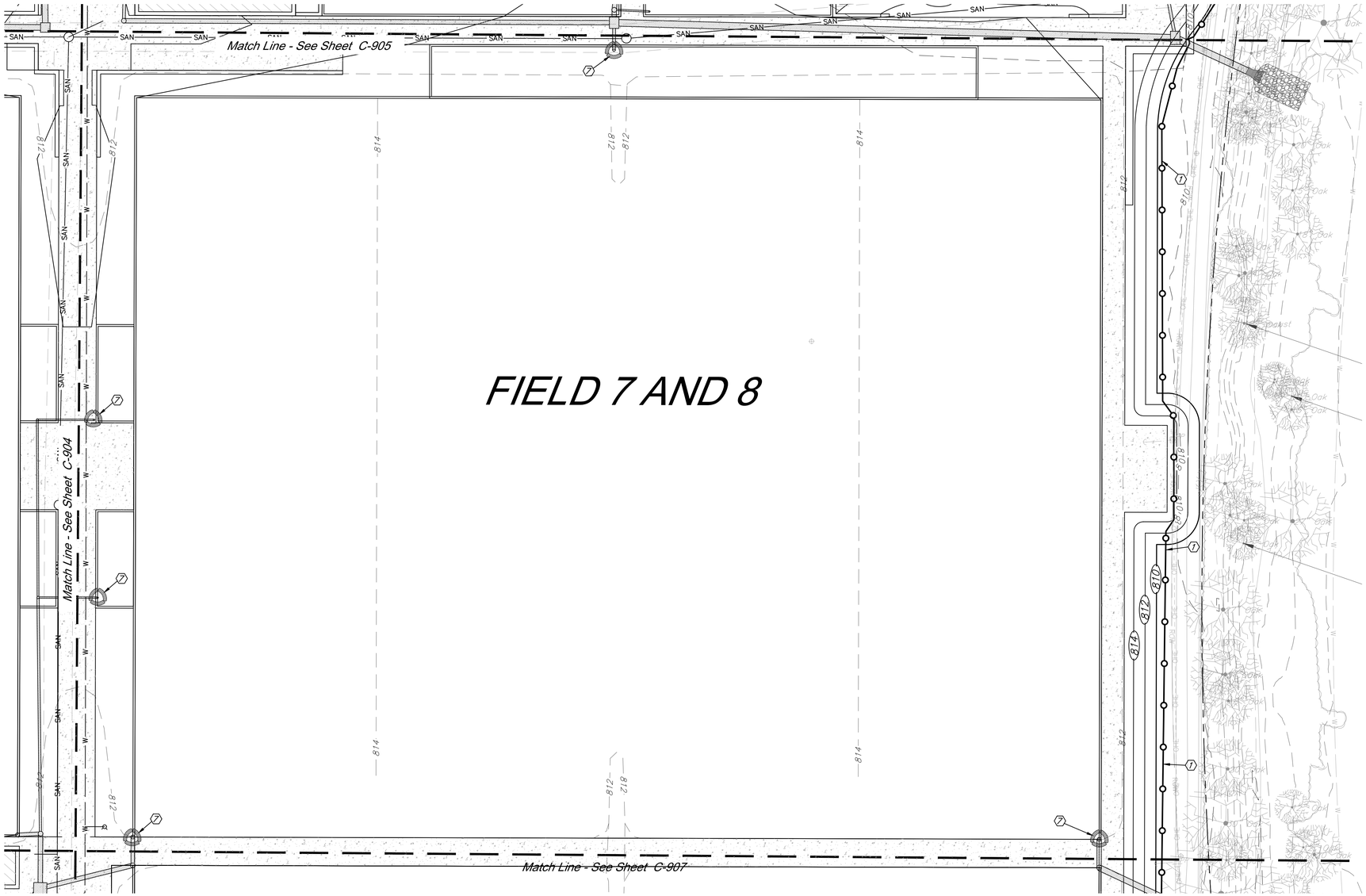
Erosion Control Plan

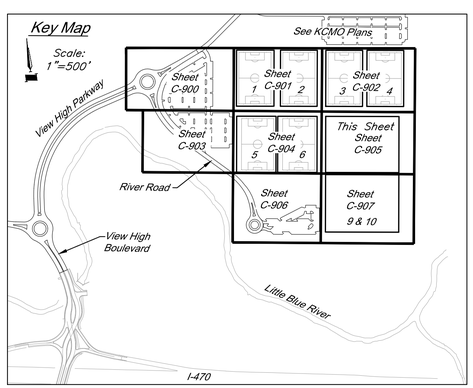
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-904

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4000.dwg Layout: C-904 Erosion Control Plan -- Thursday, January 17, 2019, 3:59pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



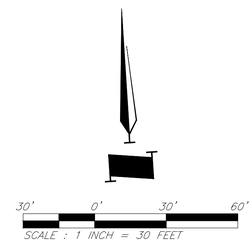


EROSION CONTROL STAGING CHART

Project Phase	Reference No.	Description	Remove After Phase:	Notes
1 – Place Erosion Control Prior to Land Disturbance	1	Install Perimeter Silt Fence	4	Install as shown on plans
	2	Construct Gravel Construction Entrance	4	Install as shown on plans
	3	Construct Concrete Wash-out	4	Install as shown on plans
	4	Install Adjacent Inlet Protection	4	Install as shown on plans
2 – After Stripping, Grubbing, and Mass Grading	5	Install Interior Silt Fence	4	Install as shown on plans
	6	Install Straw Wattles	4	Install as shown on plans
3 – After Storm Sewer Construction	7	Install Inlet Protection	4	Install as shown on plans
4 – Final Grading, Paving, and Landscaping	8	Install Erosion Control Blanket	N/A	Install as shown on plans
	9	Final Grading, Seeding, Sodding, and Landscaping of all disturbed areas	N/A	Interior erosion control measures and inlet protection may be removed once seed and sodded areas are established to cover 80% of the site.

Erosion Control Legend

- Straw Wattle
- Sediment Fence
- Inlet Sediment Trap



PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

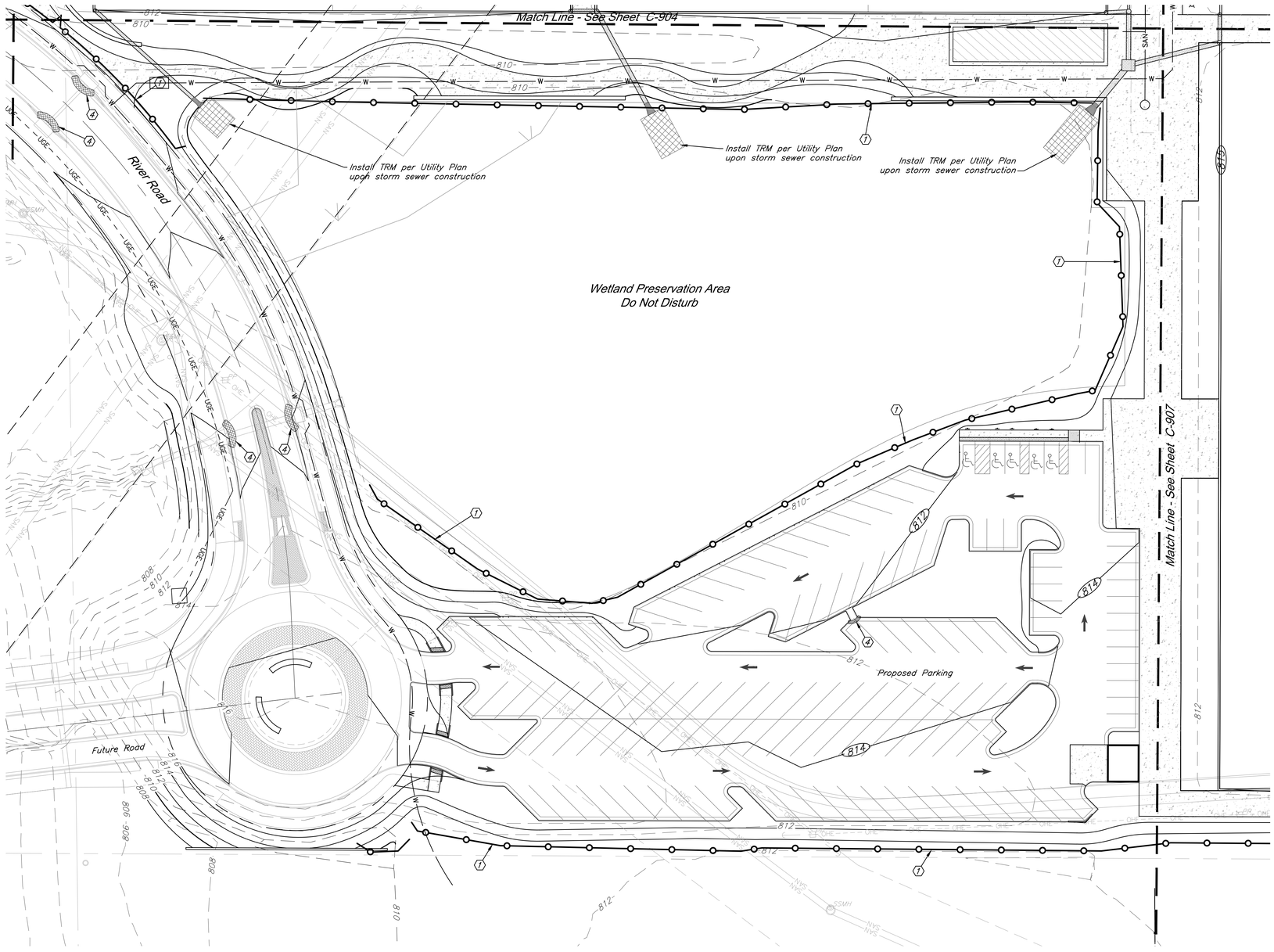
Erosion Control Plan

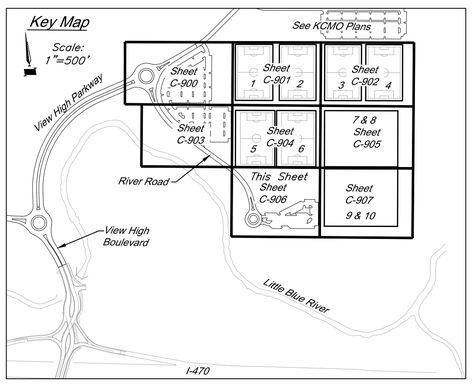
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-905

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4000.dwg Layout: C-905 Erosion Control Plan -- Thursday January 17, 2019, 4:00pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





EROSION CONTROL STAGING CHART

Project Phase	Reference No.	Description	Remove After Phase:	Notes
1 – Place Erosion Control Prior to Land Disturbance	1	Install Perimeter Silt Fence	4	Install as shown on plans
	2	Construct Gravel Construction Entrance	4	Install as shown on plans
	3	Construct Concrete Wash-out	4	Install as shown on plans
	4	Install Adjacent Inlet Protection	4	Install as shown on plans
2 – After Stripping, Grubbing, and Mass Grading	5	Install Interior Silt Fence	4	Install as shown on plans
	6	Install Straw Wattles	4	Install as shown on plans
3 – After Storm Sewer Construction	7	Install Inlet Protection	4	Install as shown on plans
4 – Final Grading, Paving, and Landscaping	8	Install Erosion Control Blanket	N/A	Install as shown on plans
	9	Final Grading, Seeding, Sodding, and Landscaping of all disturbed areas	N/A	Interior erosion control measures and inlet protection may be removed once seed and sodded areas are established to cover 80% of the site.

Erosion Control Legend

- Straw Wattle
- Sediment Fence
- Inlet Sediment Trap

30' 0' 30' 60'

SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Erosion Control Plan

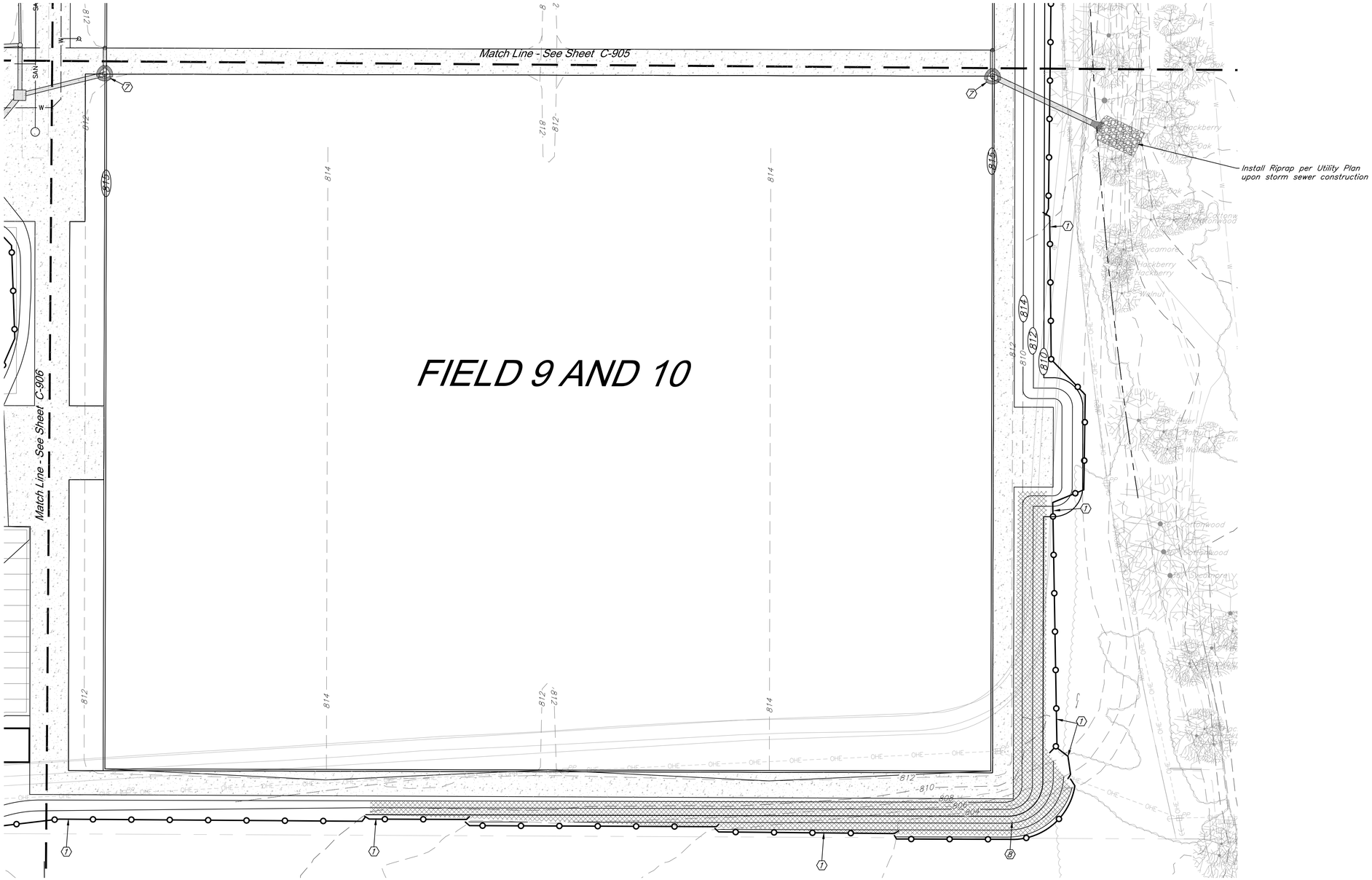
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

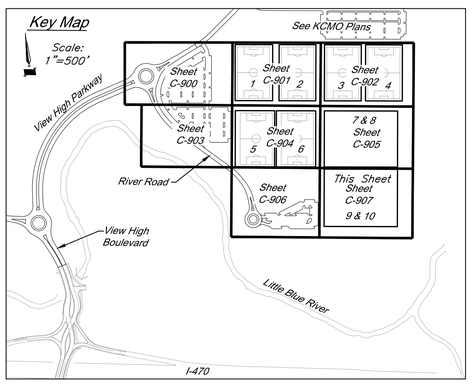
SHEET NO:

C-906

C:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720c4000.dwg Layout: C-906 Erosion Control Plan -- Thursday January 17, 2019, 4:00pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4000.dwg Layout: C-907 Erosion Control Plan -- Thursday January 17, 2019, 4:01pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.





EROSION CONTROL STAGING CHART

Project Phase	Reference No.	Description	Remove After Phase:	Notes
1 – Place Erosion Control Prior to Land Disturbance	1	Install Perimeter Silt Fence	4	Install as shown on plans
	2	Construct Gravel Construction Entrance	4	Install as shown on plans
	3	Construct Concrete Wash–out	4	Install as shown on plans
	4	Install Adjacent Inlet Protection	4	Install as shown on plans
2 – After Stripping, Grubbing, and Mass Grading	5	Install Interior Silt Fence	4	Install as shown on plans
	6	Install Straw Wattles	4	Install as shown on plans
3 – After Storm Sewer Construction	7	Install Inlet Protection	4	Install as shown on plans
	8	Install Erosion Control Blanket	N/A	Install as shown on plans
4 – Final Grading, Paving, and Landscaping	9	Final Grading, Seeding, Sodding, and Landscaping of all disturbed areas	N/A	Interior erosion control measures and inlet protection may be removed once seed and sodded areas are established to cover 80% of the site.

Erosion Control Legend

- Straw Wattle
- Sediment Fence
- Erosion Control Blanket
- Inlet Sediment Trap

30' 0' 30' 60'

SCALE : 1 INCH = 30 FEET

PROJECT BENCHMARK:

BM #11 – Chiseled "L" on top Northeast corner of concrete guardrail at the Northeast corner of I470 bridge spanning View High Drive. EL=833.80

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Erosion Control Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-907

G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4600.dwg Layout: C-1000 Erosion Control Notes -- Thursday, January 17, 2019, 4:01pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

EROSION AND SEDIMENT CONTROL NOTES

The layout of erosion control best management practices (BMPs) shown on the engineering plans is intended to control erosion and minimize, if not eliminate, the transport of sediment from the disturbed areas. The Contractor shall be responsible for the evaluation of existing surface drainage patterns and for making adjustments to the BMP locations to best control erosion and minimize, if not eliminate, the transport of sediment from the disturbed areas. The following are measures to achieve the control of erosion and sediment.

1. *Stabilization Practices – Stabilization practices are very effective at preventing erosion by shielding the soil surface from the impact of rain, slowing the velocity of runoff, holding soils in place, and increasing infiltration of runoff and allowing the soil to absorb more rainfall.*

   a. *Temporary Seeding Stabilization – During acceptable growing periods (see Table 1 below); temporary seeding of annual vegetation with a straw mulch cover shall be used as a temporary cover until permanent vegetation is established. If there is a possibility that a vegetative cover will be required to control erosion for more than 1 year, then consider the addition of a perennial/permanent grass species as part of a seeding mixture.*

Table 1. Temporary Seeding Dates and Minimum Application Rates

Seeding Dates	Temporary Seed Species	Minimum Application Rates (pure live seed lbs. per acre)	Straw Mulch (tons per acre)
Jan. 1 – Jan. 31	None	Not Applicable	2.5
Feb. 1 – May 31	Annual Ryegrass	120	1.5
June 1 – Aug.4	None	Not Applicable	2.5
Aug. 15 – Nov. 15	Cereal/Winter Rye	120	1.5
Nov. 16 – Dec. 31	None	Not Applicable	2.5

Seedbed Preparation – For broadcast seeding or drilling, loosen soil to depth of 3 inches. For no till drilling, loosen soil if it is compacted. Loosen compacted, hard or crusted soil surfaces with a disk, ripper, chisel, harrow or other tillage equipment. Avoid preparing the seedbed under excessively wet conditions. For establishment and long-term growth, apply a complete fertilizer at rates recommended by soil tests or as specified in plans and specifications. If soil pH is less than 6.0, apply lime according to soil tests. Incorporate necessary lime and fertilizer to a depth of 3 to 6 inches of soil.

Installation – For the best results use certified seed. Apply seed uniformly using a cyclone seeder, drop-type spreader, drill, cultipacker seeder or hydroseeder. When using a drill seeder, plant rye or other grains about 1 inch deep and plant grasses no more than ½ inch. A vegetative straw mulch cover shall be applied over the seed mixture to help germinate and establish plant cover, control weeds, and protect seed mixture against temperature extremes. Follow straw mulch preparation and application procedures described herein.

   b. *Temporary Mulch Stabilization – During non-growing periods, a straw mulch cover shall be applied in unseeded areas to protect against erosion until temporary or permanent vegetation is established.*

Site Preparation – Divert runoff water from areas above the site that will be mulched. Remove stumps, roots and other debris from the construction area. Grade area as needed to permit the use of equipment for seeding, mulching and maintenance. Shape area so that it is relatively smooth.

Application – Spread straw mulch uniformly over the area with a power blower, hydroseeder, or by hand. No more than 25% of the ground surface should be visible after spreading. Apply straw mulch at a rate of 1.5 tons per acre as a seed cover or 2.5 tons per acre as a stand alone cover. The straw should be dry, unchopped, unweathered; free of weed seeds and rot. In areas of steep slopes or high winds, or in critical areas such as swales, mulching may need to be secured to the ground with a binder, netting, or tacking.

   c. *Permanent Seeding Stabilization – All disturbed areas shall be permanently seeded with a cool season grass mixture as specified in the Standards and Specifications of the City of Lee's Summit, Missouri..*

Seedbed Preparation – loosen soil to depth of 3 inches. For no till drilling, loosen soil if it is compacted. Loosen compacted, hard or crusted soil surfaces with a disk, ripper, chisel, harrow or other tillage equipment. Avoid preparing the seedbed under excessively wet conditions. For establishment and long-term growth, apply a complete fertilizer at rates recommended by soil tests or as specified in plans and specifications. If soil pH is less than 6.0, apply lime according to soil tests. Incorporate necessary lime and fertilizer to a depth of 3 to 6 inches of soil.

Installation – For the best results use certified seed. Apply seed uniformly using a hydroseeder. A vegetative straw mulch cover shall be applied over the seed mixture to help germinate and establish plant cover, control weeds, and protect seed mixture against temperature extremes. Follow straw mulch preparation and application procedures described in the Standards and Specifications of the City of Lee's Summit, Missouri.

2. *Structural Practices*

   a. *Silt Fence – A temporary sediment barrier consisting of a geotextile fabric shall be installed as shown on the attached engineering plans and details. Silt fencing shall be installed to maintain sediment onsite.*

      Minimum Requirements:

      Location – Fence should be built on a nearly level grade and at least 10 feet from the toe of the slope to provide a broad shallow sediment pool. Install on the contour, where fence can intercept runoff as a sheet flow; not located crossing channels, waterways or other concentrated flow paths; not attached to existing trees.

      Spacing of Support Posts – 10 feet maximum for fence supported by wire; 6 feet maximum for high strength fabric without supportive wire backing. Support posts should be driven into the ground a minimum of 10 inches deep.

      Trench – Bottom 1 foot of fence must be buried minimum of 4 inches deep.

   b. *Inlet Protection – When installation of the storm drainage system is complete, gravel curb inlet sediment traps will be placed at the drainage system inlets. Construction shall be in accordance with attached engineering plans and details.*

   c. *Stockpiles – The toe of stockpiles shall be placed a minimum of 10 feet from erosion control measures. If stockpiles are to remain for more than 14 days, they shall be temporarily stabilized with vegetative mulch and temporary seeding.*

3. *Maintenance – The contractor shall repair all erosion control measures or re-seed areas that are disturbed or damaged as a result of weather or other situations, within 2 days after the occurrence. This will include all areas bare of vegetation.*

EROSION CONTROL GENERAL NOTES

1. *The Contractor is responsible for erosion control during construction and until the Owner and City accepts the work as complete. The erosion control measures shown on this plan are a typical minimum installation. The Contractor shall be responsible for adjusting or adding to these measures as necessary during the phasing of the construction to assure adequate control.*

2. *Clearing and grubbing within 50' of a defined drainage course should be avoided when possible. Where changes to a defined drainage course occur, work should be delayed until all materials and equipment necessary to protect and complete the drainage change are on site. Changes shall be completed as quickly as possible once the work has been initiated. The area impacted by the construction activities shall be revegetated or protected from erosion as soon as possible, areas within 50' of a defined drainage ways should be recontoured as needed or otherwise protected within five (5) working days after grading has ceased.*

3. *Where soil disturbing activities cease in an area for more than 14 days, the disturbed areas shall be protected from erosion by stabilizing the area with mulch or other similarly effective erosion control measures. If the slope of the area is greater than 3:1 or if the slope is greater than 3% and greater than 150 feet in length, then the disturbed areas shall be protected from erosion by stabilizing the area with mulch or other similarly effective erosion control measures if activities cease for more than seven (7) days.*

4. *Existing vegetation shall be preserved to the extent and where practical. In no case shall disturbed areas remain without vegetative ground cover for a period in excess of 60 days.*

5. *Additional site management practices which shall be adhered to during the construction process shall include:*

   –Solid and hazardous waste management including providing trash containers and regular site clean up for proper disposal of solid waste such as building and construction material, product/material shipping waste, food containers and cups, and providing containers for the proper disposal of waste paints solvents, and cleaning compounds.

   –Provisions of portable toilets for proper disposal of sanitary sewage.

   –Storage of construction materials away from drainage courses and low areas.

   –Installation of containment berms and use of drip pans at petroleum product and liquid storage tanks and containers.

6. *All disturbed areas shall be seeded, fertilized and mulched, or sodded, in accordance with the Standards and Specifications adopted by the City of Lee's Summit, Missouri and good engineering practices. This shall be completed within fourteen (14) days after completing the work, in any area. If this is outside of the seeding period, silt barriers or other similarly effective measures shall be provided until such time that the areas can be seeded.*

7. *All erosion control measures, temporary or permanent, require maintenance to preserve their effectiveness. All erosion control devices shall be inspected immediately after each heavy rainstorm and at least daily during prolonged rainfall. Any required repairs should be made immediately. All costs associated with the repair work including related incidentals will be the contractor's responsibility and shall be included in the Contractor's bid for the proposed work. Only after the project is complete and accepted can the erosion control be removed.*

8. *Seeding shall be done before the proposed seedbed becomes eroded, crusted over, or dried out and shall not be done when the ground is frozen, or covered with snow. The seed shall comply with requirements of the Missouri Seed Law and the Federal Seed Act. Also, it shall contain no seed of any plant on the Federal Noxious Weed List. Other weed seed shall not exceed one percent by weight of mix.*

9. *During the dates Dec. 15 through May 30 ALL lime, fertilizer, seed, and mulch shall be applied to finished slopes of disturbed areas. During the months of June, July, October, and November 1st through December 15th, lime, fertilizer, seed, and mulch shall be applied at the following rates:*

   Lime – 100% of the specified quantity
   Fertilizer – 75% of the specified quantity
   Seed – 50% of the specified quantity
   Mulch – 100% of the specified quantity

10. *Mulch shall be Vegetative type, cereal straw form stalks of oats, rye, or barley, or approved equal. The straw shall be free of prohibited weed seed and relatively free of all other noxious and undesirable seed. Apply straw mulch at a rate of 1.5 tons per acre as a seed cover or 2.5 tons per acre as a stand alone cover. Mulch shall be embedded by a mulch anchoring tool or disk type roller having flat serrated disks spaced not more than 10 inches apart and cleaning scrapers shall be provided.*

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St. Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex
Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:
Erosion Control Notes

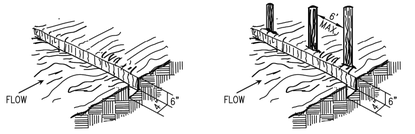
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:
C-1000

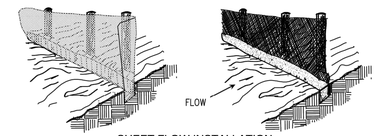
G:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4600.dwg Layout: C-1001 Erosion Control Details -- Thursday January 17, 2019, 4:01pm -- Architect 00212, Professional Engineer 00133, Professional Land Surveyor 00059
Copyright 2019, George Butler Associates, Inc.
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THE PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

SEDIMENT FENCE

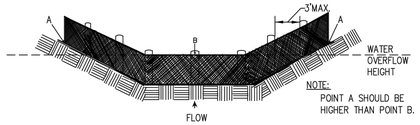
1. EXCAVATE A 6"x4" TRENCH.
2. SET THE STAKES ALONG THE DOWN SLOPE SIDE OF THE TRENCH.



3. STAPLE GEOTEXTILE MATERIAL TO STAKES AND EXTEND IT INTO AND AROUND THE BOTTOM OF THE TRENCH.
4. BACKFILL AND COMPACT THE EXCAVATED SOIL OVER THE GEOTEXTILE IN THE TRENCH.



SHEET FLOW INSTALLATION
(PERSPECTIVE VIEW)
NOT TO SCALE



DRAINAGEWAY INSTALLATION
(FRONT ELEVATION)
NOT TO SCALE

SOURCE: MODIFIED FROM VA. DCR, 1992

SEDIMENT FENCE NOTES:

A) INSTALLATION:

1. THE HEIGHT OF SEDIMENT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE AND SHALL NOT EXCEED 34 INCHES ABOVE THE GROUND SURFACE.
2. THE FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE UNAVOIDABLE, FILTER CLOTH SHALL BE SECURELY SPLICED TOGETHER ONLY AT SUPPORT POSTS, WITH A MAX 6-INCH OVERLAP.
3. DIG A TRENCH AT LEAST 6 INCHES DEEP AND 4 INCHES WIDE ALONG THE FENCE ALIGNMENT.
4. DRIVE POSTS AT LEAST 24 INCHES INTO THE GROUND ON THE DOWNSLOPE SIDE OF THE TRENCH. SPACE POSTS A MAXIMUM OF 6 FEET APART.
5. EXTRA-STRENGTH SEDIMENT FENCE FABRIC SHALL BE USED. POSTS FOR THIS TYPE OF FABRIC SHALL BE PLACED A MAXIMUM OF 6 FEET APART. THE SEDIMENT FABRIC SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING A MINIMUM OF ONE INCH LONG, HEAVY-DUTY WIRE STAPLES OR TIE-WIRES, AND EIGHT INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
6. PLACE THE BOTTOM 1 FOOT OF FABRIC IN THE MINIMUM-OF-6-INCH DEEP TRENCH, LAPPING TOWARD THE UPSLOPE SIDE. BACKFILL WITH COMPACTED EARTH OR GRAVEL.
7. IF A SEDIMENT FENCE IS TO BE CONSTRUCTED ACROSS A DITCH LINE OR SWALE, IT MUST BE OF SUFFICIENT LENGTH TO ELIMINATE ENDFLOW, AND THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC OR HORSESHOE, PLACED ON A CONTOUR, WITH THE ENDS ORIENTED UPSLOPE. EXTRA-STRENGTH SEDIMENT FABRIC SHALL BE USED WITH A MAXIMUM 3-FOOT SPACING OF POSTS.
8. TO REDUCE MAINTENANCE, EXCAVATE A SHALLOW SEDIMENT STORAGE AREA IN THE UPSLOPE SIDE OF THE FENCE. PROVIDE GOOD ACCESS IN AREAS OF HEAVY SEDIMENTATION FOR CLEAN OUT AND MAINTENANCE.
9. SEDIMENT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

B) TROUBLESHOOTING:

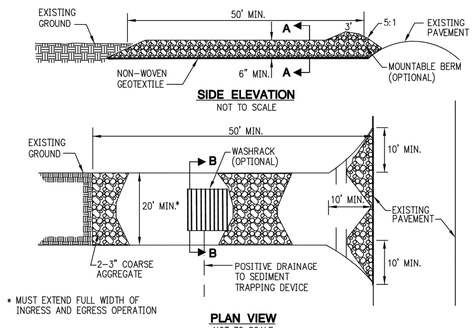
1. DETERMINE THE EXACT LOCATION OF UNDERGROUND UTILITIES, BEFORE FENCE INSTALLATION SO UTILITIES ARE NOT DISTURBED.
2. GRADE ALIGNMENT OF FENCE AS NEEDED TO PROVIDE A BROAD, NEARLY LEVEL AREA UPSTREAM OF FENCE TO ALLOW SEDIMENT COLLECTION AREA.

C) INSPECTION MAINTENANCE:

1. INSPECT SEDIMENT FENCES AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL. MAKE ANY REQUIRED REPAIRS IMMEDIATELY.
2. SHOULD THE FABRIC OF A SEDIMENT FENCE COLLAPSE, TEAR, DECOMPOSE, OR BECOME INEFFECTIVE, REPLACE IT PROMPTLY.
3. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE. AVOID DAMAGING OR UNDERMINING THE FENCE DURING CLEANOUT. SEDIMENT ACCUMULATION SHOULD NOT EXCEED 1/2 THE HEIGHT OF THE FENCE.
4. REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, AND BRING THE AREA TO GRADE AND STABILIZE IT AFTER THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY AND COMPLETELY STABILIZED.

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
SEDIMENT FENCE	STANDARD DRAWING NUMBER: ESC-10 ADOPTED:

TEMPORARY CONSTRUCTION ENTRANCE



SOURCE: MODIFIED FROM VA. DCR, 1992

TEMPORARY CONSTRCUTION ENTRANCE PAD NOTES:

A) INSTALLATION:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. IF SLOPE TOWARDS THE PUBLIC ROAD EXCEEDS 2%, CONSTRUCT A 6-TO 8-INCH HIGH RIDGE WITH 3H:1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
4. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS.
5. PLACE STONE TO DIMENSIONS AND GRADE AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
7. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

B) TROUBLESHOOTING:

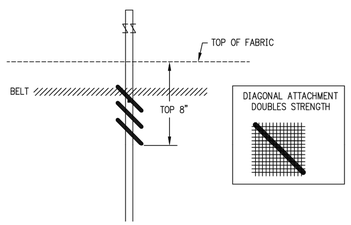
1. CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
   a. INADEQUATE RUNOFF CONTROL TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROAD – INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES.
   b. SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL – INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC.
   c. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC – EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.

C) INSPECTION AND MAINTENANCE:

1. INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER 1/2-INCH OR GREATER STORM EVENTS.
2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN 2-AND 3-INCH STONE AS NEEDED.
4. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
5. REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED.

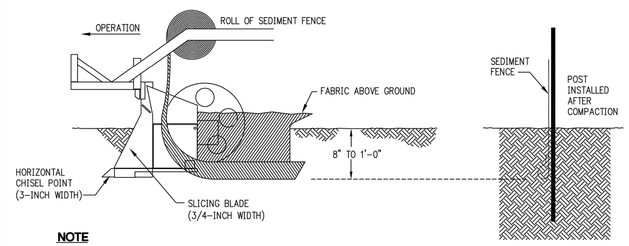
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
TEMPORARY CONSTRUCTION ENTRANCE	STANDARD DRAWING NUMBER: ESC-01 ADOPTED:

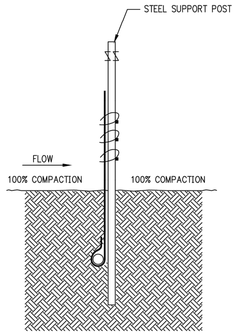
SEDIMENT FENCE INSTALLATION SLICING METHOD



SEDIMENT FENCE INSTALLATION SLICING METHOD NOTES:

1. LIMIT PONDING HEIGHT TO 24"
2. ATTACH FABRIC TO UPSTREAM SIDE OF POST.
3. DRIVE OVER EACH SIDE OF SEDIMENT FENCE 2 TO 4 TIMES WITH DEVICE EXERTING 60 PSI OR GREATER AFTER MATERIAL IS SLICED INTO THE GROUND.
4. SPACE POSTS A MAX OF 7' ON OPEN RUNS AND 4' ON POOLING AREAS.
5. SINK POSTS AS FAR BELOW GROUND AS FABRIC ABOVE GROUND.

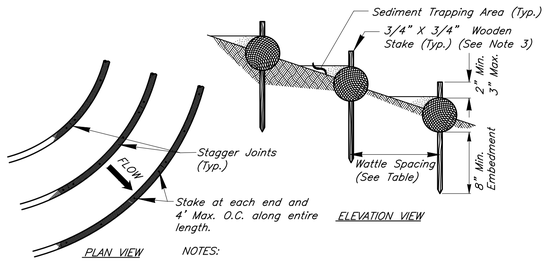




NOTE
VIBRATORY PLOW IS NOT ACCEPTABLE BECAUSE OF HORIZONTAL COMPACTION.

SOURCE: TOM CARPENTER, 2000

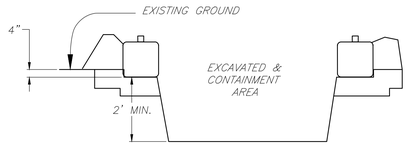
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
SEDIMENT FENCE INSTALLATION SLICING METHOD	STANDARD DRAWING NUMBER: ESC-11 ADOPTED:

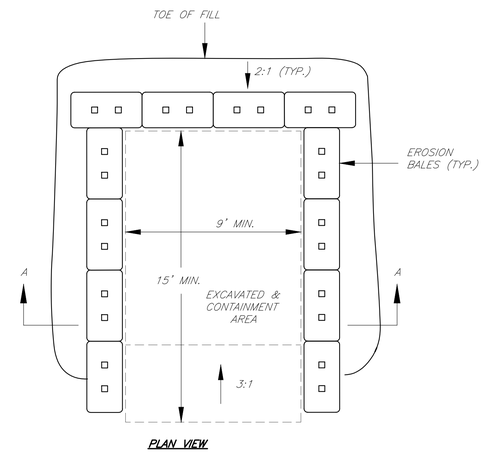


WATTLE SPACING TABLE	
SLOPE	MAXIMUM SPACING
1:1	10 FEET
2:1	20 FEET
3:1	30 FEET
4:1	40 FEET

NOTES:
1. Install wattles along contours.
2. Wattles shall be inspected regularly, and immediately after a runoff producing rainfall, to ensure they remain thoroughly entrenched and in contact with the soil.
3. Live stakes may be used for permanent installations.
4. When sediment fills the area behind the wattles to 1/2 the height of the wattles, the contractor shall remove the sediment.
5. Install wattles snugly into the trench. abut adjacent wattles tightly, end to end, without overlapping the ends.
6. Pilot holes may be driven through the wattle and into the soil, when soil conditions require.

STRAW WATTLE DETAIL
Not to Scale





CONCRETE WASH-OUT DETAIL
Not to Scale

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Erosion Control Details

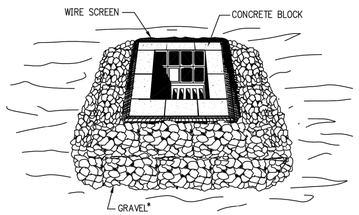
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

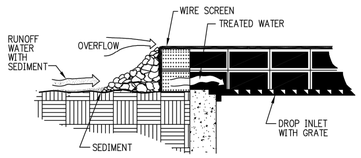
C-1001

C:\12720\Civil 3D\Production Drawings\Construction Site Plans\12720C4600.dwg Layout: C-1002 Erosion Control Details -- Thursday, January 17, 2019, 4:02pm -- Copyright 2019, George Butler Associates, Inc. Architect 00212, Professional Engineer 000133, Professional Land Surveyor 000059
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DECLARES PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL, RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

BLOCK AND GRAVEL DROP INLET SEDIMENT TRAP



NOTE:
* USE CLEAN GRAVEL, 1/2" TO 1" DIAMETER



CROSS SECTION

BLOCK AND GRAVEL DROP INLET SEDIMENT TRAP NOTES:

A) GENERAL NOTES:

1. PLACE CONCRETE BLOCKS LENGTHWISE ON THEIR SIDES IN A SINGLE ROW AROUND THE PERIMETER OF THE INLET WITH THE ENDS OF THE ADJACENT BLOCKS ABUTTING. THE HEIGHT OF THE BARRIER CAN BE VARIED, DEPENDING ON THE DESIGN NEEDS, BY STACKING COMBINATIONS OF 4-INCH, 8-INCH, AND 12-INCH BLOCKS. THE BARRIER OF BLOCKS SHALL BE AT LEAST 12 INCHES HIGH AND NO GREATER THAN 24 INCHES HIGH.
2. WIRE MESH, OR WEBBING, SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED.
3. STONE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BLOCK BARRIER.
4. IF THE STONE BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS AND CLEANED OR REPLACED.

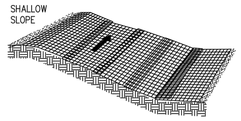
B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER AND REPAIRS MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA SO THAT IT WILL NOT ERODE.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

SOURCE: MODIFIED FROM VA. DCR, 1992

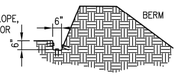
AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
BLOCK AND GRAVEL DROP INLET SEDIMENT TRAP	STANDARD DRAWING NUMBER ESC-21 ADOPTED:

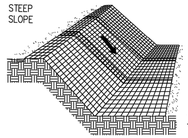
EROSION CONTROL BLANKET



NOTE:
ON SHALLOW SLOPES, PROTECTIVE EROSION CONTROL BLANKETS MAY BE APPLIED ACROSS THE SLOPE.

NOTE:
WHERE THERE IS A BERM AT THE TOP OF THE SLOPE, BRING THE MATERIAL OVER THE BERM AND ANCHOR IT BEHIND THE BERM.

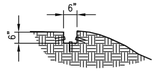


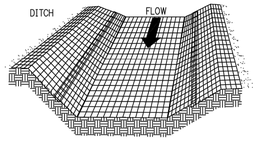


NOTE:
ON STEEP SLOPES, APPLY PROTECTIVE BLANKET PERPENDICULAR TO THE DIRECTION OF FLOW AND ANCHOR SECURELY.

NOTE:
BRING MATERIAL DOWN TO A LEVEL AREA BEFORE TERMINATING THE INSTALLATION.

TOP OF SLOPE BLANKET ANCHOR SLOT





NOTE:
IN DITCHES, APPLY PROTECTIVE COVERING PARALLEL TO THE DIRECTION OF FLOW. USE CHECK SLOTS AS REQUIRED. AVOID JOINING MATERIAL IN THE CENTER OF THE DITCH IF AT ALL POSSIBLE. FOLLOW BLANKET MANUFACTURER'S RECOMMENDATIONS FOR ALLOWABLE VELOCITY AND SHEAR STRESS.

EROSION CONTROL BLANKET NOTES (1 OF 2):

A) SITE PREPARATION:
AFTER SITE HAS BEEN SHAPED AND GRADED, PREPARE A FRIABLE SEEDBED RELATIVELY FREE FROM CLODS AND ROCKS MORE THAN 1 1/2 INCHES IN DIAMETER AND ANY FOREIGN MATERIAL THAT WILL PREVENT UNIFORM CONTACT OF THE PROTECTIVE COVERING WITH THE SOIL SURFACE.

B) PLANTING:
LIME, FERTILIZE, AND SEED IN ACCORDANCE WITH SEEDING OR PLANTING PLAN. WHEN USING JUTE MESH ON A SEEDED AREA, APPLY APPROXIMATELY ONE HALF THE SEED AFTER LAYING THE MAT. THE PROTECTIVE COVERING CAN BE LAID OVER SPRIGGED AREAS WHERE SMALL GRASS PLANTS HAVE BEEN INSERTED INTO THE SOIL. WHERE GROUND COVERS ARE TO BE PLANTED, LAY THE PROTECTIVE COVERING FIRST AND THEN PLANT THROUGH THE MATERIAL AS PER PLANTING PLAN.

C) LAYING AND STAPLING:
IF INSTRUCTIONS HAVE BEEN FOLLOWED, ALL NEEDED CHECK SLOTS WILL HAVE BEEN INSTALLED, AND THE PROTECTIVE COVERING WILL BE LAID ON A FRIABLE SEEDBED FREE FROM CLODS, ROCKS, ROOTS, ETC. THAT MIGHT IMPEDE GOOD CONTACT.

1. START LAYING THE PROTECTIVE COVERING FROM THE TOP OF THE CHANNEL OR SLOPE AND UNROLL DOWN-GRADE. ALLOW TO LAY LOOSELY ON SOIL; DO NOT STRETCH.
2. UPSLOPE ENDS OF THE BLANKET SHOULD BE BURIED IN AN ANCHOR SLOT NO LESS THAN 6-INCHES DEEP. TAMP EARTH
3. FIRMLY OVER THE MATERIAL. WHEN TOP IS RELATIVELY FLAT, EXTEND BLANKET ABOUT 40 INCHES AWAY FROM SLOPE. STAPLE THE MATERIAL AT A MINIMUM OF EVERY 12 INCHES ACROSS THE TOP END.
4. EDGES OF THE MATERIAL SHALL BE STAPLED EVERY 3 FEET. WHERE MULTIPLE WIDTHS ARE LAID SIDE BY SIDE, THE ADJACENT EDGES SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND STAPLED TOGETHER.
5. STAPLES SHALL BE PLACED DOWN THE CENTER, STAGGERED WITH THE EDGES AT 3-FOOT INTERVALS.

D) TROUBLESHOOTING:
CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL, IF ANY OF THE FOLLOWING OCCUR:

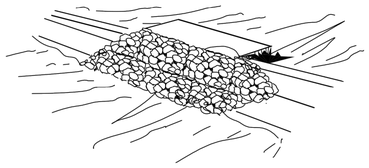
1. MOVEMENT OF THE BLANKET OR EROSION UNDER THE BLANKET IS OBSERVED.
2. VARIATIONS IN TOPOGRAPHY ON SITE INDICATE EROSION CONTROL MAT WILL NOT FUNCTION AS INTENDED; CHANGES IN PLAN MAY BE NEEDED, OR A BLANKET WITH A SHORTER OR LONGER LIFE MAY BE NEEDED.
3. DESIGN SPECIFICATIONS FOR SEED VARIETY, SEEDING DATES, OR EROSION CONTROL MATERIALS CANNOT BE MET; SUBSTITUTION MAY BE REQUIRED. UNAPPROVED SUBSTITUTIONS COULD RESULT IN FAILURE TO ESTABLISH VEGETATION.

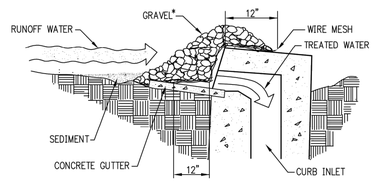
E) MAINTENANCE & INSPECTION
INSPECT CONTROLS AFTER EACH RAIN EVENT OF 1/2 INCH OR GREATER, AND EVERY 7 DAYS UNTIL VEGETATION IS ESTABLISHED, FOR EROSION OR UNDERMINING BENEATH THE NETTING, BLANKETS, OR MATS. IF ANY AREA SHOWS EROSION, PULL BACK THAT PORTION OF THE MATERIAL, ADD SOIL, TAMP DOWN, AND RESEED; RESECURE THE LINEAR MATERIAL IN PLACE. IF NETTING, BLANKETS OR MATS BECOME DISLOCATED OR DAMAGED, REPAIR OR REPLACE AND RESECURE IMMEDIATELY.

SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
EROSION CONTROL BLANKET SHEET 1 OF 2	STANDARD DRAWING NUMBER ESC-04 ADOPTED:

GRAVEL CURB INLET SEDIMENT TRAP





CROSS SECTION
NOT TO SCALE

NOTE:
*USE CLEAN GRAVEL 1/2" TO 1" IN DIAMETER.

GRAVEL CURB INLET SEDIMENT TRAP NOTES:

A) GENERAL NOTES:

1. WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE PLACED OVER THE CURB INLET OPENING SO THAT AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE INLET COVER AND AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE CONCRETE GUTTER FROM THE INLET OPENING.
2. STONE SHALL BE PILED AGAINST THE WIRE SO AS TO ANCHOR IT AGAINST THE GUTTER AND INLET COVER AND TO COVER THE INLET OPENING COMPLETELY.
3. IF THE STONE BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCK AND CLEANED OR REPLACED.

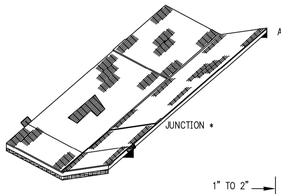
B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2-INCH OR GREATER AND REPAIRS MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA SO THAT IT WILL NOT ERODE.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

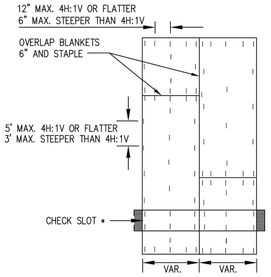
SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
GRAVEL CURB INLET SEDIMENT TRAP	STANDARD DRAWING NUMBER ESC-24 ADOPTED:

EROSION CONTROL BLANKET INSTALLATION FOR CHANNELS

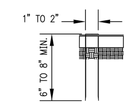


NOTE:
* JUNCTION: OVERLAP TOP BLANKET 6 INCHES MINIMUM AND STAPLE EVERY 6 INCHES ACROSS.



PLAN VIEW STAPLING DIAGRAM
NOT TO SCALE

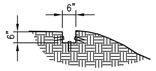
NOTE:
* CHECK SLOTS AT MIN. 50' INTERVALS; NOT REQUIRED WITH ALL COMBINATION BLANKETS



NOT TO SCALE

NOTE:
STAPLE FORMED FROM NO.11 STEEL WIRE.
MIN. 8" STAPLE LENGTH FOR SANDY SOIL.
MIN. 6" STAPLE LENGTH FOR OTHER SOIL.

NOTE:
APPROXIMATELY 200 STAPLES ARE REQUIRED PER 100 SQ. YDS. OF MATERIAL ROLL. ANCHOR SLOTS, JUNCTION SLOTS, AND CHECK SLOTS TO BE BURIED 6" TO 12" DEEP.



ANCHOR SLOT

EROSION CONTROL BLANKET NOTES (2 OF 2):

F) STAPLES:
STAPLES FOR ANCHORING BLANKET SHALL BE NO. 11-GAUGE WIRE OR HEAVIER. THEIR LENGTH SHALL BE A MINIMUM OF 6 INCHES. A LARGER STAPLE WITH A LENGTH OF UP TO 12 INCHES SHALL BE USED ON LOOSE, SANDY, OR UNSTABLE SOILS.

G) JOINING PREOTECTIVE COVERINGS:
OVERLAP THE END OF THE PREVIOUS ROLL A MINIMUM OF 6 INCHES AND STAPLE. STAPLE ACROSS THE END OF THE ROLL JUST BELOW THE ANCHOR SLOT AND ACROSS THE MATERIAL EVERY 6 INCHES.

H) TERMINAL END:
AT THE POINT AT WHICH THE MATERIAL IS DISCONTINUED, OR WHERE THE PROTECTIVE COVERING MEETS A STRUCTURE OF SOME TYPE, STAPLE A MINIMUM OF EVERY 12 INCHES.

I) FINAL CHECK:
THESE INSTALLATION CRITERIA MUST BE ADHERED TO:
1. ALL DISTURBED AREAS ARE SEEDED.
2. PROTECTIVE BLANKET IS IN UNIFORM CONTACT WITH THE SOIL.
3. ALL LAP JOINTS ARE SECURE.
4. ALL STAPLES ARE DRIVEN FLUSH WITH THE GROUND.

SOURCE: MODIFIED FROM VA. DCR, 1992

AMERICAN PUBLIC WORKS ASSOCIATION	
APWA	KANSAS CITY METROPOLITAN CHAPTER
EROSION CONTROL BLANKET SHEET 2 OF 2	STANDARD DRAWING NUMBER ESC-05 ADOPTED:

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority #2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central St, Suite 01C
Kansas City, MO
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5200
www.hei-eng.com
MO Certificate of Authority #000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

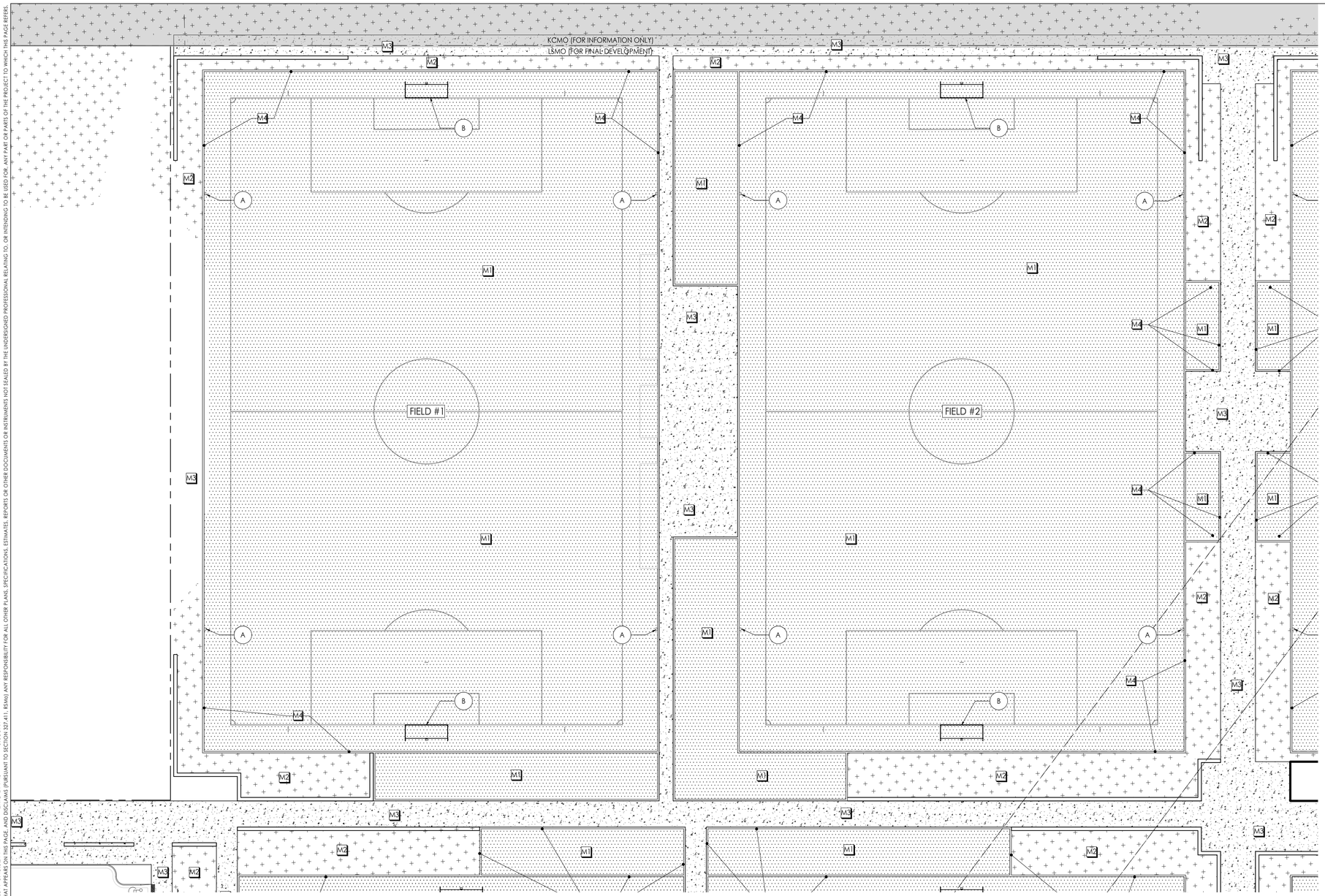
DRAWING TITLE:

Erosion Control Details

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: CEL

SHEET NO:

C-1002



1 FIELD 1 AND 2 MATERIALS PLAN

Scale: 1" = 30'

30 15 0 30 90

SCALE: 1"=30'

MATERIALS LEGEND

SYMBOL	DESCRIPTION
M1	ARTIFICIAL TURF SURFACE (BY OTHERS) CONSTRUCT ALL BASE CONDITIONS UNDER SYNTHETIC TURF
M2	PLANTING AREA (REFER TO L-SERIES LANDSCAPE SHEETS)
M3	CONCRETE WALK (RE: CIVIL DWGS)
M4	CONCRETE PERIMETER CURB

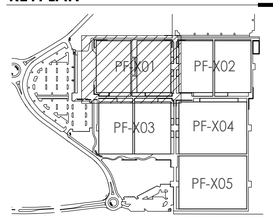
EQUIPMENT SCHEDULE

KEY	DESCRIPTION
A	FIELD QUICK COUPLER
B	SOCCER GOAL

MATERIALS AND EQUIPMENT NOTES

1. THE MATERIALS, EQUIPMENT, FEATURES AND CONDITIONS ILLUSTRATED ON THIS PLAN ARE ASPECTS OF THE WORK THAT THE CONTRACTOR SHALL CONSTRUCT.
   - 1.1. MATERIALS IDENTIFIED BY HATCHES ARE TO THE APPROXIMATE LIMITS. DO NOT SCALE PLANS; REFER TO DETAILS FOR THE LIMITS OF THE MATERIAL AND THE EDGE ADJACENCIES PROVIDED BY OTHERS OR CONSTRUCTED BY THE TRACK AND FIELD CONTRACTOR
   - 1.2. EQUIPMENT IDENTIFIED BY KEY SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND REQUIREMENTS. REFER TO SPECS AND REFERENCED DETAILS FOR ADDITIONAL INFORMATION.
   - 1.3. EDGE CONDITIONS IDENTIFIED BY KEY NUMBER PROVIDE GUIDANCE ON THE CONSTRUCTED CONDITION BETWEEN DIFFERING MATERIALS. REFER TO THE IDENTIFIED DETAIL FOR ADDITIONAL INFORMATION.
2. OTHER SCOPES OF WORK DIRECTLY RELATED TO THESE MATERIALS AND CONDITIONS INCLUDE SUBSURFACE DRAINAGE, SUB- AND SURFACE GRADING, FENCING AND UTILITIES. REFER TO OTHER PF-SERIES DRAWINGS THAT ILLUSTRATE THESE SCOPES OF WORK.

KEYPLAN



CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Field 1 & 2 Material & Details Plan

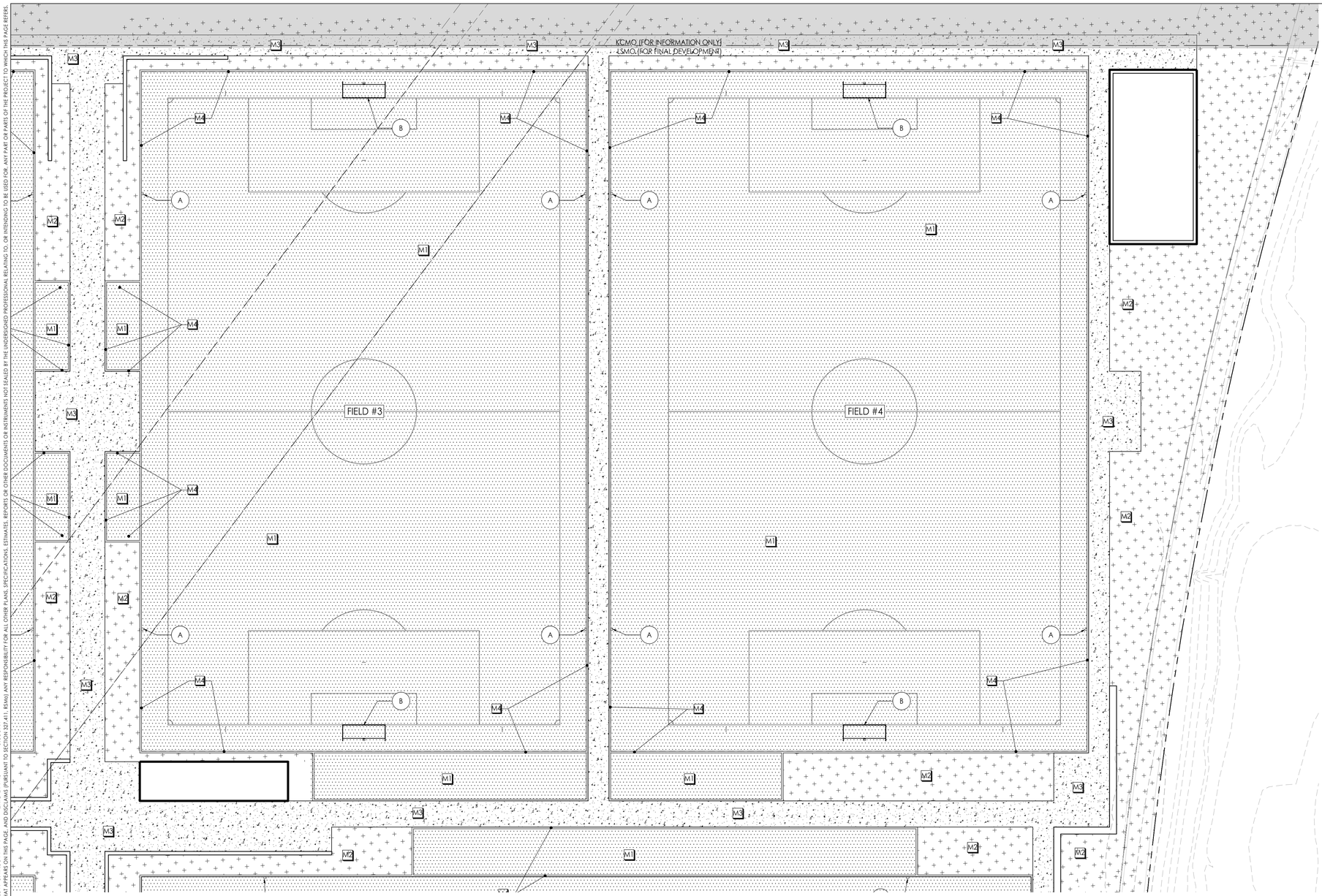
JOB NO: 1197 SCALE:

DATE: 01.18.2019 DRAWN BY:

SHEET NO:

PF-101

G:\Archive\2016\1197-PARAGON STAR\DRAWINGS\CAD\SHEETS\PF-100 Materials.dwg 1/17/2019 5:48:52 PM ERIC DAVIS 0.3869^1
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



MATERIALS LEGEND

SYMBOL	DESCRIPTION
M1	ARTIFICIAL TURF SURFACE (BY OTHERS) CONSTRUCT ALL BASE CONDITIONS UNDER SYNTHETIC TURF
M2	PLANTING AREA (REFER TO L-SERIES LANDSCAPE SHEETS)
M3	CONCRETE WALK (RE: CIVIL DWGS)
M4	CONCRETE PERIMETER CURB

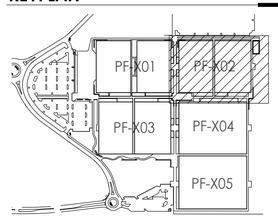
EQUIPMENT SCHEDULE

KEY	DESCRIPTION
A	FIELD QUICK COUPLER
B	SOCCER GOAL

1 **FIELD 3 AND 4 MATERIALS PLAN**
Scale: 1" = 30'

30 15 0 30 90
SCALE: 1"=30'

KEYPLAN



CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

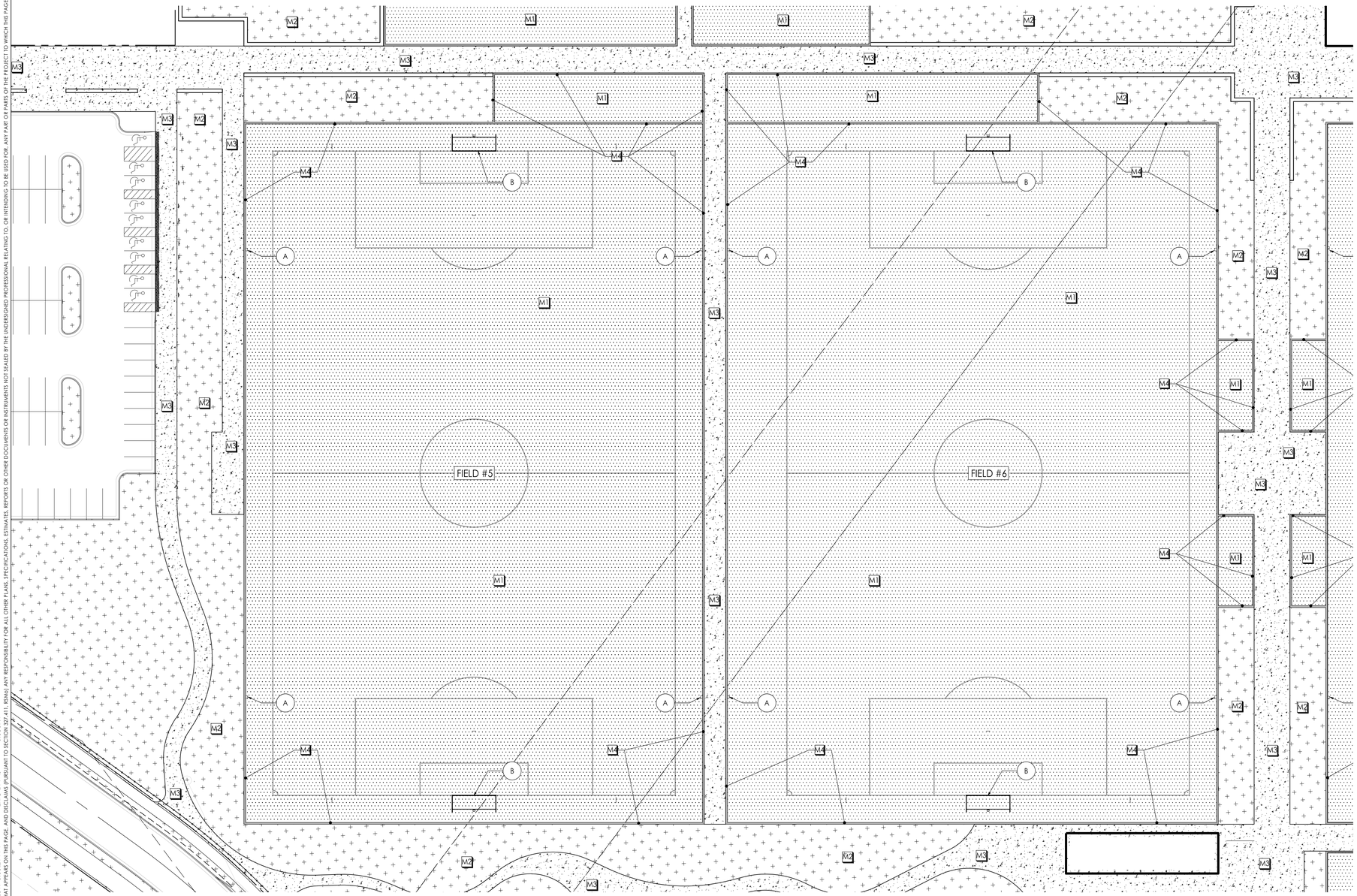
Field 3 & 4
Material & Details
Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY:

SHEET NO:

PF-102

G:\Archive\2016\1197-PARAGON STAR\DRAWINGS\CAD\SHEETS\PF-100 Materials.dwg 1/17/2019 5:49:36 PM ERIC DAVIS
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
0.3869^1



1 FIELD 5 AND 6 MATERIALS PLAN

Scale: 1" = 30'

30 15 0 30 90

SCALE: 1"=30'

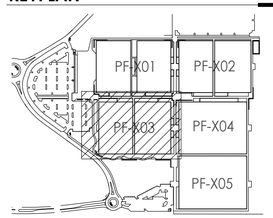
MATERIALS LEGEND

SYMBOL	DESCRIPTION
M1	ARTIFICIAL TURF SURFACE (BY OTHERS) CONSTRUCT ALL BASE CONDITIONS UNDER SYNTHETIC TURF
M2	PLANTING AREA (REFER TO L-SERIES LANDSCAPE SHEETS)
M3	CONCRETE WALK (RE: CIVIL DWGS)
M4	CONCRETE PERIMETER CURB

EQUIPMENT SCHEDULE

KEY	DESCRIPTION
A	FIELD QUICK COUPLER
B	SOCCER GOAL

KEYPLAN



CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Field 5 & 6 Material & Details Plan

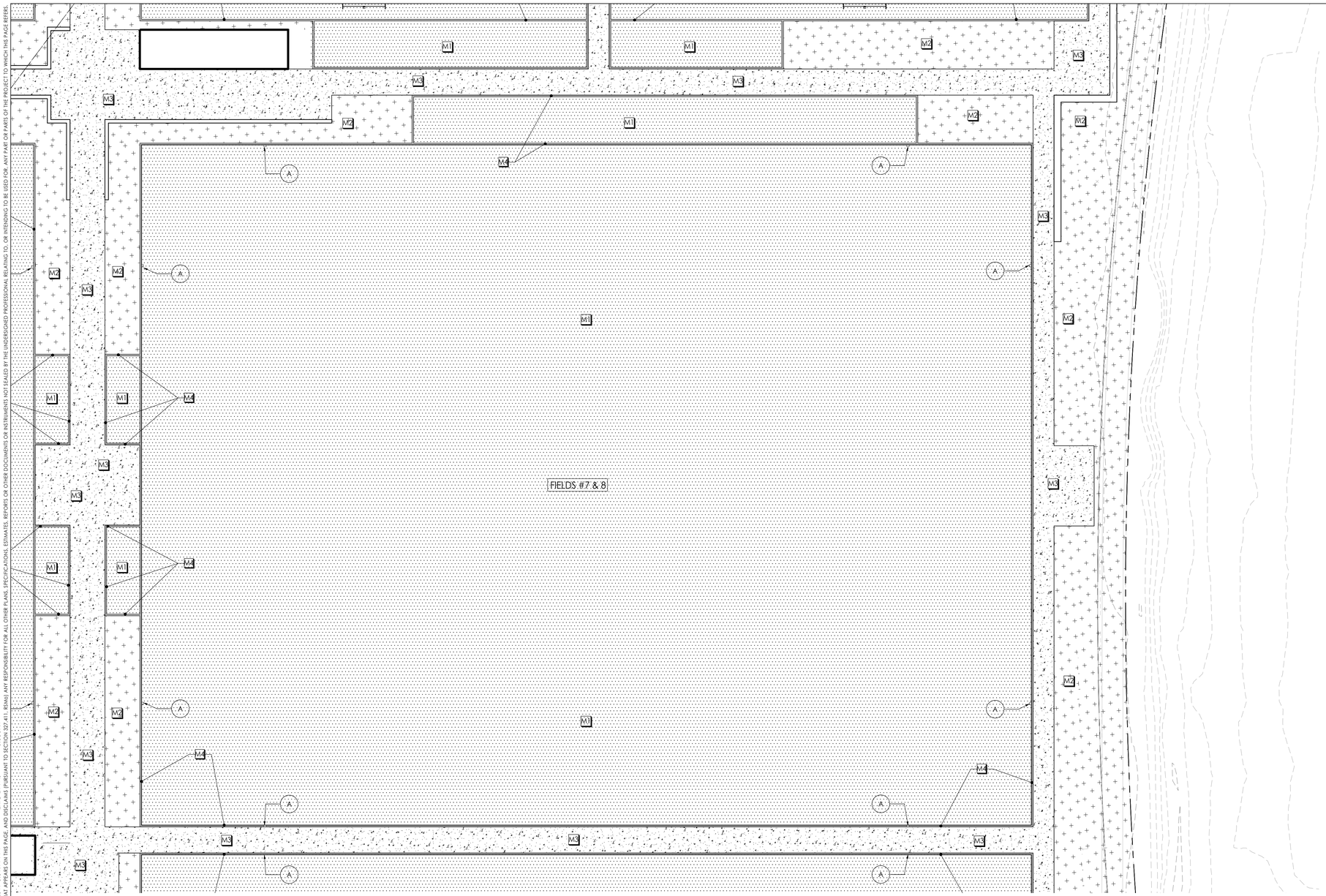
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY:

SHEET NO:

PF-103

THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

G:\Archive\2019\1197-PARAGON STAR\DRAWINGS\CAD\SHEETS\PF-100 Materials.dwg 1/17/2019 5:50:21 PM ERIC DAVIS 0.3869:1



MATERIALS LEGEND

SYMBOL	DESCRIPTION
M1	ARTIFICIAL TURF SURFACE (BY OTHERS) CONSTRUCT ALL BASE CONDITIONS UNDER SYNTHETIC TURF
M2	PLANTING AREA (REFER TO L-SERIES LANDSCAPE SHEETS)
M3	CONCRETE WALK (RE: CIVIL DWGS)
M4	CONCRETE PERIMETER CURB

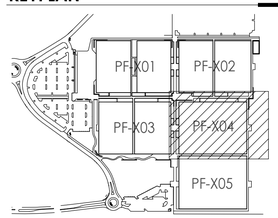
EQUIPMENT SCHEDULE

KEY	DESCRIPTION
A	FIELD QUICK COUPLER
B	SOCCER GOAL

1 **FIELD 7 AND 8 MATERIALS PLAN**
Scale: 1" = 30'

30 15 0 30 90
SCALE: 1"=30'

KEYPLAN



CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

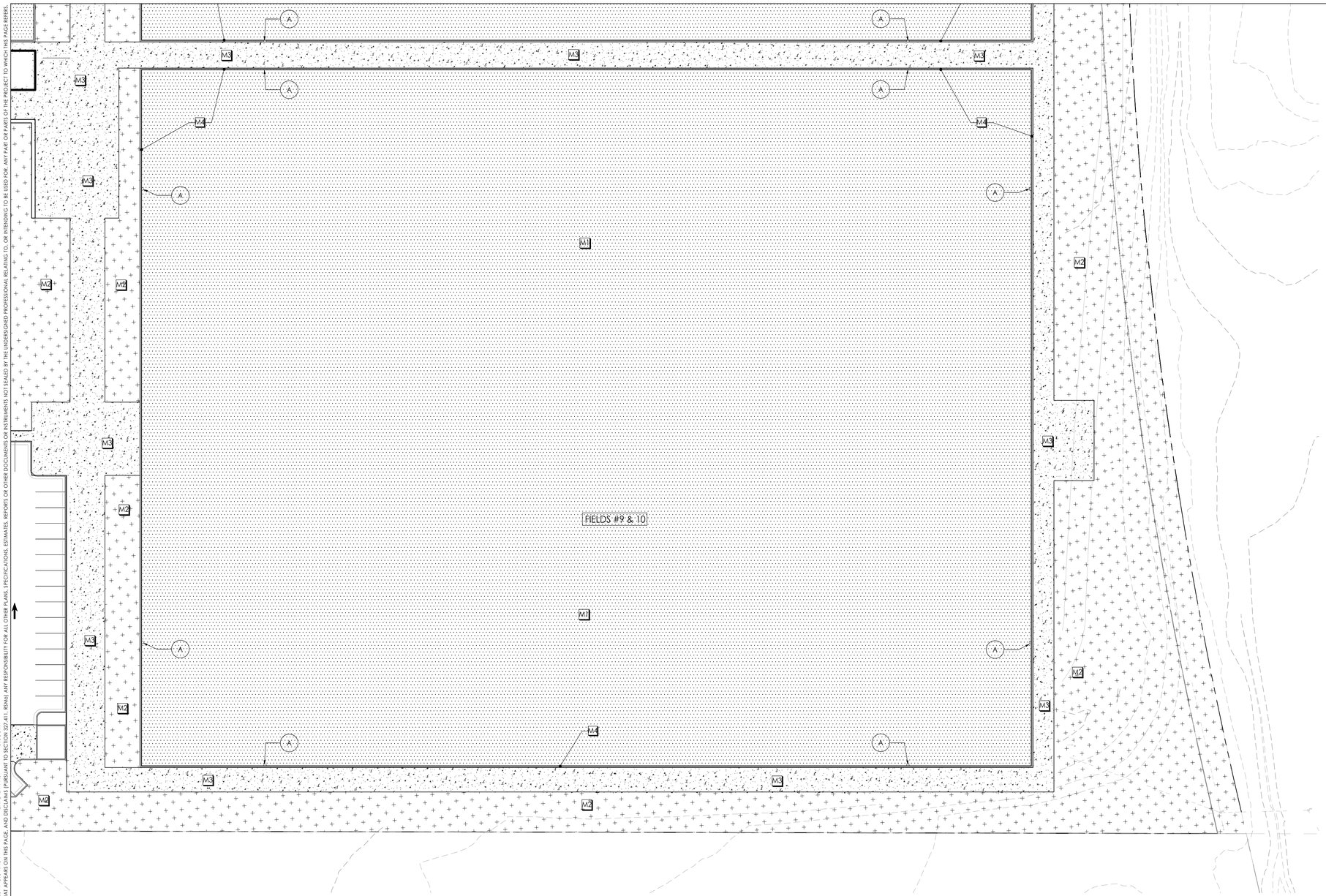
Field 7 & 8 Material & Details Plan

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY:

SHEET NO:

PF-104

G:\Archive\2016\1197-PARAGON STAR\DRAWINGS\CAD\SHEETS\PF-100 Materials.dwg 1/17/2019 5:51:11 PM ERIC DAVIS
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
0.3869^1



1 FIELD 9 AND 10 MATERIALS PLAN

Scale: 1" = 30'

30 15 0 30 90

SCALE: 1"=30'

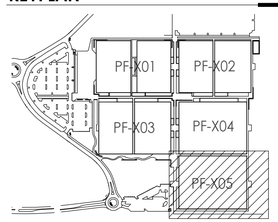
MATERIALS LEGEND

SYMBOL	DESCRIPTION
M1	ARTIFICIAL TURF SURFACE (BY OTHERS) CONSTRUCT ALL BASE CONDITIONS UNDER SYNTHETIC TURF
M2	PLANTING AREA (REFER TO L-SERIES LANDSCAPE SHEETS)
M3	CONCRETE WALK (RE: CIVIL DWGS)
M4	CONCRETE PERIMETER CURB

EQUIPMENT SCHEDULE

KEY	DESCRIPTION
A	FIELD QUICK COUPLER
B	SOCCER GOAL

KEYPLAN



CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

Field 9 & 10 Material & Details Plan

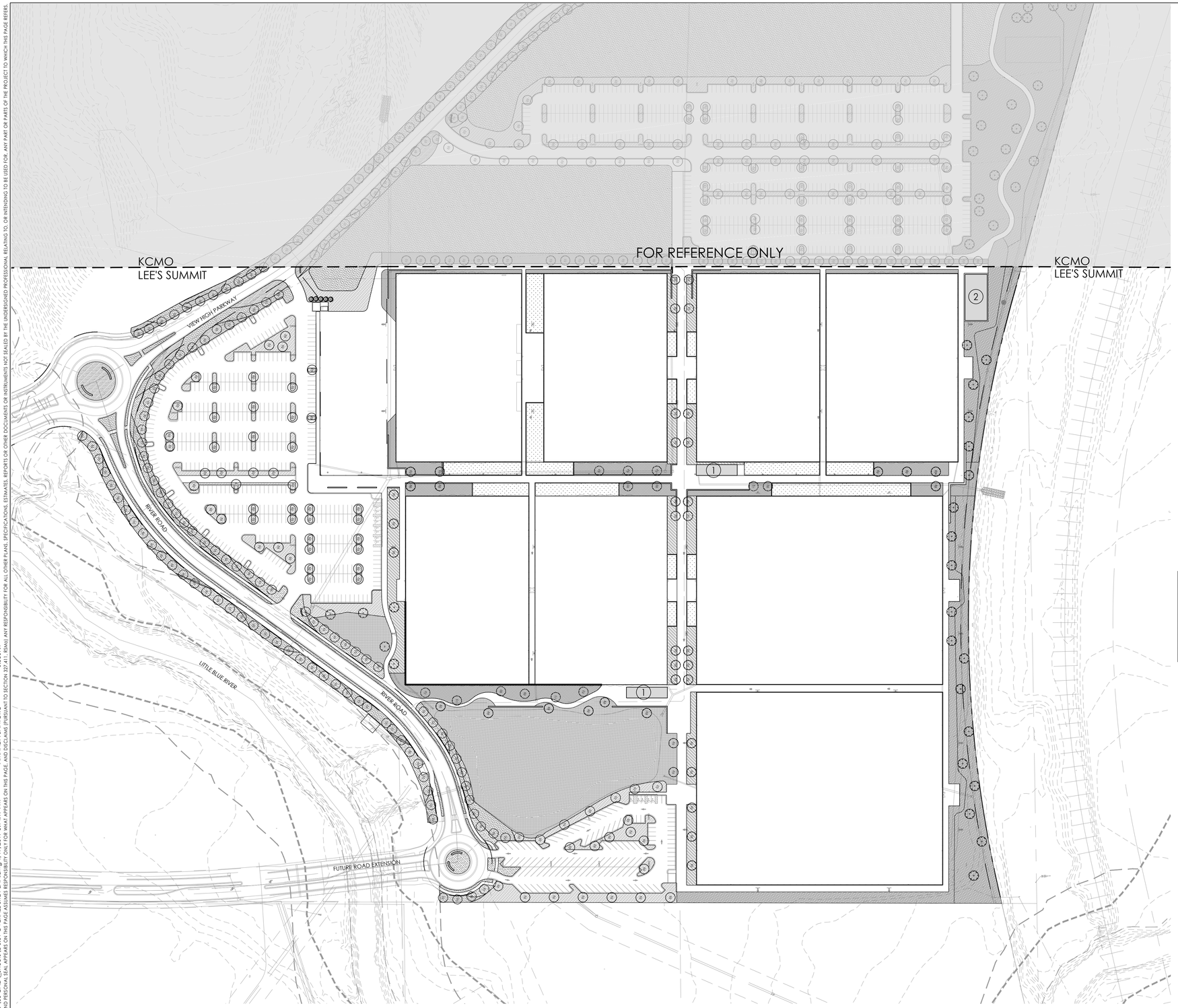
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY:

SHEET NO:

PF-105

G:\Archive\2016\1197-PARAGON STAR\DRAWINGS\CAD\SHEETS\PF-100 Materials.dwg 1/17/2019 5:51:43 PM ERIC DAVIS
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
0.3869:1

M:\Paragon Star - Lee's Summit, MO\03 CAD_Sheets\L-001 OVERALL SITE PLAN.dwg 1/17/2019 5:14:19 PM AMANDA SANTORO
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.
0.3869^1



A OVERALL SITE PLAN
0'-1" = 100'-0"

10' 100'
0 50' 200'

NORTH

Sheet List Table	
Sheet Number	Sheet Title
L-001	OVERALL SITE PLAN
L-500	LANDSCAPE PLAN
L-501	LANDSCAPE PLAN
L-502	LANDSCAPE PLAN
L-503	LANDSCAPE PLAN
L-504	LANDSCAPE PLAN
L-505	LANDSCAPE PLAN
L-506	LANDSCAPE PLAN
L-507	LANDSCAPE PLAN
L-508	LANDSCAPE SCHEDULE
L-700	SITE DETAILS
L-800	PLANTING DETAILS

PLAN NOTES

1. CONCESSION / RESTROOM / SHADE AND AMENITY BUILDING (TYPICAL - TWO LOCATIONS)

   GENERAL DESCRIPTION IS AS FOLLOWS; ADDITIONAL DETAIL SHALL BE PROVIDED WITH SUBSEQUENT SUBMITTAL TO THE CITY OF LEE'S SUMMIT.

   - STRUCTURE SHALL BE A ONE-STORY BUILDING, CMU/TIMBER CONSTRUCTION
   - SCREENING OF ROOFTOP MECHANICAL UNITS WILL BE INCORPORATED INTO ROOFLINE DESIGN FOR SCREENING.
   - ROOF MATERIAL SHALL BE RAISED SEAM METAL PANEL.
   - SQUARE FOOTAGE VALUES PROVIDED IN LAND USE SCHEDULE REPRESENT ANTICIPATED MINIMUMS - ADJUSTMENTS TO TOTALS OR ALLOCATION FOR ADDITIONAL USES SUCH AS TRAINING, FIRST AID, OFFICIAL'S LOUNGE, ETC. MAY BE EXPLORED.

2. FUTURE MAINTENANCE BUILDING

Land Use Schedule

Requirement	Value	Comments
Total Floor Area	2,400 SF (min)	Additional detail will be provided with subsequent submittal
	Each Concession Building: 700 SF (min) concession and storage; 500 SF (min) restroom, 10 (min) lavatories	
Number of Dwelling Units	N/A - no residential use	
Land Area	76.36 Acres	Excludes building setback lines
Required Parking Spaces	(Concessions) 5 per 1,000 SF = 12	Concessions/Restroom/Amenity Building (Per 8.530, Table 8-1)
Required Parking Spaces	(Soccer Complex) Director's Determination	
Provided Parking Spaces	595	
Impervious Coverage	9.01 Acres	
Floor Area Ratio	0.0007'2	Gross floor area / lot area (per Sec. 15.1230)

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

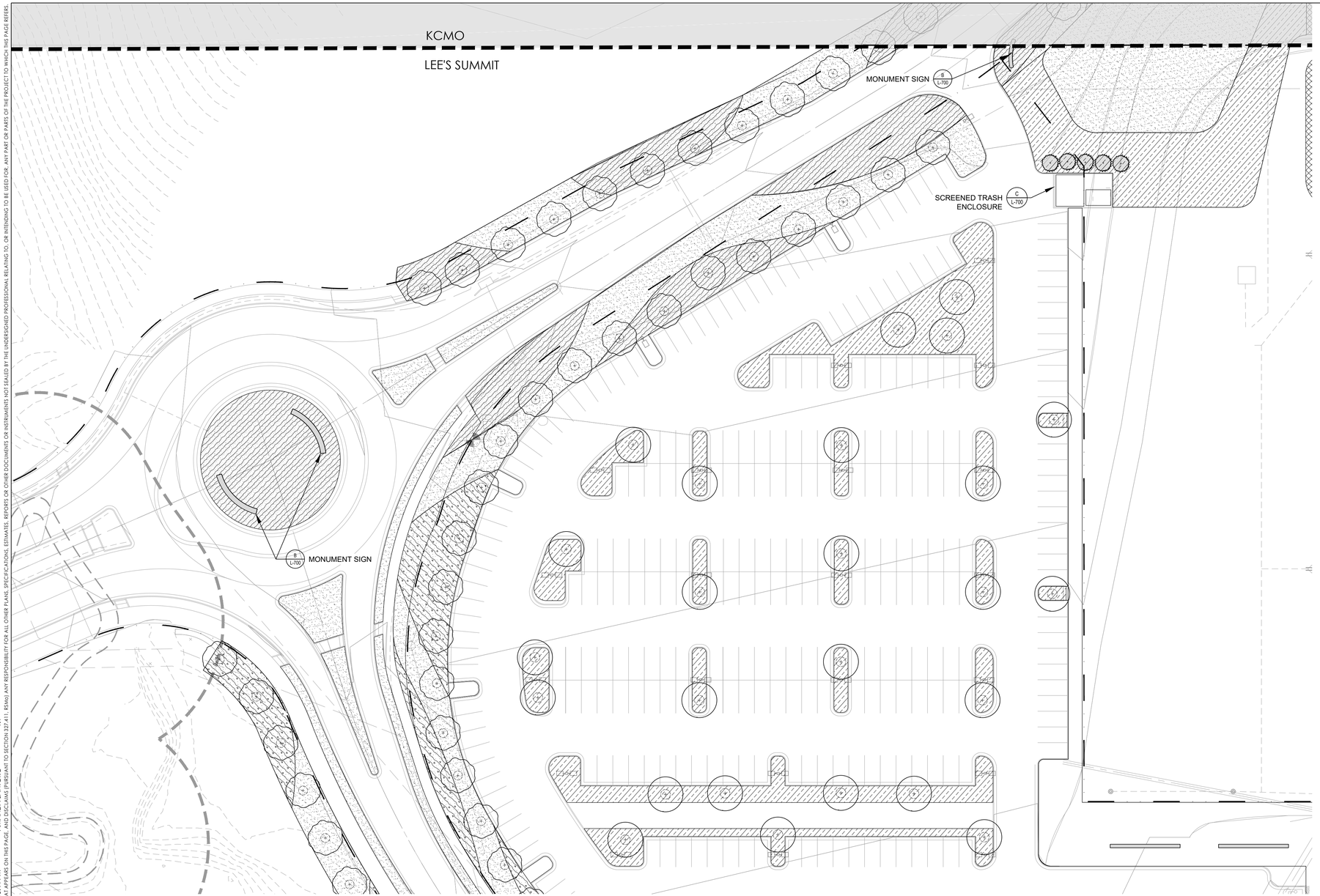
PROFESSIONAL SEAL:

DRAWING TITLE:
OVERALL SITE PLAN

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

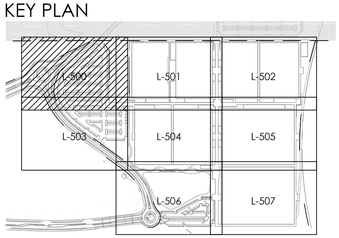
SHEET NO:
L-001

M:\Paragon Star - Lee's Summit, MO\03 CAD_Sheets\L-500 LANDSCAPE PLANS.dwg 1/17/2019 5:16:44 PM AMANDA SANTORO 1:1
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS PURSUANT TO SECTION 327.411, RSMo ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



A LANDSCAPE PLAN
0'-1" = 30'-0"

KEY PLAN



CONCEPT PLANT SCHEDULE

PROMENADE TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
ACER TRUNCATUM / SHANTUNG MAPLE
CERCIS CANADENSIS / EASTERN REDBUD
ZELKOVA SERRATA / SAWLEAF ZELKOVA

PARKING LOT TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
GINKGO BILOBA / MAIDENHAIR TREE

STREET TREES
* 2"-- 2.5" CALIPER TREES
SPECIES BELOW:
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

NATURALISTIC AREA TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

SCREENING TREES
* EVERGREENS W/ MIN. HEIGHT OF 8`
SPECIES BELOW:
THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

ARTIFICIAL TURF
PRACTICE AREAS W/ SAME MATERIAL AS SPORTS FIELDS
-

TURF
SOD
-

PARKING MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

RIVER ROAD MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
ARUNCUS DIOICUS / BRIDE`S FEATHERS
CORNUS ALBA / TATARIAN DOGWOOD
EUTROCHIUM PURPUREUM / SWEET JOE PYE WEED
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
POLYGONATUM ODORATUM `VARIEGATUM` / SOLOMON`S-SEAL
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

PARKWAY MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
MONARDA BRADBURIANA / EASTERN BEE BALM
PANICUM VIRGATUM / SWITCH GRASS
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS

PROMENADE N-S
* PLUGS @ 12" O.C.
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CORNUS ALBA / TATARIAN DOGWOOD
PHYSOCARPUS OPULIFOLIUS `NANUS` / DWARF NINEBARK
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

PROMENADE E-W
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
BOUTELOUA GRACILIS / BLUE GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

WETLAND MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS INCARNATA / SWAMP MILKWEED
CAREX GRAYI / MORNING STAR SEDGE
CAREX HAYDENII / HAYDEN`S SEDGE
CAREX STRICTA / TUSSOCK SEDGE
LOBELIA CARDINALIS / CARDINAL FLOWER
PANICUM VIRGATUM / SWITCH GRASS
SILPHIUM LACINIATUM / COMPASS PLANT
SORGHASTRUM NUTANS / INDIAN GRASS

PRAIRIE MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
PANICUM VIRGATUM / SWITCH GRASS
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:
LANDSCAPE PLAN

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

SHEET NO:
L-500

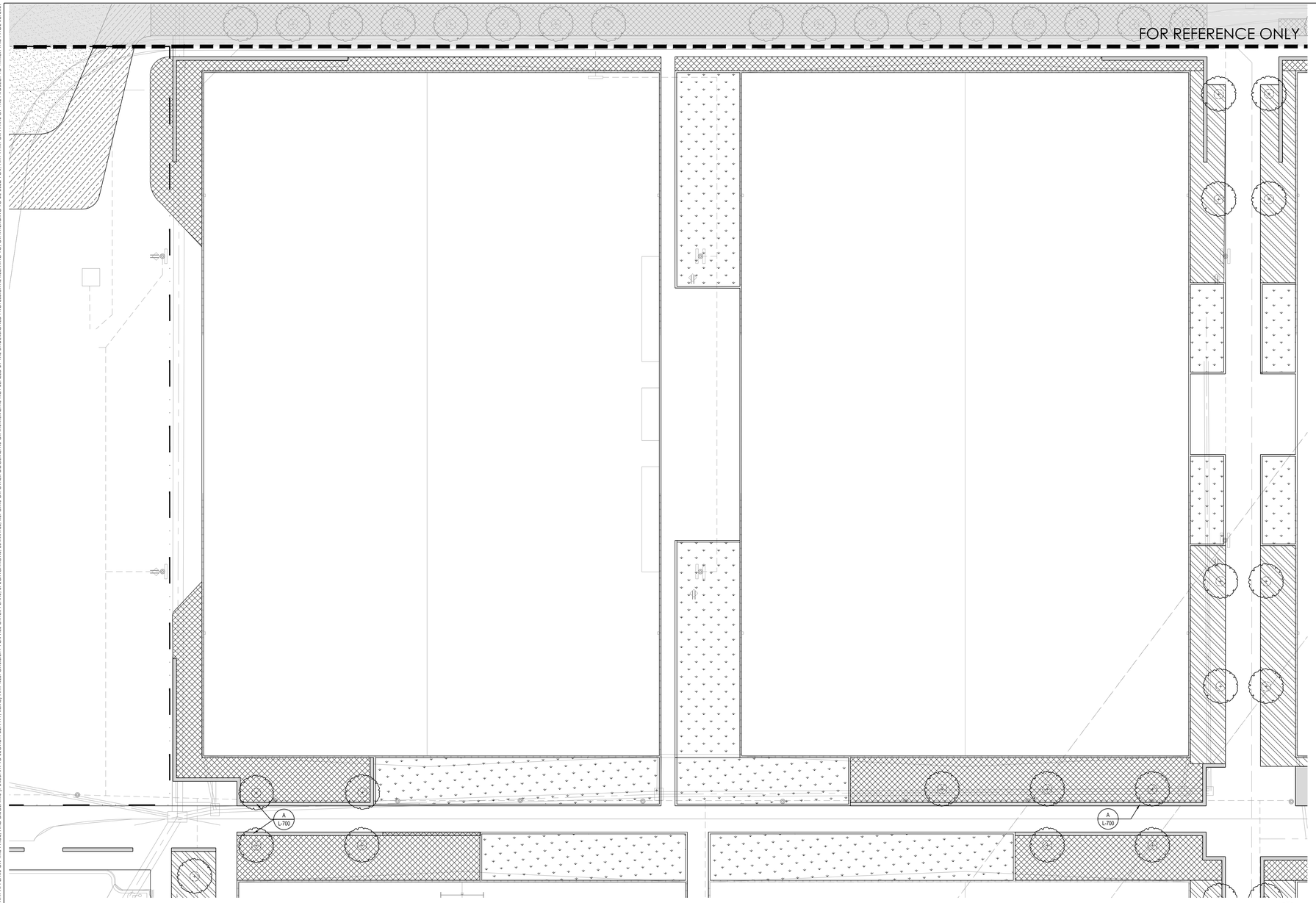
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

AMANDA SANTORO

M:\Paragon Star - Lee's Summit, MO\03 CAD_Sheets\L-5.00 LANDSCAPE PLANS.dwg | 1/7/2019 5:17:32 PM

1:1

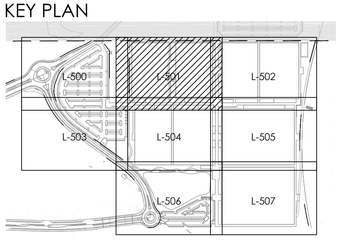
FOR REFERENCE ONLY



A LANDSCAPE PLAN
0'-1" = 30'-0"

10' 30'
0 20' 60'
NORTH

KEY PLAN



CONCEPT PLANT SCHEDULE

PROMENADE TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
ACER TRUNCATUM / SHANTUNG MAPLE
CERCIS CANADENSIS / EASTERN REDBUD
ZELKOVA SERRATA / SAWLEAF ZELKOVA

PARKING LOT TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
GINKGO BILOBA / MAIDENHAIR TREE

STREET TREES
* 2"-- 2.5" CALIPER TREES
SPECIES BELOW:
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

NATURALISTIC AREA TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

SCREENING TREES
* EVERGREENS W/ MIN. HEIGHT OF 8`
SPECIES BELOW:
THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

ARTIFICIAL TURF
PRACTICE AREAS W/ SAME MATERIAL AS SPORTS FIELDS
-

TURF
SOD
-

PARKING MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

RIVER ROAD MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
ARUNCUS DIOICUS / BRIDE`S FEATHERS
CORNUS ALBA / TATARIAN DOGWOOD
EUTROCHIUM PURPUREUM / SWEET JOE PYE WEED
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
POLYGONATUM ODORATUM `VARIEGATUM` / SOLOMON`S-SEAL
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

PARKWAY MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
MONARDA BRADBURIANA / EASTERN BEE BALM
PANICUM VIRGATUM / SWITCH GRASS
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS

PROMENADE N-S
* PLUGS @ 12" O.C.
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CORNUS ALBA / TATARIAN DOGWOOD
PHYSOCARPUS OPULIFOLIUS `NANUS` / DWARF NINEBARK
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

PROMENADE E-W
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
BOUTELOUA GRACILIS / BLUE GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

WETLAND MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS INCARNATA / SWAMP MILKWEED
CAREX GRAYI / MORNING STAR SEDGE
CAREX HAYDENII / HAYDEN`S SEDGE
CAREX STRICTA / TUSSOCK SEDGE
LOBELIA CARDINALIS / CARDINAL FLOWER
PANICUM VIRGATUM / SWITCH GRASS
SILPHIUM LACINIATUM / COMPASS PLANT
SORGHASTRUM NUTANS / INDIAN GRASS

PRAIRIE MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
PANICUM VIRGATUM / SWITCH GRASS
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

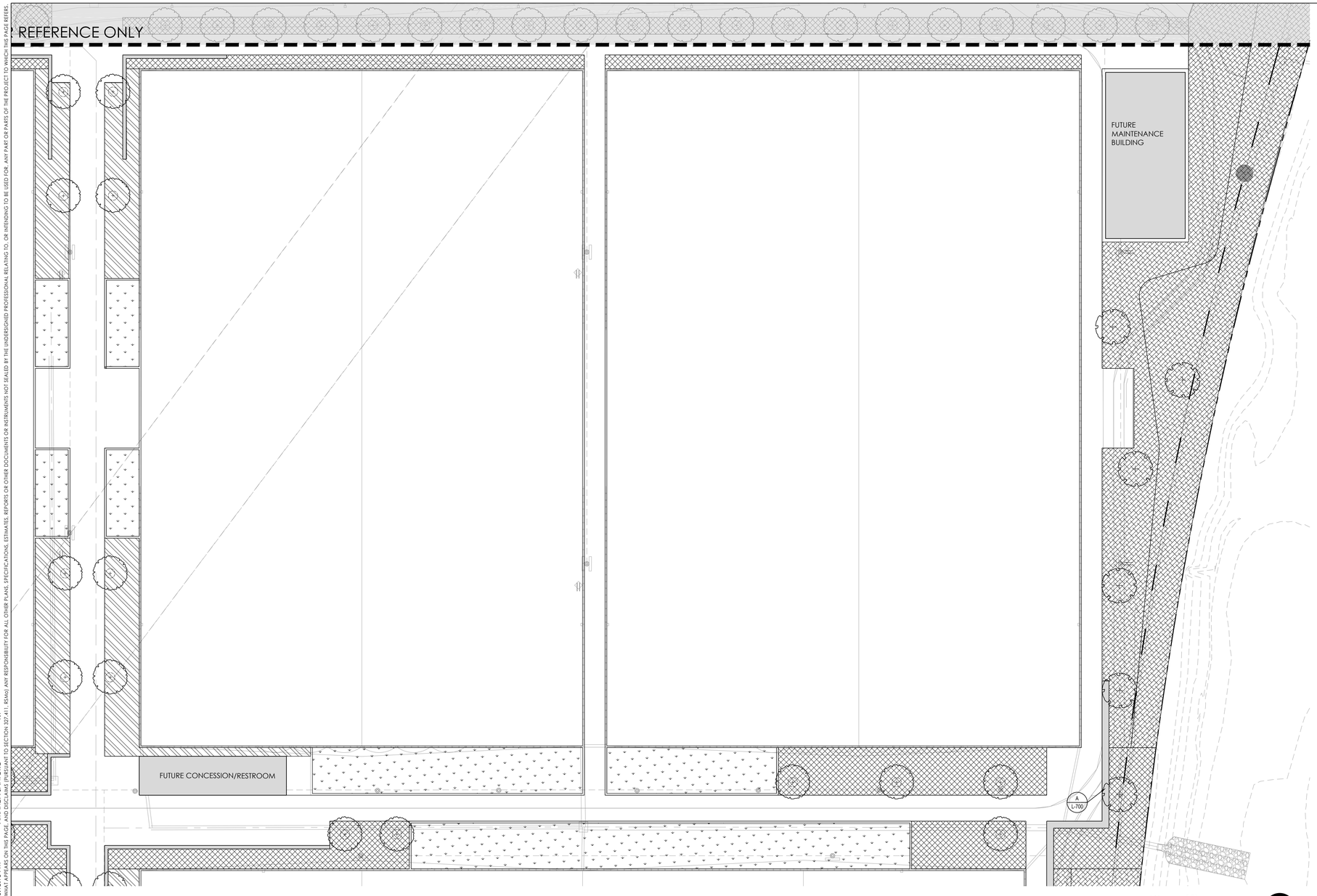
PROFESSIONAL SEAL:

DRAWING TITLE:
LANDSCAPE PLAN

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

SHEET NO:
L-501

REFERENCE ONLY

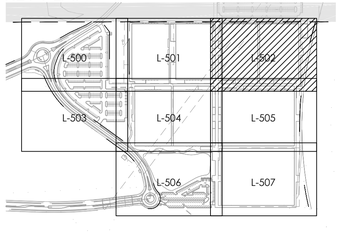


A LANDSCAPE PLAN
0'-1" = 30'-0"

10' 30'
0 20' 60'

NORTH

KEY PLAN



CONCEPT PLANT SCHEDULE

PROMENADE TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
ACER TRUNCATUM / SHANTUNG MAPLE
CERCIS CANADENSIS / EASTERN REDBUD
ZELKOVA SERRATA / SAWLEAF ZELKOVA

PARKING LOT TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
GINKGO BILOBA / MAIDENHAIR TREE

STREET TREES
* 2"-- 2.5" CALIPER TREES
SPECIES BELOW:
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

NATURALISTIC AREA TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

SCREENING TREES
* EVERGREENS W/ MIN. HEIGHT OF 8`
SPECIES BELOW:
THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

ARTIFICIAL TURF
PRACTICE AREAS W/ SAME MATERIAL AS SPORTS FIELDS
-

TURF
SOD
-

PARKING MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

RIVER ROAD MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
ARUNCUS DIOICUS / BRIDE`S FEATHERS
CORNUS ALBA / TATARIAN DOGWOOD
EUTROCHIUM PURPUREUM / SWEET JOE PYE WEED
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
POLYGONATUM ODORATUM `VARIEGATUM` / SOLOMON`S-SEAL
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

PARKWAY MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
MONARDA BRADBURIANA / EASTERN BEE BALM
PANICUM VIRGATUM / SWITCH GRASS
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS

PROMENADE N-S
* PLUGS @ 12" O.C.
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CORNUS ALBA / TATARIAN DOGWOOD
PHYSOCARPUS OPULIFOLIUS `NANUS` / DWARF NINEBARK
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

PROMENADE E-W
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
BOUTELOUA GRACILIS / BLUE GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

WETLAND MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS INCARNATA / SWAMP MILKWEED
CAREX GRAYI / MORNING STAR SEDGE
CAREX HAYDENII / HAYDEN`S SEDGE
CAREX STRICTA / TUSSOCK SEDGE
LOBELIA CARDINALIS / CARDINAL FLOWER
PANICUM VIRGATUM / SWITCH GRASS
SILPHIUM LACINIATUM / COMPASS PLANT
SORGHASTRUM NUTANS / INDIAN GRASS

PRAIRIE MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
PANICUM VIRGATUM / SWITCH GRASS
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

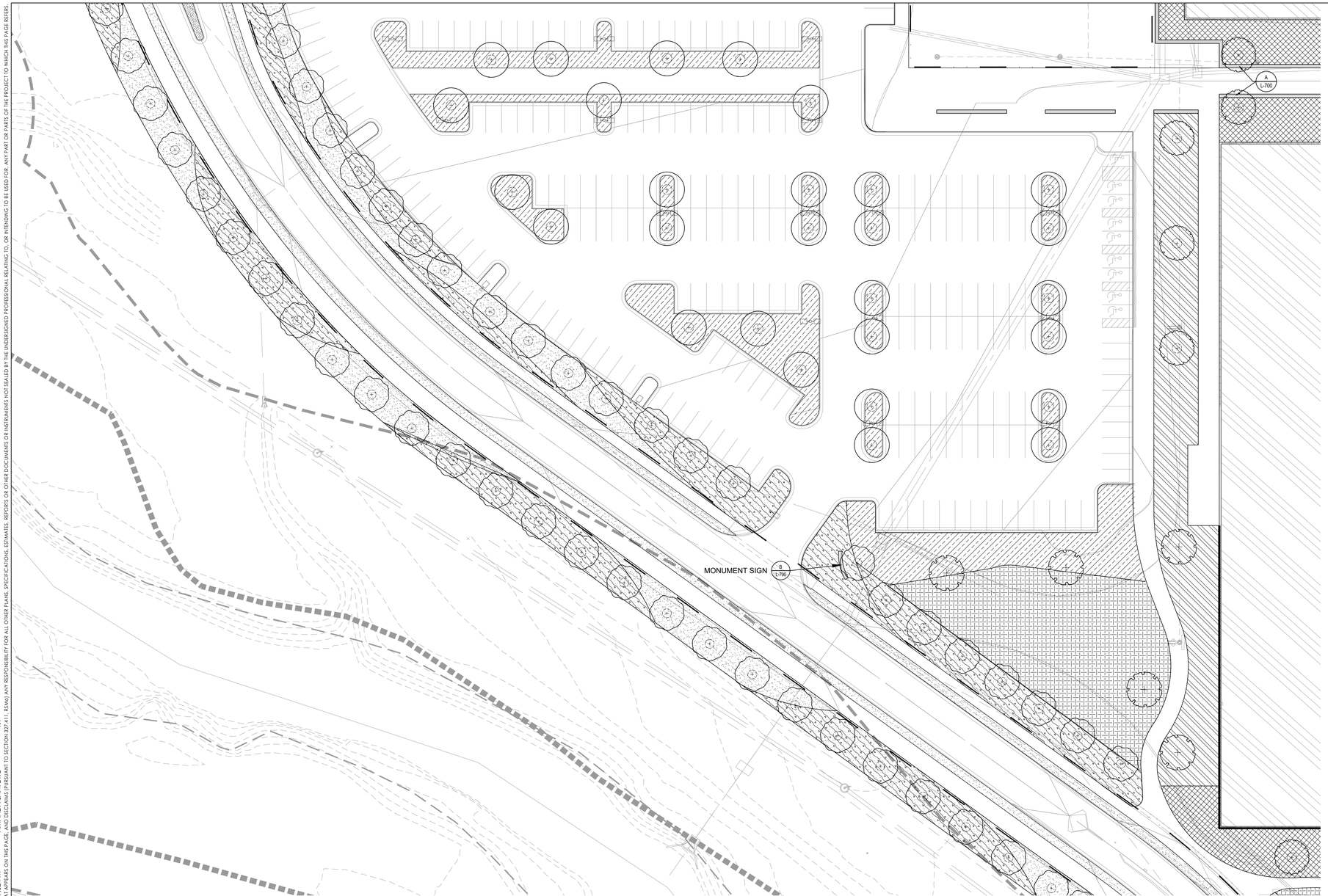
DRAWING TITLE:
LANDSCAPE PLAN

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

SHEET NO:
L-502

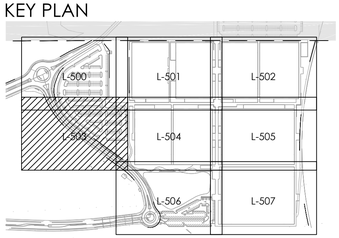
M:\Paragon Star - Lee's Summit, MO\03 CAD_Sheets\L-5.00 LANDSCAPE PLANS.dwg | 1/7/2019 5:18:13 PM AMANDA SANTORO 1-1
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

M:\Paragon Star - Lee's Summit, MO\03 CAD_Sheets\L-500 LANDSCAPE PLANS.dwg 1/17/2019 5:19:02 PM AMANDA SANTORO 1:1
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



A LANDSCAPE PLAN
0'-1" = 30'-0"

KEY PLAN



CONCEPT PLANT SCHEDULE

PROMENADE TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
ACER TRUNCATUM / SHANTUNG MAPLE
CERCIS CANADENSIS / EASTERN REDBUD
ZELKOVA SERRATA / SAWLEAF ZELKOVA

PARKING LOT TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
GINKGO BILOBA / MAIDENHAIR TREE

STREET TREES
* 2"-- 2.5" CALIPER TREES
SPECIES BELOW:
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

NATURALISTIC AREA TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

SCREENING TREES
* EVERGREENS W/ MIN. HEIGHT OF 8`
SPECIES BELOW:
THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

ARTIFICIAL TURF
PRACTICE AREAS W/ SAME MATERIAL AS SPORTS FIELDS
-

TURF
SOD
-

PARKING MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

RIVER ROAD MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
ARUNCUS DIOICUS / BRIDE`S FEATHERS
CORNUS ALBA / TATARIAN DOGWOOD
EUTROCHIUM PURPUREUM / SWEET JOE PYE WEED
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
POLYGONATUM ODORATUM `VARIEGATUM` / SOLOMON`S-SEAL
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

PARKWAY MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
MONARDA BRADBURIANA / EASTERN BEE BALM
PANICUM VIRGATUM / SWITCH GRASS
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS

PROMENADE N-S
* PLUGS @ 12" O.C.
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CORNUS ALBA / TATARIAN DOGWOOD
PHYSOCARPUS OPULIFOLIUS `NANUS` / DWARF NINEBARK
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

PROMENADE E-W
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
BOUTELOUA GRACILIS / BLUE GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

WETLAND MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS INCARNATA / SWAMP MILKWEED
CAREX GRAYI / MORNING STAR SEDGE
CAREX HAYDENII / HAYDEN`S SEDGE
CAREX STRICTA / TUSSOCK SEDGE
LOBELIA CARDINALIS / CARDINAL FLOWER
PANICUM VIRGATUM / SWITCH GRASS
SILPHIUM LACINIATUM / COMPASS PLANT
SORGHASTRUM NUTANS / INDIAN GRASS

PRAIRIE MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
PANICUM VIRGATUM / SWITCH GRASS
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

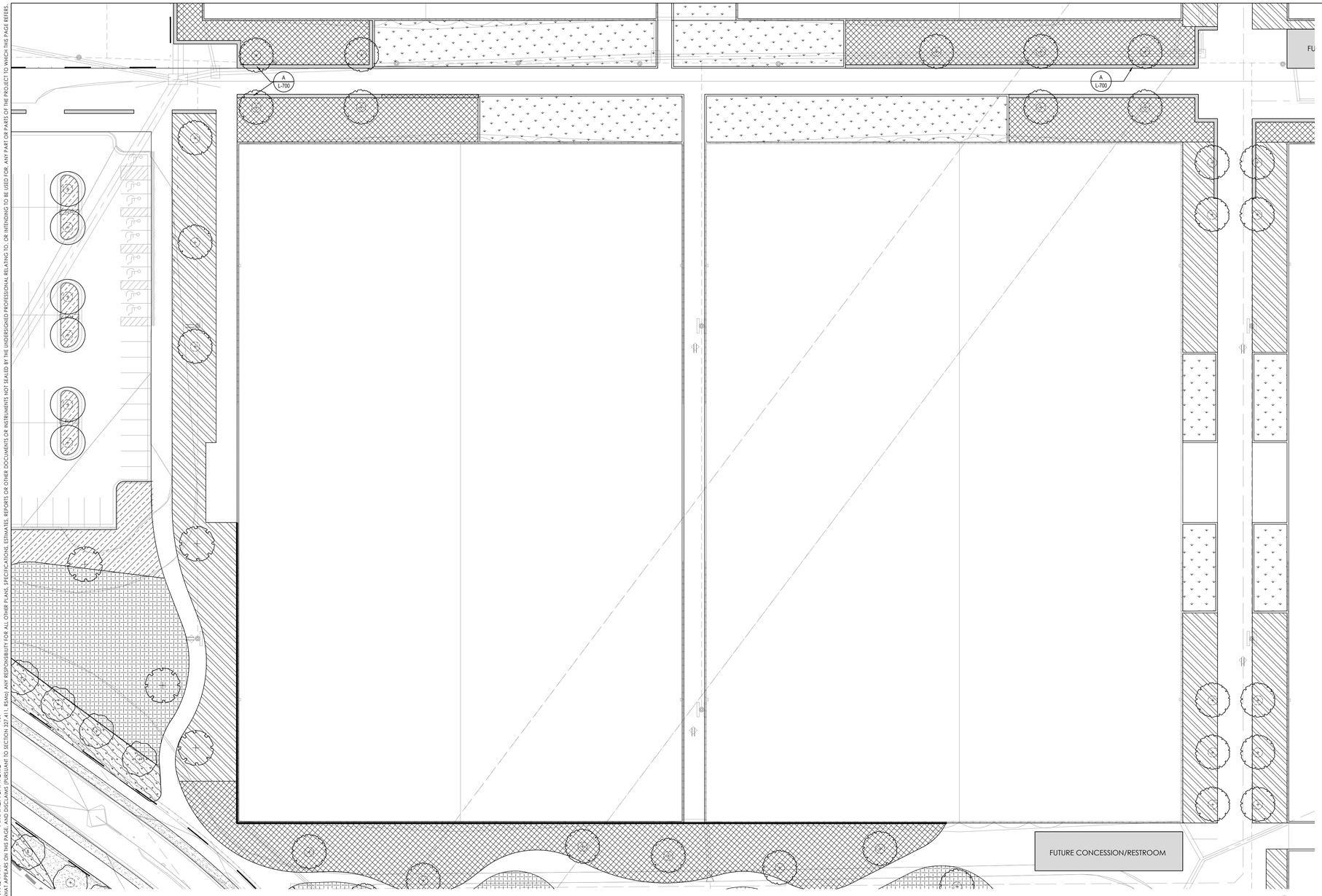
PROFESSIONAL SEAL:

DRAWING TITLE:
LANDSCAPE PLAN

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

SHEET NO:
L-503

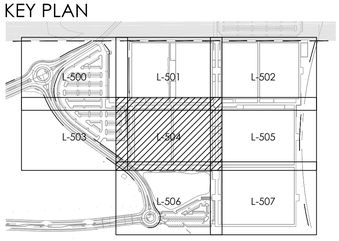
M:\Paragon Star - Lee's Summit, MO\03 CAD_Sheets\L-5.00 LANDSCAPE PLANS.dwg | 1/17/2019 5:19:54 PM AMANDA SANTORO 1:1
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



A LANDSCAPE PLAN
0'-1" = 30'-0"

10' 30'
0 20' 60'
NORTH

KEY PLAN



CONCEPT PLANT SCHEDULE

PROMENADE TREES
* 2"– 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
ACER TRUNCATUM / SHANTUNG MAPLE
CERCIS CANADENSIS / EASTERN REDBUD
ZELKOVA SERRATA / SAWLEAF ZELKOVA

PARKING LOT TREES
* 2"– 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
GINKGO BILOBA / MAIDENHAIR TREE

STREET TREES
* 2"– 2.5" CALIPER TREES
SPECIES BELOW:
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

NATURALISTIC AREA TREES
* 2"– 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

SCREENING TREES
* EVERGREENS W/ MIN. HEIGHT OF 8`
SPECIES BELOW:
THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

ARTIFICIAL TURF
PRACTICE AREAS W/ SAME MATERIAL AS SPORTS FIELDS
-

TURF
SOD
-

PARKING MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

RIVER ROAD MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
ARUNCUS DIOICUS / BRIDE`S FEATHERS
CORNUS ALBA / TATARIAN DOGWOOD
EUTROCHIUM PURPUREUM / SWEET JOE PYE WEED
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
POLYGONATUM ODORATUM `VARIEGATUM` / SOLOMON`S-SEAL
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

PARKWAY MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
MONARDA BRADBURIANA / EASTERN BEE BALM
PANICUM VIRGATUM / SWITCH GRASS
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS

PROMENADE N-S
* PLUGS @ 12" O.C.
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CORNUS ALBA / TATARIAN DOGWOOD
PHYSOCARPUS OPULIFOLIUS `NANUS` / DWARF NINEBARK
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

PROMENADE E-W
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
BOUTELOUA GRACILIS / BLUE GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

WETLAND MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS INCARNATA / SWAMP MILKWEED
CAREX GRAYI / MORNING STAR SEDGE
CAREX HAYDENII / HAYDEN`S SEDGE
CAREX STRICTA / TUSSOCK SEDGE
LOBELIA CARDINALIS / CARDINAL FLOWER
PANICUM VIRGATUM / SWITCH GRASS
SILPHIUM LACINIATUM / COMPASS PLANT
SORGHASTRUM NUTANS / INDIAN GRASS

PRAIRIE MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
PANICUM VIRGATUM / SWITCH GRASS
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

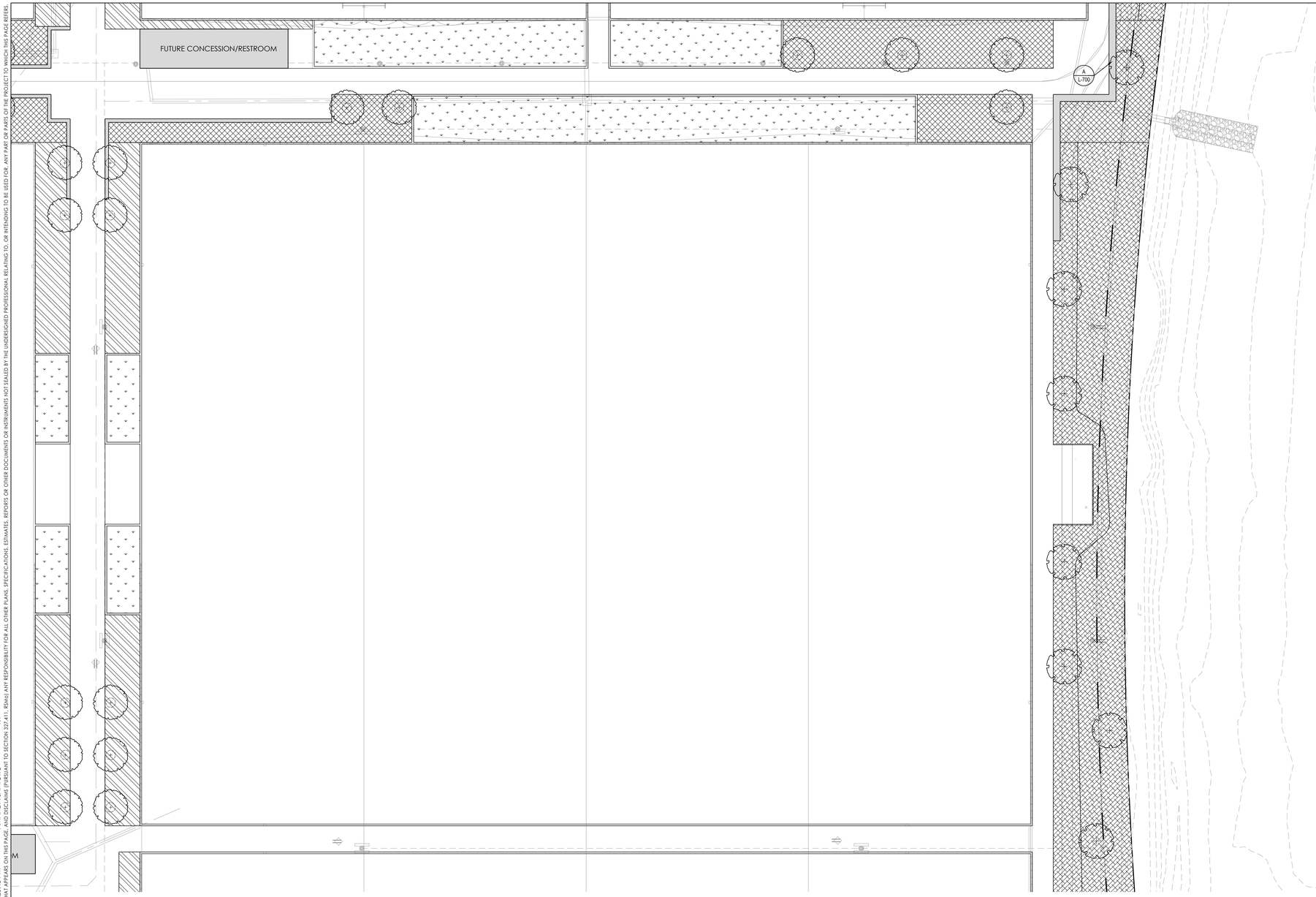
ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:
LANDSCAPE PLAN

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

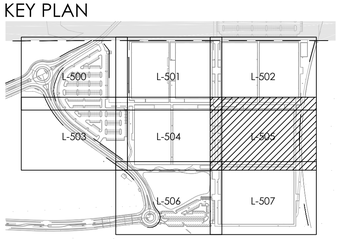
SHEET NO:
L-504



A LANDSCAPE PLAN
0'-1" = 30'-0"

10' 30'
0 20' 60'
NORTH

KEY PLAN



CONCEPT PLANT SCHEDULE

PROMENADE TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
ACER TRUNCATUM / SHANTUNG MAPLE
CERCIS CANADENSIS / EASTERN REDBUD
ZELKOVA SERRATA / SAWLEAF ZELKOVA

PARKING LOT TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
GINKGO BILOBA / MAIDENHAIR TREE

STREET TREES
* 2"-- 2.5" CALIPER TREES
SPECIES BELOW:
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

NATURALISTIC AREA TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

SCREENING TREES
* EVERGREENS W/ MIN. HEIGHT OF 8`
SPECIES BELOW:
THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

ARTIFICIAL TURF
PRACTICE AREAS W/ SAME MATERIAL AS SPORTS FIELDS
-

TURF
SOD
-

PARKING MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

RIVER ROAD MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
ARUNCUS DIOICUS / BRIDE`S FEATHERS
CORNUS ALBA / TATARIAN DOGWOOD
EUTROCHIUM PURPUREUM / SWEET JOE PYE WEED
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
POLYGONATUM ODORATUM `VARIEGATUM` / SOLOMON`S-SEAL
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

PARKWAY MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
MONARDA BRADBURIANA / EASTERN BEE BALM
PANICUM VIRGATUM / SWITCH GRASS
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS

PROMENADE N-S
* PLUGS @ 12" O.C.
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CORNUS ALBA / TATARIAN DOGWOOD
PHYSOCARPUS OPULIFOLIUS `NANUS` / DWARF NINEBARK
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

PROMENADE E-W
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
BOUTELOUA GRACILIS / BLUE GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

WETLAND MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS INCARNATA / SWAMP MILKWEED
CAREX GRAYI / MORNING STAR SEDGE
CAREX HAYDENII / HAYDEN`S SEDGE
CAREX STRICTA / TUSSOCK SEDGE
LOBELIA CARDINALIS / CARDINAL FLOWER
PANICUM VIRGATUM / SWITCH GRASS
SILPHIUM LACINIATUM / COMPASS PLANT
SORGHASTRUM NUTANS / INDIAN GRASS

PRAIRIE MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
PANICUM VIRGATUM / SWITCH GRASS
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:
LANDSCAPE PLAN

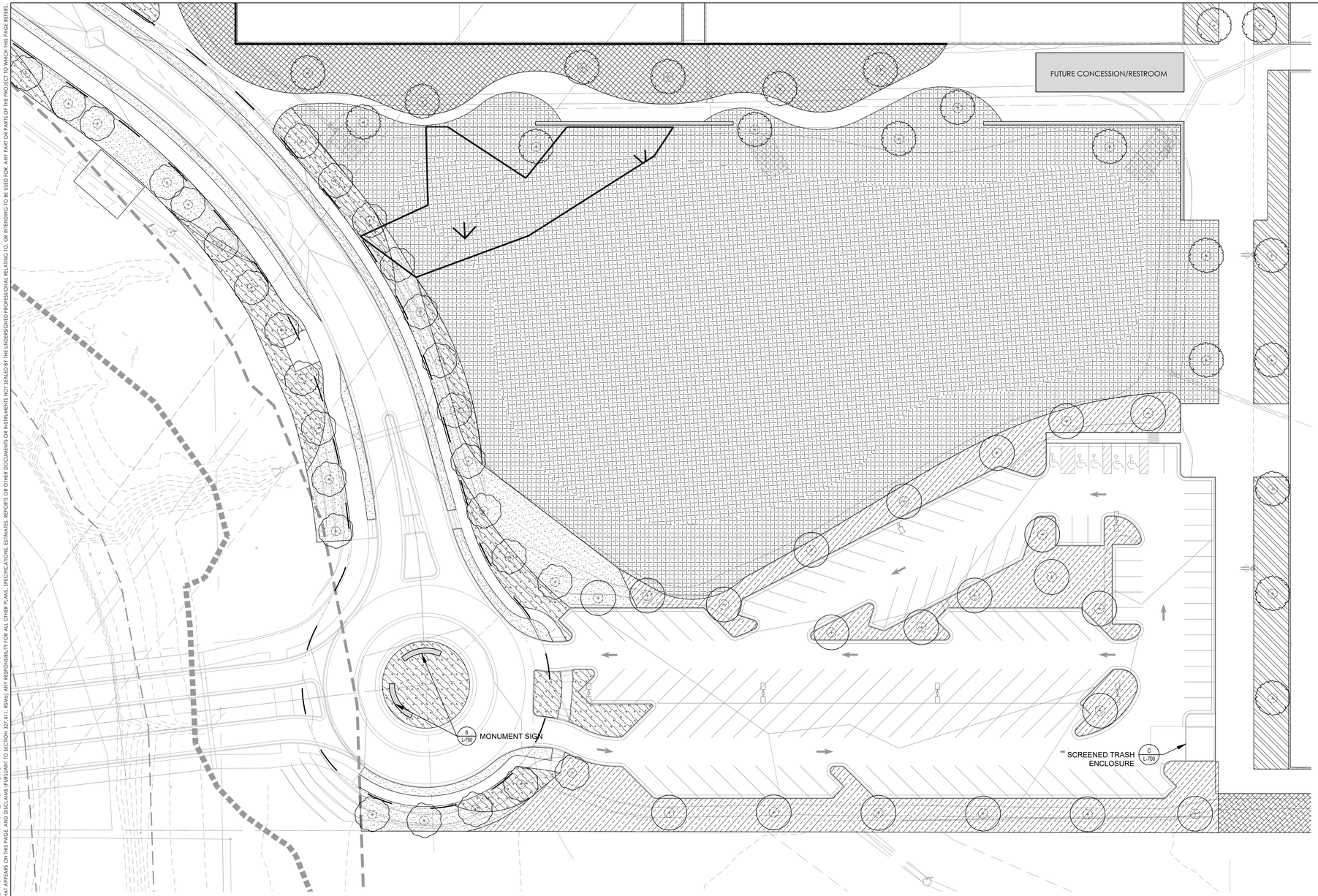
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

SHEET NO:
L-505

M:\Paragon Star - Lee's Summit, MO\03 CAD_Sheets\L-5.00 LANDSCAPE PLANS.dwg 1/17/2019 5:20:48 PM AMANDA SANTORO 1:1
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS PURSUANT TO SECTION 327.411, RSMO ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

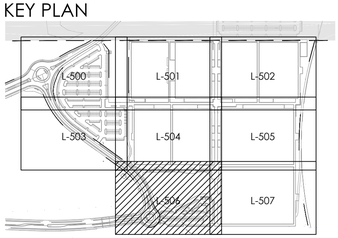
M:\Paragon Star - Lee's Summit_MO\03 CAD_Sheets\L-500 LANDSCAPE PLANS.dwg 1/17/2019 5:21:40 PM AMANDA SANTORO 1:1



A LANDSCAPE PLAN
0'-1" = 30'-0"

10' 30'
0 20' 60'
NORTH

KEY PLAN



CONCEPT PLANT SCHEDULE

PROMENADE TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
ACER TRUNCATUM / SHANTUNG MAPLE
CERCIS CANADENSIS / EASTERN REDBUD
ZELKOVA SERRATA / SAWLEAF ZELKOVA

PARKING LOT TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
GINKGO BILOBA / MAIDENHAIR TREE

STREET TREES
* 2"-- 2.5" CALIPER TREES
SPECIES BELOW:
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

NATURALISTIC AREA TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

SCREENING TREES
* EVERGREENS W/ MIN. HEIGHT OF 8`
SPECIES BELOW:
THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

ARTIFICIAL TURF
PRACTICE AREAS W/ SAME MATERIAL AS SPORTS FIELDS
-

TURF
SOD
-

PARKING MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

RIVER ROAD MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
ARUNCUS DIOICUS / BRIDE`S FEATHERS
CORNUS ALBA / TATARIAN DOGWOOD
EUTROCHIUM PURPUREUM / SWEET JOE PYE WEED
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
POLYGONATUM ODORATUM `VARIEGATUM` / SOLOMON`S-SEAL
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

PARKWAY MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
MONARDA BRADBURIANA / EASTERN BEE BALM
PANICUM VIRGATUM / SWITCH GRASS
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS

PROMENADE N-S
* PLUGS @ 12" O.C.
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CORNUS ALBA / TATARIAN DOGWOOD
PHYSOCARPUS OPULIFOLIUS `NANUS` / DWARF NINEBARK
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

PROMENADE E-W
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
BOUTELOUA GRACILIS / BLUE GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

WETLAND MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS INCARNATA / SWAMP MILKWEED
CAREX GRAYI / MORNING STAR SEDGE
CAREX HAYDENII / HAYDEN`S SEDGE
CAREX STRICTA / TUSSOCK SEDGE
LOBELIA CARDINALIS / CARDINAL FLOWER
PANICUM VIRGATUM / SWITCH GRASS
SILPHIUM LACINIATUM / COMPASS PLANT
SORGHASTRUM NUTANS / INDIAN GRASS

PRAIRIE MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
PANICUM VIRGATUM / SWITCH GRASS

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

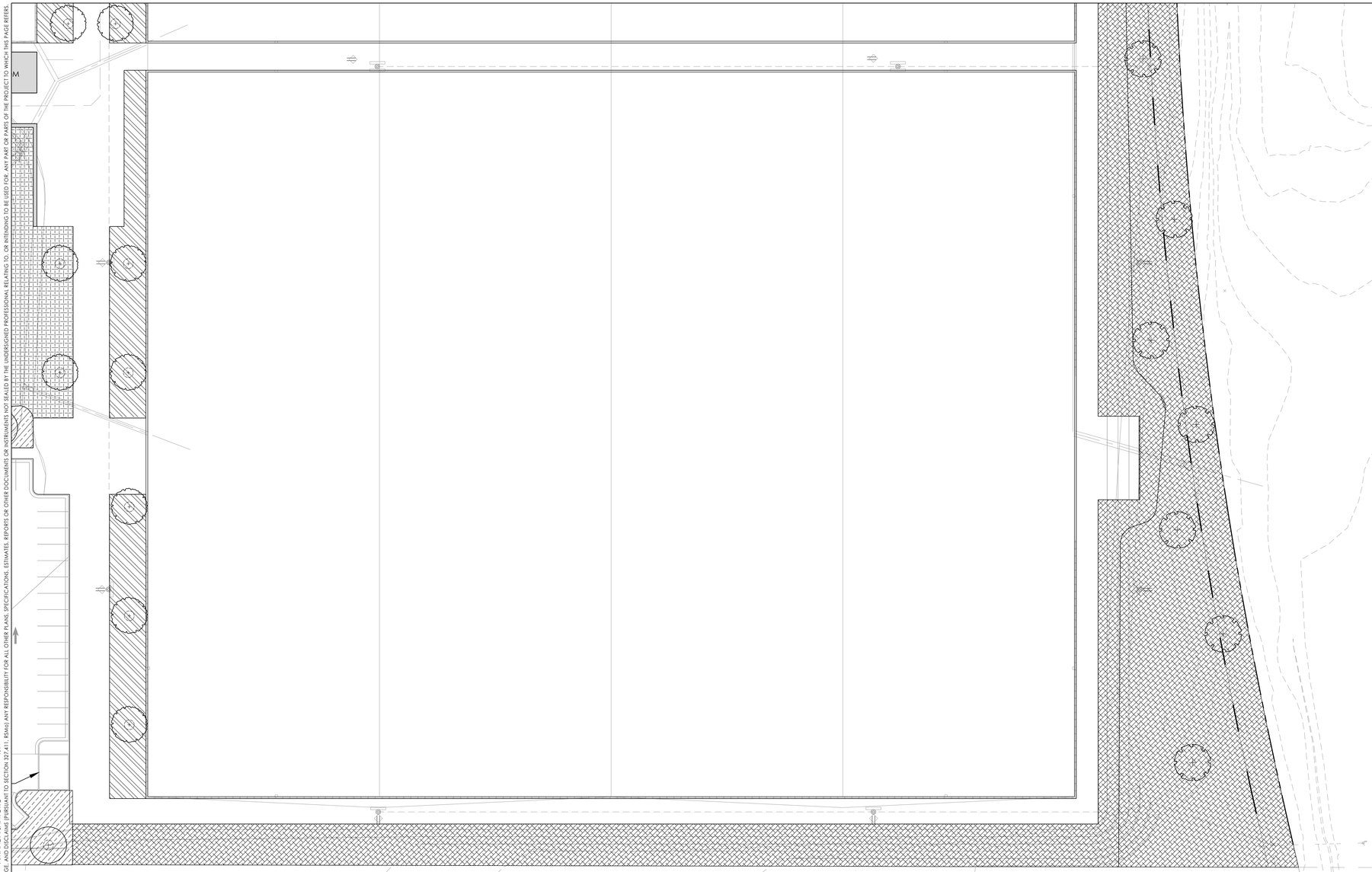
PROFESSIONAL SEAL:

DRAWING TITLE:
LANDSCAPE PLAN

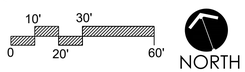
JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

SHEET NO:
L-506

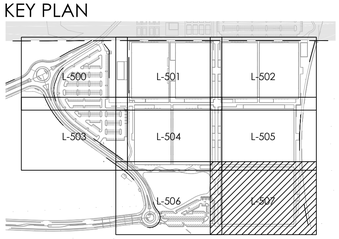
M:\Paragon Star - Lee's Summit, MO\03 CAD_Sheets\L-5.00 LANDSCAPE PLANS.dwg 1/17/2019 5:22:31 PM AMANDA SANTORO 1:1
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



A LANDSCAPE PLAN
0'-1" = 30'-0"



KEY PLAN



CONCEPT PLANT SCHEDULE

PROMENADE TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
ACER TRUNCATUM / SHANTUNG MAPLE
CERCIS CANADENSIS / EASTERN REDBUD
ZELKOVA SERRATA / SAWLEAF ZELKOVA

PARKING LOT TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
GINKGO BILOBA / MAIDENHAIR TREE

STREET TREES
* 2"-- 2.5" CALIPER TREES
SPECIES BELOW:
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

NATURALISTIC AREA TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

SCREENING TREES
* EVERGREENS W/ MIN. HEIGHT OF 8`
SPECIES BELOW:
THUJA OCCIDENTALIS / AMERICAN ARBORVITAE

ARTIFICIAL TURF
PRACTICE AREAS W/ SAME MATERIAL AS SPORTS FIELDS
-

TURF
SOD
-

PARKING MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

RIVER ROAD MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
ARUNCUS DIOICUS / BRIDE`S FEATHERS
CORNUS ALBA / TATARIAN DOGWOOD
EUTROCHIUM PURPUREUM / SWEET JOE PYE WEED
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
POLYGONATUM ODORATUM `VARIEGATUM` / SOLOMON`S-SEAL
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

PARKWAY MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
MONARDA BRADBURIANA / EASTERN BEE BALM
PANICUM VIRGATUM / SWITCH GRASS
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS

PROMENADE N-S
* PLUGS @ 12" O.C.
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CORNUS ALBA / TATARIAN DOGWOOD
PHYSOCARPUS OPULIFOLIUS `NANUS` / DWARF NINEBARK
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED

PROMENADE E-W
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
BOUTELOUA GRACILIS / BLUE GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

WETLAND MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS INCARNATA / SWAMP MILKWEED
CAREX GRAYI / MORNING STAR SEDGE
CAREX HAYDENII / HAYDEN`S SEDGE
CAREX STRICTA / TUSSOCK SEDGE
LOBELIA CARDINALIS / CARDINAL FLOWER
PANICUM VIRGATUM / SWITCH GRASS
SILPHIUM LACINIATUM / COMPASS PLANT
SORGHASTRUM NUTANS / INDIAN GRASS

PRAIRIE MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
PANICUM VIRGATUM / SWITCH GRASS
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:
LANDSCAPE PLAN

JOB NO:1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

SHEET NO:
L-507

CONCEPT PLANT SCHEDULE



PROMENADE TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
ACER TRUNCATUM / SHANTUNG MAPLE
CERCIS CANADENSIS / EASTERN REDBUD
ZELKOVA SERRATA / SAWLEAF ZELKOVA



PARKING LOT TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
GINKGO BILOBA / MAIDENHAIR TREE



STREET TREES
* 2"-- 2.5" CALIPER TREES
SPECIES BELOW:
GLEDITSIA TRIACANTHOS INERMIS / THORNLESS COMMON HONEYLOCUST
GYMNOCLADUS DIOICA / KENTUCKY COFFEE TREE
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK

NOTE:
TREES PROVIDED FOR EACH 30 FEET OF STREET FRONTAGE.



NATURALISTIC AREA TREES
* 2"-- 2.5" CALIPER DECIDIOUS TREES
* 1.5" CALIPER ORNAMENTAL TREES
SPECIES BELOW:
CELTIS OCCIDENTALIS / COMMON HACKBERRY
CERCIS CANADENSIS / EASTERN REDBUD
QUERCUS BICOLOR / SWAMP WHITE OAK
QUERCUS RUBRA / RED OAK



SCREENING TREES
* EVERGREENS W/ MIN. HEIGHT OF 8'
SPECIES BELOW:
THUJA OCCIDENTALIS / AMERICAN ARBORVITAE



ARTIFICIAL TURF
PRACTICE AREAS W/ SAME MATERIAL AS SPORTS FIELDS
-



TURF
SOD
-



PARKING MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
SPORORBOLUS HETEROLEPIS / PRAIRIE DROPSEED

NOTE:
MATURE HEIGHT OF PLANTS MEETS / OR EXCEEDS TWO AND ONE-HALF FEET REQUIREMENTS

RIVER ROAD MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
ARUNCUS DIOICUS / BRIDE`S FEATHERS
CORNUS ALBA / TATARIAN DOGWOOD
EUTROCHIUM PURPUREUM / SWEET JOE PYE WEED
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
POLYGONATUM ODORATUM `VARIEGATUM` / SOLOMON`S-SEAL
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC

NOTE:
MEETS / OR EXCEEDS ONE SHRUB FOR EACH 20 FEET OF STREET FRONTAGE. MATURE HEIGHT OF PLANTS MEETS / OR EXCEEDS TWO AND ONE-HALF FEET REQUIREMENTS FOR PARKING SCREENING



PARKWAY MIX
* PLUGS @ 12" O.C.
SPECIES BELOW:
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
MONARDA BRADBURIANA / EASTERN BEE BALM
PANICUM VIRGATUM / SWITCH GRASS
RHUS AROMATICA `GRO-LOW` / GRO-LOW FRAGRANT SUMAC
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS

NOTE:
MEETS / OR EXCEEDS ONE SHRUB FOR EACH 20 FEET OF STREET FRONTAGE. MATURE HEIGHT OF PLANTS MEETS / OR EXCEEDS TWO AND ONE-HALF FEET REQUIREMENTS FOR PARKING SCREENING



PROMENADE N-S
* PLUGS @ 12" O.C.
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
CORNUS ALBA / TATARIAN DOGWOOD
PHYSOCARPUS OPULIFOLIUS `NANUS` / DWARF NINEBARK
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SPOROBOLUS HETEROLEPIS / PRAIRIE DROPSEED



PROMENADE E-W
* PLUGS @ 12" O.C.
SPECIES BELOW:
BOUTELOUA CURTIPENDULA / SIDE OATS GRAMA
BOUTELOUA GRACILIS / BLUE GRAMA
ECHINACEA PURPUREA / PURPLE CONEFLOWER
HYDRANGEA ARBORESCENS / WILD HYDRANGEA
LIATRIS SCARIOSA NOVAE-ANGLIAE / NEW ENGLAND BLAZING ASTER
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS

CONCEPT PLANT SCHEDULE



WETLAND MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS INCARNATA / SWAMP MILKWEED
CAREX GRAYI / MORNING STAR SEDGE
CAREX HAYDENII / HAYDEN`S SEDGE
CAREX STRICTA / TUSSOCK SEDGE
LOBELIA CARDINALIS / CARDINAL FLOWER
PANICUM VIRGATUM / SWITCH GRASS
SILPHIUM LACINIATUM / COMPASS PLANT
SORGHASTRUM NUTANS / INDIAN GRASS



PRAIRIE MIX
* SEED MIX
SPECIES BELOW:
ASCLEPIAS TUBEROSA / BUTTERFLY MILKWEED
BAPTISIA AUSTRALIS / BLUE WILD INDIGO
CEANOTHUS AMERICANUS / NEW JERSEY TEA
HAMAMELIS VERNALIS `AMETHYST` / AMETHYST VERNAL WITCHHAZEL
PANICUM VIRGATUM / SWITCH GRASS
SCHIZACHYRIUM SCOPARIUM / LITTLE BLUESTEM GRASS
SORGHASTRUM NUTANS / INDIAN GRASS
SYMPHYOTRICHUM OBLONGIFOLIUM / FALL ASTER

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex
Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

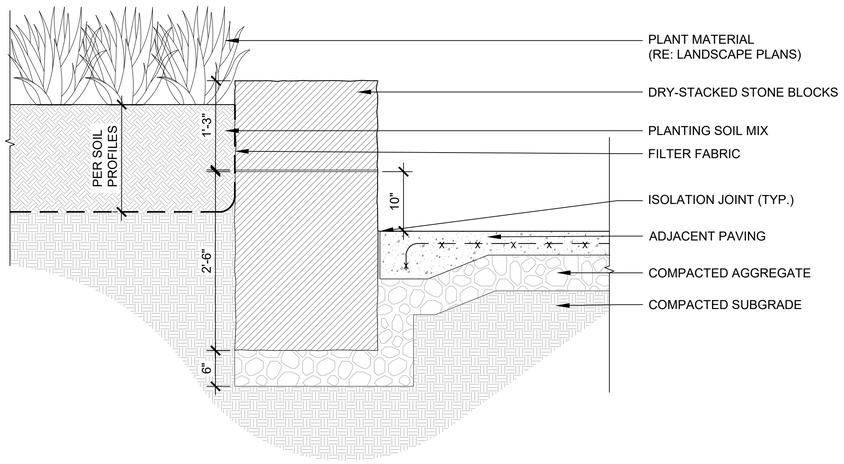
PROFESSIONAL SEAL:

DRAWING TITLE:
LANDSCAPE SCHEDULE

JOB NO:1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

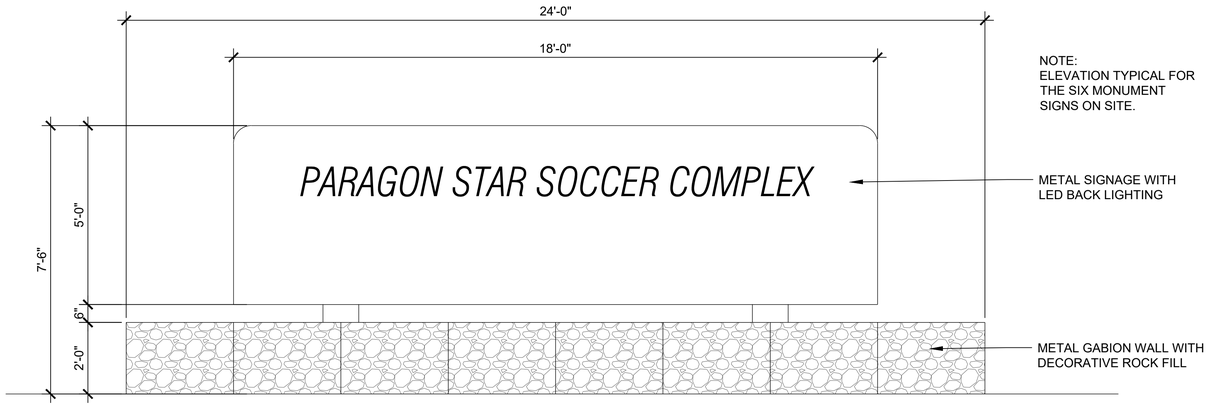
SHEET NO:
L-508

M:\Paragon Star - Lee's Summit, MO\03 CADD_Sheets\L-5.00 LANDSCAPE PLANS.dwg | 1/7/2019 5:23:08 PM AMANDA SANTORO 1:1
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



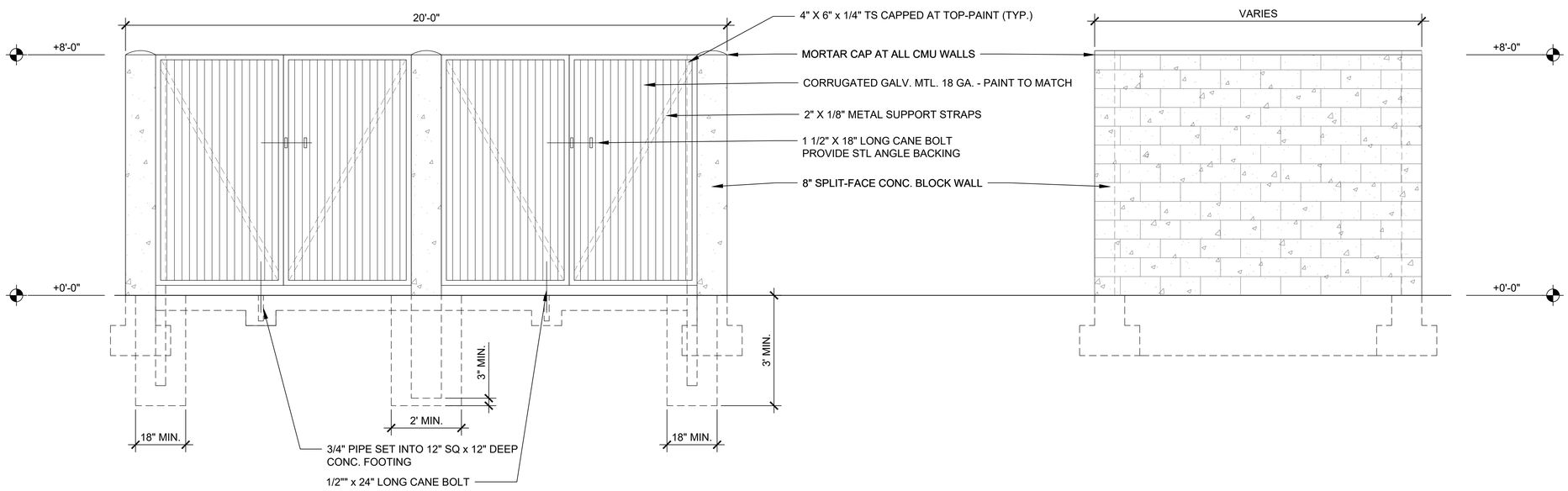
A SECTION - DRYSTACKED STONE WALL TYPICAL

1" = 1'-0"



B ELEVATION - TYPICAL MONUMENT SIGNAGE

1/2" = 1'-0"



C ELEVATION - TYPICAL TRASH ENCLOSURE

1/2" = 1'-0"

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

SITE DETAILS

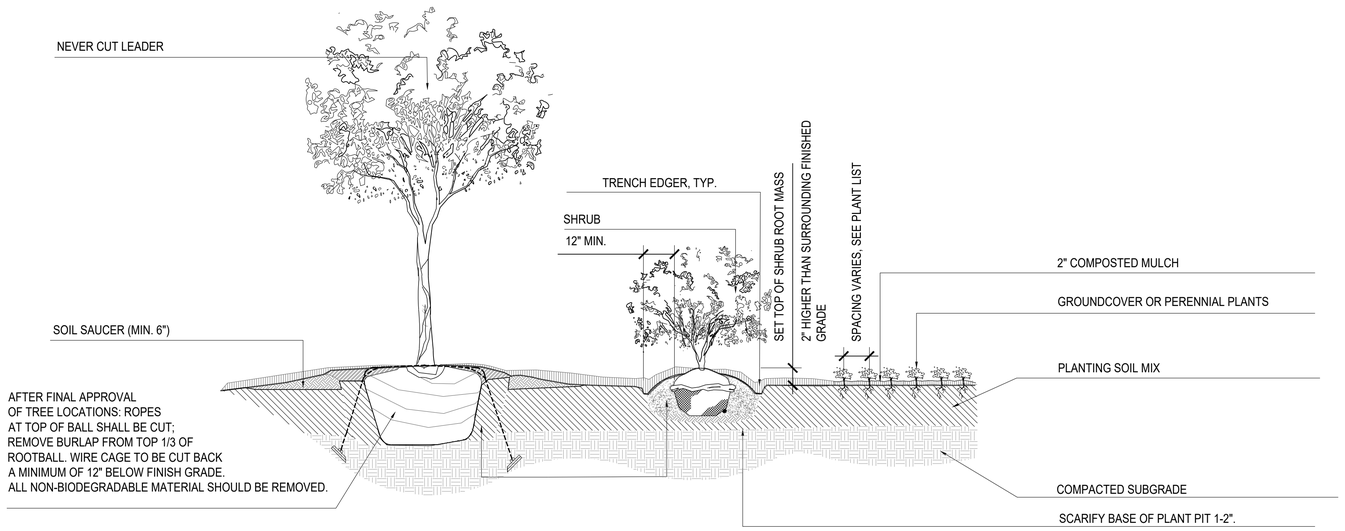
JOB NO: 1197 SCALE:

DATE: 01.18.2019 DRAWN BY: ADS

SHEET NO:

L-700

M:\Paragon Star - Lee's Summit, MO\03 CADs_Sheets\L-7.00 SITE DETAILS.dwg 1/17/2019 5:23:39 PM AMANDA SANTORO 1:1
THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



EVERGREEN & DECIDUOUS TREES:
1. TREES SHALL BEAR SAME RELATION TO FINISHED GRADE AS THEY DID TO PREVIOUSLY EXISTING GRADE ON SITE OR IN NURSERY.
2. DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHEN BACKFILLING.
3. TREE STAKING/GUYING SHOULD BE REVIEWED WITH LANDSCAPE ARCHITECT WHEN CONTRACTOR DEEMS IT NECESSARY.
5. ROOT FLARE OF TREE TO BE SET NO MORE THAN 2" ABOVE FINISHED GRADE IN BORDERS & MASS PLANTINGS.
6. TREES PLANTED WITHIN OR ADJACENT TO PAVING SHALL BE PLANTED WITH ROOT FLARE NO MORE THAN 1" ABOVE ADJACENT GRADE.
7. EVERGREEN TREES WITH TIGHTLY SHEARED FORM WILL BE REJECTED.
8. IF PITS ARE MACHINE EXCAVATED, & GLAZING IS PRONOUNCED, ALL SIDES OF PIT ARE TO BE SCARIFIED.
9. SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.

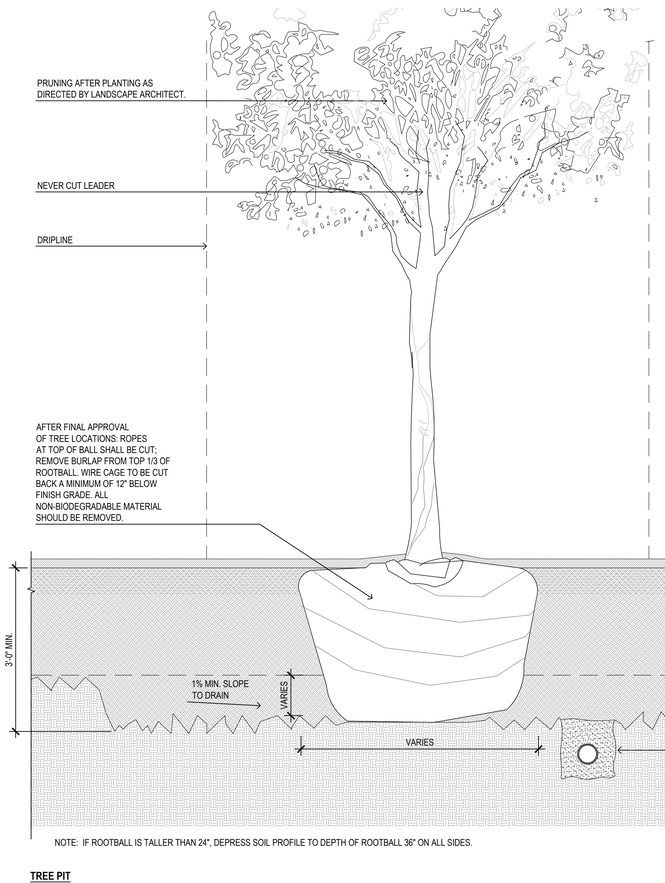
SHRUBS:
1. DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHILE BACKFILLING.
2. SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.
3. DO NOT BREAK ROOTBALL.
4. IF B&B MATERIAL, REMOVE BURLAP & STRING FROM AROUND TOP 1/3 OF ROOTBALL. IF CONTAINERIZED, LOOSEN ROOT MASS SIGNIFICANTLY BY HAND OR CUT ROOT MASS VERTICALLY WITH KNIFE ON 4 SIDES TO A DEPTH OF 1" & CUT BOTTOM OF ROOT MASS IN SAME MANNER IN AN 'X' PATTERN.

PERENNIALS & GROUNDCOVER:
1. DO NOT ALLOW AIR POCKETS TO FORM IN SOIL WHILE BACKFILLING.
2. SOAK PLANTS IMMEDIATELY WITH WATER AFTER INSTALLATION.
3. LOOSEN ROOT MASS SIGNIFICANTLY BY HAND OR CUT ROOT MASS VERTICALLY WITH KNIFE ON 4 SIDES TO A DEPTH OF 1" & CUT BOTTOM OF ROOT MASS IN SAME MANNER IN AN 'X' PATTERN.
4. PLANT APPROXIMATELY 1" ABOVE PLANTING MEDIA TO ALLOW FOR TYPICAL DRESSING OF MULCH.
5. SOAK PLANTS WITH WATER IMMEDIATELY AFTER INSTALLATION.

NOTE: ALL TREES ON GRADE SHALL HAVE ROOTBALL ANCHORING SYSTEM

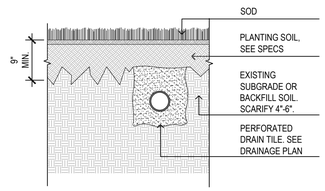
A PLANTING DETAIL - STANDARD FOR REFERENCE

1" = 1'-0"

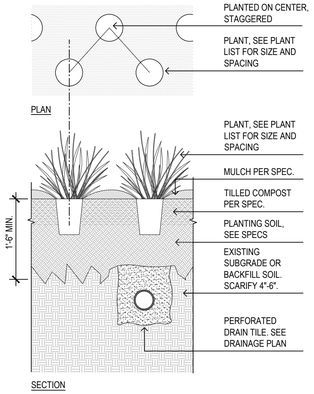


NOTE: IF ROOTBALL IS TALLER THAN 24", DEPRESS SOIL PROFILE TO DEPTH OF ROOTBALL 36" ON ALL SIDES.

TREE PIT



LAWN



PLANTING BED - PERENNIALS AND SHRUBS

B SOIL PROFILES

3/4" = 1'-0"

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

DRAWING TITLE:

PLANTING DETAILS

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: ADS

SHEET NO:

L-800

M:\Paragon Star - Lee's Summit, MO\03 CAD_Sheets\L-8.00 PLANTING DETAILS.dwg 1/17/2019 5:24:09 PM AMANDA SANTORO 1:1
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

ELECTRICAL SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED.

V2.01

STANDARD MOUNTING HEIGHTS

AUDIBLE APPLIANCES (CENTERLINE)	84"
ALARMS	48"
ANNUNCIATOR PANELS (DISPLAY)	60"
CONTROLS (TOP OF DEVICE)	48"
EXIT SIGNS (WALL MOUNTED)	80"
FIRE ALARM ANNUNCIATOR PANEL (DISPLAY)	60"
FIRE ALARM BELL (EXTERIOR) (CENTERLINE)	120"
FIRE ALARM CONTROL PANEL/UNIT (DISPLAY)	60"
INTERCOM (AFEA ONLY)	36"
INTERCOMS (TOP OF DEVICE)	48"
PULL STATIONS (TOP OF DEVICE)	48"
PHOTOCELLS	144"
RECEPTACLES	16"
RECEPTACLES (EXTERIOR)	24"
RECEPTACLES (GARAGES)	24"
RECEPTACLES (POOLS)	27"
RECEPTACLES (ABOVE COUNTER)	+6" ABOVE BACKSPLASH/COUNTER, 40" MAX
RECEPTACLES IN EQUIPMENT ROOMS	44"
REMOTE INDICATING LIGHT (EQUIPMENT ROOMS)	48"
REMOTE INDICATING LIGHT (FINISHED AREAS)	CEILING
SAFETY SWITCHES (TOP OF DEVICE)	48"
STARTERS (TOP OF DEVICE)	48"
SWITCHES (TOP OF DEVICE)	44"
TELEPHONE, DATA OUTLETS	SAME AS ADJACENT DEVICE, UNO
TELEPHONE TERMINAL BOARD (BOTTOM)	6"
TELEVISION OUTLETS	REFER TO ARCH DRAWINGS
VISIBLE APPLIANCES (CENTERLINE)	84"

USE THE DEFAULT MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE CONSTRUCTION DOCUMENTS. MOUNTING HEIGHTS LISTED ARE ABOVE FINISHED FLOOR (AFF) OR ABOVE FINISHED GRADE (AFG) TO BOTTOM OF OUTLET BOX. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ABBREVIATIONS

AF	AMPERE FRAME SIZE
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CAPACITY
AS	AMPERE SWITCH
AT	AMPERE TRIP SETTING
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIO VISUAL
BAS	BUILDING AUTOMATION SYSTEM
BKR	BREAKER
C	CONDUIT
CAT	CATEGORY
CATV	CABLE TELEVISION SYSTEM
CCTV	CLOSED CIRCUIT TELEVISION
CD	CANDELA
CKT	CIRCUIT
CODE	APPLICABLE CODE ADOPTED BY JURISDICTION
CT	CURRENT TRANSFORMER
CTR	CENTER
CVD	CUMULATIVE VOLTAGE DROP
DEMO	DEMOLITION
DPDT	DOUBLE-POLE, DOUBLE-THROW
DPST	DOUBLE-POLE, SINGLE-THROW
(E)	EXISTING
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EM	EMERGENCY
EMS	ENERGY MANAGEMENT SYSTEM
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCA	FAULT CURRENT AMPS AVAILABLE
FCU	FAN COIL UNIT
FF	FINISHED FLOOR
FLA	FULL LOAD AMPS
FLR	FLOOR
GC	GENERAL CONTRACTOR
GEC	GROUNDING ELECTRODE CONDUCTOR
GES	GROUNDING ELECTRODE SYSTEM
GFR	GROUND FAULT RELAY
G	GROUND
IG	ISOLATED GROUND
ISC	SHORT CIRCUIT CURRENT
JBU-BOX	JUNCTION BOX
LF	LINEAR FEET
LRA	LOCKED ROTOR AMPS
LTG/LTS	LIGHTING/LIGHTS
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MTD	MOUNTED
N/A	NOT APPLICABLE
NF	NON-FUSED
NL	NIGHT LIGHT (24HR ON)
NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY (CSA,ETL,NSF,UL)
OS	OCCUPANCY SENSOR
P	POLE
PART	PARTIAL CIRCUIT
PH/Ø	PHASE
PNL	PANEL
PNLBD	PANELBOARD
PROVIDE	FURNISH AND INSTALL
PT	POTENTIAL TRANSFORMER
QTY	QUANTITY
RCPT	RECEPTACLE
RELO	RELOCATE
RLA	RUNNING LOAD AMPS
RTU	ROOFTOP UNIT
SCCR	SHORT-CIRCUIT CURRENT RATING
SD	SMOKE DUCT DETECTOR
SF	SQUARE FEET
SPDT	SINGLE-POLE, DOUBLE-THROW
SPST	SINGLE-POLE, SINGLE-THROW
ST	SHUNT TRIP
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TBB	TELECOMMUNICATIONS BONDING BACKBONE
TBD	TO BE DETERMINED
TGB	TELECOMMUNICATIONS GROUND BUS BAR
TL	TWISTLOCK
TMGB	TELECOMMUNICATIONS MAIN GROUND BUS BAR
TX	TRANSFORMER
TYP	TYPICAL
U/F	UNDERFLOOR
U/G	UNDERGROUND
U/S	UNDERSLAB
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
VD	VOLTAGE DROP
VFD	VARIABLE FREQUENCY DRIVE
W	WIRE
W/	WITH
WP	WEATHER PROOF
WR	WEATHER RESISTANT
WT	WATERTIGHT
XP	EXPLOSION-PROOF

ANNOTATION

- MECHANICAL OR FIRE PROTECTION PLAN NOTE CALLOUT
- PLUMBING PLAN NOTE CALLOUT
- ELECTRICAL OR FIRE ALARM PLAN NOTE CALLOUT
- TECHNOLOGY PLAN CALLOUT
- PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES
- EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)
- MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)
- CONNECTION POINT OF NEW WORK TO EXISTING
- DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- SECTION CUT DESIGNATION

CIRCUITING & WIRING

- HOMERUN TO PANELBOARD. INFORMATION AT ARROWS ARE CIRCUIT NUMBERS AND PANELBOARD FOR TERMINATION. REFER TO PANELBOARD SCHEDULES FOR BRANCH CIRCUIT CONDUCTOR SIZES.
- CIRCUIT CONTINUATION OR PARTIAL CIRCUIT
- CONDUIT CONCEALED
- CONDUIT IN/UNDER FLOOR/GROUND CONSTRUCTION
- EXPOSED CONDUIT
- FLEXIBLE CONDUIT
- LOW VOLTAGE CABLE (NOT ROUTED IN CONDUIT)
- CONDUIT TURNING DOWN
- CONDUIT TURNING UP
- CONNECTION POINT OR EQUIPMENT TERMINATION
- EQUIPMENT TERMINATION

CONDUCTOR TICK MARK LEGEND

WHERE TICK MARKS ARE SHOWN, THE FOLLOWING SHALL GOVERN:

- SWITCHED HOT (PHASE) CONDUCTORS (SHOWN TRAILING NEUTRAL)
- NEUTRAL (GROUNDED) CONDUCTOR
- UNSWITCHED HOT (PHASE) CONDUCTORS (SHOWN LEADING NEUTRAL)
- NOTE: HASH MARKS INDICATE QUANTITY OF CONDUCTORS
- EQUIPMENT GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION OR BARE)
- ISOLATED GROUNDING CONDUCTOR IN CONDUIT (GREEN INSULATION WITH YELLOW TRACER)

BRANCH CIRCUIT CONDUCTOR TABLE

WHERE TICK MARKS ARE NOT SHOWN, THE FOLLOWING SHALL GOVERN:

# OF POLES	HOT (PHASE)*	NEUTRAL (GROUNDED)**	GROUNDING***
1P	(1)	(1) UNO	(1)
2P	(2)	(1) UNO	(1)
3P	(3)	(1) UNO	(1)

* PROVIDE ADDITIONAL CONDUCTORS THROUGH ENTIRE CIRCUIT (SWITCHED, UNSWITCHED(EM, ETC.) AS INDICATED THROUGHOUT CONSTRUCTION DOCUMENTS AND AS REQUIRED FOR A COMPLETE AND WORKING SYSTEM.

** REFER TO SPECIFICATIONS FOR LIMITATIONS ON SHARING NEUTRAL (GROUNDED) CONDUCTORS. DO NOT CIRCUIT AS A MULTI-WIRE BRANCH CIRCUIT, UNO.

*** PROVIDE ADDITIONAL ISOLATED GROUNDING CONDUCTORS WHERE INDICATED.

REFER TO SPECIFICATIONS, PLANS, NOTES, WIRING AND CONTROL DIAGRAMS FOR ADDITIONAL CIRCUITING REQUIREMENTS.

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING	NEW
DEMOLISH	FUTURE

LIGHTING (REFER TO LIGHT FIXTURE SCHEDULE FOR MORE INFO)

- LIGHT FIXTURE
  - a = SWITCHED BY SWITCH "a"
  - A = LIGHT FIXTURE TYPE "A"
  - = WALL MOUNT
  - = ARROW INDICATES AIMING DIRECTION
- LIGHT FIXTURE CIRCUITED AS A NIGHT LIGHT (NL)
- EMERGENCY LIGHT FIXTURE WITH EMERGENCY LIGHTING BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE
- NIGHT LIGHT/EMERGENCY LIGHT FIXTURE WITH EMERGENCY BATTERY PACK OR CONNECTED TO EMERGENCY SOURCE
- LIGHT FIXTURE WITH DUAL BALLASTS CIRCUITED SEPARATELY (SHADING IMPLIES EMERGENCY LIGHT FIXTURE)
- LIGHTING TRACK WITH LIGHT FIXTURE TYPES AS INDICATED
- MIRROR LIGHTS
- EXTERIOR SITE PARKING LOT LIGHT FIXTURE
- EXTERIOR PEDESTRIAN POST TOP LIGHT FIXTURE
- EXTERIOR LIT BOLLARD LIGHT FIXTURE
- EXIT SIGN - CEILING / WALL MOUNTED, ARROWS AS INDICATED, FACE HATCHED
- EMERGENCY LIGHTING UNIT EQUIPMENT WITH BATTERY PACK - CEILING/WALL MOUNTED
- AFEA (AREA FOR EVACUATION ASSISTANCE) SIGN - CEILING/WALL MOUNTED, ARROWS AS INDICATED

POWER EQUIPMENT & DEVICES

- ELECTRICAL PANELBOARD (SURFACE OR FLUSH MOUNT)
- TERMINAL CABINET (SURFACE OR FLUSH MOUNT), TYPE AS NOTED
- PLYWOOD TERMINAL BOARD FOR TELEPHONE SYSTEM, UNO. SIZE AS NOTED
- SWITCHBOARD OR MOTOR CONTROL CENTER ON HOUSEKEEPING PAD
- ELECTRICAL DISTRIBUTION PANELBOARD
- TRANSFORMER
- MOTOR
- 200/3/150/3R — DISCONNECT SWITCH - "200/3/150/3R" DENOTES AMPERES/POLE/FUSE/NEMA ENCLOSURE RATING, NF= NON-FUSED, CB= CIRCUIT BREAKER (200/3/CB), NO VALUE (200/3/150) FOR NEMA ENCLOSURE MEANS STANDARD NEMA 1 RATING
- 30/3/15/1/3R — COMBINATION DISCONNECT (SAFETY) SWITCH AND MOTOR STARTER "30/3/15/1/3R" DENOTES AMPERES/POLE/FUSE/NEMA STARTER SIZE/NEMA ENCLOSURE RATING. NF= NON-FUSED, CB= CIRCUIT BREAKER (30/3/CB/1), NO VALUE (200/3/150/1) FOR NEMA ENCLOSURE MEANS STANDARD NEMA 1 ENCLOSURE RATING
- MAGNETIC MOTOR STARTER, NEMA SIZE AS NOTED. 3-POLE, UNO
- MANUAL MOTOR STARTER DISCONNECT
- FRACTIONAL HORSEPOWER MANUAL CONTROLLER
- INTEGRAL HORSEPOWER MANUAL CONTROLLER
- VFD — VARIABLE FREQUENCY DRIVE
- R — RELAY OR CONTACTOR (IN SCHEMATICS)
- C — CONTACTOR (SIZE, COIL VOLTAGE AND NUMBER OF POLES AS INDICATED)
- TS — TIME SWITCH
- PC — PHOTOCELL
- INDICATING LIGHT
- EMERGENCY POWER OFF BUTTON
- STOP-START PUSH BUTTON CONTROL STATION
- HAND-OFF-AUTO PUSH BUTTON CONTROL STATION
- MUSHROOM-TYPE PUSH BUTTON
- OVERHEAD PADDLE FAN

LIGHTING CONTROL DEVICES, WIRING DEVICES & BOXES

- SINGLE POLE SWITCH (NO LETTER DESIGNATION)
- SWITCH LETTER DESIGNATIONS AS FOLLOWS:
  - 2 = TWO POLE
  - 3 = THREE-WAY
  - 4 = FOUR-WAY
  - D = DIMMER
  - F = FAN SPEED CONTROL
  - K = KEYED
  - LV = LOW VOLTAGE
  - OS = OCCUPANCY SENSOR
  - P = SPST-PILOT LIGHT
  - VS = VACANCY SENSOR
  - WP = WEATHER PROOF
- ALC — AUTOMATIC LOAD CONTROL RELAY
- BTS — BRANCH CIRCUIT TRANSFER SWITCH
- SIMPLEX RECEPTACLE - NEMA 5-20R, UNO
- DUPLEX RECEPTACLE - NEMA 5-20R, UNO
- DOUBLE DUPLEX RECEPTACLE - NEMA 5-20R, UNO
- SPECIAL RECEPTACLE - NEMA TYPE AS NOTED
- TWIST-LOCK TYPE RECEPTACLE
- GFCI — GFCI TYPE RECEPTACLE*
- ISOLATED GROUND TYPE RECEPTACLE*
- EM — EMERGENCY RECEPTACLE*
- RECEPTACLE INSTALLED ABOVE COUNTER OR BACKSPLASH*
- RECEPTACLE INSTALLED IN CEILING*
- RECEPTACLE INSTALLED IN FLOOR*
- RECEPTACLE INSTALLED VIA DROP CORD*
- WR/WP — RECEPTACLE LETTER DESIGNATIONS AS FOLLOWS:
  - C = AUTOMATICALLY CONTROLLED
  - CH = CLOCK HANGER TYPE
  - D = DEMOLISHED
  - E/ETREX = EXISTING
  - EM = EMERGENCY POWER
  - GFCI = GROUND-FAULT CIRCUIT INTERRUPTER
  - H = HORIZONTALLY MOUNTED
  - IG = ISOLATED GROUND
  - R = RELOCATED
  - S = MANUALLY SWITCHED
  - TR = TAMPER RESISTANT
  - TV = TELEVISION
  - USB = USB/DUPLEX
  - WP = WEATHER PROOF COVER
  - WR = WEATHER RESISTANT
- MULTI-OUTLET ASSEMBLY
- TELEPHONE OUTLET
- DATA OUTLET
- MULTI-SERVICE OUTLET; TELEPHONE AND DATA
  - ABOVE COUNTER, TYP
  - WALL, TYP
  - FLOOR, TYP
- A — MULTI-SERVICE POWER POLE WITH TELEPHONE, DATA AND POWER OUTLETS A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- A — MULTI-SERVICE FLOOR BOX WITH TELEPHONE, DATA AND POWER OUTLETS A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- A — POKE THROUGH, A = TYPE, REFER TO PLANS, SCHEDULES AND SPECIFICATIONS
- THERMOSTAT
- J — JUNCTION BOX/OUTLET BOX
- BLANK FACE GFCI FEED THROUGH DEVICE

REFER TO LIGHTING CONTROL DEVICE SCHEDULE FOR ADDITIONAL DEVICE SYMBOLS AND DEFINITIONS SPECIFIC TO THIS PROJECT.

*SYMBOL DEMONSTRATED WITH DUPLEX RECEPTACLE, WHEN USED IN COMBINATION WITH OTHER DEVICES MEANING IS SIMILAR FOR THOSE DEVICE TYPES.

SIGNALING

- B — SIGNALING BELL
- B — SIGNALING BUZZER
- T — LV TRANSFORMER

ELECTRICAL ONE-LINE & RISER DIAGRAM

- SWITCH (RATING AS INDICATED)
- DRAWOUT CIRCUIT BREAKER (RATINGS AS INDICATED)
- FUSED SWITCH (RATING, POLES AND FUSE TYPE AS INDICATED)
- COMBINATION FUSED SWITCH/STARTER AND STARTER SIZE
- CIRCUIT BREAKER (RATINGS AS INDICATED)
- COMBINATION CIRCUIT BREAKER/STARTER AND STARTER SIZE
- PANELBOARD, SINGLE OR MULTI-SECTION (REFER TO SCHEDULES)
- ISOLATED POWER PANELBOARD W/ INTEGRAL TRANSFORMER (REFER TO SCHEDULES)
- TRANSFORMER (TYPE AND RATINGS AS INDICATED)
- SHIELDED TRANSFORMER (TYPE AND RATINGS AS INDICATED)
- ATSM — AUTOMATIC TRANSFER SWITCH (RATINGS AS INDICATED)
- ATSM (1WAY/2WAY) — AUTOMATIC TRANSFER SWITCH WITH BYPASS (RATINGS AS INDICATED)
- GEN (READY OPERATION) — GENERATOR (RATINGS AS INDICATED)
  - NON-SEPARATELY DERIVED SOURCE
  - OR
  - SEPARATELY DERIVED SOURCE
- MDP (SWITCHBOARD, ELEC ROOM) — 4000 AMPS 480Y/277V 3Ø 4W — SWITCHGEAR, SWITCHBOARD AND/OR DISTRIBUTION PANELBOARD (TYPE, RATING, DEVICES AND ACCESSORIES AS INDICATED)
- DIGITAL — COMBINATION DIGITAL VOLT METER/AMMETER
- ### — CIRCUIT IDENTIFICATION (REFER TO CIRCUIT SCHEDULE)
- GFR — GROUND FAULT RELAY
- PFR — PHASE FAILURE RELAY
- KK# — KIRK-KEY INTERLOCK (# INDICATES KEY PAIR)
- ST — SHUNT TRIP
- AM — AMMETER (RANGE AS SPECIFIED OR REQUIRED)
- VM — VOLTMETER (RANGE AS SPECIFIED OR REQUIRED)
- UTILITY METER — UTILITY METER (AS REQUIRED BY UTILITY)
- AS — AMMETER SWITCH
- VS — VOLTMETER SWITCH
- WH D 15 — WATT-HOUR METER, "D" DENOTES DEMAND REGISTER, "15" DENOTES MINUTES OF DEMAND INTERVAL
- CURRENT TRANSFORMER RATING AS SPECIFIED OR REQUIRED
- POTENTIAL TRANSFORMER RATING AS SPECIFIED OR REQUIRED
- SPD — SURGE-PROTECTIVE DEVICE
- GROUND CONNECTION
- GROUND CONNECTION WITH TEST WELL
- GROUND ROD
- LIGHTNING ARRESTER
- CAPACITOR
- CONTACT (OPEN OR CLOSED)
- HEATER
- MOTOR
- ## — BLOCK LOAD KW OR KVA
- × F# × FP# — FAULT POINT REFERENCED IN SHORT CIRCUIT CURRENT AND VOLTAGE DROP SPREADSHEET

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

JULIETTE A. PIERCE
LICENSE # PE-2009003622

DRAWING TITLE:

ELECTRICAL SYMBOLS AND LEGENDS

JOB NO: 1197 SCALE: N/A

DATE: 01.18.2019 DRAWN BY: LKV

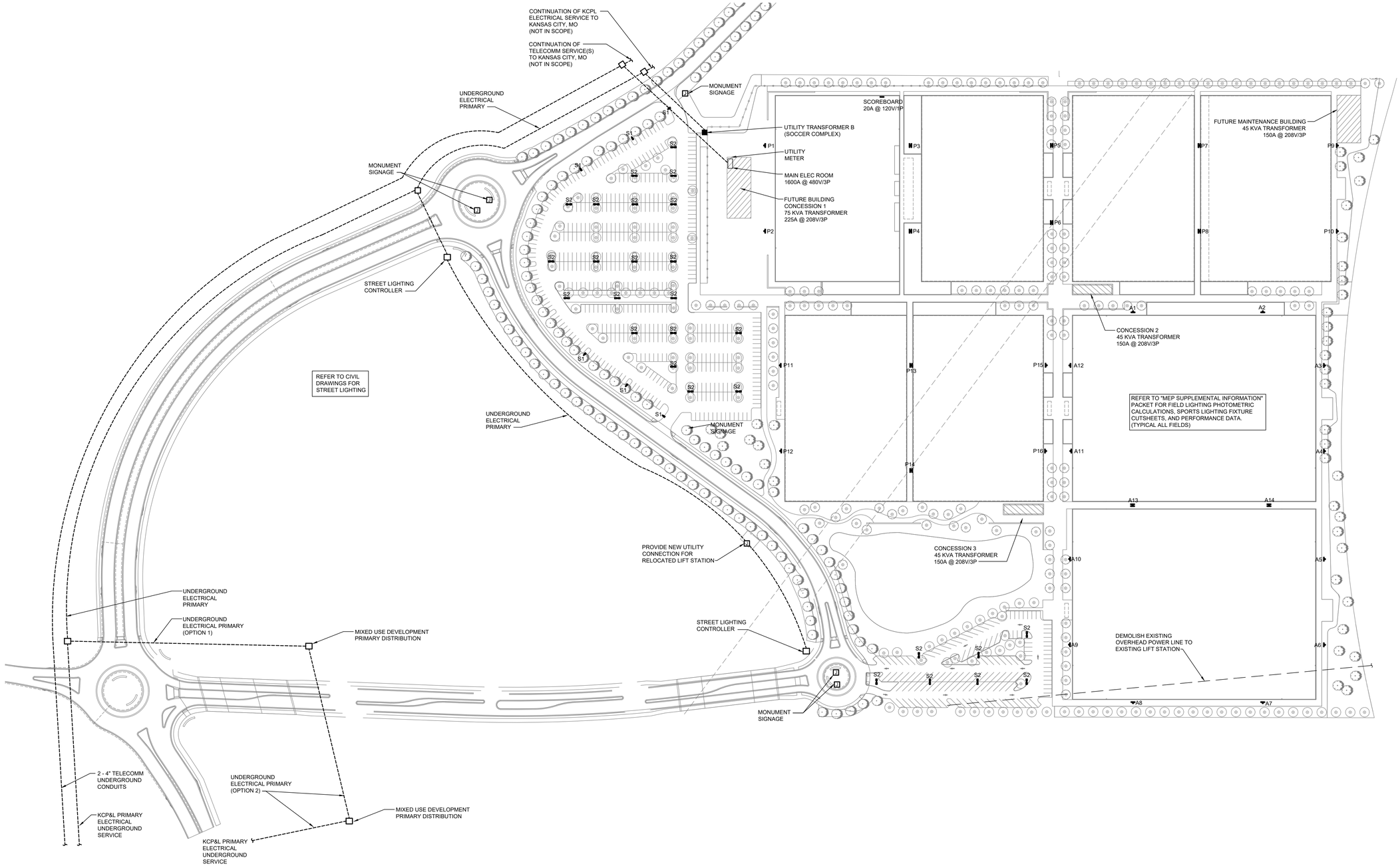
SHEET NO:

E-000

HENDERSON ENGINEERS
1801 MAIN, SUITE 300
KANSAS CITY, MO 64108
TEL (816) 663-8700 FAX (816) 663-8701
WWW.HENDERSONENGINEERS.COM
1850004412
MO. CORPORATE NUMBER: E-556D
EXPIRES 12/31/20

THE PROFESSIONAL WHOSE SEAL SIGNATURE AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

JULIETTE A. PIERCE



1 ELECTRICAL SITE PLAN
SCALE: 1:100

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

JULIETTE A. PIERCE
LICENSE # PE-2009003622

DRAWING TITLE:

ELECTRICAL SITE PLAN

HENDERSON ENGINEERS
1801 MAIN, SUITE 300
KANSAS CITY, MO 64108
TEL (816) 663-8700 **FAX** (816) 663-8701
WWW.HENDERSONENGINEERS.COM
1850004412
MO. CORPORATE NUMBER: E-556D
EXPIRES 12/31/20

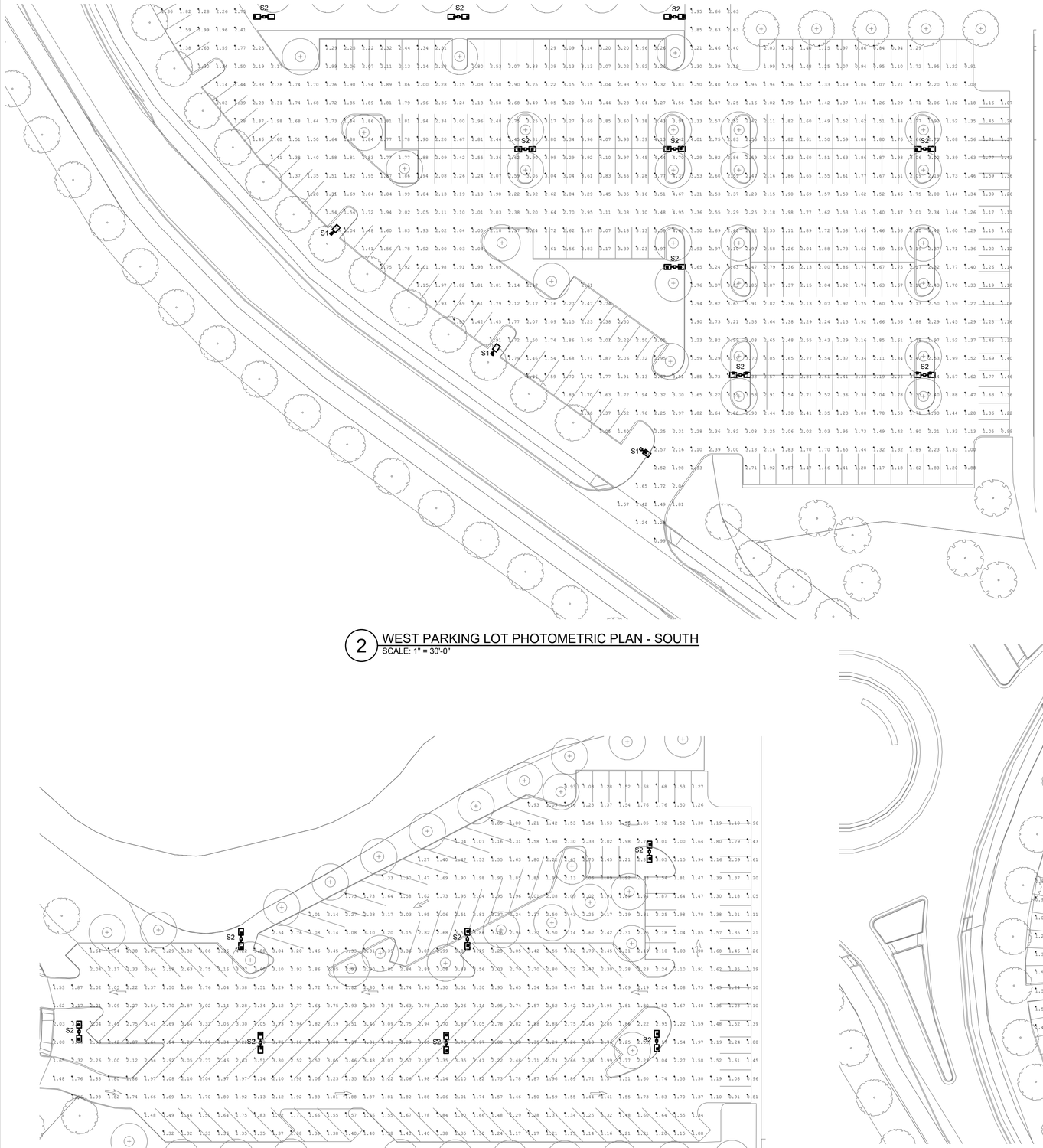
JOB NO: 1197 (1197) SCALE: 1:100
DATE: 01.18.2019 (01.18.2019) DRAWN BY: LKV

SHEET NO:

E-100

THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

JULIETTE A. PIERCE



2 WEST PARKING LOT PHOTOMETRIC PLAN - SOUTH
SCALE: 1" = 30'-0"

3 SOUTH PARKING LOT PHOTOMETRIC PLAN
SCALE: 1" = 30'-0"

LIGHT FIXTURE SCHEDULE

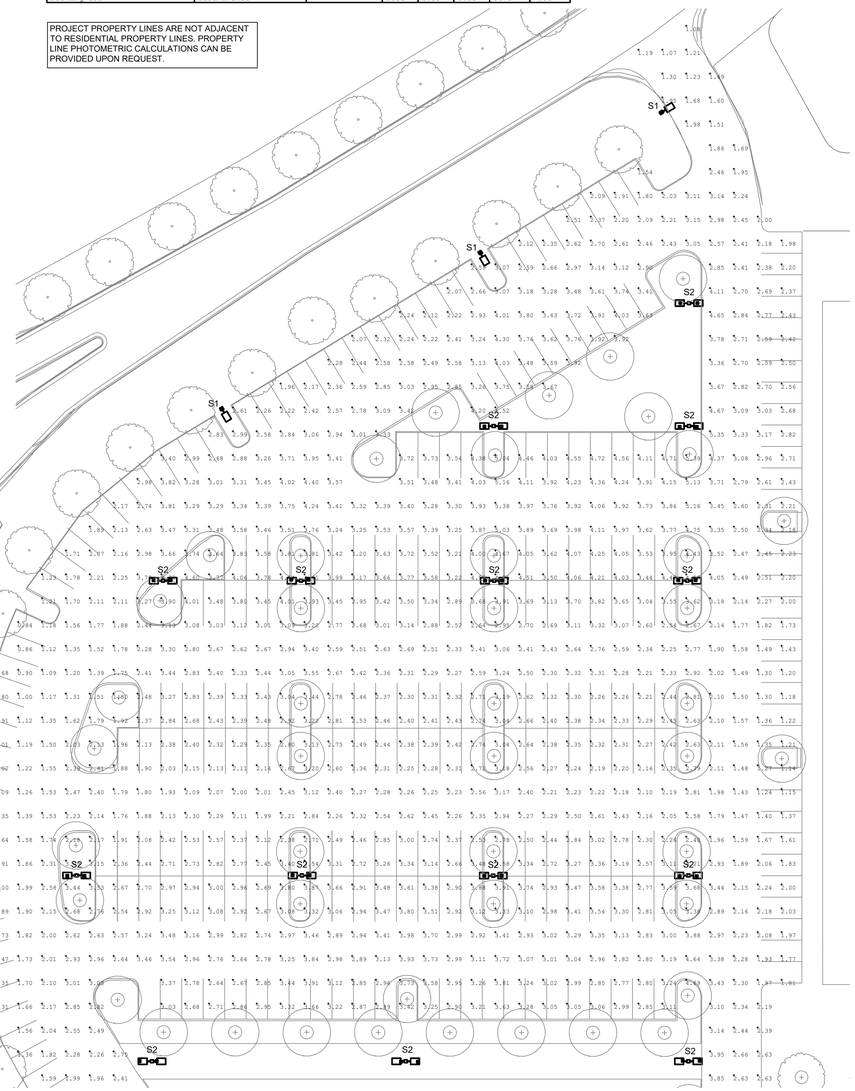
TYPE	MANUFACTURER/MODEL #	LAMPS NO.	LAMPS TYPE	LAMPS VOLT	INPUT WATTS	INPUT VA	DESCRIPTION
S1	MCGRAW-EDISON GLEON-AF-03-LED-480-T4W-BK	-	LED BY MANUFACTURER 4000K, 70 CRI 18,045 LUMENS 400,000 HRS	480	166	166	LED PARKING LOT FIXTURE. PROVIDE WITH 28' ALUMINUM POLE.
S2	MCGRAW-EDISON (2) GLEON-AF-03-LED-480-T4W-BK	-	LED BY MANUFACTURER 4000K, 70 CRI 36,090 LUMENS 400,000 HRS	480	332	332	LED PARKING LOT FIXTURE. PROVIDE (2) HEAD PER POLE AT 180 DEGREES. PROVIDE WITH 28' ALUMINUM POLE.

REFER TO "MEP SUPPLEMENTAL INFORMATION" PACKET FOR PARKING LOT LIGHT FIXTURE CUT SHEET AND PERFORMANCE DATA.

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Total Lamp Lumens	LLF	Description
▭	120	GLEON-AF-03-LED-E1-T4W	SINGLE	N.A.	0.720	GLEON-AF-03-LED-E1-T4W

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Boundary Line to Residential	Illuminance	Fc	0.10	0.42	0.02	5.00	21.00
Parking Lot S	Illuminance	Fc	2.22	4.37	0.83	2.74	5.40
Parking Lot W	Illuminance	Fc	2.52	5.39	0.68	3.71	7.93

PROJECT PROPERTY LINES ARE NOT ADJACENT TO RESIDENTIAL PROPERTY LINES. PROPERTY LINE PHOTOMETRIC CALCULATIONS CAN BE PROVIDED UPON REQUEST.



1 WEST PARKING LOT PHOTOMETRIC PLAN - NORTH
SCALE: 1" = 30'-0"

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements

1401 NW View High Dr, Lee's Summit, MO 64081

Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

JULIETTE A. PIERCE
LICENSE # PE-2009003622

DRAWING TITLE:

PHOTOMETRIC PLAN

JOB NO: 1197 SCALE:

DATE: 01.18.2019 DRAWN BY: LKV

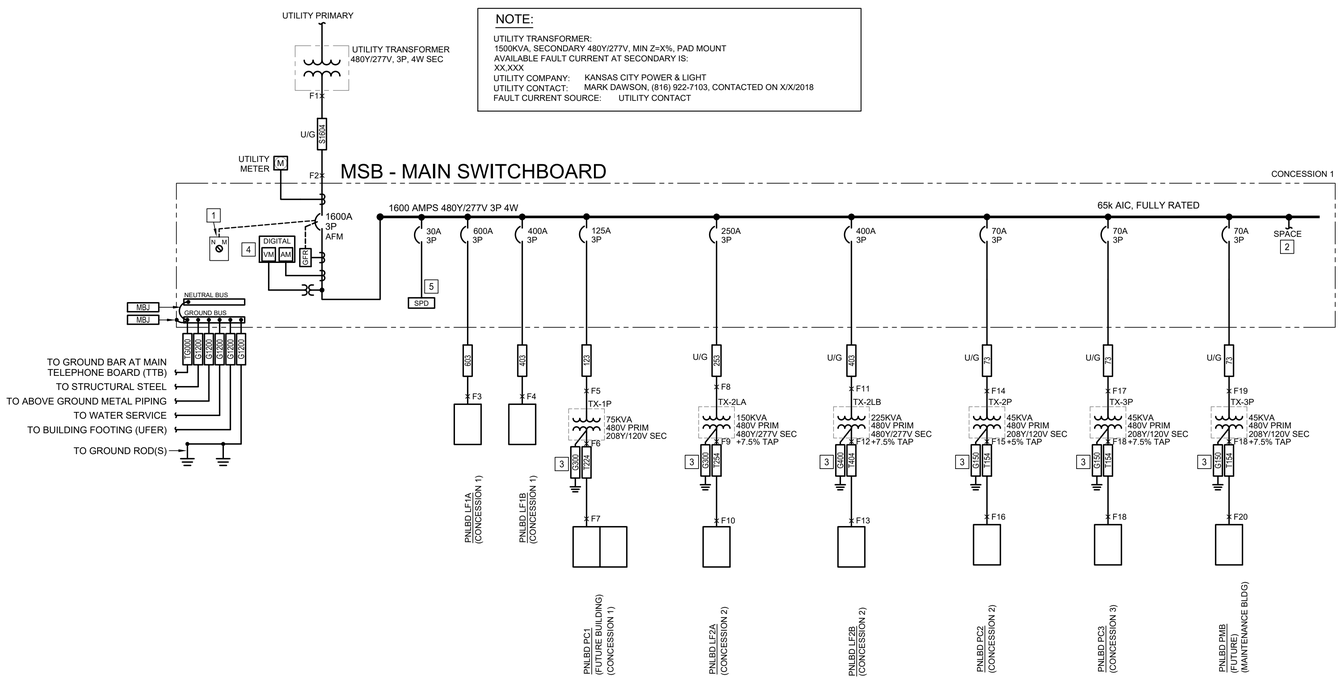
SHEET NO:

E-200

HENDERSON ENGINEERS
1901 MAIN, SUITE 300
KANSAS CITY, MO 64108
TEL (816) 663-8700 FAX (816) 663-8701
WWW.HENDERSONENGINEERS.COM
1850004412
MO. CORPORATE NUMBER: E-556D
EXPIRES 12/31/20

THE PROFESSIONAL WHOSE SEAL SIGNATURE AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

JULIETTE A. PIERCE



NOTE:

UTILITY TRANSFORMER:
1500KVA, SECONDARY 480Y/277V, MIN Z=X%, PAD MOUNT
AVAILABLE FAULT CURRENT AT SECONDARY IS:
XX,XXX
UTILITY COMPANY: KANSAS CITY POWER & LIGHT
UTILITY CONTACT: MARK DAWSON, (816) 922-7103, CONTACTED ON X/X/2018
FAULT CURRENT SOURCE: UTILITY CONTACT

1 ELECTRICAL ONE-LINE DIAGRAM
NTS

BUILDING ELECTRICAL SERVICE LOAD SUMMARY			
BUILDING OCCUPANCY TYPE:	A	SERVICE DESCRIPTION:	
BUILDING SQUARE FOOTAGE:	5,000	480Y/277V, 3PH	
LOAD DESCRIPTION	Connected KVA	Demand FACTOR	Demand KVA
HVAC - SUMMER	0.00	100%	0.00
HVAC - WINTER	0.00	100%	0.00
LIGHTING (PER NEC-220)	5.00	125%	6.25
RECEPTACLES	5.40	100%;50%	5.40
KITCHEN EQUIPMENT	0.00	100%	0.00
SUPPLEMENTAL ELECTRIC HEAT	0.00	100%	0.00
MISCELLANEOUS EQUIPMENT	2.73	100%	2.73
EXTERIOR LIGHTING	800.21	125%	1000.26
TOTAL LOAD	818.74	KVA	1020.04
TOTAL AMPACITY	984.79	AMPS	1226.92
SERVICE AMPACITY	1600	AMPS	1600.00
SPARE CAPACITY		AMPS	373

CIRCUIT SCHEDULE:

ALL CONDUCTOR SIZES ARE BASED ON 75 DEG C RATED TERMINATIONS. COPPER CONDUCTORS ARE BASED ON THHN/THWN-2 INSULATION. ALUMINUM CONDUCTORS (PREFIX "A") ARE BASED ON XHHW-2 INSULATION. FOR ANY OTHER CONDITIONS ALLOWED PER SPECIFICATIONS, OR FOR TERMINATIONS OR INSULATION TYPES RATED LESS THAN 75 DEG C, MODIFY SIZES ACCORDING TO NFPA 70.

- 73 — 70A, (3)#4, (1)#8G, 1" C
- 123 — 125A, (3)#1, (1)#6G, 1-1/4" C
- 253 — 250A, (3)-250kcmil, (1)#4G, 2" C
- 403 — 400A, (2) 2"C, EACH W/ (3)#3/0, (1)#3G
- 603 — 600A, (2) 2-1/2" C, EACH W/ (3)-350kcmil, (1)#1G
- G1200 — GND, #8 COPPER GROUND, 3/4" C
- G150 — GND, #3/0 COPPER GROUND, 1" C
- G300 — GND, #2 COPPER GROUND, 3/4" C
- G400 — GND, #1/0 COPPER GROUND, 1" C
- MBJ — MAIN BONDING JUMPER
- S1604 — 1600A, (5) 3" C, EACH W/ (4)-400kcmil
- T154 — 150A, (4)#1/0, (1)#6 SSBJ, 1-1/2" C
- T224 — 225A, (4)#4/0, (1)#2 SSBJ, 2-1/2" C
- T254 — 250A, (4)-250kcmil, (1)#2 SSBJ, 2-1/2" C
- T404 — 400A, (2) 2" C, EACH W/ (4)#3/0, (1)#4 SSBJ
- TG000 — COMM GND, #3/0 COPPER GROUND, 3/4" C

ONELINE DIAGRAM KEYED NOTES:

1. PROVIDE ENERGY-REDUCING MAINTENANCE SYSTEM FOR ARC FLASH MITIGATION. PROVIDE CONTROL UNIT WITH NORMAL/MAINTENANCE SELECTOR SWITCH AND ALL REQUIRED WIRING BETWEEN SELECTOR SWITCH AND CIRCUIT BREAKER. PROVIDE WITH BLUE STROBE ENABLED WHEN IN MAINTENANCE MODE.
2. PROVIDE UNUSED SPACES IN DISTRIBUTION PANELBOARDS WITH FULL BUSSING FOR FUTURE INSTALLATION OF DEVICES. TYPICAL FOR ALL DISTRIBUTION TYPE PANELBOARDS.
3. GROUND TRANSFORMER TO LOCAL GROUND BAR IN ELECTRICAL ROOM PER NEC REQUIREMENTS. REFER TO GROUNDING RISER DIAGRAM, DETAIL 1 SHEET E6-06 FOR ADDITIONAL INFORMATION.
4. PROVIDE BOARD MOUNTED DIGITAL DEMAND METER. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. PROVIDE SURGE PROTECTIVE DEVICE (SPD) INTEGRAL TO DISTRIBUTION BOARD. COORDINATE OVERCURRENT PROTECTION DEVICE SIZE WITH SPD SUBMITTAL INFORMATION AND PROVIDE AS REQUIRED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

ONELINE DIAGRAM GENERAL NOTES:

1. REFER TO SHEETS E0-0 FOR ADDITIONAL GENERAL NOTES.
2. CIRCUIT BREAKERS DENOTED WITH 'AFM' SHALL BE ADJUSTABLE TRIP TYPE BREAKER COMPATIBLE WITH ARC FLASH MITIGATION SYSTEM. INCLUDE SYSTEM INFORMATION AND DEVICE SETTINGS IN OPERATIONS AND MAINTENANCE MANUAL UPON COMPLETION OF PROJECT.
3. F## INDICATES FAULT POINT. REFER TO TABLES ON E300 FOR AVAILABLE FAULT CURRENT AND CUMULATIVE VOLTAGE DROP AT FAULT POINTS.

Short-Circuit and Voltage Drop Calculations

Distances are for calculation purposes only and shall not be used for contractor takeoffs nor bidding - Contractor shall notify Engineer of any field condition that results in a change of 10% or greater circuit distance

The following calculations are based on the "Point-by-Point" method where:
$ISC_{(2)} = ISC_{(1)} \times M_{(1)}$ M= 1/(1+f)
$ISC_{(1)}$ = short circuit current at fault point 1
$ISC_{(2)}$ = short circuit current at fault point 2

Feeder: $f_{(3\varnothing)} = \frac{1.732 \times L \times Isc}{C \times E}$
Feeder: $f_{(1\varnothing)} = \frac{2 \times L \times Isc}{C \times E}$

XFMR: $f_{(3\varnothing)} = \frac{IP(sca) \times Vp \times 1.73 \times \%Z}{100{,}000 \times KVA}$
XFMR: $f_{(1\varnothing)} = \frac{IP(sca) \times Vp \times \%Z}{100{,}000 \times KVA}$

$IS_{1\varnothing(2)} = \frac{Vp \times M \times IP_{sca)}}{Vs}$

VOLTAGE DROP (3Ø):
%VD= ((R x cos(arccos(pf)) + X x sin (arccos(pf))) x L/# x I x 1.73) / E
VOLTAGE DROP (1Ø):
%VD= ((R x cos(arccos(pf)) + X x sin(arccos(pf))) x 2 x L/# x I) / E

IP = Primary short circuit current
Vp = Primary voltage
IS= Secondary short circuit current
Vs= Secondary voltage
L = Length of circuit
C = "C" Factor from Bussman table where "C" = 1 / impedance per linear foot
E = Line to line volts

%VD CUM= Cumulative Voltage Drop from Fault Point 1 to Fault Point #
R= resistance in ohms per LF
X= reactances in ohms per LF

Feeder Types =
NM - Non Magnetic Conduit, M - Magnetic Conduit, FB - Feeder Busway, PB - Plug-in Busway, TX - Transformer

Date of Calculations: 12/19/2018
System Voltage: 480Y/277V - 3 phase

Fault Point (F#)	Bus/Feeder Description	Source (Fault Point)	Phase	Source Isc (amps)	Feeder: Conduit Type/ TX	Material	Quantity of Parallel Sets and Bus/ Phase & Neutral Size			Conductor 'C' Value	Busway 'C' Value	L-L Voltage (E)	Circuit Length (L)	Load Power Factor (pf)	Circuit Load (Amperage)	Conductor: Resistance (R)	Reactance (X)	Arccos (pf) (Radians)	Transformer: Type	Degree Rise	kVA	New Xfmr Z	Existing Xfmr Z	Secondary Voltage	Tap Setting	f	M	Fault Current (amps)	Voltage Drop (%VD)	Cumulative Voltage Drop (%VD)	Fault Point (F#)
1	Utility Service Point			30,106 at the secondary of the utility transformer																								Source Isc + 6X Motor Contribution =	30136			1
	Motor Contribution			5 The connected full load motor amps (includes compressors) on the system																											
2	MSB	1	3	30136	NM	CU	5	Set(s) of	400	kcmil	24297	--	480	30	0.9	1280	0.000033	0.000040	0.451027								0.027	0.97	29348	-0.13%	-0.13%	2
3	LF1A	2	3	29348	M	CU	2	Set(s) of	350	kcmil	19704	--	480	5	0.95	480	0.000039	0.000050	0.317560								0.013	0.99	28959	-0.02%	-0.15%	3
4	LF1B	2	3	29348	M	CU	2	Set(s) of	3/0	AWG	12844	--	480	10	0.95	320	0.000079	0.000052	0.317560								0.041	0.96	28188	-0.05%	-0.18%	4
5	TX-1P (PRIM)	2	3	29348	M	CU	1	Set(s) of		1	AWG	7293	--	480	5	0.8	100	0.000160	0.000057	0.643501								0.073	0.93	27361	-0.03%	-0.16%	5
6	TX-1P (SEC)	5	3	27361	TX								480								DOE	150	75	3.61				10.949	0.08			-0.16%	6
7	PC1	6	3		M	CU	1	Set(s) of	4/0	AWG	15082	--	208	5	0.8	180	0.000063	0.000051	0.643501											-0.06%	-0.22%	7
8	TX-2LA (PRIM)	2	3	29348	NM	CU	1	Set(s) of	250	kcmil	18594	--	480	1425	0.95	200	0.000052	0.000041	0.317560								8.116	0.11	3219	-6.40%	-6.53%	8
9	TX-2LA (SEC)	8	3	3219	TX								480								DOE	150	150	3.46			0.075	0.617	0.62			0.97%	9
10	LF2	9	3		M	CU	1	Set(s) of	250	kcmil	16483	--	480	5	0.95	200	0.000054	0.000052	0.317560											-0.02%	0.95%	10
11	TX-2LB (PRIM)	2	3	29348	NM	CU	2	Set(s) of	3/0	AWG	13923	--	480	1425	0.9	320	0.000077	0.000042	0.451027								5.419	0.16	4572	-7.21%	-7.34%	11
12	TX-2BL (SEC)	11	3	4572	TX								480								DOE	150	225	4.29			0.075	0.725	0.58			0.16%	12
13	LF2B	12	3		M	CU	2	Set(s) of	3/0	AWG	12844	--	480	5	0.9	320	0.000079	0.000052	0.451027											-0.03%	0.13%	13
14	TX-2P (PRIM)	2	3	29348	M	CU	1	Set(s) of		4	AWG	3806	--	480	1025	0.8	56	0.000310	0.000060	0.643501								28.520	0.03	994	-5.88%	-6.01%	14
15	TX-2P (SEC)	14	3	994	TX								480								DOE	150	45	3.51			0.05	0.645	0.61			-1.01%	15
16	PC2	15	3		M	CU	1	Set(s) of	1/0	AWG	8925	--	208	5	0.8	120	0.000120	0.000055	0.643501											-0.06%	-1.08%	16
17	TX-3P (PRIM)	2	3	29348	M	CU	1	Set(s) of		4	AWG	3806	--	480	1380	0.8	56	0.000310	0.000060	0.643501								38.398	0.03	745	-7.92%	-8.05%	17
18	TX-3P (SEC)	17	3	745	TX								480								DOE	150	45	3.51			0.075	0.483	0.67			-0.55%	18
19	PC3	18	3		M	CU	1	Set(s) of	1/0	AWG	8925	--	208	5	0.8	120	0.000120	0.000055	0.643501											-0.06%	-0.61%	19

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

JULIETTE A. PIERCE
LICENSE # PE-2009003622

DRAWING TITLE:

ELECTRICAL ONE-LINE DIAGRAM

JOB NO: 1197 SCALE: N/A
DATE: 01.18.2019 DRAWN BY: LKV

SHEET NO:

E-300

HENDERSON ENGINEERS
1901 MAIN, SUITE 300
KANSAS CITY, MO 64108
TEL (816) 663-8700 FAX (816) 663-8701
WWW.HENDERSONENGINEERS.COM
1850004412
MO. CORPORATE NUMBER: E-556D
EXPIRES 12/31/20

JULIETTE A. PIERCE
THE PROFESSIONAL WHOSE SEAL, SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

PLUMBING SYMBOLS

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V2.01

STANDARD MOUNTING HEIGHTS

REFER TO THE ARCHITECTURAL DRAWINGS FOR PLUMBING FIXTURE MOUNTING HEIGHTS. UNO, INSTALL PLUMBING FIXTURES WITH THE MOUNTING HEIGHTS AS LISTED BELOW WITH FINAL APPROVAL BY THE ARCHITECT.

LAVATORY OR SINK	
STANDARD HEIGHT	31" FLOOR TO RIM
ADA ACCESSIBLE	34" FLOOR TO RIM
CHILD HEIGHT	24" FLOOR TO RIM
URINAL	
STANDARD HEIGHT	24" FLOOR TO RIM
ADA ACCESSIBLE	17" FLOOR TO RIM
CHILD HEIGHT	14" FLOOR TO RIM
WATER CLOSET	
STANDARD HEIGHT	15" FLOOR TO RIM
ADA ACCESSIBLE	17" TO 19" FLOOR TO TOP OF SEAT
CHILD HEIGHT	10" FLOOR TO RIM
WATER COOLER OR DRINKING FOUNTAIN	
STANDARD HEIGHT	41" FLOOR TO SPOUT
ADA ACCESSIBLE	36" FLOOR TO SPOUT
CHILD HEIGHT	30" FLOOR TO SPOUT
SHOWER VALVES	
STANDARD HEIGHT - MEN	48" FLOOR TO CENTERLINE
STANDARD HEIGHT - WOMEN	42" FLOOR TO CENTERLINE
ADA ACCESSIBLE	38" MIN TO 48" MAX FLOOR TO CENTERLINE
SHOWER HEADS	
MEN	6'-6" FLOOR TO CENTERLINE
WOMEN	6'-0" FLOOR TO CENTERLINE
TUB VALVES	
STANDARD HEIGHT	32" FLOOR TO CENTERLINE
ADA ACCESSIBLE	CENTER BETWEEN GRAB BAR AND TUB RIM
CLINIC SERVICE SINKS	30" FLOOR TO RIM
SURGEON'S SCRUB-UP SINKS	35" FLOOR TO FRONT RIM
ICE MAKER OUTLET BOXES	24" FLOOR TO CENTER OF BOX
WASHING MACHINE OUTLET BOXES	42" FLOOR TO RIM
JANITOR'S SINK FAUCET FITTINGS	42" FLOOR TO CENTERLINE
HOSE BIBBS	36" AFF TO CENTERLINE
NON FREEZE WALL HYDRANTS	18" AFG TO CENTERLINE

USE THE DEFAULT MOUNTING HEIGHTS SHOWN ABOVE UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS OR ELSEWHERE. MOUNTING HEIGHTS LISTED ARE ABOVE FINISHED FLOOR (AFF) OR ABOVE FINISHED GRADE (AFG). ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.

ANNOTATION

- (1) PLUMBING PLAN NOTE CALLOUT
- (1) PLUMBING EQUIPMENT DESIGNATION. (CONTRACTOR FURNISHED AND INSTALLED). REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES
- [1] EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)
- CU 1 MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR PROVIDED UNO)
- CONNECTION POINT OF NEW WORK TO EXISTING
- 1 / P1 DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- 1 / P1 SECTION CUT DESIGNATION

ABBREVIATIONS

ADA	AMERICANS WITH DISABILITIES ACT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHU	AIR HANDLING UNIT
AP	ACCESS PANEL
BAS	BUILDING AUTOMATION SYSTEM
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
BTU	BRITISH THERMAL UNIT
CP	CONDENSATE PUMP
CPVC	CHLORINATED POLYVINYL CHLORIDE
CU	COPPER
DI	DUCTILE IRON
DN	DOWN
DFU	DRAINAGE FIXTURE UNIT
DS	DOWNSPOUT
(E)	EXISTING
EMS	ENERGY MANAGEMENT SYSTEM
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
FD	FLOOR DRAIN
FFA	FROM FLOOR ABOVE
FFB	FROM FLOOR BELOW
FF	FINISHED FLOOR
FL	FLOW LINE
FLA	FULL LOAD AMPS
FLR	FLOOR
GPM	GALLONS PER MINUTE
HD	HEAD, HUB DRAIN
HZ	HERTZ
IE	INVERT ELEVATION
IN WC	INCHES OF WATER COLUMN
JB	JUNCTION BOX
J-BOX	JUNCTION BOX
KW	KILOWATT
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MBH	1000 BTU PER HOUR
MH	MANHOLE
MIN	MINIMUM
N/C	NORMALLY CLOSED
N/O	NORMALLY OPEN
NIC	NOT IN CONTRACT
ORD	OVERFLOW ROOF DRAIN
PDI	PLUMBING DRAINAGE INSTITUTE
PH/Ø	PHASE
PRV	PRESSURE REDUCING VALVE
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
RPM	REVOLUTIONS PER MINUTE
RTU	ROOFTOP UNIT
SF	SQUARE FEET
SP	SUMP PUMP
SS	STAINLESS STEEL, SANITARY SEWER, SOIL STACK
TDH	TOTAL DYNAMIC HEAD
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
VCP	VITRIFIED CLAY PIPE
VFD	VARIABLE FREQUENCY DRIVE
VS	VENT STACK
VTR	VENT THROUGH ROOF
W/	WITH
W/O	WITHOUT
WC	WATER COLUMN
WS	WASTE STACK
WSFU	WATER SUPPLY FIXTURE UNIT
WVS	WASTE VENT STACK

PIPING SYMBOLS

- OXYGEN OUTLET
- NITROUS OXIDE OUTLET
- MEDICAL AIR OUTLET
- NITROGEN OUTLET
- MEDICAL VACUUM INLET
- FLOOR SINK (FS), SIZE & TYPE
- FLOOR DRAIN (FD), SIZE & TYPE
- ROOF DRAIN (RD), SIZE & TYPE
- BALL VALVE
- CONTROL VALVE
- SHUTOFF VALVE
- CHECK VALVE
- BALANCING VALVE WITH PRESSURE PORTS
- WATER METER
- STRAINER
- STRAINER WITH BLOWOFF
- RELIEF/SAFETY VALVE
- SOLENOID VALVE
- PRESSURE REDUCING VALVE
- GAS PRESSURE REGULATOR
- THERMOSTATIC MIXING VALVE
- PA PIPE ANCHOR
- EJ EXPANSION JOINT
- BACKFLOW PREVENTER
- PRESSURE GAUGE
- THERMOMETER
- UNION
- FLANGE CONNECTION
- HOSE BIBB (HB)
- NONFREEZE WALL HYDRANT (NW)
- MANUAL / AUTOMATIC AIR VENT OR VACUUM RELIEF VALVE
- PRESSURE / VACUUM SWITCH
- CLEANOUT
- CAP
- WALL CLEANOUT (WCO)
- FLOOR CLEANOUT (FCO)
- EXTERIOR CLEANOUT (ECO)
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- ELBOW UP WITH SHUT-OFF VALVE (SOV)
- ELBOW DOWN WITH SHUT-OFF VALVE (SOV)
- TEE UP WITH SHUT-OFF VALVE (SOV)
- TEE DOWN WITH SHUT-OFF VALVE (SOV)
- "A" WATER HAMMER ARRESTER (WHA) WITH PDI SIZES, (A, B, C, D, & E)
- RECIRCULATION PUMP
- P-TRAP
- GAS COCK
- TRAP PRIMER
- TRAP PRIMER WITH DISTRIBUTION UNIT

LINETYPE LEGEND

THROUGHOUT THE DRAWINGS DIFFERENT LINE-TYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.

EXISTING	———	NEW	———
DEMOLISH	- - - - - - - - - - - -	FUTURE	– – – – – – – – – –

PIPING LINETYPES

- CW — DOMESTIC COLD WATER (CW)
- SCW — SOFTENED COLD WATER (SCW)
- HW — DOMESTIC HOT WATER (HW)
- HWR — DOMESTIC HOT WATER RECIRC. (HWR)
- 140° — 140° DOMESTIC HOT WATER (140°)
- T — TRAP PRIMER LINE (T)
- S — SOIL PIPING - ABOVE FLOOR (S)
- S — SOIL PIPING - BELOW FLOOR (S)
- W — WASTE PIPING - ABOVE FLOOR (W)
- W — WASTE PIPING - BELOW FLOOR (W)
- GW — GREASE WASTE - ABOVE FLOOR (GW)
- GW — GREASE WASTE - BELOW FLOOR (GW)
- CGWV — COMBINATION GREASE WASTE AND VENT (CGWV)
- CWV — COMBINATION WASTE AND VENT (CWV)
- ST — STORM DRAIN - ABOVE FLOOR (ST)
- ST — STORM DRAIN - BELOW FLOOR (ST)
- OST — OVERFLOW STORM DRAIN - ABOVE FLOOR (OST)
- VBG — VENT BELOW GRADE (VBG)
- VBF — VENT BELOW FLOOR (VBF)
- ID — INDIRECT DRAIN (ID)
- CDH — CONDENSATE DRAIN - HIGH EFFICIENCY RTU (CDH)
- CD — CONDENSATE DRAIN (CD)
- ACD — AUXILIARY CONDENSATE DRAIN (ACD)
- SPD — SUMP OR SEWAGE PUMP DISCHARGE (SPD)
- G — NATURAL GAS (G)
- G — NATURAL GAS ON ROOF (G)
- MPG — MEDIUM PRESSURE NATURAL GAS (MPG)
- MPG — MEDIUM PRESSURE NATURAL GAS ON ROOF (MPG)
- NPW — NON POTABLE WATER (NPW)
- LPG — LIQUIFIED PETROLEUM GAS (LPG)
- WS — WATER SERVICE (WS)
- FP — FIRE PROTECTION (FP)
- PD — CONDENSATE PUMP DISCHARGE (PD)
- V — VENT PIPING (V)
- AW — ACID WASTE - ABOVE FLOOR (AW)
- AW — ACID WASTE - BELOW FLOOR (AW)
- AV — ACID VENT (AV)
- CA — COMPRESSED AIR (CA)
- MA — MEDICAL AIR (MA)
- MV — MEDICAL VACUUM (MV)
- N2 — NITROGEN (N2)
- N2O — NITROUS OXIDE (N2O)
- O2 — OXYGEN (O2)
- EV — EVAC/WAGD (EV)
- CO2 — CARBON DIOXIDE (CO2)
- AI — MEDICAL AIR INTAKE (AI)
- VE — MEDICAL VACUUM EXHAUST (VE)
- HE — HELIUM (HE)
- IA — INSTRUMENT AIR (IA)
- IV — INSTRUMENT VACUUM (IV)
- DA — DENTAL AIR (DA)
- DV — DENTAL VACUUM (DV)
- FW1 — FILTERED WATER (FW1)
- FW2 — FILTERED WATER W/ SCALE INHIBITOR (FW2)
- RO — REVERSE OSMOSIS (RO)
- ROR — REVERSE OSMOSIS REMINERALIZATION (ROR)

GENERAL NOTES:

1. PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS, REFER TO SPECIFICATIONS.
2. DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
3. PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
4. PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
5. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
6. DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
7. INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE. INSTALL EXPOSED PIPING TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
8. VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
9. PIPING IN FINISHED AREAS SHALL BE ROUTED CONCEALED; EXPOSED PIPING, WHERE NECESSARY, SHALL BE ROUTED AS HIGH AS POSSIBLE AND TIGHT TO WALLS.
10. COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
11. COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
12. CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
13. PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
14. COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
15. COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10' MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2' CLEARANCE FROM ALL OTHER EQUIPMENT.
16. PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON AT SLAB ON GRADE. SEE SPECIFICATION SECTION 15400 FOR MORE INFORMATION.
17. WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

JAMES J. DIETZ
LICENSE # PE-2007020258

DRAWING TITLE:

PLUMBING SYMBOLS & NOTES

JOB NO: 1197 SCALE:
DATE: 01.18.2019 DRAWN BY: SNG

SHEET NO:

P-000

HENDERSON ENGINEERS
1801 MAIN, SUITE 300
KANSAS CITY, MO 64108
TEL (816) 663-8700 FAX (816) 663-8701
WWW.HENDERSONENGINEERS.COM

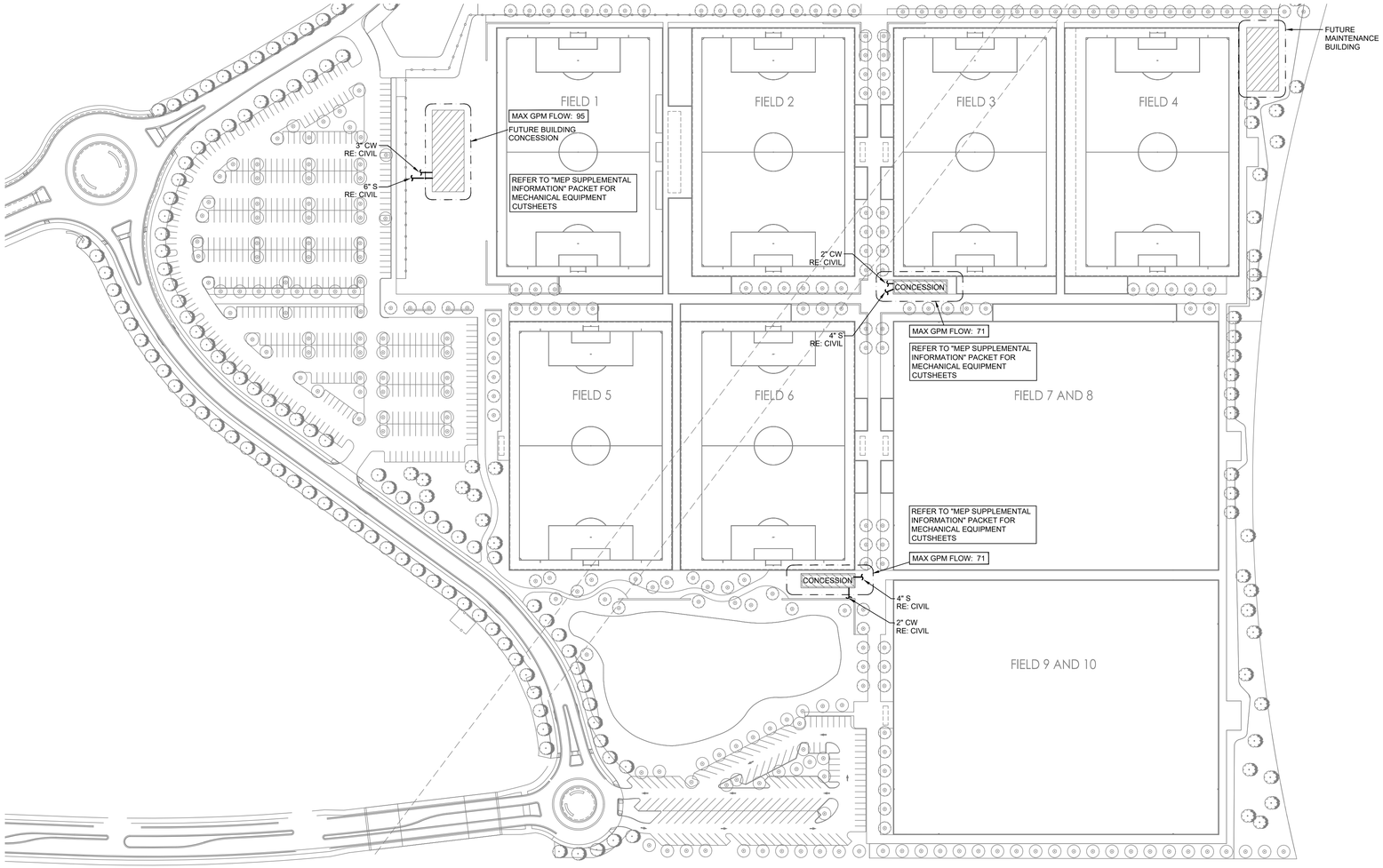
1850004412
MO. CORPORATE NUMBER: E-556D
EXPIRES 12/31/20

THE PROFESSIONAL WHOSE SEAL SIGNATURE, AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

JAMES J. DIETZ

THE PROFESSIONAL WHOSE SEAL SIGNATURE AND PERSONAL SEAL APPEARS ON THIS PAGE ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE AND DISCLAIMS (PURSUANT TO SECTION 327.411, RSMo) ANY RESPONSIBILITY FOR ALL OTHER PLANS, SPECIFICATIONS, ESTIMATES, REPORTS OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO, OR INTENDING TO BE USED FOR, ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

JAMES J. DIETZ



1 PLUMBING SITE PLAN
SCALE: 1:100

CIVIL ENGINEERING
GBA
9801 Renner Boulevard
Lenexa, KS 66219
913.492.0400
www.gbateam.com
MO Certificate of Authority # 000133

LANDSCAPE ARCHITECTURE
LAND3 Studio, LLC
317 SE Main
Lee's Summit, MO 64063
www.land3studio.com
MO Certificate of Authority # 2008001860

LANDSCAPE ARCHITECTURE
Hoerr Schaudt Landscape Architects
2100 Central Street, Suite 01C
Kansas City, MO 64108
816.510.0438
www.hoerrschaudt.com
MO Certificate of Authority (Applied)

MEP ENGINEERING
HENDERSON ENGINEERS, Inc.
8345 Lenexa Drive
Lenexa, KS 66214
913.742.5000
www.hei-eng.com
Missouri Certificate of Authority # 000556

PROJECT:

Paragon Star Soccer Complex

Soccer Complex & Associated Improvements
1401 NW View High Dr, Lee's Summit, MO 64081
Final Development Plan

ISSUE:

PROFESSIONAL SEAL:

JAMES J. DIETZ
LICENSE # PE-2007020258

DRAWING TITLE:

PLUMBING SITE PLAN

JOB NO: 1197 SCALE: 1:100
DATE: 01.18.2019 DRAWN BY: SNG

SHEET NO:

P-001

HENDERSON ENGINEERS
1801 MAIN, SUITE 300
KANSAS CITY, MO 64108
TEL (816) 663-8700 FAX (816) 663-8701
WWW.HENDERSONENGINEERS.COM
1850004412
MO. CORPORATE NUMBER: E-556D
EXPIRES 12/31/20