

PLAYGROUND REPLACEMENT CONSTRUCTION DOCUMENTS

MISSOURI STATE PARKS WEST REGION

BOTHWELL LODGE STATE HISTORIC SITE, KNOB NOSTER STATE PARK & CONFEDERATE MEMORIAL STATE HISTORIC SITE

BOTHWELL LODGE STATE HISTORIC SITE

19349 Bothwell State Park Road
Sedalia, MO 65301

SITE NUMBER: 5303 ASSET NUMBER: 9999



OWNER:

STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR

DEPARTMENT OF
NATURAL RESOURCES,
MISSOURI STATE PARKS

PROJECT MANAGEMENT:

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

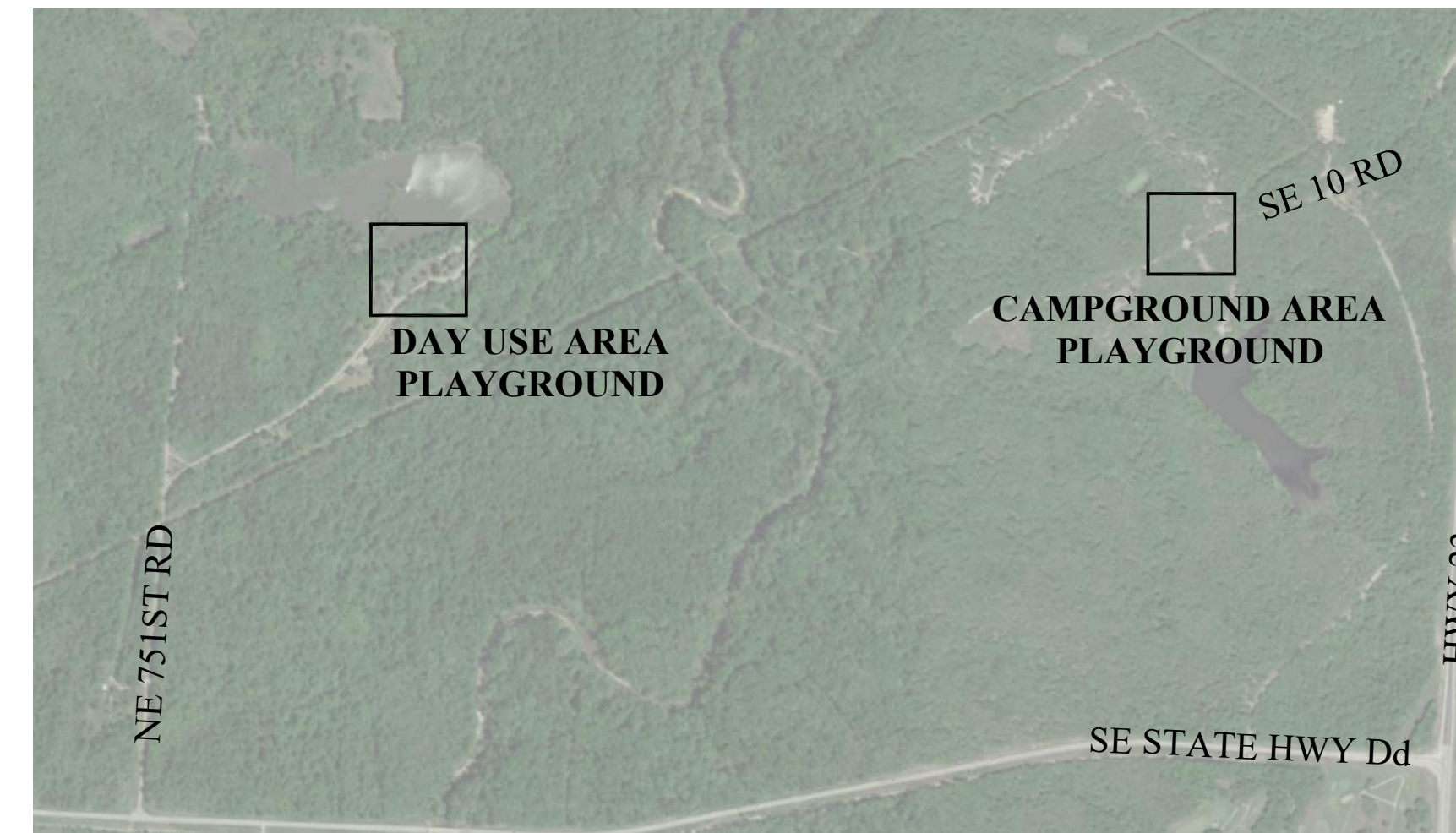
PROJECT NUMBER: X2109-01

KNOB NOSTER STATE PARK

873 SE 10th

Knob Noster, MO 65336

SITE NUMBER: 5305 ASSET NUMBER: 9999



LANDSCAPE ARCHITECT:

VIREO
414 Oak Street, Suite 101
Kansas City, MO 64106
Phone: (816) 756-5690

CIVIL ENGINEER:

RENAISSANCE INFRASTRUCTURE
CONSULTING
9653 Penrose Lane
Lenexa, KS 66219
Phone: (913) 317-9500



GEOTECHNICAL ENGINEER:

INTERTEK-PSI
1211 W. Cambridge Circle Drive
Kansas City, MO 64103
Phone: (913) 310-1600

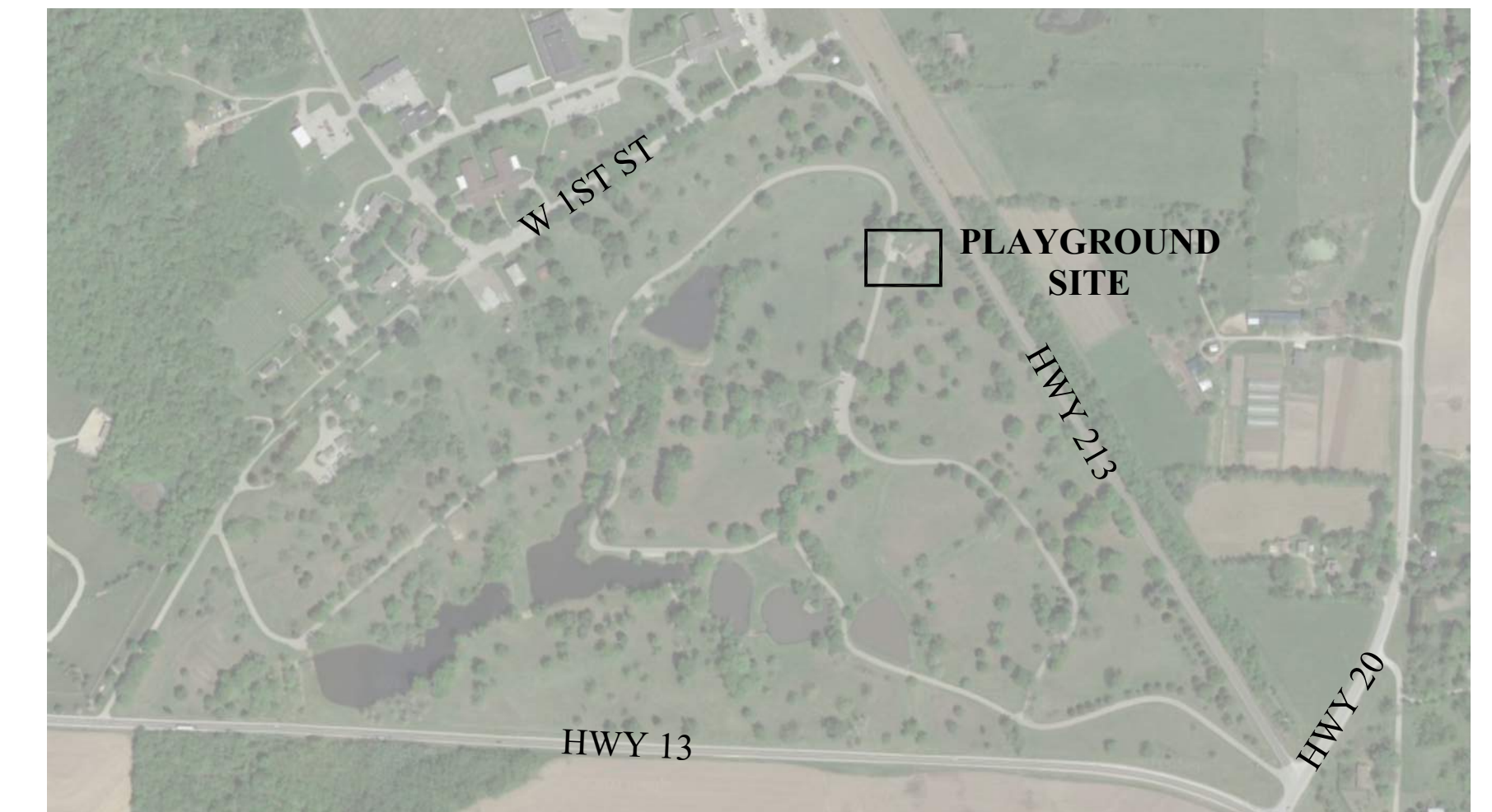


CONFEDERATE MEMORIAL STATE HISTORIC SITE

211 West First Street

Higginsville, MO 64037

SITE NUMBER: 5106 ASSET NUMBER: 9999



SHEET INDEX:

DP-100 - DEMOLITION & EROSION CONTROL PLAN
SP-101 - SITE PLAN
SP-102 - LAYOUT & GRADING PLAN
C103 - UTILITY PLAN & DETAILS
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SP-201 - SITE PLAN
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DP-400 - ALT #1 - DEMOLITION & EROSION CONTROL PLAN
SP-401 - ALT #1, #2, #3 - SITE PLAN
SP-402 - ALT #1, #2, #3 - LAYOUT & GRADING PLAN
DT-500 - SITE DETAILS

SHEET NUMBER:

G-001

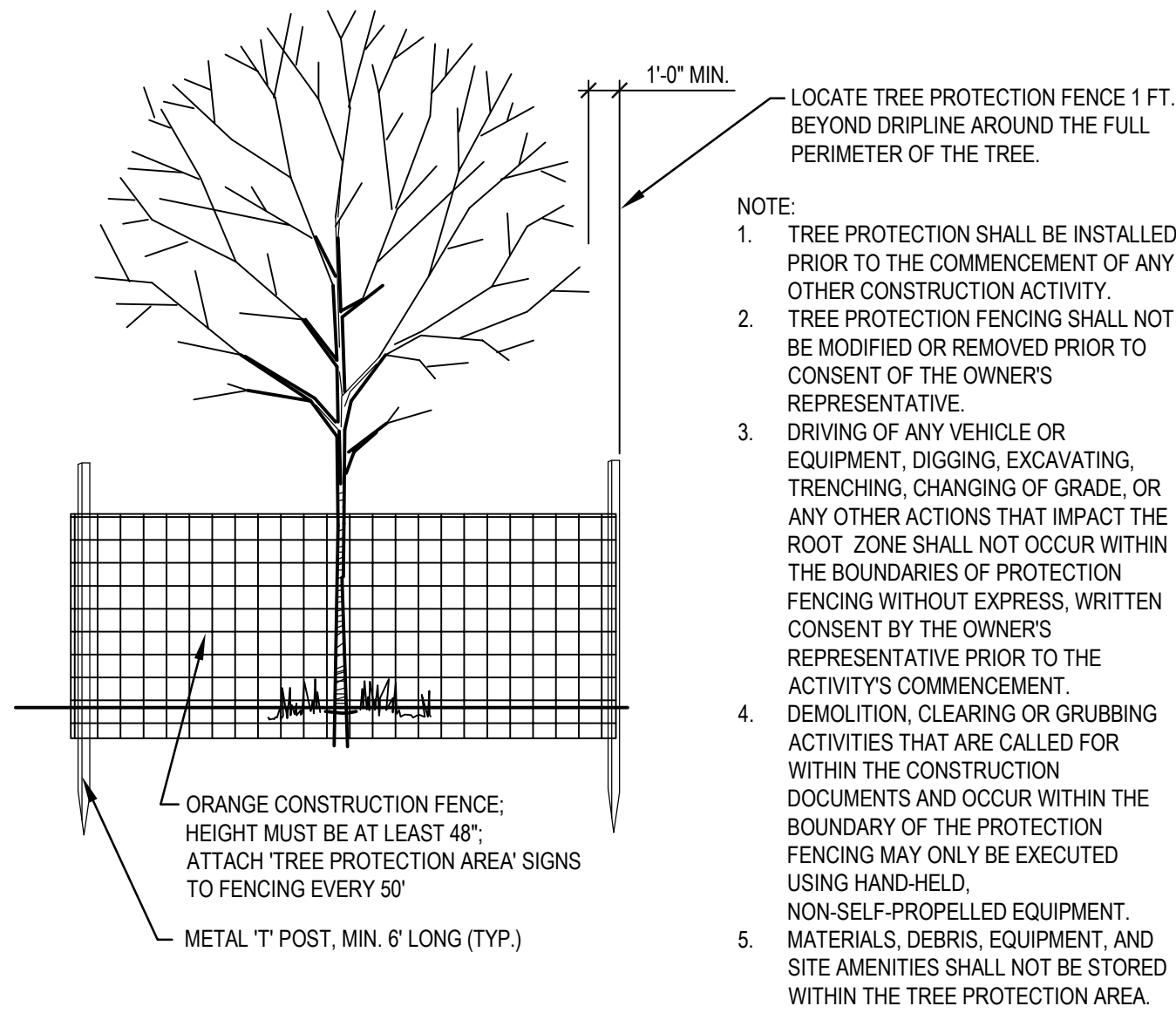
1 OF 17 SHEETS
August 22, 2022

DEMOLITION NOTES

- ALL UTILITIES SHALL BE FIELD LOCATED PRIOR TO LANDSCAPE AND PAVEMENT REMOVAL OPERATIONS.
- ALL REMOVALS SHALL BE DISPOSED OF PER LOCAL REGULATIONS BY THE CONTRACTOR.
- REFER TO CONSTRUCTION DOCUMENTS FOR GRADING AND RESTORATION OF SITE AFTER COMPLETION OF DEMOLITION WORK.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THIS INCLUDES PRIVATE AND PUBLIC UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT MISSOURI ONE CALL IN ADVANCE OF ANY EXCAVATION TO COORDINATE UTILITY LOCATIONS.
- CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER EXISTING LINES NOT OF RECORD OR SHOWN ON THESE PLANS.
- DO NOT DISRUPT UTILITY SERVICE TO ADJACENT BUSINESSES OR RESIDENCES WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.
- DO NOT DISRUPT TRAFFIC ON ADJACENT STREETS WITHOUT PRIOR WRITTEN APPROVAL BY OWNER.
- ALL SIDEWALK AND PAVEMENT TO REMAIN SHALL BE PROTECTED IN PLACE INCLUDING PROTECTION FROM DAMAGE CAUSED BY REMOVAL OF ABUTTING PAVEMENT. CONTRACTOR SHALL SAW CUT WHERE NECESSARY.
- CONTRACTOR SHALL GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DISCONNECTION, DEMOLITION, AND REMOVAL OF SERVICE LINES. CAP ALL LINES BEFORE PROCEEDING WITH WORK ON THIS CONTRACT.
- CONTRACTOR SHALL PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. USING BEST PRACTICES AND AS APPROVED BY THE ENGINEER AND OWNER.
- DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

EROSION CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH KC METROPOLITAN APWA STANDARDS. VISIT <http://kcmetro.apwa.net/PageDetails/439> FOR SPECIFICATIONS AND DETAILS. DEVICES SHOWN ON PLAN MAY NOT REPRESENT ALL DEVICES NECESSARY FOR EROSION CONTROL. UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL ADJUST AND/OR IMPLEMENT ADDITIONAL DEVICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- THE CONTRACTOR SHALL HAVE AN EROSION CONTROL COORDINATOR AND SHALL COMPLY WITH PERMITS AS REQUIRED BY LAW.
- THE CONTRACTOR SHALL STABILIZE THE SITE PRIOR TO AND DURING CONSTRUCTION. EROSION CONTROL DEVICES SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL DEVICES WILL BE INSTALLED IF DEEMED NECESSARY DURING ON SITE INSPECTION.
- THE CONTRACTOR SHALL PRACTICE SEQUENTIAL STABILIZATION TO STABILIZE THE SITE AS IT'S BEING BUILT. USE SEED, SOD, EROSION BLANKETS, MULCH, HYDRO-MULCH, TURF REINFORCEMENT MATS (TRM), BONDED FIBER MATRIX AND/OR A COMBINATION OF THESE OR OTHER DEVICES.
- ALL TOPSOIL SHALL BE REMOVED, STOCKPILED, AND REPLACED OVER DISTURBED AREAS AS SOON AS AREAS HAVE BEEN SHAPED TO FINAL GRADE.
- THE CONTRACTOR SHALL STABILIZE ALL SWALES/DITCHES AS SOON AS POSSIBLE. USE DITCH CHECKS (I.E. WATTLES OR ROCK CHECKS), EROSION BLANKET, TRM, AND/OR OTHER DEVICES.
- CONTRACTOR SHALL INSPECT AND EVALUATE EROSION CONTROL DEVICES REGULARLY AND FOLLOWING STORM EVENTS AND REPAIR DEFECTS IMMEDIATELY.
- CONDUCT TEMPORARY SEEDING AND MULCHING OPERATIONS TO PROVIDE A TEMPORARY VEGETATIVE COVER FOR EROSION AND SEDIMENT CONTROL PER THE FOLLOWING:
 - WHEN SEASONAL CONDITIONS DO NOT ALLOW FOR INSTALLATION OF THE PERMANENT VEGETATION SPECIFIED
 - WHEN CONSTRUCTION ACTIVITY CEASES AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS
 - WITHIN 7 DAYS OF COMPLETING GRADING OPERATIONS
- STRAW WATTLE LENGTHS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL ADJUST IN FIELD AS REQUIRED TO PROVIDE EROSION AND SEDIMENT CONTROL AND ADDRESS ONSITE CONDITIONS.
- THE OWNER WILL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION OPERATIONS AND WHEN ALL DISTURBED AREAS ARE STABILIZED WITH AN ESTABLISHED STAND OF PERMANENT VEGETATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SEDIMENT MOVEMENT ON SITE TO KEEP MUD OFF OF ENTRY DRIVES AND OTHER AREAS BEING USED BY SITE USERS (STAFF AND GUESTS).

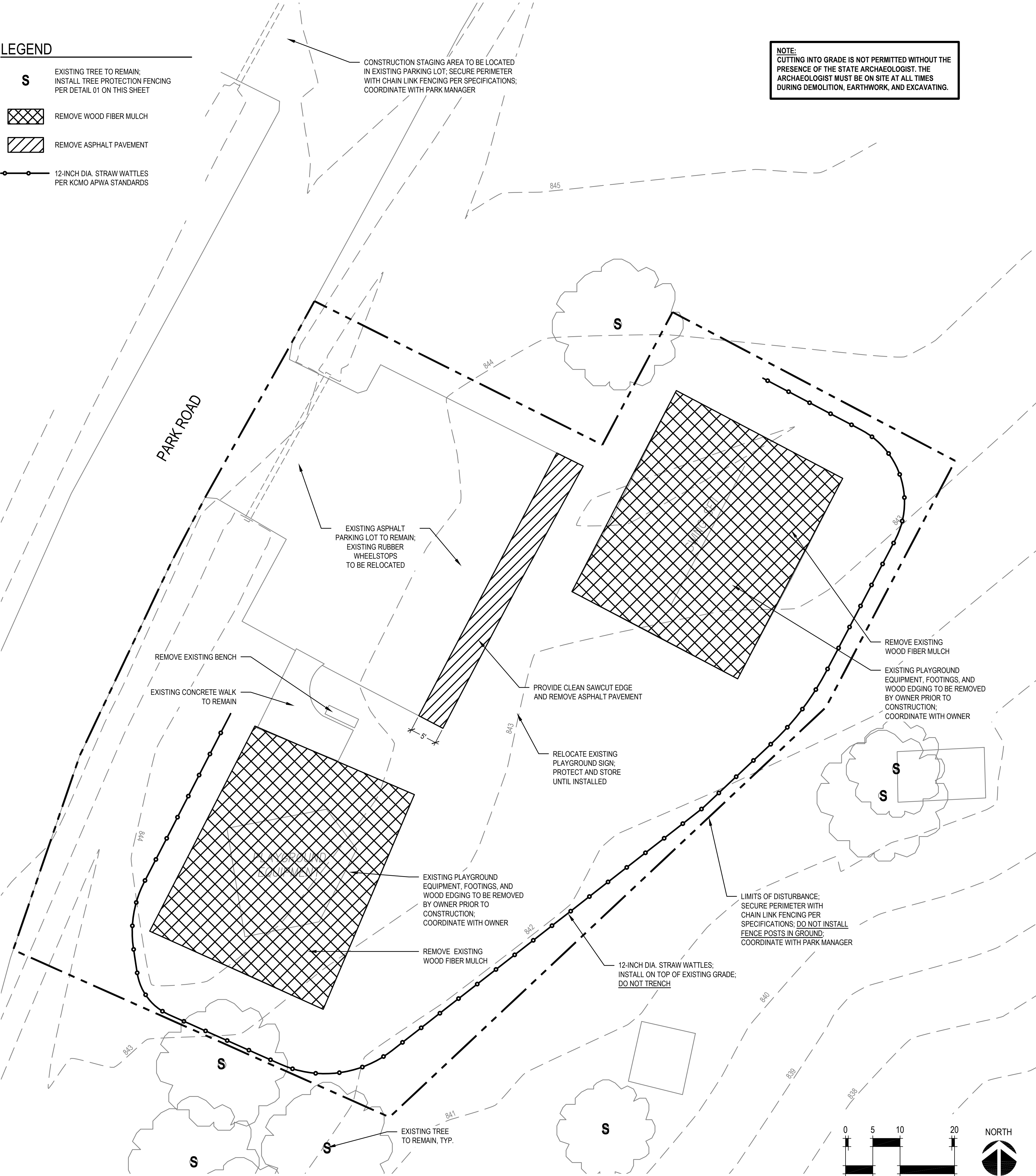


EXISTING TREE PROTECTION 01

N.T.S.

LEGEND

- S** EXISTING TREE TO REMAIN; INSTALL TREE PROTECTION FENCING PER DETAIL 01 ON THIS SHEET
- REMOVE WOOD FIBER MULCH
- REMOVE ASPHALT PAVEMENT
- 12-INCH DIA. STRAW WATTLES PER KCMO APWA STANDARDS



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LANDSCAPE ARCHITECT:



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PLAYGROUND
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BOTHWELL LODGE
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19349 BOTHWELL STATE
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SEDALIA, MO 65301

PROJECT # X2109-01
SITE # 5303
ASSET # 9999

REVISION: _____
DATE: _____
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DATE: _____

ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5303-9999-DP-100.DWG

DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

SHEET TITLE:

DEMOLITION &
EROSION CONTROL
PLAN

SHEET NUMBER:

DP-100

SHEET 2 OF 17
8/22/2022

PLAY EQUIPMENT SCHEDULE (BASIS OF DESIGN)

ITEM	QTY	MANUFACTURER	MODEL	REP.
1 Tree House Themed Play Structure (see plan for individual play components)	1	Landscape Structures	see plan	ATHCO
2 Music Instrument Play Equipment				
Ditty Metallophone	1	Landscape Structures	228212	ATHCO
Goblet Junior Drum	1	Landscape Structures	228215	ATHCO
Kettle Junior Drum	1	Landscape Structures	228217	ATHCO
3 Single Post Swing Frame with Additional Bay	1	Landscape Structures	177332 / 177333	ATHCO
Belt Seat with proguard chains	2	Landscape Structures	174018	ATHCO
Full Bucket Seat with chains	1	Landscape Structures	175038	ATHCO
Molded Seat with harness (ages 2-5) and proguard chains	1	Landscape Structures	218671	ATHCO

*NOTE:
INFORMATION SHOWN FOR BASIS OF DESIGN IS FOR BID PURPOSES ONLY. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

1. LANDSCAPE STRUCTURES
2. GAMETIME, A PLAYCORE COMPANY
3. BURKE
4. ZEAGER BROS. INC.
5. OR APPROVED EQUAL

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INCLUDING PLAY EQUIPMENT LAYOUT, SAFETY FALL ZONES, MATERIALS AND COLORS FOR ALL PLAY EQUIPMENT FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO FABRICATION AND/OR INSTALLATION.

TREEHOUSE THEMED PLAY STRUCTURE



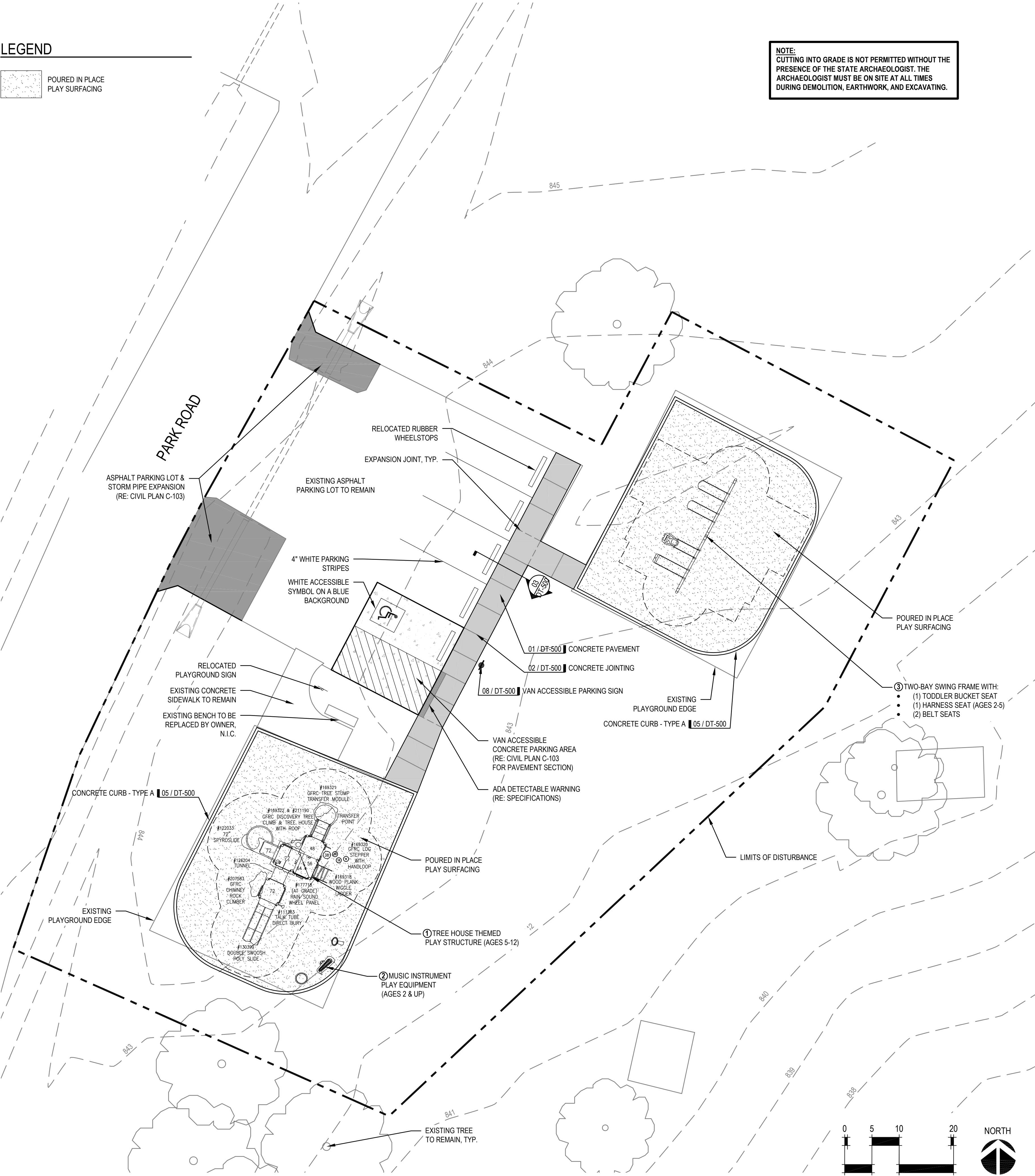
METALLOPHONE & DRUMS



LEGEND



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PROJECT # X2109-01
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ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5303-9999-SP-101.DWG
DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

SHEET TITLE:
SITE PLAN

SHEET NUMBER:

SP-101

SHEET 3 OF 17
8/22/2022

LAYOUT & GRADING NOTES

1. SITE LAYOUT DATA, INCLUDING COORDINATE POINTS, IS BASED ON A SURVEY PROVIDED BY RENAISSANCE INFRASTRUCTURE CONSULTING (2021). REFER TO SURVEY FOR HORIZONTAL LAYOUT CONTROL POINTS. REPORT ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS TO OWNER'S REPRESENTATIVE IMMEDIATELY.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL ON-SITE AND DOWNSTREAM EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION. EROSION CONTROL SYSTEMS AND PROCEDURES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATIONS.
3. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL HAVE ALL UTILITIES FLAGGED IN THE FIELD FOR INSPECTION PRIOR TO PROCEEDING WITH ANY GRADING OPERATIONS. THE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES AND WILL BE HELD LIABLE FOR ANY DELAYS CAUSED BY DAMAGE TO UTILITIES OR FAILURE TO LOCATE UTILITIES.
4. ALL CONSTRUCTION DEBRIS SHALL BE DISPOSED OF BY THE CONTRACTOR AT A LOCATION PROVIDED BY THE CONTRACTOR AND IN ACCORDANCE WITH LOCAL REGULATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF BY JOB-SITE INSPECTION AS TO THE EXTENT OF CLEARING REQUIRED PRIOR TO ENTERING INTO A CONSTRUCTION CONTRACT.
5. CONSTRUCTION STAKING SHALL BE PROVIDED BY THE CONTRACTOR. ALL CONSTRUCTION LAYOUT STAKING IS TO BE PERFORMED BY A LAND SURVEYOR OR PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSOURI. TO FACILITATE ACCURACY OF CONSTRUCTION STAKING, UPON WRITTEN REQUEST FROM CONTRACTOR, ELECTRONIC DATA COMPRISING THESE SITE DEVELOPMENT DRAWINGS WILL BE FORWARDED TO THE LAND SURVEYOR OR PROFESSIONAL ENGINEER EMPLOYED TO PERFORM THE CONSTRUCTION STAKING.
6. IN ORDER TO MAINTAIN THE INTEGRITY OF HORIZONTAL AND VERTICAL CONTROL FOR THE SITE, THE SURVEYOR OR PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR TO PERFORM CONSTRUCTION LAYOUT STAKING SHALL SET AND PROTECT ADDITIONAL TRAVERSE POINTS OUTSIDE THE AREAS OF CONSTRUCTION ACTIVITY.
7. ALL LAYOUTS SHALL BE SUBJECT OF FIELD APPROVAL BY THE OWNER'S REPRESENTATIVE.
8. SAWCUT EXISTING PAVEMENT FULL DEPTH WHERE IT MEETS NEW PAVEMENT.
9. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO THE FOLLOWING: EDGE OF PAVEMENT, FACE OF WALL, AND EDGE OF CURB.
10. ALL EDGES OF PAVEMENTS ARE TO BE STRAIGHT (OR OF CONSISTENT RADIUS IN THE CASE OF CURVES) AS SHOWN HEREON. NO UNSPECIFIED TANGENTS OR KINKS WILL BE APPROVED.
11. THIS SITE HAS BEEN DESIGNED TO COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG). REPORT ANY COMPLIANCE DISCREPANCIES TO OWNER'S REPRESENTATIVE IMMEDIATELY.
12. ALL AREAS SHALL BE BROUGHT TO FINAL PLAN CONDITION (PAVED, SEEDED, OR MULCHED) AS SOON AS POSSIBLE TO MAINTAIN FINISH GRADE CONDITIONS AND PREVENT SOIL LOSS.
13. THE CONTRACTOR SHALL PROVIDE AND PAY FOR ALL INSPECTION SERVICES.

PLAYGROUND CURB ALIGNMENT

ALIGNMENT LINE DATA				
LINE #	LENGTH	BEARING	START POINT	END POINT
L1	31.3527	N67° 55' 54.37"W	(3154051.7773, 958228.7803)	(3154022.7216, 958240.5599)
L2	30.3287	S27° 00' 54.79"W	(3154022.7216, 958240.5599)	(3154008.9454, 958213.5404)
L3	8.9368	S66° 01' 12.49"E	(3154014.8802, 958196.7834)	(3154023.0457, 958193.1514)
L4	31.8006	N23° 07' 13.42"E	(3154039.2904, 958199.5339)	(3154051.7773, 958228.7803)
L5	39.5000	S27° 45' 10.85"W	(3154099.5060, 958301.3413)	(3154081.1124, 958266.3852)
L6	23.2500	S62° 14' 49.15"E	(3154081.1124, 958266.3852)	(3154101.6878, 958255.5586)
L7	19.0000	N27° 45' 10.85"E	(3154115.5317, 958259.8565)	(3154124.3793, 958276.6708)
L8	23.2500	N62° 14' 49.15"W	(3154120.0814, 958290.5147)	(3154099.5060, 958301.3413)

ALIGNMENT CURVE DATA				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C1	90.86	12.25	19.43	12.44
C2	93.04	12.25	19.89	12.92
C3	90.00	10.25	16.10	10.25
C4	90.00	10.25	16.10	10.25

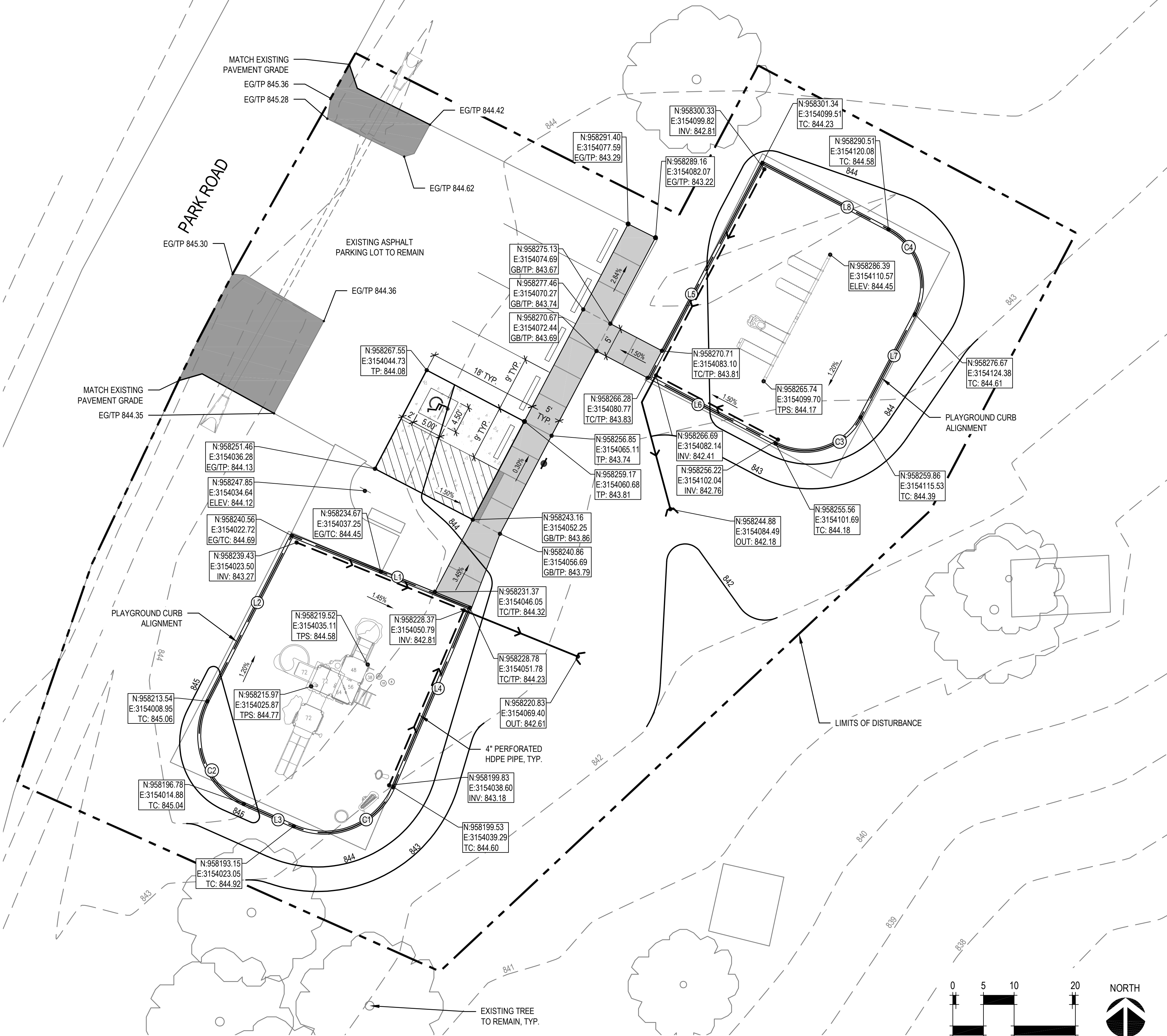
LEGEND

EG = EXISTING GRADE
GB = GRADE BREAK
TP = TOP OF PAVEMENT
TC = TOP OF CURB
TPS = TOP OF PLAY SURFACE
INV = INVERT

--- PERFORATED HDPE UNDERDRAIN PIPE
— SOLID HDPE UNDERDRAIN PIPE

NOTE:
PRIOR TO INSTALLATION OF UNDERDRAIN, OWNER'S REPRESENTATIVE SHALL REVIEW AND APPROVE ALIGNMENT IN THE FIELD TO LIMIT DAMAGE TO EXISTING TREES AND ROOT SYSTEMS.

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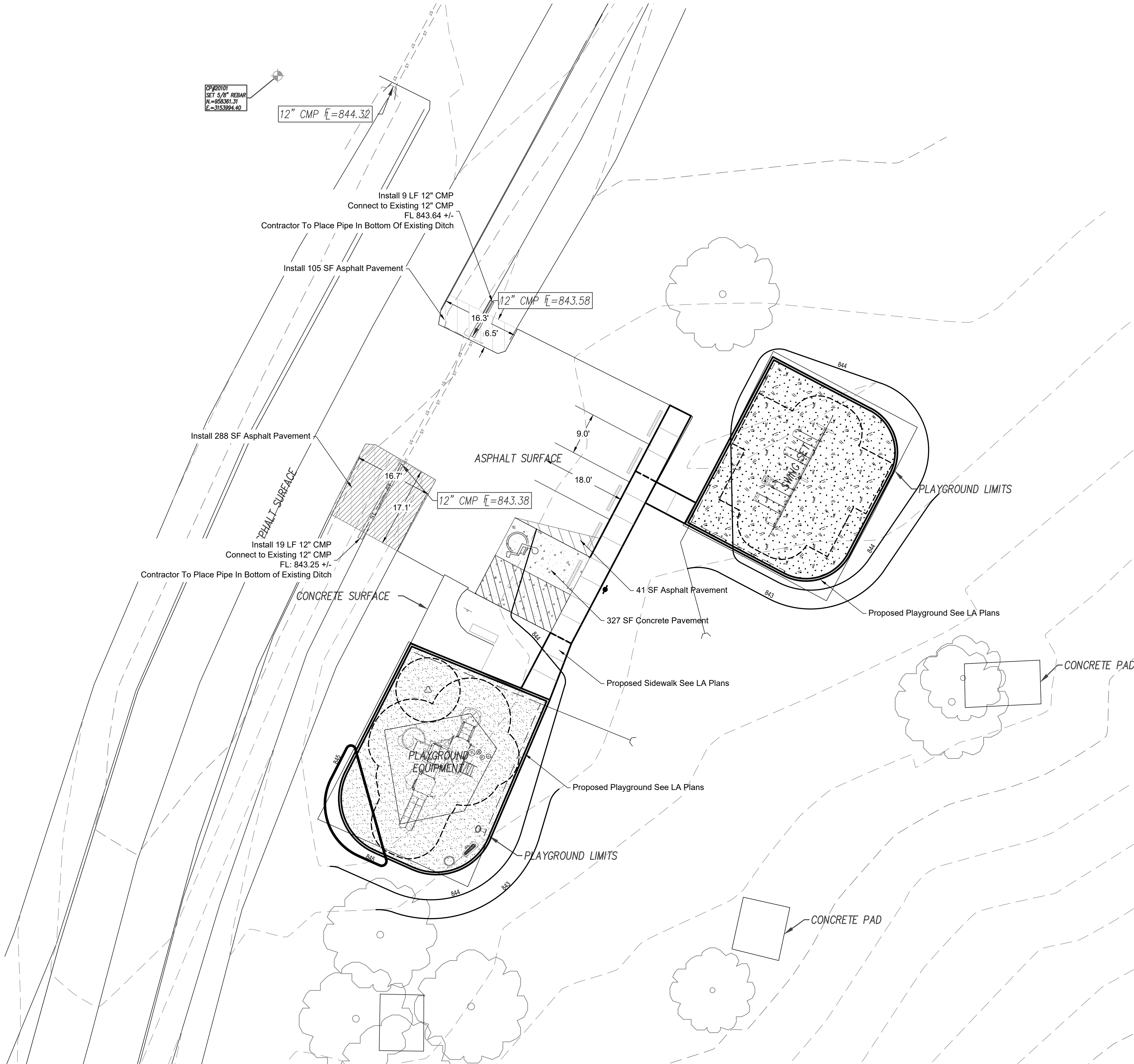
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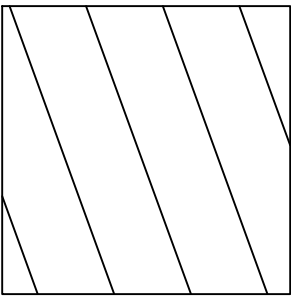
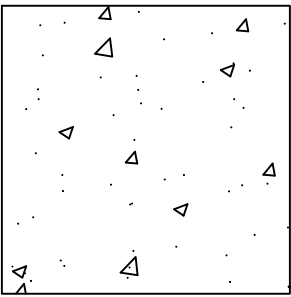
LAYOUT &
GRADING PLAN

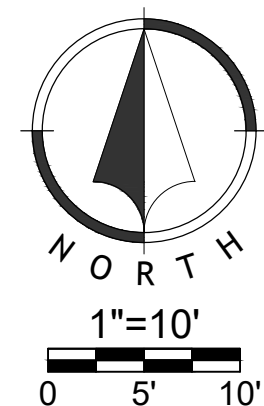
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SP-102

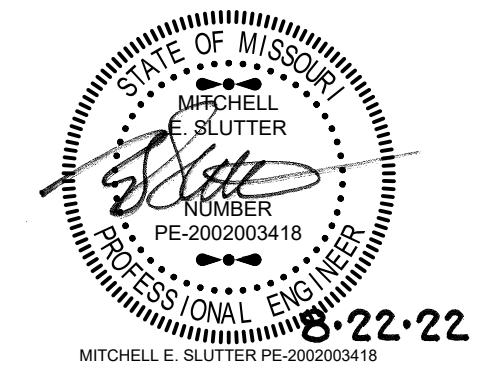
SHEET 4 OF 17
8/22/2022



Asphalt Pavement		
	1" MoDOT BP-2	
	3" MoDOT BP-1	
	6" MoDOT Type 1 Aggregate	
Concrete Pavement		
	5" Concrete	
	4" MoDOT Type 1 Aggregate	



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ISSUE DATE: 08/22/2022

CAD DWG FILE: _____
DRAWN BY: TCD
CHECKED BY: MES
DESIGNED BY: MES

SHEET TITLE:

UTILITY PLAN
& DETAILS

SHEET NUMBER:

C103

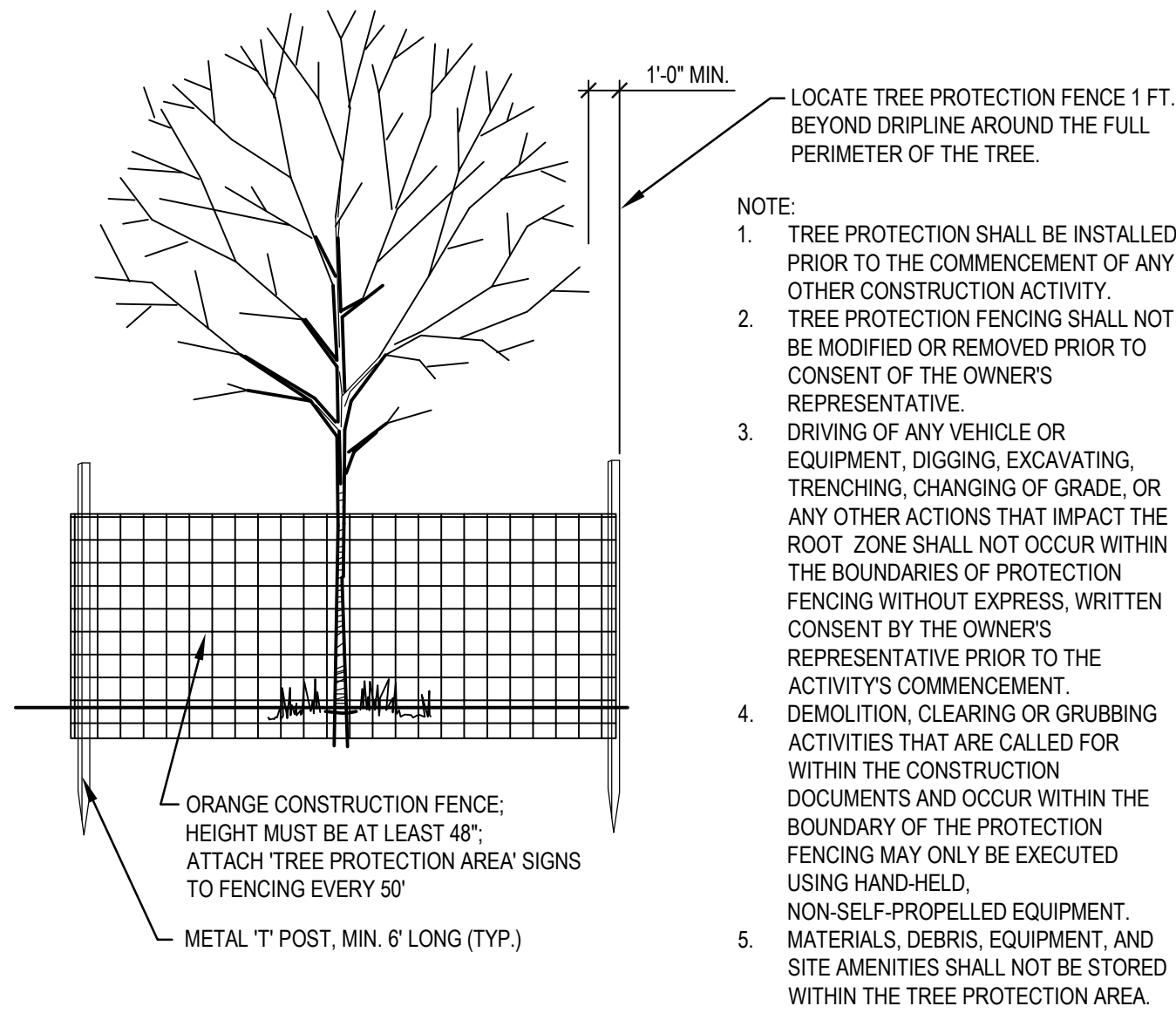
SHEET 5 OF 17
08/22/2022

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- DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

EROSION CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH KC METROPOLITAN APWA STANDARDS. VISIT <http://kcmetro.apwa.net/PageDetails/439> FOR SPECIFICATIONS AND DETAILS. DEVICES SHOWN ON PLAN MAY NOT REPRESENT ALL DEVICES NECESSARY FOR EROSION CONTROL. UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL ADJUST AND/OR IMPLEMENT ADDITIONAL DEVICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- THE CONTRACTOR SHALL HAVE AN EROSION CONTROL COORDINATOR AND SHALL COMPLY WITH PERMITS AS REQUIRED BY LAW.
- THE CONTRACTOR SHALL STABILIZE THE SITE PRIOR TO AND DURING CONSTRUCTION. EROSION CONTROL DEVICES SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL DEVICES WILL BE INSTALLED IF DEEMED NECESSARY DURING ON SITE INSPECTION.
- THE CONTRACTOR SHALL PRACTICE SEQUENTIAL STABILIZATION TO STABILIZE THE SITE AS IT'S BEING BUILT. USE SEED, SOD, EROSION BLANKETS, MULCH, HYDRO-MULCH, TURF REINFORCEMENT MATS (TRM), BONDED FIBER MATRIX AND/OR A COMBINATION OF THESE OR OTHER DEVICES.
- ALL TOPSOIL SHALL BE REMOVED, STOCKPILED, AND REPLACED OVER DISTURBED AREAS AS SOON AS AREAS HAVE BEEN SHAPED TO FINAL GRADE.
- THE CONTRACTOR SHALL STABILIZE ALL SWALES/DITCHES AS SOON AS POSSIBLE. USE DITCH CHECKS (I.E. WATTLES OR ROCK CHECKS), EROSION BLANKET, TRM, AND/OR OTHER DEVICES.
- CONTRACTOR SHALL INSPECT AND EVALUATE EROSION CONTROL DEVICES REGULARLY AND FOLLOWING STORM EVENTS AND REPAIR DEFECTS IMMEDIATELY.
- CONDUCT TEMPORARY SEEDING AND MULCHING OPERATIONS TO PROVIDE A TEMPORARY VEGETATIVE COVER FOR EROSION AND SEDIMENT CONTROL PER THE FOLLOWING:
 - WHEN SEASONAL CONDITIONS DO NOT ALLOW FOR INSTALLATION OF THE PERMANENT VEGETATION SPECIFIED
 - WHEN CONSTRUCTION ACTIVITY CEASES AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS
 - WITHIN 7 DAYS OF COMPLETING GRADING OPERATIONS
- STRAW WATTLE LENGTHS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL ADJUST IN FIELD AS REQUIRED TO PROVIDE EROSION AND SEDIMENT CONTROL AND ADDRESS ONSITE CONDITIONS.
- THE OWNER WILL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION OPERATIONS AND WHEN ALL DISTURBED AREAS ARE STABILIZED WITH AN ESTABLISHED STAND OF PERMANENT VEGETATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SEDIMENT MOVEMENT ON SITE TO KEEP MUD OFF OF ENTRY DRIVES AND OTHER AREAS BEING USED BY SITE USERS (STAFF AND GUESTS).

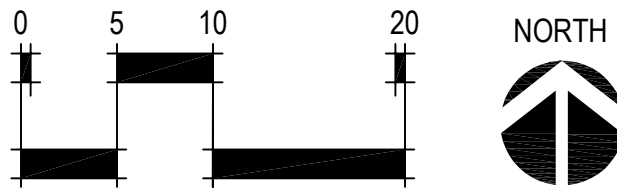
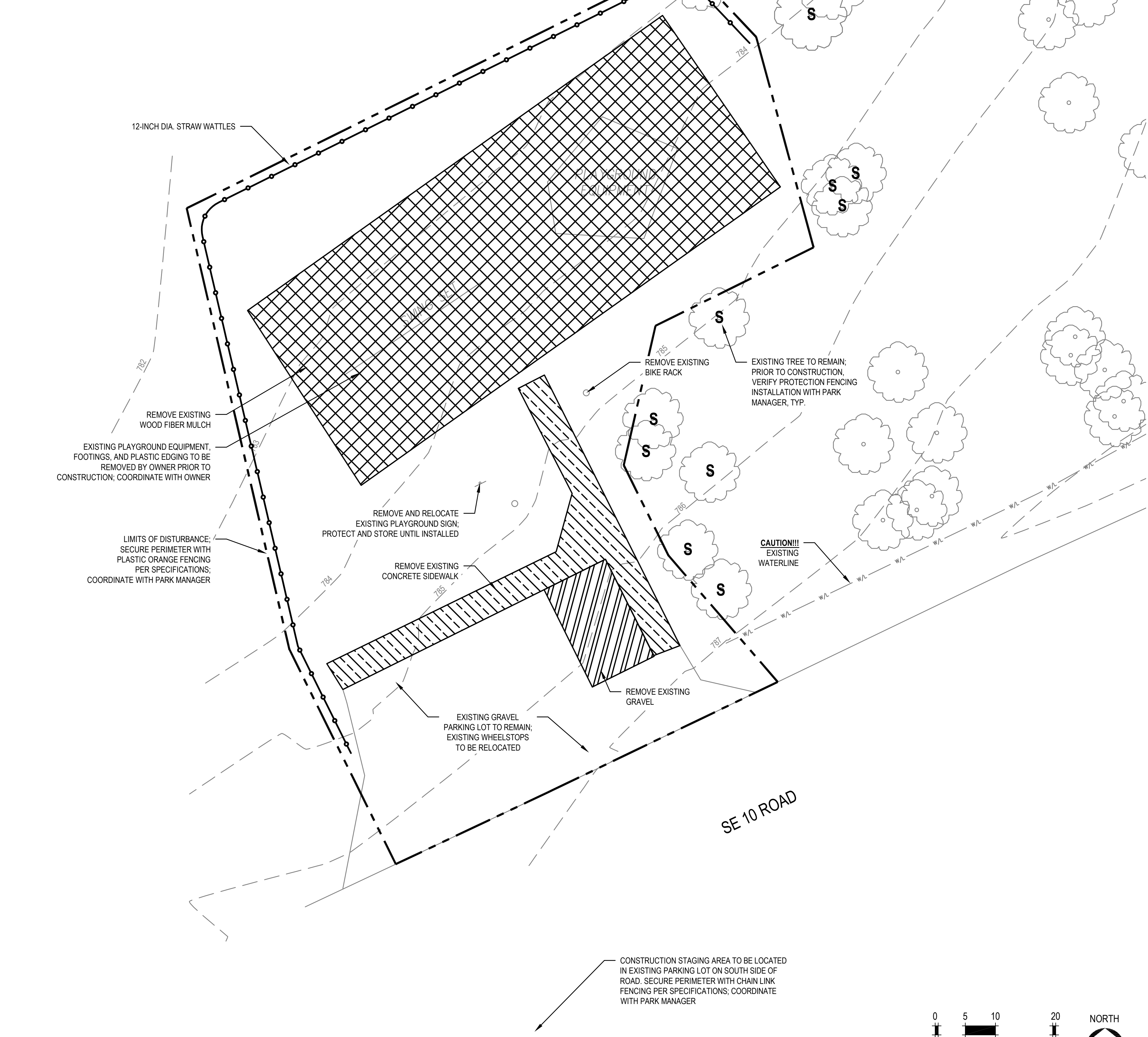


EXISTING TREE PROTECTION 01

N.T.S.

DEMOLITION LEGEND

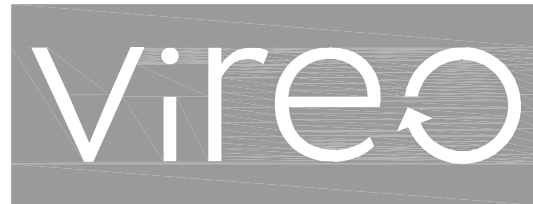
- S** EXISTING TREE TO REMAIN; INSTALL TREE PROTECTION FENCING PER DETAIL 01 ON THIS SHEET
- REMOVE WOOD FIBER MULCH
- REMOVE CONCRETE PAVEMENT
- REMOVE GRAVEL
- 12-INCH DIA. STRAW WATTLES PER KCMO APWA STANDARDS



STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



LANDSCAPE ARCHITECT:



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GEOTECHNICAL:

INTERTEK-PSI
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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES,
MISSOURI STATE PARKS

CAMPGROUND
PLAYGROUND
REPLACEMENT

KNOB NOSTER STATE PARK
873 SE 10TH
KNOB NOSTER, MO 65336

PROJECT # X2109-01
SITE # 5305
FACILITY # 9999

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5305-9999-DP-200.DWG

DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

SHEET TITLE:

DEMOLITION &
EROSION CONTROL
PLAN

SHEET NUMBER:

DP-200

SHEET 6 OF 17
8/22/2022

PLAY EQUIPMENT SCHEDULE (BASIS OF DESIGN)

ITEM	QTY	MANUFACTURER	MODEL	REP.
1 Tree House Themed Play Structure (see plan for individual play components)	1	Landscape Structures	see plan	ATHCO
2 Log Balance Beam	1	Landscape Structures	173596	ATHCO
3 Saddle Spinner	1	Landscape Structures	152179	ATHCO
4 Single Post Swing Frame	1	Landscape Structures	177332	ATHCO
Belt Seat with proguard chains	1	Landscape Structures	174018	ATHCO
Molded Seat with harness (ages 5+) with proguard chains	1	Landscape Structures	177351	ATHCO
5 72" x 90" Rubber Swing Mat	1	Zeager Bros, Inc.	TuffMat	Zeager

DRINKING FOUNTAIN (OR APPROVED EQUAL)

ITEM	QTY	MANUFACTURER	MODEL	REP.
Accessible Drinking Fountain with Bottle Filler and Hose Bib; Color: Brown (RE: Specifications)	1	Most Dependable Fountains, Inc.	10145 SM	MDF

TREE HOUSE THEMED PLAY STRUCTURE



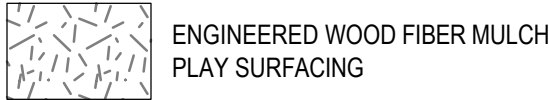
LOG BALANCE BEAM



SADDLE SPINNER



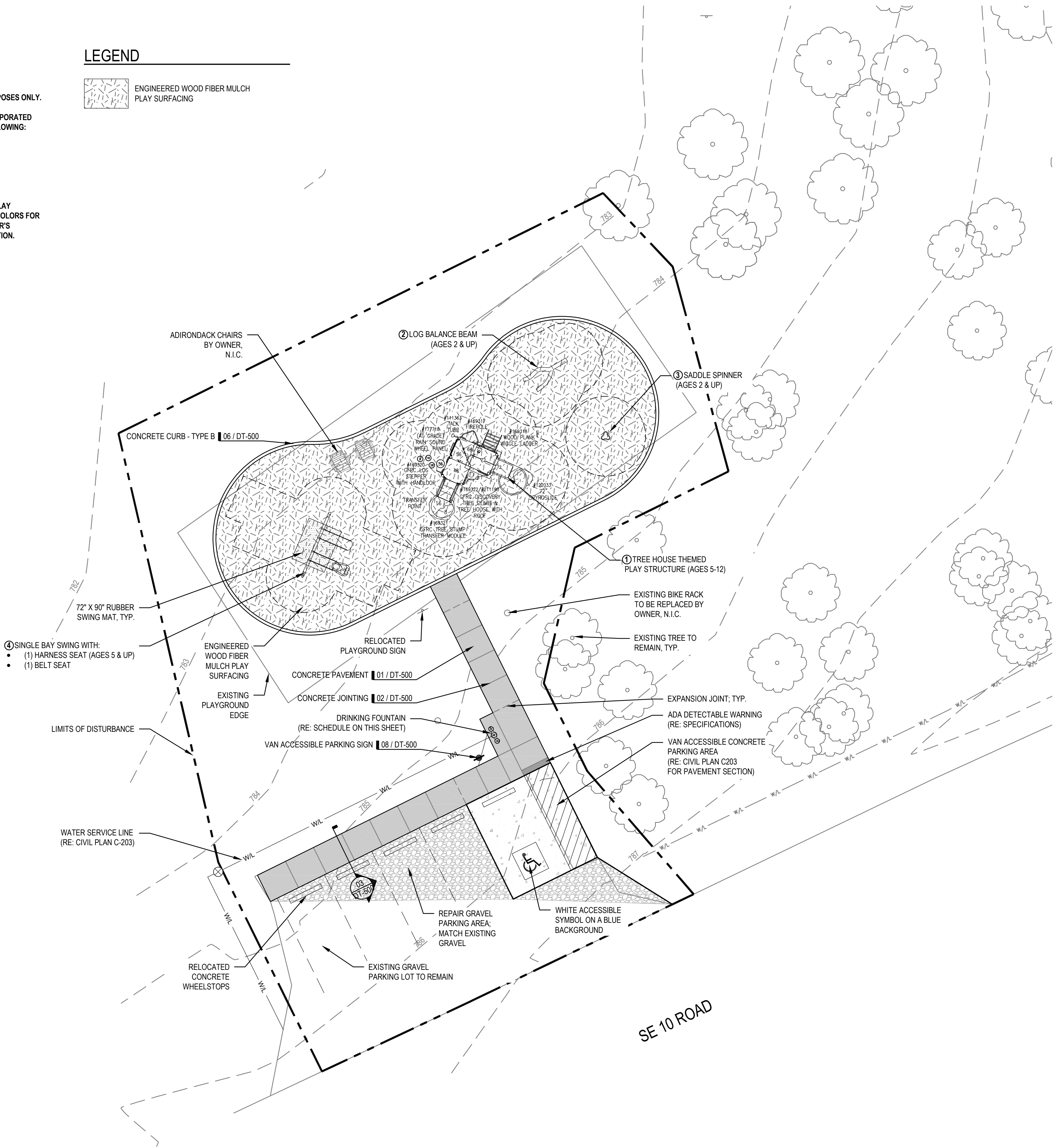
LEGEND



*NOTE:
INFORMATION SHOWN FOR BASIS OF DESIGN IS FOR BID PURPOSES ONLY.
SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE
MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED
INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

1. LANDSCAPE STRUCTURES
2. GAMETIME, A PLAYCORE COMPANY
3. BURKE
4. ZEAGER BROS, INC.
5. OR APPROVED EQUAL

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INCLUDING PLAY
EQUIPMENT LAYOUT, SAFETY FALL ZONES, MATERIALS AND COLORS FOR
ALL PLAY EQUIPMENT FOR REVIEW AND APPROVAL BY OWNER'S
REPRESENTATIVE PRIOR TO FABRICATION AND/OR INSTALLATION.



STATE OF MISSOURI
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LANDSCAPE ARCHITECT:



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PROJECT # X2109-01
SITE # 5305
FACILITY # 9999

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DATE: _____
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REVISION: _____
DATE: _____
ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5305-9999-SP-201.DWG
DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

SHEET TITLE:
SITE PLAN

SHEET NUMBER:

SP-201

SHEET 7 OF 17
8/22/2022

LAYOUT & GRADING NOTES

1. SITE LAYOUT DATA, INCLUDING COORDINATE POINTS, IS BASED ON A SURVEY PROVIDED BY RENAISSANCE INFRASTRUCTURE CONSULTING (2021). REFER TO SURVEY FOR HORIZONTAL LAYOUT CONTROL POINTS. REPORT ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS TO OWNER'S REPRESENTATIVE IMMEDIATELY.
2. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL ON-SITE AND DOWNSTREAM EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION. EROSION CONTROL SYSTEMS AND PROCEDURES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATIONS.
3. THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL HAVE ALL UTILITIES FLAGGED IN THE FIELD FOR INSPECTION PRIOR TO PROCEEDING WITH ANY GRADING OPERATIONS. THE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES AND WILL BE HELD LIABLE FOR ANY DELAYS CAUSED BY DAMAGE TO UTILITIES OR FAILURE TO LOCATE UTILITIES.
4. ALL CONSTRUCTION DEBRIS SHALL BE DISPOSED OF BY THE CONTRACTOR AT A LOCATION PROVIDED BY THE CONTRACTOR AND IN ACCORDANCE WITH LOCAL REGULATIONS. THE CONTRACTOR SHALL SATISFY HIMSELF BY JOB-SITE INSPECTION AS TO THE EXTENT OF CLEARING REQUIRED PRIOR TO ENTERING INTO A CONSTRUCTION CONTRACT.
5. CONSTRUCTION STAKING SHALL BE PROVIDED BY THE CONTRACTOR. ALL CONSTRUCTION LAYOUT STAKING IS TO BE PERFORMED BY A LAND SURVEYOR OR PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSOURI. TO FACILITATE ACCURACY OF CONSTRUCTION STAKING, UPON WRITTEN REQUEST FROM CONTRACTOR, ELECTRONIC DATA COMPRISING THESE SITE DEVELOPMENT DRAWINGS WILL BE FORWARDED TO THE LAND SURVEYOR OR PROFESSIONAL ENGINEER EMPLOYED TO PERFORM THE CONSTRUCTION STAKING.
6. IN ORDER TO MAINTAIN THE INTEGRITY OF HORIZONTAL AND VERTICAL CONTROL FOR THE SITE, THE SURVEYOR OR PROFESSIONAL ENGINEER EMPLOYED BY THE CONTRACTOR TO PERFORM CONSTRUCTION LAYOUT STAKING SHALL SET AND PROTECT ADDITIONAL TRAVERSE POINTS OUTSIDE THE AREAS OF CONSTRUCTION ACTIVITY.
7. ALL LAYOUTS SHALL BE SUBJECT OT FIELD APPROVAL BY THE OWNERS REPRESENTATIVE.
8. SAWCUT EXISTING PAVEMENT FULL DEPTH WHERE IT MEETS NEW PAVEMENT.
9. UNLESS NOTED OTHERWISE, ALL DIMENSIONS ARE TO THE FOLLOWING: EDGE OF PAVEMENT, FACE OF WALL, AND EDGE OF CURB.
10. ALL EDGES OF PAVEMENTS ARE TO BE STRAIGHT (OR OF CONSISTENT RADIUS IN THE CASE OF CURVES) AS SHOWN HEREON. NO UNSPECIFIED TANGENTS OR KINKS WILL BE APPROVED.
11. THIS SITE HAS BEEN DESIGNED TO COMPLY WITH THE PROVISIONS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG). REPORT ANY COMPLIANCE DISCREPANCIES TO OWNERS REPRESENTATIVE IMMEDIATELY.
12. ALL AREAS SHALL BE BROUGHT TO FINAL PLAN CONDITION (PAVED, SEEDED, OR MULCHED) AS SOON AS POSSIBLE TO MAINTAIN FINISH GRADE CONDITIONS AND PREVENT SOIL LOSS.
13. THE CONTRACTOR SHALL PROVIDE AND PAY FOR ALL INSPECTION SERVICES.

PLAYGROUND CURB ALIGNMENT

ALIGNMENT LINE DATA				
LINE #	LENGTH	BEARING	START POINT	END POINT
L1	15.5038	N63° 37' 34.49"E	(3050429.9495, 942419.0291)	(3050443.8397, 942425.9163)
L2	48.0000	S63° 37' 34.49"W	(3050471.0570, 942407.6006)	(3050428.0530, 942386.2778)

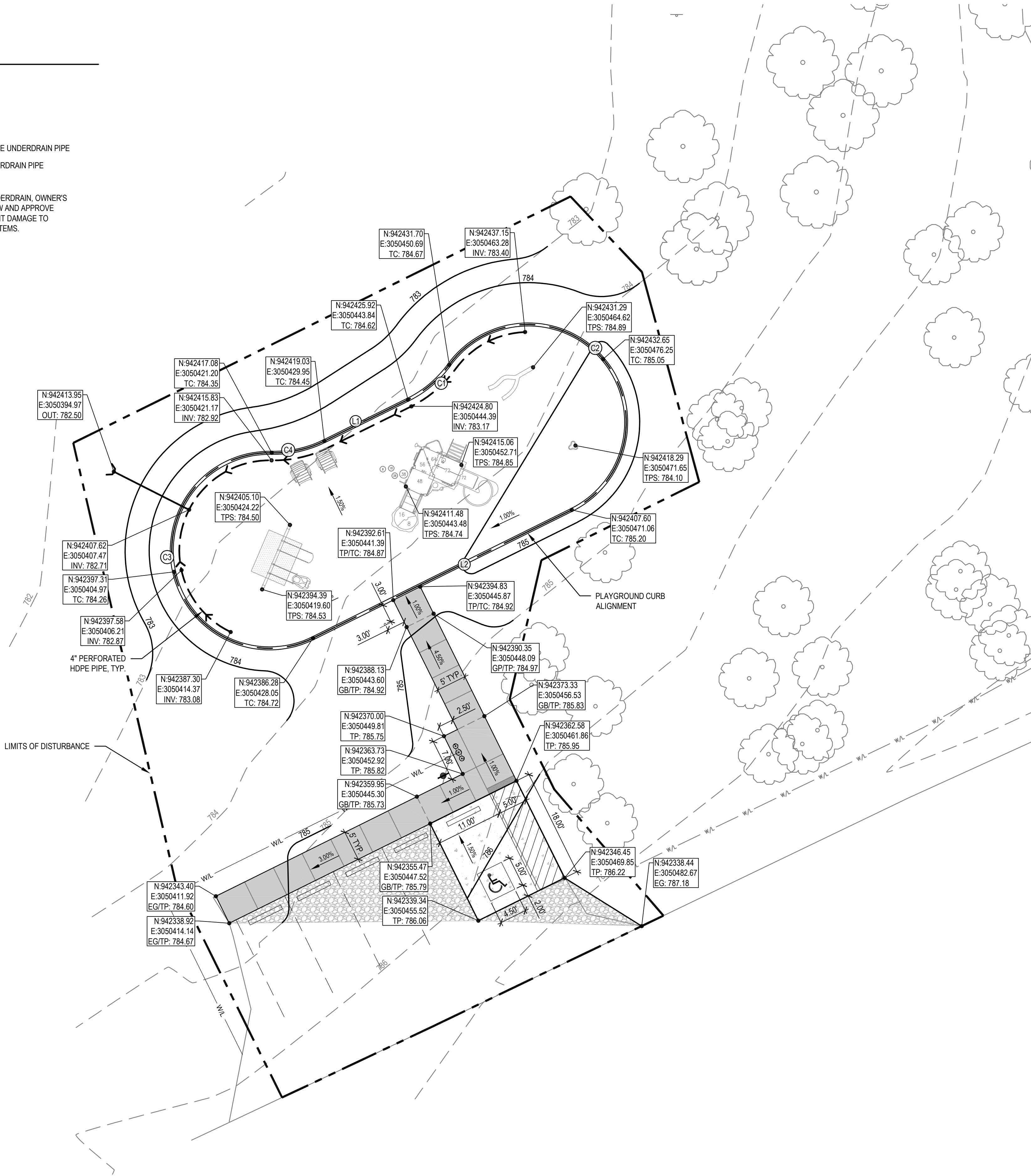
ALIGNMENT CURVE DATA				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C1	27.66	18.75	9.05	4.62
C2	207.66	16.25	58.90	66.01
C3	207.66	16.25	58.90	66.01
C4	27.66	18.75	9.05	4.62

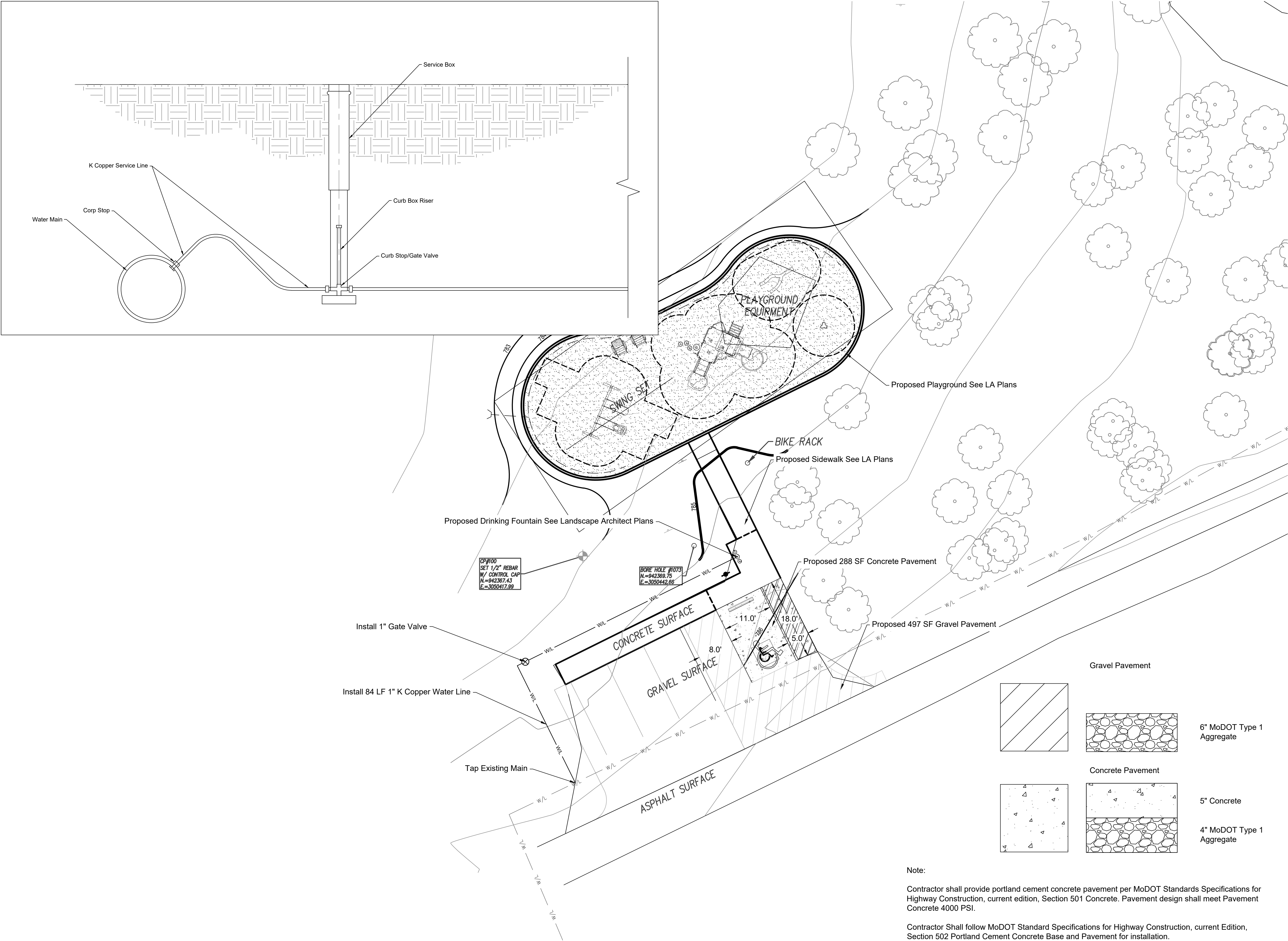
LEGEND

EG = EXISTING GRADE
GB = GRADE BREAK
TP = TOP OF PAVEMENT
TC = TOP OF CURB
TPS = TOP OF PLAY SURFACE
INV = INVERT

--- PERFORATED HDPE UNDERDRAIN PIPE
— SOLID HDPE UNDERDRAIN PIPE

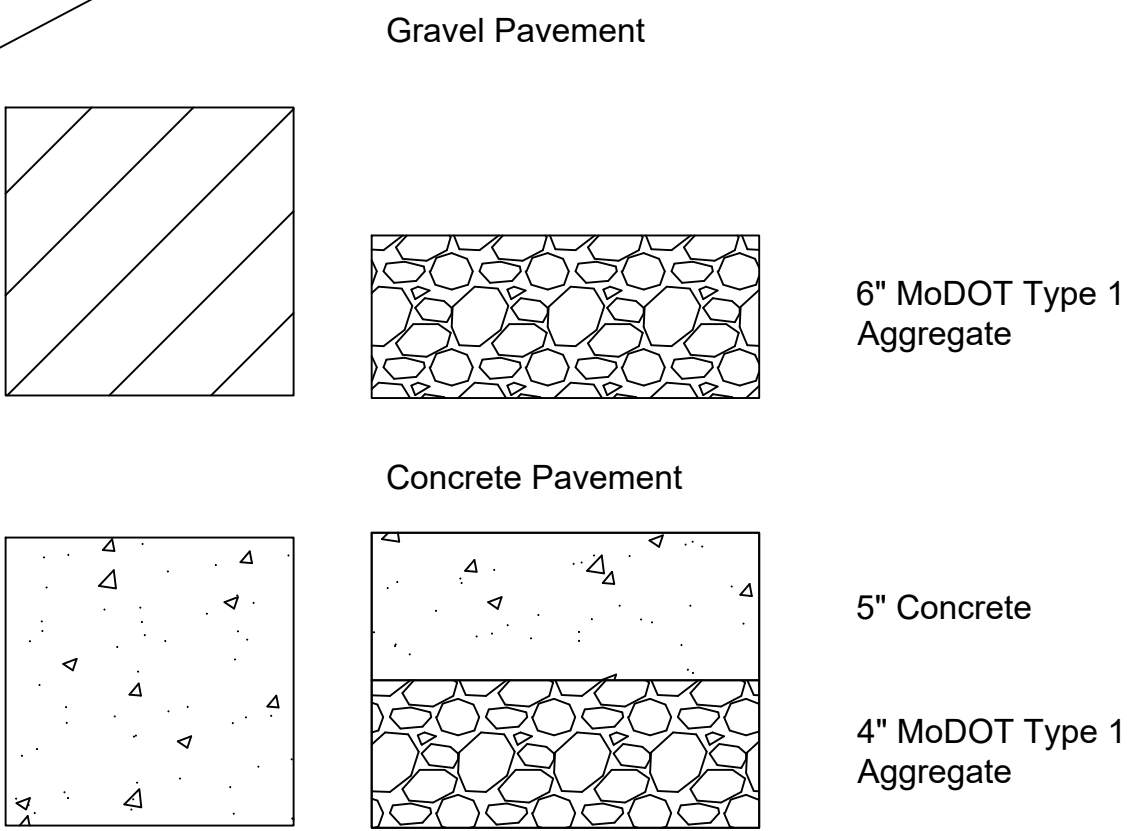
NOTE:
PRIOR TO INSTALLATION OF UNDERDRAIN, OWNER'S REPRESENTATIVE SHALL REVIEW AND APPROVE ALIGNMENT IN THE FIELD TO LIMIT DAMAGE TO EXISTING TREES AND ROOT SYSTEMS.





CFR100
SET 1/2" REBAR
W/ CONTROL CAP
N=942369.75
E=3050417.99

BORE HOLE #1073
N=942369.75
E=3050417.99



Note:

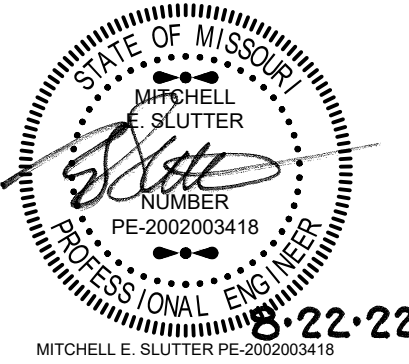
Contractor shall provide portland cement concrete pavement per MoDOT Standards Specifications for Highway Construction, current edition, Section 501 Concrete. Pavement design shall meet Pavement Concrete 4000 PSI.

Contractor Shall follow MoDOT Standard Specifications for Highway Construction, current Edition, Section 502 Portland Cement Concrete Base and Pavement for installation.

Contractor shall provide portland cement concrete material testing at no additional expense to the owner.



STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



LANDSCAPE ARCHITECT:



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OFFICE OF ADMINISTRATION
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DEPARTMENT OF
NATURAL RESOURCES,
MISSOURI STATE PARKS

CAMPGROUND
PLAYGROUND
REPLACEMENT

KNOB NOSTER STATE PARK
873 SE 10TH
KNOB NOSTER, MO 65336

PROJECT # X2109-01
SITE # 5305
FACILITY # 9999

REVISION: _____
DATE: _____
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REVISION: _____
DATE: _____

ISSUE DATE: 08/22/2022

CAD DWG FILE: _____
DRAWN BY: TCD
CHECKED BY: MES
DESIGNED BY: MES

SHEET TITLE:

UTILITY PLAN &
DETAILS

SHEET NUMBER:

C203

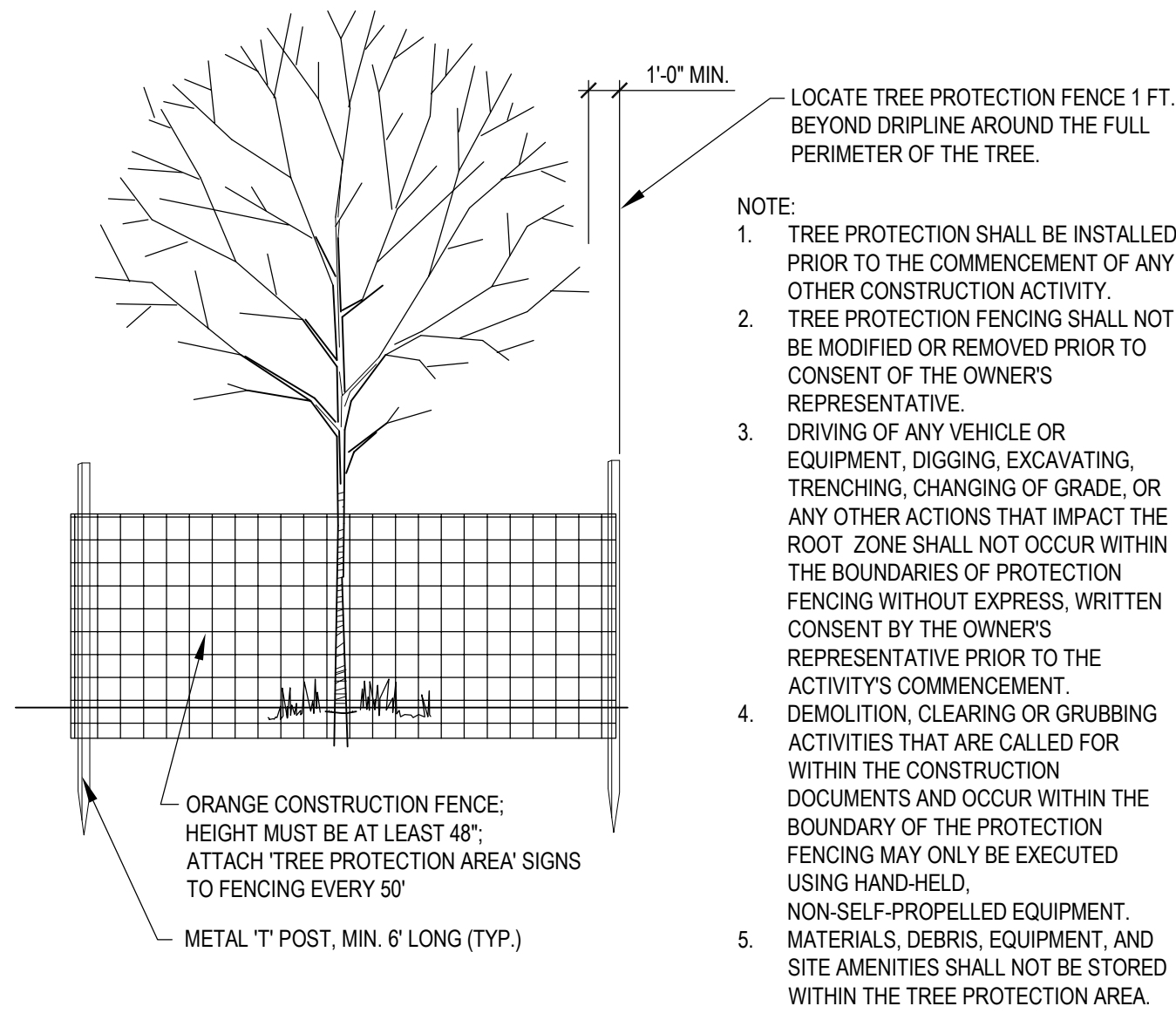
SHEET 9 OF 17
08/22/2022

DEMOLITION NOTES

- ALL UTILITIES SHALL BE FIELD LOCATED PRIOR TO LANDSCAPE AND PAVEMENT REMOVAL OPERATIONS.
- ALL REMOVALS SHALL BE DISPOSED OF PER LOCAL REGULATIONS BY THE CONTRACTOR.
- REFER TO CONSTRUCTION DOCUMENTS FOR GRADING AND RESTORATION OF SITE AFTER COMPLETION OF DEMOLITION WORK.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THIS INCLUDES PRIVATE AND PUBLIC UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT MISSOURI ONE CALL IN ADVANCE OF ANY EXCAVATION TO COORDINATE UTILITY LOCATIONS.
- CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER EXISTING LINES NOT OF RECORD OR SHOWN ON THESE PLANS.
- DO NOT DISRUPT UTILITY SERVICE TO ADJACENT BUSINESSES OR RESIDENCES WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.
- DO NOT DISRUPT TRAFFIC ON ADJACENT STREETS WITHOUT PRIOR WRITTEN APPROVAL BY OWNER.
- ALL SIDEWALK AND PAVEMENT TO REMAIN SHALL BE PROTECTED IN PLACE INCLUDING PROTECTION FROM DAMAGE CAUSED BY REMOVAL OF ABUTTING PAVEMENT. CONTRACTOR SHALL SAW CUT WHERE NECESSARY.
- CONTRACTOR SHALL GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DISCONNECTION, DEMOLITION, AND REMOVAL OF SERVICE LINES. CAP ALL LINES BEFORE PROCEEDING WITH WORK ON THIS CONTRACT.
- CONTRACTOR SHALL PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. USING BEST PRACTICES AND AS APPROVED BY THE ENGINEER AND OWNER.
- DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

EROSION CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH KC METROPOLITAN APWA STANDARDS. VISIT <http://kcmetro.apwa.net/PageDetails/439> FOR SPECIFICATIONS AND DETAILS. DEVICES SHOWN ON PLAN MAY NOT REPRESENT ALL DEVICES NECESSARY FOR EROSION CONTROL. UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL ADJUST AND/OR IMPLEMENT ADDITIONAL DEVICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
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- ALL TOPSOIL SHALL BE REMOVED, STOCKPILED, AND REPLACED OVER DISTURBED AREAS AS SOON AS AREAS HAVE BEEN SHAPED TO FINAL GRADE.
- THE CONTRACTOR SHALL STABILIZE ALL SWALES/DITCHES AS SOON AS POSSIBLE. USE DITCH CHECKS (I.E. WATTLES OR ROCK CHECKS), EROSION BLANKET, TRM, AND/OR OTHER DEVICES.
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- CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SEDIMENT MOVEMENT ON SITE TO KEEP MUD OFF OF ENTRY DRIVES AND OTHER AREAS BEING USED BY SITE USERS (STAFF AND GUESTS).

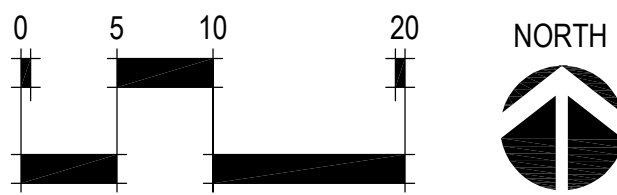
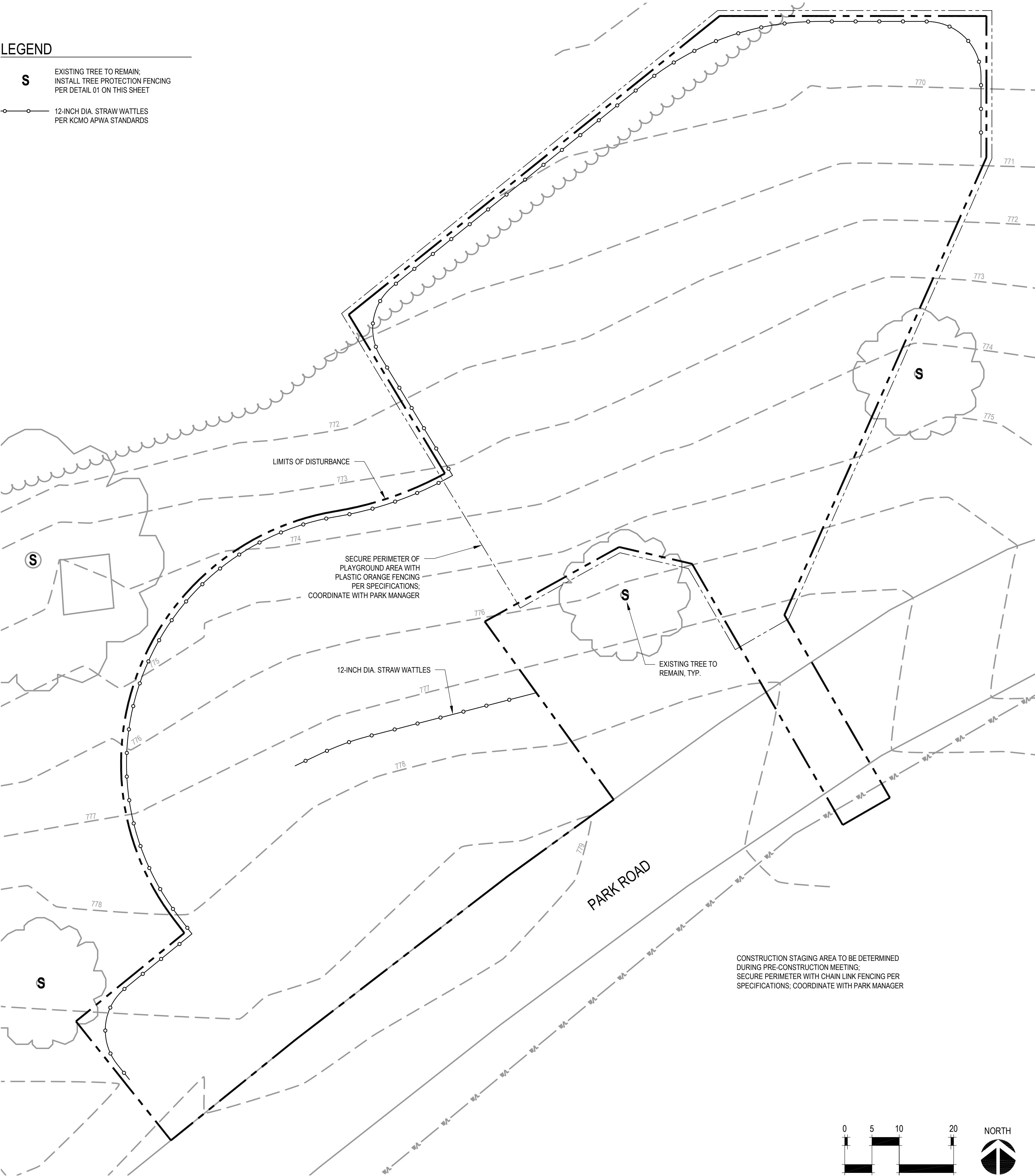


EXISTING TREE PROTECTION 01

N.T.S.

LEGEND

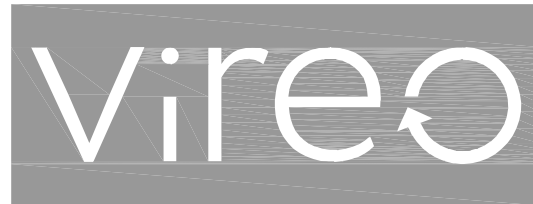
- S** EXISTING TREE TO REMAIN; INSTALL TREE PROTECTION FENCING PER DETAIL 01 ON THIS SHEET
- 12-INCH DIA. STRAW WATTLES PER KCMO APWA STANDARDS



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MISSOURI STATE PARKS

DAY-USE AREA
PLAYGROUND
REPLACEMENT

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873 SE 10TH
KNOB NOSTER, MO 65336

PROJECT # X2109-01
SITE # 5305
FACILITY # 9999

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____

ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5305-9999-DP-300.DWG
DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

SHEET TITLE:

DEMOLITION &
EROSION CONTROL
PLAN

SHEET NUMBER:

DP-300

SHEET 10 OF 17
8/22/2022

PLAY EQUIPMENT SCHEDULE (BASIS OF DESIGN)

ITEM	QTY	MANUFACTURER	MODEL	REP.
1 Challenge Course Themed Play Structure (see plan for individual play components)	1	Landscape Structures	see plan	ATHCO
2 Single Post Swing Frame with Additional Bay	1	Landscape Structures	177332 / 177333	ATHCO
Belt Seat with proguard chains	2	Landscape Structures	174018	ATHCO
Full Bucket Seat with chains	1	Landscape Structures	175038	ATHCO
Molded Seat with harness (ages 2-5) and proguard chains	1	Landscape Structures	218671	ATHCO

*NOTE:
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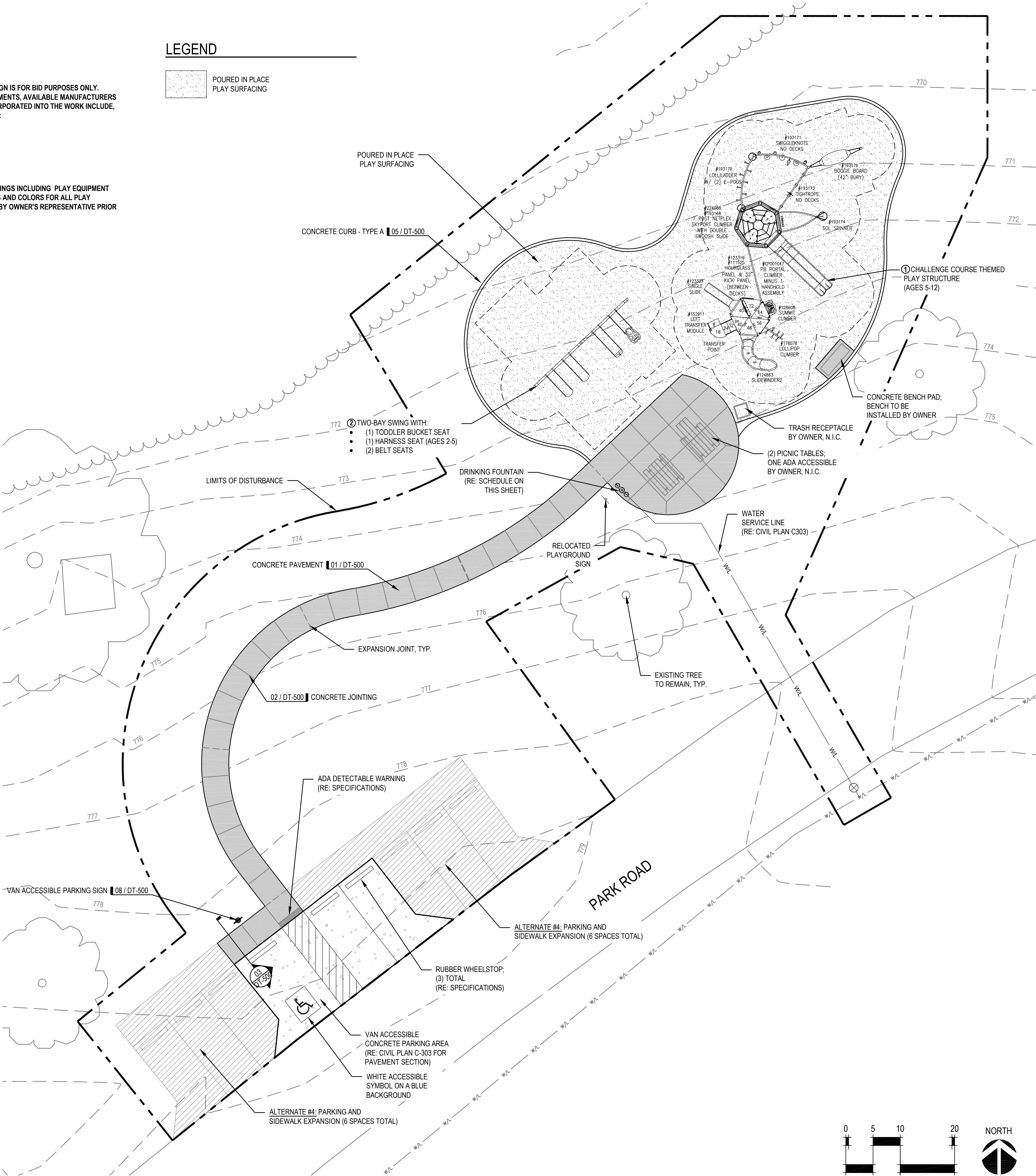
1. LANDSCAPE STRUCTURES
2. GAMETIME, A PLAYCORE COMPANY
3. BURKE
4. ZEAGER BROS, INC.
5. OR APPROVED EQUAL

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INCLUDING PLAY EQUIPMENT
LAYOUT, SAFETY FALL ZONES, MATERIALS AND COLORS FOR ALL PLAY
EQUIPMENT FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR
TO FABRICATION AND/OR INSTALLATION.

DRINKING FOUNTAIN (OR APPROVED EQUAL)

ITEM	QTY	MANUFACTURER	MODEL	REP.
Accessible Drinking Fountain with Bottle Filler and Hose Bib; Color: Brown (RE: Specifications)	1	Most Dependable Fountains, Inc.	10145 SM	MDF

CHALLENGE COURSE PLAY STRUCTURE



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Kansas City, Kansas 66103
P 913-310-1800



OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES,
MISSOURI STATE PARKS

DAY-USE AREA
PLAYGROUND
REPLACEMENT

KNOB NOSTER STATE PARK
873 SE 10TH
KNOB NOSTER, MO 65336

PROJECT # X2109-01
SITE # 5305
FACILITY # 9999

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5305-9999-SP-301.DWG
DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

SP-301

SHEET 11 OF 17
8/22/2022

LAYOUT & GRADING NOTES

- SITE LAYOUT DATA, INCLUDING COORDINATE POINTS, IS BASED ON A SURVEY PROVIDED BY RENAISSANCE INFRASTRUCTURE CONSULTING (2021). REFER TO SURVEY FOR HORIZONTAL LAYOUT CONTROL POINTS. REPORT ANY DISCREPANCIES BETWEEN PLANS AND FIELD CONDITIONS TO OWNER'S REPRESENTATIVE IMMEDIATELY.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL ON-SITE AND DOWNSTREAM EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION. EROSION CONTROL SYSTEMS AND PROCEDURES SHALL BE IN PLACE PRIOR TO ANY GRADING OPERATIONS.
- THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL HAVE ALL UTILITIES FLAGGED IN THE FIELD FOR INSPECTION PRIOR TO PROCEEDING WITH ANY GRADING OPERATIONS. THE CONTRACTOR SHALL VERIFY THE DEPTH AND LOCATION OF ALL EXISTING UTILITIES AND WILL BE HELD LIABLE FOR ANY DELAYS CAUSED BY DAMAGE TO UTILITIES OR FAILURE TO LOCATE UTILITIES.
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- THE CONTRACTOR SHALL PROVIDE AND PAY FOR ALL INSPECTION SERVICES.

PLAYGROUND CURB ALIGNMENT

ALIGNMENT LINE DATA				
LINE #	LENGTH	BEARING	START POINT	END POINT
L1	0.4697	N43° 18' 22.54"W	(3045696.6548, 942075.9759)	(3045696.3327, 942076.3177)
L2	7.9552	N16° 23' 11.91"E	(3045713.2471, 942121.9365)	(3045715.4915, 942129.5686)
L3	15.3818	N80° 25' 08.55"E	(3045727.4847, 942140.2156)	(3045742.6519, 942142.7757)
L4	6.6572	S72° 35' 51.63"W	(3045729.9094, 942084.9039)	(3045723.5569, 942082.9129)

ALIGNMENT CURVE DATA				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C1	41.68	7.88	5.73	3.00
C2	196.87	19.12	65.72	128.94
C3	95.50	9.87	16.46	10.87
C4	64.03	15.13	16.90	9.46
C5	123.73	10.13	21.87	18.94
C6	26.80	29.88	13.98	7.12
C7	75.25	30.12	39.56	23.22

SIDEWALK ALIGNMENT

ALIGNMENT LINE DATA				
LINE #	LENGTH	BEARING	START POINT	END POINT
L5	13.0447	N37° 37' 57.81"W	(3045642.0266, 941991.8755)	(3045634.0616, 942002.2061)
L6	4.5648	N46° 41' 37.46"E	(3045694.8658, 942070.8542)	(3045698.1876, 942073.9852)

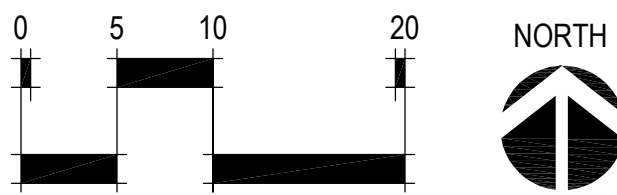
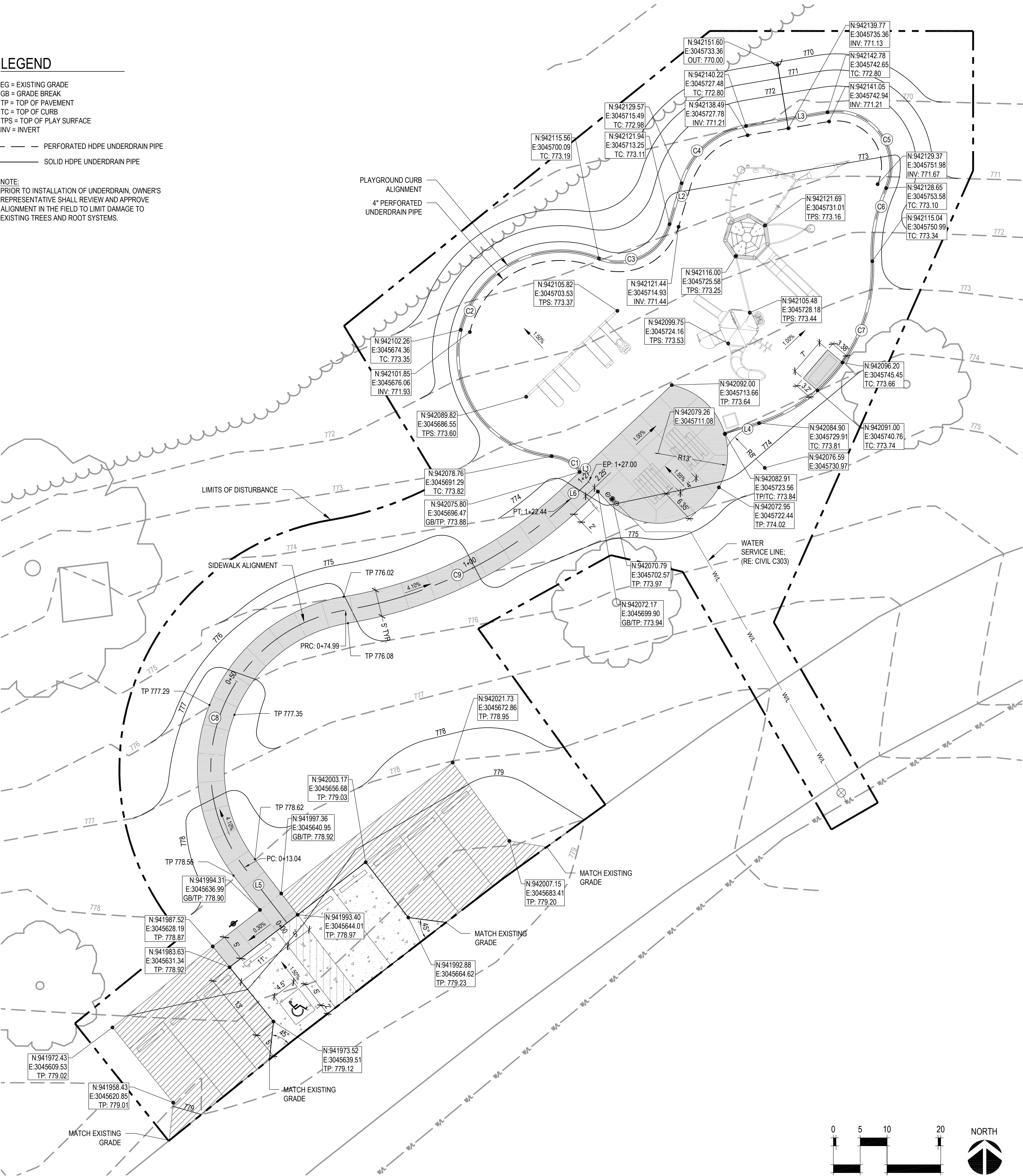
ALIGNMENT CURVE DATA				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C8	118.31	30.00	61.95	50.23
C9	33.98	80.00	47.45	24.44

LEGEND

EG = EXISTING GRADE
GB = GRADE BREAK
TP = TOP OF PAVEMENT
TC = TOP OF CURB
TPS = TOP OF PLAY SURFACE
INV = INVERT

--- PERFORATED HDPE UNDERDRAIN PIPE
— SOLID HDPE UNDERDRAIN PIPE

NOTE:
PRIOR TO INSTALLATION OF UNDERDRAIN, OWNER'S REPRESENTATIVE SHALL REVIEW AND APPROVE ALIGNMENT IN THE FIELD TO LIMIT DAMAGE TO EXISTING TREES AND ROOT SYSTEMS.



STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



LAC# MO-200223826

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DEPARTMENT OF
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DAY-USE AREA
PLAYGROUND
REPLACEMENT

KNOB NOSTER STATE PARK
873 SE 10TH
KNOB NOSTER, MO 65336

PROJECT # X2109-01
SITE # 5305
FACILITY # 9999

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
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DATE: _____
ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5305-9999-SP-302.DWG
DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

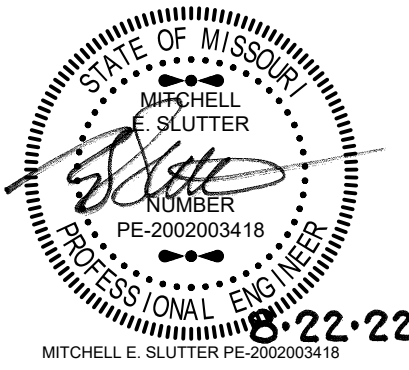
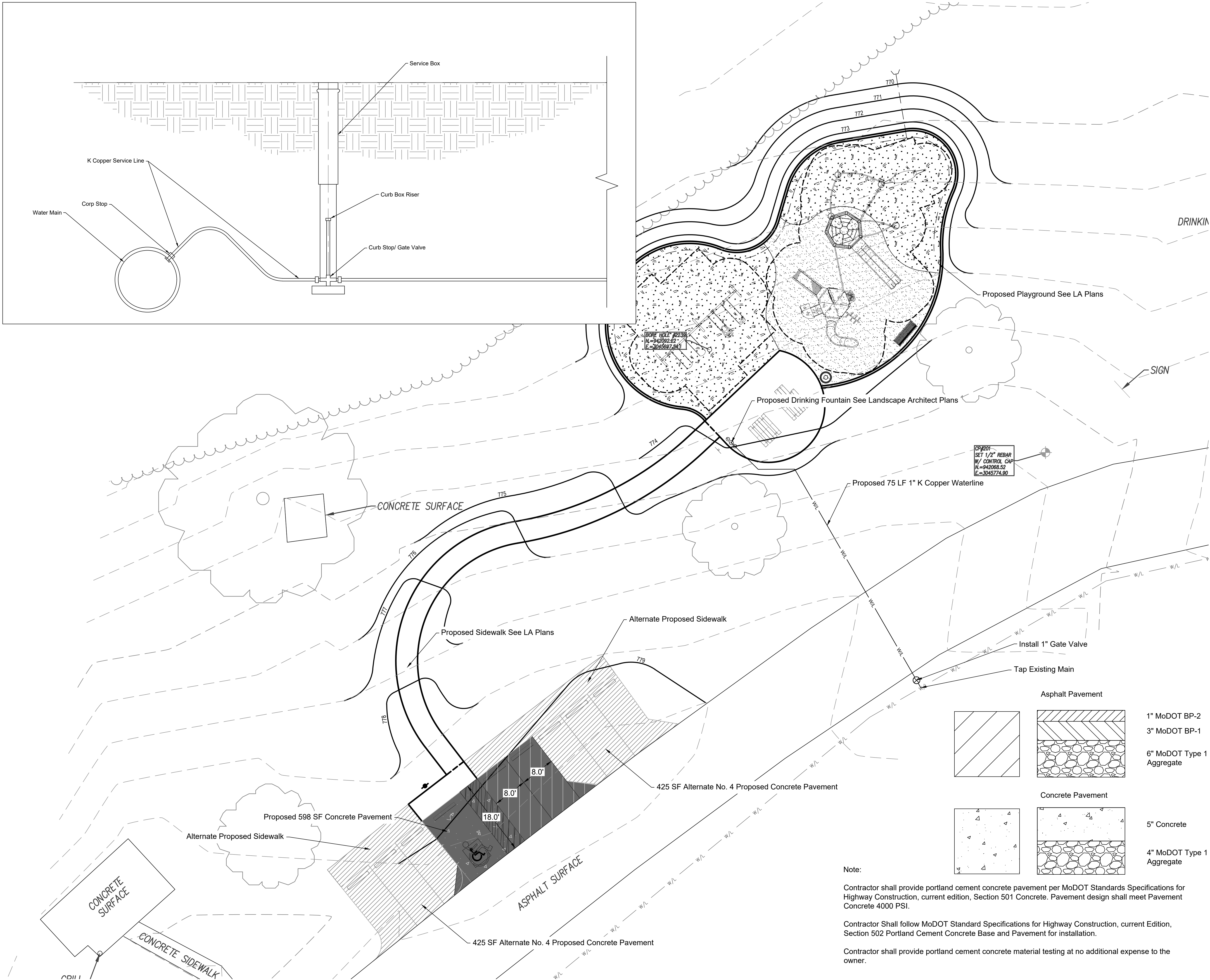
SHEET TITLE:

LAYOUT &
GRADING PLAN

SHEET NUMBER:

SP-302

SHEET 12 OF 17
08/22/2022



LANDSCAPE ARCHITECT:



LAC# MO-2002023826

929 Walnut Street, Ste. 700
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DEPARTMENT OF
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DAY USE AREA
PLAYGROUND
REPLACEMENT

KNOB NOSTER STATE PARK
873 SE 10TH
KNOB NOSTER, MO 65336

PROJECT # X2109-01
SITE # 5305
FACILITY # 9999

REVISION: _____
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DATE: _____
ISSUE DATE: 08/22/2022

CAD DWG FILE: _____
DRAWN BY: TCD
CHECKED BY: MES
DESIGNED BY: MES

SHEET TITLE:

UTILITY PLAN &
DETAILS

SHEET NUMBER:

C303

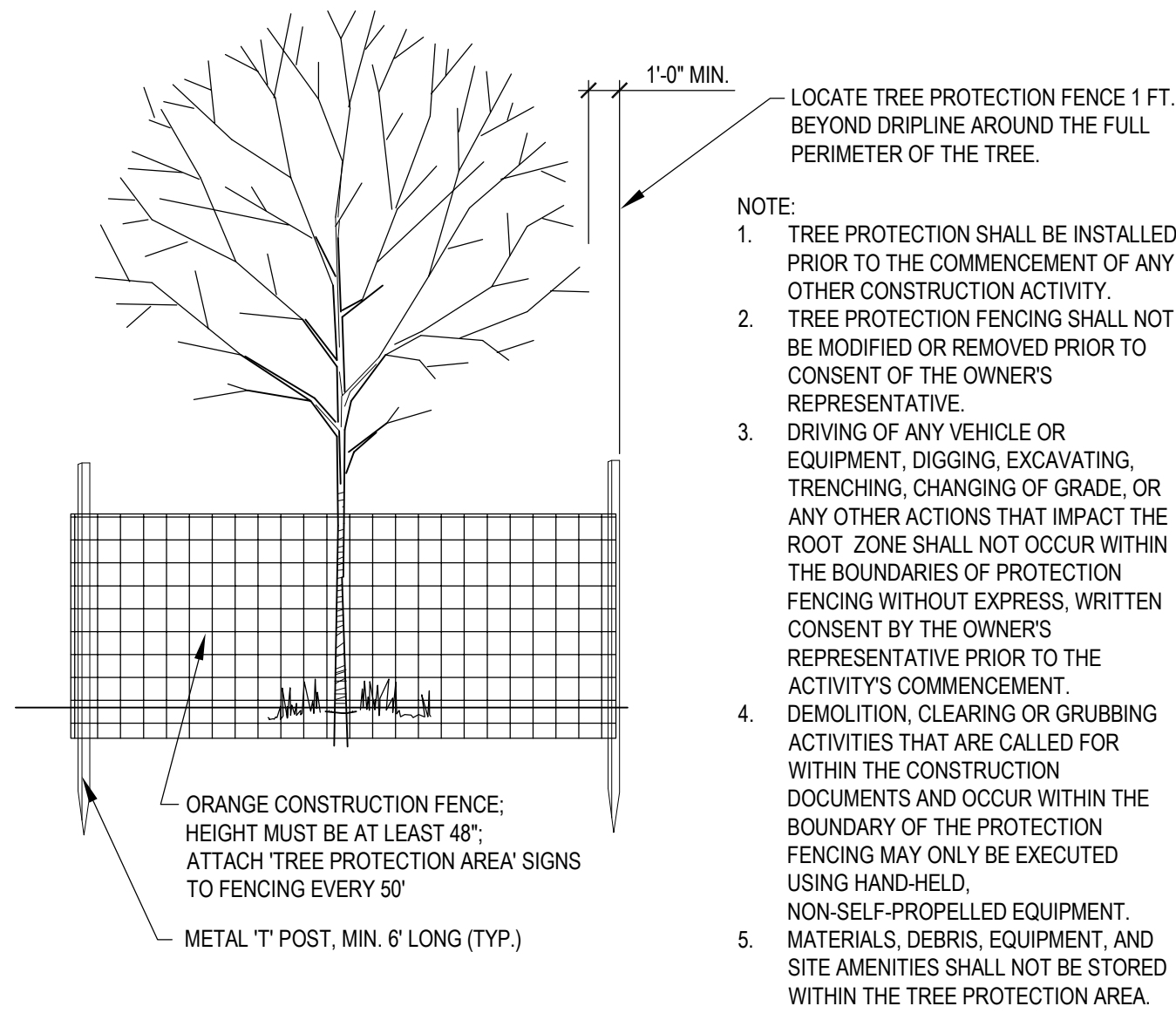
SHEET 13 OF 17
08/22/2022

DEMOLITION NOTES

- ALL UTILITIES SHALL BE FIELD LOCATED PRIOR TO LANDSCAPE AND PAVEMENT REMOVAL OPERATIONS.
- ALL REMOVALS SHALL BE DISPOSED OF PER LOCAL REGULATIONS BY THE CONTRACTOR.
- REFER TO CONSTRUCTION DOCUMENTS FOR GRADING AND RESTORATION OF SITE AFTER COMPLETION OF DEMOLITION WORK.
- THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE ENGINEER MAKES NO GUARANTEES THAT THE UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE ENGINEER HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. THIS INCLUDES PRIVATE AND PUBLIC UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT MISSOURI ONE CALL IN ADVANCE OF ANY EXCAVATION TO COORDINATE UTILITY LOCATIONS.
- CONTRACTOR IS REQUIRED TO TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER EXISTING LINES NOT OF RECORD OR SHOWN ON THESE PLANS.
- DO NOT DISRUPT UTILITY SERVICE TO ADJACENT BUSINESSES OR RESIDENCES WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER.
- DO NOT DISRUPT TRAFFIC ON ADJACENT STREETS WITHOUT PRIOR WRITTEN APPROVAL BY OWNER.
- ALL SIDEWALK AND PAVEMENT TO REMAIN SHALL BE PROTECTED IN PLACE INCLUDING PROTECTION FROM DAMAGE CAUSED BY REMOVAL OF ADJUTING PAVEMENT. CONTRACTOR SHALL SAW CUT WHERE NECESSARY.
- CONTRACTOR SHALL GIVE NOTICE TO ALL UTILITY COMPANIES REGARDING DISCONNECTION, DEMOLITION, AND REMOVAL OF SERVICE LINES. CAP ALL LINES BEFORE PROCEEDING WITH WORK ON THIS CONTRACT.
- CONTRACTOR SHALL PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC. USING BEST PRACTICES AND AS APPROVED BY THE ENGINEER AND OWNER.
- DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

EROSION CONTROL NOTES

- ALL EROSION AND SEDIMENT CONTROL SHALL COMPLY WITH KC METROPOLITAN APWA STANDARDS. VISIT <http://kcmetro.apwa.net/PageDetails/439> FOR SPECIFICATIONS AND DETAILS. DEVICES SHOWN ON PLAN MAY NOT REPRESENT ALL DEVICES NECESSARY FOR EROSION CONTROL. UPON DISCOVERING UNFORESSEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE CONTRACTOR SHALL ADJUST AND/OR IMPLEMENT ADDITIONAL DEVICES TO ELIMINATE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- THE CONTRACTOR SHALL HAVE AN EROSION CONTROL COORDINATOR AND SHALL COMPLY WITH PERMITS AS REQUIRED BY LAW.
- THE CONTRACTOR SHALL STABILIZE THE SITE PRIOR TO AND DURING CONSTRUCTION. EROSION CONTROL DEVICES SHALL BE MAINTAINED AT ALL TIMES. ADDITIONAL DEVICES WILL BE INSTALLED IF DEEMED NECESSARY DURING ON SITE INSPECTION.
- THE CONTRACTOR SHALL PRACTICE SEQUENTIAL STABILIZATION TO STABILIZE THE SITE AS IT'S BEING BUILT. USE SEED, SOD, EROSION BLANKETS, MULCH, HYDRO-MULCH, TURF REINFORCEMENT MATS (TRM), BONDED FIBER MATRIX AND/OR A COMBINATION OF THESE OR OTHER DEVICES.
- ALL TOPSOIL SHALL BE REMOVED, STOCKPILED, AND REPLACED OVER DISTURBED AREAS AS SOON AS AREAS HAVE BEEN SHAPED TO FINAL GRADE.
- THE CONTRACTOR SHALL STABILIZE ALL SWALES/DITCHES AS SOON AS POSSIBLE. USE DITCH CHECKS (I.E. WATTLES OR ROCK CHECKS), EROSION BLANKET, TRM, AND/OR OTHER DEVICES.
- CONTRACTOR SHALL INSPECT AND EVALUATE EROSION CONTROL DEVICES REGULARLY AND FOLLOWING STORM EVENTS AND REPAIR DEFECTS IMMEDIATELY.
- CONDUCT TEMPORARY SEEDING AND MULCHING OPERATIONS TO PROVIDE A TEMPORARY VEGETATIVE COVER FOR EROSION AND SEDIMENT CONTROL PER THE FOLLOWING:
 - WHEN SEASONAL CONDITIONS DO NOT ALLOW FOR INSTALLATION OF THE PERMANENT VEGETATION SPECIFIED
 - WHEN CONSTRUCTION ACTIVITY CEASES AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS
 - WITHIN 7 DAYS OF COMPLETING GRADING OPERATIONS
- STRAW WATTLE LENGTHS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL ADJUST IN FIELD AS REQUIRED TO PROVIDE EROSION AND SEDIMENT CONTROL AND ADDRESS ONSITE CONDITIONS.
- THE OWNER WILL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER COMPLETION OF CONSTRUCTION OPERATIONS AND WHEN ALL DISTURBED AREAS ARE STABILIZED WITH AN ESTABLISHED STAND OF PERMANENT VEGETATION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SEDIMENT MOVEMENT ON SITE TO KEEP MUD OFF OF ENTRY DRIVES AND OTHER AREAS BEING USED BY SITE USERS (STAFF AND GUESTS).



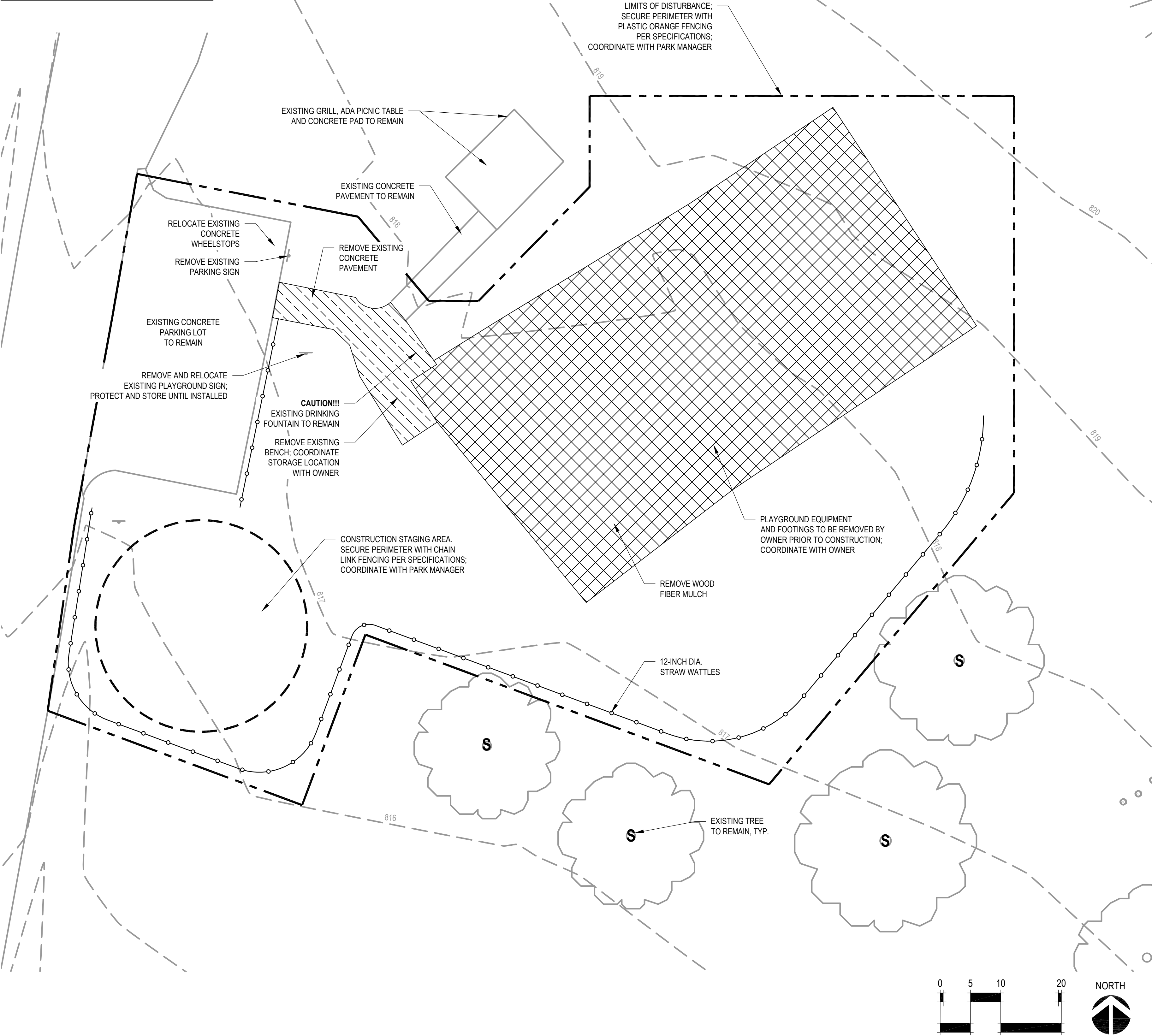
EXISTING TREE PROTECTION 01

N.T.S.

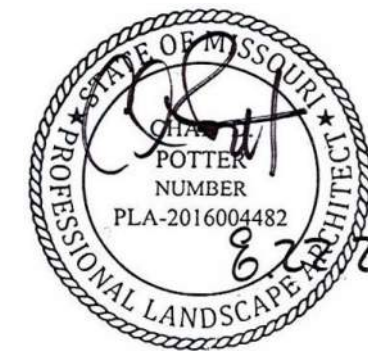
DEMOLITION LEGEND

- S EXISTING TREE TO REMAIN; INSTALL TREE PROTECTION FENCING PER DETAIL 01 ON THIS SHEET
- REMOVE WOOD FIBER MULCH
- REMOVE CONCRETE PAVEMENT
- 12-INCH DIA. STRAW WATTLES PER KCMO APWA STANDARDS

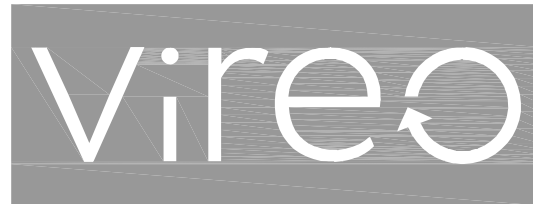
NOTE: CONFEDERATE MEMORIAL PLAYGROUND SHALL BE BID AS ALTERNATE #1.



STATE OF MISSOURI
MICHAEL L. PARSON,
GOVERNOR



LANDSCAPE ARCHITECT:



LAC# MO-200223826

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PLAYGROUND
REPLACEMENT

CONFEDERATE MEMORIAL
STATE HISTORIC SITE
211 WEST FIRST STREET
HIGGINSVILLE, MO 64037

PROJECT # X2109-01
SITE # 5106
FACILITY # 9999

REVISION: _____
DATE: _____
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ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5106-9999-DP-400.DWG
DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

SHEET TITLE:
ALT #1 -
DEMOLITION &
EROSION CONTROL
PLAN

SHEET NUMBER:

DP-400

SHEET 14 OF 17
8/22/2022

PLAY EQUIPMENT SCHEDULE (BASIS OF DESIGN)

ITEM	QTY	MANUFACTURER	MODEL	REP.
1 Tree Tops Smart Play Structure (see plan for individual play components)	1	Landscape Structures	see plan	ATHCO
2 Music Instrument Play Equipment				
Animato Metallophone	1	Landscape Structures	214438	ATHCO
Grandioso Chimes	1	Landscape Structures	214442	ATHCO
3 Single Post Swing Frame with Additional Bay	1	Landscape Structures	177332 / 177333	ATHCO
Belt Seat with proguard chains	2	Landscape Structures	174018	ATHCO
Full Bucket Seat with chains	1	Landscape Structures	175038	ATHCO
Molded Seat with harness (ages 2-5) and proguard chains	1	Landscape Structures	218671	ATHCO
4 Saddle Spinner	1	Landscape Structures	152179	ATHCO
5 72" x 90" Rubber Swing Mat	2	Zeager Bros, Inc.	TuffMat	Zeager
A2 Alternate #2 - OmniSpin Spinner	1	Landscape Structures	173591	ATHCO

*NOTE:
INFORMATION SHOWN FOR BASIS OF DESIGN IS FOR BID PURPOSES ONLY. SUBJECT TO COMPLIANCE WITH REQUIREMENTS, AVAILABLE MANUFACTURERS OFFERING PRODUCTS THAT MAY BE INCORPORATED INTO THE WORK INCLUDE, BUT ARE NOT LIMITED TO THE FOLLOWING:

1. LANDSCAPE STRUCTURES
2. GAMETIME, A PLAYCORE COMPANY
3. BURKE
4. ZEAGER BROS, INC.
5. OR APPROVED EQUAL

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS INCLUDING PLAY EQUIPMENT LAYOUT, SAFETY FALL ZONES, MATERIALS AND COLORS FOR ALL PLAY EQUIPMENT FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO FABRICATION AND/OR INSTALLATION.

TREE TOPS THEMED PLAY STRUCTURE



MUSIC INSTRUMENT PLAY EQUIPMENT



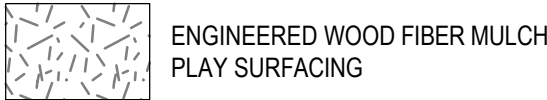
SADDLE SPINNER



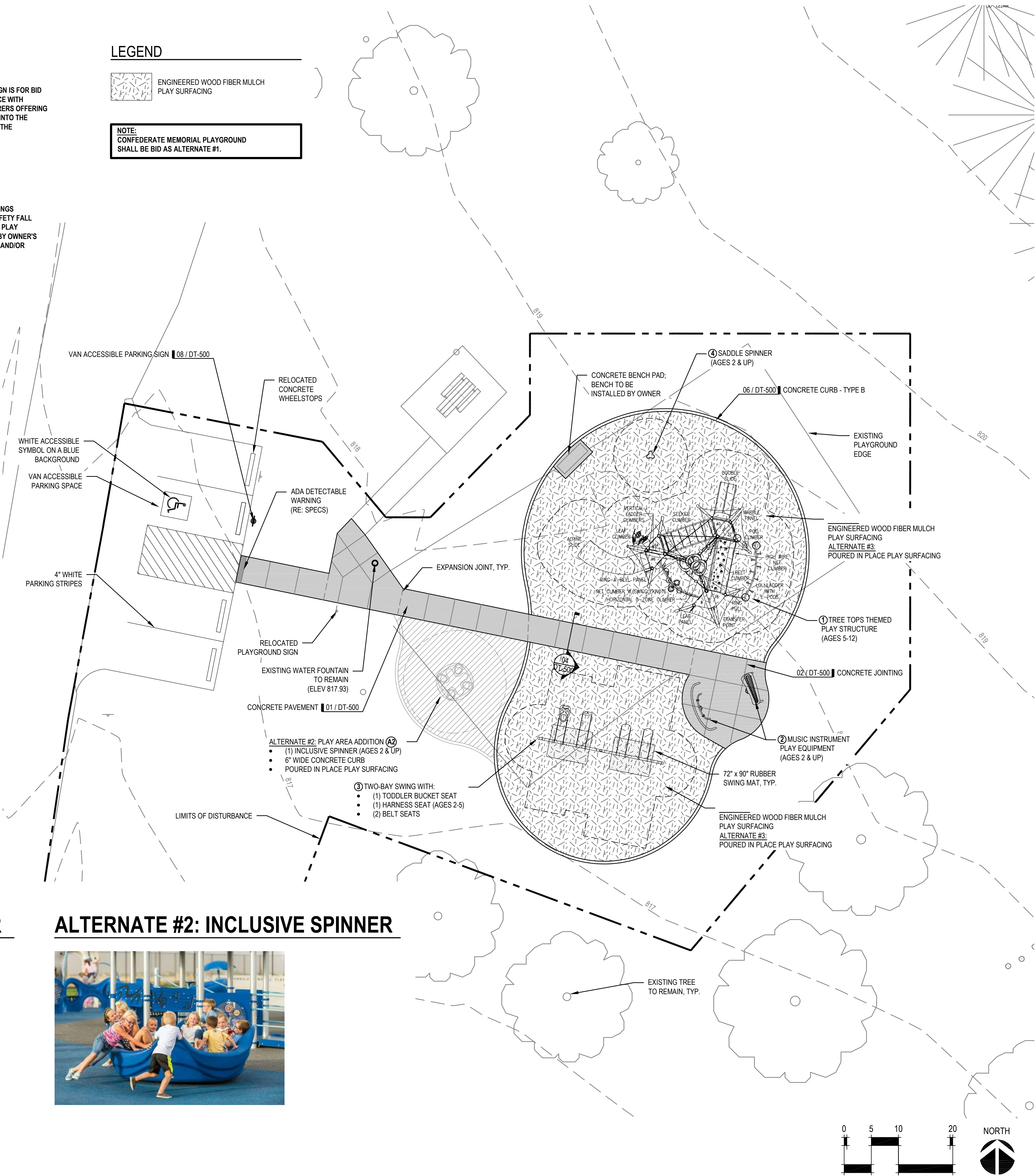
ALTERNATE #2: INCLUSIVE SPINNER



LEGEND



NOTE:
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SHALL BE BID AS ALTERNATE #1.



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PLAYGROUND
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HIGGINSVILLE, MO 64037

PROJECT # X2109-01
SITE # 5106
FACILITY # 9999

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DATE:
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ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5106-9999-SP-401.DWG
DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

SHEET TITLE:
ALT #1, #2, #3 - SITE
PLAN

SHEET NUMBER:

SP-401

SHEET 15 OF 17
8/22/2022

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PLAYGROUND CURB ALIGNMENT

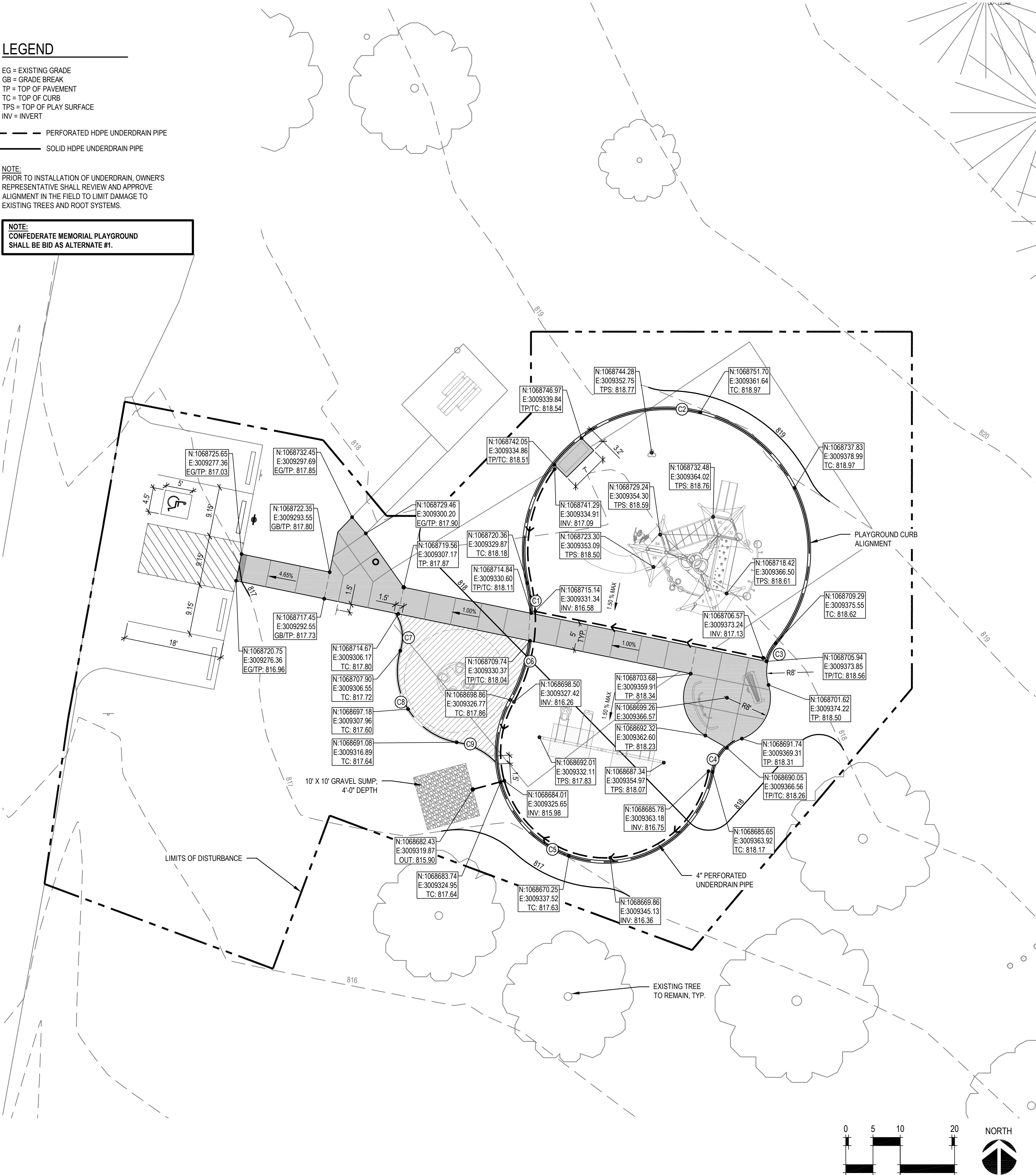
ALIGNMENT CURVE DATA				
CURVE #	DELTA	RADIUS	LENGTH	TANGENT
C1	10.56	30.25	5.58	2.80
C2	232.91	26.25	106.71	52.75
C3	26.32	8.25	3.79	1.93
C4	50.16	8.25	7.22	3.86
C5	199.32	20.00	69.58	117.49
C6	21.83	30.25	11.53	5.83
C7	48.87	8.25	7.04	3.75
C8	97.97	13.25	22.66	15.24
C9	36.82	12.25	7.87	4.08

LEGEND

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TP = TOP OF PAVEMENT
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- PERFORATED HDPE UNDERDRAIN PIPE
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MICHAEL L. PARSON,
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OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES
MANAGEMENT,
DESIGN AND CONSTRUCTION

DEPARTMENT OF
NATURAL RESOURCES,
MISSOURI STATE PARKS

PLAYGROUND
REPLACEMENT

CONFEDERATE MEMORIAL
STATE HISTORIC SITE
211 WEST FIRST STREET
HIGGINSVILLE, MO 64037

PROJECT # X2109-01
SITE # 5106
FACILITY # 9999

REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
REVISION: _____
DATE: _____
ISSUE DATE: 8/22/2022

CAD DWG FILE: X2109-01-5106-9999-SP-402.DWG
DRAWN BY: AES
CHECKED BY: CDP
DESIGNED BY: AES / CDP

SHEET TITLE:
ALT #1, #2, #3 -
LAYOUT &
GRADING PLAN

SHEET NUMBER:

SP-402

SHEET 16 OF 17
8/22/2022

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Renaissance
Infrastructure
Consulting

ntertek
osiDEPARTMENT OF
NATURAL RESOURCES,
MISSOURI STATE PARKS

CAD DWG FILE: X2109-01-DT-500.DWG
 DRAWN BY: AES
 CHECKED BY: CDP
 DESIGNED BY: AES / CDP

DT-500

HEET 17 OF 17
/22/2022



- ## CONCRETE JOINTING N.T.S. 02

TURNED DOWN CONCRETE EDGE - A **03**
N.T.S.

TURNED DOWN CONCRETE EDGE - B N.T.S. **04**

CONCRETE CURB - TYPE A N.T.S. **05**

CONCRETE CURB - TYPE B N.T.S. **06**

PLAY SURFACING 07

NOTE:
1. ACCESSIBLE SIGN TO BE CENTERED
ON PARKING STALL.

VAN ACCESSIBLE PARKING SIGN 08