

# Tucker Pickleball Courts

4898 Lavista Road (State Route 236) Tucker, GA 30084

## Construction Plans

Issued For Bidding: 9/10/24

### OWNER / DEVELOPER:

City of Tucker  
Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084  
Phone: (470) 481-0205

### LANDSCAPE ARCHITECT:

Root Design Studio  
2300 Henderson Mill Road #412  
Atlanta, GA 30345  
Phone: (404) 895-2253

### CIVIL ENGINEER:

Freedman Engineering Group  
1000 Whitlock Ave, Ste 320, #128  
Marietta, GA 30064  
Phone: (770) 851-3175

### CIVIL ENGINEER/ DRIVEWAY ENCROACHMENT ONLY:

VHB (Formerly Urban Engineers)  
New Address  
1355 Peachtree St NE Ste 100  
Atlanta, GA 30309  
Phone: (404) 214-6745

DeKalb County is not responsible for any errors or omission by engineers or other design professionals on design or County code requirements for this project.

### PROJECT INFORMATION:

#### Project Name:

Tucker Pickleball Courts

#### Project Address:

4898 Lavista Road, Tucker, GA 30084

#### Project Area:

Total Tract Area: 8.27 Acres  
Disturbed Area: 2.85 Acres (124,146 Sq. Ft.)  
Impervious Area: 4.28 Acres (186,537 Sq. Ft.)  
Impervious Coverage Percentage: 51.75% impervious

#### Zoning:

The property is zoned DT-1

#### Project Description:

This project consists of the construction of several pickleball courts adjacent to the existing rec center. In addition to the pickleball courts, a new parking lot, pavilion and restroom building, underground detention, and minor hardscape and landscape improvements will also be constructed.

### APPLICABLE CODE:

#### Zoning Code:

Code of Ordinances for the City of Tucker, GA

#### Accessibility Code:

ADA Standards for Accessible Design, 2010

#### Building Code:

International Building Code, 2021

#### WETLANDS NOTE:

This site is not located within any area of wetland.

### DRAWING INDEX:

#### COVER SHEET

V-100 EXISTING CONDITIONS

C-000 GENERAL NOTES  
C-001 KEY PLAN  
C-100 SITE PLAN: AREA A  
C-101 SITE PLAN: AREA B  
C-400 PAVILION / RESTROOM BUILDING ENLARGEMENT PLAN  
C-500 CONSTRUCTION DETAILS  
C-501 CONSTRUCTION DETAILS  
C-502 CONSTRUCTION DETAILS  
C-503 CONSTRUCTION DETAILS  
C-504 CONSTRUCTION DETAILS  
C-505 CONSTRUCTION DETAILS  
C-506 CONSTRUCTION DETAILS  
C-507 CONSTRUCTION DETAILS  
C-600 SITE FURNISHINGS

CL100 LAYOUT PLAN: AREA A  
CL101 LAYOUT PLAN: AREA B

CE000 EROSION, SEDIMENTATION, & POLLUTION CONTROL NOTES  
CE001 EROSION, SEDIMENTATION, & POLLUTION CONTROL NOTES  
CE100 EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN: AREA A - INITIAL  
CE101 EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN: AREA B - INITIAL  
CE200 EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN: AREA A - INTERMEDIATE  
CE201 EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN: AREA B - INTERMEDIATE  
CE300 EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN: AREA A - FINAL  
CE301 EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN: AREA B - FINAL  
CE500 EROSION, SEDIMENTATION, & POLLUTION CONTROL DETAILS  
CE501 EROSION, SEDIMENTATION, & POLLUTION CONTROL DETAILS

CD100 DEMOLITION PLAN: AREA A  
CD101 DEMOLITION PLAN: AREA B

CG000 DRAINAGE PIPE & AREA SUMMARIES  
CG100 GRADING PLAN: AREA A  
CG101 GRADING PLAN: AREA B  
CG102 DRAINAGE PLAN: AREA A  
CG103 DRAINAGE PLAN: AREA B  
CG300 DRAINAGE PROFILES  
CG500 GRADING & DRAINAGE DETAILS  
CG501 GRADING & DRAINAGE DETAILS  
CG502 GRADING & DRAINAGE DETAILS  
CG503 GRADING & DRAINAGE DETAILS

CU100 UTILITY PLAN: AREA A  
CU101 UTILITY PLAN: AREA B  
CU300 SEWER PROFILES  
CU500 UTILITY DETAILS

LT000 LANDSCAPE NOTES  
LT001 LANDSCAPE NOTES  
LT002 TREE PLAN CALCULATIONS  
LT100 TREE PLAN: AREA A  
LT101 TREE PLAN: AREA B  
LT400 TREE PLAN: COURTS ENLARGEMENT PLANTING PLAN  
LT500 LANDSCAPE & TREE PLAN DETAILS

E-000 NOTES AND LEGEND (ELECTRICAL)  
E-100 ELECTRICAL PLAN  
E-200 SINGLE-LINE DIAGRAMS AND SCHEDULES  
E-300 ELECTRICAL DETAILS  
E-400 ELECTRICAL SPECIFICATIONS  
E-401 ELECTRICAL SPECIFICATIONS  
E-402 ELECTRICAL SPECIFICATIONS  
E-403 ELECTRICAL SPECIFICATIONS

DRIVEWAY INTERSECTION PLANS FOR GDOT ENCROACHMENT ALONG SR 236/ LAVISTA RD  
C-10.0.0 INTERSECTION PLAN  
C-10.0.1 INTERSECTION GRADING & DRAINAGE PLAN  
C-10.0.2 INTERSECTION UTILITY - PLAN  
C-10.0.3 INTERSECTION ES&PC - PLAN  
C-10.1.0 INTERSECTION SIGHT DISTANCE PLAN

#### RESTROOM & PAVILION PLANS (ROMTEC)

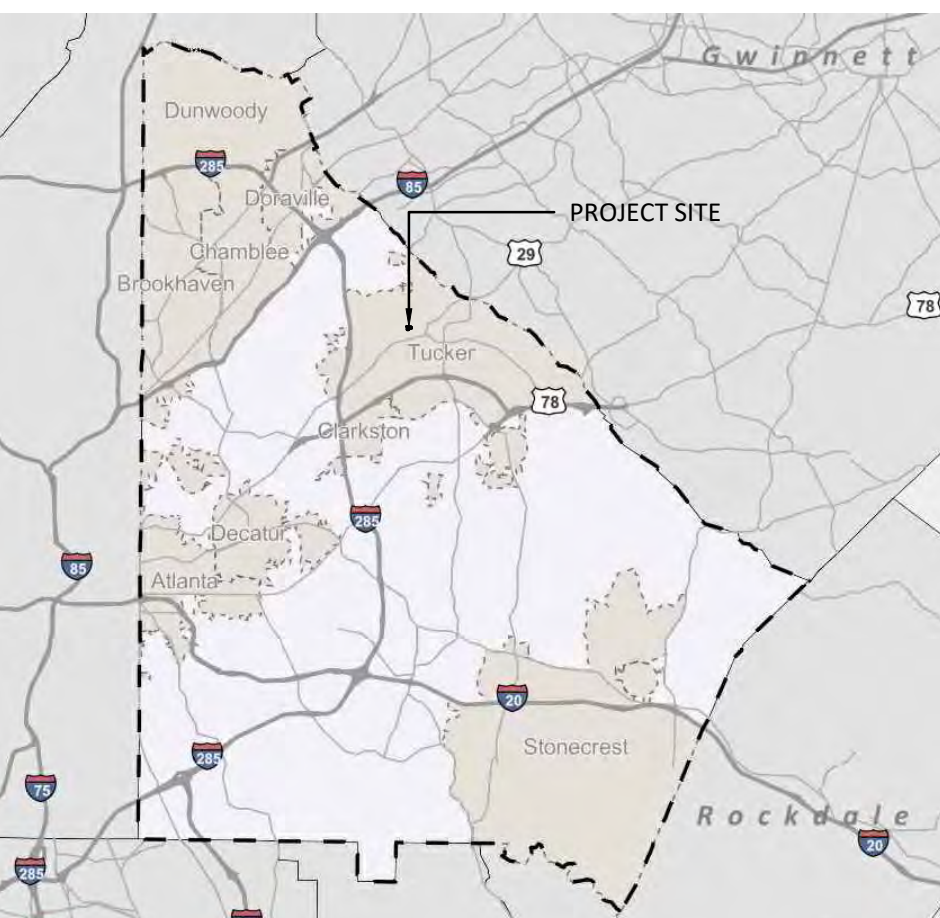
1 TITLE PAGE  
2 FLOOR PLAN & ELEVATIONS  
3 CMU PLAN & DETAILS  
4 FOUNDATION PLAN & DETAILS

#### DETENTION SYSTEM PLANS

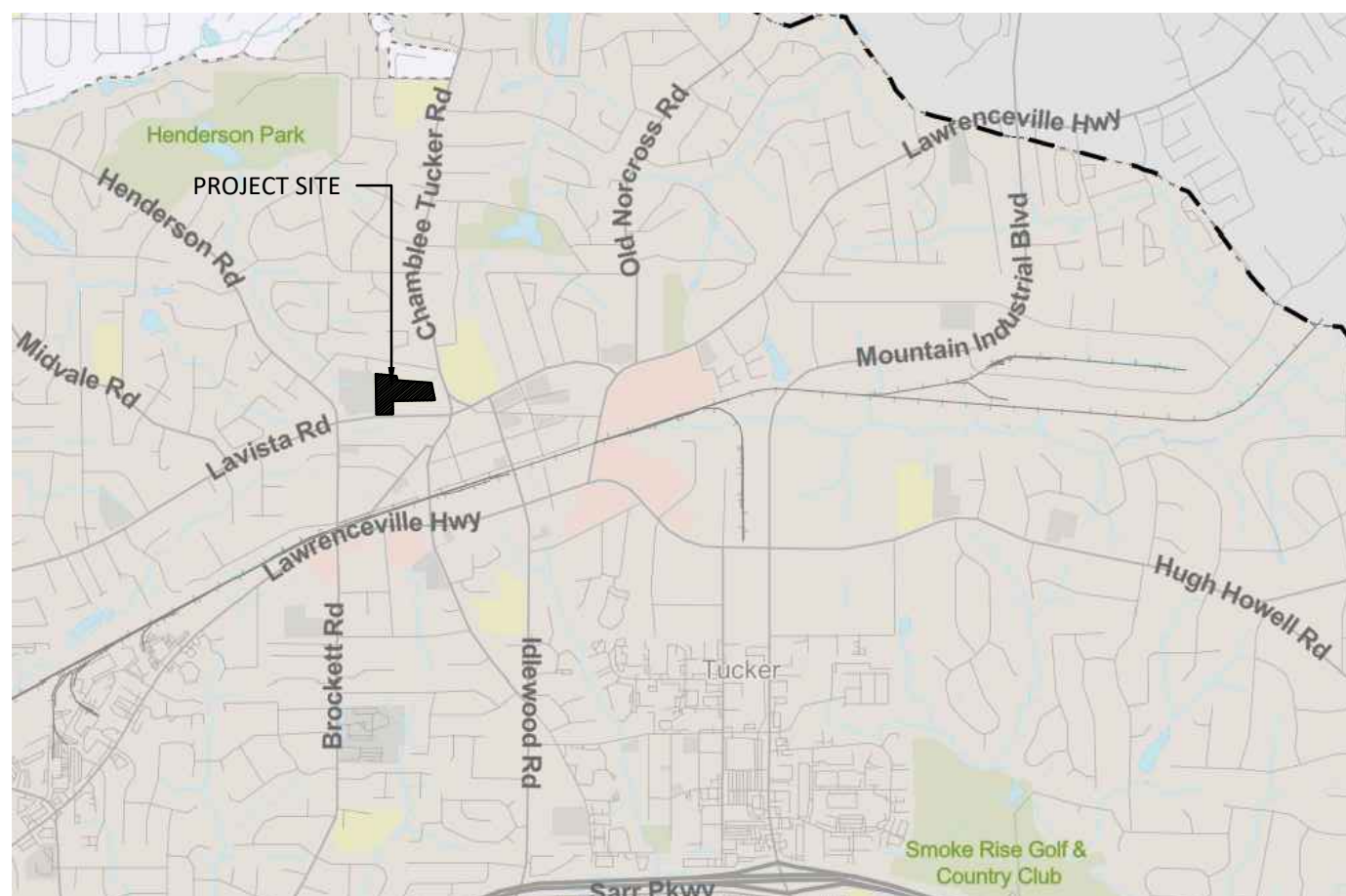
ST100 STORMTECH CHAMBER SYSTEM NOTES & SPECIFICATIONS  
ST101 STORMTECH CHAMBER SYSTEM LAYOUT PLAN  
ST102 STORMTECH CHAMBER SYSTEM FILL MATERIALS SCHEDULE  
ST103 STORMTECH CHAMBER SYSTEM ISOLATER ROW DETAIL  
ST104 STORMTECH CHAMBER SYSTEM CONSTRUCTION DETAILS  
ST105 STORMTECH CHAMBER SYSTEM DRAIN BASIN DETAIL

#### EXTERIOR ATHLETIC LIGHTING

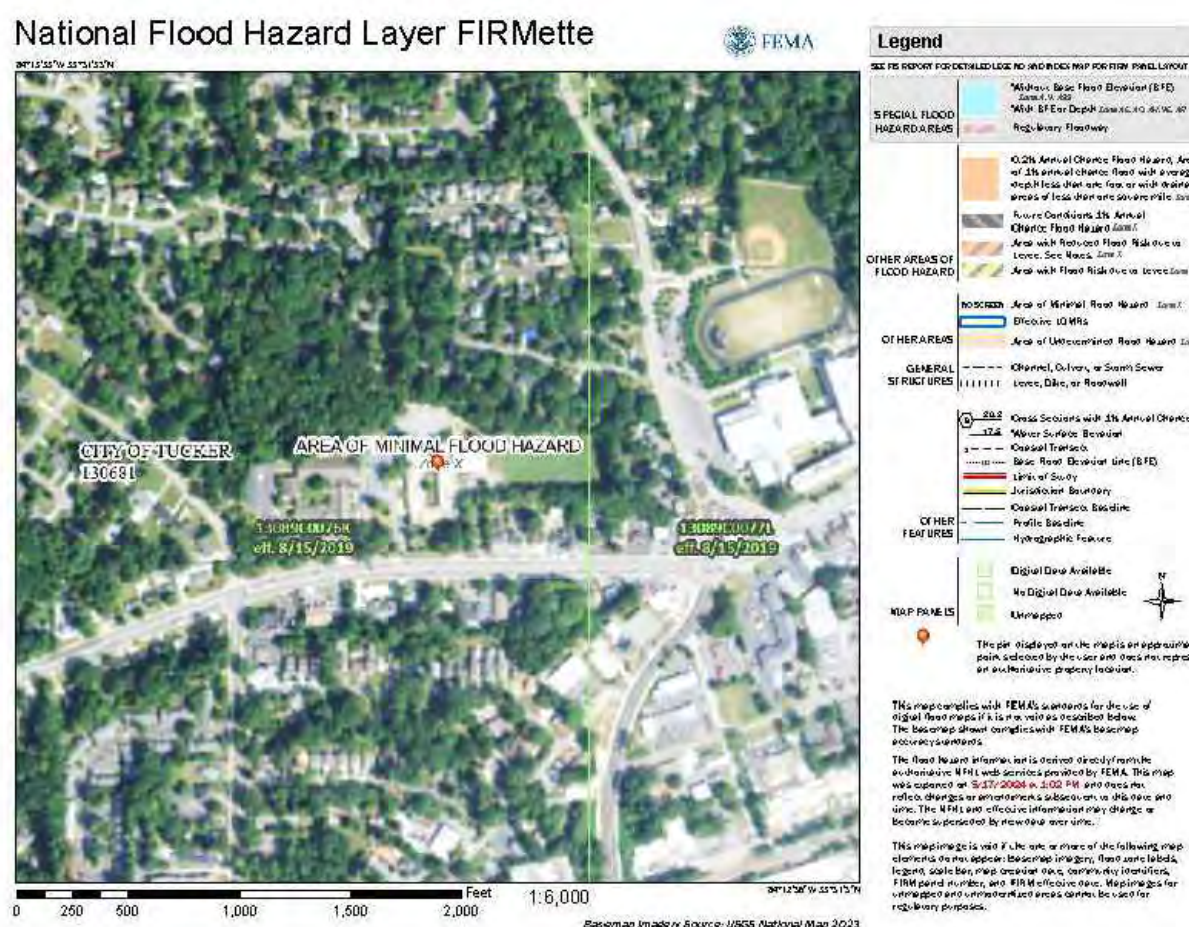
EL100 LIGHTING SYSTEM SUMMARY  
EL101 LIGHTS P1 & P2 ILLUMINATION SUMMARY  
EL102 LIGHTS P3 & P4 ILLUMINATION SUMMARY  
EL103 LIGHTS P5 & P6 ILLUMINATION SUMMARY  
EL104 LIGHTS P7 & P8 ILLUMINATION SUMMARY  
EL105 150' OFFSET SPILL DIAGRAM (HORIZONTAL)  
EL106 150' OFFSET SPILL DIAGRAM (VERTICAL)  
EL107 150' OFFSET GLARE DIAGRAM  
EL108 EQUIPMENT LIST



VICINITY MAP  
(NOT TO SCALE)



LOCATION MAP  
(NOT TO SCALE)



F.I.R.M. NOTE:  
This site is located within zone X, Area of Minimal Flood Hazard, as defined by FIRM Community Panel Number 13089C0076K for DeKalb County, Georgia, effective on 8/15/2019.

DEKALB COUNTY DEVELOPMENT FILE # 3158724



72 HOURS NOTICE IS REQUIRED TO GEORGIA 811 UTILITY PROTECTION CENTER BEFORE ANY PLANNED DIGGING  
www.georgia811.com

24-HOUR CONTACT:  
Rip Robertson  
PH: (470) 481-0205

RELEASED FOR CONSTRUCTION

Seal:

Date: 09/10/2024

Project No: 2023-019

Drawn By: PS

Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084  
City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Existing Conditions**

Sheet No:  
**V-100**



REVISIONS:

NO.	DATE	DESCRIPTION

**PLAT INFORMATION:**  
THE FIELD DATA AND CALCULATIONS ON THIS PLAT WERE OBTAINED FROM A COURSE OF SURVEY IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE BOARD OF SURVEYORS AND MAPPERS OF THE STATE OF GEORGIA. THE SURVEYOR HAS REVIEWED THE PLAT AND HAS DETERMINED THAT THE INFORMATION IS ACCURATE TO THE NEAREST FOOT IN THE HORIZONTAL PLANE AND TO THE NEAREST TENTH OF AN INCH IN THE VERTICAL PLANE. THIS PLAT WAS PREPARED FOR THE EXCLUSIVE USE OF THE CITY OF TUCKER, GEORGIA. IT IS NOT TO BE REPRODUCED OR USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF THE SURVEYOR. PROFESSIONAL SEAL OF SURVEYOR.

**TOPOGRAPHIC, TREE AND UTILITY SURVEY FOR:**  
**CITY OF TUCKER**  
LOCATED IN:  
LAND LOT 226 OF THE 18TH DISTRICT  
CITY OF TUCKER  
DEKALB COUNTY, GEORGIA

**GEORGIA SURVEYOR CERTIFICATION**  
This plat is a retracement of an existing parcel or parcels of land and does not subdivide or create a new parcel or make any changes to any real property boundaries. The recording information of the documents, maps, plats or other instruments which created the parcel or parcels are stated herein. RECORDATION OF THIS PLAT DOES NOT IMPLY APPROVAL OF ANY LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS OR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND. Furthermore, the undersigned land surveyor certifies that this plat complies with the minimum technical standards for property surveys in Georgia as set forth in the rules and regulations of the Georgia Board of Registration for Professional Engineers and Land Surveyors and as set forth in O.C.G.A. Section 15-6-67.

*Signature*  
12/08/16  
13089 C 0077 K  
MAP ID: 13089 C 0076 J EFFECTIVE DATE: 05/16/13 ZONE: "X"

PROJECT NO: 1113-23-082  
SURVEYED BY: SEI  
FIELD DATE: 05/10/2023  
DRAFTED BY: J. COLLINS  
ISSUE DATE: 05/17/2023  
**1 OF 1**



**CURVE TABLE**

CURVE	ARC LEN.	RADIUS	DELTA	CHORD	DIRECTION
C1	42.03'	2333.83'	1°01'55"	42.03'	S 88°51'56" W

**LINE TABLE**

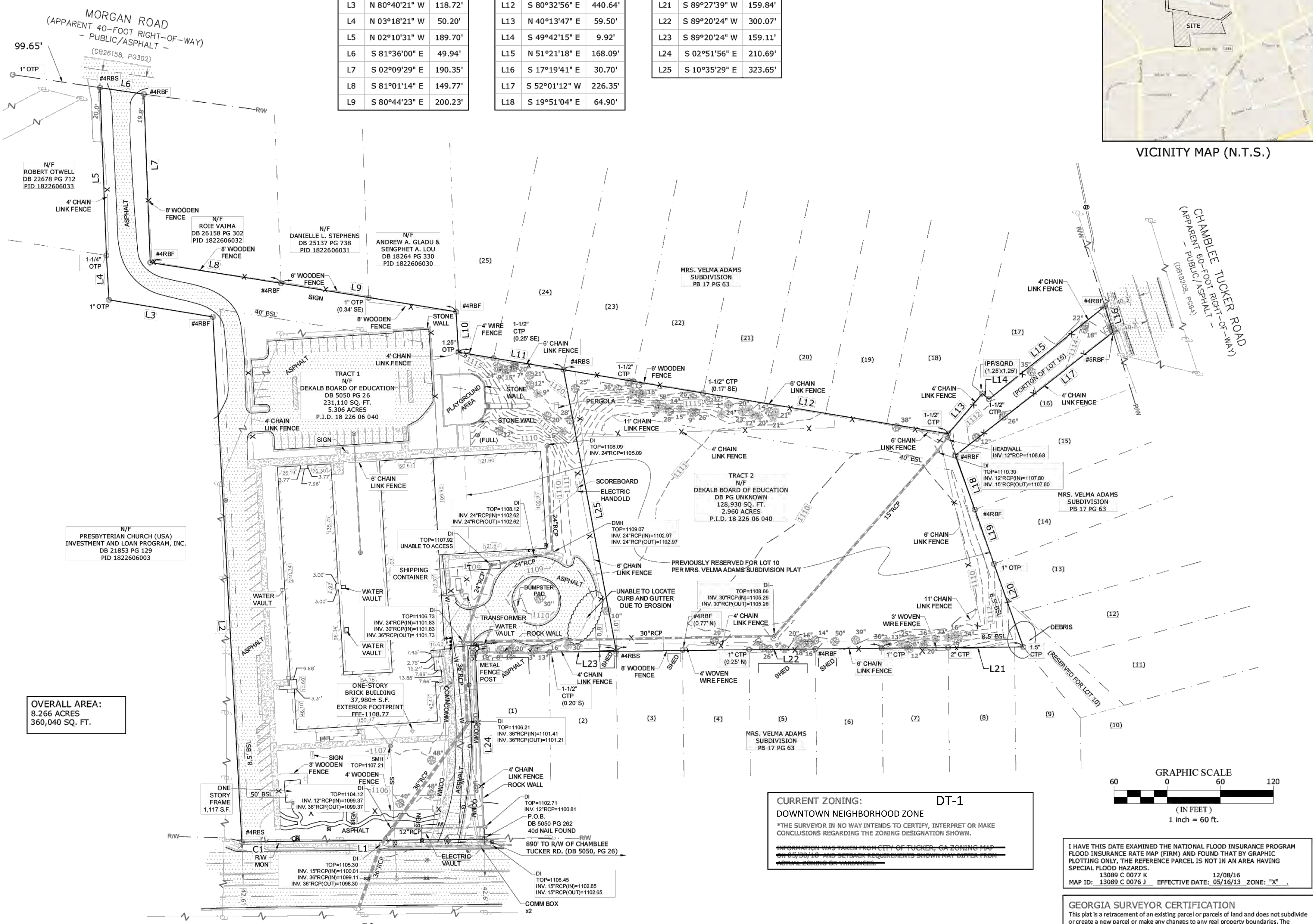
LINE	DIRECTION	LENGTH
L19	S 19°22'08" E	65.04'
L20	S 19°26'01" E	99.47'
L21	S 89°27'39" W	159.84'
L22	S 89°20'24" W	300.07'
L23	S 89°20'24" W	159.11'
L24	S 02°51'56" E	210.69'
L25	S 10°35'29" E	323.65'

**LINE TABLE**

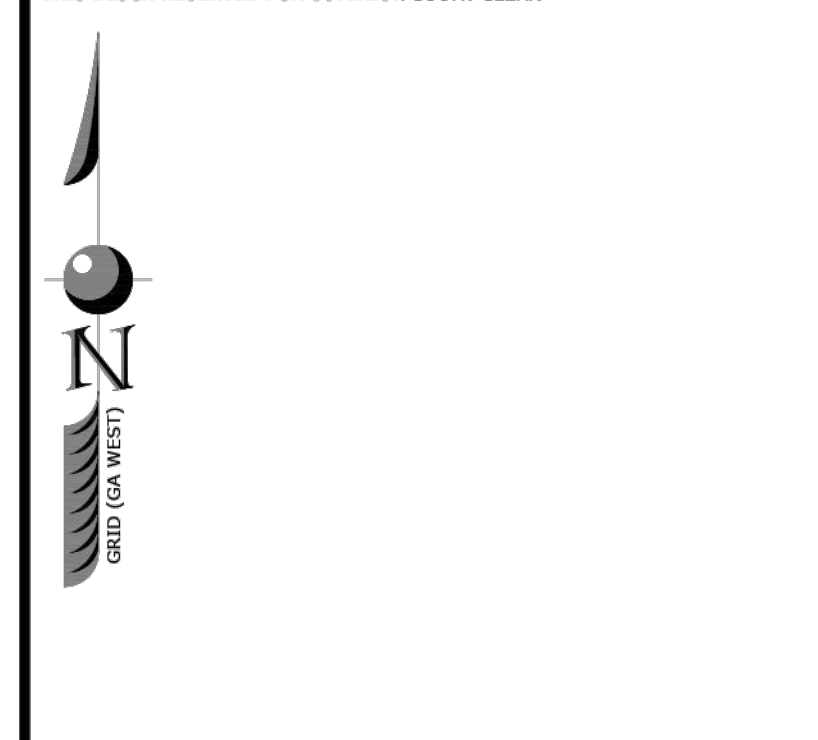
LINE	DIRECTION	LENGTH
L10	S 03°11'15" E	45.79'
L11	S 80°32'56" E	120.25'
L12	S 80°32'56" E	440.64'
L13	N 40°13'47" E	59.50'
L14	S 49°42'15" W	9.92'
L15	N 51°21'18" E	168.09'
L16	S 17°19'41" W	30.70'
L17	S 52°01'12" W	226.35'
L18	S 19°51'04" E	64.90'

**LINE TABLE**

LINE	DIRECTION	LENGTH
L1	S 89°22'58" W	232.26'
L2	S 03°09'15" E	594.27'
L3	N 80°40'21" W	118.72'
L4	N 03°18'21" W	50.20'
L5	N 02°10'31" W	189.70'
L6	S 81°36'00" E	49.94'
L7	S 02°09'29" E	190.35'
L8	S 81°01'14" E	149.77'
L9	S 80°44'23" E	200.23'



THIS BLOCK RESERVED FOR SUPERIOR COURT CLERK



- LEGEND:**
- RBF REINFORCING BAR FOUND
  - RBS REINFORCING BAR SET
  - OTP OPEN TOP PIPE
  - CTP CRIMP TOP PIPE
  - SIB SOLID IRON BAR
  - CMF CONCRETE MONUMENT FOUND
  - CL CENTERLINE
  - R/W RIGHT-OF-WAY
  - LL LAND LOT
  - LLL LAND LOT LINE
  - L LINE
  - A ARC
  - R RADIUS
  - CH CHORD
  - C CONC
  - CONC CONCRETE
  - GUY GUY POLE
  - TELEPHONE TELEPHONE PEDESTAL
  - SEWER SEWER CLEANOUT
  - GAS GAS METER
  - WATER WATER VALVE
  - METER WATER METER
  - WATER WATER SPIGOT
  - SIGN SIGN
  - TRAFFIC TRAFFIC BOX
  - PEDESTRIAN PEDESTRIAN SIGNAL
  - BOLLARD BOLLARD (ROUND)
  - BOLLARD BOLLARD (SQUARE)
  - PVC PVC STUB
  - POWER POWER STUB
  - ELECTRIC ELECTRIC METER
  - WETLAND WETLAND FLAG
  - CMF CORRUGATED METAL PIPE
  - RCP REINFORCED CONCRETE PIPE
  - CD CROSS DRAIN
  - SS SANITARY SEWER
  - FENCE FENCE
  - OVERHEAD OVERHEAD UTILITY LINES(S)

- GENERAL NOTES:**
- THE TERM "CERTIFICATION" AS USED IN RULE 180-6-69(2) AND (3) AND RELATING TO PROFESSIONAL ENGINEERING OR LAND SURVEYING SERVICES, AS DESCRIBED IN O.C.G.A. 43-15-2(6) AND (11), SHALL MEAN A SIGNED STATEMENT BASED UPON FACTS AND KNOWLEDGE TO THE REGISTRANT AND IS NOT A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED.
  - INFORMATION REGARDING THE REPUTED PRESENCE, SIZE, CHARACTER, AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES IS SHOWN HEREON. THERE IS NO CERTAINTY OF THE ACCURACY OF THIS INFORMATION AND IT SHALL BE CONSIDERED IN THAT LIGHT BY THOSE RELYING ON THIS PLAT. THE LOCATION AND ARRANGEMENT OF UNDERGROUND UTILITIES AND STRUCTURES SHOWN HEREON MAY BE INACCURATE AND UTILITIES AND STRUCTURES NOT SHOWN MAY BE ENCOUNTERED. THE OWNER, ITS EMPLOYEES, ITS CONSULTANTS, ITS CONTRACTORS, AND/OR ITS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THIS INFORMATION SHOWN HEREON AS TO SUCH UNDERGROUND INFORMATION.
  - UNLESS OTHERWISE STATED HEREON, ONLY EVIDENCE OF EASEMENTS OR STRUCTURES THERETO WHICH ARE READILY APPARENT FROM A CASUAL ABOVE GROUND VIEW OF PREMISES ARE SHOWN. NO LIABILITY IS ASSUMED BY THE UNDERSIGNED FOR LOSS RELATING TO THE EXISTENCE OF ANY EASEMENT NOT DISCOVERED FROM MY CASUAL ABOVE GROUND VIEW OF THE PREMISES.
  - UNLESS STATED OTHERWISE, GOVERNMENTAL JURISDICTIONAL AREAS OR NEGATIVE EASEMENTS, IF ANY, WHICH MIGHT IMPACT ON THE USE OF THE PREMISES WERE NOT LOCATED. NO LIABILITY IS ASSUMED BY THE UNDERSIGNED FOR ANY LOSS RESULTING FROM THE EXERCISE OF ANY GOVERNMENTAL JURISDICTION AFFECTING THE USE OF THE PREMISES.
  - ACCEPTANCE OF THIS SURVEY PLAT OR USE OF THE CORNER MONUMENTS FOUND OR SET DURING THE PERFORMANCE OF THE FIELD SURVEY HEREBY LIMIT THE UNDERSIGNED LIABILITY RELATED TO PROFESSIONAL NEGLIGENCE ACTS, ERRORS, OMISSIONS OR BREACH OF CONTRACT TO AN AMOUNT NOT TO EXCEED THE FEE CHARGED. FOR ADDITIONAL LIABILITY COVERAGE FROM THE UNDERSIGNED, A FEE OF 2% OF THE LIABILITY AMOUNT REQUESTED MUST BE PAID TO THE UNDERSIGNED PRIOR TO COMMENCEMENT OF THIS PROJECT.
  - REPRODUCTIONS OF THIS PLAT ARE NOT VALID UNLESS THE SEAL IS SIGNED WITH A "LIVE" SIGNATURE.
  - UNLESS OTHERWISE STATED HEREON, THIS SURVEY WAS PREPARED WITHOUT BENEFIT OF AN ABSTRACT OF TITLE. NO LIABILITY IS ASSUMED BY THE UNDERSIGNED FOR LOSS RELATING TO ANY MATTER THAT MIGHT BE DISCOVERED BY AN ABSTRACT OR TITLE SEARCH OF THE PROPERTY.
  - THIS SURVEY COMPLIES WITH BOTH THE RULES OF THE GEORGIA BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS AND THE OFFICIAL CODE OF GEORGIA ANNOTATED (O.C.G.A.) 15-6-67, N THAT WHERE A CONFLICT EXISTS BETWEEN THOSE TWO SETS OF SPECIFICATIONS, THE REQUIREMENTS OF LAW PREVAIL.

OVERALL AREA:  
8.266 ACRES  
360,040 SQ. FT.

**PARKING SUMMARY:**  
REGULAR SPACES: 30  
HANDICAP SPACES: 3  
TOTAL: 33

S.R. 236  
A.K.A. LAVISTA ROAD  
VARIABLE RIGHT-OF-WAY  
- PUBLIC / ASPHALT -  
G.D.O.T. PROJ. NO. TSAP-236-0(24)

**CURRENT ZONING: DT-1**  
**DOWNTOWN NEIGHBORHOOD ZONE**  
\*THE SURVEYOR IN NO WAY INTENDS TO CERTIFY, INTERPRET OR MAKE CONCLUSIONS REGARDING THE ZONING DESIGNATION SHOWN.  
~~THE ZONING WAS OBTAINED FROM THE CITY OF TUCKER, GA ZONING MAP ON 05/26/16 AND SETBACK REQUIREMENTS SHOWN THAT DIFFER FROM THE ZONING ON THIS PLAT.~~

I HAVE THIS DATE EXAMINED THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP (FIRM) AND FOUND THAT BY GRAPHIC PLOTTING ONLY, THE REFERENCE PARCEL IS NOT IN AN AREA HAVING SPECIAL FLOOD HAZARDS.  
13089 C 0077 K  
MAP ID: 13089 C 0076 J EFFECTIVE DATE: 05/16/13 ZONE: "X"

**GEORGIA SURVEYOR CERTIFICATION**  
This plat is a retracement of an existing parcel or parcels of land and does not subdivide or create a new parcel or make any changes to any real property boundaries. The recording information of the documents, maps, plats or other instruments which created the parcel or parcels are stated herein. RECORDATION OF THIS PLAT DOES NOT IMPLY APPROVAL OF ANY LOCAL JURISDICTION, AVAILABILITY OF PERMITS, COMPLIANCE WITH LOCAL REGULATIONS OR REQUIREMENTS OR SUITABILITY FOR ANY USE OR PURPOSE OF THE LAND. Furthermore, the undersigned land surveyor certifies that this plat complies with the minimum technical standards for property surveys in Georgia as set forth in the rules and regulations of the Georgia Board of Registration for Professional Engineers and Land Surveyors and as set forth in O.C.G.A. Section 15-6-67.

*Signature*  
05/17/2023  
DATE

**GENERAL NOTES:**

- IF ANY OF THESE NOTES ARE FOUND TO BE IN CONFLICT WITH LOCAL JURISDICTION NOTES AND SPECIFICATIONS, THEN LOCAL JURISDICTION NOTES AND SPECIFICATIONS TAKE PRECEDENCE.
- ALL WORK AND MATERIALS SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND CODES AS REQUIRED.
- CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS, BUILDING UTILITY ENTRANCE LOCATIONS, EXACT LOCATIONS AND DIMENSIONS OF ENTRIES, DOWNSPOUTS, AND OTHER FEATURES RELATED TO BUILDINGS AND STRUCTURES.
- UNLESS SHOWN OTHERWISE ON THE PLANS, CONTRACTOR SHALL APPLY 2" OF TOP SOIL TO ALL DISTURBED AREAS OF THE SITE, PLANT GRASS SEED OR SOD, APPLY STRAW, AND WATER. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A HEALTHY STAND OF GRASS ON ALL SEEDED OR SODDED AREAS. IF A HEALTHY STAND OF GRASS CAN NOT BE ESTABLISHED BY THE TIME THE BUILDING BECOMES OCCUPIED, THEN SOD SHALL BE INSTALLED AND WATERED UNTIL GRASS IS ESTABLISHED.
- ALL DIMENSIONS AND RADII ARE REFERENCED TO THE FACE OF CURB UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE UNLESS OTHERWISE NOTED.
- IF REQUIRED, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BID. AREAS TO BE DISTURBED SHALL BE IMPROVED PER THESE PLANS OR RESTORED TO THEIR ORIGINAL OR BETTER CONDITION.
- ALL HEIGHTS AND SETBACKS SHALL MEET THE MINIMUM STANDARDS SET FORTH IN THE LOCAL CODE.
- THE CONTRACTOR SHALL PROTECT ALL MONUMENTS, IRON PINS, AND PROPERTY CORNERS DURING CONSTRUCTION.
- CONTRACTOR AGREES TO REPAIR ANY DAMAGE TO THE PUBLIC RIGHT-OF-WAY IN ACCORDANCE WITH THE STANDARDS OF THE GDOT.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE OWNER ANY DISCREPANCIES FOUND BETWEEN THE ACTUAL FIELD CONDITIONS AND THE CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.

**TRAFFIC CONTROL NOTES:**

- REFER TO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION) FOR DETAILS OF STANDARD TRAFFIC CONTROL SIGNS AND STANDARDS.
- THE CONTRACTOR SHALL EMPLOY ALL NECESSARY BARRICADES, SIGNS, FENCES, FLASHING LIGHTS, TRAFFIC MEN, ETC. FOR MAINTENANCE AND PROTECTION OF TRAFFIC AS REQUIRED.

**DEMOLITION NOTES:**

- THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE ALL EXISTING UTILITIES ON SITE PRIOR TO ANY DEMOLITION.
- THE CONTRACTOR SHALL PERFORM DEMOLITION ACTIVITIES AS NOTED AND SHOWN ON THESE PLANS.
- IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ANY PERMITS AND PAY FEES REQUIRED FOR DEMOLITION AND HAUL-OFF FROM THE APPROPRIATE AUTHORITIES. THESE FEES ARE TO BE INCLUDED WITH THE BID.
- THE CONTRACTOR SHALL PREPARE ALL DOCUMENTS AND ACQUIRE APPROPRIATE PERMITS AS REQUIRED PRIOR TO THE COMMENCEMENT OF DEMOLITION.
- THE DEMOLITION PLAN IS INTENDED TO DEPICT GENERAL DEMOLITION AND UTILITY WORK. IT IS NOT INTENDED TO IDENTIFY EACH ELEMENT OF DEMOLITION OR RELOCATION. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND APPROPRIATE UTILITY COMPANY PRIOR TO WORK.
- IN ACCORDANCE WITH THE DEMOLITION PLAN, CONTRACTOR TO COMPLETELY DEMOLISH AND DISPOSE OF OFFSITE IN A LAWFUL MANNER EXISTING BUILDINGS, INCLUDING FOUNDATIONS AND ALL APPURTENANCES LOCATED ON AND AROUND THE PROPERTY INCLUDING BUT NOT LIMITED TO BOLLARDS, GAS METERS, AIR CONDITIONING UNITS, SIGNS, CURBS, SIDEWALKS, ELECTRIC METERS, FENCING, ETC. UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- REMOVE AND/OR PLUG EXISTING UTILITIES SUCH AS SANITARY SEWER, WATER, GAS, ELECTRIC, AND TELEPHONE AS SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING EACH UTILITY COMPANY TO COORDINATE REMOVAL OF ALL UTILITIES AND FOR DETERMINING HORIZONTAL AND VERTICAL LOCATIONS OF UTILITIES PRIOR TO COMMENCING WORK.

**DEMOLITION NOTES (continued):**

- THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND PLUG, ALL SERVICE PIPING AT THE STREET LINE OR MAIN, AS REQUIRED, OR AS OTHERWISE NOTED. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN.
  - THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF SERVICE PIPING TO BE REMOVED, CUT OR PLUGGED.
  - THE CONTRACTOR SHALL ARRANGE FOR RESETTling OF CURB BOXES, VALVE BOXES AND REMOVAL AND/OR RELOCATION OF OVERHEAD UTILITIES AND POLES WITH THE APPROPRIATE UTILITY COMPANY.
  - INSTALL ALL EROSION AND SEDIMENT CONTROL DEVICES AND TREE PROTECTION PRIOR TO BEGINNING DEMOLITION WORK.
  - THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL UTILITIES TO REMAIN IN PLACE.
  - THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID UNNECESSARY DAMAGE TO EXISTING ROAD SURFACES.
  - SAWCUT AT INTERFACE OF PAVEMENT OR CURB TO REMAIN. SAWCUT EXISTING PAVEMENT AT THE R.O.W. WHERE REQUIRED.
  - ALL EXISTING ITEMS TO REMAIN WHICH ARE DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE SOLE EXPENSE OF THE CONTRACTOR.
  - THE CONTRACTOR SHALL MAINTAIN ALL UTILITY SERVICES TO THE ADJOINING PROPERTIES DURING THE DEMOLITION PROCESS.
  - SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR DIRECTION BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
  - ASBESTOS OR HAZARDOUS MATERIAL, IF FOUND ON SITE, SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR AND DISPOSED OF PROPERLY.
- UTILITY NOTES:**
- ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES.
  - CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72-HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
  - SANITARY SEWER PIPE, AS SHOWN ON PLANS, SHALL BE AS FOLLOWS:
    - PVC PER ASTM D 3034
    - DUCTILE IRON PIPE PER AWWA C150
    - PIPE RUNS BETWEEN MANHOLES TO BE THE SAME CLASS.
  - WATER LINES, AS SHOWN ON PLANS, SHALL BE AS FOLLOWS:
    - PVC C-900 PER ASTM D 2241, CLASS 200 UNDER PUBLIC ROADS, OTHERWISE CLASS 150
    - DUCTILE IRON PIPE PER AWWA C150
    - EITHER COPPER TUBE TYPE "L" (SOFT) PER ANSI 816.22
    - PVC, 200 P.S.I. PER ASTM D1784 AND D2241.
  - MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
  - ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AS CALLED OUT IN THE SPECIFICATIONS.
  - ALL UTILITIES SHOULD BE KEPT TEN (10') APART (PARALLEL) OR WHEN CROSSING 18" VERTICAL CLEARANCE (OUTSIDE EDGE OF PIPE TO OUTSIDE EDGE OF PIPE).
  - CONTRACTOR SHALL MAINTAIN A MINIMUM OF 3'-0" COVER ON ALL WATER LINES.
  - IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATER LINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATER LINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE. MEETING REQUIREMENTS OF ANSI A21.10 OR ANSI 21.11 (AWWA C-151) (CLASS 50).
  - LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
  - TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS IN UNPAVED AREAS WITH WATER TIGHT LIDS.
  - ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3,000 P.S.I.
  - DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
  - EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
  - REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
  - CONTRACTOR IS RESPONSIBLE FOR COMPLYING TO THE SPECIFICATIONS OF THE LOCAL JURISDICTION WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
  - THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS WAS PROVIDED BY THE LAND SURVEYOR AND IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

**UTILITY NOTES (continued):**

- CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
- ALL EXISTING AND PROPOSED UTILITY MAIN LENGTHS SHOWN ARE APPROXIMATE.
- ALL EXISTING UTILITIES PROPOSED TO BE RELOCATED ON THESE PLANS SHALL BE PLACED UNDERGROUND, UNLESS OTHERWISE NOTED.

**GRADING NOTES:**

- ALL CUT OR FILL SLOPES SHALL BE 2:1 OR FLATTER UNLESS OTHERWISE NOTED.
- EXISTING AND PROPOSED GRADE CONTOUR INTERVALS SHOWN AT 1 FOOT.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
- TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY SEI, 5/17/23
- UNLESS OTHERWISE NOTED ON THE LANDSCAPE PLANS, ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 2 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL GRASS AND MAINTAIN DISTURBED AREAS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
- ALL PROPOSED CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
- ALL ELEVATIONS ARE IN REFERENCE TO THE BENCHMARK, AND THIS MUST BE VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO GROUND BREAKING. GENERAL CONTRACTOR TO VERIFY ELEVATIONS AND REPORT ANY DISCREPANCIES TO THE OWNER PRIOR TO GROUND BREAKING.
- THE CONTRACTOR SHALL IMMEDIATELY REPORT TO OWNER ANY DISCREPANCIES FOUND BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS AND SHALL WAIT FOR INSTRUCTION PRIOR TO PROCEEDING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING EXISTING UTILITIES, AND SHALL REPAIR ALL DAMAGE TO EXISTING UTILITIES THAT OCCUR DURING CONSTRUCTION.
- CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
- ALL SITE PREPARATION AND UNSUITABLE SOIL REMOVAL, AS WELL AS THE PLACEMENT OF FILL MATERIALS SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED IN THE GEOTECHNICAL REPORT (BY OTHERS).
- LIMITS OF CLEARING SHOWN ON GRADING PLAN ARE BASED UPON THE APPROXIMATE CUT AND FILL SLOPE LIMITS, OR OTHER GRADING REQUIREMENTS.
- THE PROPOSED CONTOURS SHOWN IN DRIVES AND PARKING LOTS AND SIDEWALKS ARE FINISHED ELEVATIONS INCLUDING PAVEMENT. REFER TO PAVEMENT CROSS SECTION DATA TO ESTABLISH CORRECT SUBBASE OR AGGREGATE BASE COURSE ELEVATIONS.
- CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE SO THAT RUNOFF WILL DRAIN BY GRAVITY FLOW ACROSS NEW PAVEMENT AREAS TO NEW OR EXISTING DRAINAGE INLETS OR SHEET OVER LAND.
- ANY GRADING BEYOND THE LIMITS OF CONSTRUCTION AS SHOWN ON THE GRADING PLAN IS PROHIBITED.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SHEETING, SHORING, BRACING AND SPECIAL EXCAVATION MEASURES REQUIRED TO MEET OSHA, FEDERAL, STATE AND LOCAL REGULATIONS PURSUANT TO THE INSTALLATION OF THE WORK INDICATED ON THESE DRAWINGS. THE DESIGN ENGINEER ACCEPTS NO RESPONSIBILITY FOR THE DESIGN(S) TO INSTALL SAID ITEMS.
- THE CONTRACTOR SHALL INCLUDE IN THE BID ANY DEWATERING AND MOISTURE CONDITIONING NECESSARY TO CONSTRUCT THE PROJECT AS SHOWN ON THE PLANS.
- ALL FOUNDATION EXCAVATION SHALL BE INSPECTED BY A QUALIFIED GEOTECHNICAL ENGINEER TO DETERMINE WHETHER UNSUITABLE MATERIAL MUST BE REMOVED. ALL UNDESIRABLE MATTER SHALL BE REMOVED, BACKFILLED AND COMPACTED AS REQUIRED BY THE GEOTECHNICAL REPRESENTATIVE.
- GRADES, ELEVATIONS AND LOCATIONS SHOWN ARE APPROXIMATE. AS DIRECTED BY THE ENGINEER, THEY MAY BE ADJUSTED TO ACCOMMODATE UNFORESEEN CONDITIONS. STATIONS, OFFSETS AND ELEVATIONS REFER TO THE CENTER OF DROP INLETS, MANHOLES AND JUNCTION BOXES, AND THE MIDPOINT OF THE LIP FOR CATCH BASINS.

**DRAINAGE NOTES:**

- CONTRACTOR TO CONFIRM STRUCTURE ELEVATIONS SHOWN AND PROVIDE SHOP DRAWINGS TO OWNER & ENGINEER FOR REVIEW PRIOR TO ORDERING OF OR INSTALLATION OF STRUCTURES.
- PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION.
- STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
  - TYPE 1: RCP, CLASS III PER ASTM C-76, WITH FLEXIBLE PLASTIC BITUMEN GASKETS AT JOINTS.
  - TYPE 2: SPIRAL RIB METAL PIPE TYPE 1R: ALUMINIZED COATED AS SPECIFIED ON CONSTRUCTION DRAWINGS. ONLY PERMITTED WHEN SPECIFICALLY INDICATED ON CONSTRUCTION DRAWINGS. PIPE ENDS SHALL BE RE-CORRUGATED AND INSTALLED WITH SEMI-CORRUGATED HUGGER-TYPE BANDS AND "O" RING GASKETS IN ACCORDANCE WITH PIPE MANUFACTURER'S INSTALLATION REQUIREMENTS. SPIRAL RIB METAL PIPE MUST COMPLY WITH ASTM A 760 TYPE 1R. ACCEPTABLE MANUFACTURER: CONTECH, INC." ULTRA FLO OR ULTRA FLO II", CALDWELL CULVERT CO. "SMOOTH RIB", OR APPROVED EQUAL.
  - TYPE 3: HIGH DENSITY POLYETHYLENE, ADS N-12 ST 1B PIPE (PER ASTM F2648), OR APPROVED EQUAL, SHALL HAVE A SMOOTH INTERIOR AND ANGULAR EXTERIOR CORRUGATIONS. 4- THROUGH 60-INCH SHALL MEET ASTM F2648. PIPE SHALL BE JOINED USING A BELL & SPIGOT JOINT MEETING ASTM F2648. THE JOINT SHALL BE SOIL-TIGHT AND GASKETS, WHEN APPLICABLE, SHALL MEET THE REQUIREMENTS OF ASTM F477. FITTINGS SHALL CONFORM TO ASTM F 2306. MATERIAL FOR PIPE PRODUCTION SHALL BE AN ENGINEERED COMPOUND OF VIRGIN AND RECYCLED HIGH DENSITY POLYETHYLENE CONFORMING WITH THE MINIMUM REQUIREMENTS OF CELL CLASSIFICATION 424420C (ESCR TEST CONDITION B) FOR 4- THROUGH 10-INCH (100 TO 250 MM) DIAMETERS, AND 435420C (ESCR TEST CONDITION B) FOR 12- THROUGH 60-INCH DIAMETERS, AS DEFINED AND DESCRIBED IN THE LATEST VERSION OF ASTM D3350, EXCEPT THAT CARBON BLACK CONTENT SHOULD NOT EXCEED 4%. INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321 OR PER MANUFACTURER'S RECOMMENDATION.
- EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
- IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
- ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
- ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
- ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM Poured MORTAR INVERT FROM INVERT IN TO INVERT OUT.
- ALL STORM DRAINAGE WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE CLASS III REINFORCED CONCRETE PIPE, UNLESS OTHERWISE SHOWN.
- A MINIMUM GRADE OF 0.50% SHALL BE MAINTAINED ON ALL PIPES.
- ALL PIPE LENGTHS AND SLOPES ARE APPROXIMATE.
- ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
- SUBSURFACE DRAINAGE FACILITIES MAY BE REQUIRED IN THE STREET RIGHT-OF-WAY IF DEEMED NECESSARY BY THE INSPECTOR.
  - NO MORE THAN 500 LF OF TRENCH MAY BE OPENED AT ONE TIME.
  - EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
  - EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- MATERIAL USED FOR BACK-FILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
- STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL REGULATIONS.
- APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- THIS PLAN DETAILS PIPES UP TO 5FT FROM THE BUILDING FACE. REFER TO ARCHITECTURAL DRAWINGS FOR BUILDING CONNECTIONS. CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY.
- STRUCTURE TOP ELEVATIONS SHOWN HERE ARE APPROXIMATE. CONTRACTOR SHALL ADJUST AS NECESSARY.



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Date: 09/10/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**General Notes**

Sheet No:  
**C-000**

**FREEDMAN ENGINEERING GROUP**

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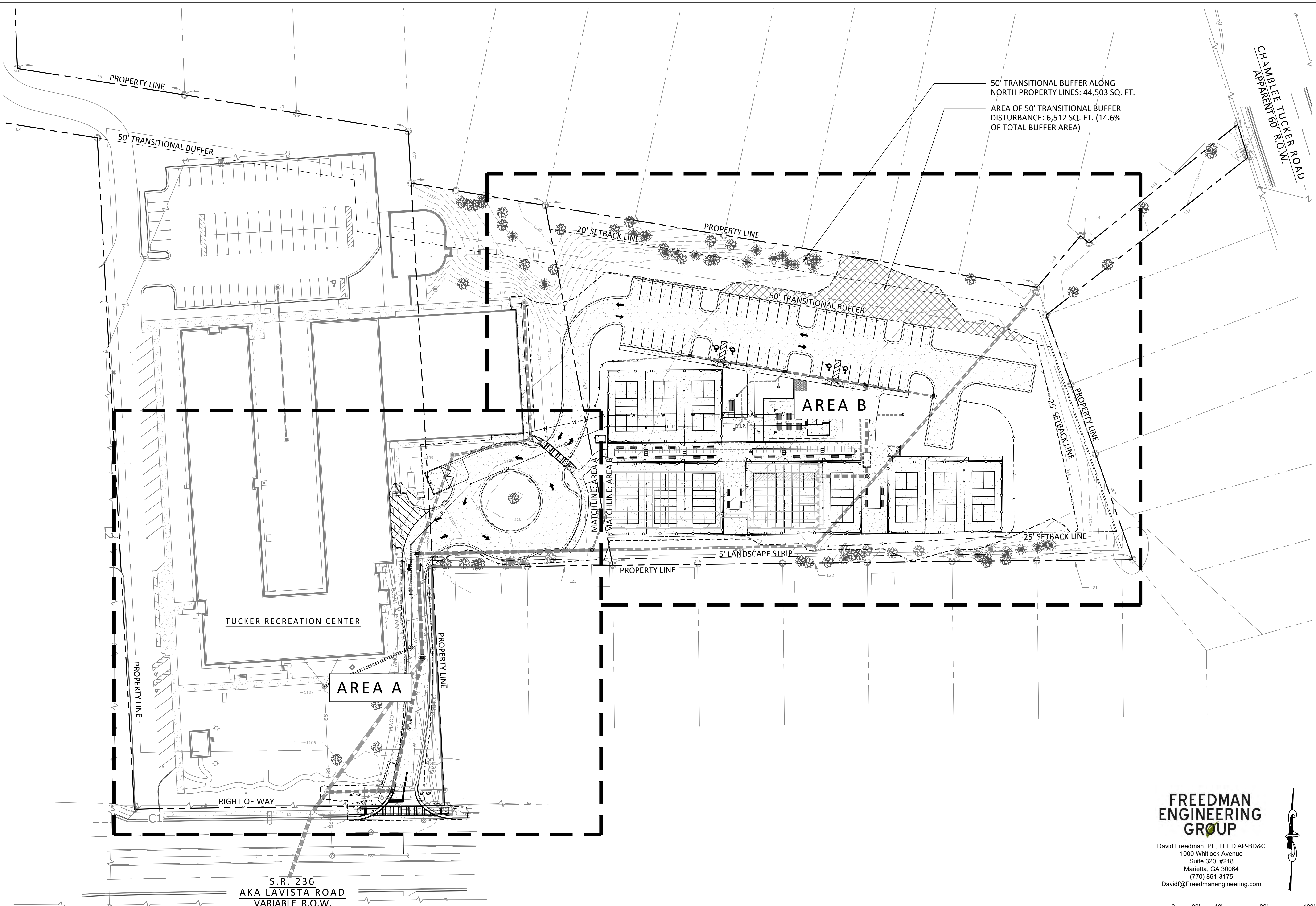
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Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Key Plan**

Sheet No:  
**C-001**



50' TRANSITIONAL BUFFER ALONG  
NORTH PROPERTY LINES: 44,503 SQ. FT.  
AREA OF 50' TRANSITIONAL BUFFER  
DISTURBANCE: 6,512 SQ. FT. (14.6%  
OF TOTAL BUFFER AREA)

S.R. 236  
AKA LAVISTA ROAD  
VARIABLE R.O.W.

**FREEDMAN  
ENGINEERING  
GROUP**  
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David@Freedmanengineering.com

0 20' 40' 80' 120'  
SCALE: 1" = 40'

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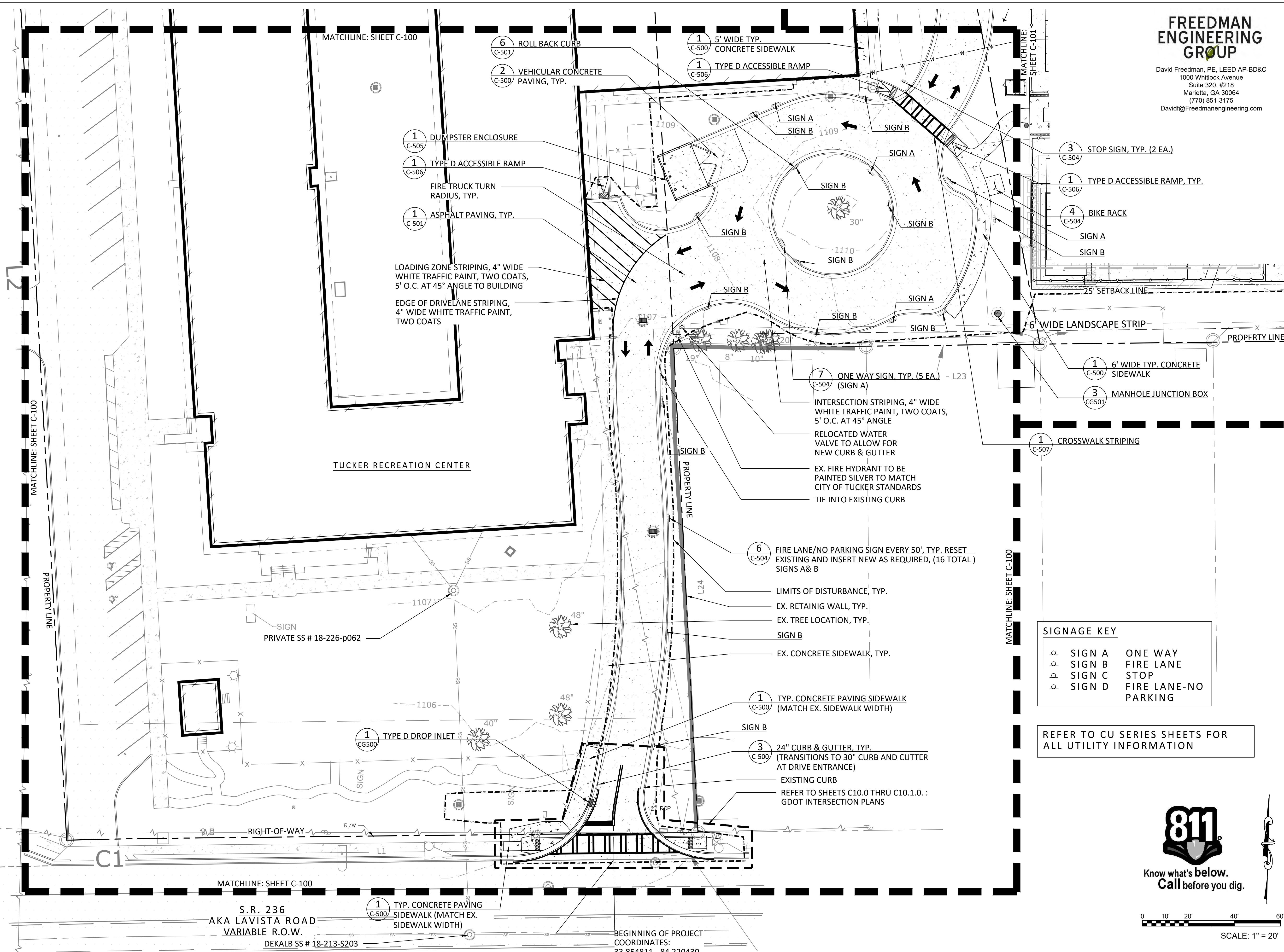
**Tucker Pickleball Courts**  
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Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Site Plan: Area A**

Sheet No:  
**C-100**

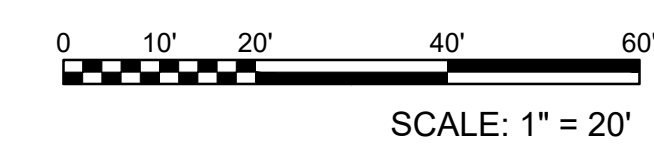


- 3 STOP SIGN, TYP. (2 EA.) (C-504)
- 1 TYPE D ACCESSIBLE RAMP, TYP. (C-506)
- 4 BIKE RACK (C-504)
- SIGN A
- SIGN B
- 25' SETBACK LINE
- 6' WIDE LANDSCAPE STRIP
- 1 6' WIDE TYP. CONCRETE SIDEWALK (C-500)
- 3 MANHOLE JUNCTION BOX (CG501)
- 1 CROSSWALK STRIPING (C-507)

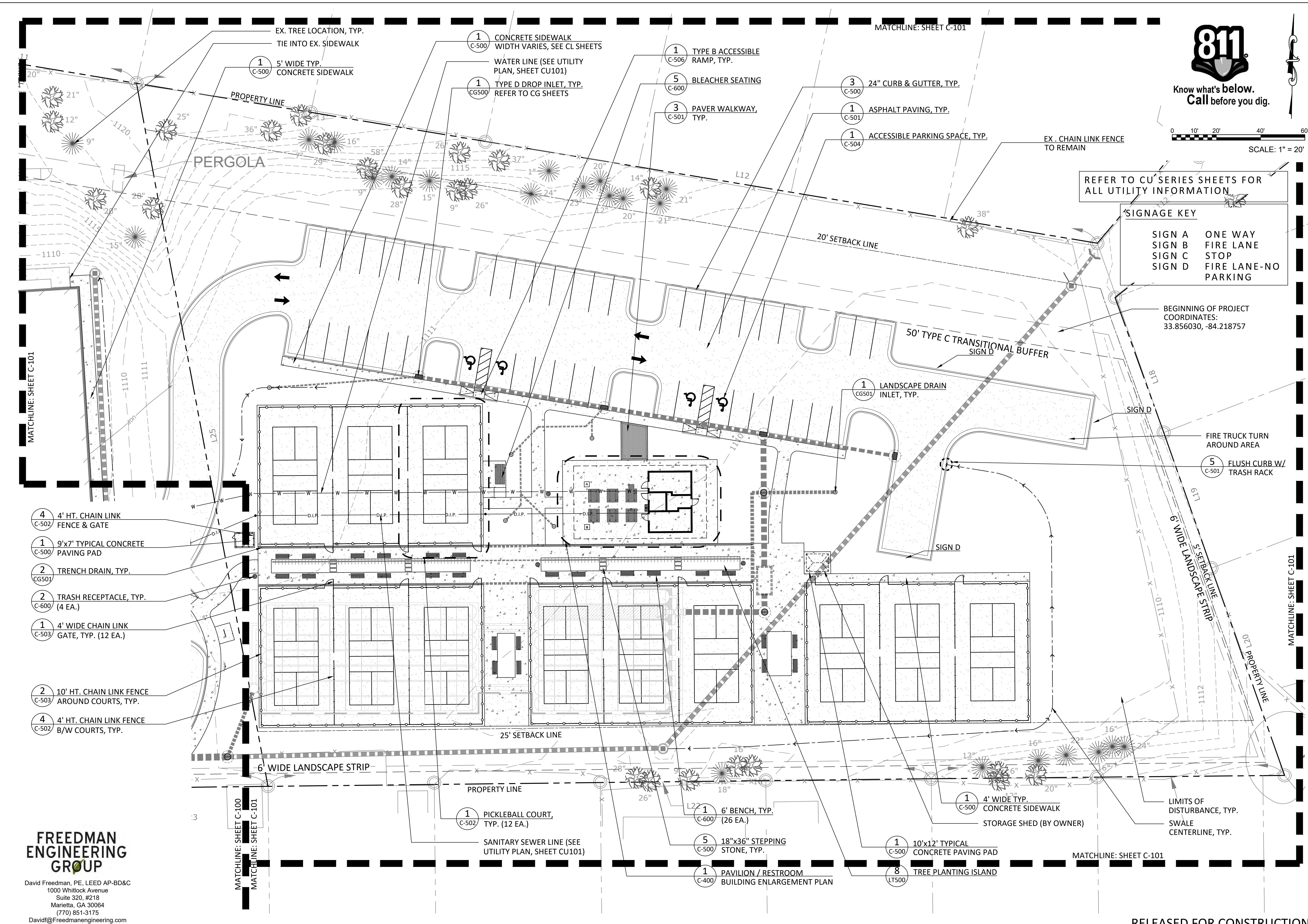
**SIGNAGE KEY**

⬆	SIGN A	ONE WAY
⬆	SIGN B	FIRE LANE
⬆	SIGN C	STOP
⬆	SIGN D	FIRE LANE-NO PARKING

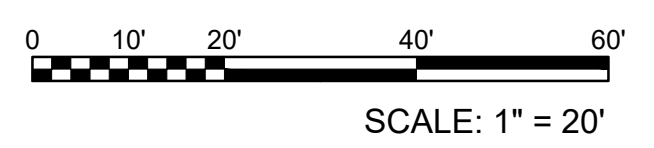
REFER TO CU SERIES SHEETS FOR ALL UTILITY INFORMATION



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**SIGNAGE KEY**

SIGN A	ONE WAY
SIGN B	FIRE LANE
SIGN C	STOP
SIGN D	FIRE LANE-NO PARKING

BEGINNING OF PROJECT COORDINATES:  
33.856030, -84.218757

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Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Site Plan: Area B**

Sheet No:  
**C-101**

**FREEDMAN ENGINEERING GROUP**

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- BID ALTERNATE NOTES:**
1. BASE BID SHALL NOT INCLUDE PAVILION, BUT SHALL INCLUDE 70'x38' CONCRETE PAVING SLAB BELOW AND STUBBED UP WATER AND SANITARY LINE.
  2. CONTRACTOR SHALL ADJUST TOTAL BASE BID BY INCLUDING THE FOLLOWING:
  3. BID ALTERNATE #1:
    - 3.1. CONSTRUCTION OF PREFABRICATED PAVILION AS SHOWN.
    - 3.1.1. REFER TO PROJECT MANUAL FOR MORE INFORMATION.



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SCALE: 1/4" = 1'-0"

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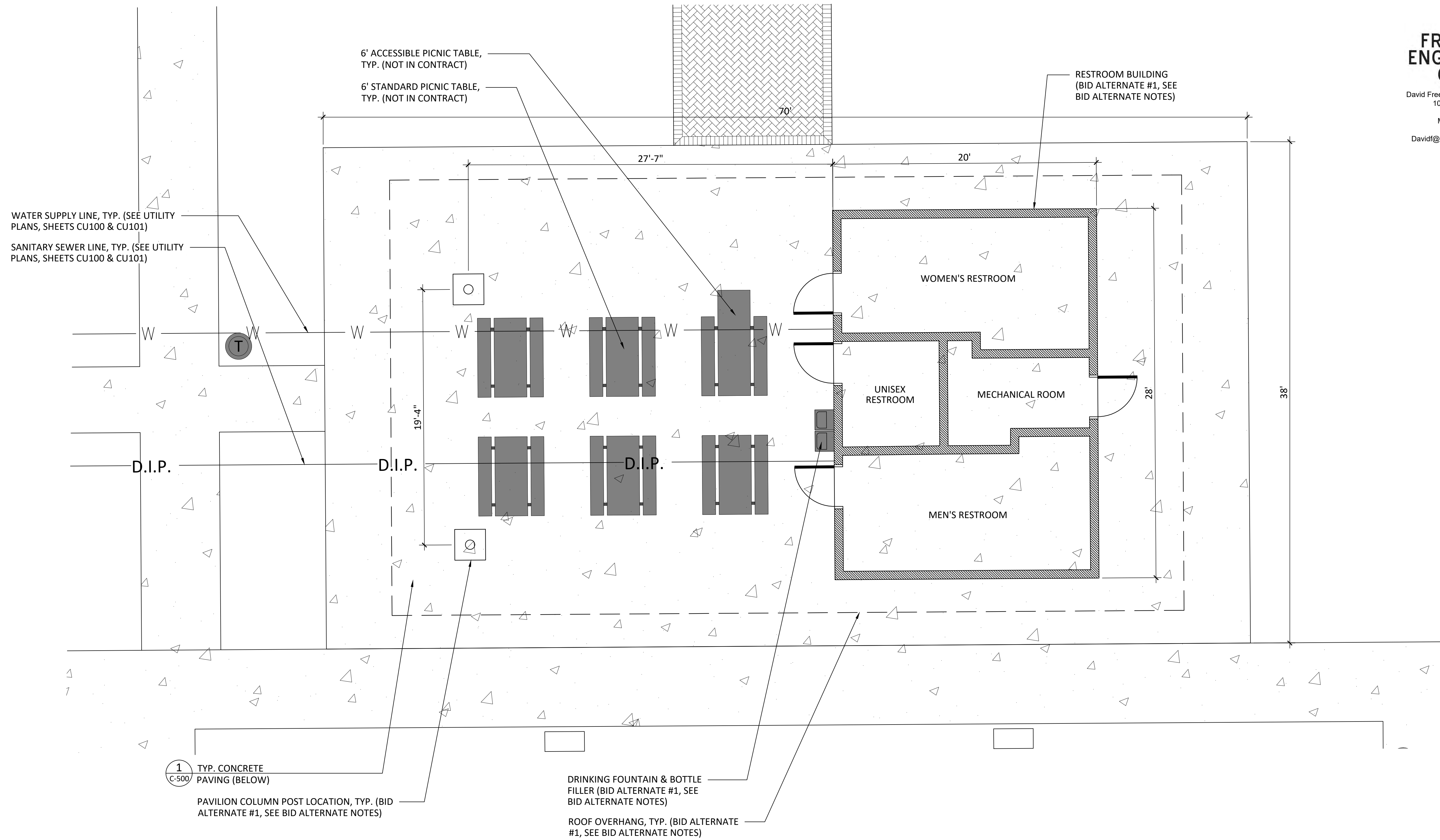
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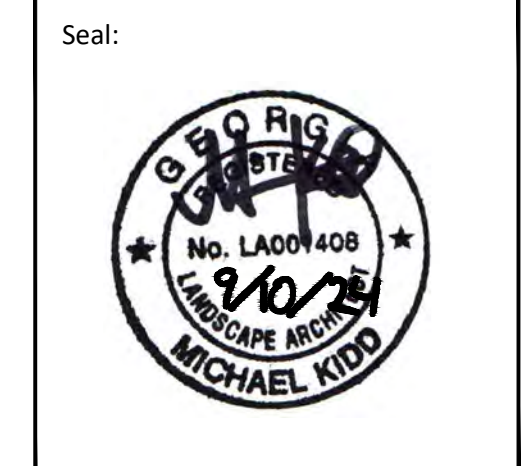
Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Pavilion / Restroom Building Enlargement Plan**

Sheet No:  
**C-400**





Date: 09/10/2024  
Project No: 2023-019  
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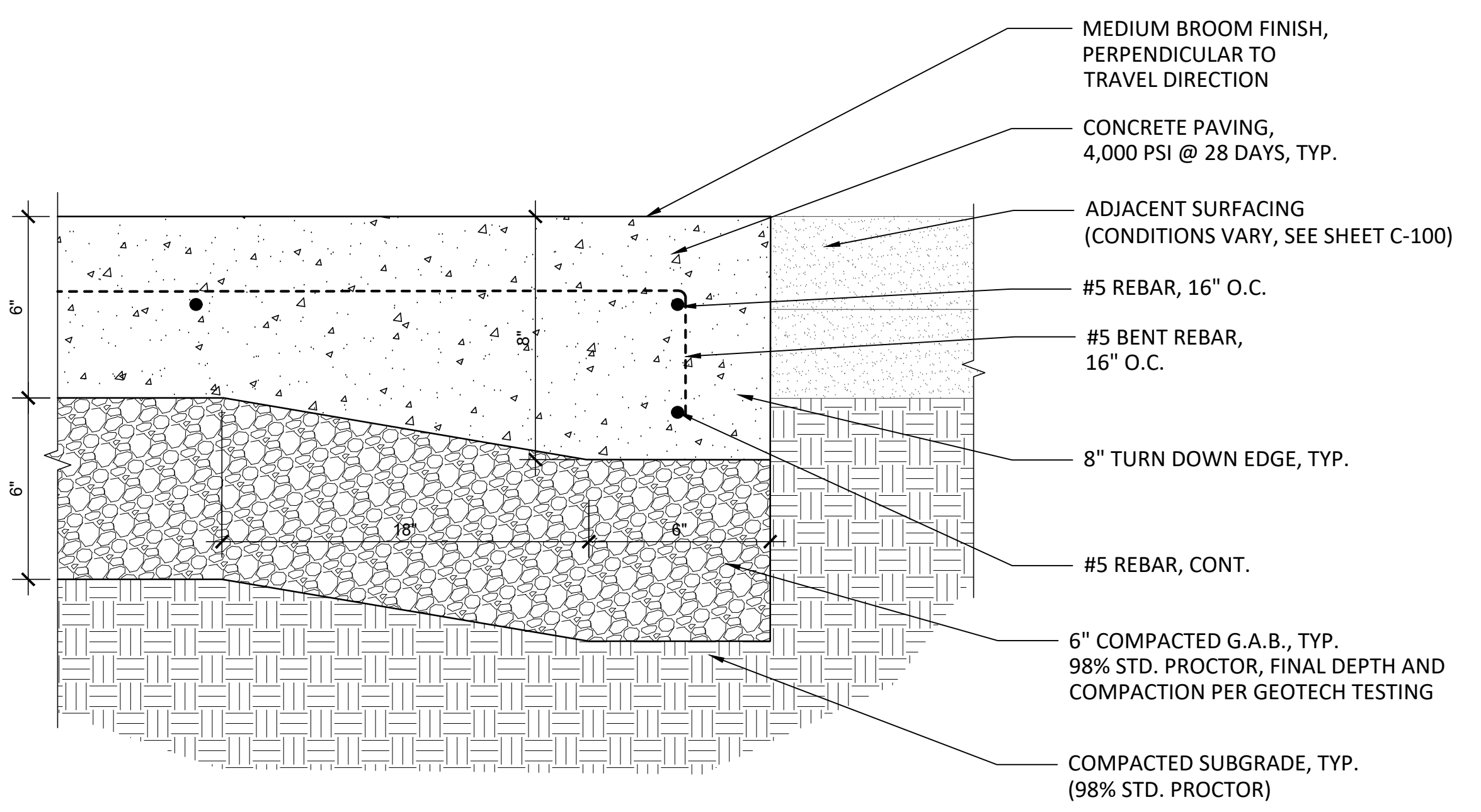
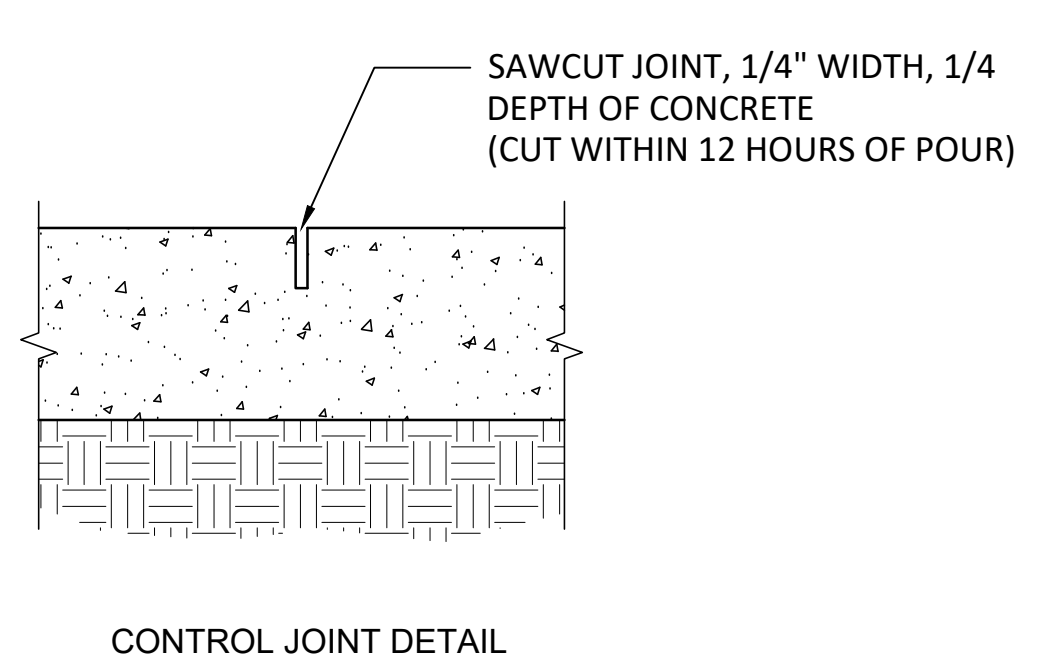
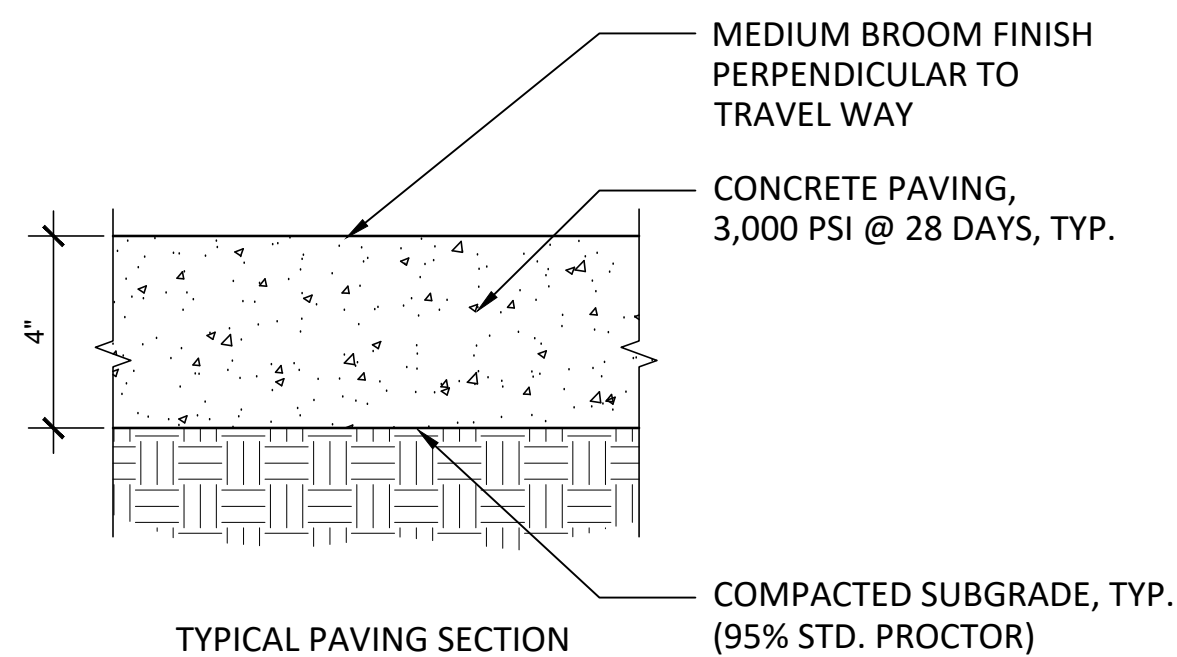
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Sheet Title:  
**Construction Details**

Sheet No:  
**C-500**

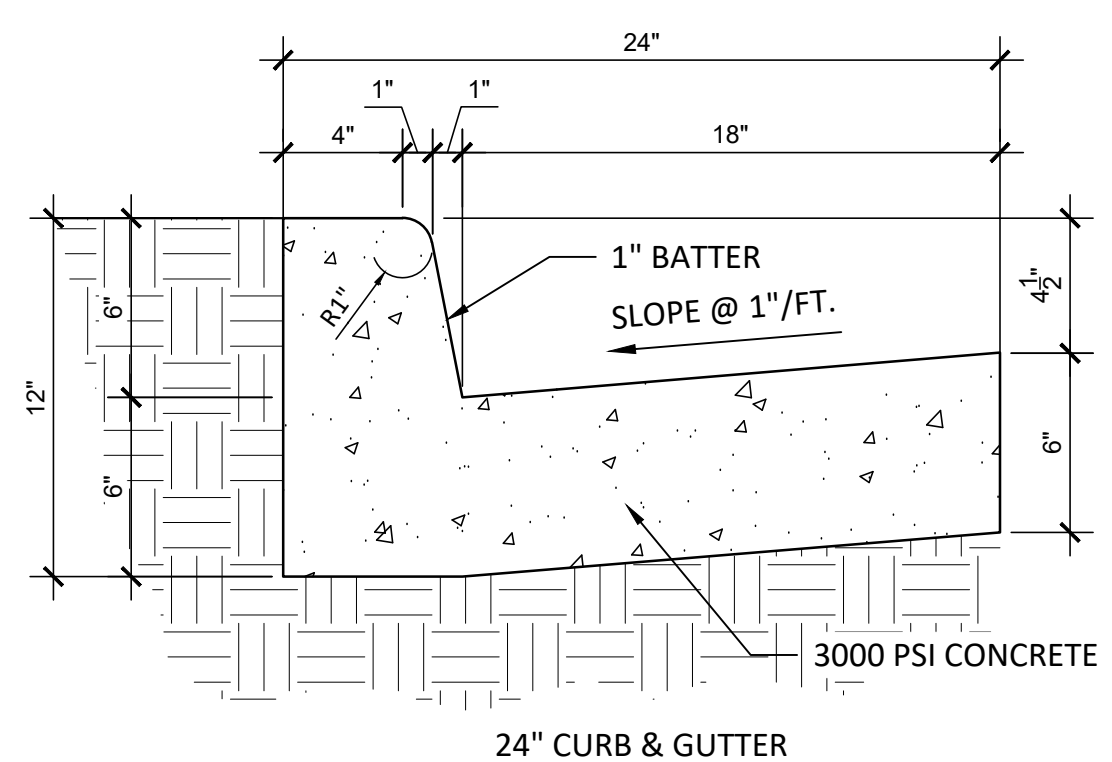


- CONCRETE PAVING NOTES:**
- PAVEMENT WIDTH VARIES. REFER TO SITE PLAN.
  - CONTROL JOINT SPACING EQUAL TO WIDTH OF WALK UNLESS OTHERWISE INDICATED ON THE PLANS.
  - EXPANSION JOINTS @ 40' MAX., AND WHEN ABUTTING ADJACENT RIGID PAVEMENTS, CURBS, AND STRUCTURES, OR AS SHOWN ON PLANS.
  - INSTALL A TEMPORARY SNAP/CAP OVER THE TOP OF THE EXPANSION JOINT AFTER THE EXPANSION JOINT BOARD IS INSTALLED. ONCE CURED, REMOVE THE CAP, INSTALL BACKER ROD, AND CAULK THE TOP OF JOINT.
  - ALL JOINTS SHALL BE PERPENDICULAR WITH EDGES OF WALK. IF WALK IS CURVED, JOINTS SHALL EXTEND FROM RADIUS POINT.
  - CONCRETE TO BE 3,000 PSI @ 28 DAYS, AIR ENTRAINED. CONCRETE TO BE LOW CARBON VERTUA BY CEMEX (READY MIX USA) OR EQUIVALENT WITH 30% OR GREATER REDUCTION IN EMISSIONS COMPARED TO STRAIGHT CONCRETE MIX.
  - SEE GENERAL NOTES AND/OR SPECIFICATIONS FOR ADDITIONAL INFORMATION.

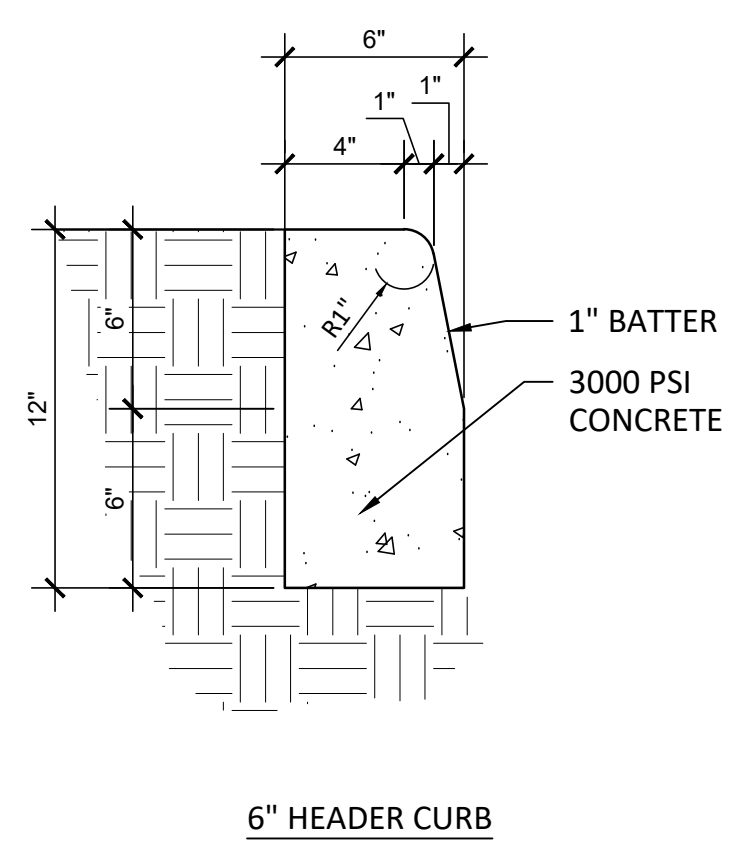
**NOTE:**  
CONCRETE TO BE 4,000 PSI @ 28 DAYS, AIR ENTRAINED. CONCRETE TO BE LOW CARBON VERTUA BY CEMEX (READY MIX USA) OR EQUIVALENT WITH 30% OR GREATER REDUCTION IN EMISSIONS COMPARED TO STRAIGHT CONCRETE MIX.  
REFER TO DETAIL 1 / SHEET C-500 FOR ADDITIONAL INFORMATION, INCLUDING CONTROL AND ISOLATION JOINTS.

**1 TYPICAL CONCRETE PAVING DETAIL**  
SCALE: 3" = 1'-0"

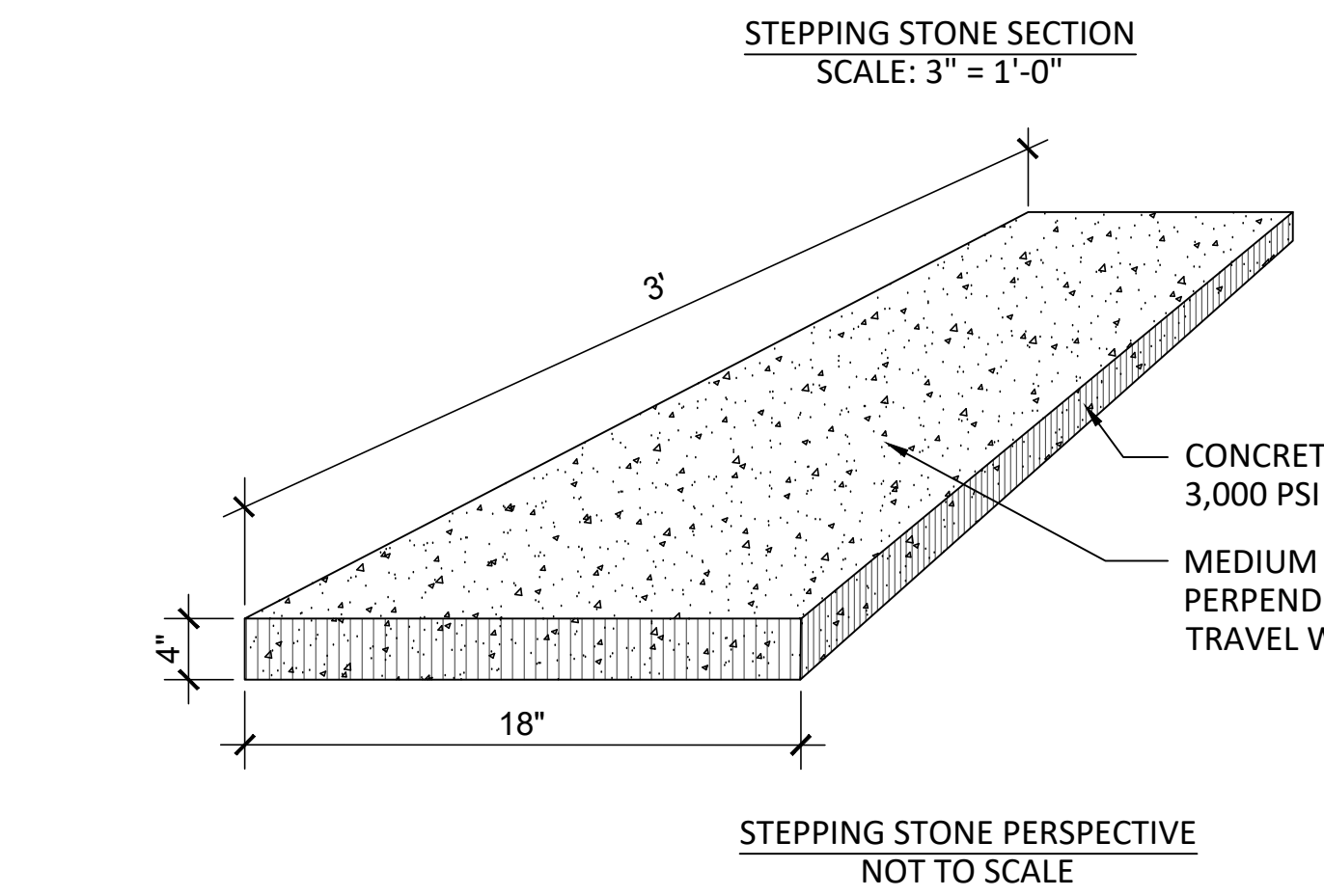
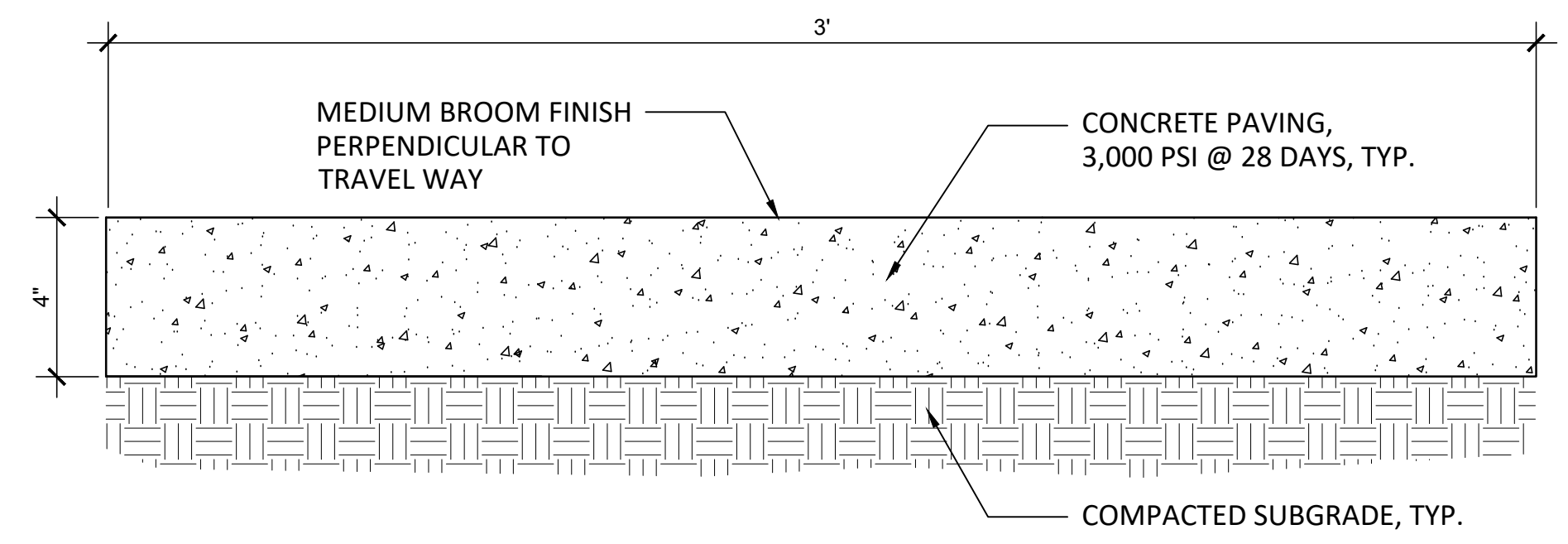
**2 VEHICULAR CONCRETE PAVING**  
SCALE: 3" = 1'-0"



- NOTE:**
- 1/2" PREFORMED EXPANSION JOINTS SHALL BE LOCATED AT TANGENT POINTS OF RADIUS RETURNS, DRIVEWAYS, STREET INTERSECTIONS, AND AT 40' INTERVALS ALONG THE CURB.
  - CONTROL JOINTS SHALL BE LOCATED AT 10' INTERVALS ALONG THE CURB.
  - CONCRETE TO BE 3,000 PSI @ 28 DAYS, AIR ENTRAINED. CONCRETE TO BE LOW CARBON VERTUA BY CEMEX (READY MIX USA) OR EQUIVALENT WITH 30% OR GREATER REDUCTION IN EMISSIONS COMPARED TO STRAIGHT CONCRETE MIX.



- NOTE:**
- 1/2" PREFORMED EXPANSION JOINTS SHALL BE LOCATED AT TANGENT POINTS OF RADIUS RETURNS, DRIVEWAYS, STREET INTERSECTIONS, AND AT 40' INTERVALS ALONG THE CURB.
  - CONTROL JOINTS SHALL BE LOCATED AT 10' INTERVALS ALONG THE CURB.
  - CONCRETE TO BE 3,000 PSI @ 28 DAYS, AIR ENTRAINED. CONCRETE TO BE LOW CARBON VERTUA BY CEMEX (READY MIX USA) OR EQUIVALENT WITH 30% OR GREATER REDUCTION IN EMISSIONS COMPARED TO STRAIGHT CONCRETE MIX.



**3 24" CURB & GUTTER DETAIL**  
SCALE: 2" = 1'-0"

**4 6" HEADER CURB DETAIL**  
SCALE: 2" = 1'-0"

**5 18"x36" STEPPING STONE**  
SCALE: VARIES



Seal:



Date: 09/10/2024  
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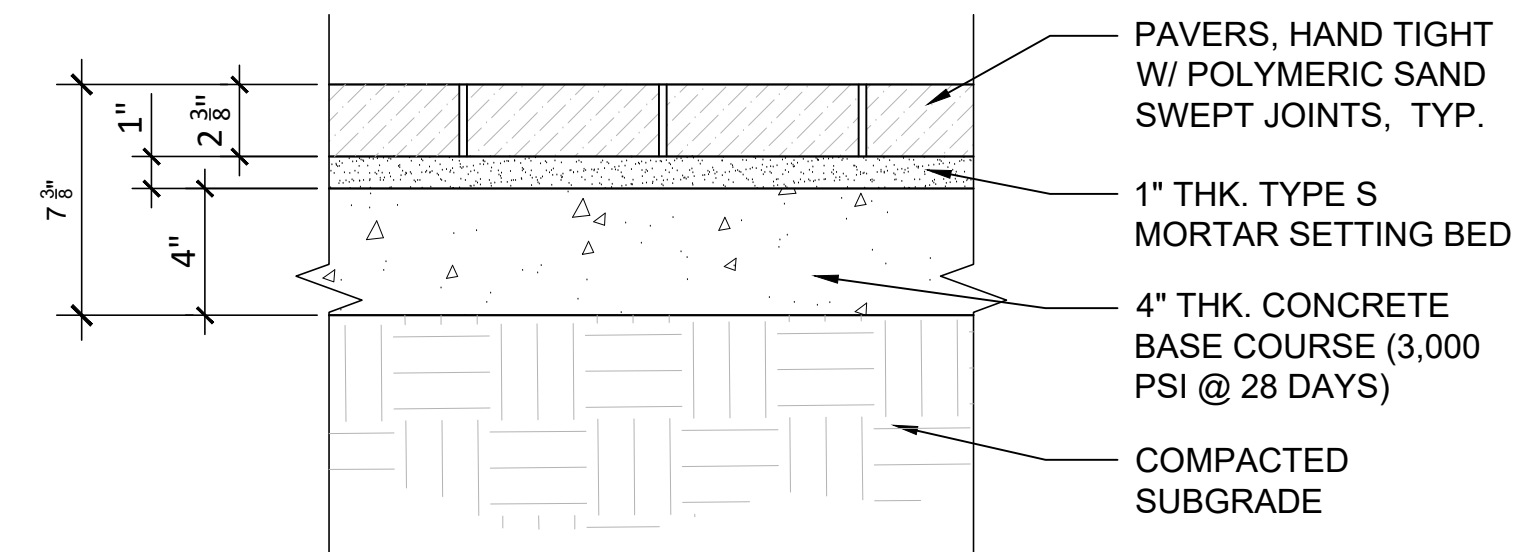
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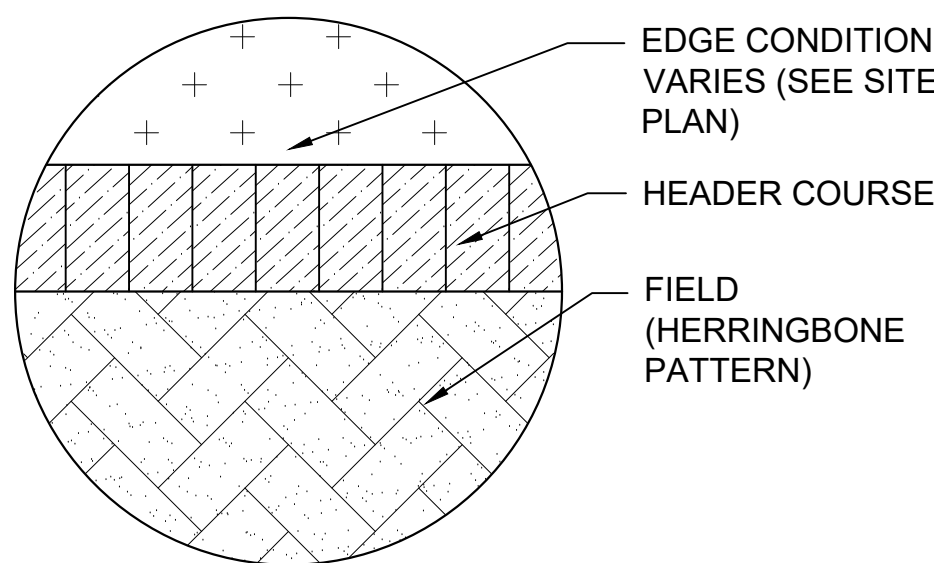
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**Construction Details**

Sheet No:  
**C-501**



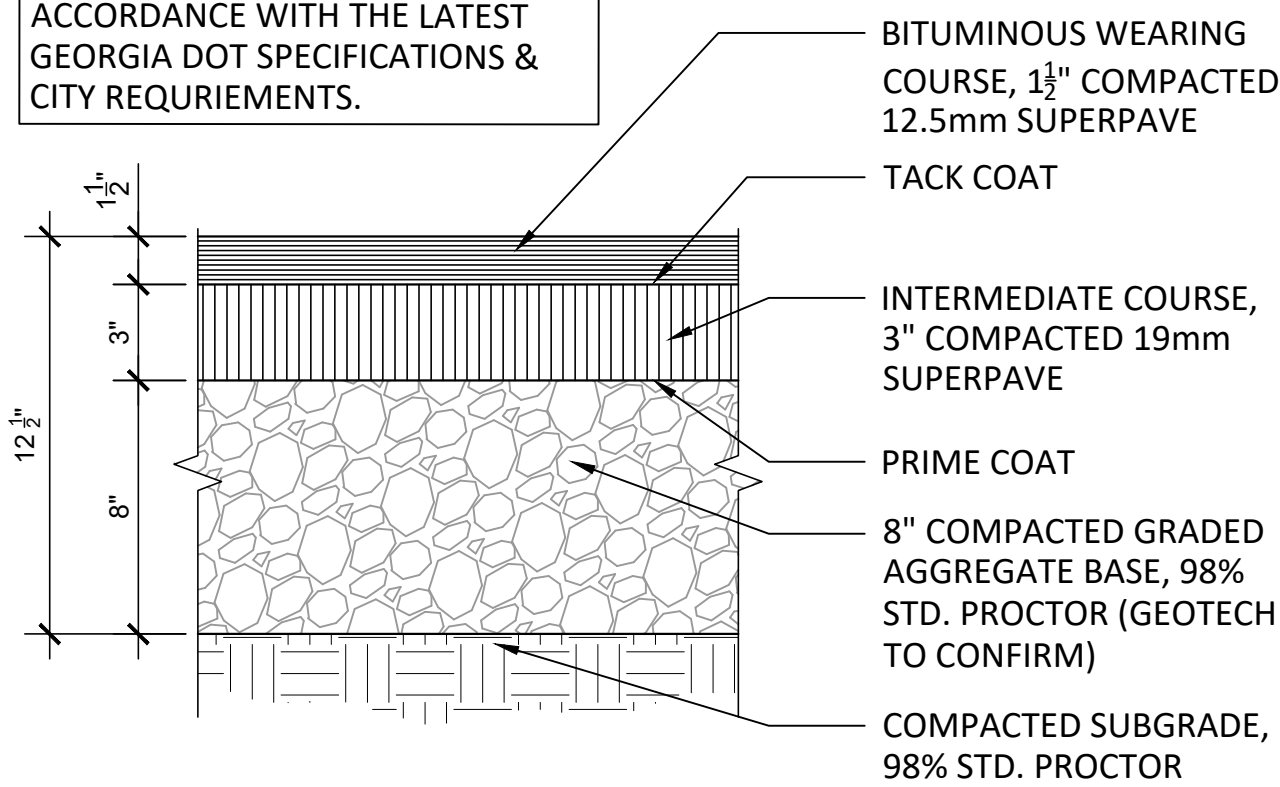
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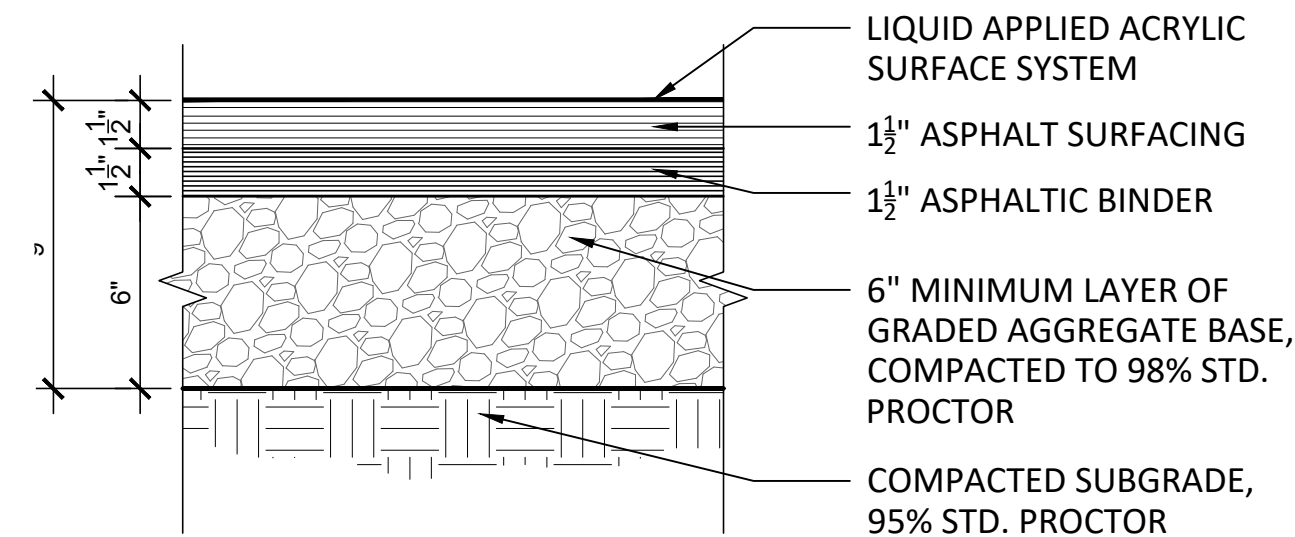
PLAN  
(NOT TO SCALE)

- PAVER NOTE:**
1. HEADER COURSE PAVER:
    - 1.1. Holland Stone by Belgard Pavers (or Approved Equal)
    - 1.2. 2 3/8" Thick
    - 1.3. Gray Granite Color
    - 1.4. Soldier Course Pattern
  2. FIELD PAVER
    - 2.1. Holland Stone by Belgard Pavers (or Approved Equal)
    - 2.2. 2 3/8" Thick
    - 2.3. Gray Granite Color
    - 2.4. Herringbone Pattern

**ASPHALT PAVING NOTE:**  
ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST GEORGIA DOT SPECIFICATIONS & CITY REQUIREMENTS.



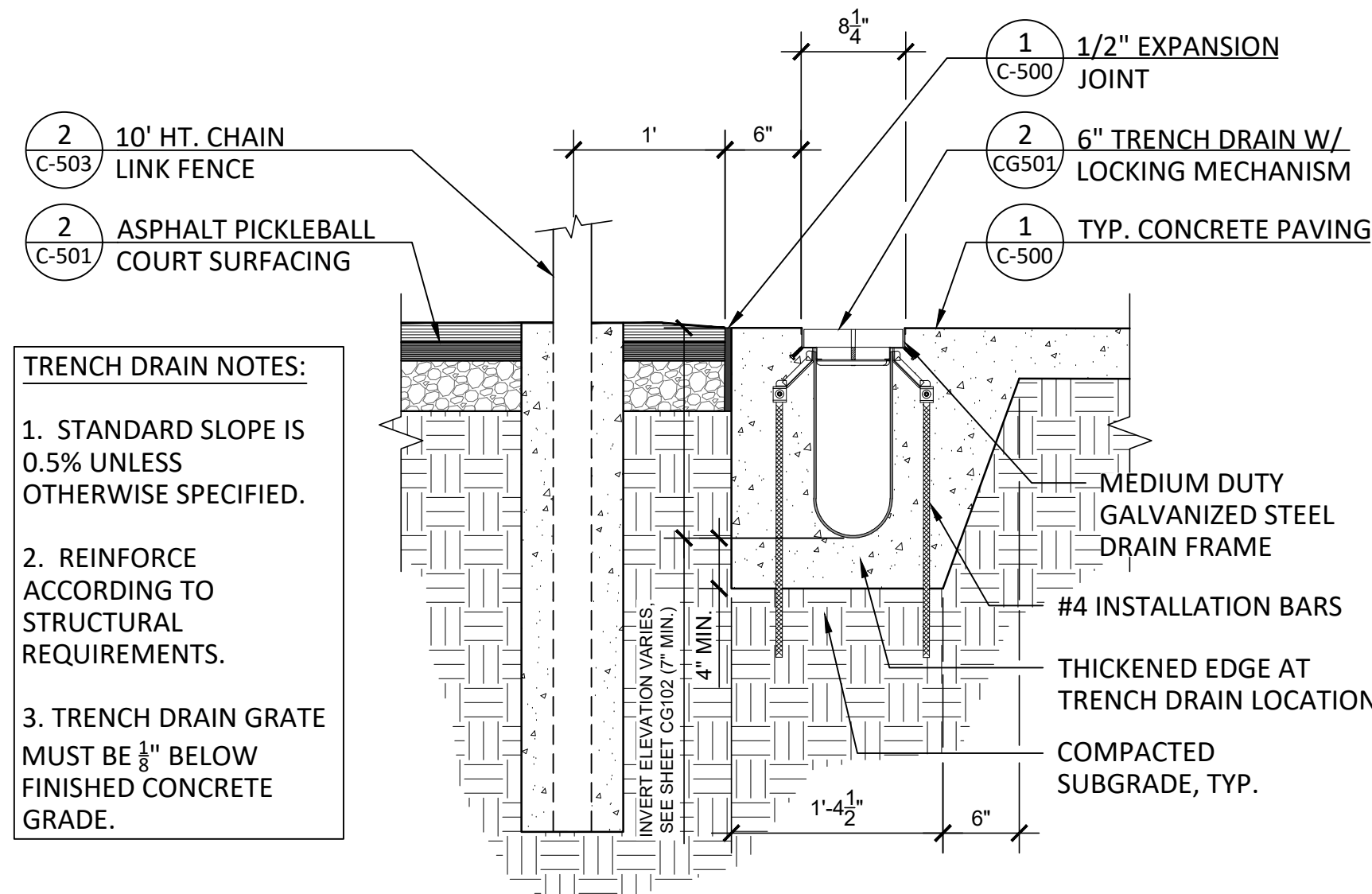
**1 ASPHALT DRIVEWAY DETAIL**  
SCALE: 2" = 1'-0"



SEE PICKLEBALL SURFACING NOTES, SHEET C-502, FOR ADDITIONAL INFORMATION.

**2 ASPHALT COURT SURFACING DETAIL**  
SCALE: 2" = 1'-0"

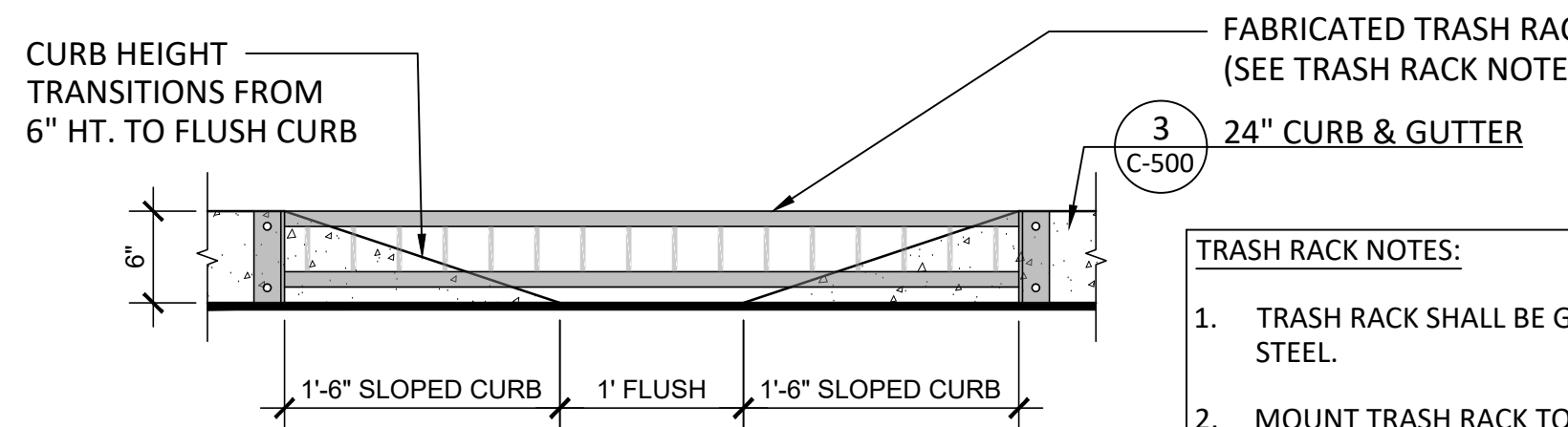
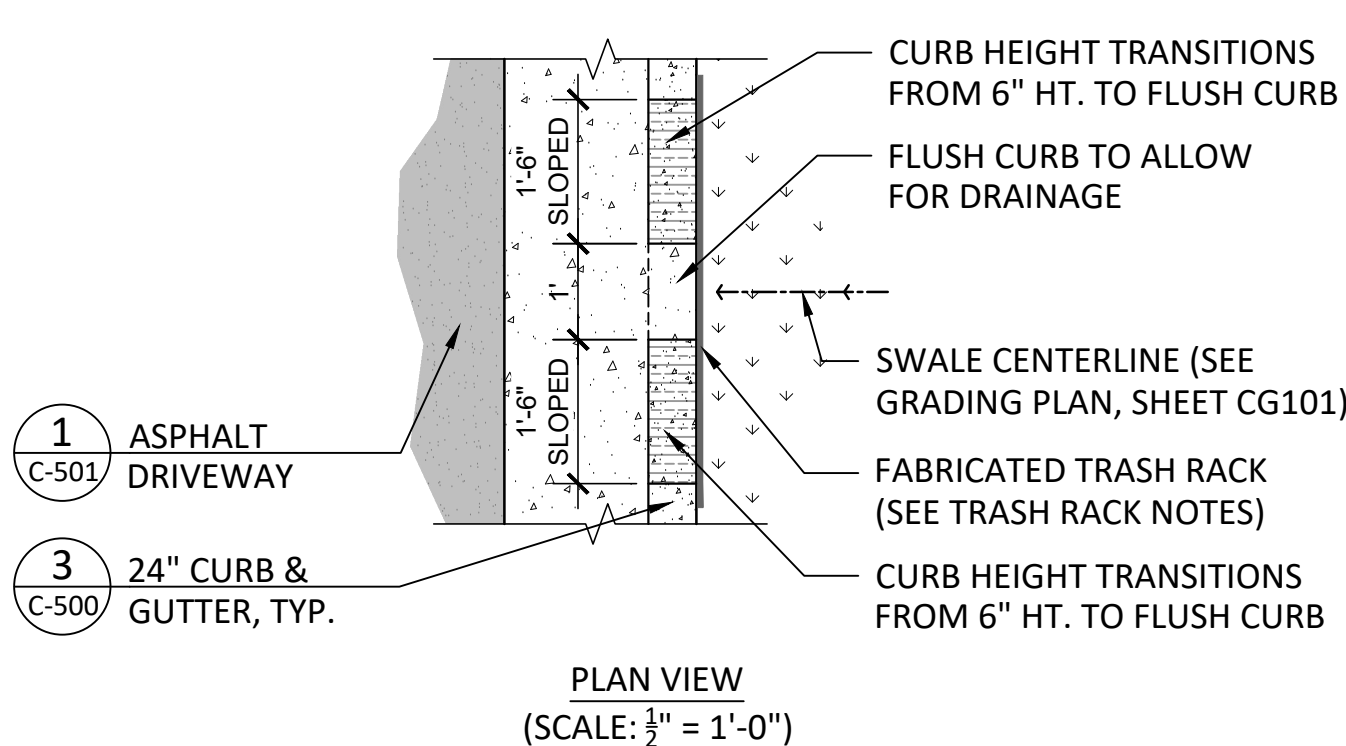
**3 PAVER WALKWAY DETAIL**  
SCALE: 2" = 1'-0"



**TRENCH DRAIN NOTES:**

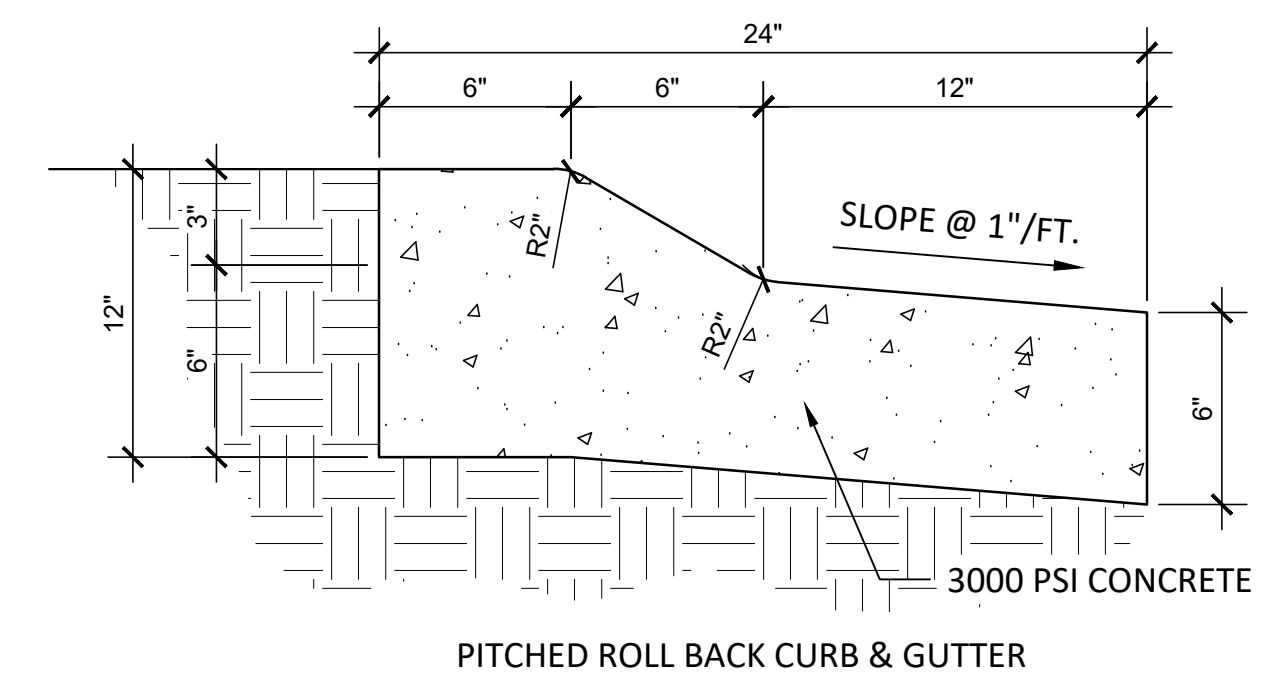
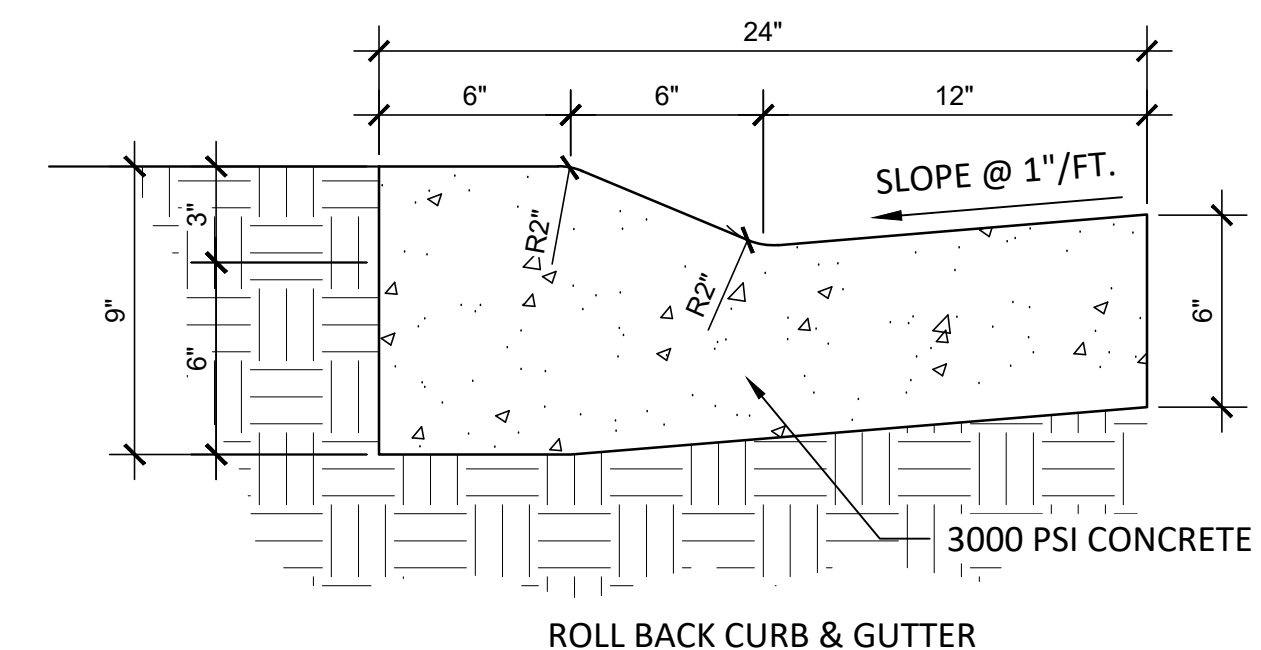
1. STANDARD SLOPE IS 0.5% UNLESS OTHERWISE SPECIFIED.
2. REINFORCE ACCORDING TO STRUCTURAL REQUIREMENTS.
3. TRENCH DRAIN GRATE MUST BE 3/8" BELOW FINISHED CONCRETE GRADE.

**4 EDGE OF COURT / TRENCH DRAIN CROSS SECTION**  
SCALE: 1" = 1'-0"



- TRASH RACK NOTES:**
1. TRASH RACK SHALL BE GALVANIZED STEEL.
  2. MOUNT TRASH RACK TO BACK OF CURB WITH 1/4" DIA. x 2" GALVANIZED EXPANSION BOLTS.
  3. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF TRASH RACK FABRICATION TO PROJECT LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION

**5 FLUSH CURB WITH TRASH RACK**  
SCALE: VARIES



**NOTE:**  
1. SEE 24" CURB & GUTTER DETAIL (DETAIL 3 / C-500) FOR ADDITIONAL INFORMATION.

**6 ROLL BACK CURB DETAIL**  
SCALE: 2" = 1'-0"

Seal:



Date: 09/10/2024

Project No: 2023-019

Drawn By: PS

Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

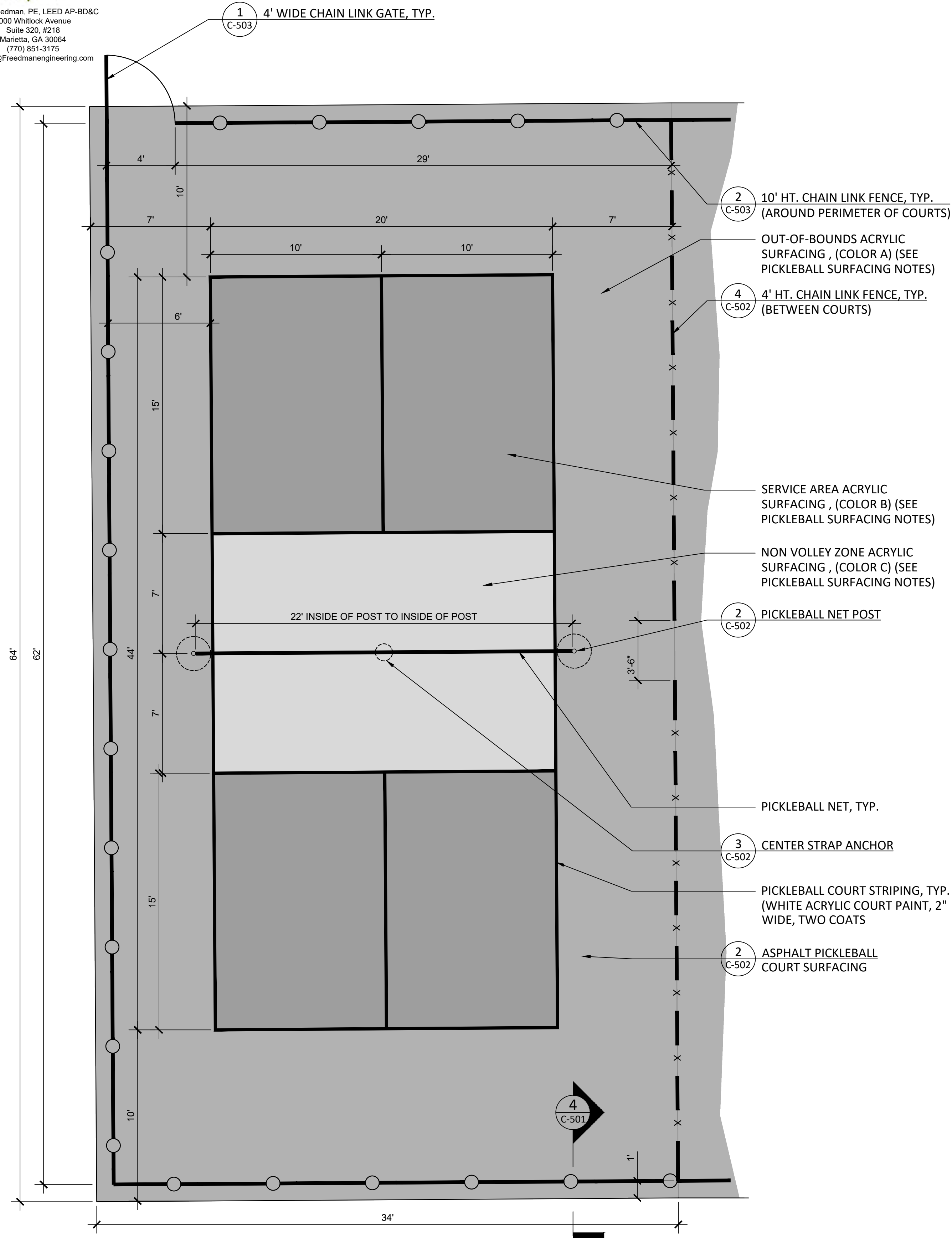
NO.	DATE	DESCRIPTION

Sheet Title:

**Construction  
Details**

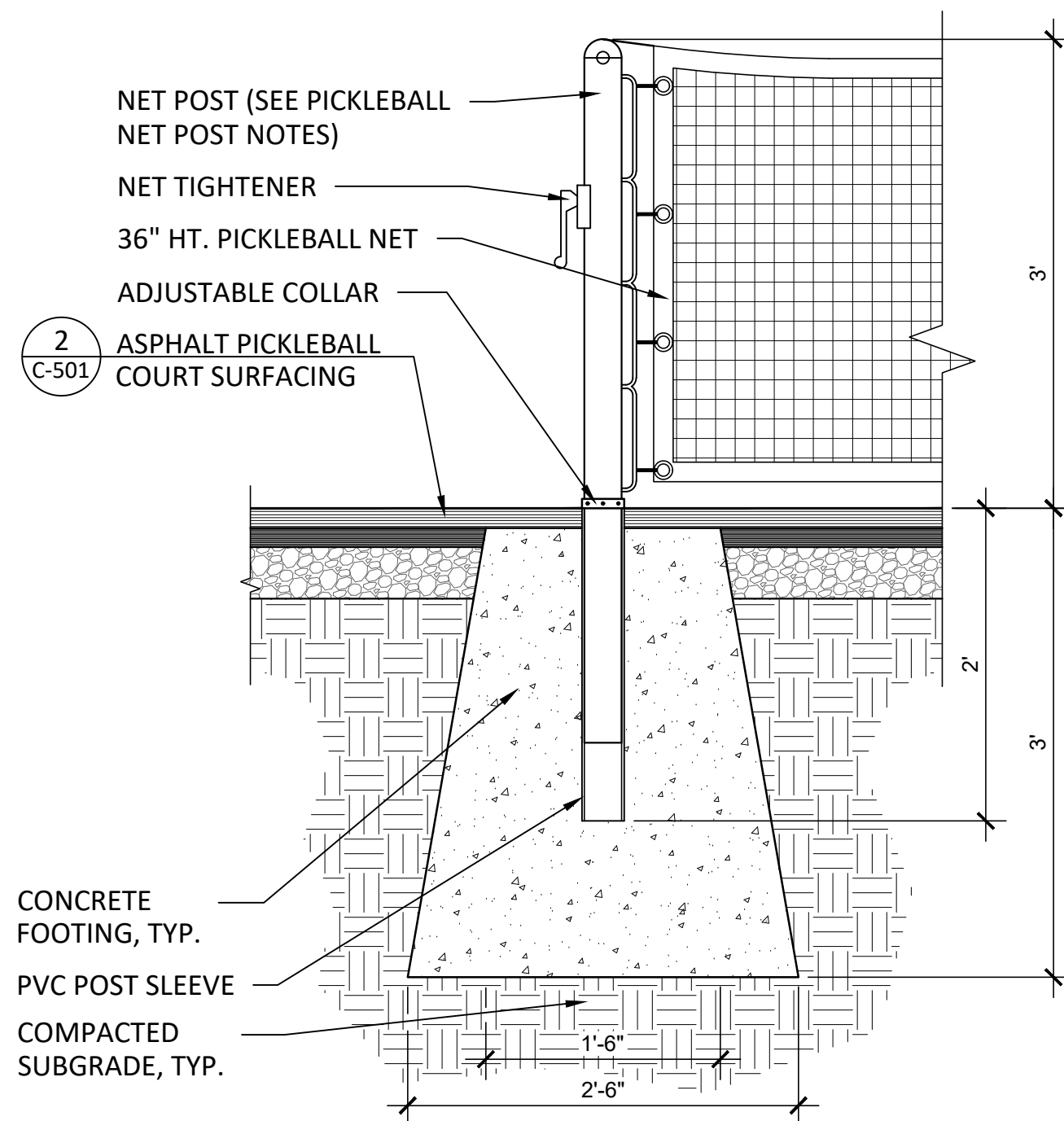
Sheet No:

**C-502**



**1 PICKLEBALL COURT SURFACING DETAIL**

SCALE: 1/4" = 1'-0"



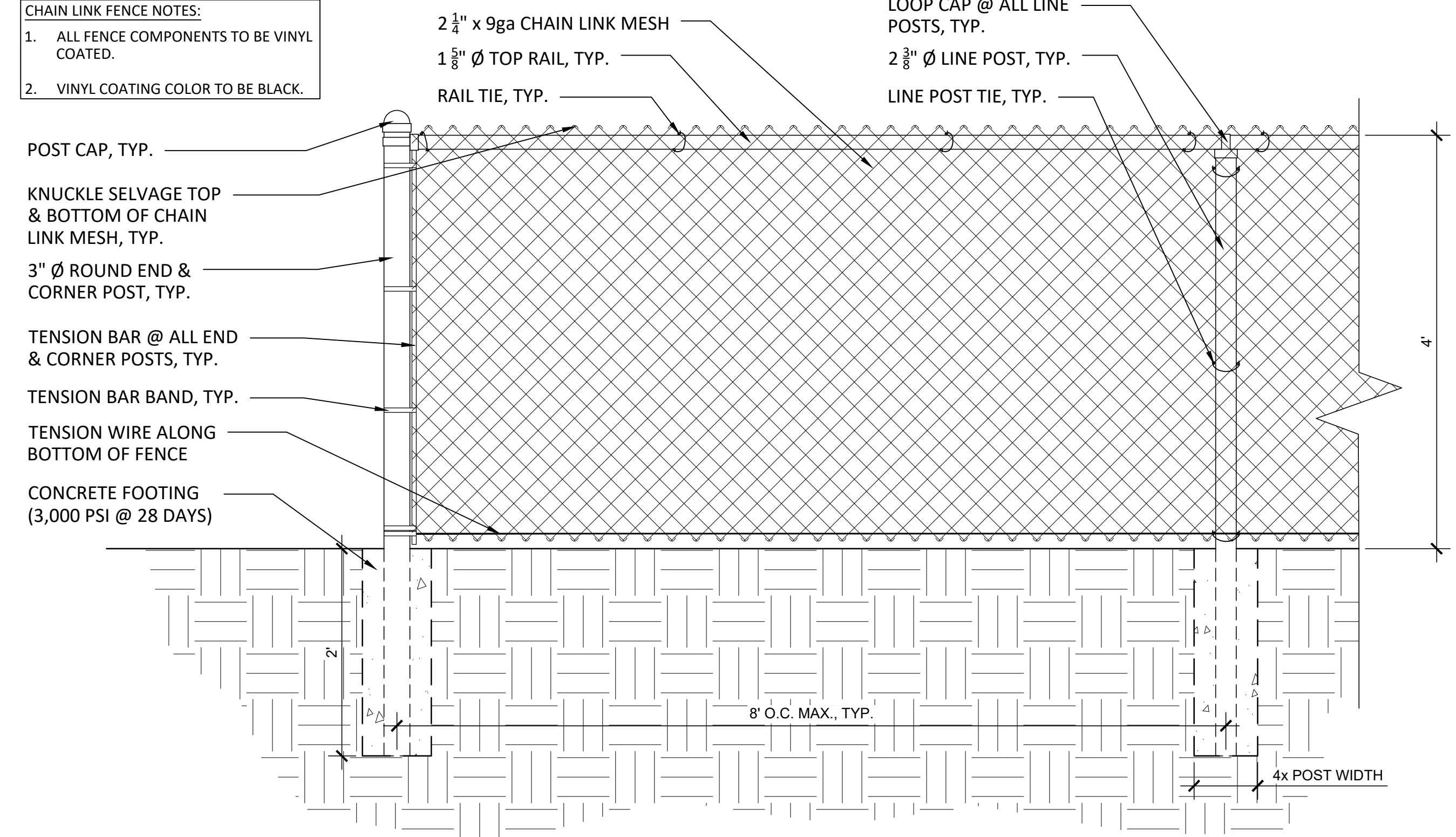
- PICKLEBALL NET AND NET POST NOTES:**
- NET POST SHALL BE ITEM # HT102-0001 BY PICKLEBALL CENTRAL (pickleballcentral.com, 877-961-3791) OR APPROVED EQUAL.
  - NET POSTS SHALL BE 54" IN LENGTH, 2 7/8" OUTSIDE DIAMETER, & BLACK IN COLOR.
  - NET POSTS SHALL BE MOUNTED IN PVC POST SLEEVE FOR REMOVABILITY.
  - NET WITH CENTER TIE DOWN SHALL BE 36" HT PERMANENT NET, ITEM #HT103 BY PICKLEBALL CENTRAL (pickleballcentral.com, 877-961-3791)
  - CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.

**2 PICKLEBALL NET POST DETAIL**

SCALE: 1" = 1'-0"

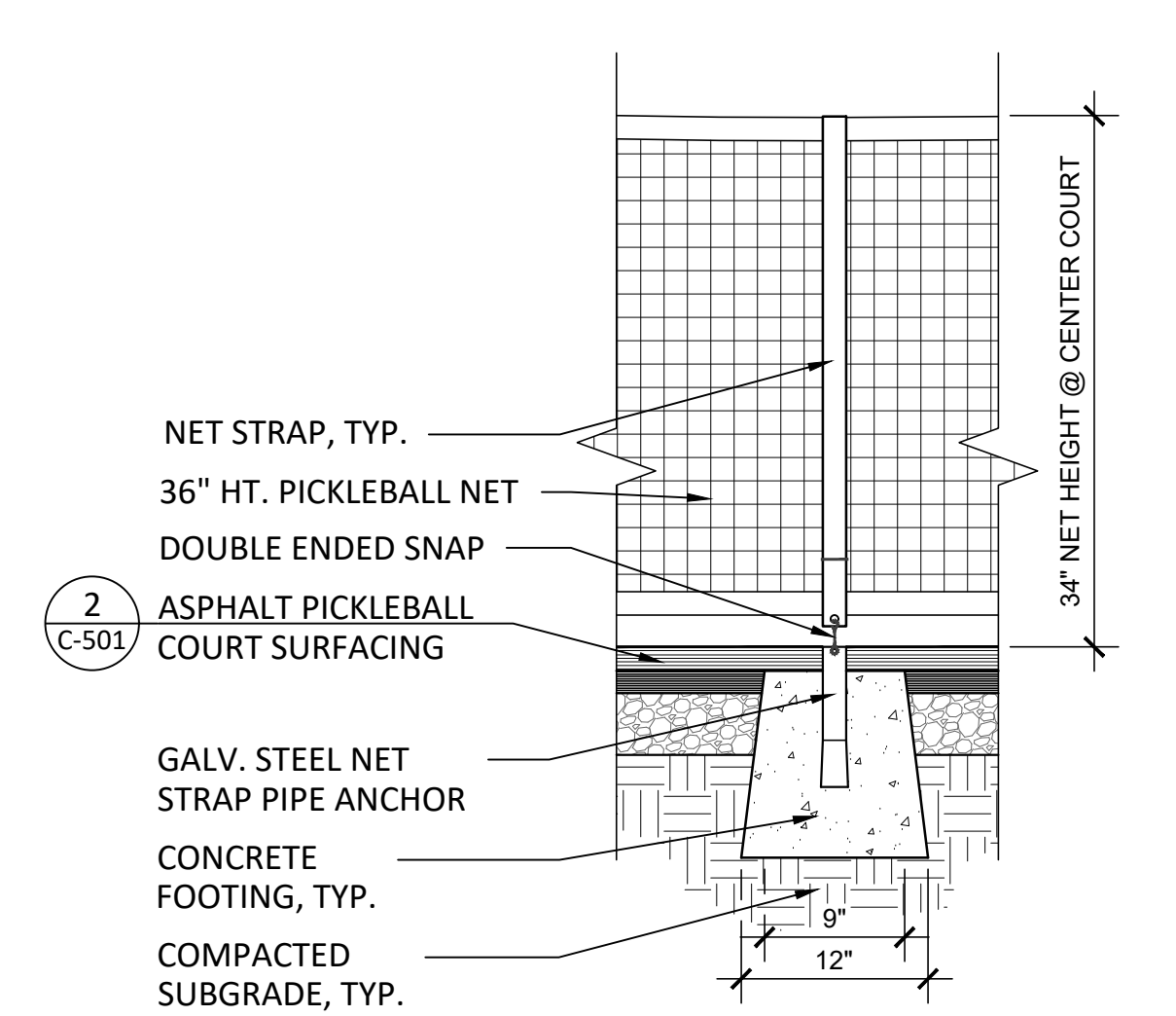
**CHAIN LINK FENCE NOTES:**

- ALL FENCE COMPONENTS TO BE VINYL COATED.
- VINYL COATING COLOR TO BE BLACK.



**4 4' HT. CHAIN LINK FENCE (BETWEEN COURTS)**

SCALE: 1" = 1'-0"



**3 CENTER STRAP ANCHOR DETAIL**

SCALE: 1" = 1'-0"

**PICKLEBALL SURFACING NOTES:**

PICKLEBALL COURTS SHALL BE SURFACED AND STRIPED TO MEET THE FOLLOWING SPECIFICATIONS:

- SURFACING:**
  - CONTRACTOR SHALL SURFACE ALL PICKLEBALL COURTS WITH ONE COAT OF ACRYLIC RESURFACER BASE COURSE (BELOW) WITH TWO COATS OF COLOR SURFACING TOP COURSE (ABOVE).
    - ACRYLIC RESURFACER SHALL BE BLACK ACRYLIC RESURFACING PRODUCT BY ACRYTECH, OR APPROVED EQUAL.
    - TWO COATS OF COLOR SURFACING SHALL BE COLORFLEX PRODUCT BY ACRYTECH, OR APPROVED EQUAL.
      - OUT-OF-BOUNDS COURT COLOR (COLOR A) SHALL BE SANDSTONE.
      - SERVICE AREA COLOR (COLOR B) SHALL BE COMPETITION BLUE.
      - NON-VOLLEY ZONE COURT COLOR (COLOR C) SHALL BE LIGHT BLUE.
      - CONTRACTOR SHALL PROVIDE SAMPLES OF ALL COURT SURFACE COLORS TO OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.
  - INSTALL ALL COURT SURFACING PRODUCTS PER MANUFACTURER RECOMMENDATIONS. MANUFACTURER INFO:
 

ACRYTECH SPORTS SURACING  
2660 EASTERLY PLACE, DECATUR, GA 30035  
770-734-3000  
www.atsports.com
- STRIPING:**
  - CONTRACTOR SHALL STRIPE COURTS AS SHOWN ON PLAN.
    - PICKLEBALL COURT STRIPES SHALL BE WHITE IN COLOR, TWO INCHES WIDE.

Seal:



Date: 09/10/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

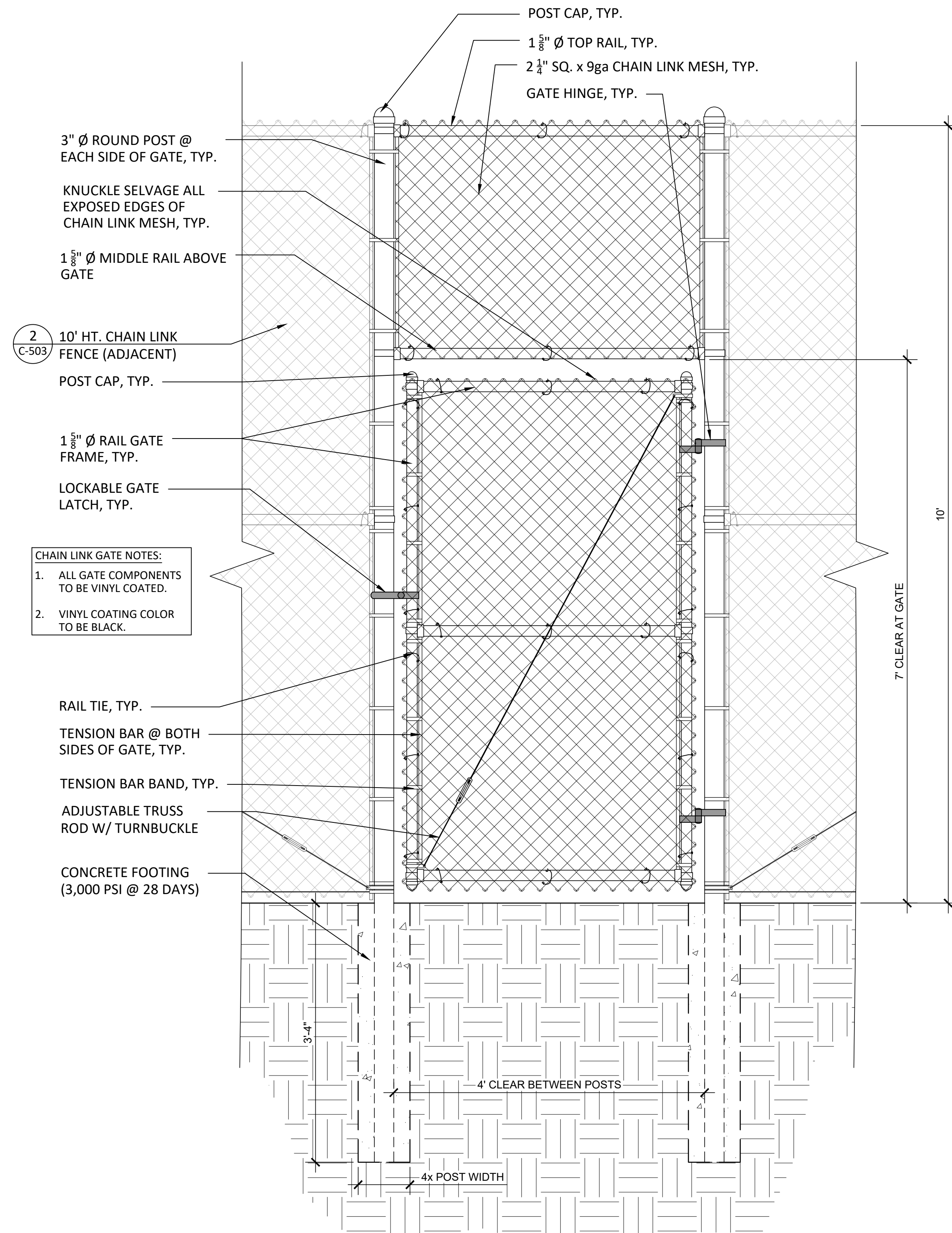
**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084  
City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

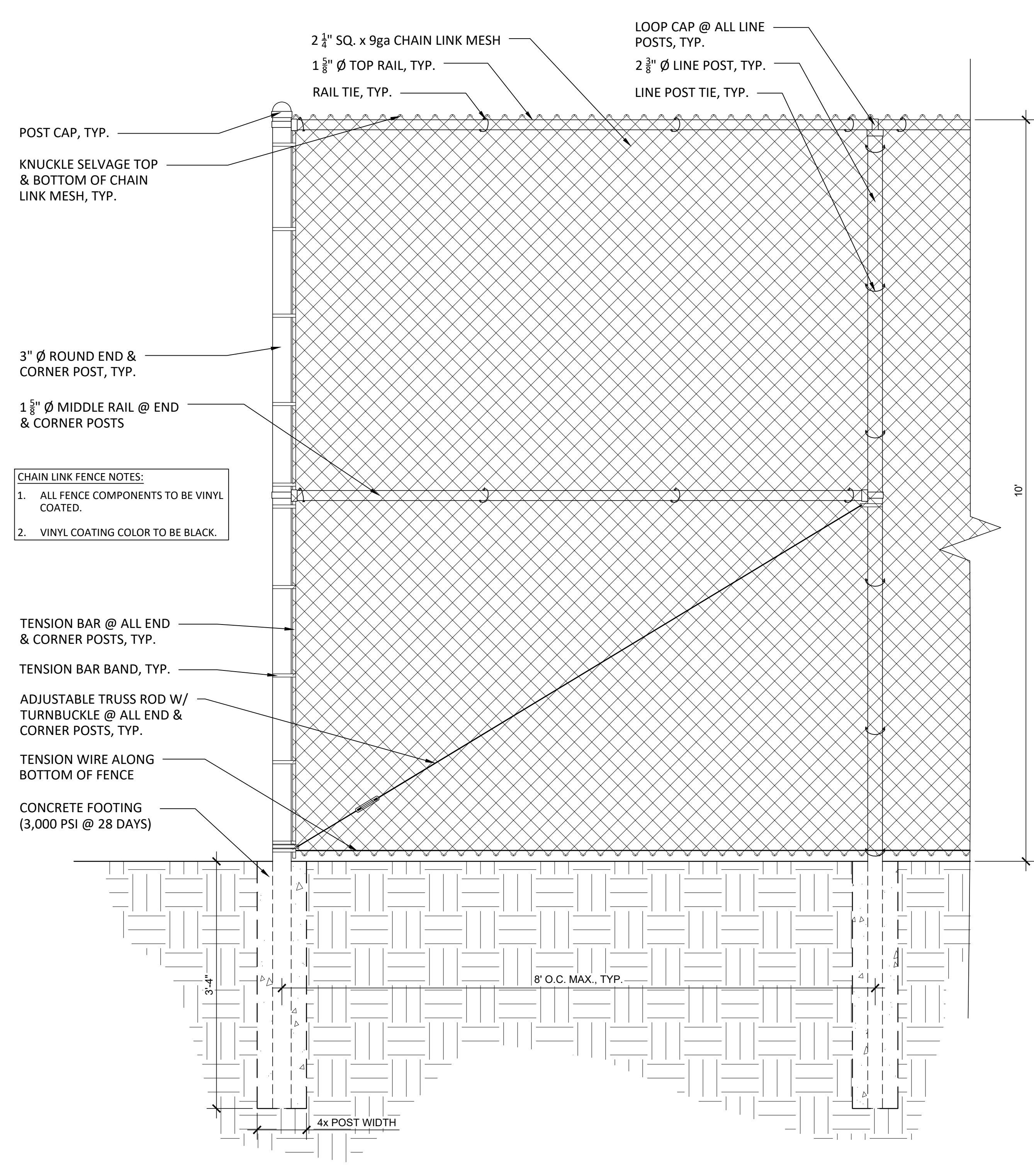
NO.	DATE	DESCRIPTION

Sheet Title:  
**Construction  
Details**

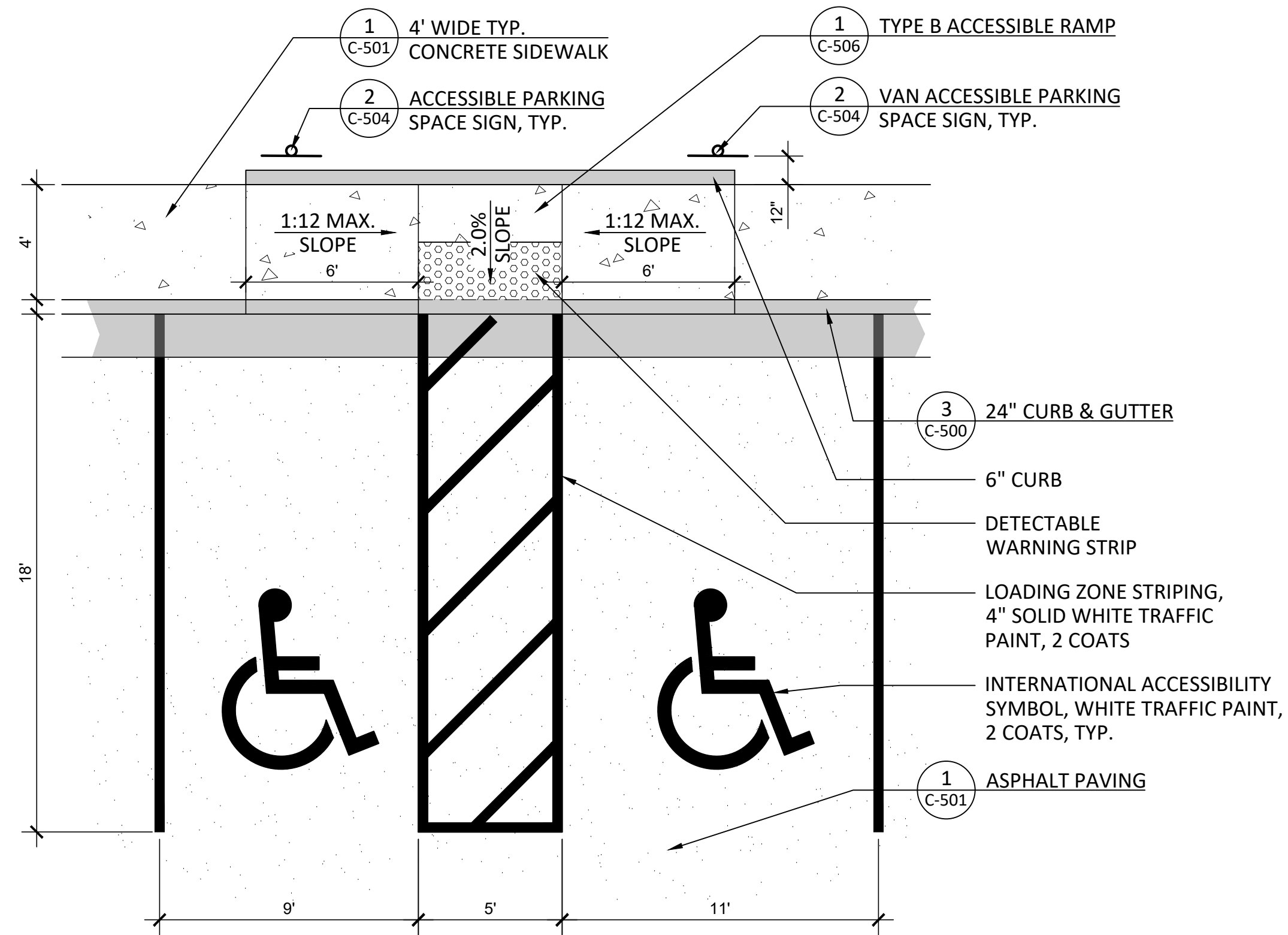
Sheet No:  
**C-503**



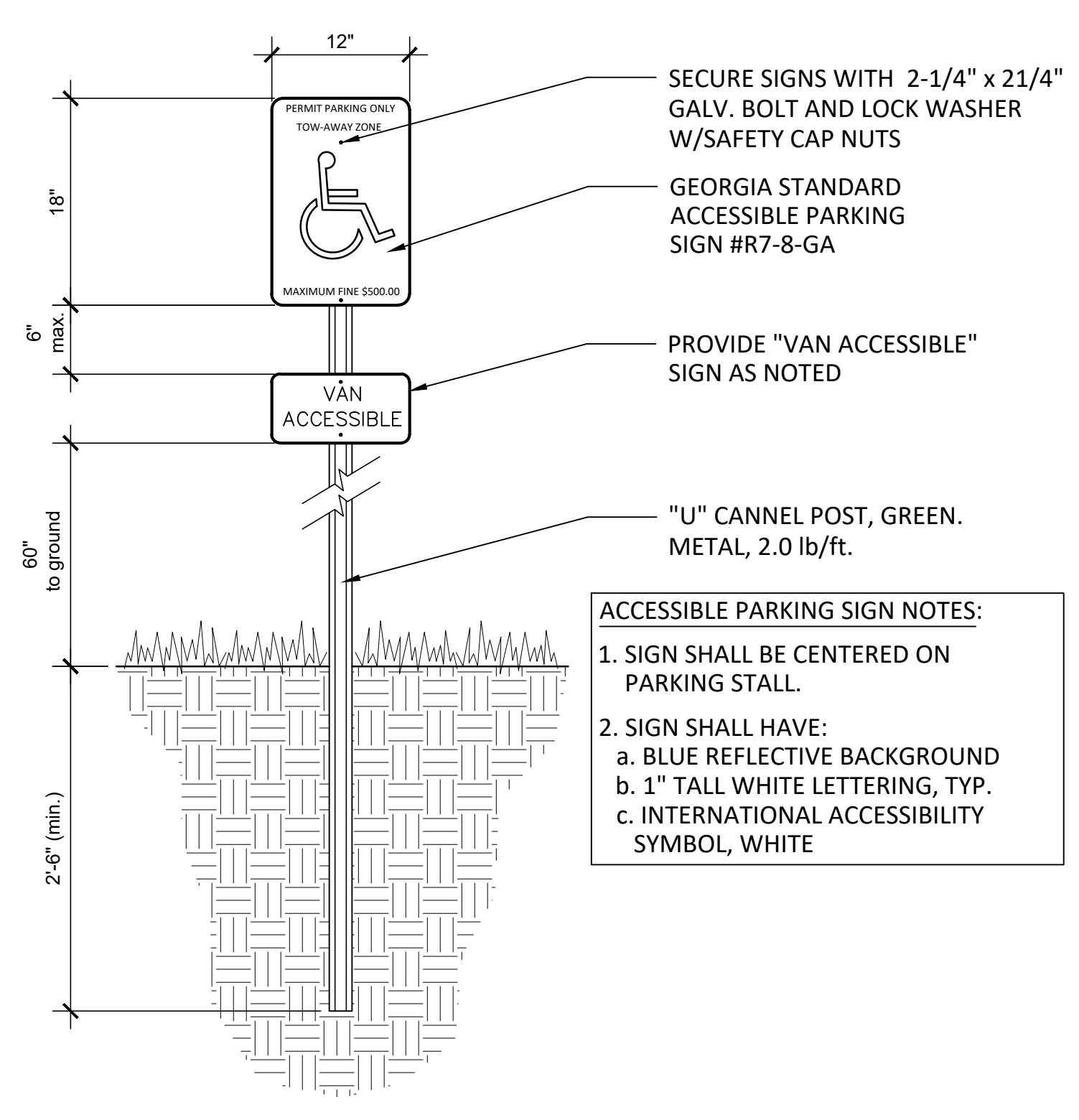
**1** 4' WIDE CHAIN LINK GATE  
SCALE: 1" = 1'-0"



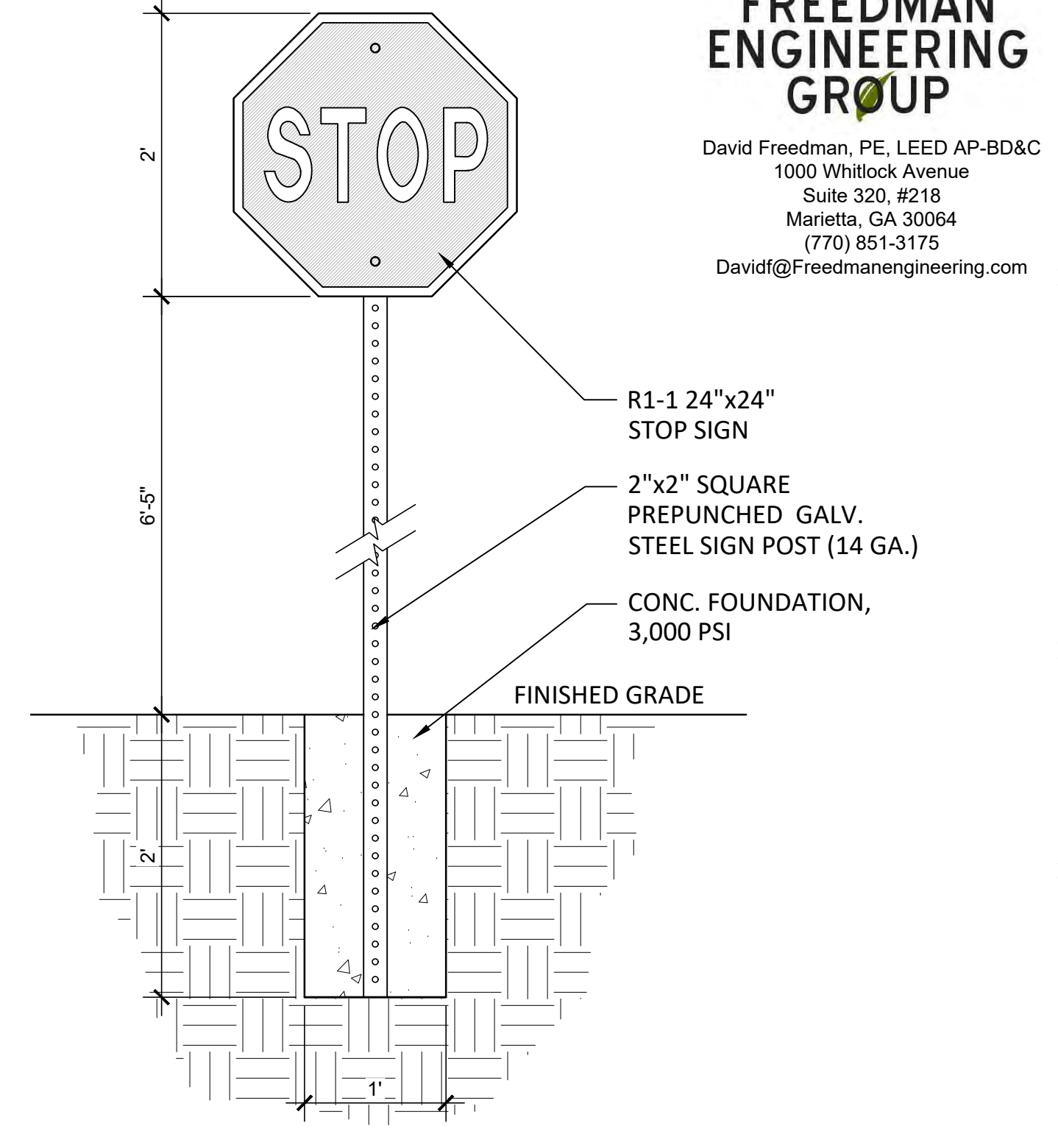
**2** 10' HT. CHAIN LINK FENCE  
SCALE: 1" = 1'-0"



**1** ACCESSIBLE PARKING SPACE DETAIL  
SCALE: 1/4" = 1'-0"



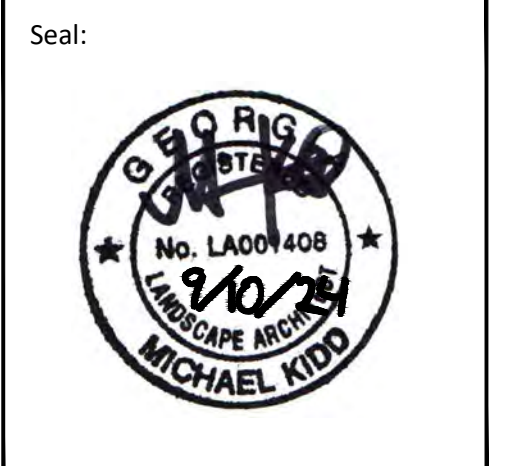
**2** ACCESSIBLE PARKING SPACE SIGN DETAIL  
SCALE: 1" = 1'-0"



**3** STOP SIGN DETAIL  
SCALE: 1" = 1'-0"

**FREEDMAN ENGINEERING GROUP**  
David Freedman, PE, LEED AP-BD&C  
1000 Whitlock Avenue  
Suite 320, #218  
Marietta, GA 30064  
(770) 851-3175  
David@freedmanengineering.com

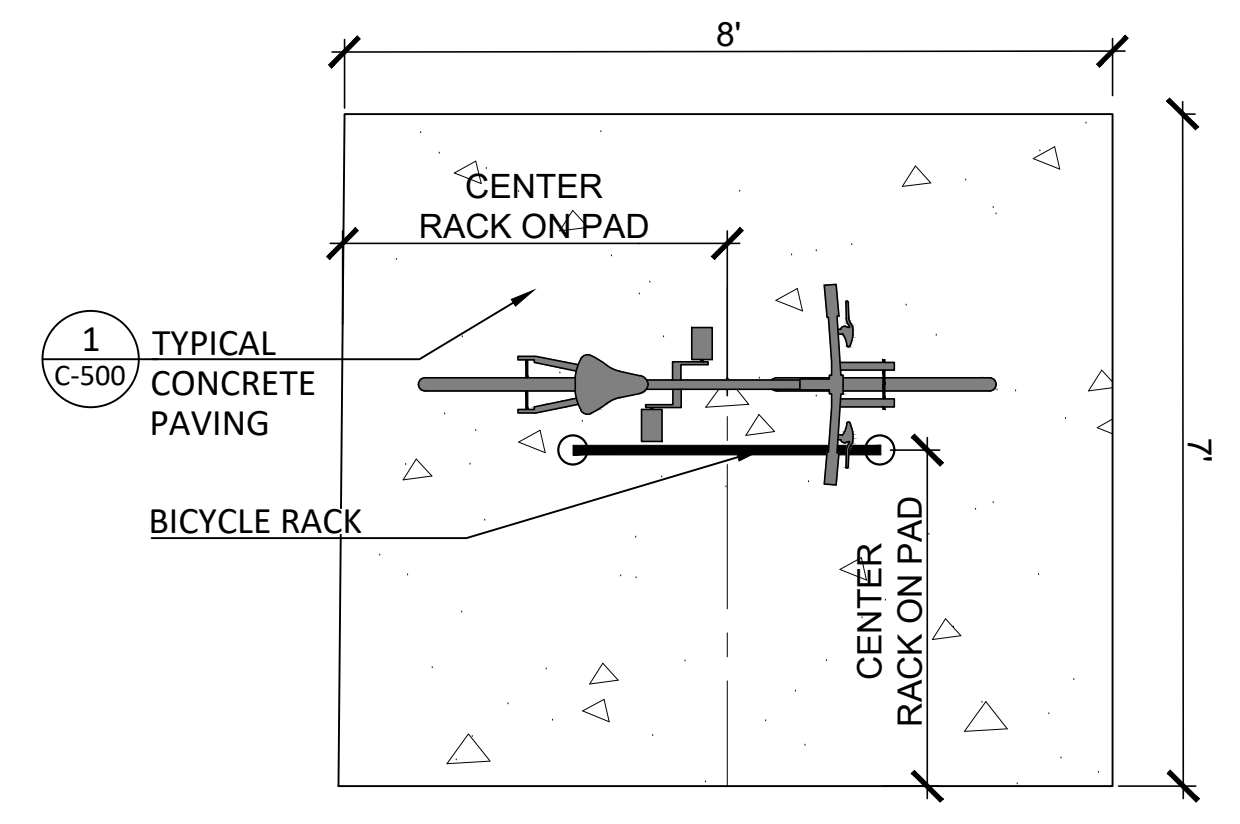
**ROOT DESIGN STUDIO**  
landscape architecture  
2300 Henderson Mill Road  
Suite 412  
Atlanta, Georgia 30345  
(404) 895-2253  
www.RootDesignStudio.com



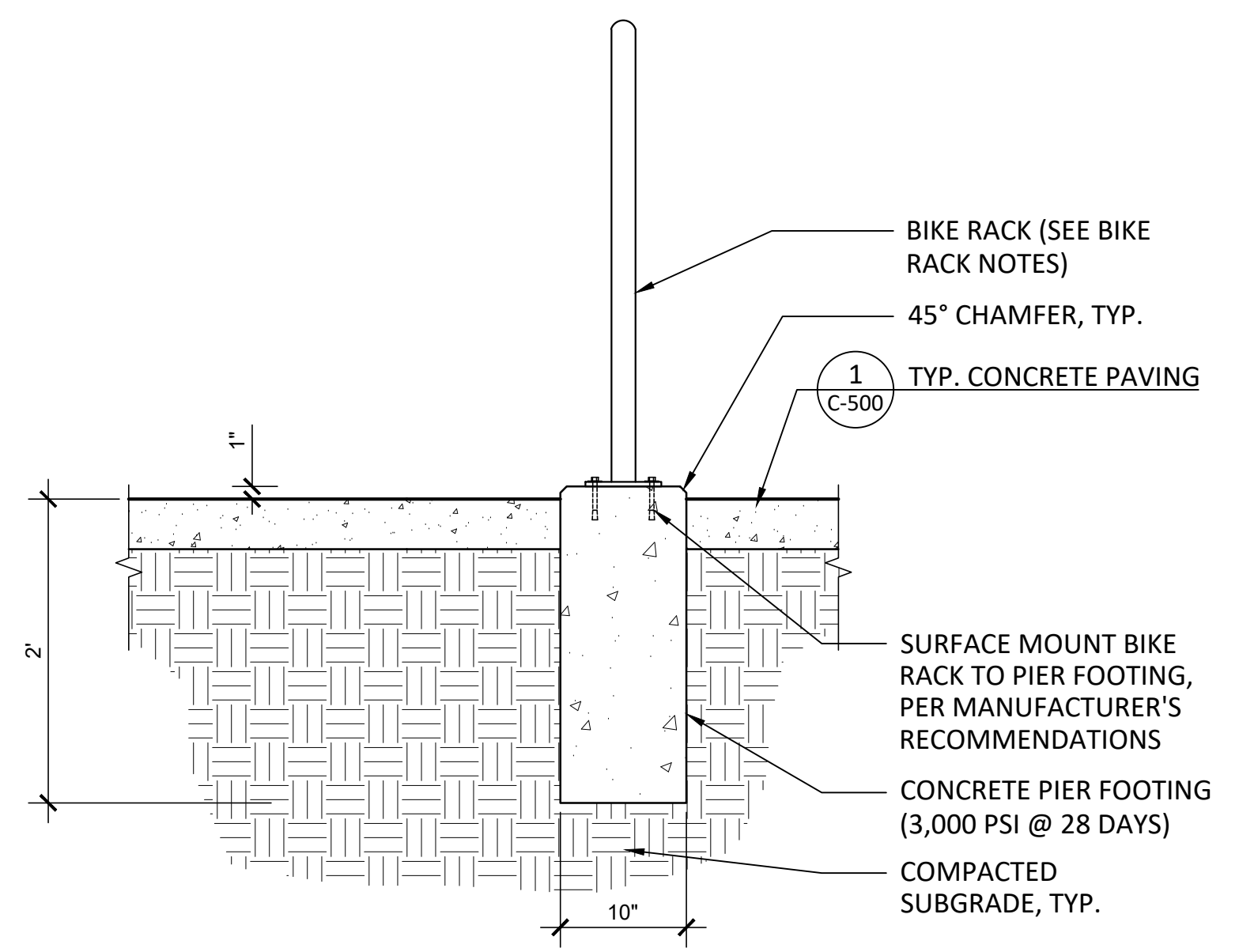
Date: 09/10/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

**BIKE RACK NOTES:**

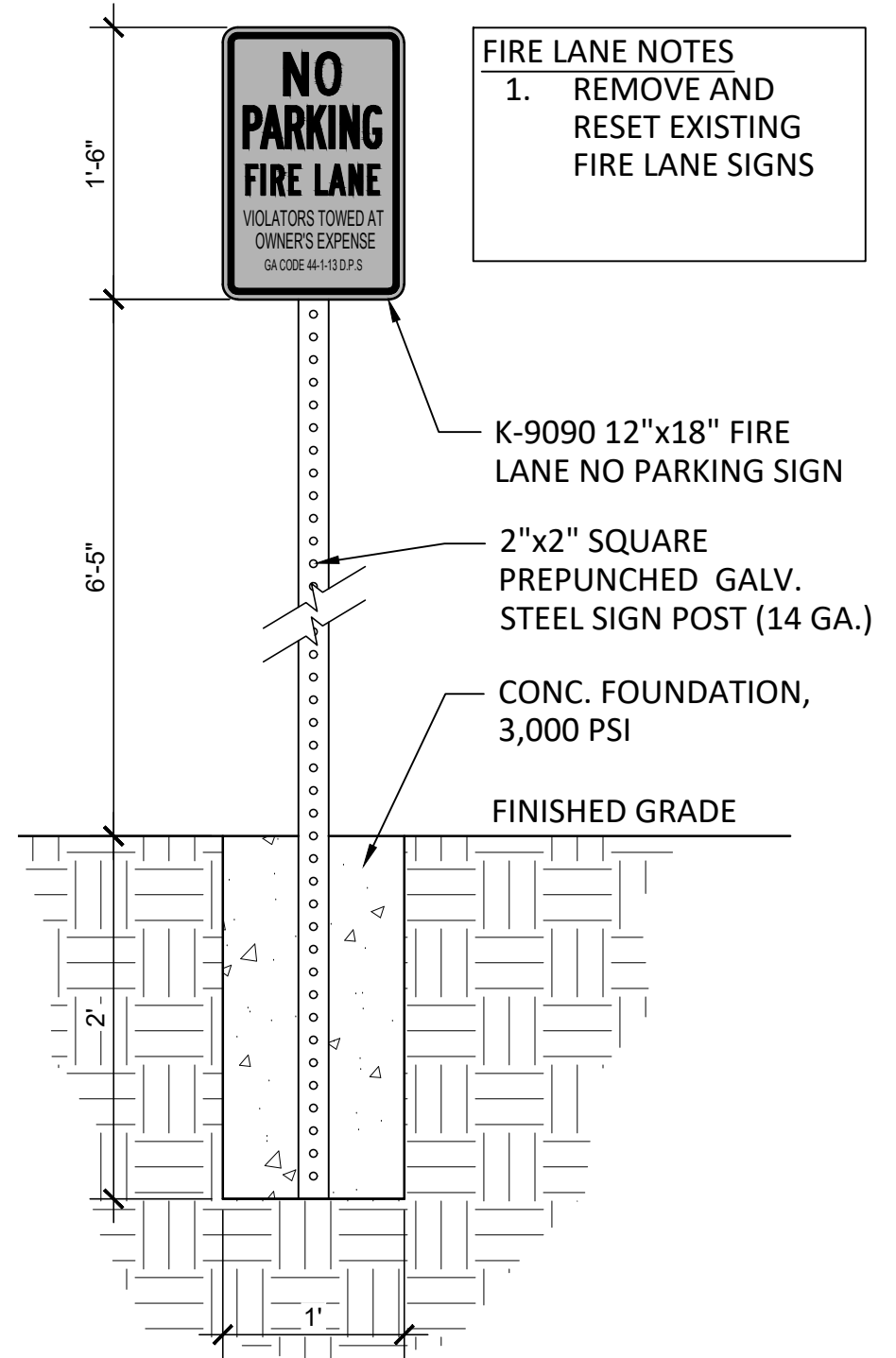
- BIKE RACK SHALL BE 2BK5PM-SM (PARKS 5 BIKES, SURFACE MOUNT) BY LEISURECRAFT (LEISURECRAFT.COM, 1-800-633-8241) OR APPROVED EQUAL.
- BIKE RACK SHALL BE BLACK IN COLOR W/ THERMOPLASTIC FINISH (TBD).
- BIKE RACK SHALL BE SURFACE MOUNTED TO CONCRETE PIER FOOTING, PER DETAIL & MANUFACTURER RECOMMENDATIONS.
- CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.



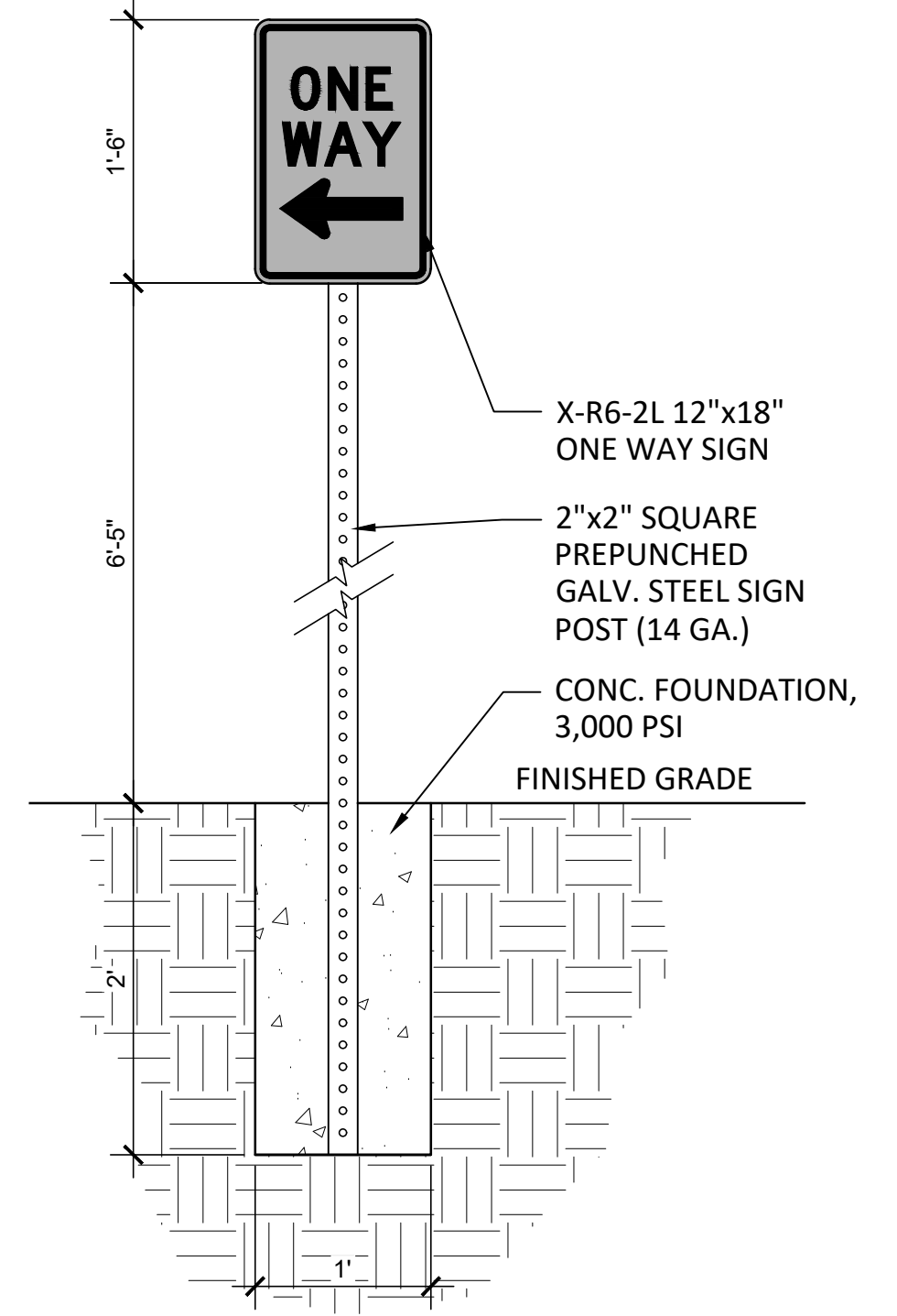
**4** BIKE RACK  
SCALE: N.T.S.



**5** BIKE RACK MOUNTING DETAIL  
SCALE: N.T.S.



**6** FIRE LANE SIGN DETAIL  
SCALE: 1" = 1'-0"



**7** ONE-WAY SIGN DETAIL  
SCALE: 1" = 1'-0"

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084  
City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

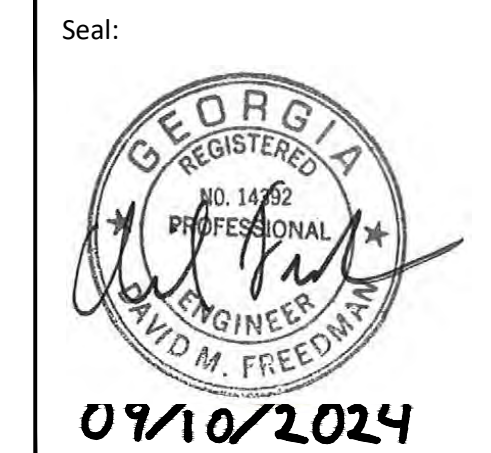
Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Construction Details**

Sheet No:  
**C-504**

RELEASED FOR CONSTRUCTION



Date: 09/10/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084  
City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

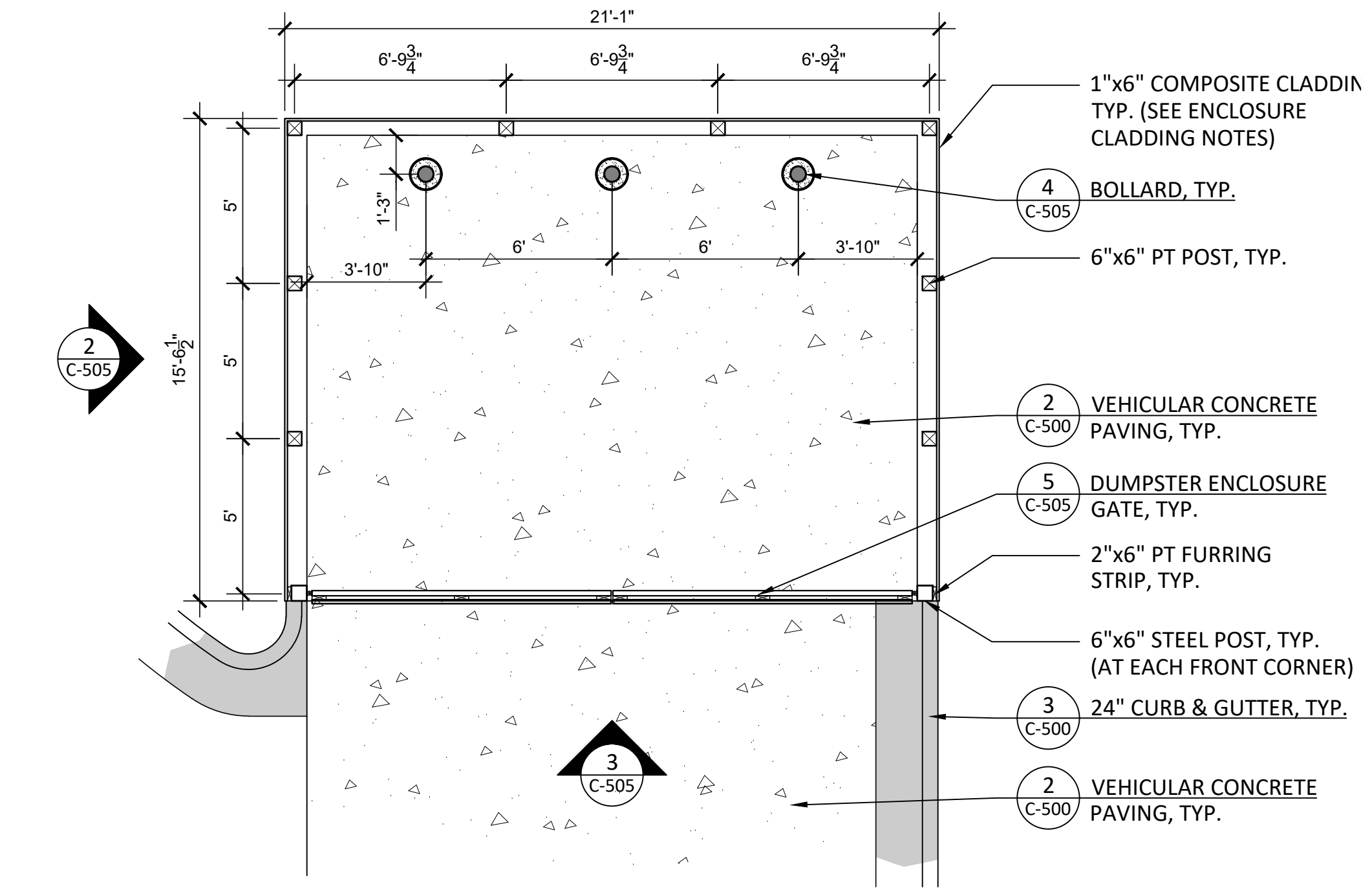
Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Construction  
Details**

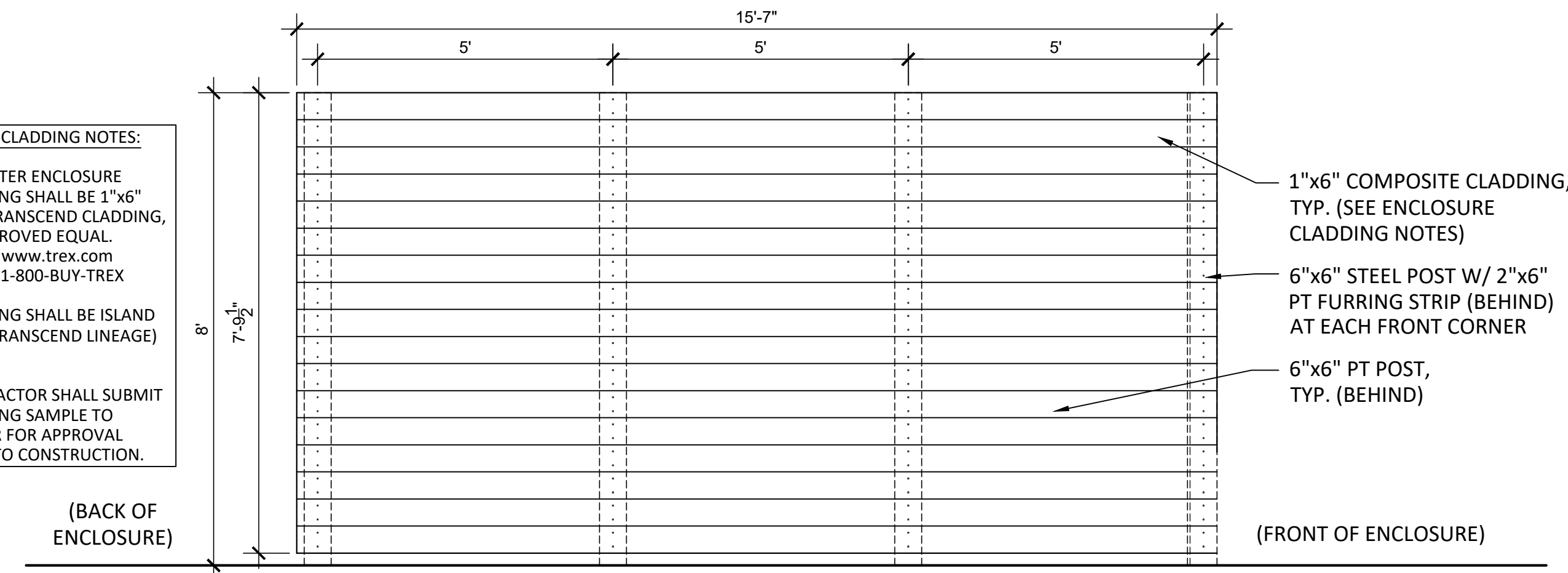
Sheet No:  
**C-505**

RELEASED FOR CONSTRUCTION

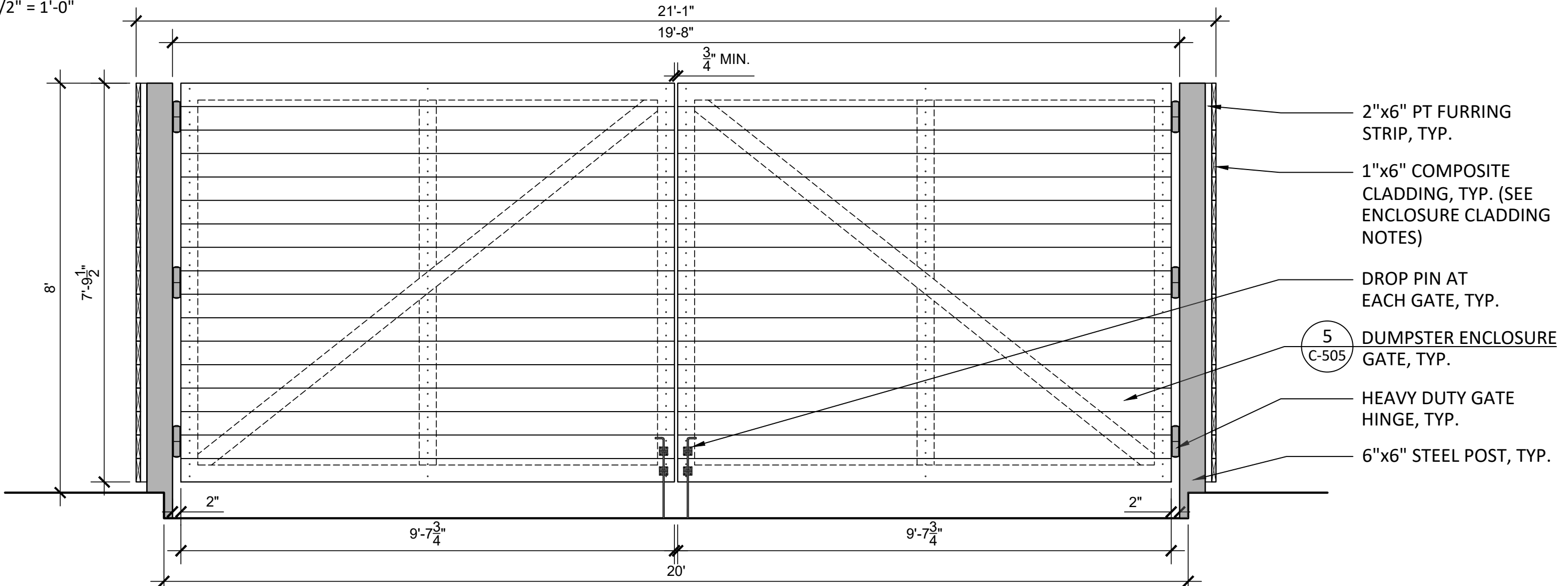


**1 DUMPSTER ENCLOSURE - ENLARGEMENT PLAN**  
SCALE: 1/4" = 1'-0"

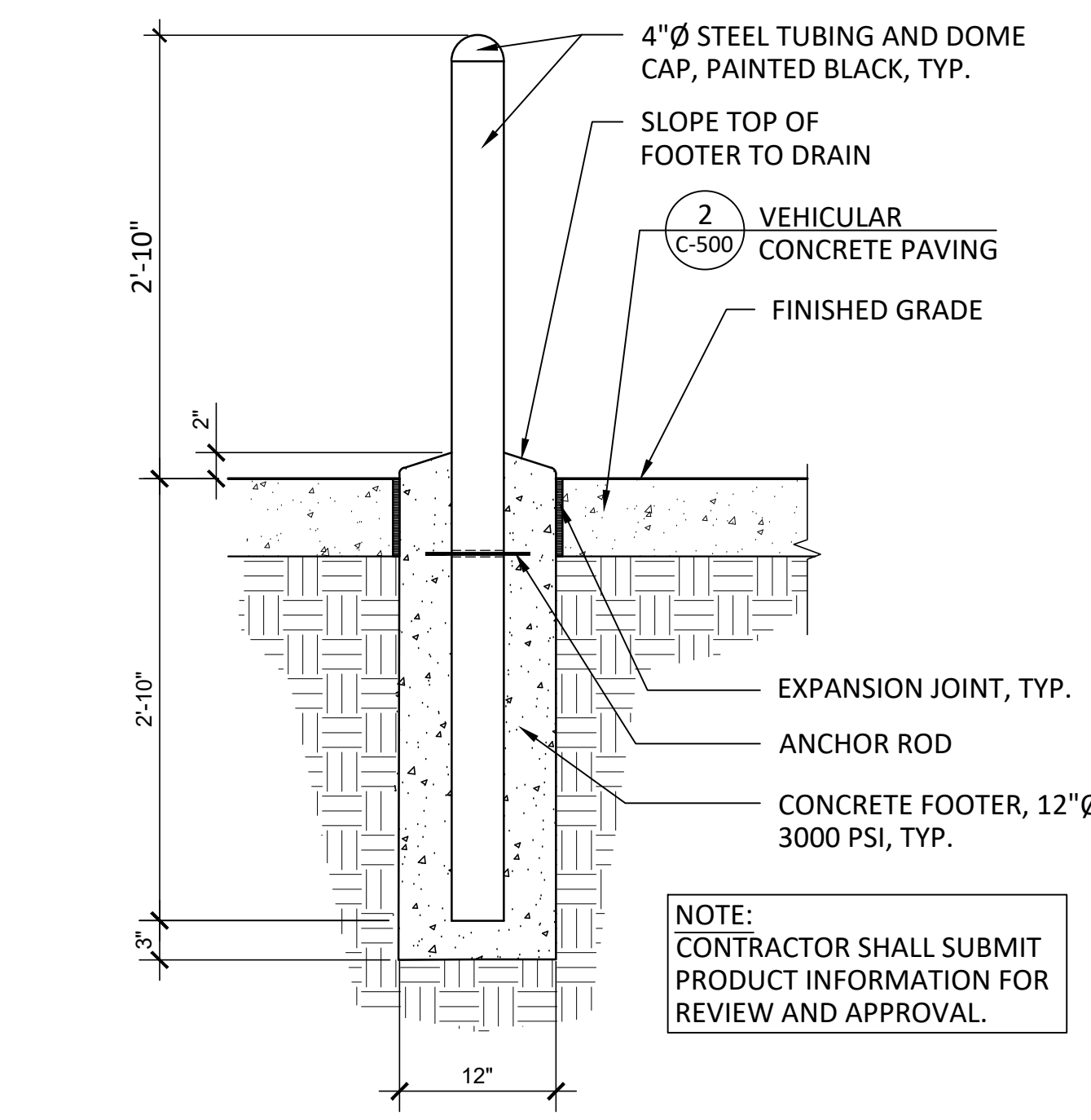
- ENCLOSURE CLADDING NOTES:**
- DUMPSTER ENCLOSURE CLADDING SHALL BE 1"x6" TREX TRANSCEND CLADDING, OR APPROVED EQUAL.
    - www.trex.com
    - 1-800-BUY-TREX
  - CLADDING SHALL BE ISLAND MIST (TRANSCEND LINEAGE) COLOR.
  - CONTRACTOR SHALL SUBMIT CLADDING SAMPLE TO OWNER FOR APPROVAL PRIOR TO CONSTRUCTION.



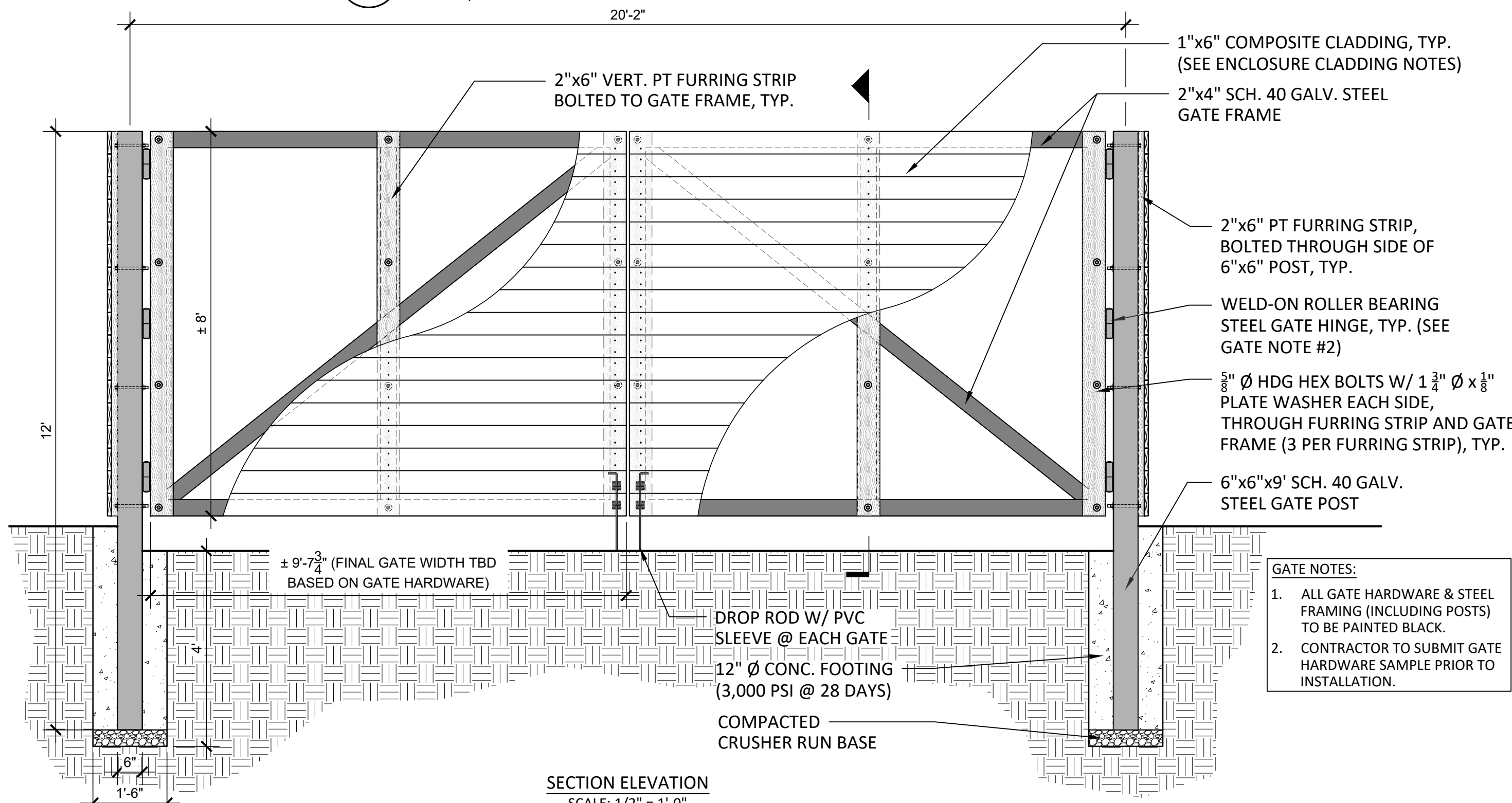
**2 DUMPSTER ENCLOSURE - SIDE ELEVATION**  
SCALE: 1/2" = 1'-0"



**3 DUMPSTER ENCLOSURE - FRONT ELEVATION**  
SCALE: 1/2" = 1'-0"

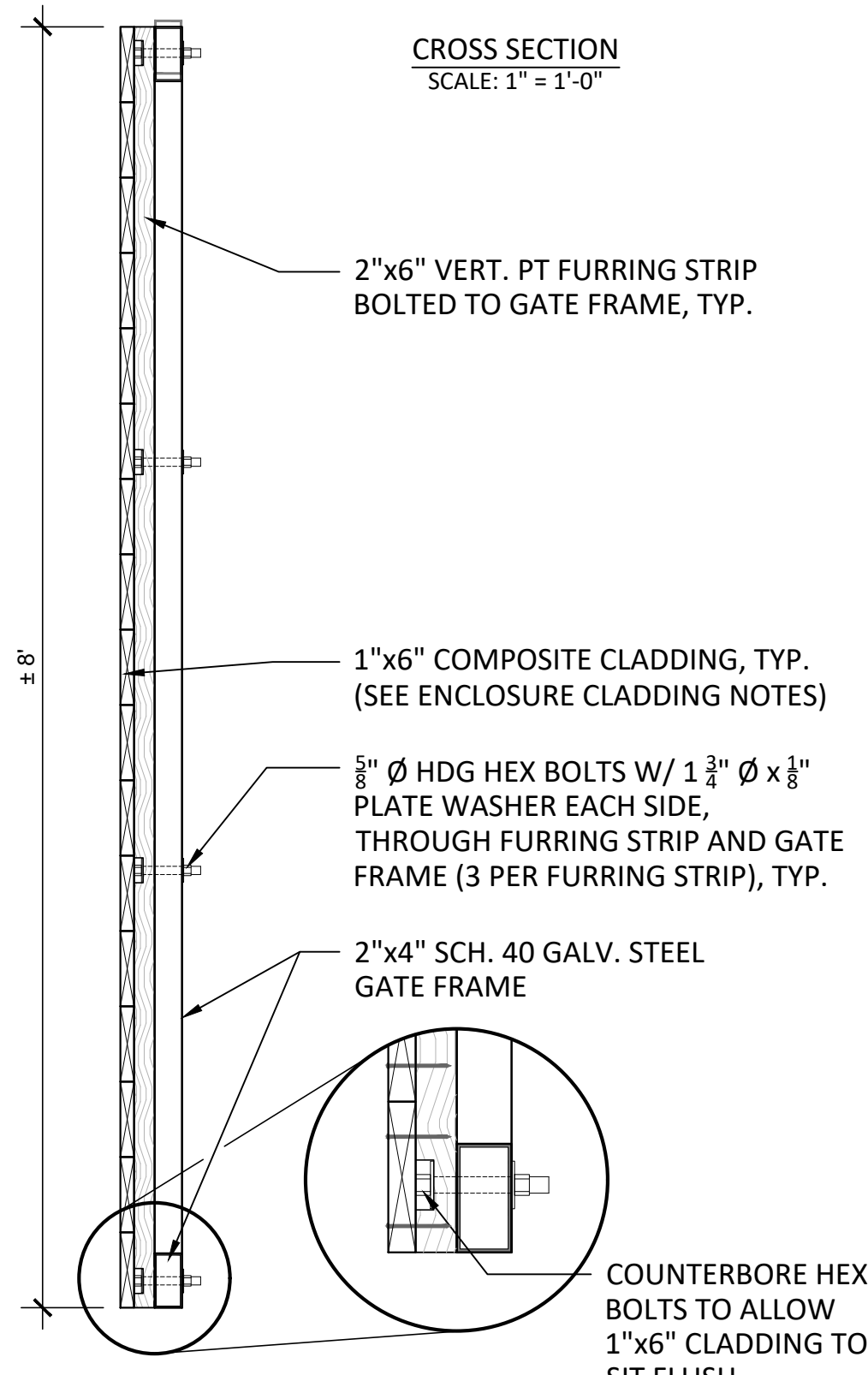


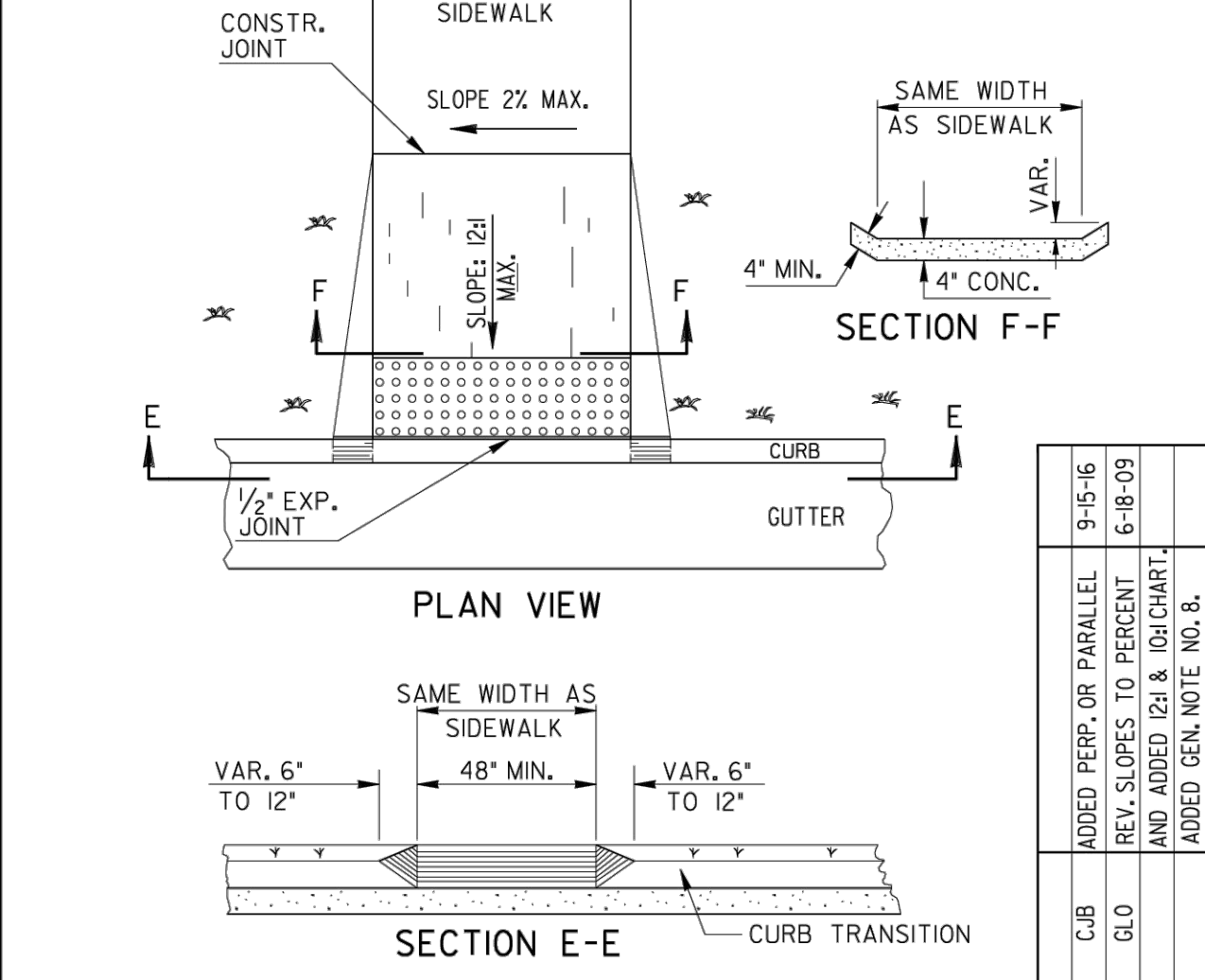
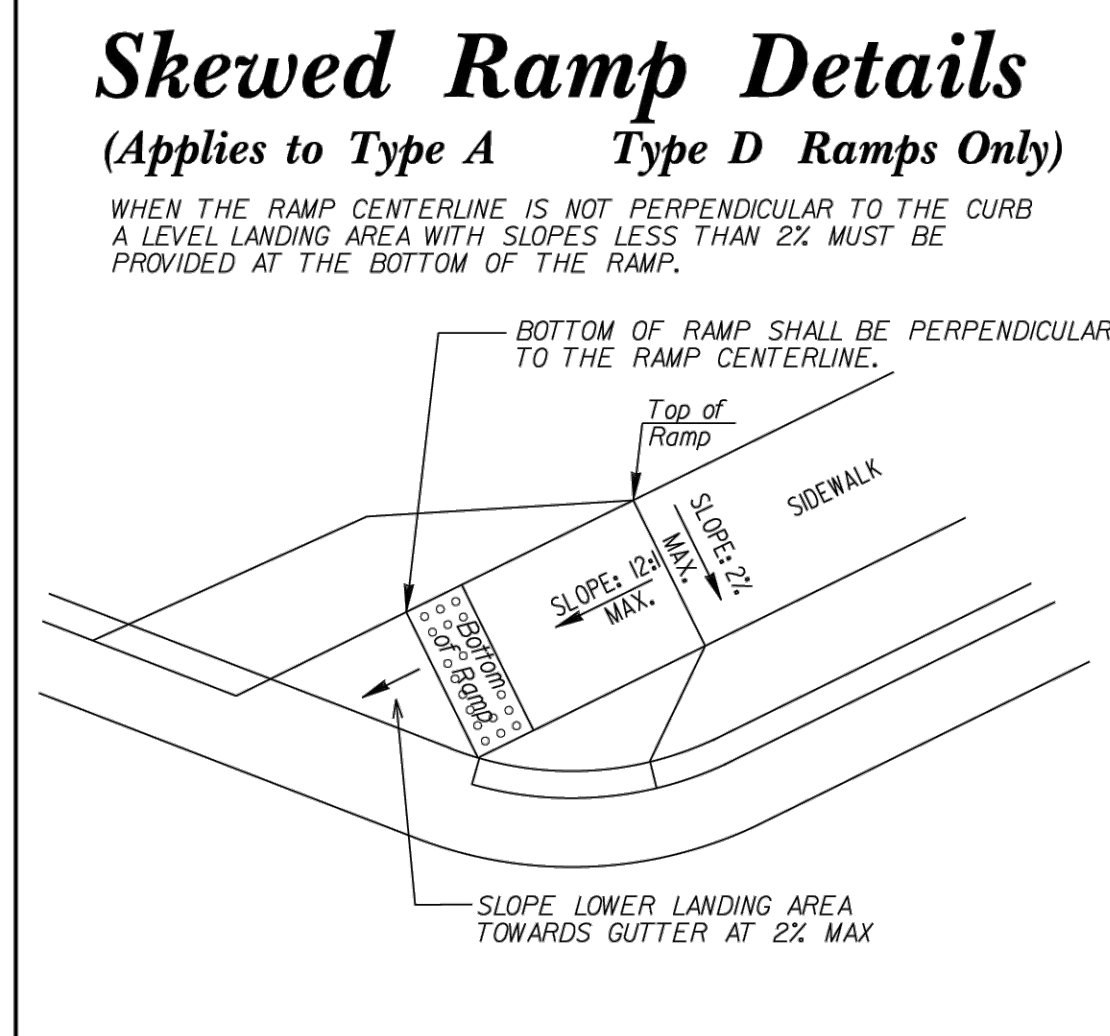
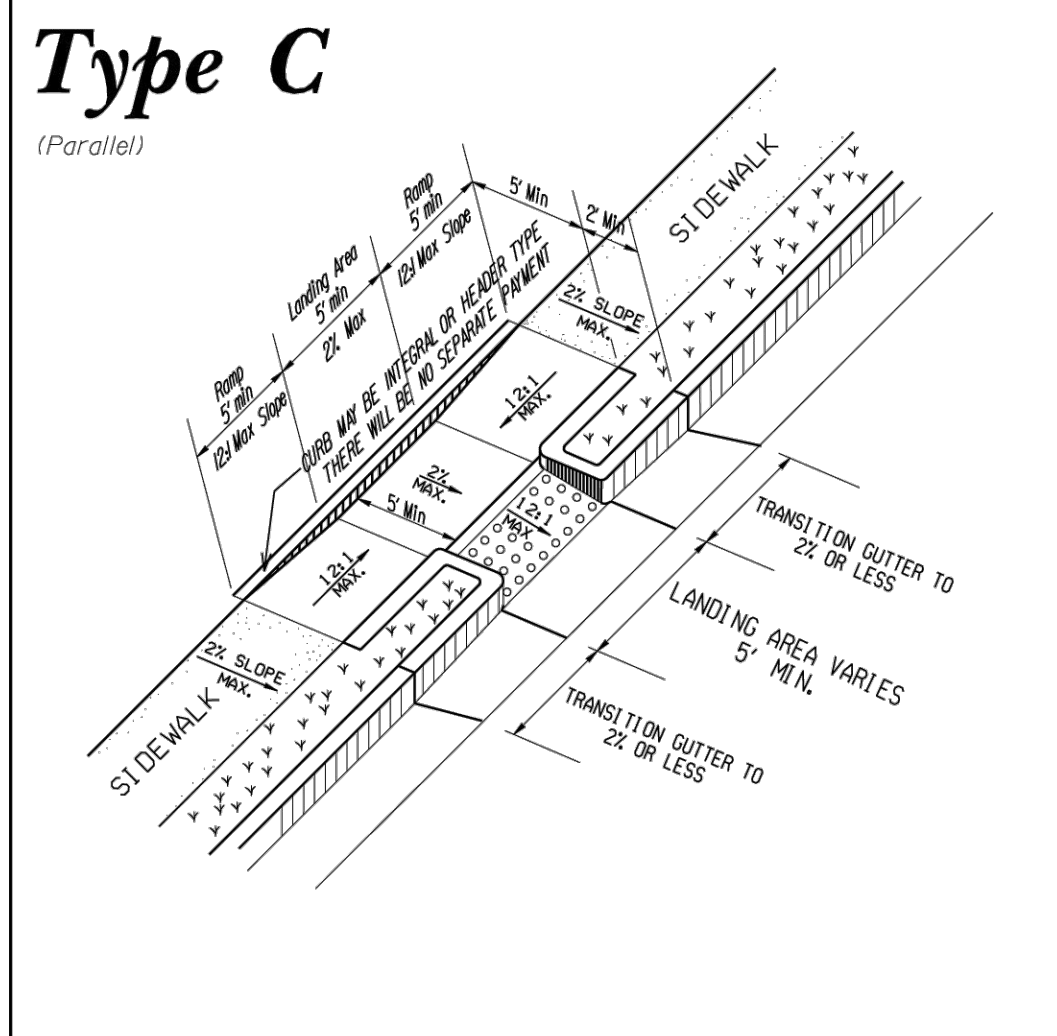
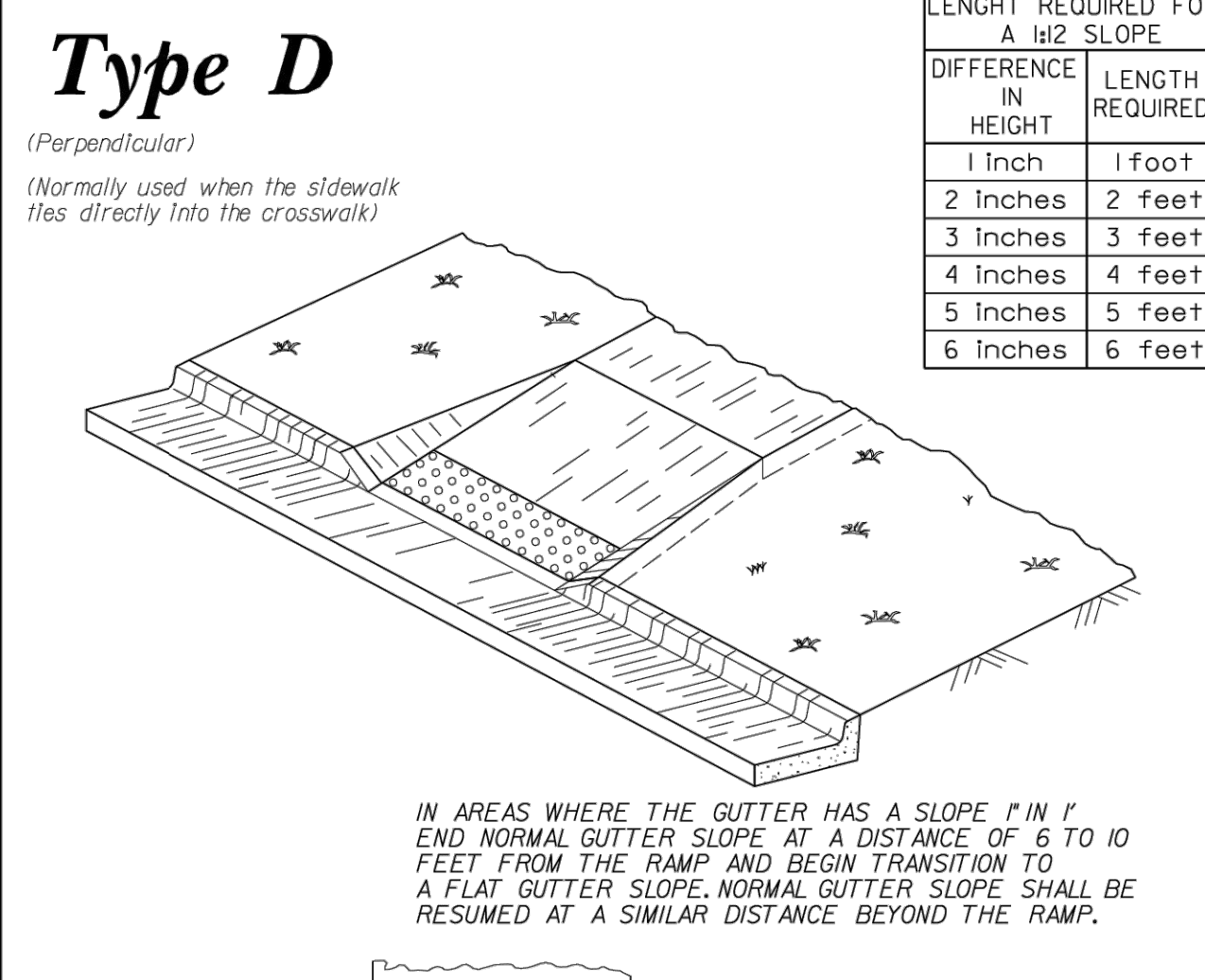
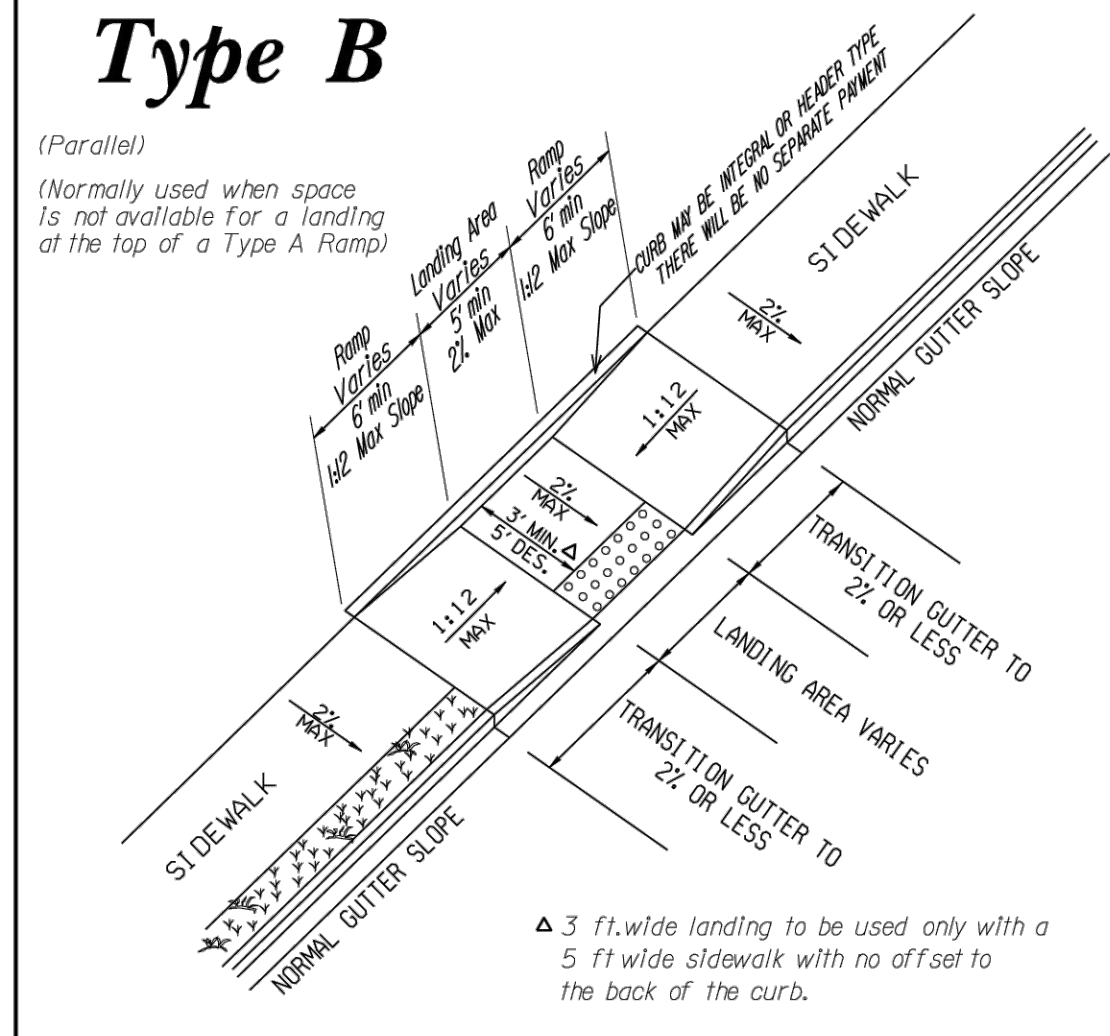
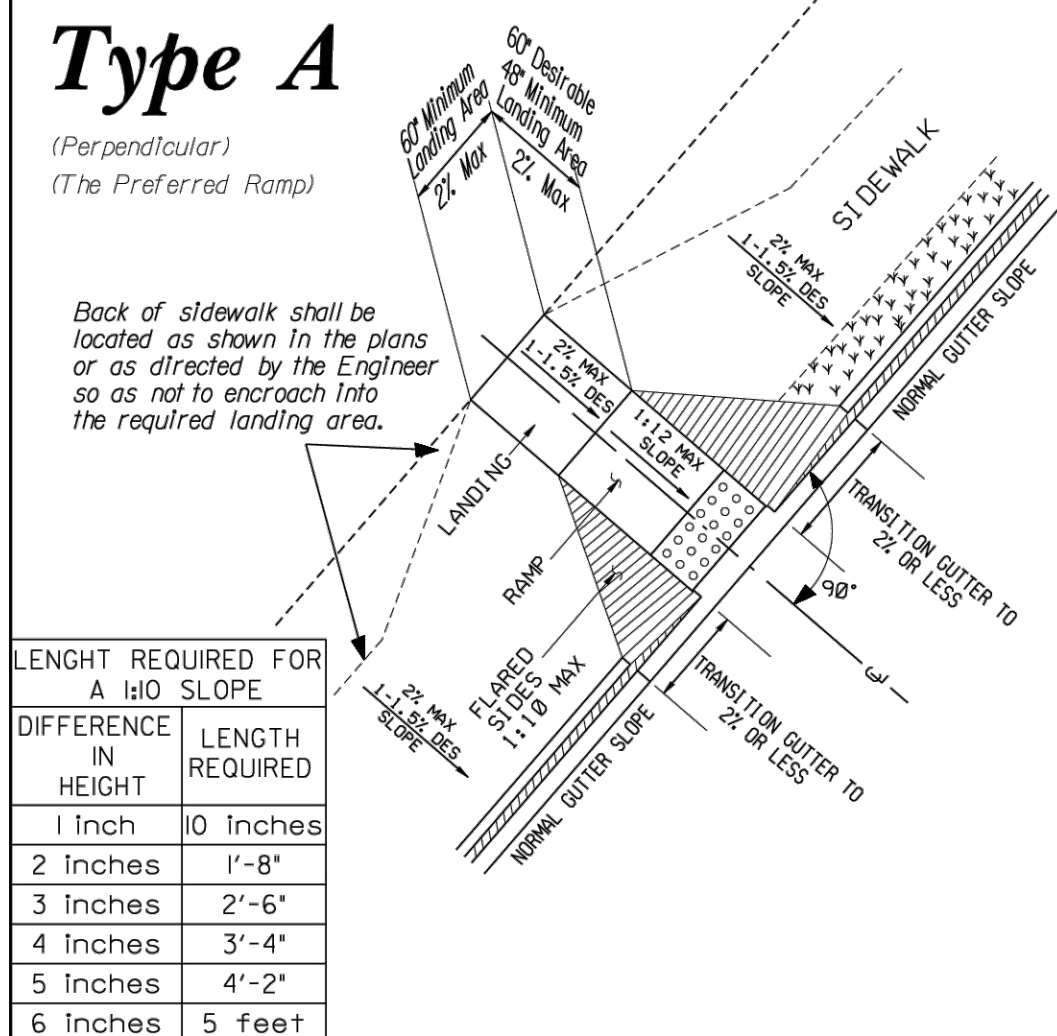
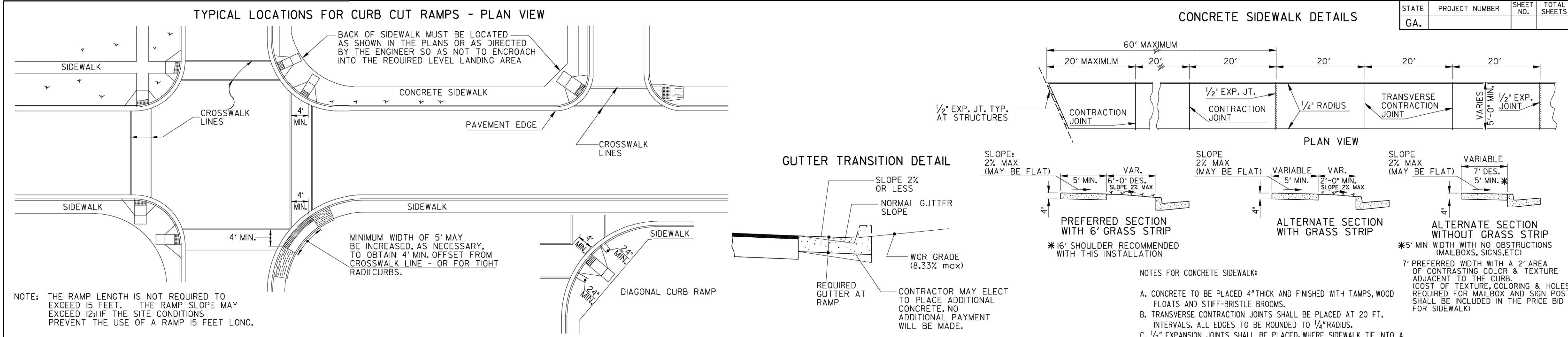
**4 BOLLARD DETAIL**  
SCALE: 1" = 1'-0"



**5 DUMPSTER ENCLOSURE GATE**  
SCALE: VARIES

- GATE NOTES:**
- ALL GATE HARDWARE & STEEL FRAMING (INCLUDING POSTS) TO BE PAINTED BLACK.
  - CONTRACTOR TO SUBMIT GATE HARDWARE SAMPLE PRIOR TO INSTALLATION.





**This Detail Replaces Ga Standard 9031W**  
Guidelines For Usage On Metric Projects

When these details are incorporated into plans and or projects that are being prepared or constructed in metric units, exact or precise conversion to metric units is not required. The dimensions shown that are in feet and inches may be converted to corresponding metric units using the following "Rounded-Off" conversion factors: 1" = 25mm, 4" = 100mm, and 12" or 1' = 300mm. All measurement notes that refer to linear feet and square yards shall be interpreted to mean linear meters and square meters.

REVISION	DATE	DESCRIPTION
9-15-16	6-18-09	ADDED PERP. OR PARALLEL
6-18-09		REV. SLOPES TO PERCENT
5-10-06	2-21-03	AND ADDED 12:1 & 10:1 CHART
2-21-03	2-10-03	ADDED GEN. NOTE NO. 8.
2-10-03	7-29-02	REVISED
7-29-02	5-29-02	REVISED
5-29-02	5-23-02	REVISED
5-23-02	4-29-02	REVISED
4-29-02	4-1-02	REVISED
4-1-02	3-28-02	REVISED
3-28-02		

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA

SPECIAL DETAIL  
CONCRETE SIDEWALK DETAILS  
CURB CUT (WHEELCHAIR) RAMPS

NO SCALE  
MARCH 12, 2002

NUMBER  
A3

Seal:

Date:  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

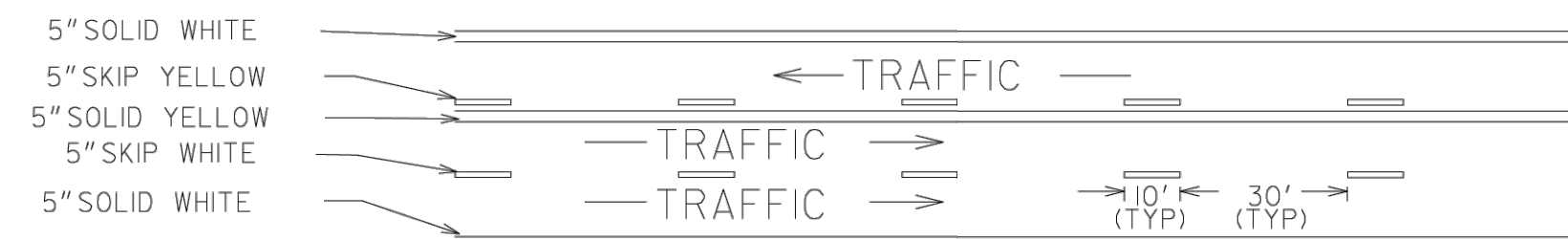
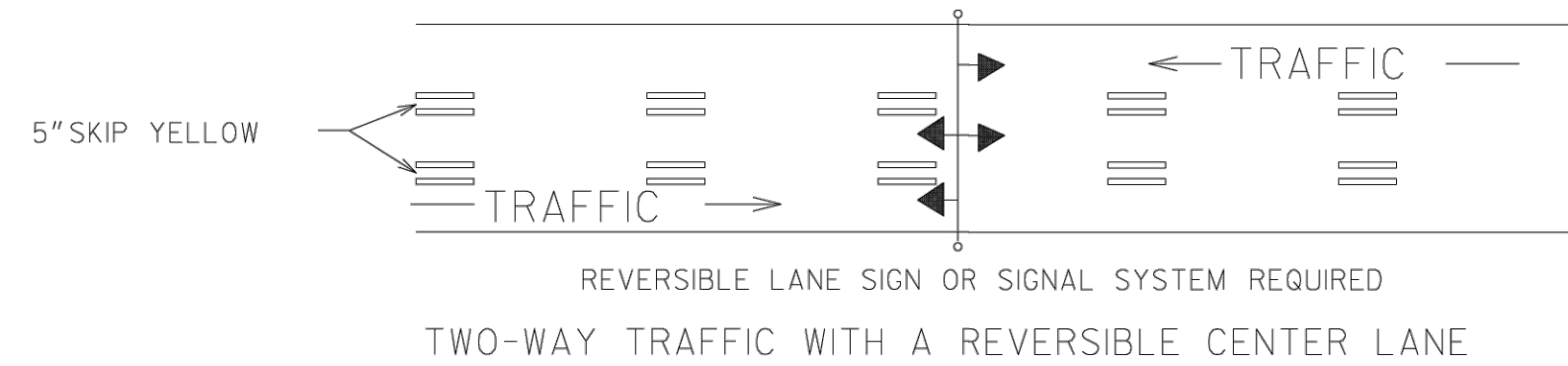
Revisions:

NO.	DATE	DESCRIPTION

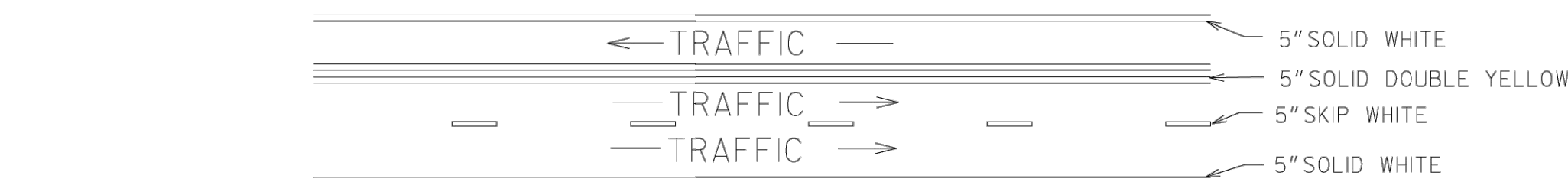
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**Construction  
Details**

Sheet No:  
**C-506**

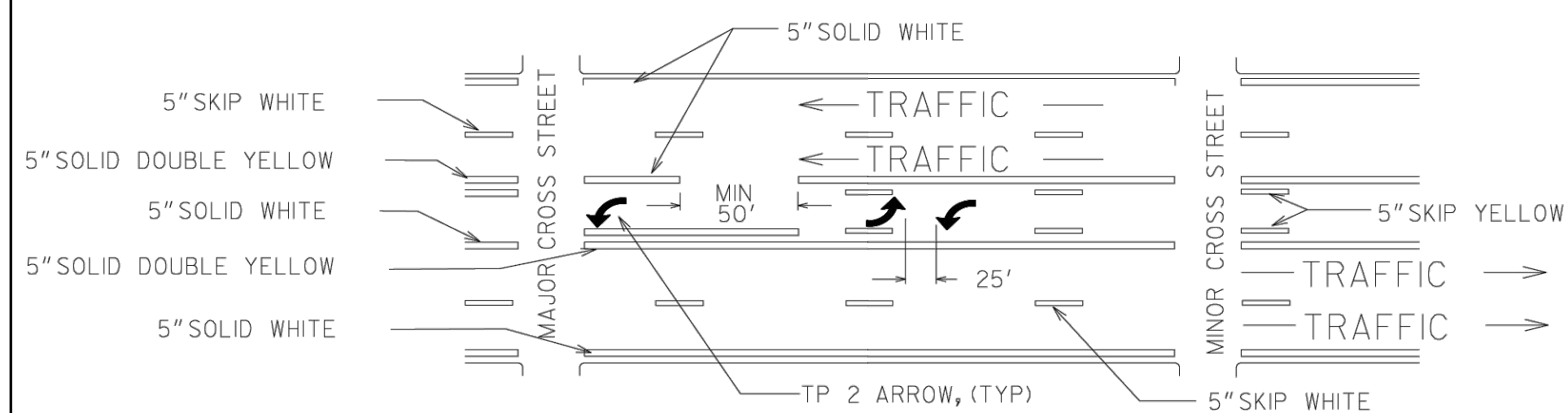
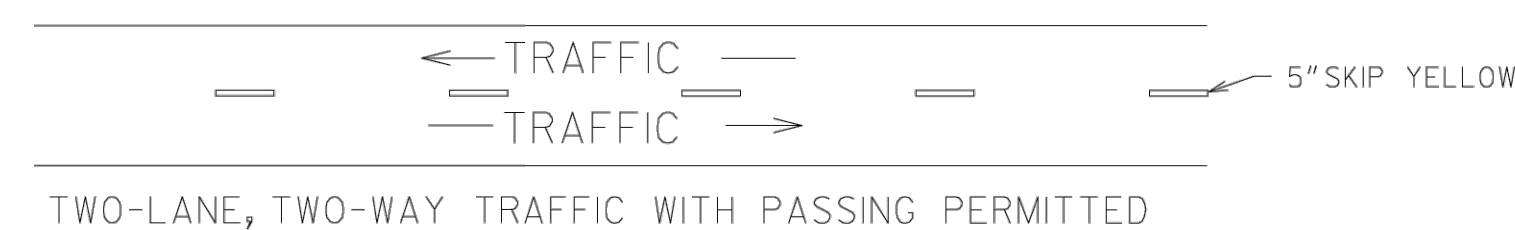
STATE	PROJECT NUMBER	SHEET NO.	TOTAL SHEETS
GA.			



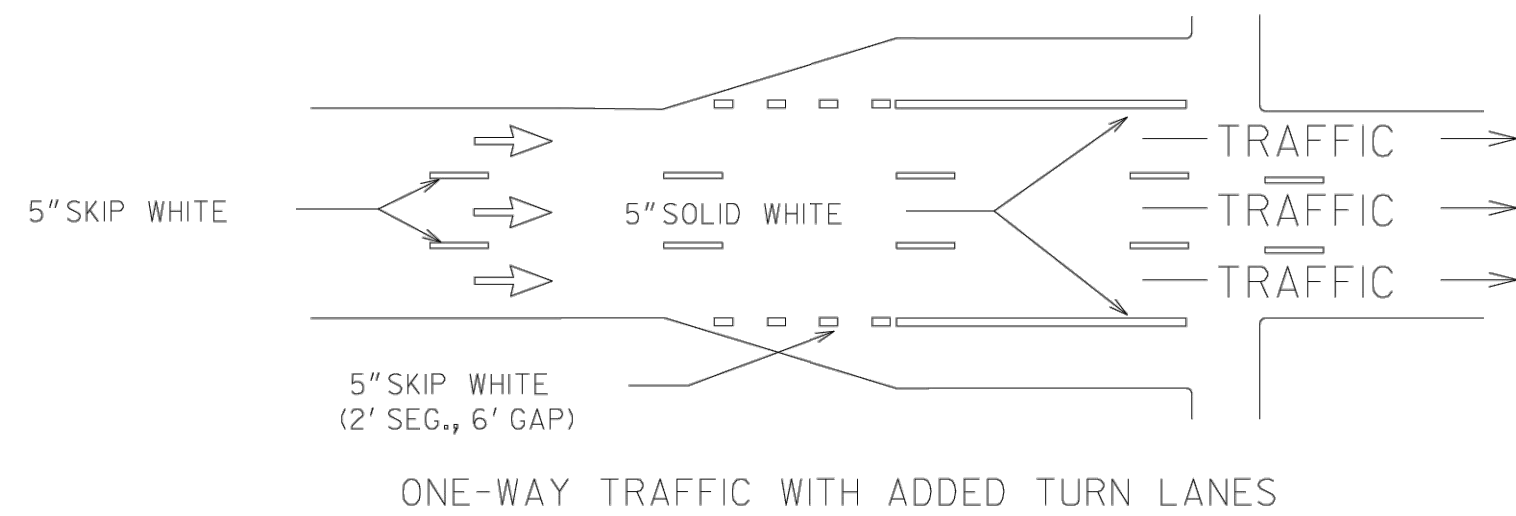
TWO-WAY TRAFFIC WHERE MOTORISTS IN A SINGLE LANE ARE PERMITTED TO PASS



TWO-WAY TRAFFIC WHERE MOTORISTS IN A SINGLE LANE ARE NOT PERMITTED TO PASS

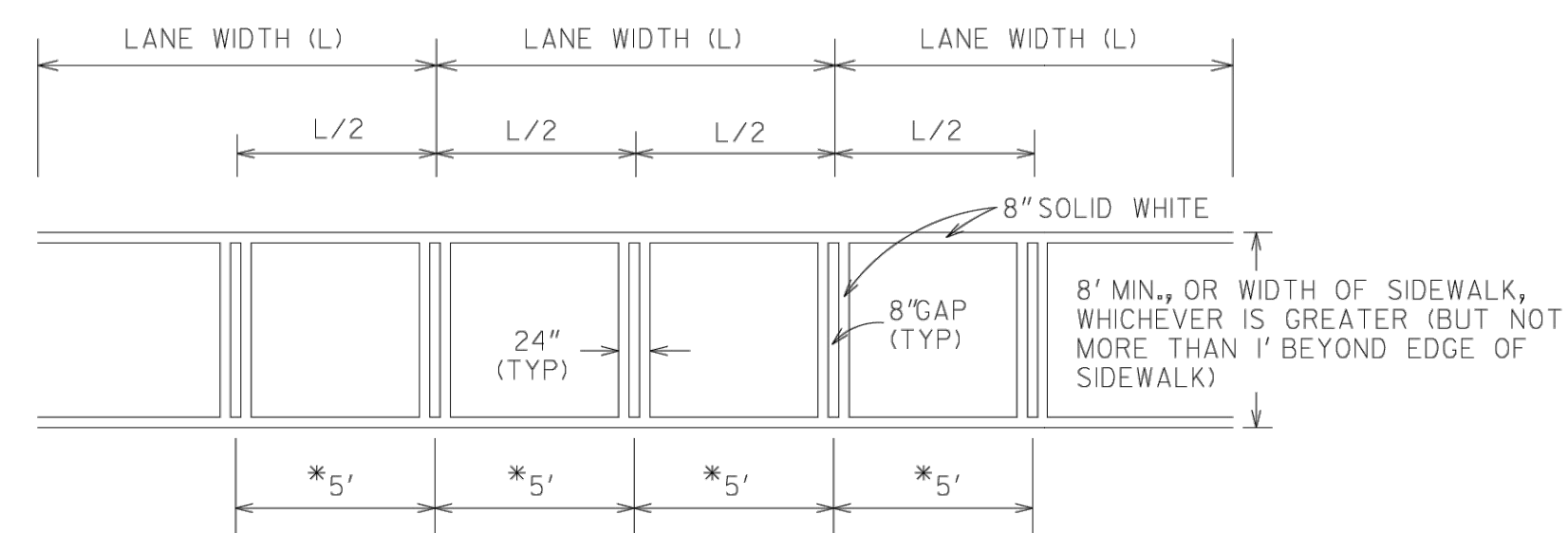
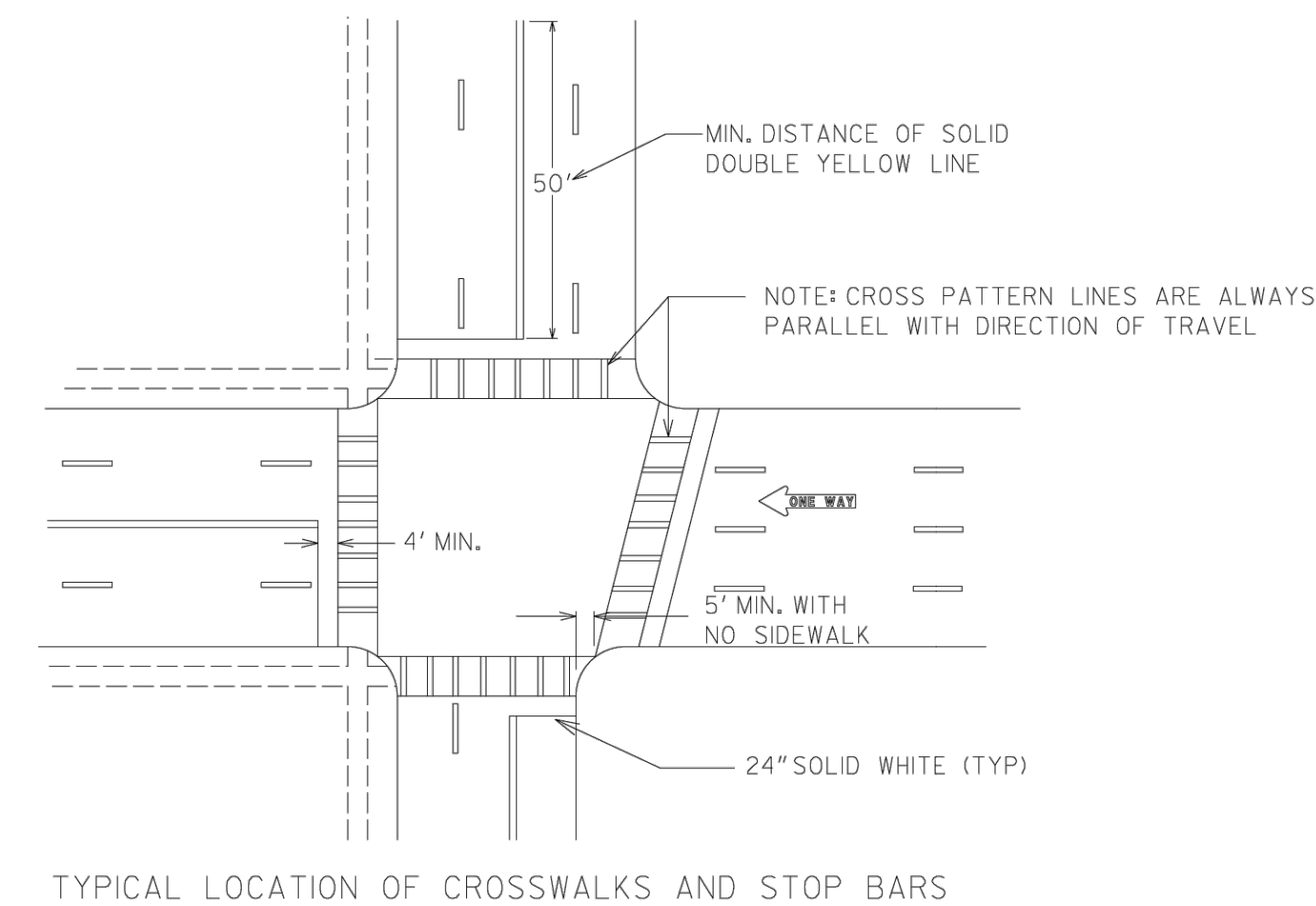
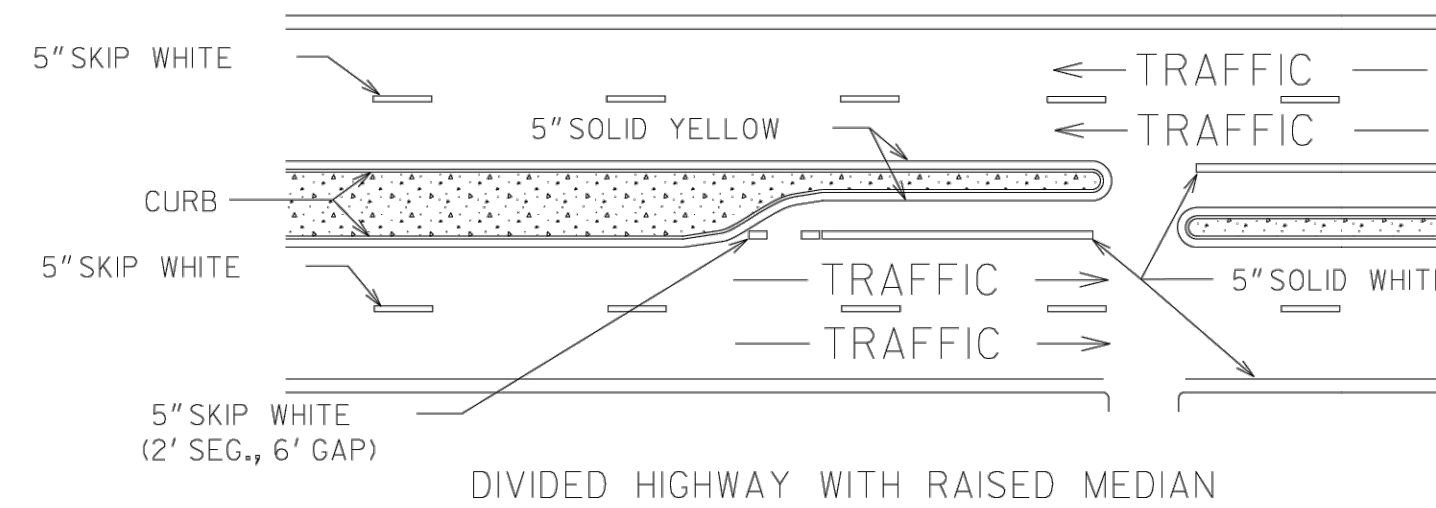


MULTI-LANE, TWO-WAY TRAFFIC WITH SINGLE LANE, TWO-WAY LEFT TURN CHANNELIZATION



**GENERAL NOTES:**

1. SPACING BETWEEN DOUBLE LINES SHALL BE EQUAL TO THE LINE WIDTH.
2. EDGE LINES SHALL BE PLACED A MINIMUM OF 4 INCHES FROM THE NORMAL EDGE OF PAVEMENT.
3. CONTRAST MARKINGS FOR SKIP STRIPING SHALL BE AS SHOWN IN DETAIL T-II.B.



\*USE WHERE THE LANE WIDTH EXCEEDS 12' OR WHERE LANE LINES HAVE BEEN OMITTED

CROSSWALK DETAIL

9-15-16 DATE		DEPARTMENT OF TRANSPORTATION STATE OF GEORGIA	
ADDED GENERAL NOTE 3 REVISION		CONSTRUCTION DETAILS PAVEMENT MARKING PLACEMENT NON-LIMITED ACCESS ROADWAY	
NO SCALE		JANUARY 2000	
DESIGNED	BY	NUMBER	
DRAWN	BY	T-IIA	
TRACED	BY		
CHECKED	BY		

Seal:

Date:

Project No: 2023-019

Drawn By: PS

Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
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Revisions:

NO.	DATE	DESCRIPTION

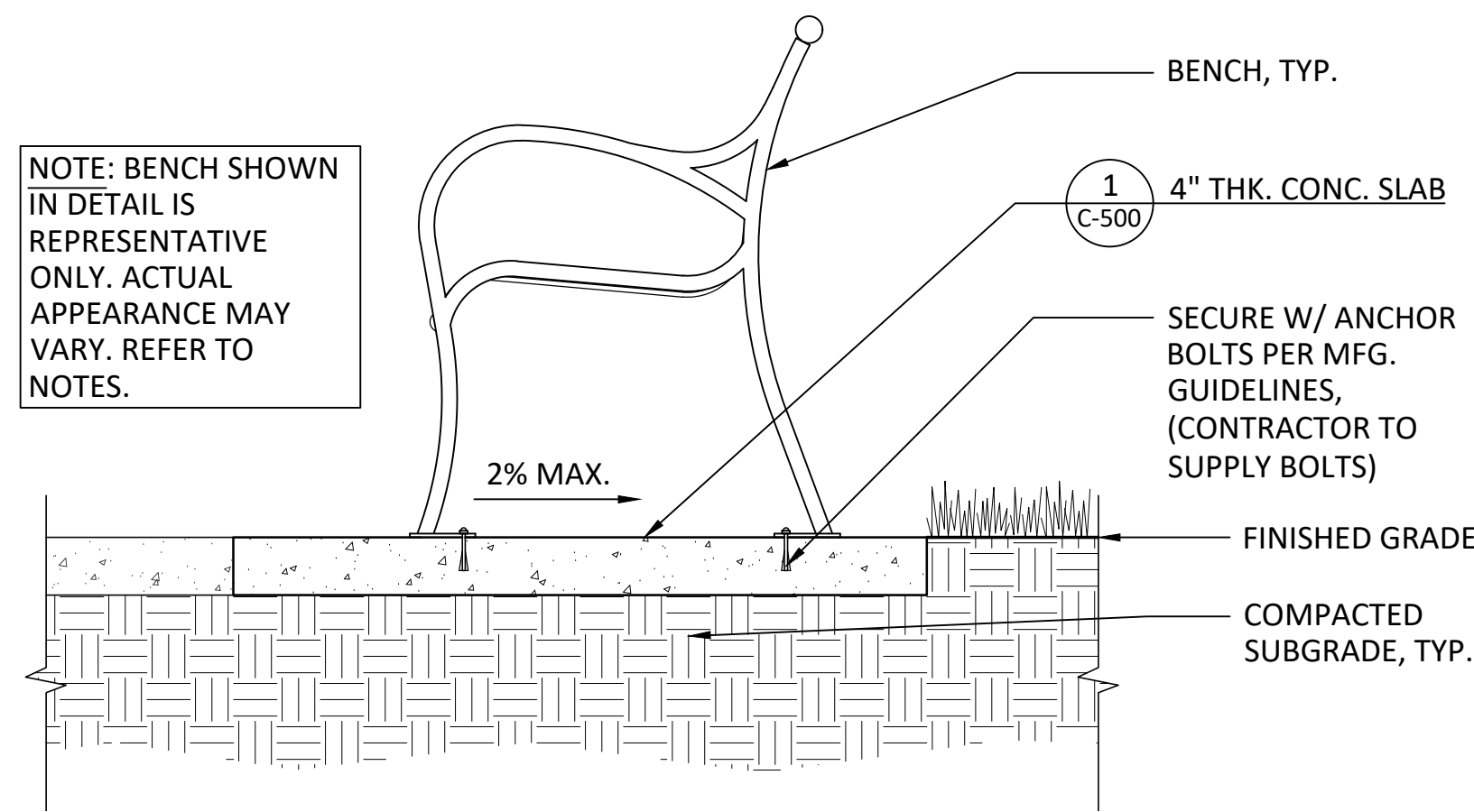
Sheet Title:

**Construction  
Details**

Sheet No:

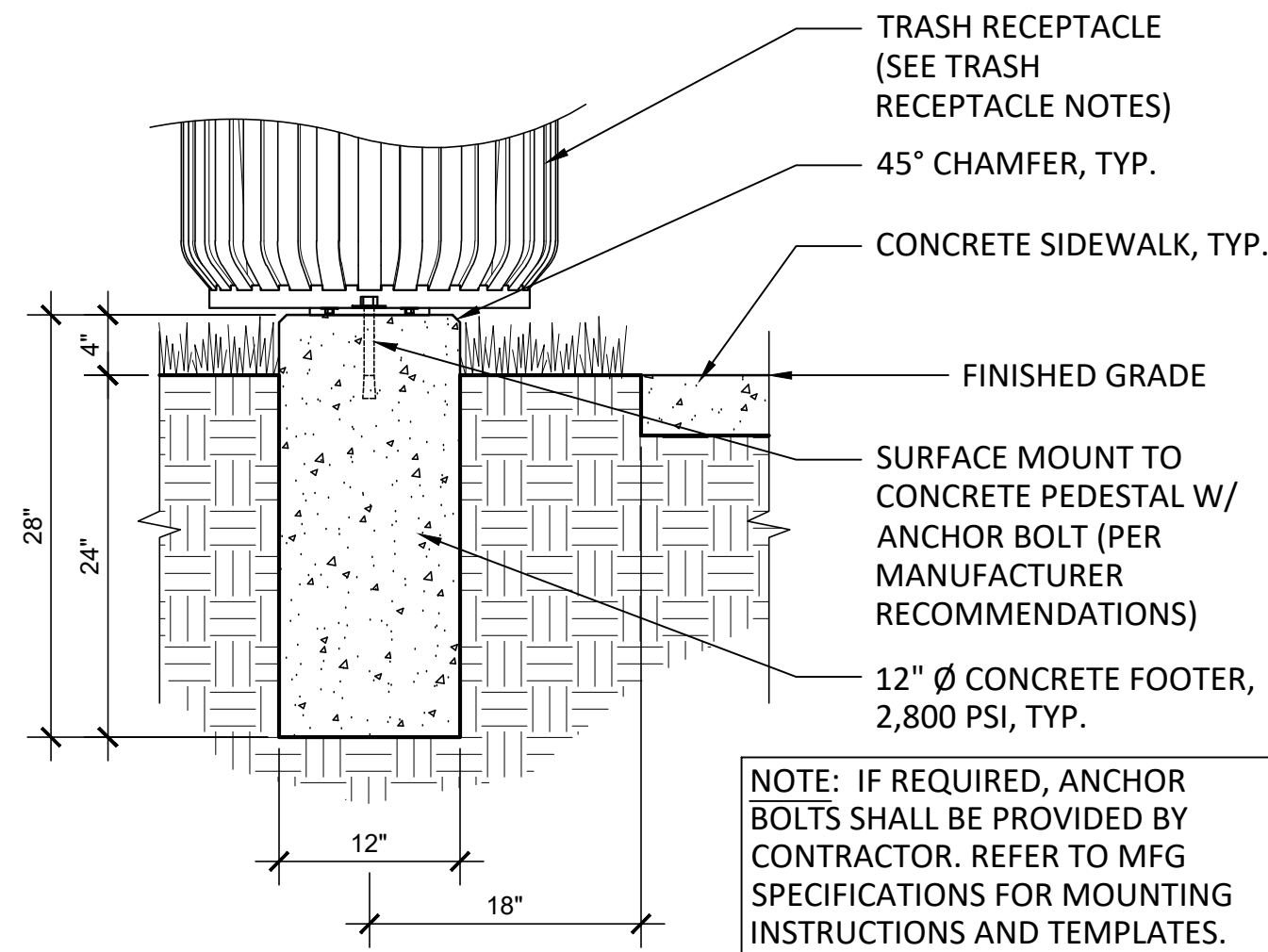
**C-507**

NOTE: BENCH SHOWN IN DETAIL IS REPRESENTATIVE ONLY. ACTUAL APPEARANCE MAY VARY. REFER TO NOTES.



- BENCH NOTES:**
- BENCH SHALL BE 6' WIDE STEEL SITES SERIES RB28 (SURFACE MOUNT) BY VICTOR STANLEY (VICTORSTANLEY.COM 1-800-368-2573) OR APPROVED EQUAL.
  - SURFACE MOUNT BENCH TO SLAB W/CONCRETE ANCHOR PER MANUFACTURER'S RECOMMENDATIONS.
  - BIKE RACK SHALL BE BLACK IN COLOR POWDERCOATED FINISH.
  - BENCH PAD TO HAVE A CROSS SLOPE NOT TO EXCEED 2% IN ANY DIRECTION
  - CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.

**1 6' BENCH**  
SCALE: N.T.S.

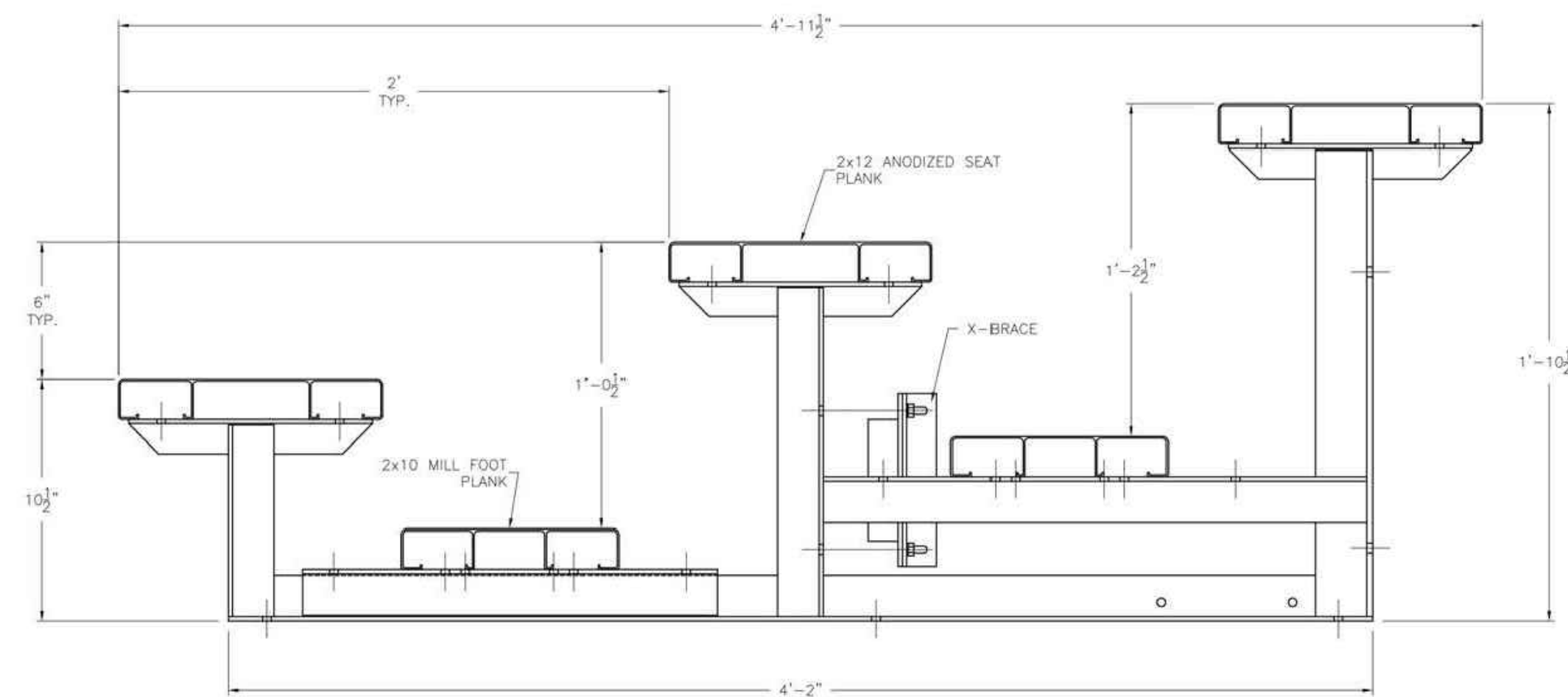


NOTE: IF REQUIRED, ANCHOR BOLTS SHALL BE PROVIDED BY CONTRACTOR. REFER TO MFG SPECIFICATIONS FOR MOUNTING INSTRUCTIONS AND TEMPLATES.

- TRASH RECEPTACLE NOTES:**
- TRASH RECEPTACLE TO BE MODEL # S-42 BY VICTOR STANLEY (victorstanley.com , 1-800-368-2573) OR APPROVED EQUAL.
  - TRASH RECEPTACLE SHALL HAVE RAIN BONNET LID.
  - TRASH RECEPTACLE & RAIN BONNET LID TO BE POWDERCOATED BLACK.
  - TRASH RECEPTACLE SHALL BE MOUNTED TO CONCRETE PEDESTAL PER MANUFACTURER RECOMMENDATIONS, AS SHOWN BELOW.
  - CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.

**2 TRASH RECEPTACLE**  
SCALE: N.T.S.

**3 6' STANDARD PICNIC TABLE**  
SCALE: N.T.S.



- BLEACHER SEATING NOTES:**
- QUANTITY: 1
  - BLEACHER SEATING SHALL BE 3 ROW ALUMINUM BLEACHERS ,SIDELINE SERIES (ITEM # 569-1214) BY THE PARK & FACILITIES CATALOG, OR APPROVED EQUAL.
    - www.theparkcatalog.com
    - 877-721-3069
  - BLEACHER SEATING SHALL BE 9' LONG.
  - BLEACHER SEATING SHALL BE ANCHORED TO CONCRETE PAVING, PER MANUFACTURER RECOMMENDATIONS.
  - CONTRACTOR SHALL SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.

**4 6' ACCESSIBLE PICNIC TABLE**  
SCALE: N.T.S.

**5 BLEACHER SEATING**  
SCALE: N.T.S.

NOT IN CONTRACT

NOT IN CONTRACT

**FREEDMAN ENGINEERING GROUP**

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www.RootDStudio.com

Seal:



Date: 09/10/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084  
  
City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

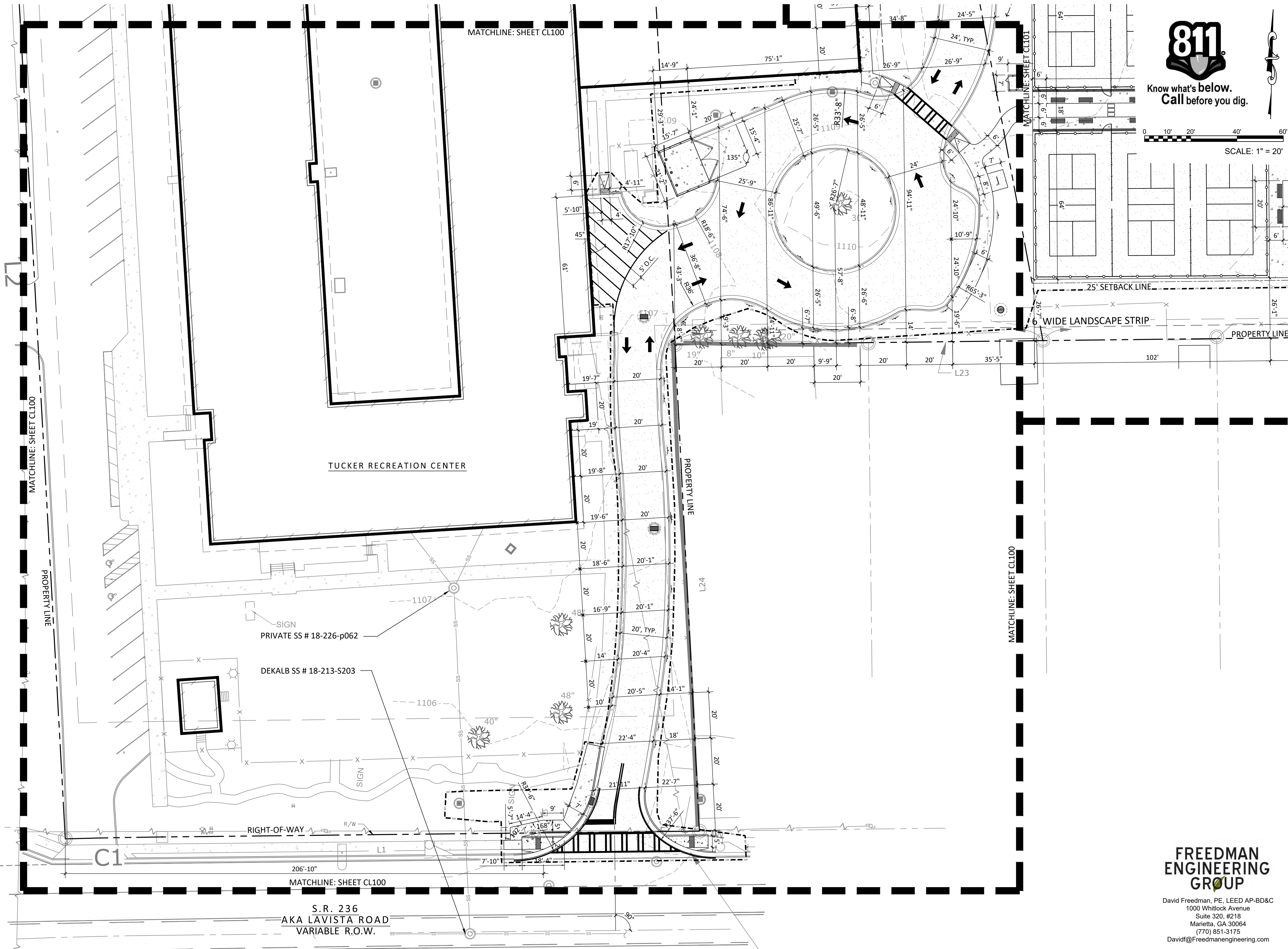
NO.	DATE	DESCRIPTION

Sheet Title:  
**Site Furnishings**

Sheet No:  
**C-600**

RELEASED FOR CONSTRUCTION





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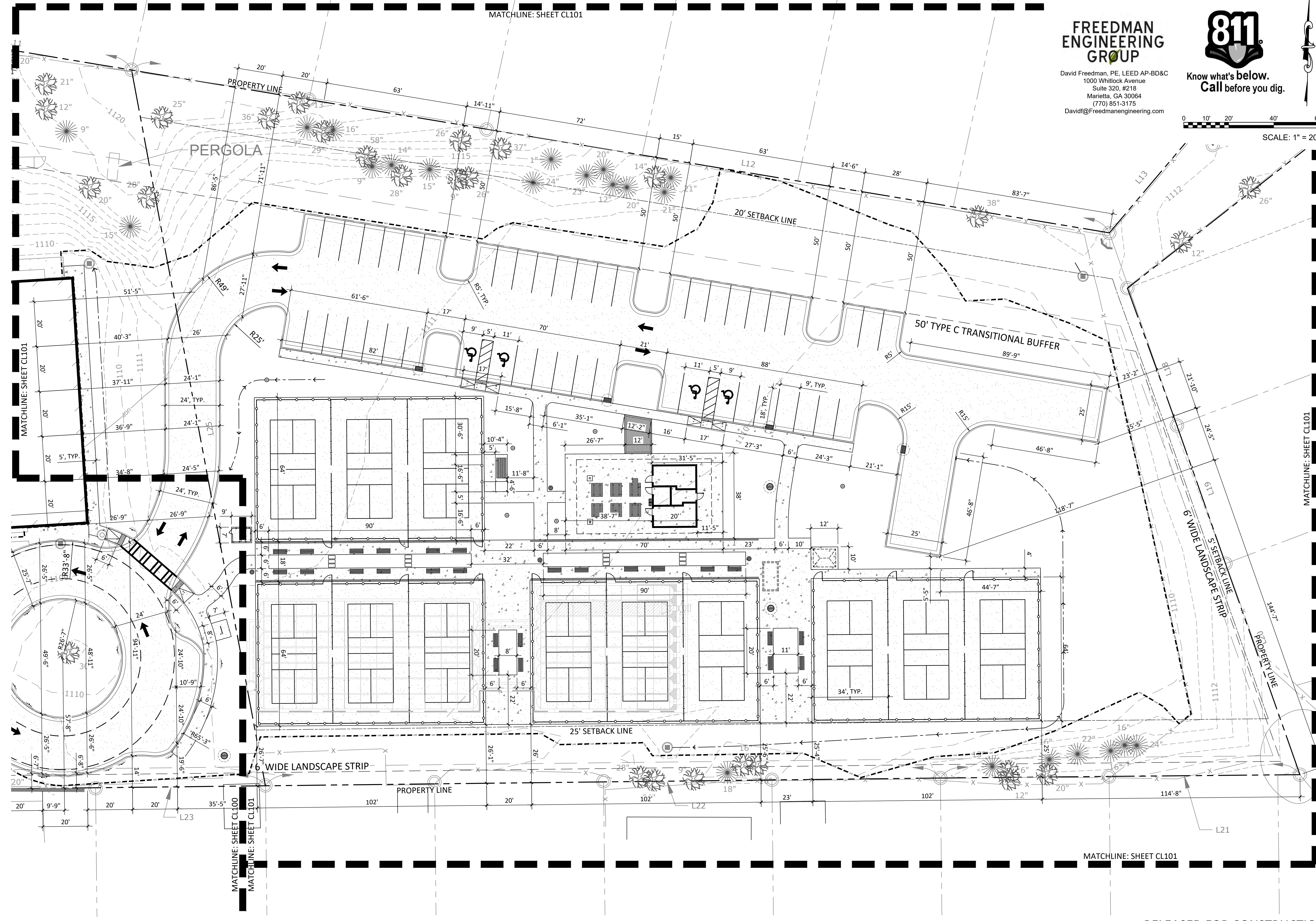
Sheet Title:  
**Layout Plan**

Sheet No:  
**CL100**



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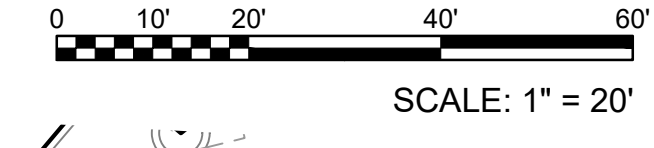


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**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Layout Plan:  
Area B**

Sheet No:  
**CL101**

RELEASED FOR CONSTRUCTION

**PROJECT DESCRIPTION**

THE PROJECT CONSISTS OF THE CONSTRUCTION OF SEVERAL PICKLEBALL COURTS ADJACENT TO THE EXISTING TUCKER REC CENTER. IN ADDITION TO THE PICKLEBALL COURTS, A NEW PARKING LOT, PAVILION AND RESTROOM BUILDING, UNDERGROUND DETENTION, AND HARDSCAPE / LANDSCAPE IMPROVEMENTS WE BE CONSTRUCTED. THE TOTAL PROJECT AREA IS 8.27 ACRES AND THE DISTURBED AREA IS 122,585 SQUARE FEET OR 2.85 ACRES. THE TOTAL VOLUME OF EARTH TO BE DISTURBED IS XXXX CUBIC FEET.

**CONSTRUCTION ACTIVITIES FOR THE PROJECT WILL INCLUDE THE FOLLOWING:**

- INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES
- ESTABLISHING TEMPORARY AND PERMANENT VEGETATION
- DEMOLITION
- CONSTRUCTION OF ALL OF THE PROJECT ELEMENTS - PICKLEBALL COURTS, PARKING LOT, RESTROOM / PAVILION, UNDERGROUND DETENTION, ETC.
- PAVING
- UTILITY WORK
- LANDSCAPING

DISTURBED AREAS WILL BE RESTORED WITH PERMANENT GRASS VEGETATION AND LANDSCAPE MULCHING. THE REMAINING AREAS DISTURBED BY CONSTRUCTION ACTIVITIES WILL BE RETURNED TO THEIR ORIGINAL CONDITIONS. TOPOGRAPHY WILL BE RETURNED TO ORIGINAL GRADE AND SLOPE AS MUCH AS POSSIBLE, AND RUNOFF COEFFICIENTS WILL BE COMPARABLE TO PRE CONSTRUCTION VALUES. STORM WATER RUNOFF RATES WILL BE MINIMALLY AFFECTED AS A RESULT OF THIS PROJECT.

**STORM-DRAIN PIPE AND WEIR VELOCITIES:**

EXISTING SITE DRAINAGE PATTERNS WILL NOT BE ALTERED AS A RESULT OF THE PROJECT. NO STORM DRAINAGE DISCHARGE STRUCTURES WILL BE INSTALLED.

**SEDIMENT STORAGE:**

CONSTRUCTION ACTIVITY INCLUDES GRADING, INSTALLATION OF DRAINAGE STRUCTURES AND PIPES, CONSTRUCTION OF SEVERAL PICKLEBALL COURTS, NEW PARKING LOT, PAVILION AND RESTROOM BUILDING, AND MAINTAINING EROSION CONTROL MEASURES AND GRASSING OF ALL DISTURBED AREAS. GIVEN THE NATURE OF THE PROJECT, SILT FENCE, TEMPORARY SEDIMENT BASINS, EXCAVATED INLET PROTECTION, AND TEMPORARY AND PERMANENT GRASSING WILL BE USED FOR SEDIMENT CONTROL FOR THE PROJECT.

DISTURBED AREA TOTAL = 2.85 ACRES

REQUIRED VOLUME OF SEDIMENT STORAGE = (2.85 ACRES)(67 C.Y./ACRE) = 191 CUBIC YARDS

**INITIAL PHASE:**

SILT FENCE STORAGE = 1 L.F. X 1.5' HIGH X 1.5' DEEP = 0.083 C.Y./L.F.

TOTAL AMOUNT OF SILT FENCE = 833 L.F., TOTAL SILT FENCE STORAGE: (833 L.F.)(0.083 C.Y./L.F.) = 69.1 C.Y.

TEMPORARY SEDIMENT TRAP S44-A (EAST) - 0.95 ACRES DRAINAGE - (0.95 AC)(67 C.Y./AC) = 63.7 CY REQUIRED; BASIN VOLUME=1,776 C.F. = 65.8 C.Y. PROVIDED

TEMPORARY SEDIMENT TRAP S44-A (SOUTH) - 0.96 ACRES DRAINAGE - (0.96 AC)(67 C.Y./AC) = 64.3 CY REQUIRED; BASIN VOLUME=1,776 C.F. = 65.8 C.Y. PROVIDED

TEMPORARY SEDIMENT TRAP S44-A (NORTH) - 0.92 ACRES DRAINAGE - (0.92 AC)(67 C.Y./AC) = 61.6 CY REQUIRED; BASIN VOLUME=1,776 C.F. = 65.8 C.Y. PROVIDED

TOTAL AMOUNT OF STORAGE IN TEMPORARY SEDIMENT TRAPS = (65.8 C.Y.)(3) = 197.4 C.Y.

TOTAL AMOUNT OF ON SITE STORAGE INITIAL PHASE = 69.1 C.Y. + 197.4 C.Y. = 266.5 C.Y.

**INTERMEDIATE PHASE:**

TOTAL AMOUNT OF SILT FENCE = 833 L.F., TOTAL SILT FENCE STORAGE (833 L.F.)(0.083 C.Y./L.F.) = 69.1 C.Y.

EXCAVATED INLET PROTECTION STORAGE: 15.4 C.Y. + 25.6 C.Y. + 18.5 C.Y. + 12.6 C.Y. + 12.6 C.Y. = 212.3 C.Y.

TOTAL AMOUNT OF ON SITE STORAGE INTERMEDIATE PHASE = 69.1 C.Y. + 212.3 C.Y. = 281.4 C.Y.

**POLLUTION PREVENTION PRACTICES & REMEDIATION OF PETROLEUM SPILLS AND LEAKS:**

THE CONTRACTOR IS PROHIBITED FROM STORING OIL OR ANY HAZARDOUS WASTE MATERIAL AT THE CONSTRUCTION SITE. CONSTRUCTION EQUIPMENT AND VEHICLES ARE THE ONLY ANTICIPATED SOURCE OF POTENTIAL POLLUTION EXPECTED WITHIN THE CONSTRUCTION AREA FOR THIS PROJECT.

**PREVENTION OF SPILLS AND LEAKS-**

THE CONTRACTOR IS RESPONSIBLE FOR MINIMIZING THE POTENTIAL OF POLLUTION FROM EQUIPMENT AND VEHICLE LEAKS OR SPILLS REACHING ANY RECEIVING WATERS. AT A MINIMUM, THE FOLLOWING PRACTICES SHALL BE IMPLEMENTED:

REGULARLY INSPECT ONSITE VEHICLES AND EQUIPMENT FOR LEAKS AND REPAIR IMMEDIATELY.

CHECK INCOMING VEHICLES AND EQUIPMENT FOR LEAKING OIL AND FLUIDS. DO NOT ALLOW LEAKING VEHICLES OR EQUIPMENT ONSITE.

IF FUELING MUST OCCUR ONSITE, USE LOCATIONS AWAY FROM DRAINAGE COURSES TO PREVENT THE RUNOFF OF STORMWATER AND THE RUNOFF OF SPILLS. ALWAYS USE SECONDARY CONTAINMENT, SUCH AS A DRAIN PAN, WHEN FUELING TO CATCH SPILLS/LEAKS.

IF MAINTENANCE MUST OCCUR ONSITE, USE A DESIGNATED AREA AND SECONDARY CONTAINMENT, LOCATED AWAY FROM DRAINAGE COURSES, TO PREVENT THE RUNOFF OF STORMWATER AND THE RUNOFF OF SPILLS.

ALWAYS USE SECONDARY CONTAINMENT, SUCH AS DRAIN PAN OR DROP CLOTH, TO CATCH SPILLS OR LEAKS WHEN REMOVING OR CHANGING FLUIDS. PROMPTLY TRANSFER USED FLUIDS TO PROPER WASTE OR RECYCLING CONTAINERS. IMMEDIATELY REMOVE FROM SITE AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

TO THE EXTENT THAT THE WORK CAN BE ACCOMPLISHED SAFELY, SPILLS OF OIL OR PETROLEUM PRODUCTS SHOULD BE CONTAINED AND CLEANED UP IMMEDIATELY. SPILLS SHOULD BE COVERED AND PROTECTED FROM STORMWATER RUNOFF DURING RAINFALL TO THE EXTENT THAT IT DOESNT COMPROMISE CLEAN UP ACTIVITIES.

**CLEANUP OF PETROLEUM LEAKS OR SPILLS-**

CLEAN UP LEAKS AND SPILLS IMMEDIATELY. NEVER HOSE DOWN OR BURY SPILLS. REMOVE CONTAMINATED SOILS AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

**MINOR SPILLS**

CONTAIN THE SPREAD OF THE SPILL, REMOVE CONTAMINATED SOILS, AND DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

**SEMI-SIGNIFICANT SPILLS**

SPILLS SHOULD BE CLEANED UP IMMEDIATELY WITH THE AID OF AS MANY ONSITE PERSONNEL AS NECESSARY. IMMEDIATELY CONTAIN THE SPILL BY CONSTRUCTING AN EARTHEN DIKE. DIG UP AND PROPERLY DISPOSE OF CONTAMINATED SOIL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

**SIGNIFICANT SPILLS**

FOR SIGNIFICANT SPILLS THAT CANNOT BE CONTROLLED BY PERSONNEL IN THE IMMEDIATE VICINITY, THE FOLLOWING STEPS SHOULD BE TAKEN:

NOTIFY THE LOCAL EMERGENCY RESPONSE BY CONTACTING 911. IN ADDITION TO 911, THE CONTRACTOR WILL NOTIFY THE PROPER 24 HOUR EMERGENCY CONTACT. THE SERVICES OF A SPILLS CONTRACTOR OR A HAZ-MAT TEAM SHOULD BE OBTAINED IMMEDIATELY. CONSTRUCTION PERSONNEL SHOULD NOT ATTEMPT TO CLEAN UP UNTIL THE APPROPRIATE AND QUALIFIED STAFFS HAVE ARRIVED AT THE JOB SITE.

THE CONTRACTOR IS REQUIRED TO ADHERE TO ALL REPORTING REQUIREMENTS OF GEORGIA'S OIL OR HAZARDOUS MATERIAL SPILLS OR RELEASES ACT (O.C.G.A. §§12-14-2, ET SEQ.), 40 CFR PART 117 AND 40 CFR PART 302, WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTING QUANTITY ESTABLISHED UNDER EITHER GEORGIA'S OIL OR HAZARDOUS MATERIAL SPILLS OR RELEASES ACT (O.C.G.A. §§12-14-2, ET SEQ.), 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD, THE CONTRACTOR IS REQUIRED TO NOTIFY EPD AT (404) 656-4863 OR (800) 241-4113 AND THE NATIONAL RESPONSE CENTER (NRC) AT (800) 424-8802 IN ACCORDANCE WITH THE REQUIREMENTS OF GEORGIA'S OIL OR HAZARDOUS MATERIAL SPILLS OR RELEASES ACT (O.C.G.A. §§12-14-2, ET SEQ.), 40 CFR 117 AND 40 CFR 302 AS SOON AS HE/SHE HAS KNOWLEDGE OF THE DISCHARGE.

**POST CONSTRUCTION POLLUTION CONTROL MEASURES:**

THIS PROJECT CONSISTS OF DEVELOPING A RECREATIONAL COMPLEX FOR THE CITY OF TUCKER TO INCLUDE SEVERAL PICKLEBALL COURTS, NEW PARKING, LOT, PAVILION AND RESTROOM BUILDING. PLANS INCLUDE GRADING AND DRAINAGE AND UPGRADES TO THE EXISTING DRIVEWAY CONNECTING TO LAVISTA ROAD. THE AREAS OUTSIDE OF PERMANENT STRUCTURES WILL BE RE-ESTABLISHED WITH PERMANENT VEGETATION AS SOON AS POSSIBLE. A PROPOSED CRYSTAL STREAM WATER QUALITY UNIT WILL BE INSTALLED TO PROVIDE WATER QUALITY ALONG WITH AN UNDERGROUND STORMWATER CHAMBER SYSTEM. THEREFORE, THE PROPOSED WATER QUALITY UNIT ALONG WITH PERMANENT GRASS VEGETATION ON DISTURBED AREAS WILL HELP CONTROL POST CONSTRUCTION RUNOFF AND POLLUTION

THE CONTRACTOR SHALL ENSURE SATISFACTORY GROWTH AND COVERAGE OF PERMANENT GRASS VEGETATION ON DISTURBED AREAS. GRASSED AREAS WILL BE CONSIDERED ACCEPTABLE WHEN PERMANENT GRASS VEGETATION HAS REACHED A POINT OF MATURITY, COVERAGE IS AT LEAST 95% OF THE TOTAL AREA WITH NO BARE SPOTS EXCEEDING ONE SQUARE FOOT, AND GROUND SURFACE IS FULLY STABILIZED AGAINST EROSION. SILT FENCE INSTALLED DURING THE INITIAL PHASE WILL BE KEPT IN PLACE AND MAINTAINED UNTIL PERMANENT VEGETATION HAS BEEN EFFECTIVELY ESTABLISHED AND CONTRACTOR HAS RECEIVED FINAL ACCEPTANCE BY THE OWNER.

**WASTE MATERIALS:**

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT BY A SECTION 404 PERMIT. ANY WASTE MATERIAL FROM CONSTRUCTION ACTIVITIES SHALL BE COLLECTED AND STORED IN A SECURE, LIDDED CONTAINER. AT THE END OF EACH WORK DAY WASTE MATERIAL SHALL BE REMOVED FROM THE CONSTRUCTION SITE AND DISPOSED OF PROPERLY.

IF EXISTING SANITARY FACILITIES ARE UNAVAILABLE, PORTABLE SANITARY FACILITIES SHALL BE PROVIDED. CONTRACTOR SHALL PAY THE COST FOR INSTALLATION, MAINTENANCE, AND REMOVAL OF TEMPORARY SANITARY FACILITIES. UNITS SHALL BE CLEANED AND SANITARY WASTE SHALL BE COLLECTED A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER AND IN COMPLIANCE WITH LOCAL AND STATE REGULATIONS.

UNITS SHALL BE LOCATED AT SUCH PLACES AS APPROVED BY THE OWNER AND WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORM WATER DISCHARGE IS NEGLIGIBLE.

THESE PLANS ARE IN COMPLIANCE WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER, AND SEPTIC SYSTEM REGULATIONS.

**INSPECTION OF BMP'S:**

CONTRACTOR IS TO NOTIFY ES AND PC DESIGN PROFESSIONAL WHEN CONSTRUCTION IS TO BEGIN. THE DESIGN PROFESSIONAL WHO PREPARED THE ES AND PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS WITHIN 7 DAYS AFTER INSTALLATION IN ACCORDANCE WITH PART IV.A.5. PAGE 25 OF THE GENERAL NPDES PERMIT.

**ES&PC PLAN AMENDMENTS/REVISIONS:**

ANY AMENDMENT TO THE EROSION CONTROL PLANS WHICH HAS A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE ES&PC PLAN DESIGN PROFESSIONAL.

**CONCRETE WASHDOWN:**

CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS, DRUMS, THE REAR OF VEHICLES, AND/OR ANY OTHER EQUIPMENT IS PROHIBITED ON THE PROJECT SITE.

**PRIMARY PERMITTEE:**

THE PRIMARY PERMITTEE FOR THIS SITE IS THE CITY OF TUCKER, GEORGIA, PARKS & RECREATION DEPARTMENT, 4898 LAVISTA ROAD, TUCKER, GA, 30084, 470-481-0205, 24-HR CONTACT IS RIP ROBERTSON, EMAIL: RROBERTSON@TUCKERGA.GOV

**STATE WATERS:**

THIS PROJECT IS NOT LOCATED WITHIN STATE WATERS. THE RECEIVING WATERS FOR THIS PROJECT IS BURNT FORK CREEK. THERE ARE NO BUFFER ENCROACHMENTS ASSOCIATED WITH THIS PROJECT AND A BUFFER VARIANCE IS NOT REQUIRED.

**EXISTING LAND USE:**

THE EXISTING LANDS AT THE PROJECT SITE ARE A CITY PARK.

**CRITICAL AREAS INFORMATION:**

THERE ARE NO CRITICAL AREAS WITHIN THIS PROJECT.

**WETLANDS:**

THERE ARE NOT WETLANDS WITHIN THE PROJECT AREA.

**EROSION, SEDIMENTATION AND POLLUTION CONTROL INSPECTIONS AND REPORTING:**

INSPECTIONS AND REPORTING REQUIREMENTS ARE REQUIRED.

**MULCHING**

Ds1

ALL SLOPED AREAS TO BE MULCHED AND TEMPORARILY GRASSED WITH 2 1/2 TONS PER ACRE OF DRY STRAW.

**TEMPORARY GRASSING**

Ds2

TEMPORARY GRASSING SHALL CONSIST OF SOWING A QUICK GRASS SUCH AS RYE GRASS, BROWN TOP MILLET, OR A GRASS SUITABLE TO THE AREA AND SEASON. LIME AND FERTILIZER WILL BE OMITTED. MULCH IS NOT REQUIRED BUT SHOULD BE USED AS DICTATED BY EXISTING SITE CONDITIONS.

SPECIES	RATE	PLANTING DATE
RYE GRASS-ANNUAL	40-50#/AC.	AUGUST THRU MID-APRIL
BROWNTOP MILLET	30-40#/AC.	APRIL THRU MID-JULY
RYE	160-170#/AC.	MID-AUGUST THRU DECEMBER

**PERMANENT GRASSING:**

Ds3

PERMANENT GRASSING SHALL CONSIST OF GROUND PREPARATION, LIMING AND FERTILIZATION, SEEDING, AND MULCHING.

THE GROUND SHALL BE PREPARED BY PLOWING AND DISKING NOT LESS THAN 4". FERTILIZER AND LIME SHALL BE UNIFORMLY MIXED INTO THE GROUND - FERTILIZER AT A RATE OF 1500#/AC. AND LIME AT 2000#/AC. THE GROUND SHALL BE FINISHED OFF SMOOTH AND UNIFORM BEING FREE OF ROCKS, CLODS, ROOTS, ETC. FERTILIZER MIXED GRADE SHALL BE EITHER 4-12-12; 6-12-12 OR 5-10-15. SEEDING SHALL BE DONE WITHIN 24 HOURS OF THE FERTILIZER APPLICATION, WEATHER PERMITTING. SEED SHALL BE UNIFORMLY SPREAD AT THE RATE SHOWN BELOW. MULCHING IS REQUIRED AND SHALL BE DONE IMMEDIATELY AFTER SEEDING. MULCH SHALL BE UNIFORMLY APPLIED OVER THE AREA LEAVING APPROXIMATELY 25% OF THE GROUND SURFACE EXPOSED. THE RATE OF APPLICATION SHALL BE DOUBLED ON SIDE SLOPES 4:1 AND STEEPER.

SPECIES	RATE	PLANTING DATE
TALL FESCUE	50#/AC.	MID AUGUST THRU OCTOBER
COMMON BERMUDA (HULLED)	10#/AC.	MARCH THRU JUNE
COMMON BERMUDA (UNHULLED)	10#/AC.	OCTOBER THRU FEBRUARY
WEEPING LOVEGRASS	4#/AC.	MARCH THRU MAY

**DUST CONTROL**

Du

PROVIDE DUST CONTROL THROUGH A COMBINATION OF MEASURES INCLUDING MULCHING, VEGETATION COVER , SPRAY ON ADHESIVES, TILLAGE, IRRIGATION, SPRAY ON ADHESIVES, AND/OR CALCIUM CHLORIDE

**EROSION CONTROL NOTES:**

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE OR AS DIRECTED BY THE EROSION CONTROL INSPECTOR. PRACTICES WILL BE CHECKED DAILY.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND-DISTURBING ACTIVITIES.

THE EXTENT AND LOCATION OF EROSION CONTROL MEASURES SHOWN ARE THE ESTIMATED REQUIRED. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED DUE TO THE ACTUAL FIELD CONDITIONS, AND WILL BE INSTALLED AT THE OWNER/DEVELOPERS EXPENSE WHEN DIRECTED BY THE PROPER GOVERNING AUTHORITY.

ALTERNATE TYPE C SILT FENCE CAN BE USED PROVIDED IT IS APPROVED BY THE GEORGIA DEPARTMENT OF TRANSPORTATION.

NO CLEARING OF THE SITE UNTIL ALL BASINS, DIVERSIONS, AND SEDIMENT CONTROLS ARE INSTALLED, STABILIZED, AND FUNCTIONAL.

LAND DISTURBANCE CANNOT BEGIN ON SITE UNTIL AFTER THE PRECONSTRUCTION CONFERENCE AND THE EROSION CONTROL INSPECTOR GIVES THE LDA PERMIT TO THE CONTRACTOR. PRESENT FOR THE PRECONSTRUCTION CONFERENCE SHALL BE GENERAL CONTRACTOR, GRADING CONTRACTOR, AND OWNER. THE DESIGN PROFESSIONAL MAY BE PRESENT AT THE DIRECTION OF THE OWNER.

THE GSWCC MANUAL REQUIRES TWO ROWS OF TYPE S SEDIMENT BARRIERS, 36 INCHES APART, ALONG ALL STATE WATERS.

BUILDING MATERIALS AND PRODUCTS STORED ONSITE DURING CONSTRUCTION SHALL BE COVERED WITH PLASTIC AND/OR TARPS TO PREVENT RUNOFF.

**DEKALB COUNTY NOTES:**

CONTRACTOR SHALL PREVENT TRACKING OR FLOW OF MUD AND OR SEDIMENT ONTO FLOODWAY, STREETS, AND ADJACENT PROPERTIES. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES OR SITES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY BY THE CONTRACTOR.

CONTRACTOR IS RESPONSIBLE OF ACQUIRING RIGHT OF ENTRIES FOR ACCESS / CONSTRUCTION PRIOR TO BEGINNING CONSTRUCTION.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIME. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

SEDIMENT AND EROSION MEASURES AND PRACTICES TO BE INSPECTED DAILY.

ALL DISTURBED AREAS TO BE GRASSED AS SOON AS CONSTRUCTION PHASES PERMIT.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

CUT AND FILL SLOPES SHALL NOT EXCEED 3H:1V ON RESIDENTIAL PROJECTS AND LOTS, AND SHALL NOT EXCEED 2H:1V ON ALL OTHER PROJECTS. IF COMPLIANCE IS NOT MET AN APPLICATION FOR A VARIANCE MAY BE AN OPTION.

WEEKLY EROSION AND SEDIMENT CONTROL REPORTS SHALL BE SUBMITTED TO THE DEVELOPMENT DEPARTMENT STARTING WITH THE ISSUANCE OF THE DEVELOPMENT PERMIT AND ENDING WHEN PROJECT IS RELEASED BY THE INSPECTOR.

IF ENCROACHMENT INTO THE 25' STATE STREAM BUFFER IS PROPOSED, ASSESS OR CONTACT THE EPD TO IDENTIFY WHETHER A STREAM BUFFER VARIANCE IS REQUIRED OR NOT.

IF ENCROACHMENT INTO THE 75' COUNTY BUFFER IS PROPOSED, ASSESS OR CONTACT THE COUNTY TO IDENTIFY WHETHER A STREAM BUFFER VARIANCE IS REQUIRED OR NOT.

IF THERE IS FILLING OF ENCROACHMENT / DISTURBANCE INTO WETLANDS OR STATE WATERS IS PROPOSED, ASSESS OR CONTACT THE ARMY CORPS OF ENGINEERS TO IDENTIFY WHETHER A PERMIT / PRE-CONSTRUCTION NOTIFICATION IS REQUIRED OR NOT.

NOTE THAT FOR ITEMS # 59 AND 61: A PERMIT / VARIANCE IS REQUIRED OR A LETTER / EMAIL FROM THE EPD STATING THAT A PERMIT / VARIANCE IS NOT REQUIRED MUST BE PROVIDED BY BEFORE THE LAND DISTURBANCE PERMIT WILL BE ISSUED BY THE COUNTY.

BEFORE BEGINNING CONSTRUCTION ACTIVITY, THE INTERMEDIATE REGIONAL FLOODPLAIN ELEVATION CONTOURS SHALL BE IDENTIFIED ON THE PROPERTY BY STAKING OR OTHER IDENTIFYING MECHANISMS NO LESS THAN EVERY ONE HUNDRED (100) FEET, AND SHALL BE IDENTIFIABLE THROUGHOUT PROJECT DEVELOPMENT.

ALL NEW AND REPLACEMENT WATER SUPPLY AND SANITARY SEWAGE SYSTEMS SHALL BE DESIGNED TO MINIMIZE OR ELIMINATE: (1) INFILTRATION OF FLOODWATERS INTO THE SYSTEMS, AND (2) DISCHARGE FROM THE SYSTEMS INTO FLOODWATERS.

ALL NEW CONSTRUCTION AND SUBSTANTIAL IMPROVEMENTS SHALL BE ADEQUATELY ANCHORED TO PREVENT FLOTATION, COLLAPSE, OR LATERAL MOVEMENT OF THE STRUCTURE RESULTING FROM HYDRODYNAMIC AND HYDROSTATIC LOADS, INCLUDING THE EFFECTS OF BUOYANCY.

**IMPAIRED STREAM REQUIREMENTS, TMDL PLANS, AND ALTERNATIVE BMP NOTES**

1. STORM WATER FROM THIS PROJECT SITE WILL NOT DISCHARGE WITHIN ONE LINEAR MILE OF AN IMPAIRED STREAM MEETING THE NPDES PERMIT CRITERIA ACCORDING TO THE 2022 305B/303D LIST OF IMPAIRED STREAMS. A TMDL IMPLEMENTATION PLAN HAS THEREFORE NOT BEEN WRITTEN, AND APPENDIX 1 DOES NOT APPLY TO THIS PROJECT.
2. ALTERNATIVE BMPS WILL NOT BE INSTALLED DURING THIS PROJECT.

NON EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50 FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25 FEET OF A COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

**ANTICIPATED ACTIVITY SCHEDULE:**

START DATE: NOVEMBER 1, 2024  
END DATE: MARCH 1, 2025

ACTIVITY	2024																								
	MONTH 1					MONTH 2					MONTH 3					MONTH 4					MONTH 5				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4					
EROSION CONTROL INSTALLATION OF SILT FENCE, CONSTRUCTION EXIT, TEMPORARY SEDIMENT TRAPS, TEMPORARY MULCHING AND GRASSING																									
ROUGH GRADING OF THE SITE, INSTALLATION OF STORM DRAIN STRUCTURES AND ASSOCIATED PIPING AND UTILITIES, AND INSTALLATION OF EXCAVATED INLET PROTECTION																									
INSTALLATION OF UNDERGROUND STORM CHAMBER SYSTEM AND WATER QUALITY TREATMENT DEVICE																									
FINAL GRADING OF THE SITE AND PICKLEBALL COURTS AREA, CONSTRUCTION OF THE PARKING AREA AND DRIVEWAYS.																									
INSTALLATION OF TEMPORARY AND PERMANENT GRASSING IN AREAS WHERE SITE IMPROVEMENTS ARE COMPLETE AND IN DISTURBED AREAS LEFT EXPOSED FOR GREATER THAN 14 DAYS																									
CLEANING OF STORM DRAINS																									
INSTALLATION OF LANDSCAPING																									
MAINTAIN INSTALLED EROSION CONTROL BMPS UNTIL PERMANENT VEGETATION IS ESTABLISHED AND EFFECTIVE CONTROL OF EROSION HAS BEEN ACHIEVED IN DISTURBED AREAS																									

I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND DISTURBANCE ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100001, GAR 100002, GAR 100003.

*David Freedman*  
DAVID FREEDMAN  
P.E. LICENSE NO. 14392, GSWCC LEVEL II CERTIFICATION NO. 66474

07/2/2024  
DATE

**CERTIFICATION - ES&PC DESIGN PROFESSIONAL**

*David Freedman*  
DAVID FREEDMAN  
P.E. - LICENSE NO. 14392, GSWCC LEVEL II CERTIFICATION NO. 66474

07/2/2024  
DATE

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION

*David Freedman*  
DAVID FREEDMAN  
P.E. - LICENSE NO. 14392, GSWCC LEVEL II CERTIFICATION NO. 66474

07/2/2024  
DATE

**ROOT DESIGN STUDIO**  
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Seal:

07/2/2024

Date: 07/02/2024

Project No: 2023-019

Drawn By: PS

Checked By: DF

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Erosion, Sedimentation, & Pollution Control Notes**

Sheet No:  
**CE000**



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# INSPECTION REQUIREMENTS, SAMPLING REQUIREMENTS, AND REPORTING

CONTRACTOR IS RESPONSIBLE FOR FULL COMPLIANCE WITH GEORGIA EPD GENERAL NPDES PERMIT NO. GAR10001 AS DESCRIBED BELOW AND AS OTHERWISE CONTAINED IN THE REFERENCED PERMIT.

## INSPECTIONS

- Each day when any type of construction activity has taken place at a primary permittee's site, certified personnel provided by the Contractor shall inspect: (a) all areas at the primary permittee's site where petroleum products are stored, used, or handled for spills and leaks from vehicles and equipment and (b) all locations at the primary permittee's site where vehicles enter or exit the site for evidence of off-site sediment tracking. These inspections must be conducted until a Notice of Termination is submitted.
- Measure and record rainfall within disturbed areas of the site that have not met final stabilization once every 24 hours except any non-working Saturday, non-working Sunday and non-working Federal holiday. The data collected for the purpose of compliance with this permit shall be representative of the monitored activity. Measurement of rainfall may be suspended if all areas of the site have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region.
- Construction (provided by the Contractor) shall inspect the following at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches rainfall or greater (unless such storm ends after 5:00 PM on any Friday or on any non-working Saturday, non-working Sunday or any non-working Federal holiday) in which case the inspection shall be completed by the end of the next business day and/or working day, whichever occurs first: (a) disturbed areas of the primary permittee's construction site; (b) areas used by the Contractor for storage of materials that are exposed to precipitation; and (c) structural control measures. Erosion and sediment control measures identified in the Plan applicable to the primary permittee's site shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s). For areas of a site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region, the Contractor must comply with Part IV.D.4.a.(4) of the Permit. These inspections must be conducted until a Notice of Termination is submitted.
- Certified personnel (provided by the Contractor) shall inspect at least once per month during the term of this permit (i.e., until a Notice of Termination has been submitted) the areas of the site that have undergone final stabilization or established a crop of annual vegetation and a seeding of target perennials appropriate for the region. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and the receiving water(s). Erosion and sediment control measures identified in the Plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving water(s).

## SAMPLING FREQUENCY

- Certified personnel must sample in accordance with the Erosion, Sedimentation, and Pollution Control Plan at least once for each rainfall event described below. For a qualifying event, samples must be taken at the beginning of any stormwater discharge to a monitored receiving water and/or from a monitored outfall location within in forty-(45) minutes or as soon as possible.
- Where manual and automatic sampling are impossible (as defined in the EPD permit), or are beyond the Owner and/or Contractor's control, samples shall be taken as soon as possible, but in no case more than twelve (12) hours after the beginning of the stormwater discharge.
- Sampling shall occur for the following qualifying events:
  - For each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit after all clearing and grubbing operations have been completed, but prior to completion of mass grading operations, in the drainage area of the location selected as the sampling location.
  - In addition to 1 above, for each area of the site that discharges to a receiving water or from an outfall, the first rain event that reaches or exceeds 0.5 inch with a stormwater discharge that occurs during normal business hours as defined in this permit either 90 days after the first sampling event or after all mass grading operations have been completed, but prior to submittal of a NOT, in the drainage area of the location selected as the sampling location, whichever comes first.
  - At the time of sampling performed pursuant to 1 and 2 above, if BMPs in any area of the site that discharges to a receiving water or from an outfall are not properly designed, installed and maintained, corrective action shall be defined and implemented within two (2) business days, and turbidity samples shall be taken from discharges from that area of the site for each subsequent rain event that reaches or exceeds 0.5 inch during normal business hours\* until the selected turbidity standard is attained, or until post-storm event inspections determine that BMPs are properly designed, installed and maintained.
  - Where sampling pursuant to 1, 2, or 3 above is required but not possible (or not required because there was no discharge), the Contractor, in accordance with Part IV.D.4.a.(6) of the EPD permit, must include a written justification in the inspection report of why sampling was not performed. Providing this justification does not relieve the Contractor of any subsequent sampling obligations under 1, 2, or 3 above.
- Note that the Contractor may choose to meet the requirements of 1 and 2 above by collecting turbidity samples from any rain event that reaches or exceeds 0.5 inch and allows for sampling at any time of day or week.

## REPORTING

- Sampling results are required to be submitted to the EPD at the address shown in Part II.C. of the EPD permit by the fifteenth day of the month following the reporting period.

- Based on the results of each inspection, the site description and the pollution prevention and control measures identified in the Erosion, Sedimentation and Pollution Control Plan, the Plan shall be revised as appropriate not later than seven (7) calendar days following each inspection. Implementation of such changes shall be made as soon as practical but in no case later than seven (7) calendar days following each inspection.
- A report of each inspection that includes the name(s) of certified personnel making each inspection, the date(s) of each inspection, construction phase (i.e., initial, intermediate or final), major observations relating to the implementation of the Erosion, Sedimentation and Pollution Control Plan, and actions taken in accordance with Part IV.D.4.a.(5) of the permit shall be made and retained at the site or be readily available at a designated alternate outfall location until the entire site or that portion of a construction site that has been phased has undergone final stabilization and a Notice of Termination is submitted to EPD. Such reports shall be readily available by the end of the second business day and/or working day and shall identify all incidents of best management practices that have not been properly installed and/or maintained as described in the Plan. Where the report does not identify any incidents, the inspection report shall contain a certification that the best management practices are in compliance with the Erosion, Sedimentation and Pollution Control Plan. The report shall be signed in accordance with Part V.G.2. of the permit.

## SAMPLING REQUIREMENTS

- Sampling shall be performed at the locations indicated on these plans.
  - Analytical methods used to collect and analyze the samples and quality control/quality assurance procedures shall be in accordance with methodology and test procedures established by 40 CFR Part 136, the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and any other guidance documents that may be prepared by EPD.
  - Sampling is to take place in Ex. Drain Inlet MH #11 which is downstream of all improvements onsite.
  - A violation is defined as a Nephelometric Turbidity Unit (NTU) value of greater than 75 based on Appendix B for a 8.27-acre site with a drainage area less than 5.0 square miles.
- SAMPLE TYPE**
- All sampling shall be collected by "grab samples" and the analysis of these samples must be conducted in accordance with methodology and test procedures established by 40 CFR Part 136 (unless other test procedures have been approved); the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" and guidance documents that may be prepared by the EPD.
  - Sample containers should be labeled prior to collecting the samples.
  - Samples should be well mixed before transferring to a secondary container.

- Copies of all Notices of Intent, Notices of Termination, inspection reports, sampling reports (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) or other reports requested by the EPD, Erosion, Sedimentation and Pollution Control Plans, records of all data used to complete the Notice of Intent to be covered by the permit and all other records required by the permit shall be retained by the permittee who either produced or used it for a period of at least three years from the date that the NOT is submitted in accordance with Part VI of the permit. These records must be maintained at the permittee's primary place of business or at a designated alternative location once the construction activity has ceased at the permitted site. This period may be extended by request of the EPD at any time upon written notification to the permittee. Contractor to provide permittee copies of all of the referenced information.
- All sampling reports shall include the following information:
  - The rainfall amount, date, exact place and time of sampling or measurements;
  - The name(s) of the certified personnel who performed the sampling and measurements;
  - The date(s) analyses were performed;
  - The time(s) analyses were initiated;
  - The name(s) of the certified personnel who performed the analyses;
  - References and written procedures, when available, for the analytical techniques or methods used;
  - The results of such analyses, including the bench sheets, instrument readings, computer disks or tapes, etc., used to determine these results;
  - Results which exceed 1000 NTU shall be reported as "exceeds 1000 NTU;" and
  - Certification statement that sampling was conducted as per the Plan.
- All written correspondence required by the permit shall be submitted by return receipt certified mail (or similar service) to the appropriate District Office of the EPD according to the schedule in Appendix A of the permit. The Contractor shall retain a copy of the proof of submittal at the construction site or the proof of submittal shall be readily available at a designated location from commencement of construction until such time as a NOT is submitted in accordance with Part VI of the Permit.

## RETENTION OF RECORDS

- The Contractor shall retain the following records at the construction site or the records shall be readily available at a designated alternate location from commencement of construction until such time as a NOT is submitted in accordance with Part VI of the Permit:
  - A copy of all Notices of Intent submitted to EPD;
  - A copy of the Erosion, Sedimentation and Pollution Control Plan required by this permit;
  - The design professional's report of the results of the inspection conducted in accordance with Part IV.A.5. of the permit;
  - A copy of all sampling information, results, and reports required by this permit;
  - A copy of all inspection reports generated in accordance with Part IV.D.4.a. of this permit;
  - A copy of all violation summaries and violation summary reports generated in accordance with Part III.D.2. of this permit; and
  - Daily rainfall information collected in accordance with Part IV.D.4.a.(2) of the permit.

- Large mouth, well cleaned and rinsed glass or plastic jars should be used for collecting samples. The jars should be cleaned thoroughly to avoid contamination.
- Manual, automatic or rising stage sampling may be utilized. Samples required by this permit should be analyzed immediately, but in no case later than 48 hours after collection. However, samples from automatic samplers must be collected no later than the next business day after their accumulation, unless flow through automated analysis is utilized. If automatic sampling is utilized and the automatic sampler is not activated during the qualifying event, the Contractor must utilize manual sampling or rising stage sampling during the next qualifying event. Dilution of samples is not required. Samples may be analyzed directly with a properly calibrated turbidimeter. Samples are not required to be cooled.
- Sampling and analysis of the receiving water(s) or outfalls beyond the minimum frequency stated in this permit must be reported to EPD as specified in Part IV.E.

## SAMPLING POINTS

- The upstream sample for each receiving water(s) must be taken immediately upstream of the confluence of the first stormwater discharge from the permitted activity (i.e., the discharge farthest upstream at the site) but downstream of any other stormwater discharges not associated with the permitted activity. Where appropriate, several upstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the upstream turbidity value.
- The downstream sample for each receiving water(s) must be taken downstream of the confluence of the last stormwater discharge from the permitted activity (i.e., the discharge farthest downstream at the site) but upstream of any other stormwater discharge not associated with the permitted activity. Where appropriate, several downstream samples from across the receiving water(s) may need to be taken and the arithmetic average of the turbidity of these samples used for the downstream turbidity value.
- Ideally the samples should be taken from the horizontal and vertical center of the receiving water(s) or the stormwater outfall channel(s).
- Care should be taken to avoid stirring the bottom sediments in the receiving water(s) or in the outfall stormwater channel.
- The sampling container should be held so that the opening faces upstream.
- The samples should be kept free from floating debris.
- All sampling must be done in such a way (including generally accepted sampling methods, locations, timing, and frequency) as to accurately reflect whether stormwater runoff from the construction site is in compliance with the standard set forth in Parts III.D.3. or III.D.4., of EPD Permit No. GAR 10001, whichever is applicable.

## DRAINAGE BASIN TABLE

SITE SIZE ACRES	NEPHELOMETRIC TURBIDITY UNIT (NTU) TABLES WATERS SUPPORTING WARM WATER FISHERIES SURFACE WATER DRAINAGE AREA – SQUARE MILES				
	0–4.99	5–9.99	10–24.99	25-49.99	50-99.99
1.00–10	75	150	200	400	750
10.01–25	50	100	100	200	300
25.01–50	50	50	100	100	200
50.01–100	50	50	50	100	100
100.01+	50	50	50	50	50

# EROSION, SEDIMENTATION, & POLLUTION CONTROL PLAN CHECKLIST

**EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST**  
STANDARD ALONE CONSTRUCTION PROJECTS

Project Name: Tucker Pickleball Courts Address: 4898 Lavista Rd, Tucker, GA 30084  
Local Issuing Authority: Tucker Date on Plans: 7/2/24  
Name & Email of person filling out checklist: David Freedman, david@freedmanengineering.com  
Plan included: YES

- TO BE SHOWN ON ES&PC PLAN**
- The applicable Erosion, Sedimentation and Pollution Control Plan Checklist established by the Commission as of January 1 of the year in which the land-disturbing activity was permitted. (The completed Checklist must be submitted with the ES&PC Plan or the Plan will not be reviewed.)
  - Level II certification number issued by the Commission, signature and seal of the certified design professional. (Signatures, seal and Level II number must be on each sheet pertaining to ES&PC plan or the Plan will not be reviewed.)
  - Limits of disturbance shall be no greater than 50 acres at any one time without prior written authorization from the GAEPD District Office. If GAEPD approves the request to disturb 50 acres or more at any one time, the Plan must include at least 4 of the BMPs listed in Appendix 1 of the checklist and the GAEPD approval letter. \* (A copy of the written approval by GAEPD must be attached to the plan for the Plan to be reviewed.)
  - The name and phone number of the 24-hour contact responsible for erosion, sedimentation and pollution control.
  - Provide the name, address, email address, and phone number of primary permittee.
  - Note total and detailed acreage of the project or phase under construction.
  - Provide the GPS location of the construction site for the site. Give the Latitude and Longitude in decimal degrees.
  - Initial date of the Plan and the date of any revisions made to the Plan including the entity who requested the revisions.
  - Description of the nature of construction activity and existing conditions.
  - Provide vicinity map showing site's relation to surrounding areas. Include designation of specific phase, if necessary.
  - Identify the project receiving waters and describe all sensitive adjacent areas including streams, lakes, residential areas, wetlands, marshlands, etc. which may be affected.
  - Design professional's certification statement and signature that the site was visited prior to development of the ES&PC Plan as stated on Part IV page 19 of the permit.
  - Design professional's certification statement and signature that the permittee's ES&PC Plan provides for an appropriate and comprehensive system of BMPs and sampling to meet permit requirements as stated in Part IV page 19 of the permit. \*
  - Clearly note the statement that "The design professional who prepared the ES&PC Plan is to inspect the installation of the initial sediment storage requirements and perimeter control BMPs within 7 days after installation."
  - Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wetland vegetation or within 25 feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
  - Provide a description of any buffer encroachments and indicate whether a buffer variance is required.
  - Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wetland vegetation or within 25 feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
  - Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wetland vegetation or within 25 feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."
  - Clearly note the statement that "Non-exempt activities shall not be conducted within the 25 or 50-foot undisturbed stream buffers as measured from the point of wetland vegetation or within 25 feet of the coastal marshland buffer as measured from the Jurisdictional Determination Line without first acquiring the necessary variances and permits."

- Graphic scale and North arrow.
- Existing and proposed contour lines with contour lines drawn at an interval in accordance with the following:
 

Map Scale	Ground Slope	Contour Interval, ft.
1" = 20'	1 or 2%	1 or 2
larger scale	Riding 2 - 5% Steps 8% +	2.5 or 10
- Use of alternative BMPs whose performance has been documented to be equivalent to or superior to conventional BMPs as certified by a Design Professional (unless designated by GAEPD or the Georgia Soil and Water Conservation Commission). Please refer to the Alternative BMP Guidance Document found at www.georgia.gov.
- Use of alternative BMP for application to the Equivalent BMP List. Please refer to Appendix A-2 of the Manual for Erosion & Sediment Control in Georgia 2016 Edition. \*
- Delineation of the applicable 25-foot or 50-foot undisturbed buffers adjacent to state waters and any additional buffers required by the Local Issuing Authority. Clearly note and delineate all areas of impact.
- Delineation of on-site wetlands and all state waters located on and within 200 feet of the project site.
- Delineation and acreage of contributing drainage basins on the project site.
- Provide hydrology study and maps of drainage basins for both the pre- and post-developed conditions. \*
- An estimate of the runoff coefficient or peak discharge rate of the site prior to and after construction activities are completed.
- Storm-drain pipe and weir velocities with appropriate outlet protection to accommodate discharge without erosion. Identify/Delineate all storm water discharge points.
- Soil series for the project site and their delineation.
- The limits of disturbance for each phase of construction.
- Provide a minimum of 67 cubic yards of sediment storage per acre drained using a temporary sediment basin, notified detention pond, and/or excavated inlet sediment traps for each common drainage location. Sediment storage volume must be in place prior to and during all land disturbance activities until final stabilization of the site has been achieved. A written justification explaining the decision to use equivalent controls when a sediment basin is not desirable must be included in the Plan for each common drainage location in which a sediment basin is not provided. A written justification as to why 67 cubic yards of storage is not desirable must also be given. Worksheets from the Manual included for structural BMPs and all calculations used by the design professional to obtain the required sedimentation when using equivalent controls. When discharging from sediment basins and riprap/bowls, permittees are required to utilize outlet structures that withdraw water from the surface, unless infeasible. If outlet structures that withdraw water from the surface are not feasible, a written justification explaining this decision must be included in the Plan.
- Location of Best Management Practices that are consistent with and no less stringent than the Manual for Erosion and Sediment Control in Georgia. Use uniform coding symbols from the Manual, Chapter 6, with legend.
- Provide detailed drawings for all structural practices. Specifications must, at a minimum, meet the guidelines set forth in the Manual for Erosion and Sediment Control in Georgia.
- Provide vegetative plan, noting all temporary and permanent vegetative practices. Include species, planting dates and seeding, fertilizer, lime and mulching rates. Vegetative plan shall be site specific for appropriate time of the year that seeding will take place and for the appropriate geographic region of Georgia. \*
- Using this checklist for a project that is less than 1 acre and not part of a common development but within 200 ft of a perennial stream, the \* checklist items would be N/A.

Effective January 1, 2024

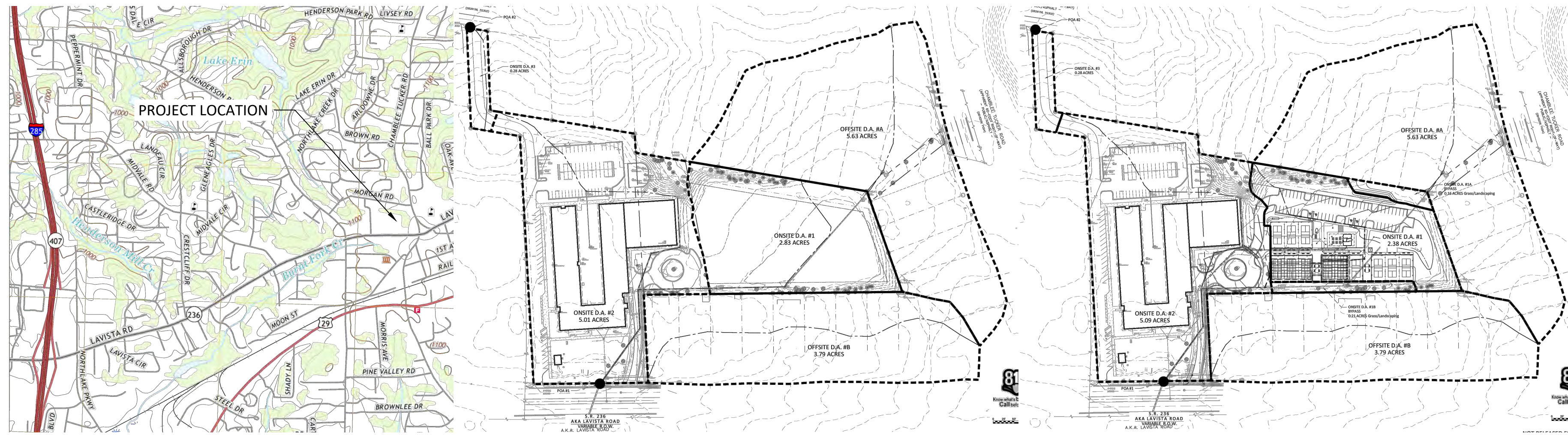
- Clearly note the statement that "Waste materials shall not be discharged to waters of the State, except as authorized by a Section 402 permit." \*
- Clearly note statement that "The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities."
- Clearly note statement that "Erosion control measures will be maintained at all times. If full implementation of the approved Plan does not provide for effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source."
- Clearly note the statement "Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding."
- Any construction activity which discharges storm water into an Impaired Stream Segment, or within 1 linear mile upstream and within the same watershed as, any portion of a State Impaired Stream Segment must comply with Part II.C. of the permit. Include the completed Appendix 1 listing all the BMPs that will be used for those areas of the site which discharge to the Impaired Stream Segment. \*
- If a TMDL implementation Plan for sediment has been finalized for the Impaired Stream Segment (identified in Item 22 above) at least six months prior to submittal of the ES&PC Plan, the ES&PC Plan must address any site-specific conditions or requirements included in the TMDL implementation Plan. \*
- BMPs for concrete washout of loads, concrete mixer chutes, hoppers and the rear of the vehicles. Washout of the drum at the construction site is prohibited. \*
- Provide BMPs for the removal of all petroleum spills and leaks.
- Description of the measures that will be installed during the construction process to control pollutants in storm water that occur after construction operations have been completed. \*
- Description of practices to provide cover for building materials and building products on site. \*
- Description of practices that will be used to reduce the pollutants in storm water discharges. \*
- Description and chart of timeline of the intended sequence of major activities which disturb soils for the major portions of the site (i.e., initial perimeter and sediment storage BMPs, clearing and grubbing activities, excavation activities, utility activities, temporary and final stabilization).
- Provide complete requirements of Inspections and record keeping by the primary permittee. \*
- Provide complete requirements of Sampling Frequency and Reporting of sampling results. \*
- Provide complete details of Records as per Part IV.F. of the permit. \*
- Description of analytical methods to be used to collect and analyze the samples from each location. \*
- Appendix B returns for NTU values at all outfall sampling points where applicable. \*
- Delineate all sampling locations, perennial and intermittent streams and other water bodies into which storm water discharges. \*
- Description of appropriate controls and measures that will be implemented at the construction site including: (1) initial sediment storage requirements and perimeter control BMPs, (2) intermediate grading and drainage BMPs, and (3) final BMPs. For construction sites where there will be no mass grading and the initial perimeter control BMPs, intermediate grading and drainage BMPs, and final BMPs are the same, the Plan may combine all of the BMPs into a single phase. \*

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Rip Robertson  
PH: (470) 481-0205

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## DRAINAGE BASIN MAPS



## DRAINAGE BASIN TABLE

**SHEET NOTES:**

- RECEIVING WATERS WHICH ARE WITHIN 200 FEET OF THE PROJECT SITE ARE LABELED AS "STATE WATER"
- SEE THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN DOCUMENT, PLAN SHEET CE000 AND CE001 FOR ADDITIONAL INFORMATION REGARDING RECEIVING WATERS AND SAMPLING REQUIREMENTS. SEE SHEETS CE100-CE301 FOR DETAILED LOCATION OF SAMPLE POINTS.
- A SITE VISIT DETERMINED THAT THERE ARE NO WETLANDS IN THE VICINITY OF THIS PROJECT.

WATERSHED INFORMATION				
WATERSHED	TOTAL ACREAGE	DESCRIPTION OF AREAS WITHIN THE WATERSHED	RUNOFF CURVE NUMBER (CN) PRE-CONSTRUCTION	RUNOFF CURVE NUMBER (CN) POST-CONSTRUCTION
WATERSHED FOR MONITORING POINT #1	±17.26	COMMERCIAL, MUNICIPAL, RESIDENTIAL PAVED ROADS, INSTITUTIONAL, UNDEVELOPED LAND, AND LAWNS	72	76

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Seal:   
07/2/2024

Date: 07/02/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: DF

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084  
City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Erosion, Sedimentation, & Pollution Control Notes**

Sheet No:  
**CE001**

RELEASED FOR CONSTRUCTION

Seal:



07/2/2024

Date: 07/2/2024

Project No: 2023-019

Drawn By: PS

Checked By: DF

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Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:

Erosion,  
Sedimentation,  
& Pollution  
Control Plan:  
Area A - Initial

Sheet No:

**CE100**

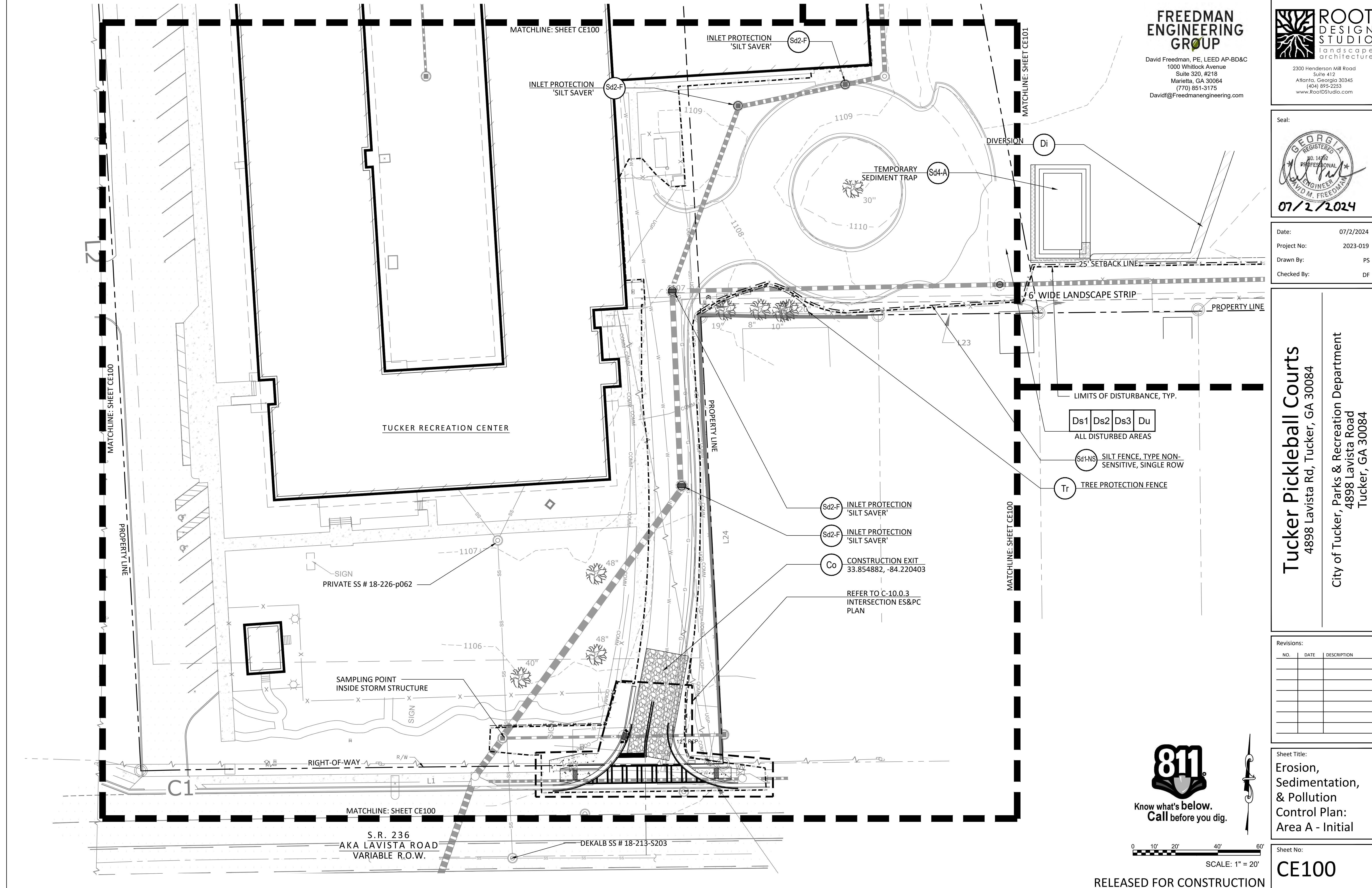


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SCALE: 1" = 20'

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MATCHLINE: SHEET CE101

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Date: 07/2/2024

Project No: 2023-019

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Checked By: DF

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

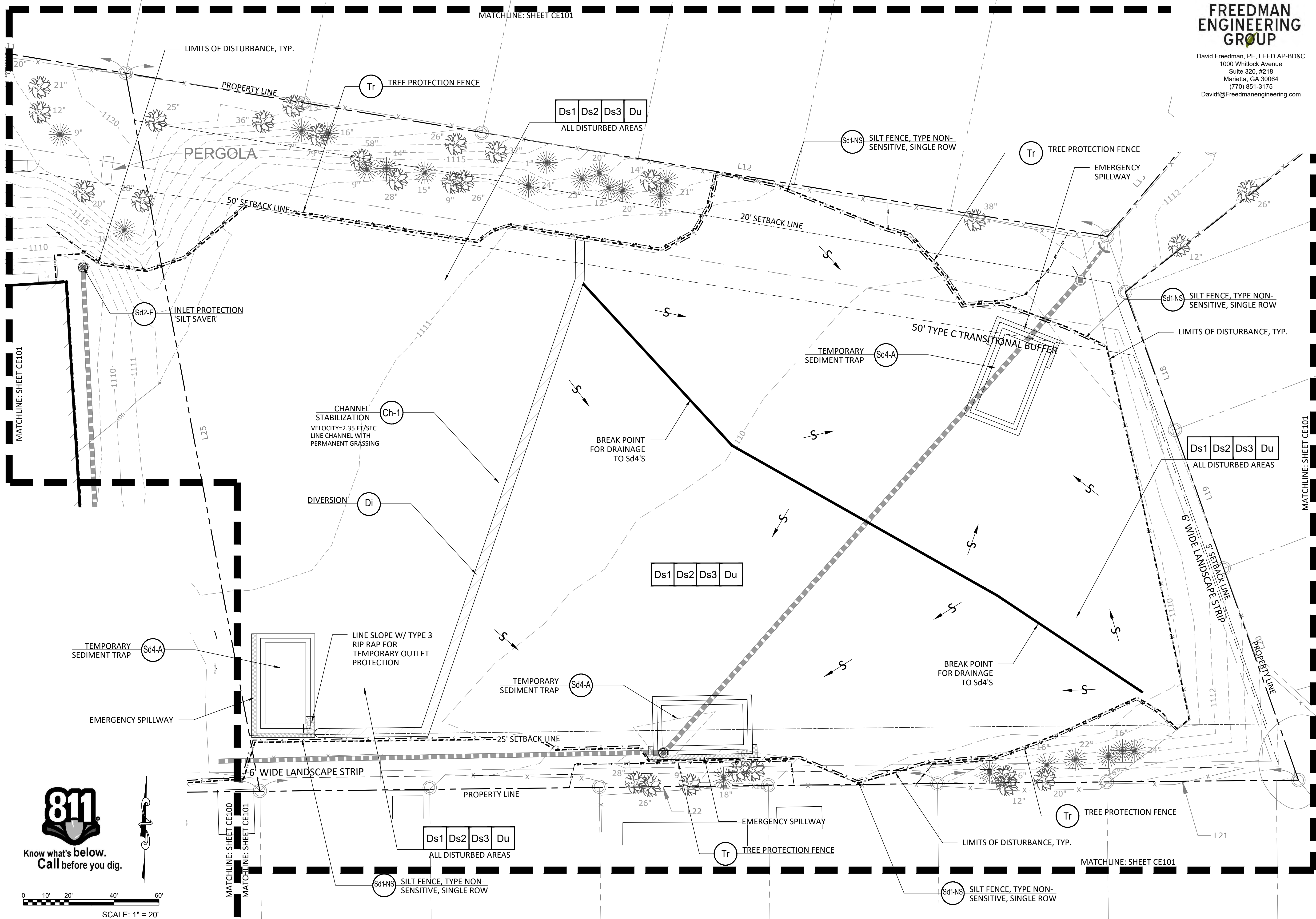
NO.	DATE	DESCRIPTION

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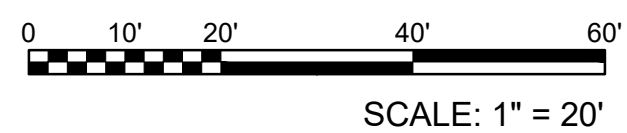
**Erosion, Sedimentation, & Pollution Control Plan: Area B-Initial**

Sheet No:

**CE101**



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NO.	DATE	DESCRIPTION

Sheet Title:

Erosion,  
Sedimentation, &  
Pollution Control  
Plan: Area A  
Intermediate

Sheet No:

**CE200**

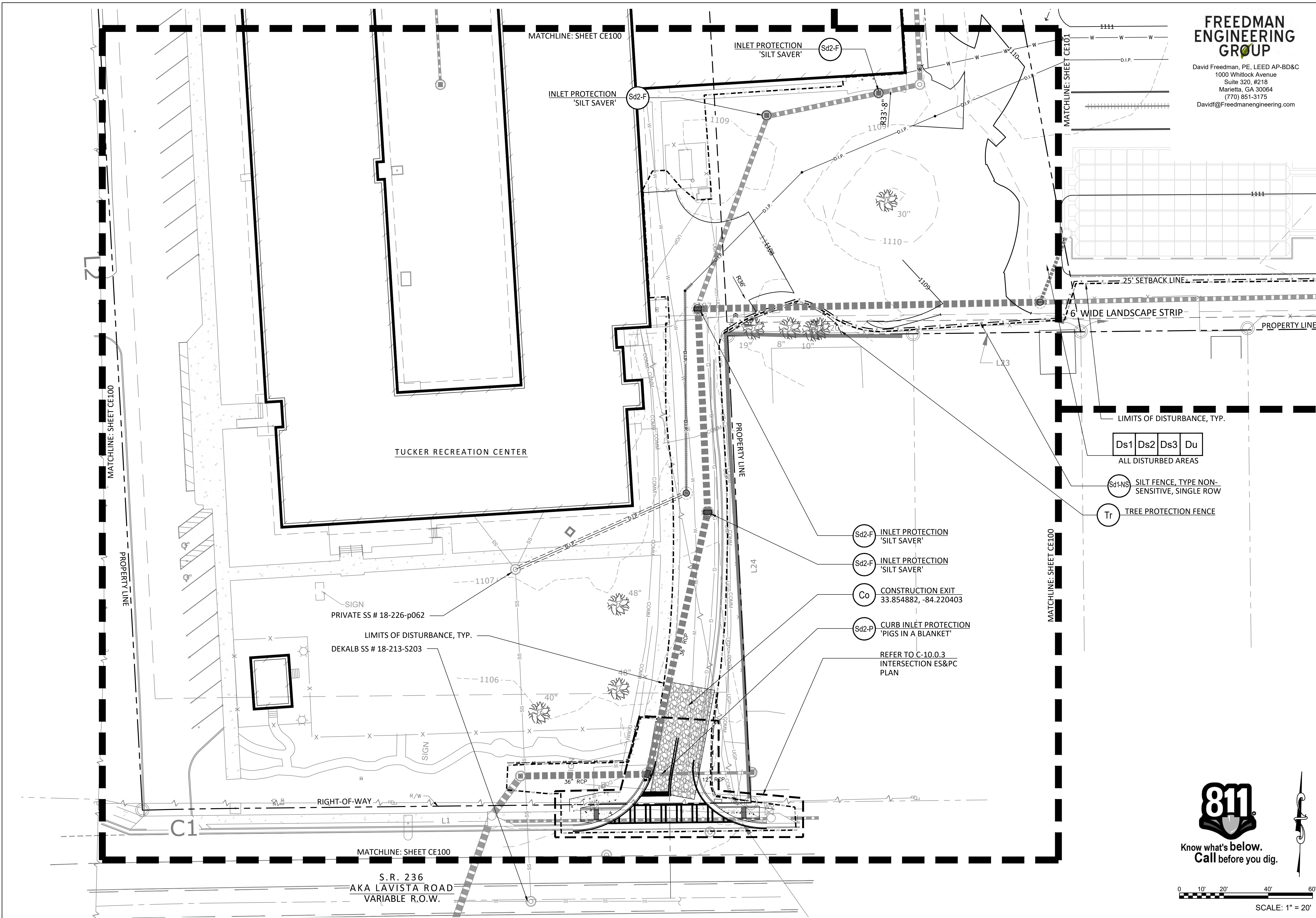


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(770) 851-3175  
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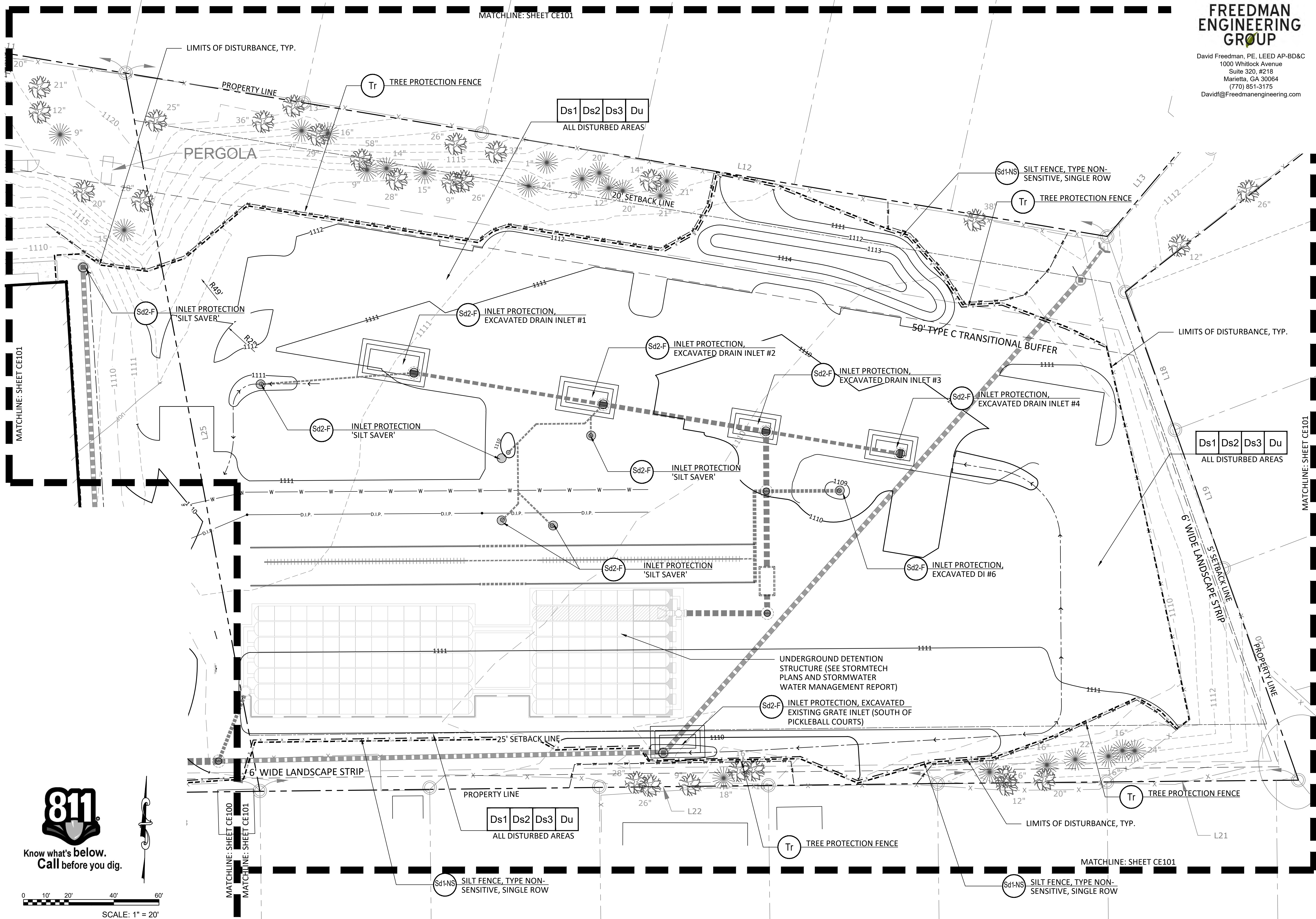
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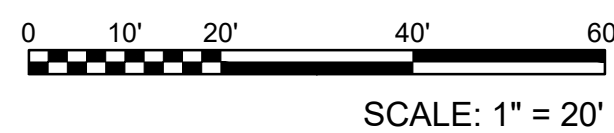
Erosion, Sedimentation, & Pollution Control Plan: Area B Intermediate

Sheet No:

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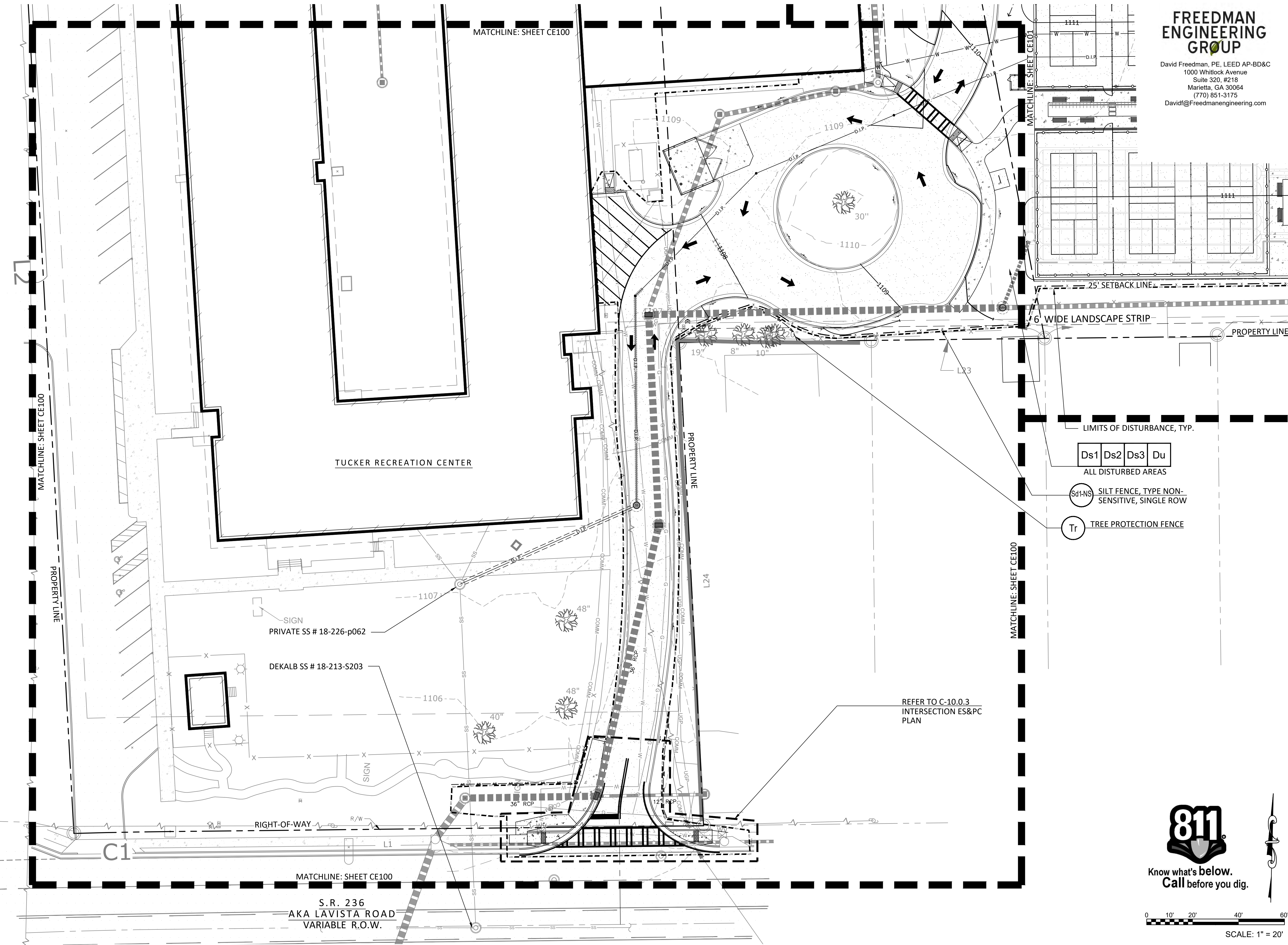
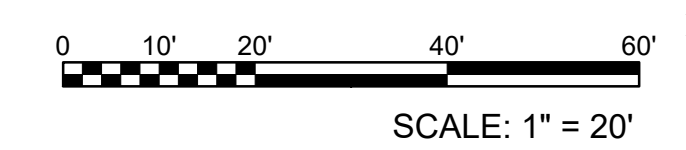
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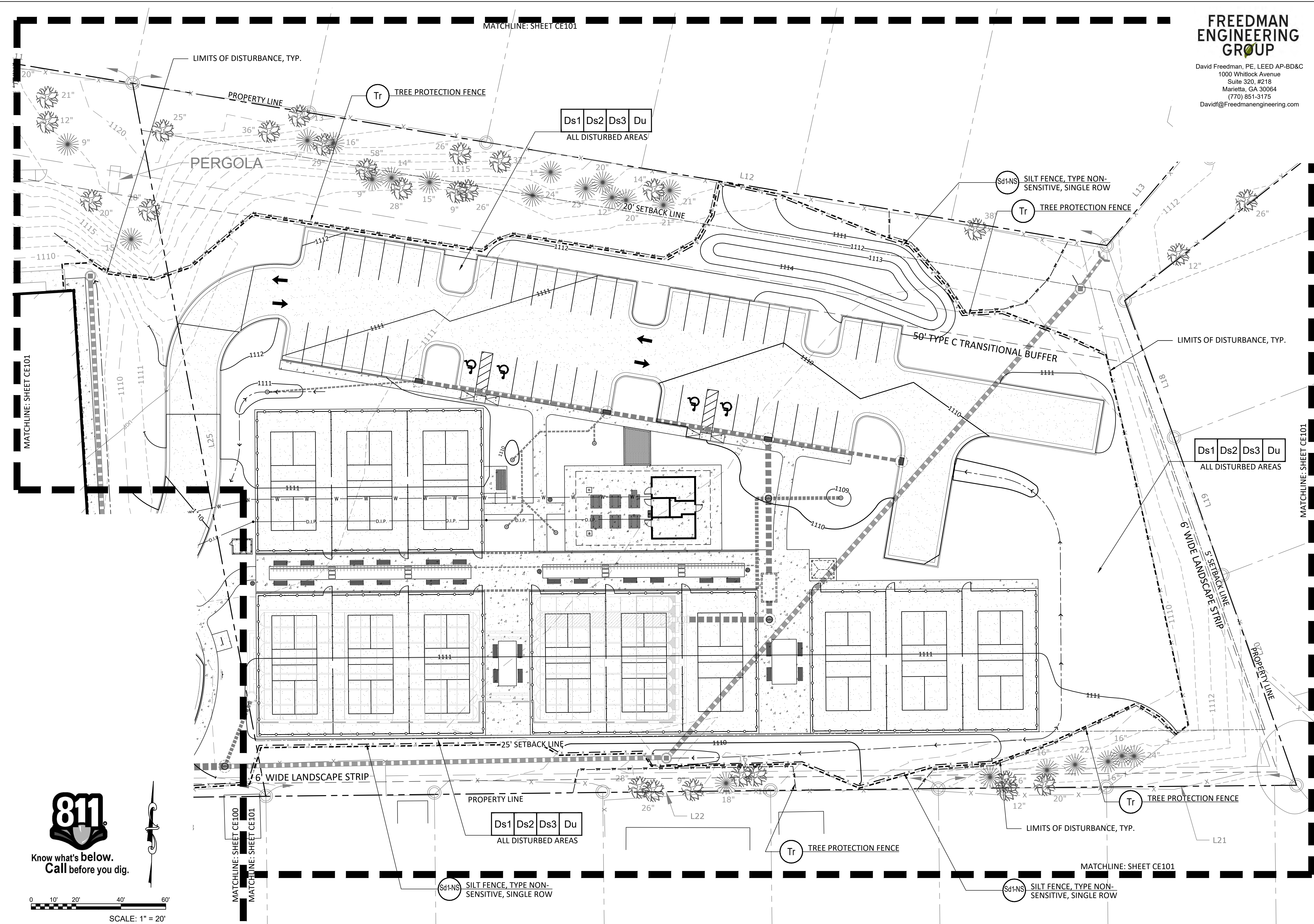
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Sheet Title:  
**Erosion,  
Sedimentation,  
& Pollution  
Control Plan:  
Area A - Final**

Sheet No:  
**CE300**

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 City of Tucker, Parks & Recreation Department  
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 Tucker, GA 30084

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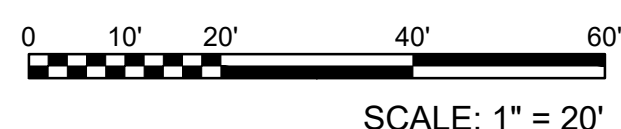
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**Erosion, Sedimentation, & Pollution Control Plan: Area B - Final**

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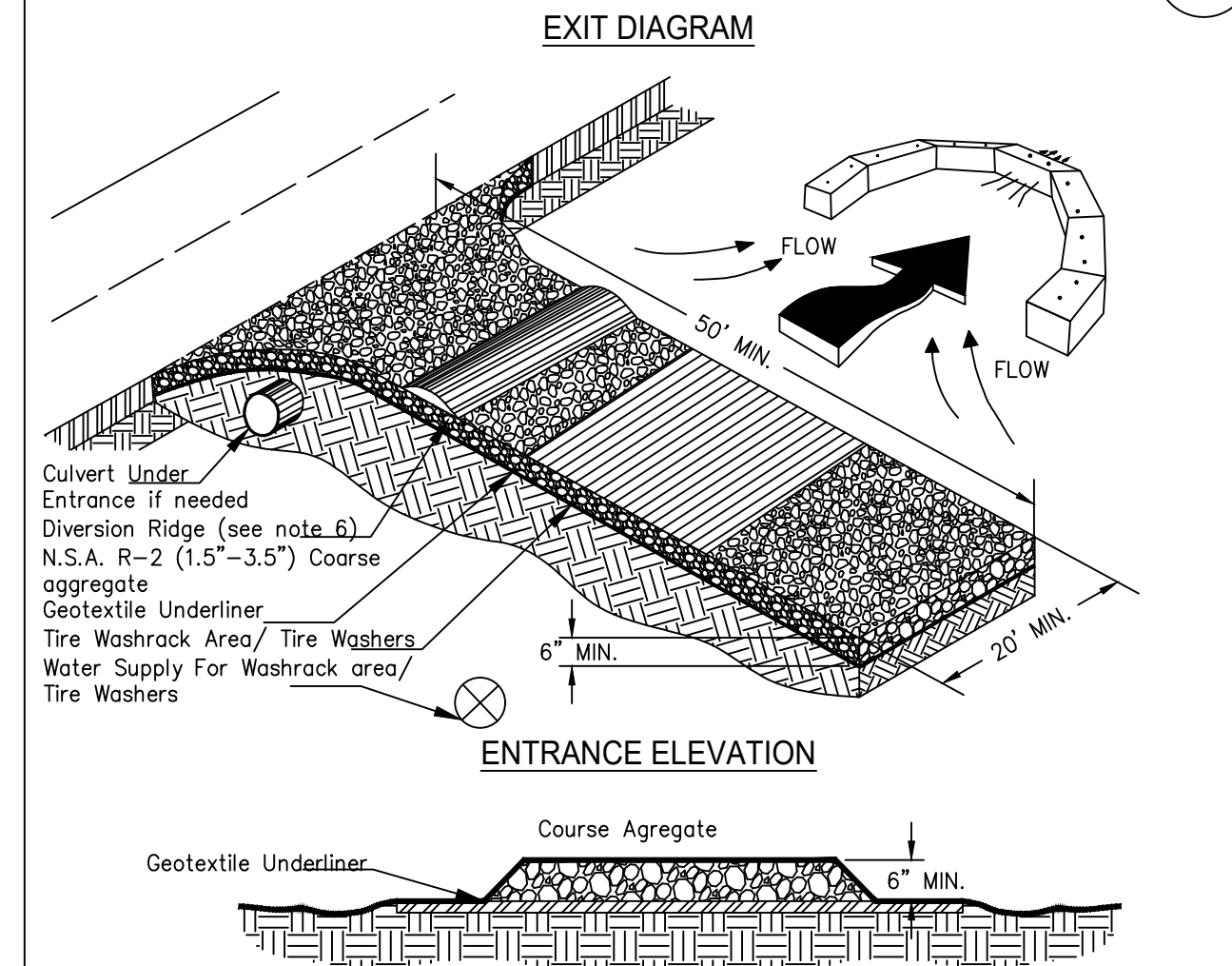
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**Erosion, Sedimentation, & Pollution Control Details**

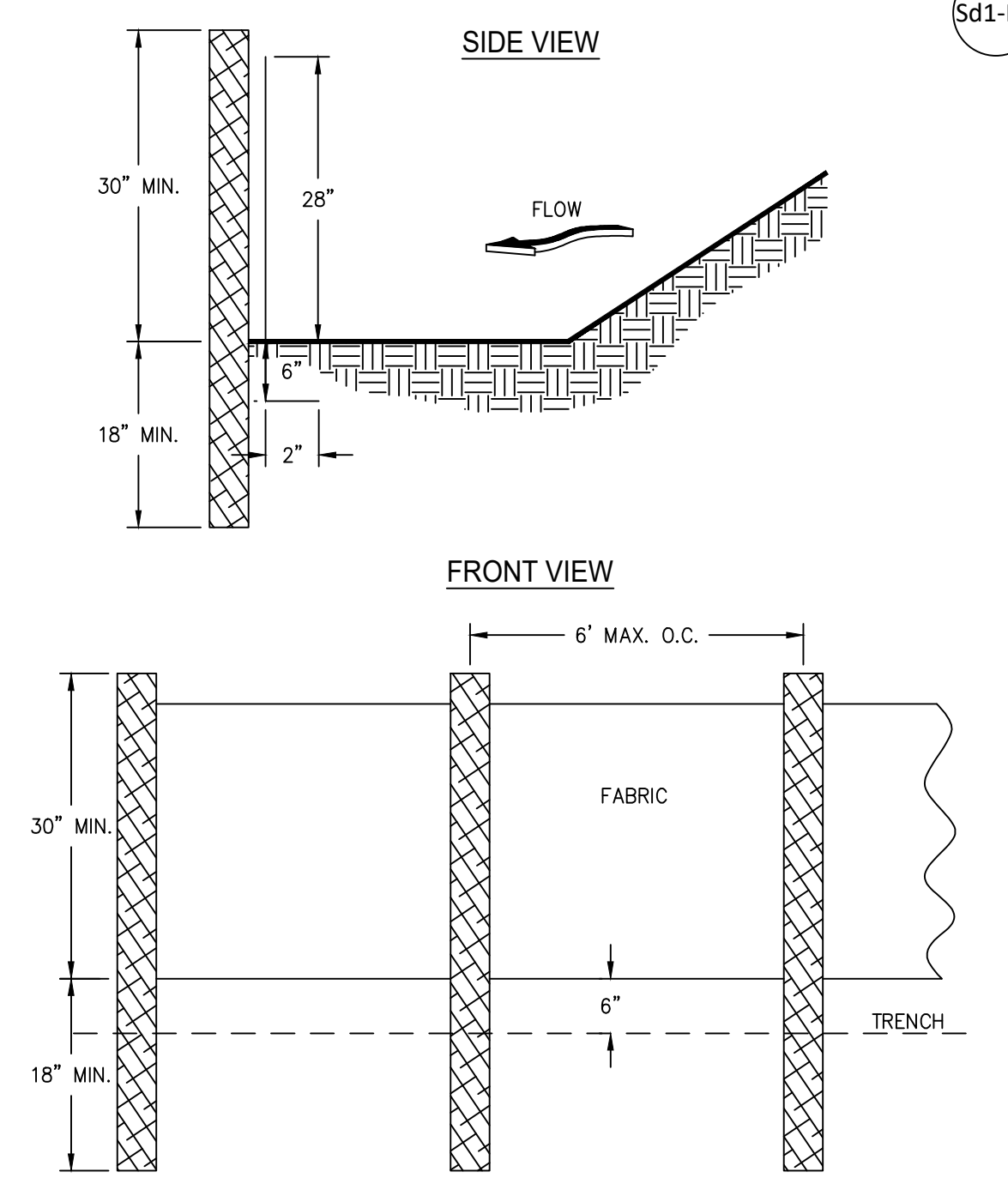
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**CE500**

**CRUSHED STONE CONSTRUCTION EXIT** (Co)



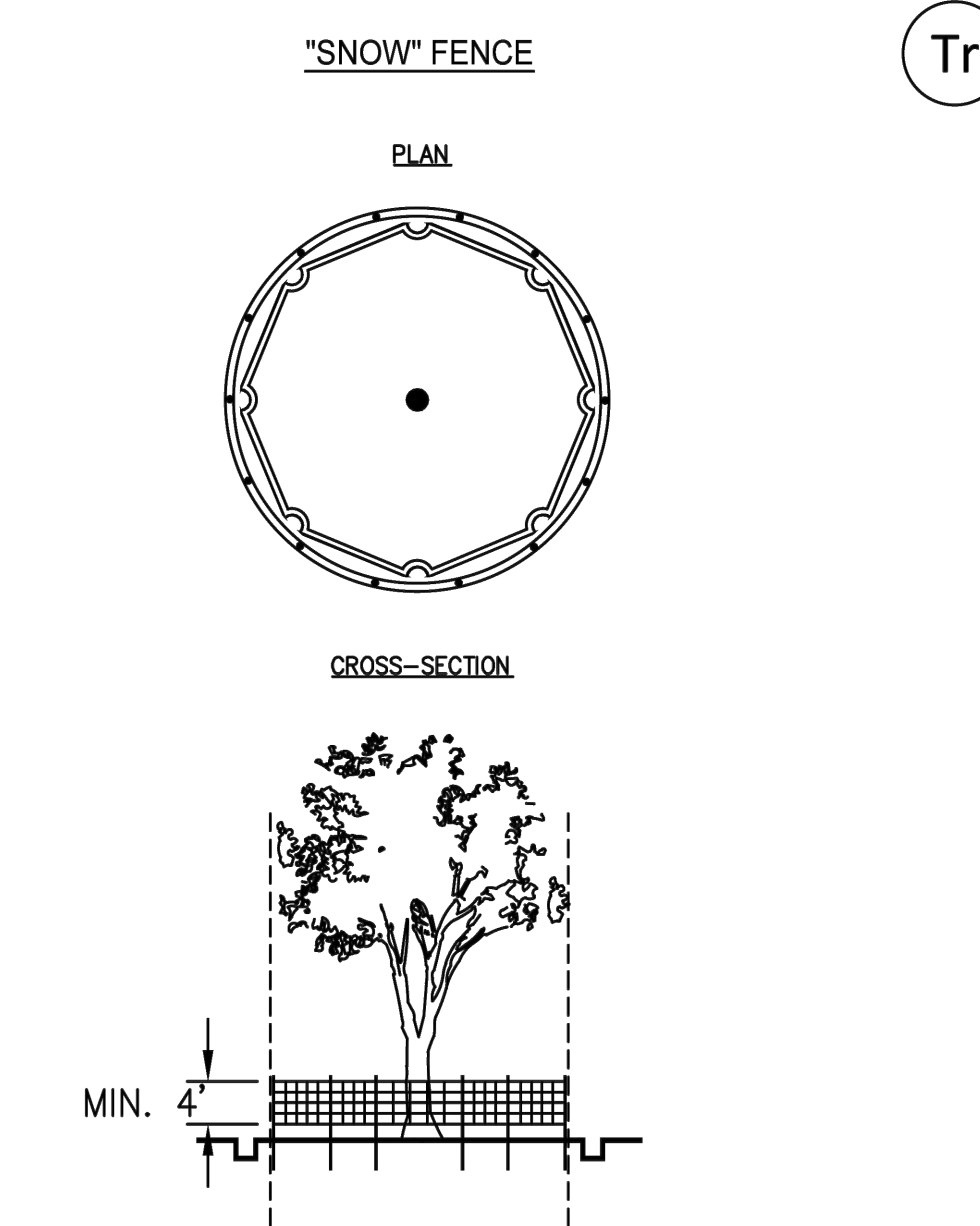
- NOTES:**
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
  2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
  3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE).
  4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
  5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'.
  6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
  7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
  8. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
  9. WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
  10. MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

**SILT FENCE - TYPE NON-SENSITIVE** (Sd1-NS)



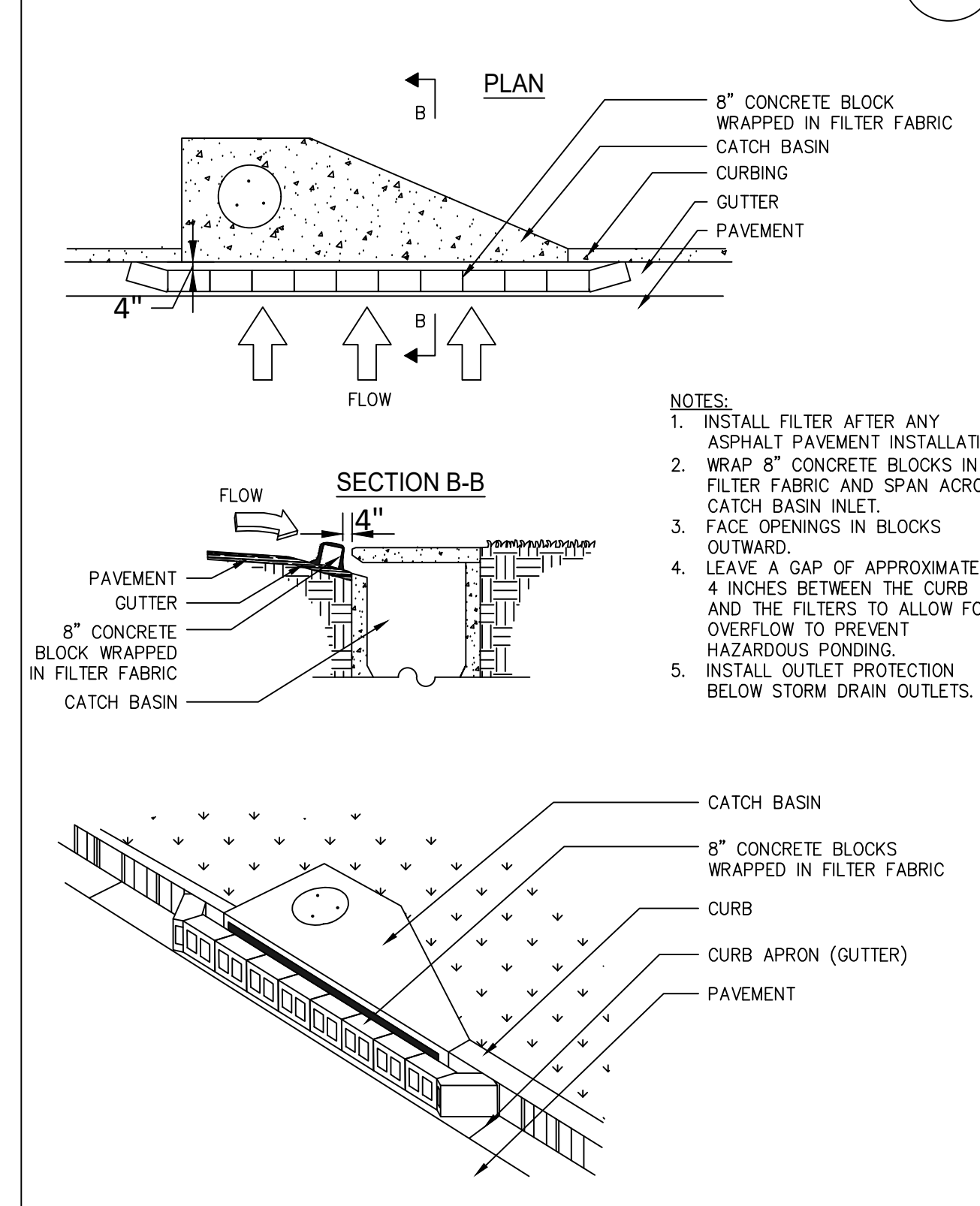
- NOTES:**
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
  2. HEIGHT (\*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

**TREE PROTECTION** (Tr)



- NOTES:**
1. USE TRENCHER (I.E. DITCH WHICH) TO CUT A 4"-5" W X 18" D TRENCH ALONG DRIP LINE (LIMIT OF CLEARING) AND BACKFILL WITH SAND AND LIGHTLY COMPACT.
  2. SPACE STAKES AT INTERVALS SUFFICIENT TO MAINTAIN ALL FENCING OUT OF DRIP LINE OR AS SHOWN BY ENGINEER (SET STAKES NO GREATER THAN 6 FEET ON CENTER-REBAR IS NOT TO BE USED FOR STAKES).
  3. MAINTAIN FENCE BY REPAIRING AND/OR REPLACING DAMAGED FENCE. DO NOT REMOVE FENCING PRIOR TO LANDSCAPING OPERATIONS.
  4. DO NOT STORE OR STACK MATERIALS, EQUIPMENT, OR VEHICLES WITHIN FENCED AREA.
  5. FENCE SHALL BE ORANGE VINYL "SNOW FENCE" 4' HIGH MINIMUM.

**CURB INLET FILTER "PIGS IN BLANKET"** (Sd2-P)



- NOTES:**
1. INSTALL FILTER AFTER ANY ASPHALT PAVEMENT INSTALLATION.
  2. WRAP 8" CONCRETE BLOCKS IN FILTER FABRIC AND SPAN ACROSS CATCH BASIN INLET.
  3. FACE OPENINGS IN BLOCKS OUTWARD.
  4. LEAVE A GAP OF APPROXIMATELY 4 INCHES BETWEEN THE CURB AND THE FILTERS TO ALLOW FOR OVERFLOW TO PREVENT HAZARDOUS PONDING.
  5. INSTALL OUTLET PROTECTION BELOW STORM DRAIN OUTLETS.

**SILT SAVER**  
SEDIMENT CONTROL PRODUCTS  
WWW.SILTSAVER.COM

A1000A  
Sd2-F

**FILTER OPTIONS FOR ASSEMBLIES:**

- 1) A1000A-HF (HIGH-FLOW FILTER) GREEN HIGH FLOW MATERIAL THROUGHOUT THE TOP OF THE FILTER EXTENDING TO ROCK BAG PLATFORM.
- 2) A1000A-DOT (DOT FILTER) GREEN HIGH FLOW MATERIAL ALLOWS FOR STORM WATER OVERFLOW AT THE TOP OF THE FILTER WHILE THE GRAY HIGH EFFICIENCY SEDIMENT FILTRATION FABRIC COVERS THE BOTTOM HALF OF THE FILTER EXTENDING TO THE ROCK BAG PLATFORM. IT IS THE PURCHASER'S RESPONSIBILITY TO SELECT APPROPRIATE FILTER.

**FILTER INSTALLATION**  
FILTER SHOULD BE PLACED OVER FRAME. POCKETS ON THE EDGES OF THE FILTER SHOULD BE FILLED WITH ROCK. INSTALLER SHALL PROVIDE ROCK FOR FILTER POCKETS.

**MAINTENANCE**  
ALL TEMPORARY EROSION, SEDIMENTATION, & POLLUTION CONTROL PRACTICES SHOULD BE INSPECTED DAILY. CONTRACTOR SHALL REMOVE SEDIMENT AND DISPOSE IN A PROPER MANNER. INSPECT FRAME AND FILTER DAILY FOR CUTS, ABRASIONS AND PROPER INSTALLATION. REPLACE OR REPOSITION, AS NECESSARY.

**REPLACEMENT FILTER OPTIONS**  
A1040-DOT, A1040-HF

**SQUARE BASE FRAME & FILTER**  
FRAME MATERIAL: HMMPE  
FILTER FABRIC MATERIAL: REFER TO SPEC  
SCALE: NOT TO SCALE  
LAST UPDATED: MARCH 2022

MODEL# A1000A  
SILT SAVER, INC. 1200 FORRESTER CEMETERY RD, COVINGTON, GA 30014 PHONE: (770) 388-7818 www.silt saver.com

CERTIFICATION - ES&PC DESIGN PROFESSIONAL  
*David Freedman*  
DAVID FREEDMAN  
P.E. - LICENSE NO. 14392, GSWCC LEVEL II CERTIFICATION NO. 66474  
DATE: 07/2/2024

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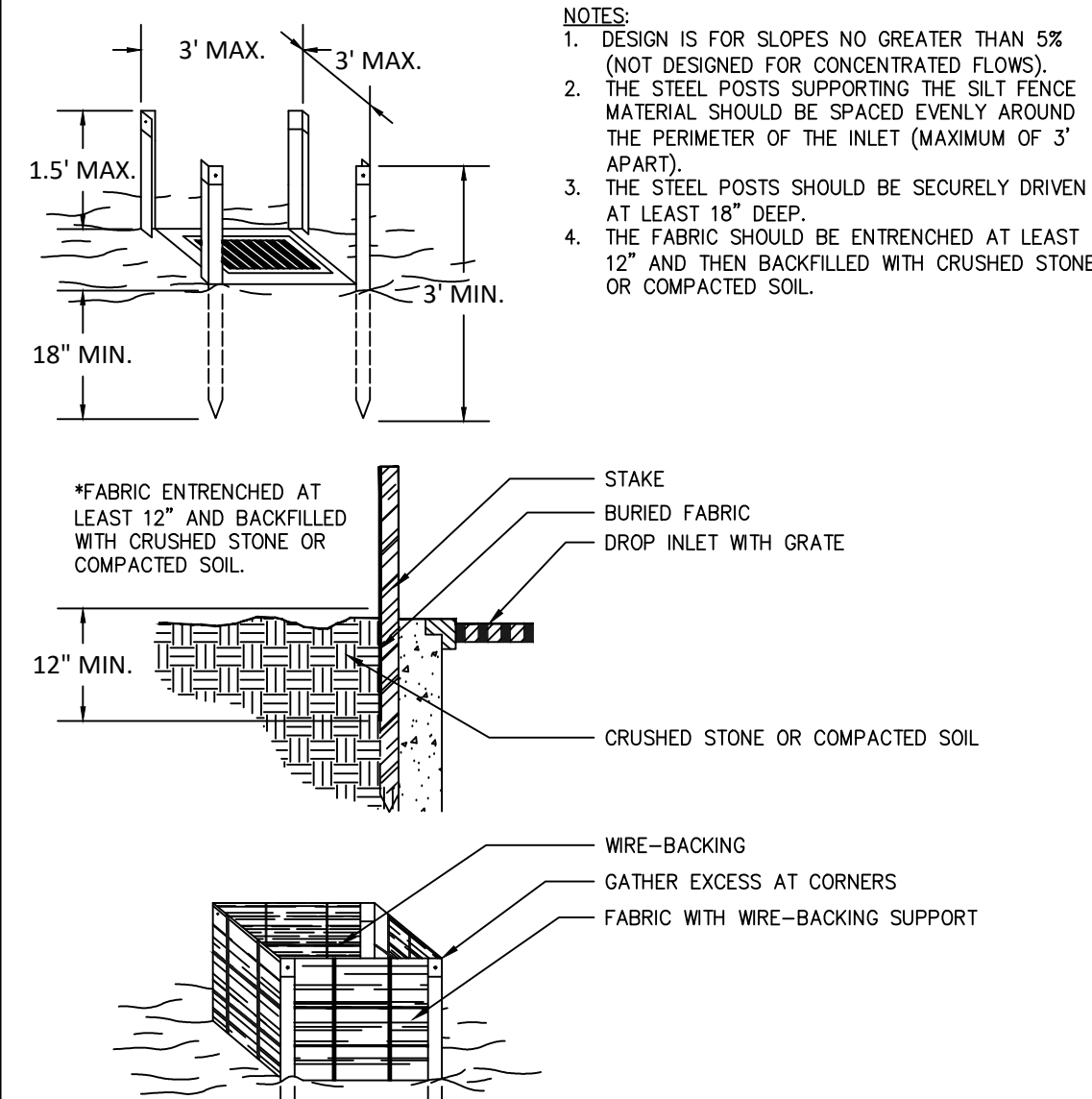


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### FABRIC AND SUPPORTING FRAME FOR INLET PROTECTION

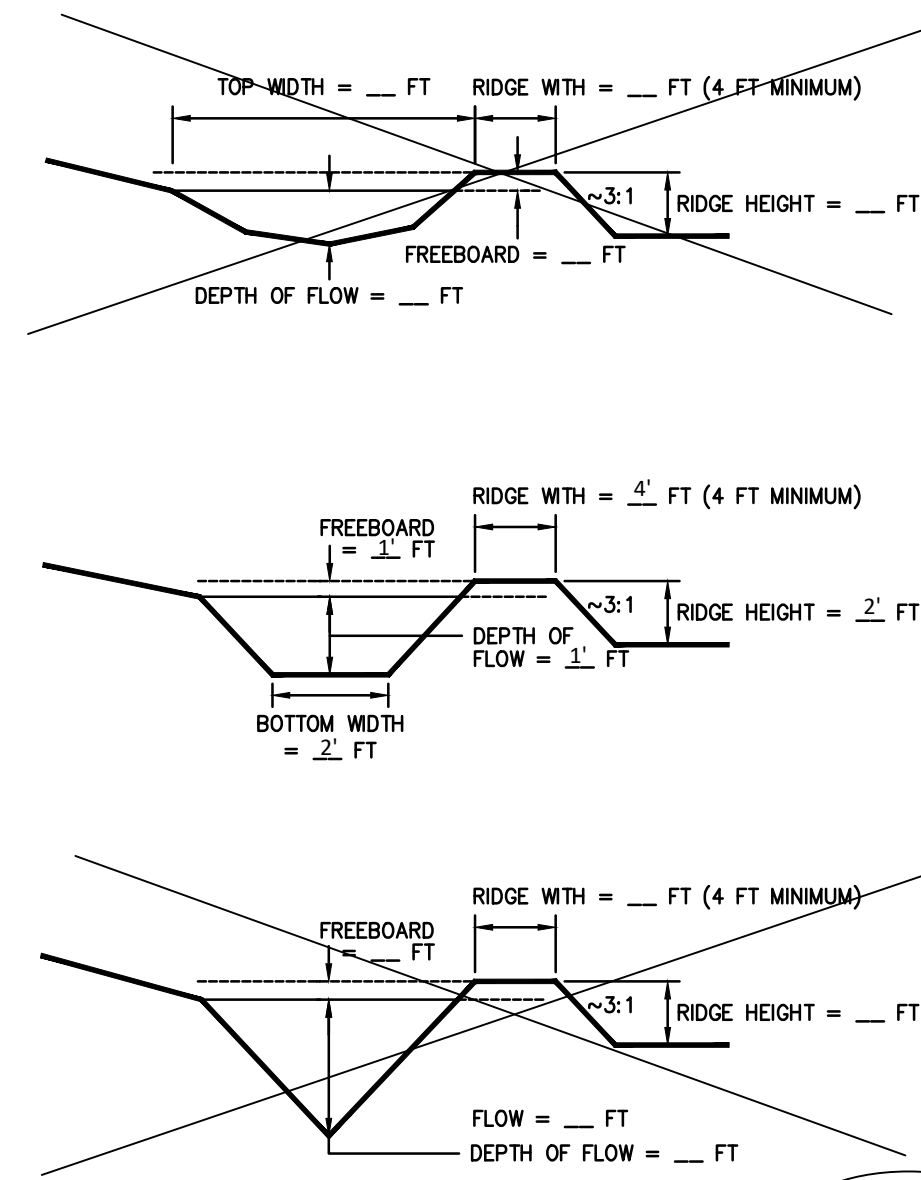
Sd2-F

#### STEEL FRAME AND SILT FENCE INSTALLATION



### SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN

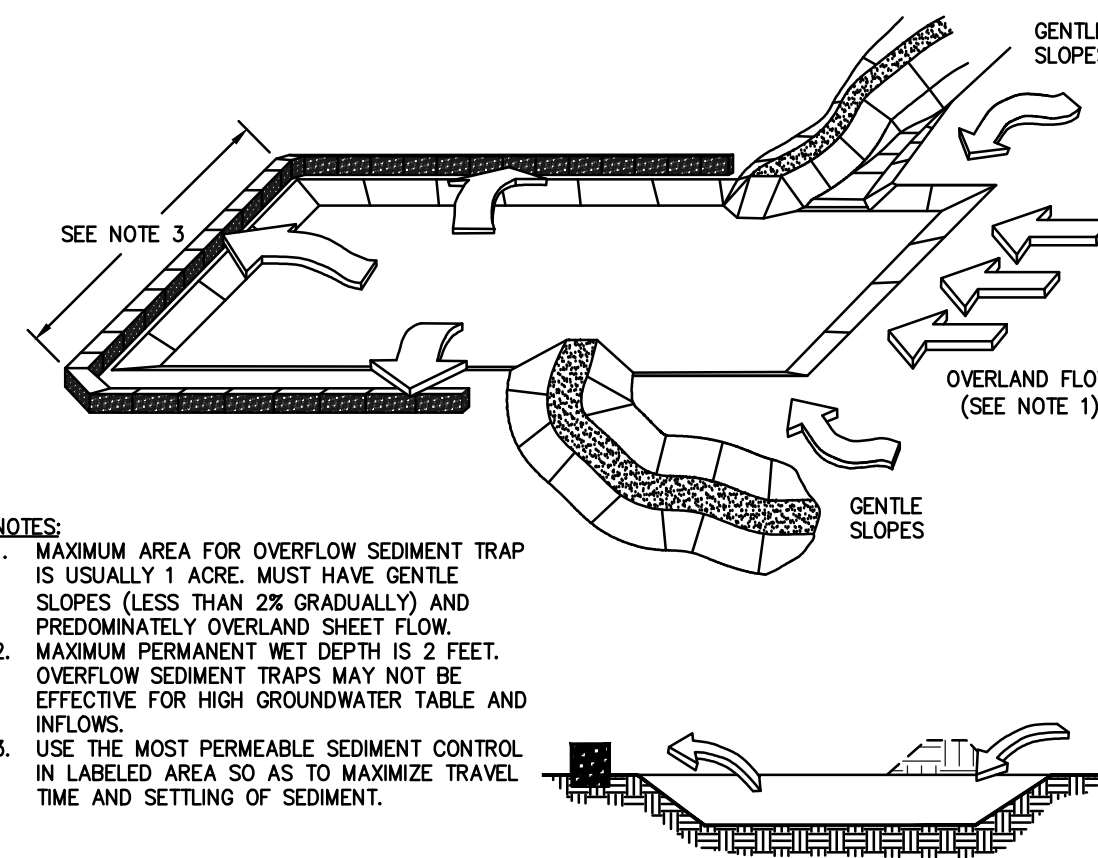
COMPLETE THE APPROPRIATE DETAIL DRAWING FOR THE CHANNEL CROSS-SECTION OF CHOICE:



Di

### TEMPORARY SEDIMENT TRAP

COURTESY OF CITY OF KNOXVILLE BMP EROSION AND SEDIMENT OVERFLOW



- NOTES:
1. MAXIMUM AREA FOR OVERFLOW SEDIMENT TRAP IS USUALLY 1 ACRE. MUST HAVE GENTLE SLOPES (LESS THAN 2% GRADUALLY) AND PREDOMINATELY OVERLAND SHEET FLOW.
  2. MAXIMUM PERMANENT NET DEPTH IS 2 FEET. OVERFLOW SEDIMENT TRAPS MAY NOT BE EFFECTIVE FOR HIGH GROUNDWATER TABLE AND INFLOWS.
  3. USE THE MOST PERMEABLE SEDIMENT CONTROL IN LABELED AREA SO AS TO MAXIMIZE TRAVEL TIME AND SETTLING OF SEDIMENT.

Sd4-A

### SOIL MAP



#### Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CuC	Cecil-Urban land complex, 2 to 10 percent slopes	3.4	44.0%
Ud	Urban land	4.3	56.0%
<b>Totals for Area of Interest</b>		<b>7.6</b>	<b>100.0%</b>

#### EXCAVATED INLET SEDIMENT TRAP Sd2 EXISTING GRATE INLET (SOUTH OF PICKLEBALL COURTS)

1. DRAINAGE AREA = 0.21 ACRES
2. REQUIRED SEDIMENT STORAGE = 67 CY/AC \* DRAINAGE AREA  
REQUIRED SEDIMENT STORAGE = 67 CY/AC \* 0.21 ACRES  
REQUIRED SEDIMENT STORAGE = 14.1 C.Y. = 380 C.F.
3. ASSUME EXCAVATION DEPTH (MINIMUM OF 1.5 FT) = 2 FT
4. ASSUME SLOPE OF SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2 : 1
5. DETERMINE REQUIRED SURFACE AREA  
S<sub>Amin</sub> = REQUIRED SEDIMENT STORAGE / EXCAVATION DEPTH  
S<sub>Amin</sub> = 380 C.F. / 2 FT  
S<sub>Amin</sub> = 190 S.F.
6. ASSUME SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS.  
(A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATION IS RECOMMENDED.)  
SHAPE: RECTANGULAR  
DIMENSIONS: L = 20 FT W = 10 FT

#### EXCAVATED INLET SEDIMENT TRAP Sd2 DRAIN INLET MH #1

1. DRAINAGE AREA = 0.34 ACRES
2. REQUIRED SEDIMENT STORAGE = 67 CY/AC \* DRAINAGE AREA  
REQUIRED SEDIMENT STORAGE = 67 CY/AC \* 0.34 ACRES  
REQUIRED SEDIMENT STORAGE = 22.8 C.Y. = 615 C.F.
3. ASSUME EXCAVATION DEPTH (MINIMUM OF 1.5 FT) = 2 FT
4. ASSUME SLOPE OF SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2 : 1
5. DETERMINE REQUIRED SURFACE AREA  
S<sub>Amin</sub> = REQUIRED SEDIMENT STORAGE / EXCAVATION DEPTH  
S<sub>Amin</sub> = 615 C.F. / 2 FT  
S<sub>Amin</sub> = 308 S.F.
6. ASSUME SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS.  
(A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATION IS RECOMMENDED.)  
SHAPE: RECTANGULAR  
DIMENSIONS: L = 26 FT W = 13 FT

#### EXCAVATED INLET SEDIMENT TRAP Sd2 DRAIN INLET MH #2

1. DRAINAGE AREA = 0.23 ACRES
2. REQUIRED SEDIMENT STORAGE = 67 CY/AC \* DRAINAGE AREA  
REQUIRED SEDIMENT STORAGE = 67 CY/AC \* 0.23 ACRES  
REQUIRED SEDIMENT STORAGE = 15.4 C.Y. = 416 C.F.
3. ASSUME EXCAVATION DEPTH (MINIMUM OF 1.5 FT) = 2 FT
4. ASSUME SLOPE OF SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2 : 1
5. DETERMINE REQUIRED SURFACE AREA  
S<sub>Amin</sub> = REQUIRED SEDIMENT STORAGE / EXCAVATION DEPTH  
S<sub>Amin</sub> = 416 C.F. / 2 FT  
S<sub>Amin</sub> = 208 S.F.
6. ASSUME SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS.  
(A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATION IS RECOMMENDED.)  
SHAPE: RECTANGULAR  
DIMENSIONS: L = 22 FT W = 11 FT

#### EXCAVATED INLET SEDIMENT TRAP Sd2 DRAIN INLET MH #3 AND MH #4

1. DRAINAGE AREA = 0.16 ACRES
2. REQUIRED SEDIMENT STORAGE = 67 CY/AC \* DRAINAGE AREA  
REQUIRED SEDIMENT STORAGE = 67 CY/AC \* 0.16 ACRES  
REQUIRED SEDIMENT STORAGE = 10.7 C.Y. = 289 C.F.
3. ASSUME EXCAVATION DEPTH (MINIMUM OF 1.5 FT) = 2 FT
4. ASSUME SLOPE OF SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2 : 1
5. DETERMINE REQUIRED SURFACE AREA  
S<sub>Amin</sub> = REQUIRED SEDIMENT STORAGE / EXCAVATION DEPTH  
S<sub>Amin</sub> = 289 C.F. / 2 FT  
S<sub>Amin</sub> = 145 S.F.
6. ASSUME SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS.  
(A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATION IS RECOMMENDED.)  
SHAPE: RECTANGULAR  
DIMENSIONS: L = 18 FT W = 9 FT

#### EXCAVATED INLET SEDIMENT TRAP Sd2 DI #6

1. DRAINAGE AREA = 0.43 ACRES
2. REQUIRED SEDIMENT STORAGE = 67 CY/AC \* DRAINAGE AREA  
REQUIRED SEDIMENT STORAGE = 67 CY/AC \* 0.43 ACRES  
REQUIRED SEDIMENT STORAGE = 28.8 C.Y. = 778 C.F.
3. ASSUME EXCAVATION DEPTH (MINIMUM OF 1.5 FT) = 2 FT
4. ASSUME SLOPE OF SIDES (SHALL NOT BE STEEPER THAN 2:1) = 2 : 1
5. DETERMINE REQUIRED SURFACE AREA  
S<sub>Amin</sub> = REQUIRED SEDIMENT STORAGE / EXCAVATION DEPTH  
S<sub>Amin</sub> = 778 C.F. / 2 FT  
S<sub>Amin</sub> = 389 S.F.
6. ASSUME SHAPE OF EXCAVATION AND DETERMINE DIMENSIONS.  
(A RECTANGULAR SHAPE WITH 2:1 LENGTH TO WIDTH RATION IS RECOMMENDED.)  
SHAPE: IRREGULAR  
DIMENSIONS: SEE GRADING ON EROSION CONTROL PLAN

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*David Freedman*  
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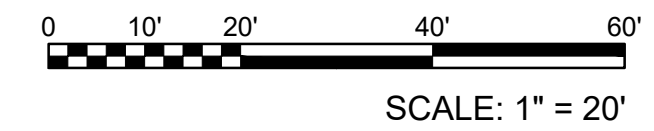
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**Erosion, Sedimentation, & Pollution Control Details**

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Drawn By: PS

Checked By: MK

# Tucker Pickleball Courts

4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:

Demolition Plan:  
Area A

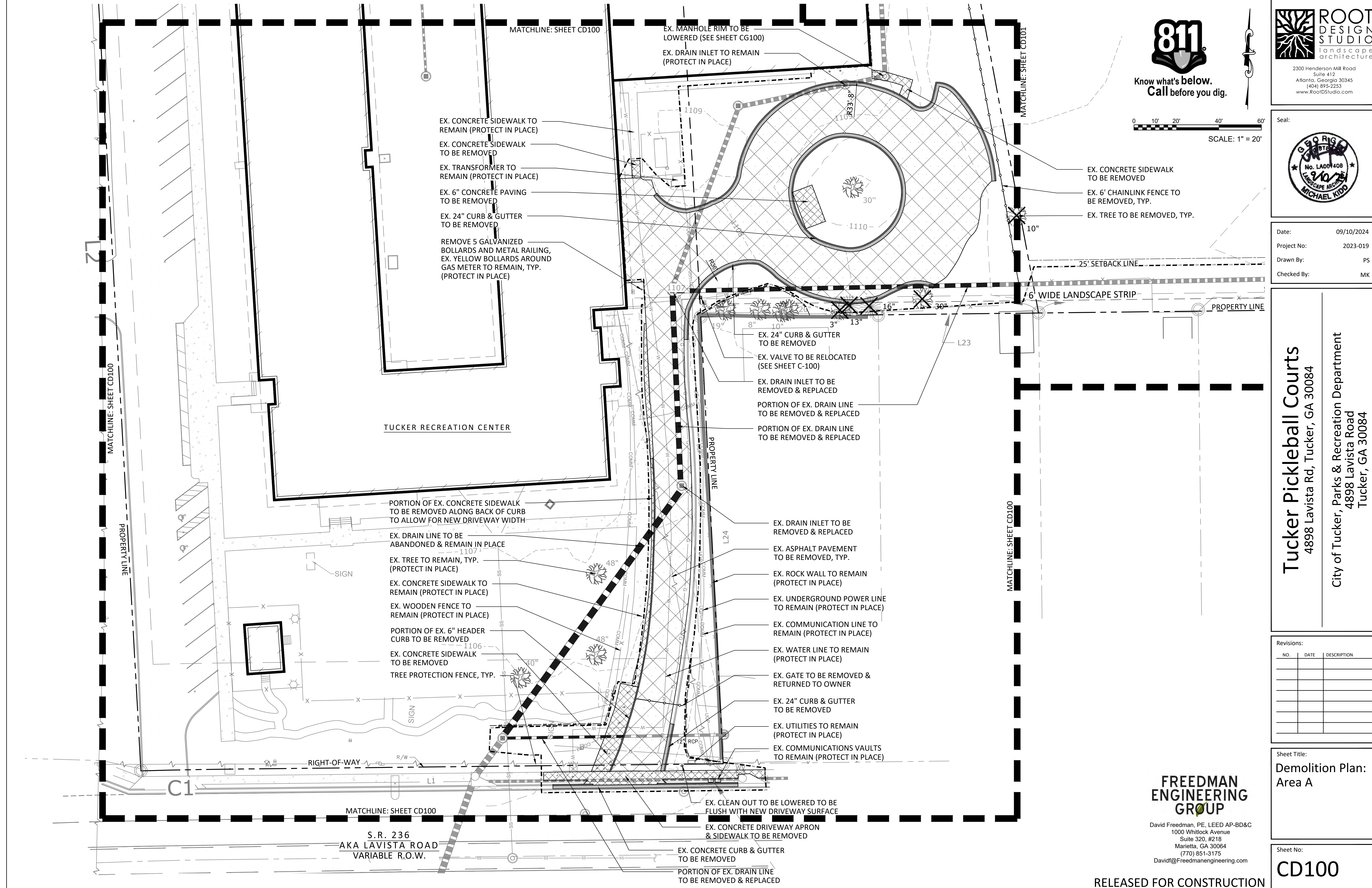
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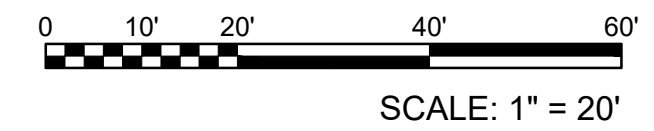
MATCHLINE: SHEET CD101

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Date: 09/10/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Demolition Plan:  
Area B**

Sheet No:  
**CD101**

- EX. CONCRETE SIDEWALK TO BE REMOVED
- EX. SCOREBOARD TO BE REMOVED
- EX. UNDERGROUND POWER LINE TO BE CAPPED AND ABANDONED
- EX. 6' CHAINLINK FENCE TO BE REMOVED, TYP.

- EX. 4' CHAINLINK FENCE TO REMAIN TYP.
- TREE PROTECTION FENCE, TYP.

EX. 11' CHAINLINK FENCE BACKSTOP TO BE REMOVED

EX. TREE TO BE REMOVED, TYP.

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Project No: 2023-019

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**TUCKER PICKLEBALL DRAINAGE PIPE SUMMARY**

PIPE SEGMENT	CONTRIBUTING INLETS	100 YEAR FLOW (CFS)	100 YEAR CUMULATIVE FLOW (CFS)	LENGTH (FEET)	SLOPE	BEGINNING INVERT	ENDING INVERT	DIAMETER (INCHES)	PIPE CAPACITY FLOWING FULL (CFS)	PIPE VELOCITY FLOWING FULL (FEET/SECOND)	PIPE VELOCITY DESIGN FLOW (FEET/SECOND)	DEPTH OF FLOW (INCHES)	PERCENT PIPE FULL (DECIMAL)
MH 1 - MH 2	MH 1, DI 1	5.0	5.0	79.5	0.005	1106.1	1105.67	18	7.4	4.2	4.5	10.8	0.6
MH 2 - MH 3	MH 2, DI 2, DI 3, DI 4, DI 5	3.75	8.7	67.5	0.005	1105.57	1105.2	24	16.0	5.1	5.2	12.7	0.53
MH 4 - MH 3	MH 4	4.17	4.17	54.7	0.006	1105.53	1105.2	18	8.1	4.6	3.7	9	0.5
MH 3 - MH 5	MH 1, MH 2, MH 3, MH 4	2.28	20.2	21	0.006	1105.1	1104.97	30	31.8	6.5	6.9	17.4	0.58
MH 5 - CRYSTAL STREAM	DI 6, TD 1, TD 2, TD 3, TD 4	13.07	33.3	30.6	0.006	1104.87	1104.7	30	41.0	6.9	6.9	17.4	0.61
CRYSTAL STREAM - MH 6	CRYSTAL STREAM	33.3	33.3	5	0.020	1104.5	1104.4	30	58.0	11.8	12.3	16.5	0.55
MH 6 - UNDERGROUND DETENTION	MH 6	33.3	33.3	32.9	0.007	1104.3	1104.08	30	34.3	7	8.0	24	0.8
DI 1 - MH 1	DI 1	0.24	0.24	64.1	0.005	1106.53	1106.2	8	0.85	2.4	2.1	2.9	0.36
DI 2 - MH 2	DI 2, DI 3, DI 4, DI 5	0.54	0.54	51.2	0.005	1105.94	1105.67	8	0.85	2.4	2.6	4.6	0.58
DI 6 - MH5	DI 6	4.19	4.19	28.7	0.011	1105.28	1104.97	18	11.0	6.2	5.8	7.7	0.43
TD 1 - TD 3	TD 1	2.40	2.40	20.7	0.005	1109.12	1109.02	12	2.5	3.2	3.2	12	1
TD 2 - TD 4	TD 2	2.61	2.61	20.7	0.005	1109.12	1109.02	12	2.5	3.2	3.2	12	1
TD 4 - MH 5	TD1, TD2, TD3, TD4	8.88	8.88	42.9	0.059	1107.52	1104.97	12	8.7	11	11.0	12	1
OCS - MH 7	OCS	3.50	3.50	27.9	0.0057	1103.16	1103.00	18	7.9	4.5	4.4	8.5	0.47
LINE A - MH7	LINE A	16.32	16.32	EXISTING									
MH 7 - MH 8	OCS, LINE A	19.82	19.82	148.8	0.0078	1102.90	1101.74	36	58.9	8.3	7.5	14.4	0.4
LINE B - MH8	LINE B	11.84	11.84	EXISTING									
MH 8 - MH 9	OCS, LINE A, LINE B	31.66	31.66	86.3	0.0082	1101.64	1100.93	36	60.4	8.5	8.6	18.4	0.51
MH 9 - MH 10	OCS, LINE A, LINE B	31.66	31.66	116.1	0.0053	1100.83	1100.22	36	48.6	6.9	7.3	21.2	0.59
MH 10 - MH 11	OCS, LINE A, LINE B	31.66	31.66	52.1	0.0144	1100.12	1099.37	36	80	11.3	10.7	15.8	0.44

STRUCTURE	CONTRIBUTING AREA (SQURE FEET)	CONTRIBUTING AREA (ACRES)	RUNOFF COEFFICIENT (C)	RAINFALL INTENSITY (INCHES/HOUR) 100 YEAR STORM*	FREQUENCY FACTOR 100 YEAR STORM	RUNOFF 100 YEAR STORM (CFS)
MH 1	14,849	0.34	0.95	11.7	1.25	4.74
MH 2	10,071	0.23	0.95	11.7	1.25	3.21
MH 3	7,133	0.16	0.95	11.7	1.25	2.28
MH 4	13,059	0.30	0.95	11.7	1.25	4.17
DI 1	1,440	0.03	0.5	11.7	1.25	0.24
DI 2	1,597	0.04	0.5	11.7	1.25	0.27
DI 3	936	0.02	0.5	11.7	1.25	0.16
DI 4	462	0.01	0.5	11.7	1.25	0.08
DI 5	203	0.00	0.5	11.7	1.25	0.03
DI 6	24,975	0.57	0.5	11.7	1.25	4.19
TD 1	7,538	0.17	0.95	11.7	1.25	2.40
TD 2	8,177	0.19	0.95	11.7	1.25	2.61
TD 3	3,210	0.07	0.95	11.7	1.25	1.02
TD 4	8,904	0.20	0.95	11.7	1.25	2.84
LINE A**	166,399	3.82	0.7	5.55	1.1	16.32
LINE B**	120,661	2.77	0.7	5.55	1.1	11.84

\*BASED ON TIME OF CONCENTRATION = 5 MINUTES

\*\* SINCE THESE ARE EXISTING LINES THE 25 YEAR STORM AND A 15 MINUTE TIME OF CONCENTRATION WERE USED

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084  
  
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Sheet Title:  
**Drainage Pipe & Area Summaries**

Sheet No:  
**CG000**



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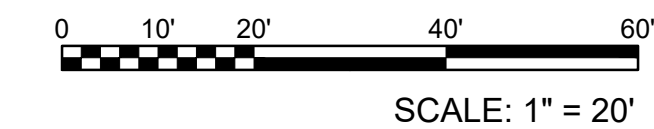
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**GRADING & DRAINAGE LEGEND:**

- × (100.0) EXISTING SPOT ELEVATION
- × 100.0 PROPOSED SPOT ELEVATION
- × TC 100.0 TOP OF CURB ELEVATION
- × BC 99.5 BOTTOM OF CURB ELEVATION
- ↘ 2.0% SLOPE PERCENTAGE / FLOW DIRECTION
- FFE 100.0 FINISHED FLOOR ELEVATION
- HP 100.0 HIGH POINT ELEVATION
- LP 50.0 LOW POINT ELEVATION
- DI 75.5 DRAIN INLET RIM ELEVATION
- INV 75.5 INVERT ELEVATION
- ↔ DS 2.0% SWALE CENTERLINE / SLOPE & FLOW DIRECTION
- 100— PROPOSED CONTOUR & ELEVATION
- 12" DRAIN INLET W/ FLAT GRATE (GRASSED AREAS)
- ⊙ 12" DRAIN INLET W/ ATRIUM GRATE (PLANTED AREAS)
- DRAIN PIPE

- ALL SLOPE PERCENTAGES INDICATE SURFACE DRAINAGE.
- LANDSCAPE DRAIN PIPES ARE TO BE SLOPED AT 0.5% MINIMUM.



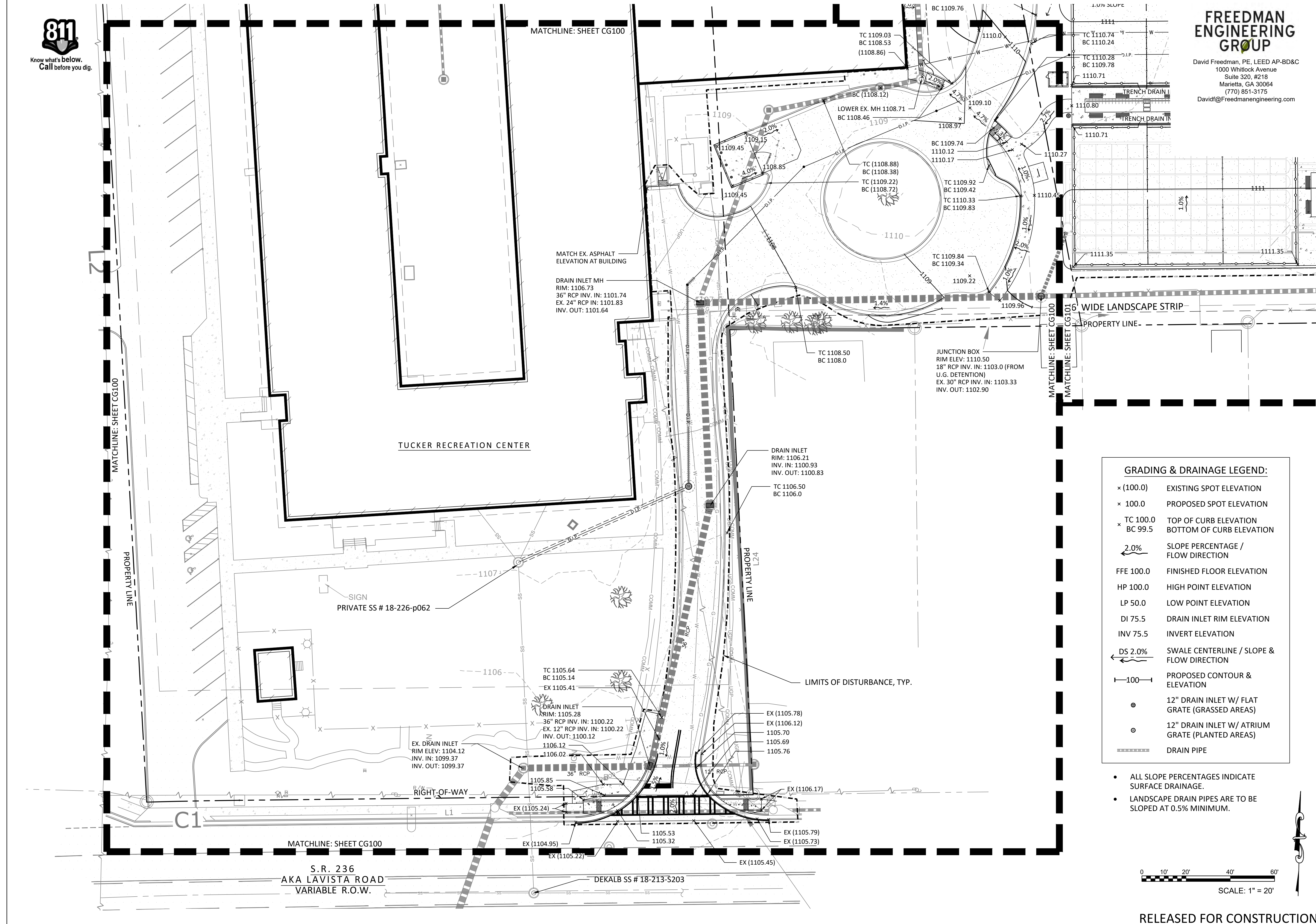
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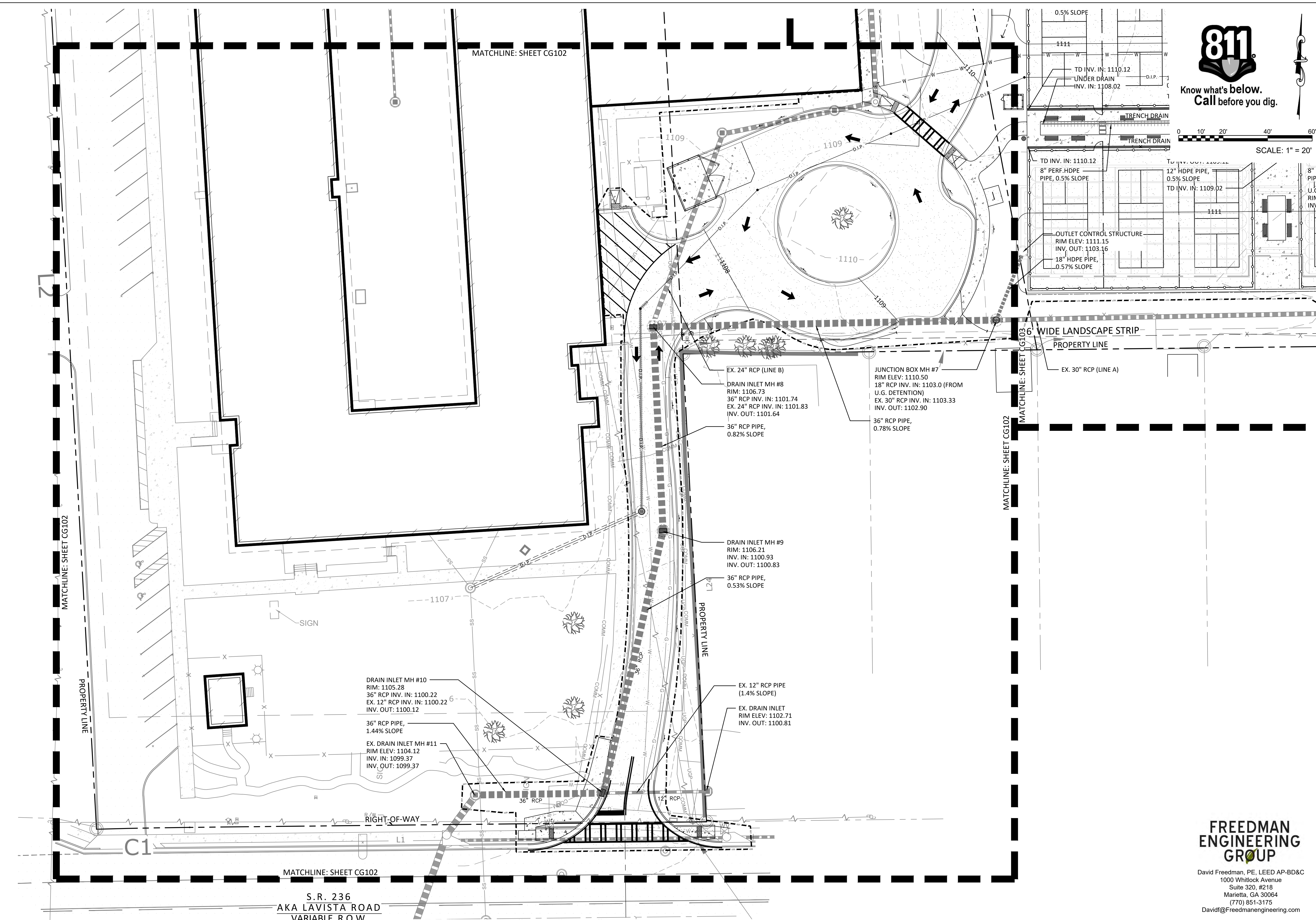
Sheet Title:  
**Grading Plan:  
Area A**

Sheet No:  
**CG100**

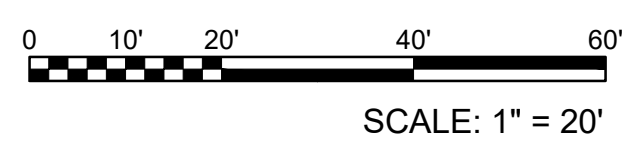








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Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Drainage Plan:  
Area A**

Sheet No:  
**CG102**



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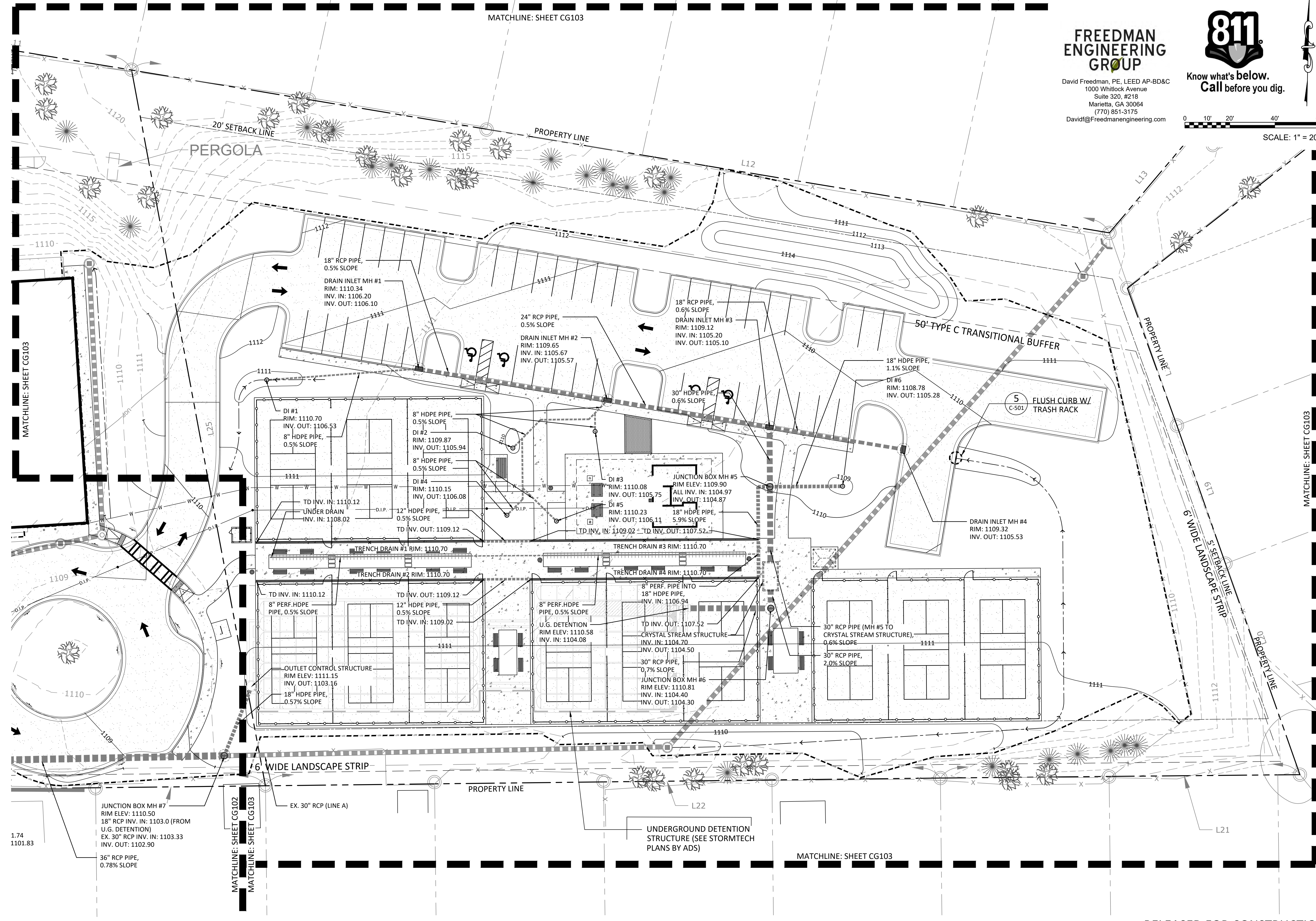
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Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Drainage Plan:  
Area B**

Sheet No:  
**CG103**



1.74  
1101.83

MATCHLINE: SHEET CG102  
MATCHLINE: SHEET CG103

MATCHLINE: SHEET CG103

MATCHLINE: SHEET CG103

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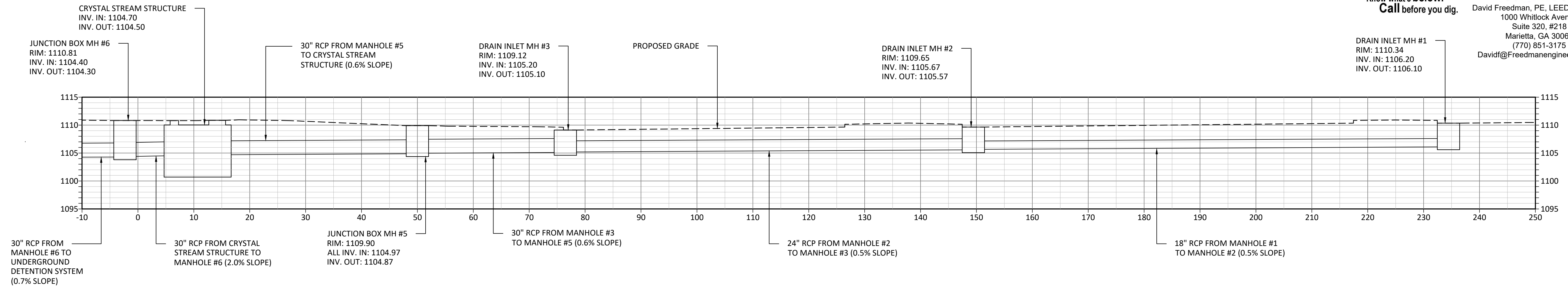
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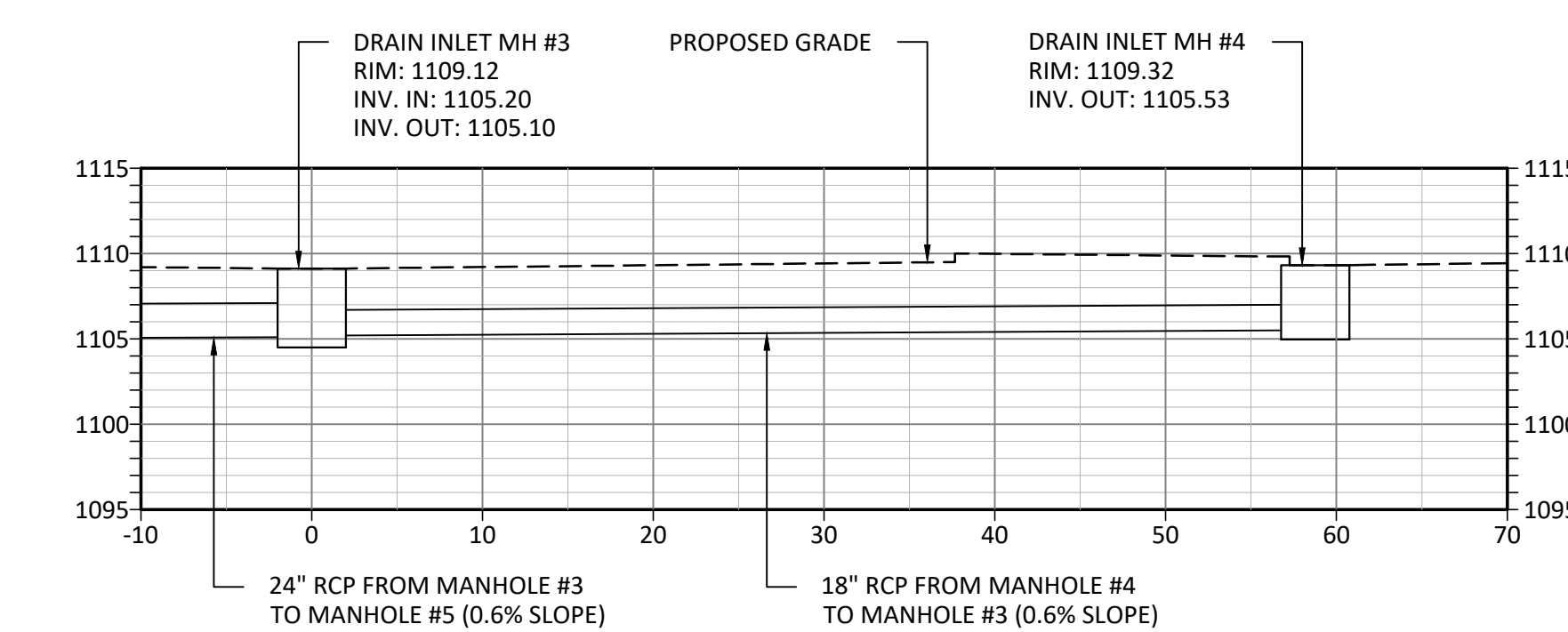
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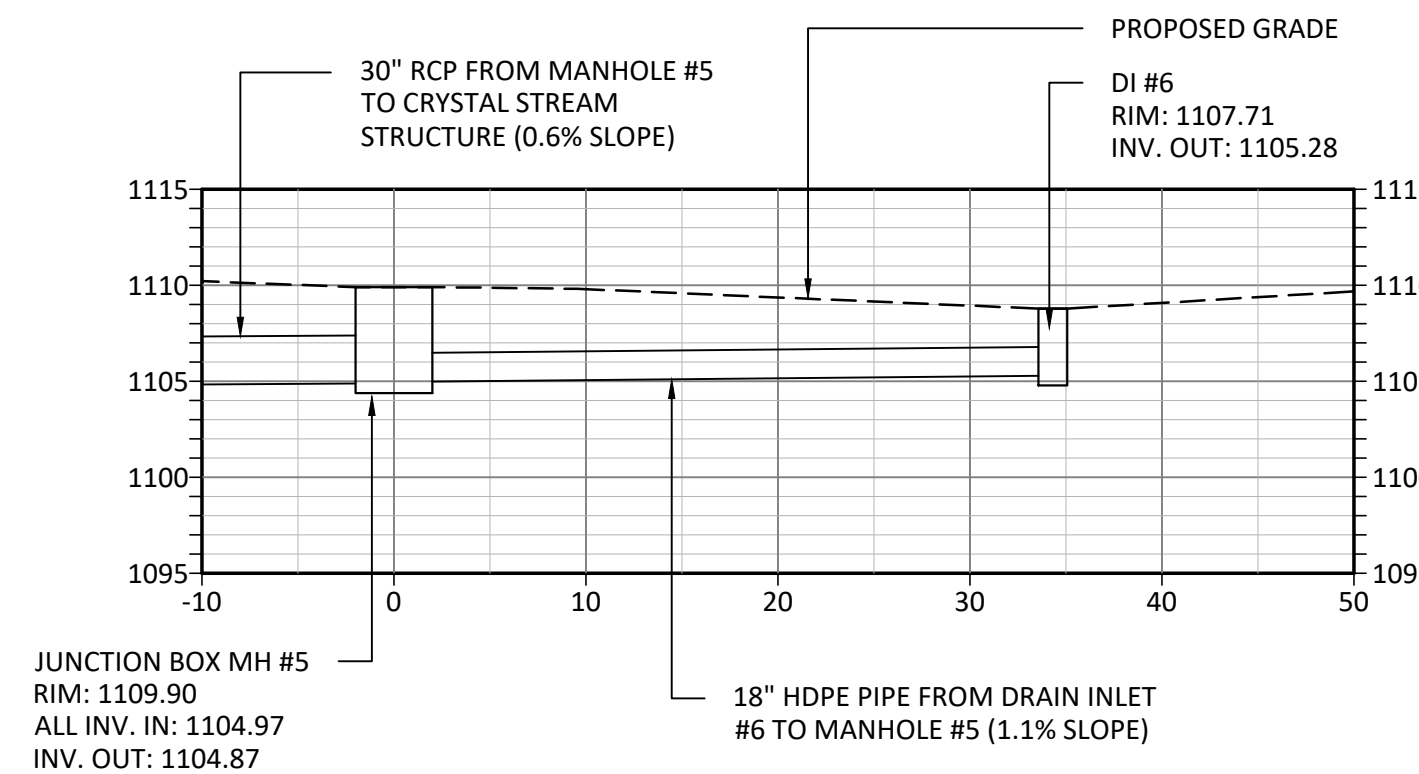
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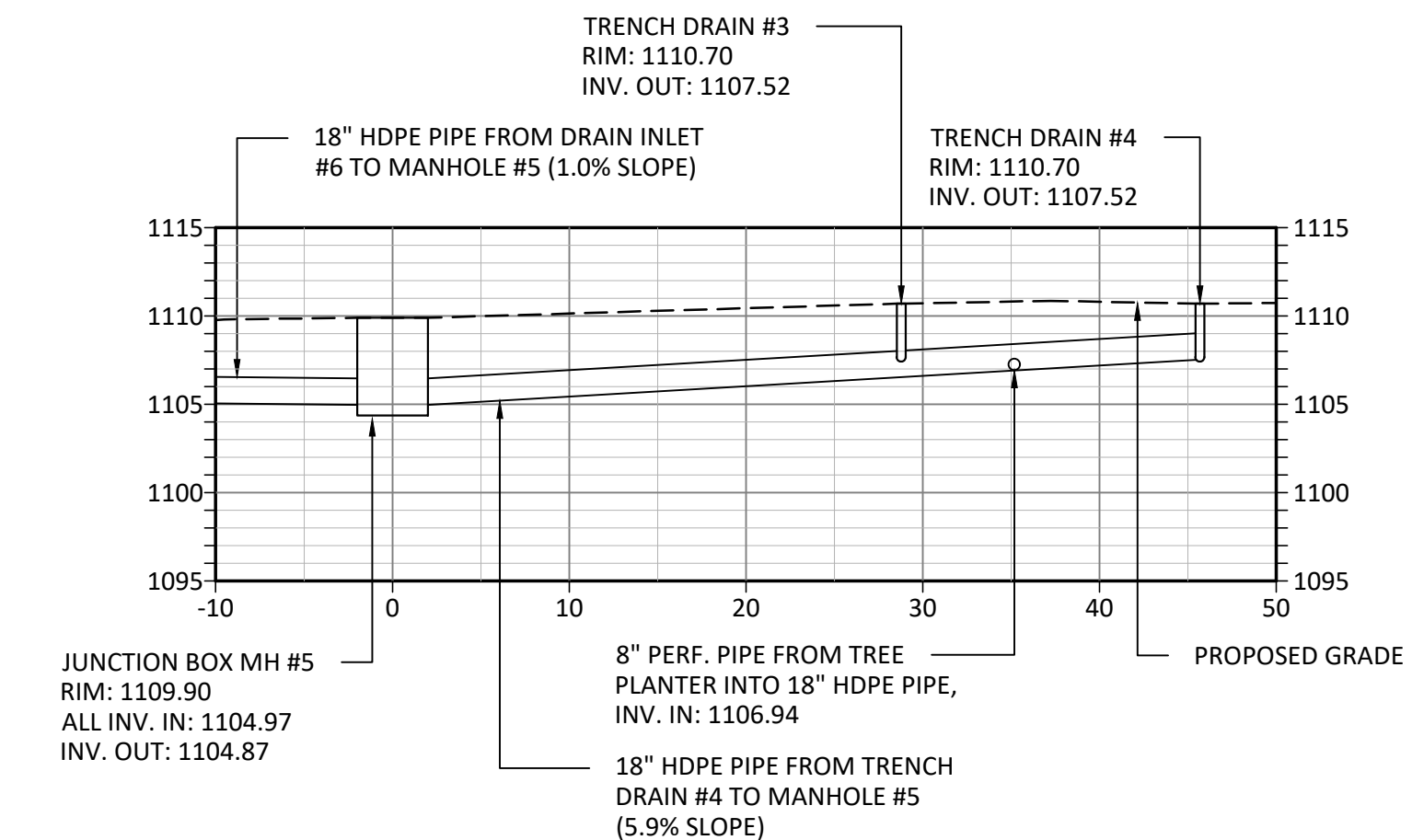
**1** STORM DRAIN PROFILE: MANHOLE #6 TO MANHOLE #1  
SCALE: 1" = 10' (HORZ. & VERT.)



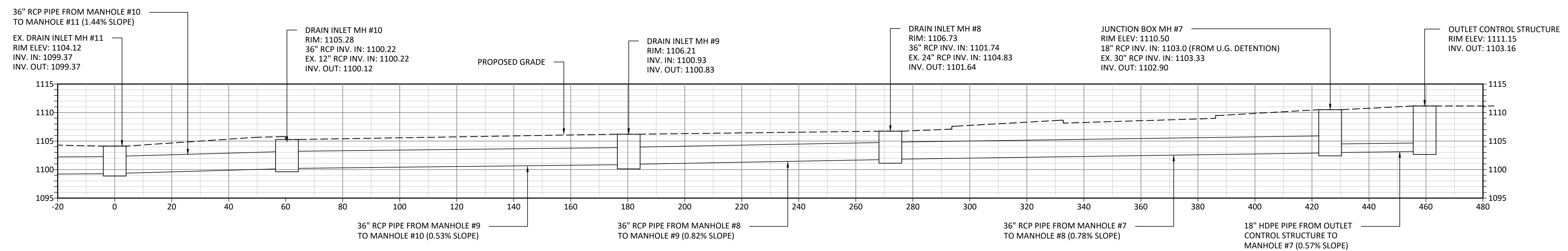
**2** STORM DRAIN PROFILE: MANHOLE #3 TO MANHOLE #4  
SCALE: 1" = 10' (HORZ. & VERT.)



**3** STORM DRAIN PROFILE: MANHOLE #5 TO DRAIN INLET #6  
SCALE: 1" = 10' (HORZ. & VERT.)



**4** STORM DRAIN PROFILE: MANHOLE #5 TO TRENCH DRAIN #4  
SCALE: 1" = 10' (HORZ. & VERT.)



**5** STORM DRAIN PROFILE: MANHOLE #11 TO OUTLET CONTROL STRUCTURE OF UNDERGROUND DETENTION  
SCALE: 1" = 10' VERT., 1" = 20' HORZ.

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NO.	DATE	DESCRIPTION

Sheet Title:  
**Drainage Profiles**

Sheet No:  
**CG300**

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**TYPE "A"**

LONGITUDINAL SECTION

CROSS SECTION

PLAN

**TYPE "B" WITH WEIR**

LONGITUDINAL SECTION

CROSS SECTION

PLAN

**TYPE "C"**

LONGITUDINAL SECTION

CROSS SECTION

PLAN

**TYPE "C" WITH WEIR**

LONGITUDINAL SECTION

CROSS SECTION

PLAN

**TYPE "D"**

LONGITUDINAL SECTION

CROSS SECTION

PLAN

**TYPE "E" (WITH HOOD)**

LONGITUDINAL SECTION

CROSS SECTION

PLAN

**DETAILS OF C.I. GRATING & FRAME**

**DETAIL OF HOOD (NON-MOUNTABLE)**  
USE WITH TP2 CURB

**DETAIL OF HOOD (MOUNTABLE)**  
USE WITH TP 7 CURB

**BRICK WALL THICKNESSES**  
(FOR ALL TYPE INLETS)

**SPECIAL NOTE:**  
STANDARD IO19A INLETS ARE FOR USE AT LOW POINTS & WHERE HYDRAULIC LOW CAPACITY GRATES ARE SUFFICIENT. WHERE HIGHER CAPACITY GRATES ARE NEEDED ON A CONTINUOUS GRADE, STANDARD IO19B IS RECOMMENDED.

**GENERAL NOTES:**

- SPECIFICATIONS: GEORGIA STANDARD AND CURRENT EDITION, AND SUPPLEMENTS THERETO.
- 1/2" EXPANSION JOINT WILL BE REQUIRED WHERE RIGID PAVEMENT, CONCRETE SIDEWALK OR CONCRETE GUTTER MEETS DROP INLETS.
- ALIGNMENT, NUMBER AND SIZES OF PIPES SHOWN ARE ONLY TYPICAL. SEE PLANS FOR ACTUAL PIPE CULVERT REQUIREMENTS.
- ALL TYPE DROP INLETS WILL BE CONSTRUCTED (AS SHOWN), SO THAT THE GRATE BARS ARE PERPENDICULAR TO THE FLOW OF TRAFFIC EXCEPT ON LIMITED ACCESS PROJECTS OR WHERE BICYCLES ARE PROHIBITED.
- BRICK MASONRY WITH CLASS "A" CONC. TOP PORTION IS SHOWN AS STANDARD CONSTRUCTION WITH ALTERNATES PERMITTED AS SHOWN. BOTTOM SLAB MAY BE 8" MIN. NON-REINFORCED CONCRETE, 8" BRICK OR 6" MIN. REINFORCED CONCRETE, SEE APPLICABLE STANDARDS FOR ALTERNATE PRECAST CONSTRUCTION.

**CONSTRUCTION ALTERNATES**

(REINF. CONC.) (REINF. CONC.) (BRICK OR REINF. CONC.)

D	TYPES "A" or "B" BRICK OR REINF. CONC.			TYPE "C" OR "D" (BRICK)				TYPE "E" (BRICK)				TYPE "C", "D" OR "E" (REINFORCED CONCRETE)			
	W1	W2	H(min)	W1	W2	W3	a (MAX.)	b	H(min)	W1	W2	W3	a (MAX.)	b	H(min)
15"	2'-0"	2'-7"	3'-3/2"	2'-2/8"	2'-11"	2'-9/8"	0'-4 3/8"	0'-1 7/8"	3'-9/2"	3'-1"	3'-0 3/8"	0'-1 7/8"	1'-1/8"	3'-11/2"	2'-0"
18"	2'-0"	2'-10"	3'-7"	2'-2/8"	3'-2/8"	2'-9/8"	0'-4 3/8"	0'-1 7/8"	4'-1"	3'-2/8"	3'-4/2"	3'-0 3/8"	0'-1 7/8"	1'-1/8"	4'-1"
24"	~	~	~	2'-8/8"	3'-3/8"	3'-3/8"	0'-1 7/8"	1'-1/8"	4'-9"	3'-1/2"	3'-1/2"	3'-0 3/8"	0'-1 7/8"	1'-1/8"	4'-8 1/2"
30"	~	~	~	3'-7/4"	4'-0 1/4"	3'-10/8"	1'-0 1/8"	1'-9"	5'-10"	3'-5/2"	4'-8 3/8"	3'-4"	0'-8"	1'-1/8"	5'-6 7/8"
36"	~	~	~	4'-1/8"	4'-8 7/8"	4'-8 7/8"	1'-4 1/8"	2'-2 1/4"	6'-11/8"	4'-8 1/2"	5'-8 3/8"	3'-10"	0'-11"	1'-7/8"	6'-7 1/8"
42"	~	~	~	4'-5"	7'-3/4"	5'-0"	1'-6"	2'-7 3/8"	8'-0 1/4"	4'-8 1/2"	7'-5 3/8"	4'-5"	1'-2 1/2"	2'-1 3/8"	8'-4 3/8"
48"	~	~	~	5'-0"	8'-2 3/4"	5'-7"	1'-9/2"	3'-1/4"	9'-1/4"	5'-11/2"	8'-6 3/8"	5'-0"	1'-6"	2'-7 3/8"	9'-5 3/8"
54"	~	~	~	5'-7"	9'-4"	6'-2"	2'-1"	3'-7 1/2"	10'-2 1/2"	5'-8 1/2"	9'-7 3/4"	5'-7"	1'-9 1/2"	3'-1/4"	10'-6 1/4"
60"	~	~	~	6'-2"	1'-4 3/8"	6'-9"	2'-4 1/2"	4'-3 3/8"	11'-3 1/4"	6'-3 1/2"	10'-8 3/8"	6'-2"	2'-1"	3'-7 3/8"	11'-7 3/8"

**NOTE:**  
MINIMUM DIMENSIONS GIVEN IN TABLE BELOW ARE BASED UPON TYPICAL OUTSIDE DIAMETERS OF CONCRETE PIPES WITH NORMAL COVER AND CLEARANCES, THESE DIMENSIONS MAY BE MODIFIED IF SO DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER, DIMENSIONS GIVEN ARE MINIMUM EXCEPT FOR "a" WHICH IS MAXIMUM.

**NOTE:**  
CONTRACTOR SHALL SPECIFY EITHER MOUNTABLE OR NON-MOUNTABLE TO FOUNDRY IF HOOD IS REQUIRED.

**NOTE:**  
DETAILS NOT SHOWN FOR CONSTRUCTION ALTERNATES WILL BE SIMILAR TO THAT SHOWN FOR BRICK MASONRY.

**NOTE:**  
CONCRETE WALLS WILL BE REINFORCED WITH #4 BARS 12" O.C. BOTH WAYS, BUT WHERE H IS OVER 9 FT., AND PIPE IS OVER 30" I.D., THE HORIZONTAL STEEL, WHICH IS MORE THAN 9 FT. DEEP WILL BE INCREASED TO 6" SPACINGS, 6" CONC. BOTTOM SLABS WILL BE REINFORCED WITH #4 BARS 12" O.C. BOTH WAYS.

**NOTE:**  
FOR PRECAST ALTERNATES, SEE STD. IO19-A PRECAST AND/OR STD. IO40 PRECAST AND BUILT-IN-PLACE COMPONENTS MAY BE USED IN COMBINATIONS WHICH PROVIDE PROPER FITS AND STRUCTURAL ADEQUACY.

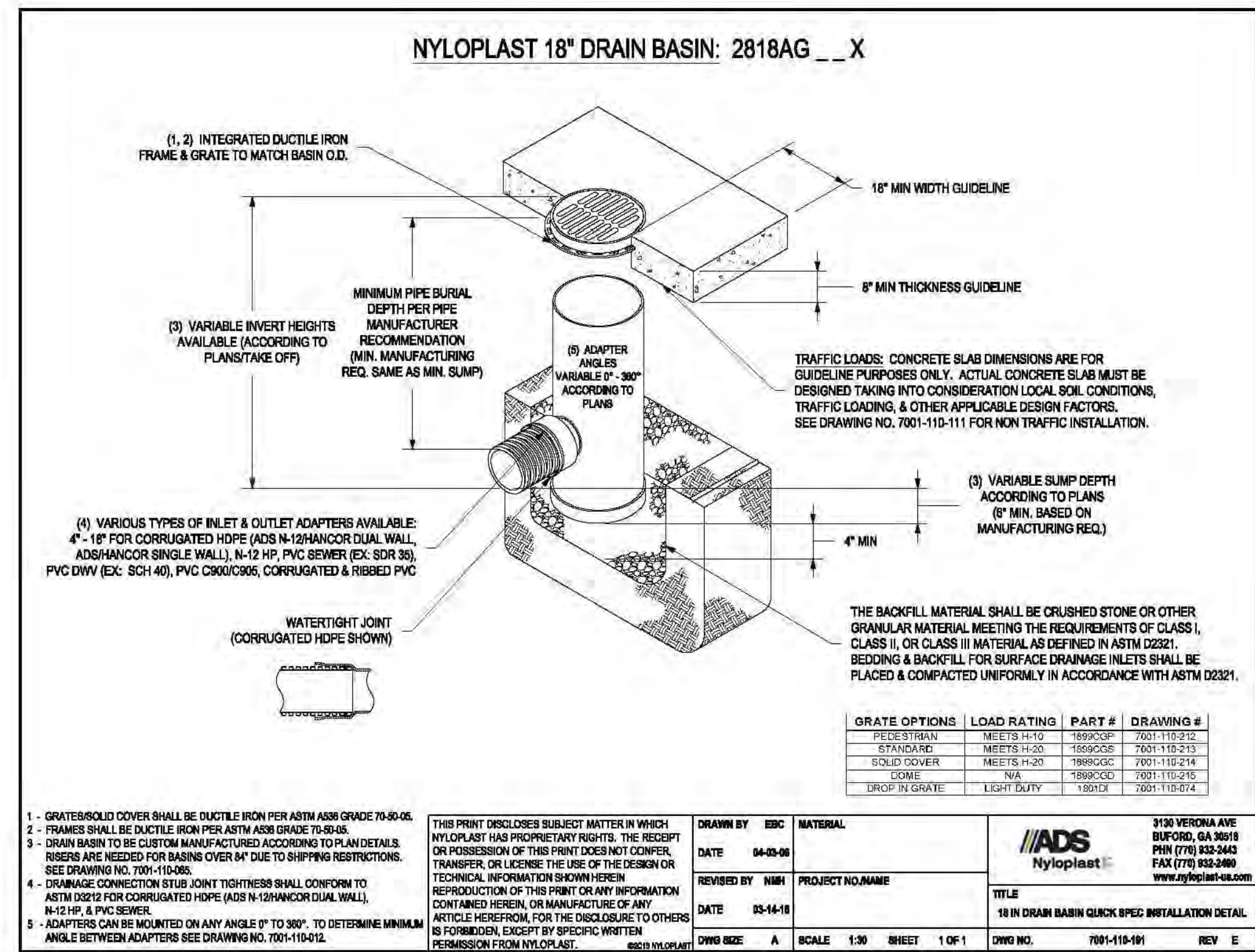
  

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STATE OF GEORGIA

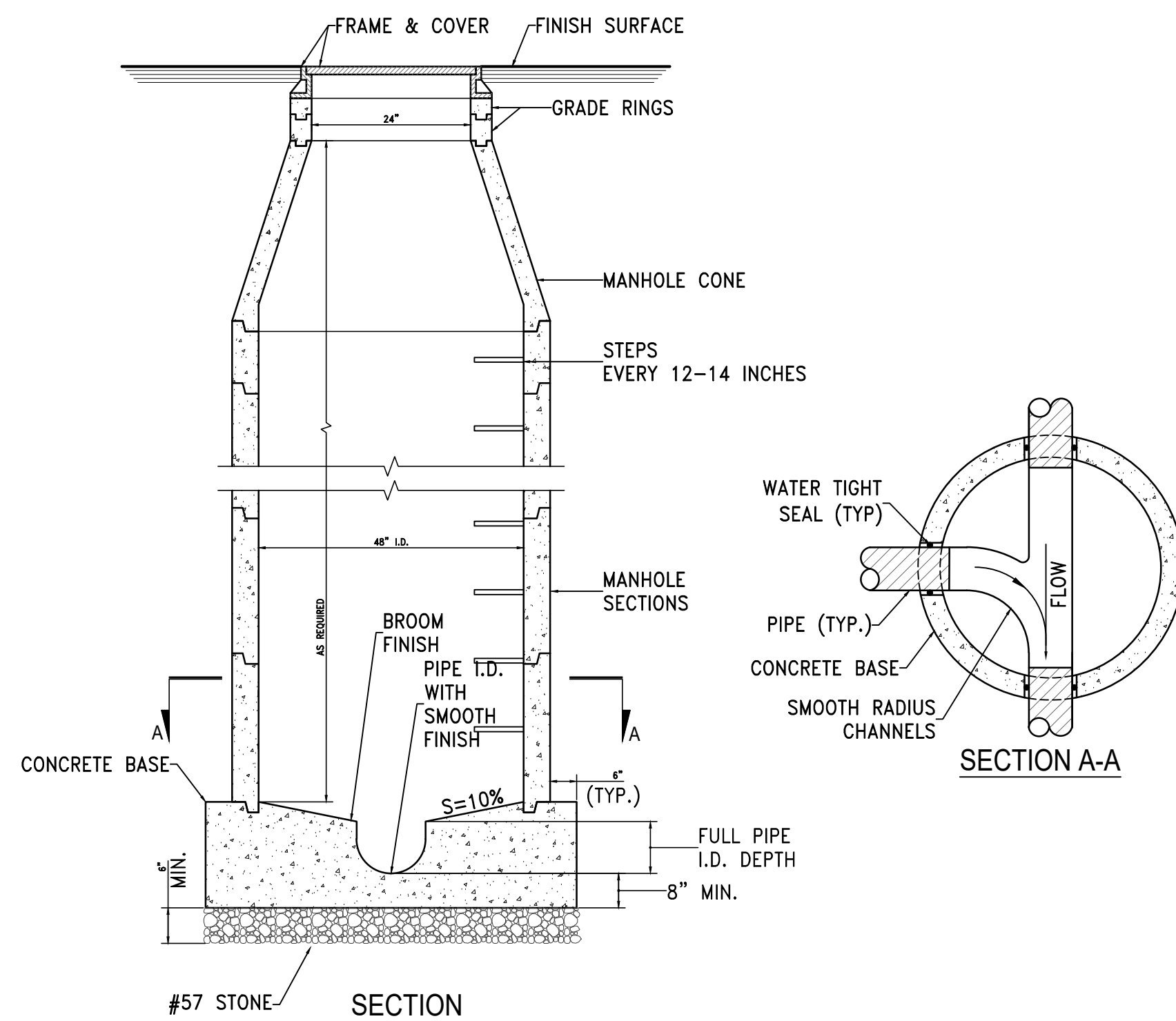
**STANDARD DROP INLETS**  
(BUILT-IN-PLACE)

SCALE AS SHOWN      REV. & REDR. AUG., 1999

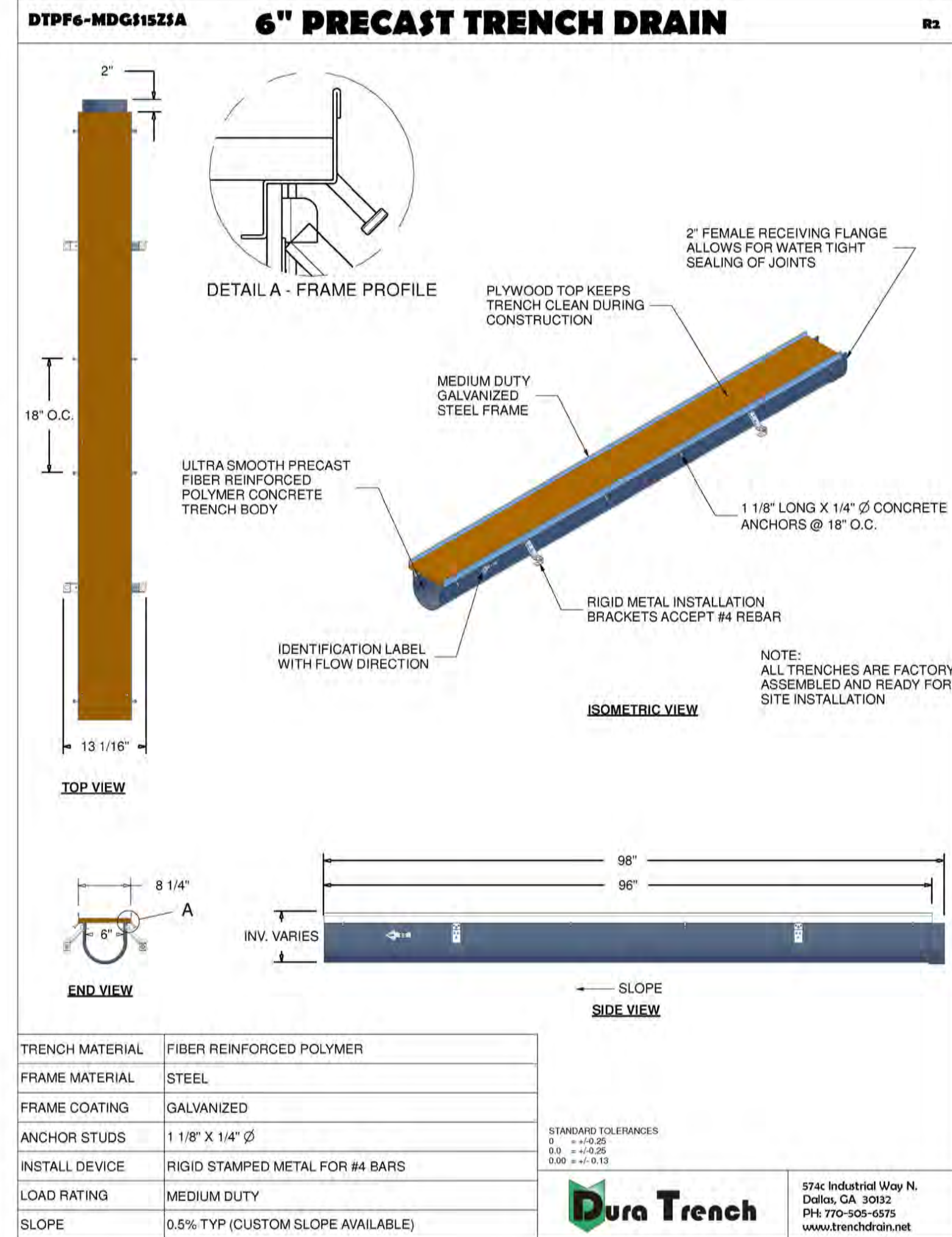
DES.	(SUBMITTED) <i>Jamsh Karim</i>	NUMBER	
REV.	STATE ROAD & AIRPORT DESIGN ENGR.	1019A	
TRA.	(APPROVED) <i>David L. Pelt</i>		
CHK.	CHIEF ENGINEER		



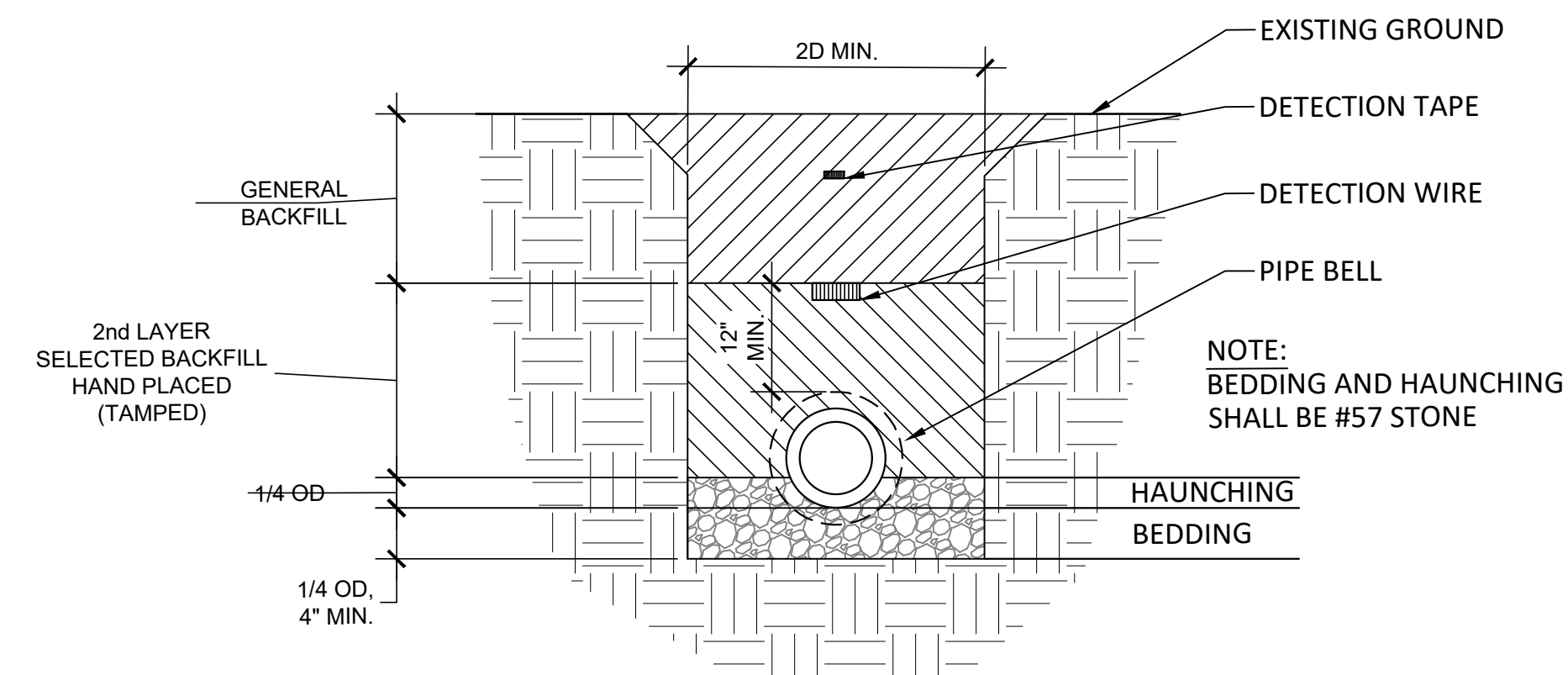
**1 LANDSCAPE DRAIN INLET DETAIL**  
SCALE: N.T.S.



**3 MANHOLE JUNCTION BOX DETAIL**  
SCALE: 1/2" = 1'-0"



**2 TRENCH DRAIN INLET DETAIL**  
SCALE: N.T.S.



**4 PIPE BEDDING DETAIL**  
SCALE: 1" = 1'-0"

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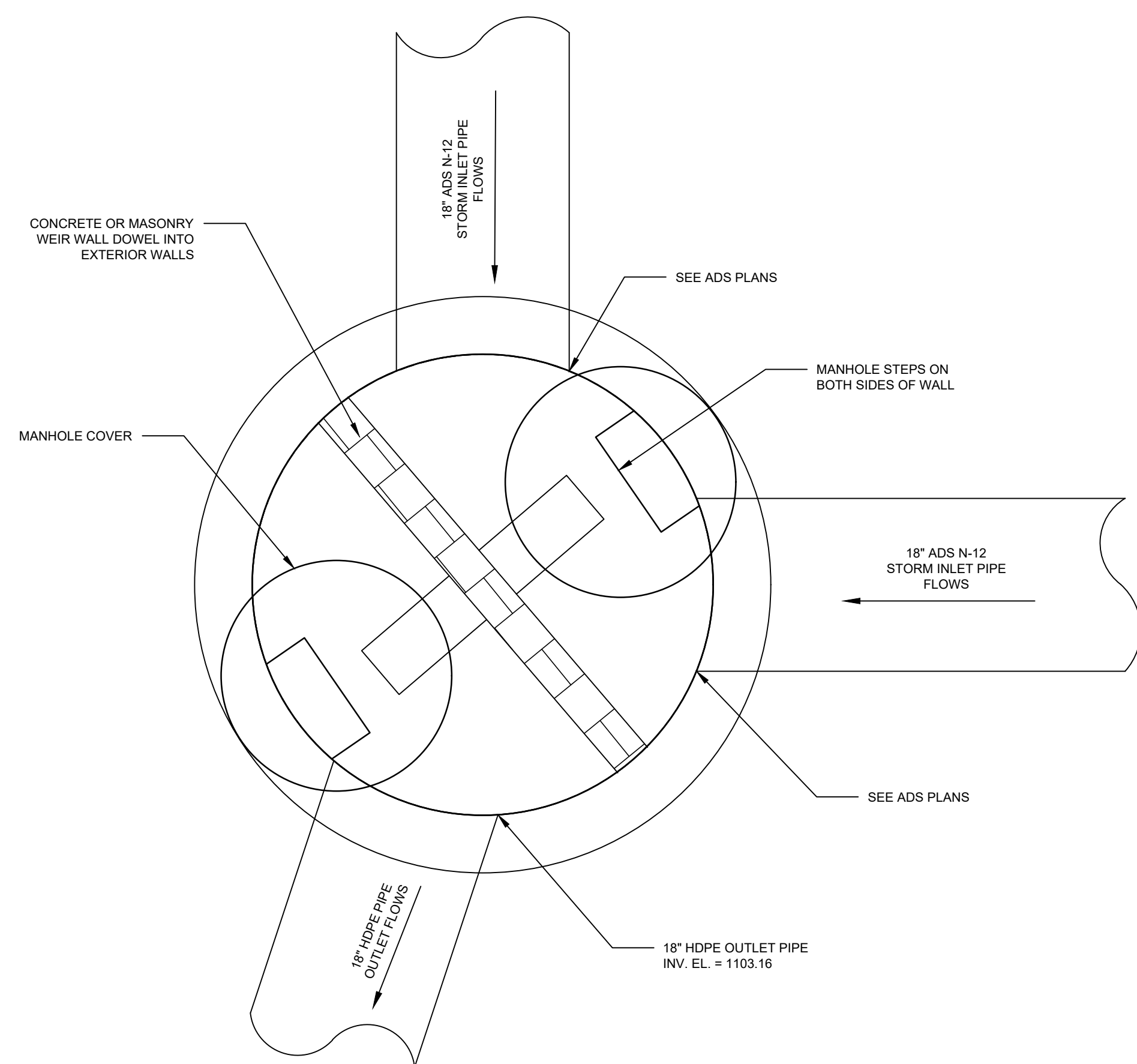
**Tucker Pickleball Courts**  
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 City of Tucker, Parks & Recreation Department  
 4898 Lavista Road  
 Tucker, GA 30084

Revisions:

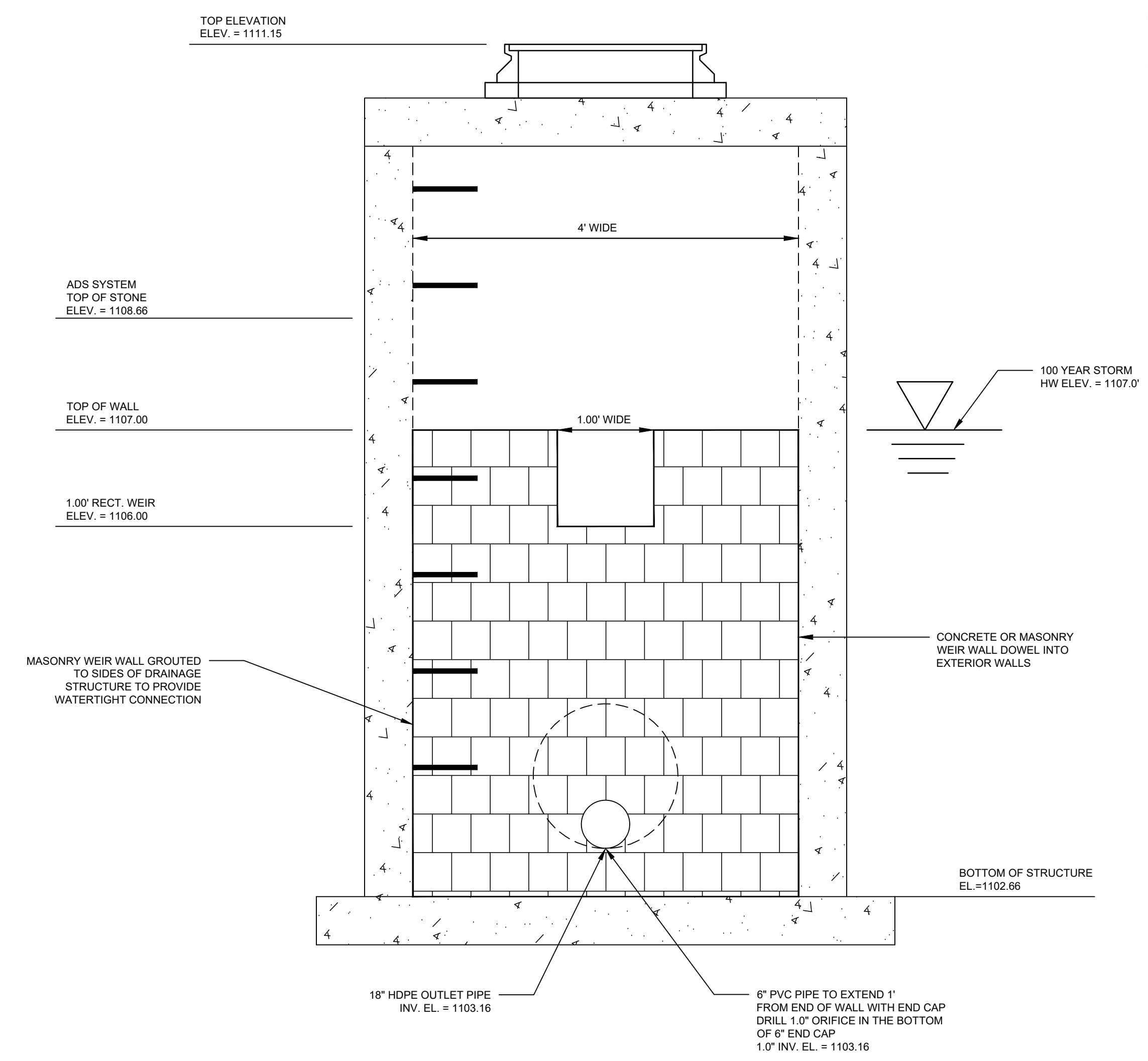
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Sheet Title:  
**Grading & Drainage Details**

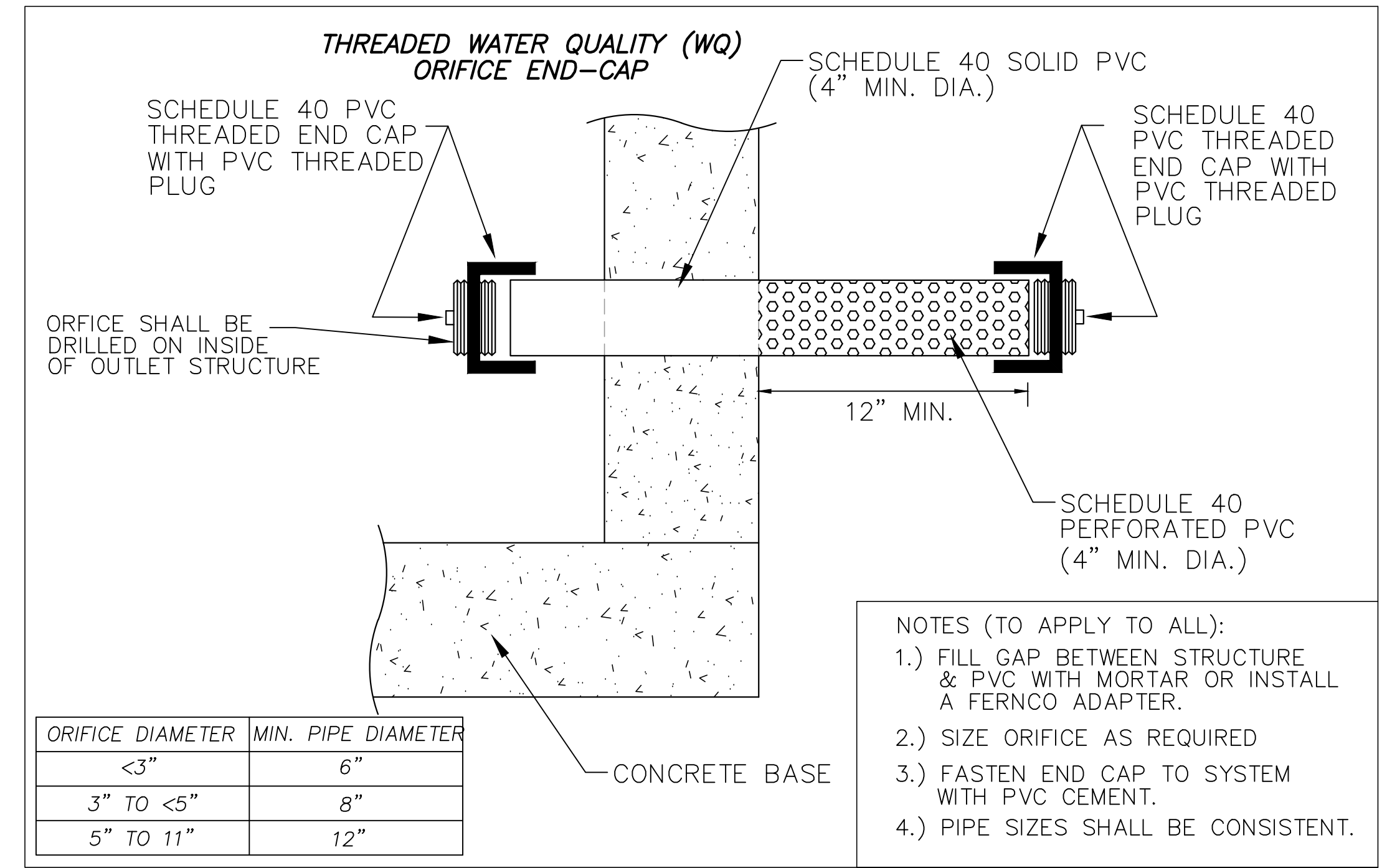
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**CG501**



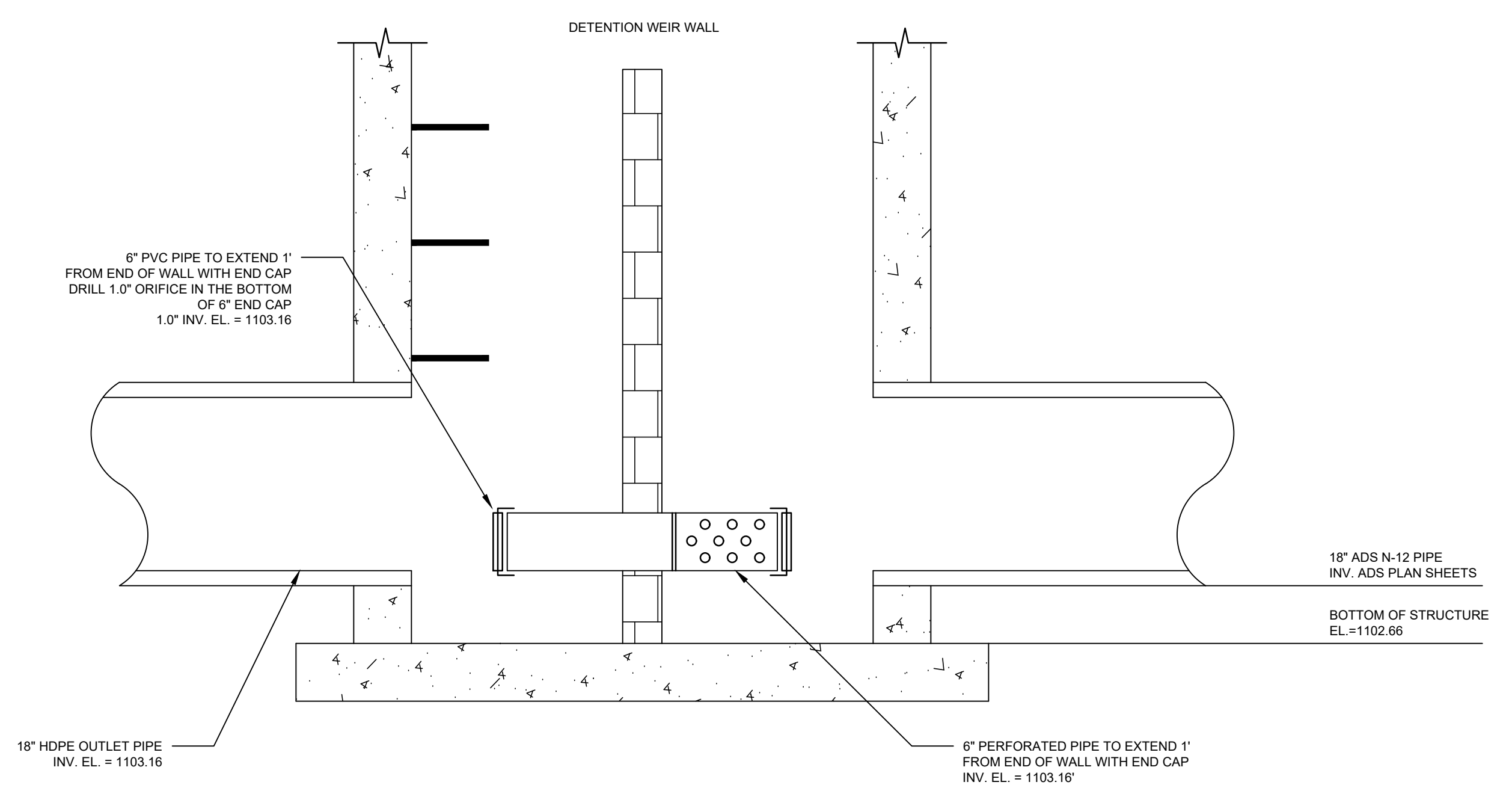
**1 UNDERGROUND DETENTION OUTLET CONTROL STRUCTURE PLAN VIEW**  
SCALE: N.T.S.



**2 UNDERGROUND DETENTION OUTLET CONTROL STRUCTURE ELEVATION**  
SCALE: N.T.S.



**3 OUTLET CONTROL STRUCTURE - THREADED WATER QUALITY ORIFICE END CAP**  
SCALE: N.T.S.



**4 UNDERGROUND DETENTION OUTLET CONTROL STRUCTURE DRAIN DETAIL**  
SCALE: N.T.S.

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**09/10/2024**

Date: 09/10/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

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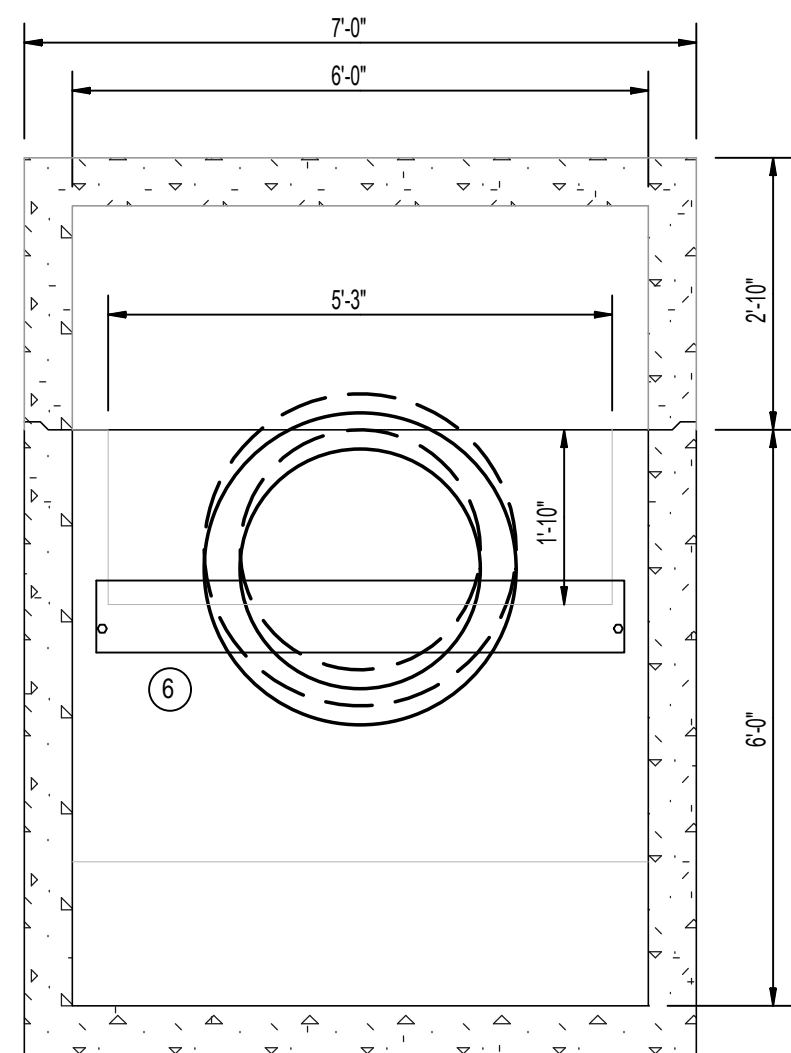
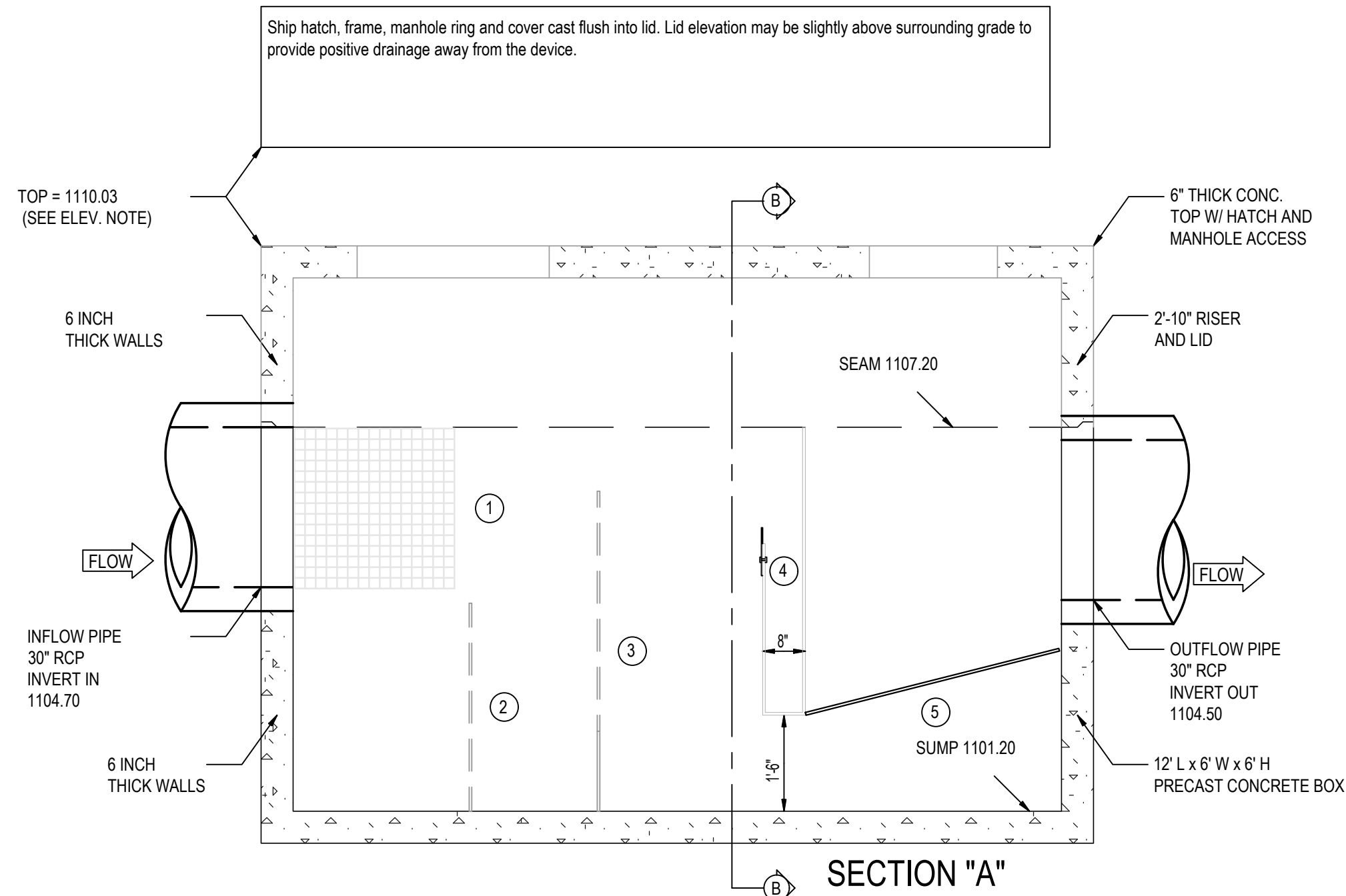
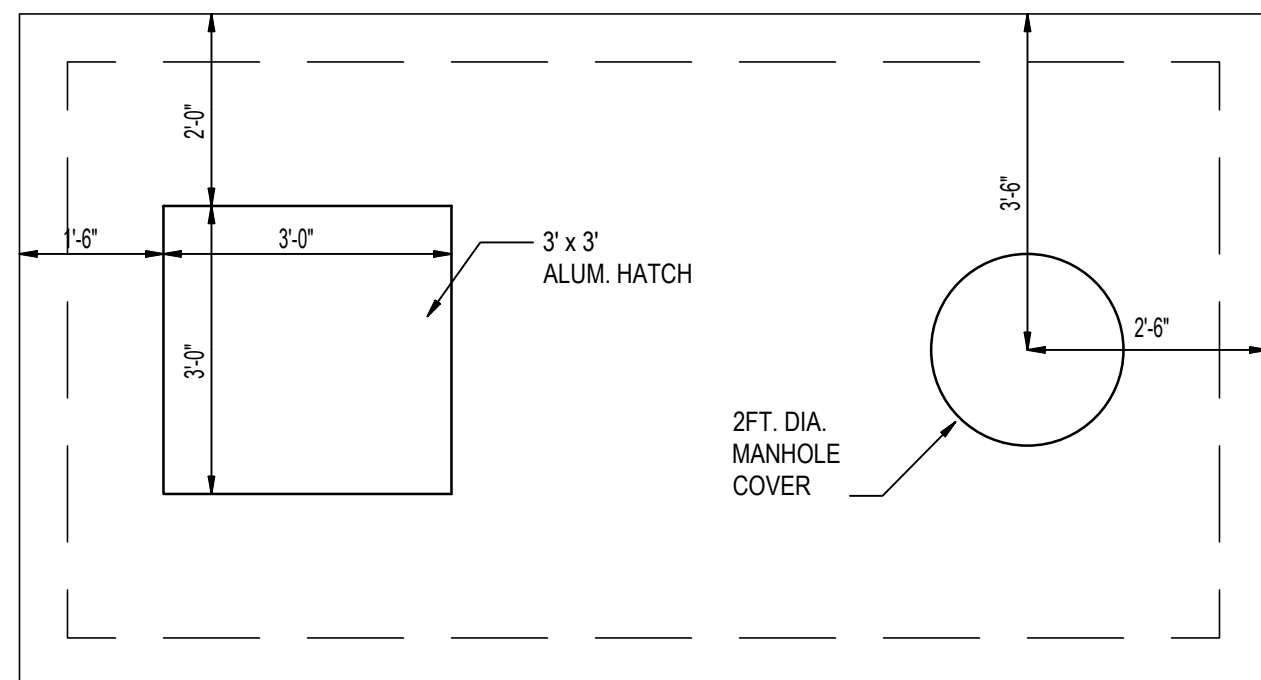
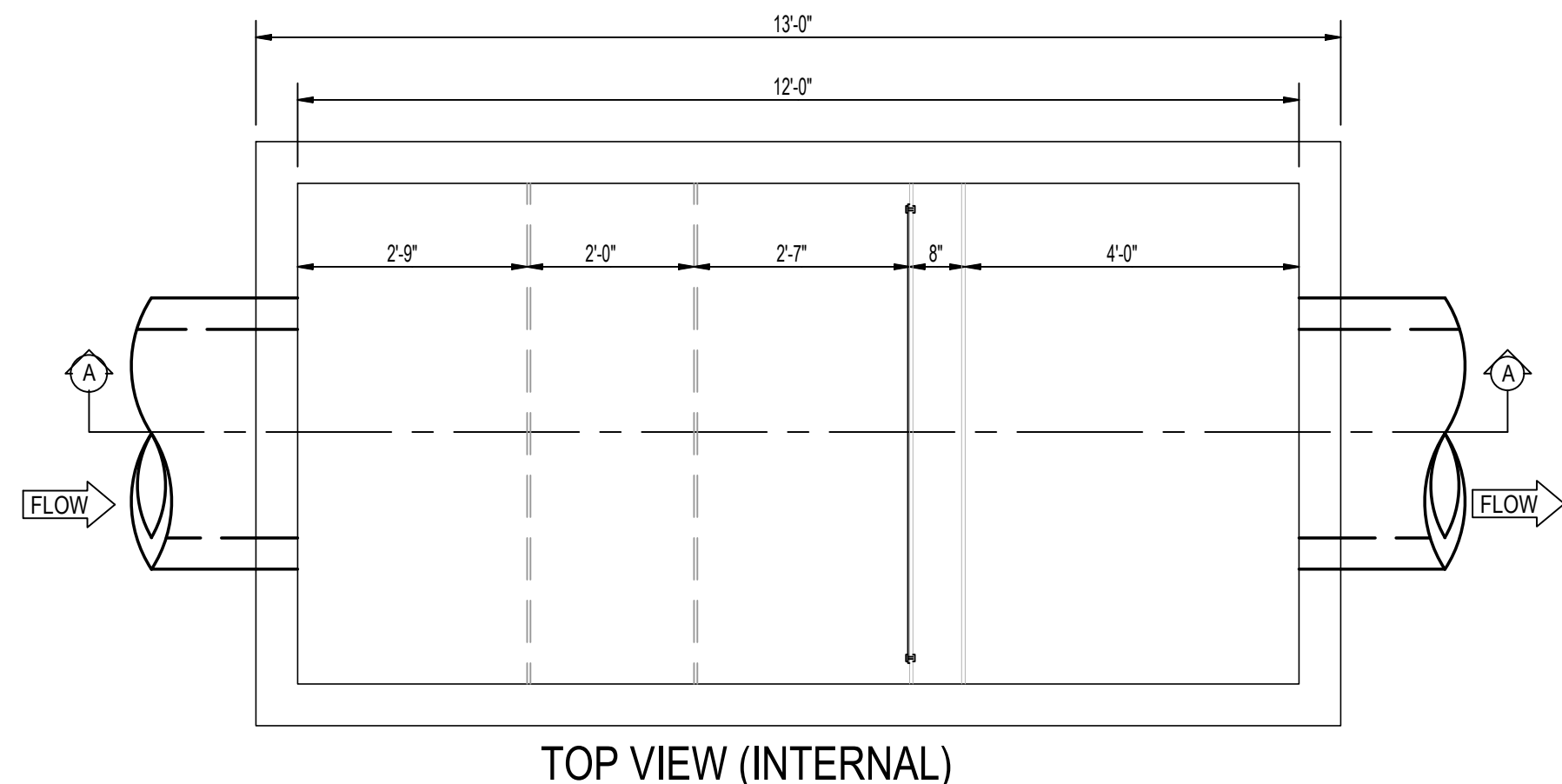
Sheet Title:  
**Grading & Drainage Details**

Sheet No:  
**CG502**

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1. ALL PIPES SHALL BE CONSTRUCTED TO BE FLUSH WITH THE INSIDE WALLS.
2. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL PIPES AND STRUCTURES BETWEEN AND AROUND THE WATER QUALITY VAULTS.
3. ALL VAULT LIFTING CONNECTIONS SHALL BE LOCATED ON THE OUTSIDE OF THE VAULT WALLS.
4. CONCRETE VAULT PRE-CASTER IS RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE CONCRETE VAULTS. WALL AND SLAB THICKNESSES SHALL BE ALTERED ACCORDINGLY.



- LEGEND**
- ① EXPANDED ALUMINUM BASKET W/ 1/4" MESH LINING, 2'-6" H x 2'-6" L x 6'-0" W, Uprt 3'-6" FROM SUMP
  - ② 1ST INTERNAL BAFFLE W/ 1" HOLES DRILLED AT 1-1/4" O.C., 3'-3" H.
  - ③ 2ND INTERNAL BAFFLE W/ 1" HOLES DRILLED AT 1 1/4" O.C., 5'-0" H.
  - ④ SPILL PROTECTION RESERVOIR 4'-6" H. WITH A 1'-10" FRONT CUT.
  - ⑤ 3/4" COCONUT FIBER FILTER IN ALUMINUM FRAME 4'-1" LONG.
  - ⑥ 1/4" ALUMINUM PLATE, 9" H., 5'-6" WIDE.

**CRYSTALSTREAM "CRYSTALCLEAN" WATER QUALITY VAULT  
MODEL "1266 "**

JURISDICTION: City of Tucker, GA

Protected by U.S. Patent Nos: 6,797,161; 6,936,163; 6,939,461; 6,951,607; 6,994,783; 7,011,743; 7,037,436; 10,024,043

free-pickleb 8/18/2023 p.a.d.s.

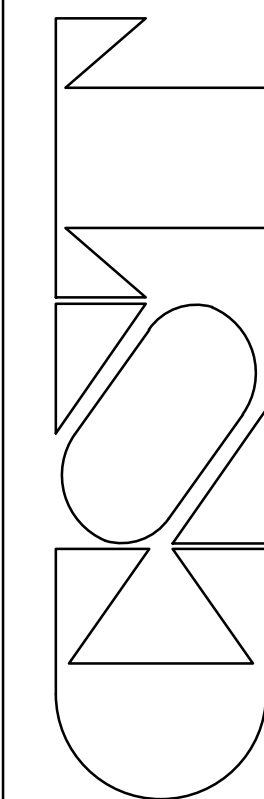
JOB NAME:  
**Tucker Pickle Ball Courts**

Device No.: CST-1  
GAO-020-081823

DESIGN FIRM: Freedman Engineering Group

**SPECIFICATIONS**

1. TOTAL FLOW CAPACITY SHALL BE 24 CFS.
2. WATER QUALITY FLOW OF 2.49 CFS MUST BE TREATED WITH A HYDRAULIC LOADING RATE OF 16 GPM/SF OR LESS.
3. SPILL PROTECTION CAPACITY SHALL BE 1,052 GALLONS BEFORE OVERFLOW.
4. ANY CHANGES OR SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER AND THE REVIEWING AUTHORITY.



**CrystalStream Technologies**

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David@Freedmanengineering.com



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09/10/2024

Date: 09/10/2024

Project No: 2023-019

Drawn By: PS

Checked By: MK

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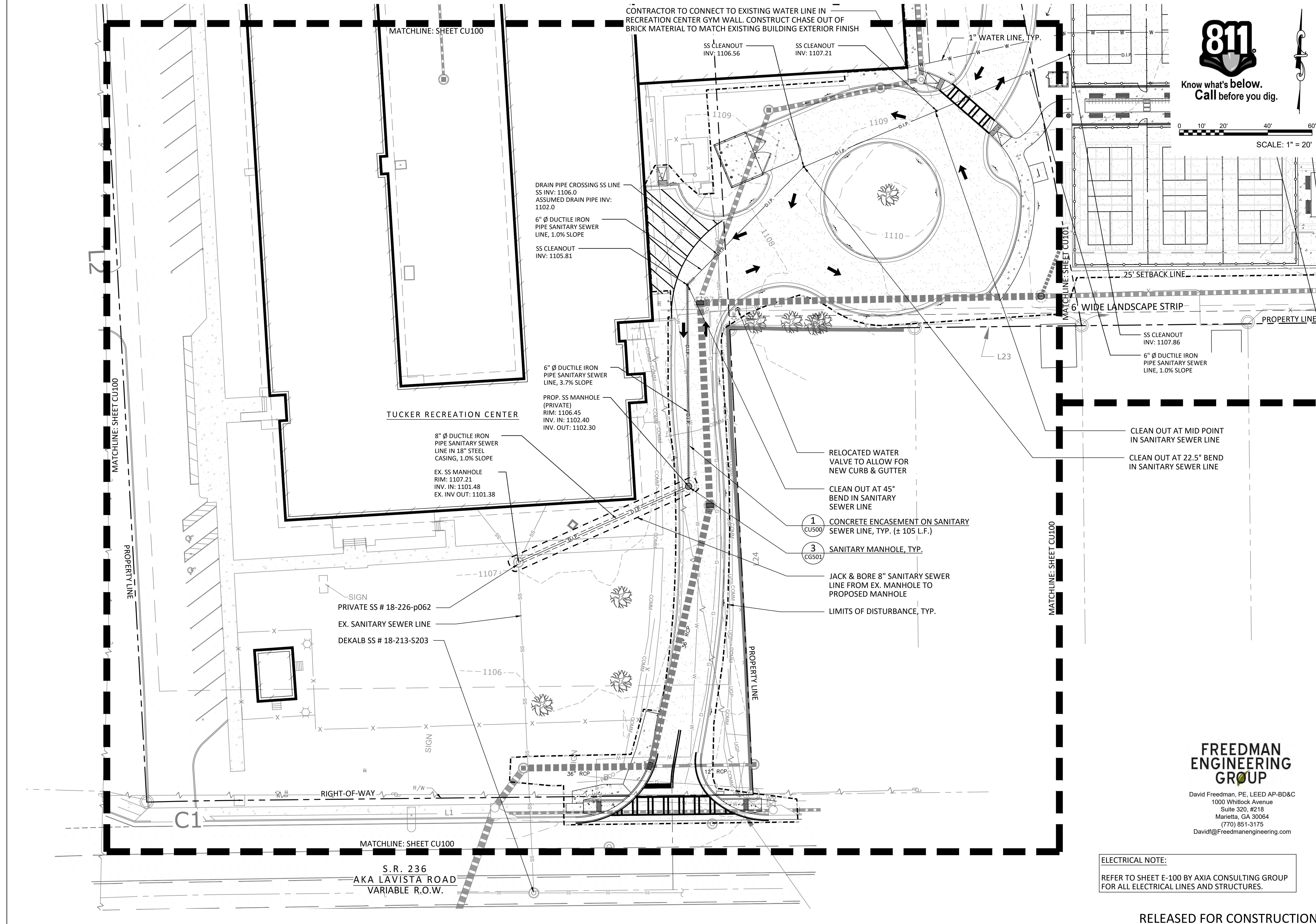
Sheet Title:  
**Grading & Drainage Details**

Sheet No:  
**CG503**

**1 CRYSTAL STREAM STRUCTURE DETAILS**  
SCALE: N.T.S.

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CONTRACTOR TO CONNECT TO EXISTING WATER LINE IN RECREATION CENTER GYM WALL. CONSTRUCT CHASE OUT OF BRICK MATERIAL TO MATCH EXISTING BUILDING EXTERIOR FINISH



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Sheet Title:  
**Utility Plan:  
Area A**

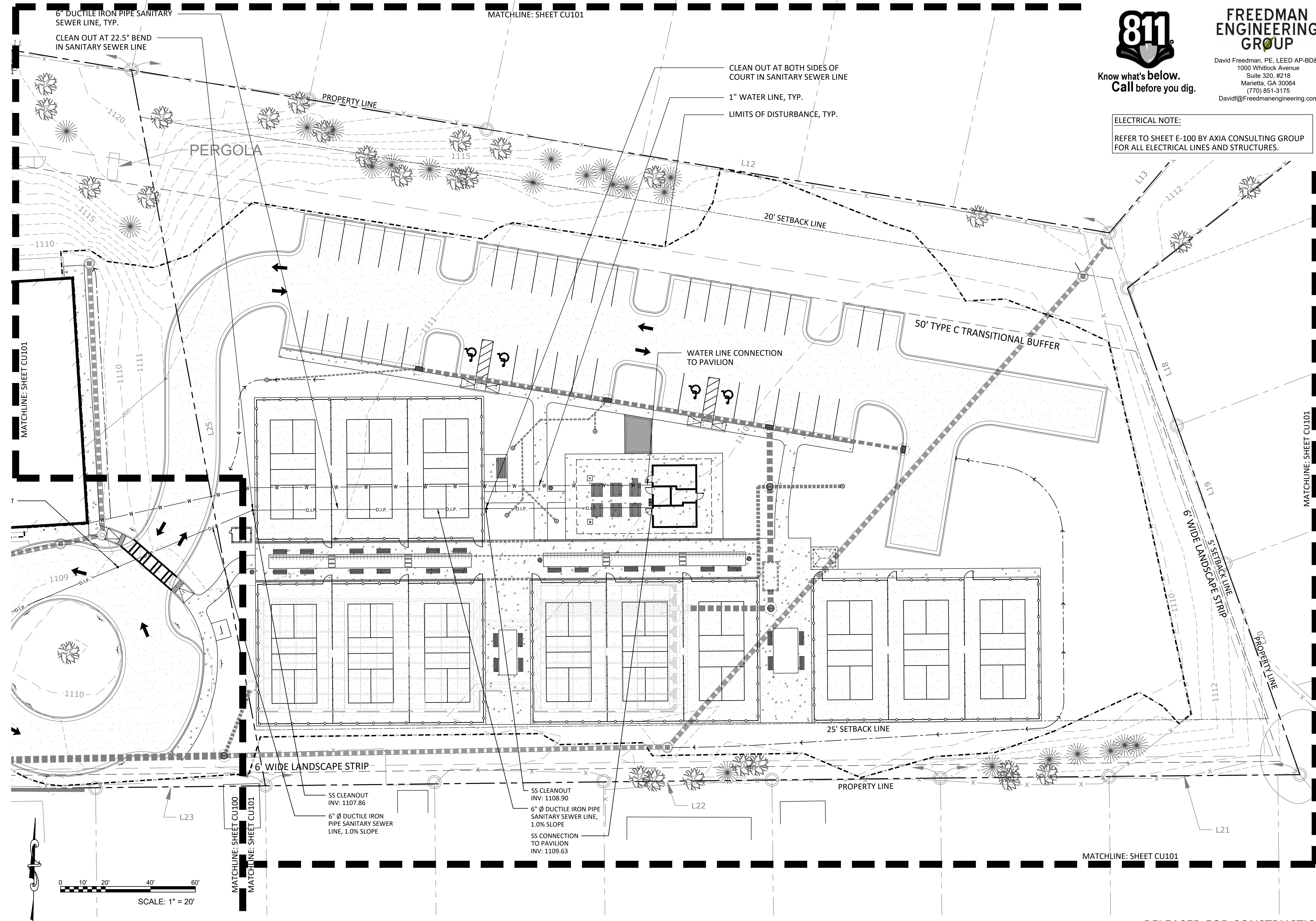
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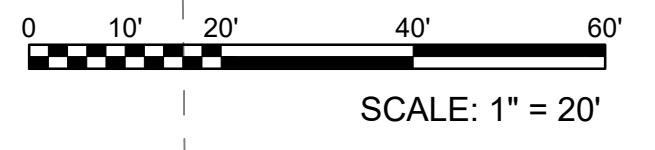
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Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Utility Plan:  
 Area B**

Sheet No:  
**CU101**



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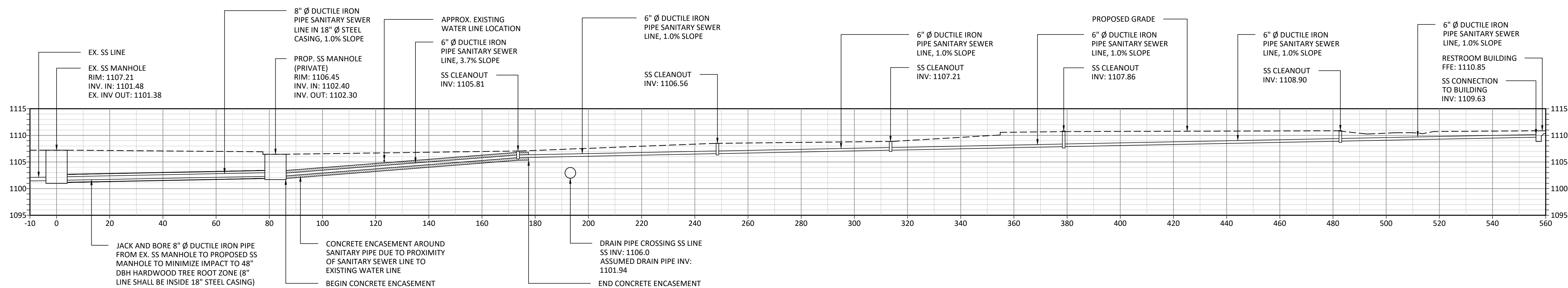
09/10/2024

Date: 09/10/2024

Project No: 2023-019

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**1 SANITARY SEWER LINE PROFILE**  
SCALE: 1" = 10' VERT., 1" = 20' HORZ.

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Sheet Title:  
**Sanitary Sewer Profiles**

Sheet No:  
**CU300**

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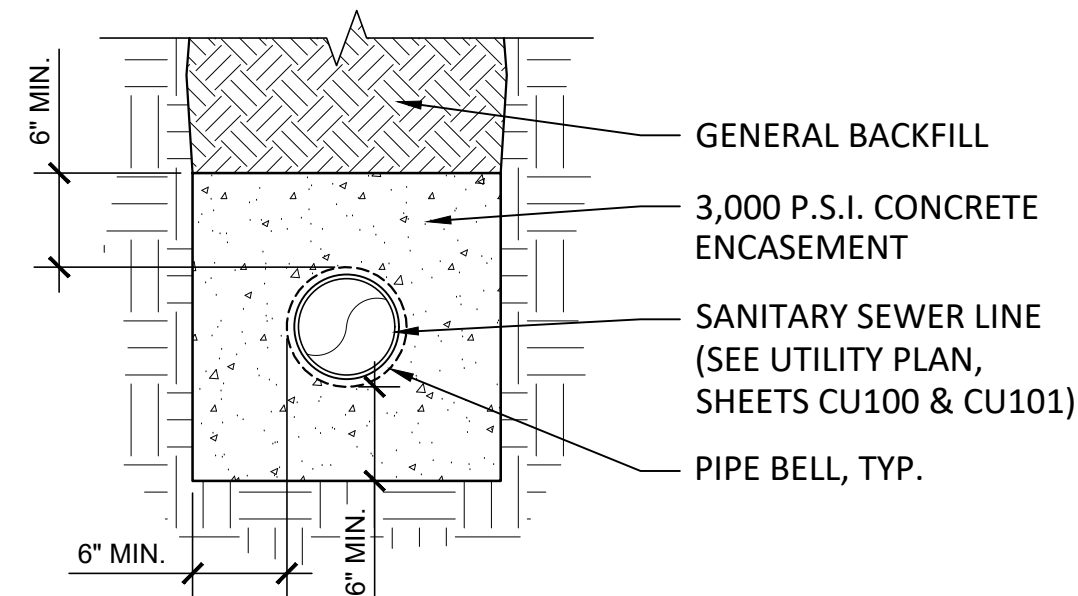


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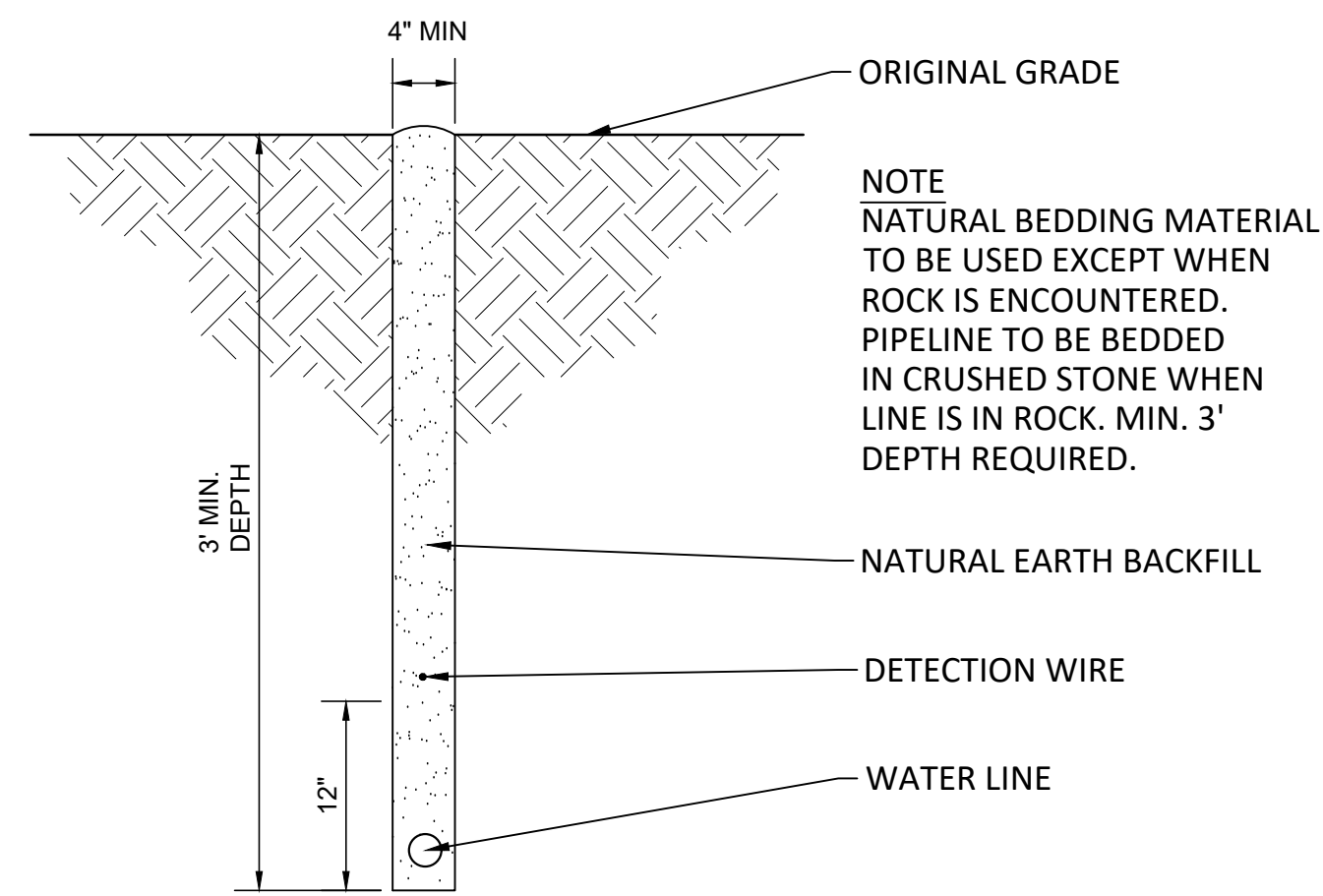
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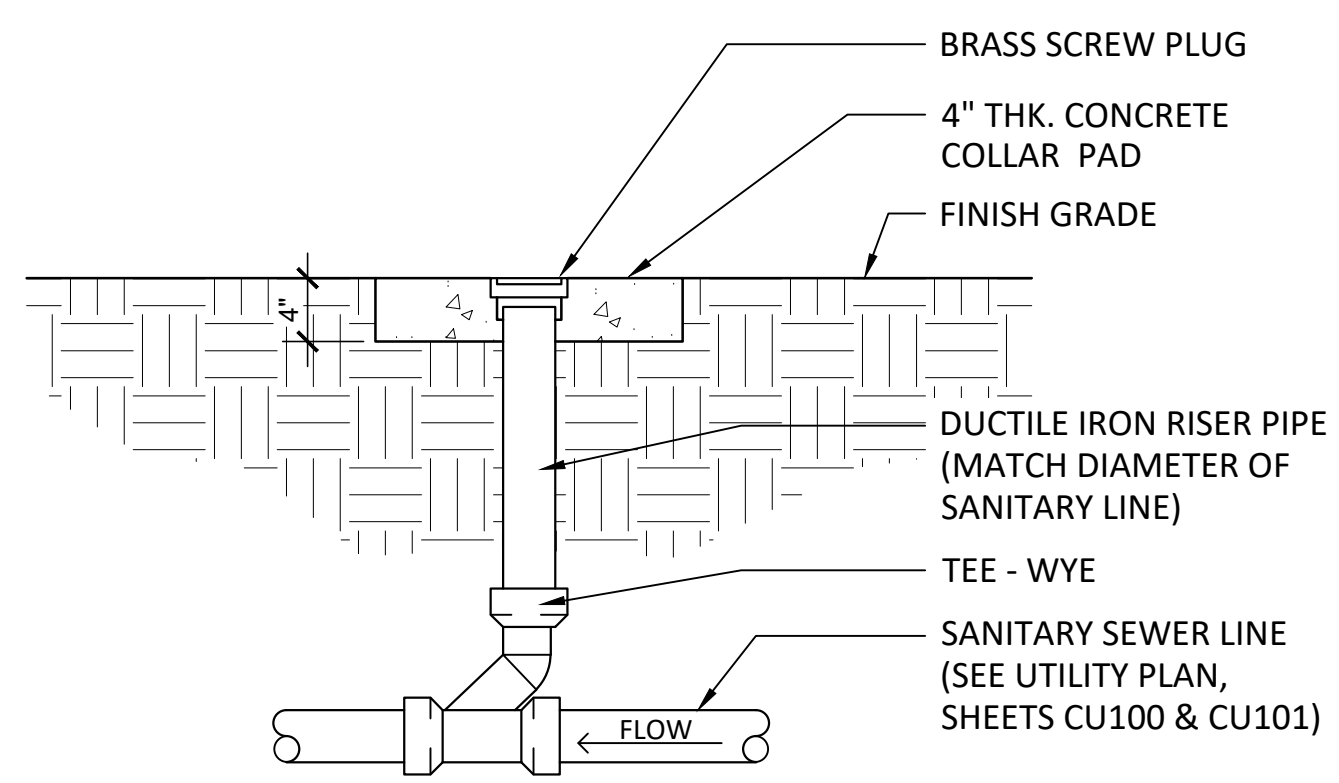
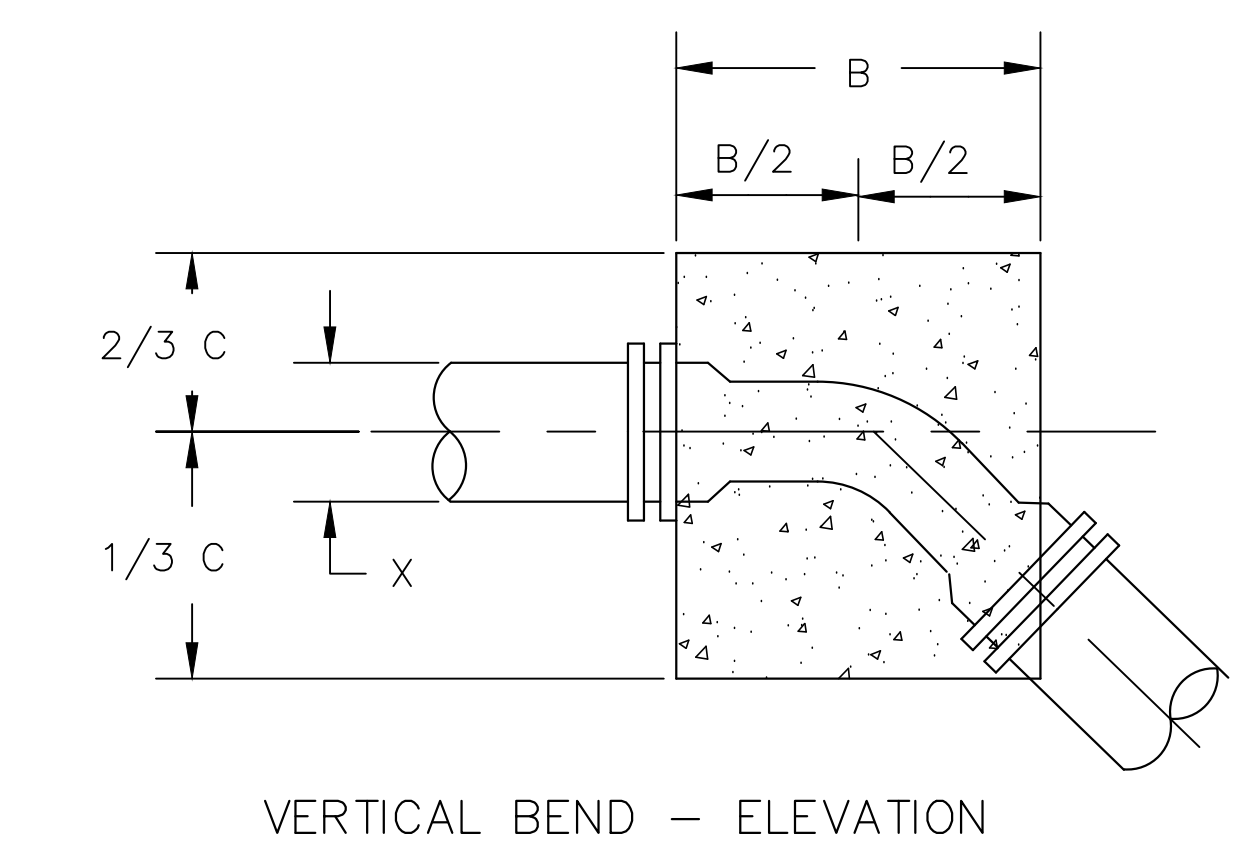
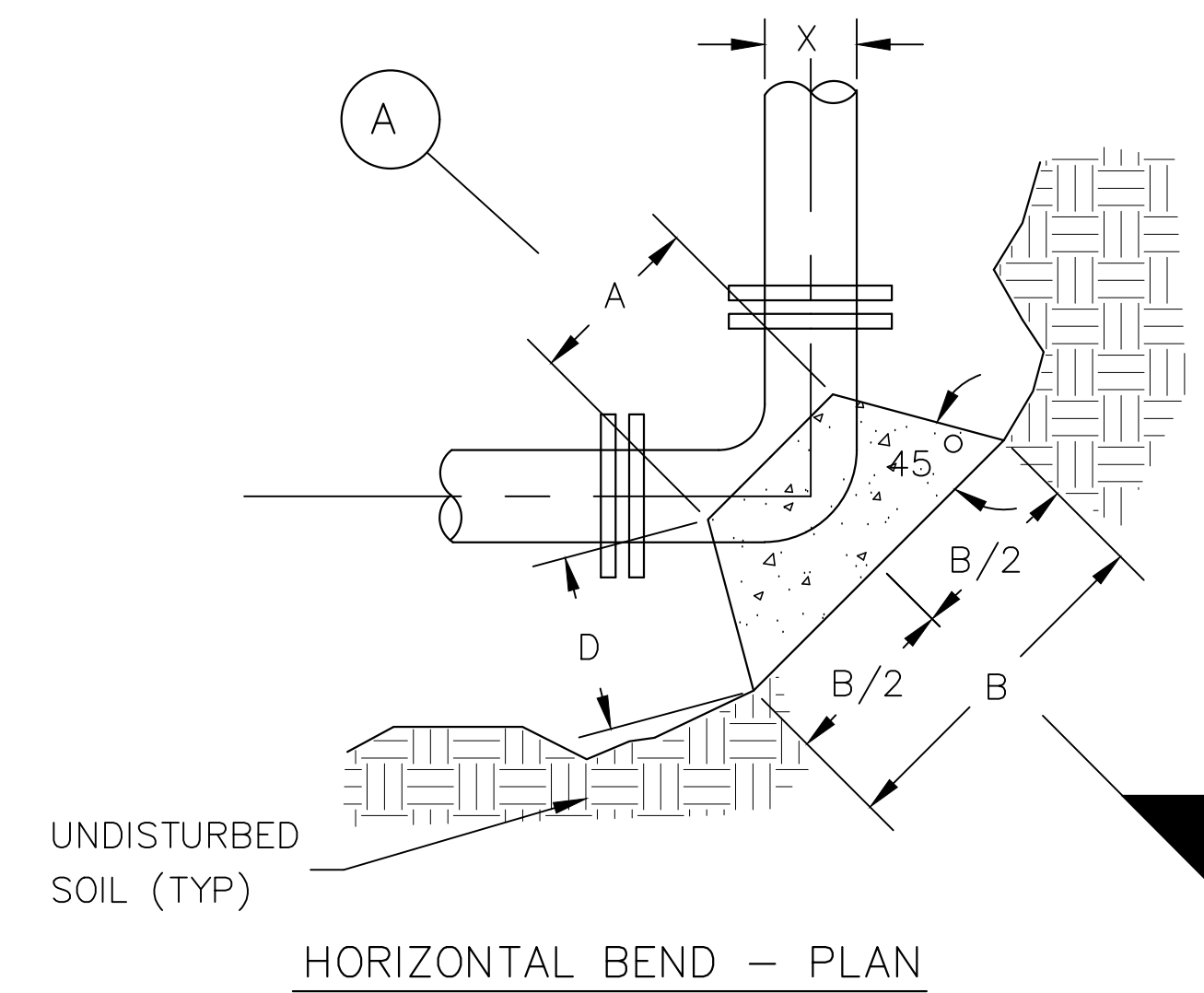
Date: 09/10/2024  
Project No: 2023-019  
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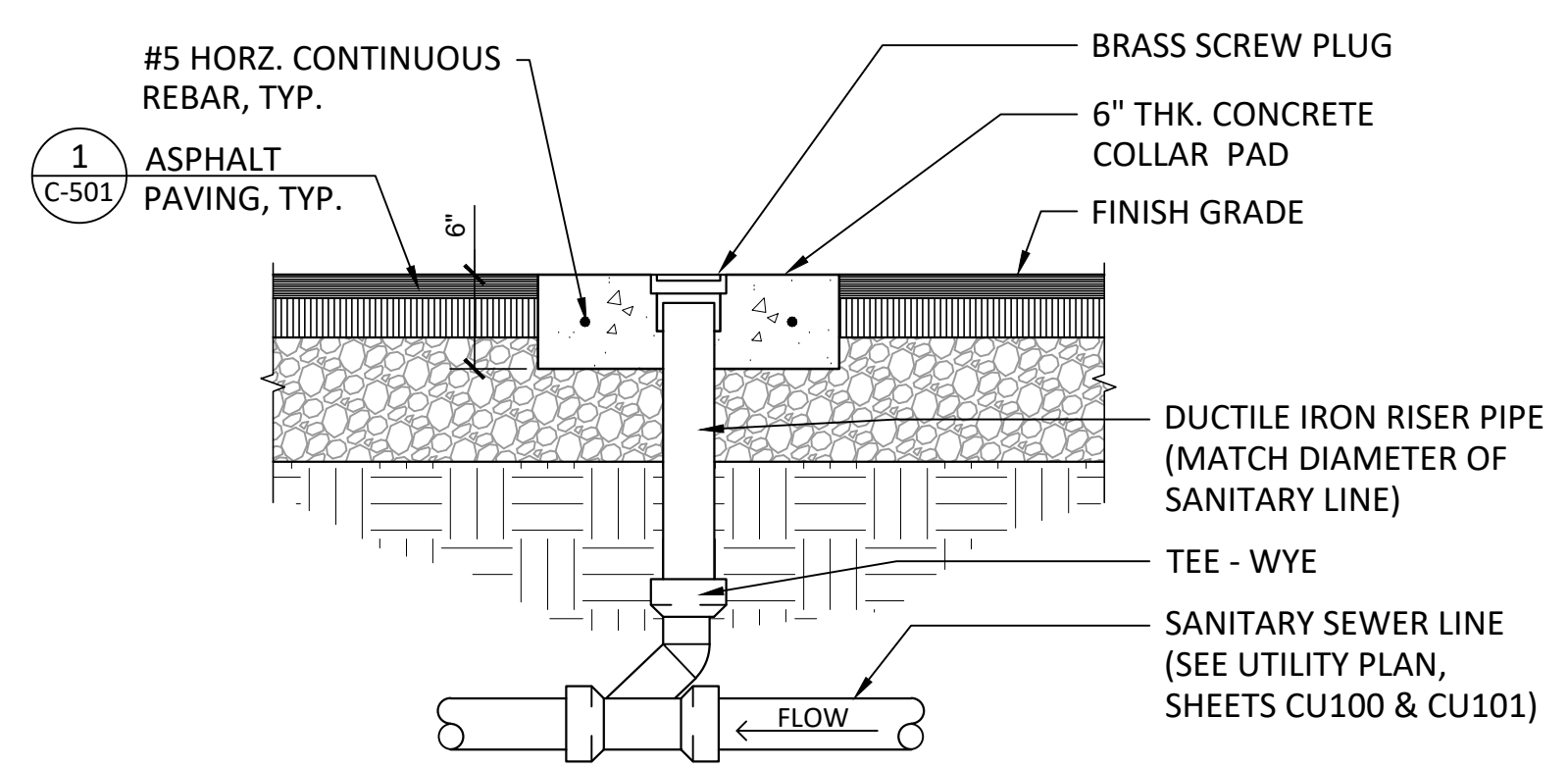
**1 CONCRETE ENCASEMENT ON SANITARY SEWER LINE**  
SCALE: 1" = 1'-0"



**2 WATER LINE TRENCH DETAIL**  
SCALE: 1" = 1'-0"



**3 CLEAN OUT DETAIL**  
SCALE: 1" = 1'-0"



**4 WATER LINE THRUST BLOCK DETAIL**  
SCALE: 1" = 1'-0"

Line Pressure = 150 PSI Soil Pressure = 2000 PSF				
Pipe Size	A	B	C	D
90 DEGREE BEND				
2&3"	0'-3"	0'-4"	1'-3"	1'-3"
4"	0'-9"	1'-3"	1'-3"	1'-3"
45 DEGREE BEND				
2&3"	0'-3"	0'-3"	1'-3"	1'-3"
4"	0'-9"	1'-0"	1'-0"	1'-0"
Line Pressure = 150 PSI Soil Pressure = 2000 PSF				
Pipe Size	A	B	C	D
11 1/4 DEGREE BEND				
2&3"	0'-3"	0'-3"	1'-3"	1'-3"
4"	0'-7"	1'-0"	1'-0"	1'-0"
22 1/2 DEGREE BEND				
2&3"	0'-3"	1'-3"	1'-3"	1'-3"
4"	0'-7"	1'-0"	1'-0"	1'-0"
Line Pressure = 150 PSI Soil Pressure = 2000 PSF				
Pipe Size	A	B	C	D
UNBALANCED TEE & PLUG				
2&3"	1'-0"	0'-3"	1'-3"	1'-3"
4"	1'-0"	1'-0"	1'-0"	1'-0"
TEE				
2&3"	0'-4"	0'-3"	1'-3"	1'-3"
4"	0'-10"	1'-0"	1'-0"	1'-0"

- NOTES:
- BLOCKING SHALL BE CLASS "C" CONCRETE ; "SACKCRETE" WILL NOT BE ALLOWED.
  - THE CONTRACTOR HAS THE OPTION TO USE RESTRAINED JOINTS IN LIEU OF OR IN ADDITION TO CONCRETE BLOCKING.

THRUST BLOCK

W01ema

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**Utility Details**

Sheet No:  
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## GENERAL NOTES:

1. THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, CODES AND REGULATIONS.
2. THE CONTRACTOR SHALL SECURE NECESSARY PERMITS PRIOR TO BEGINNING ANY WORK.
3. CONTRACTOR MUST POSSESS CURRENT LICENSES AND/OR CERTIFICATIONS AS MAY BE REQUIRED BY LAW TO APPLY GENERAL OR RESTRICTED USE PESTICIDES AND CHEMICALS.
4. USER OF THESE DRAWINGS IS CAUTIONED THAT EXISTING UNDERGROUND UTILITIES AND FOUNDATIONS AS SHOWN ARE NOT GUARANTEED, NOR IS THERE ANY GUARANTEE THAT ALL EXISTING UTILITIES AND FOUNDATIONS, WHETHER ABANDONED OR FUNCTIONAL, ARE SHOWN ON DRAWINGS. IF UNDERGROUND FOUNDATION OR UTILITY WHICH IS NOT SHOWN ON DRAWINGS IS ENCOUNTERED OR DAMAGED BY CONSTRUCTION WORK, NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY.
5. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK AND VERIFY PROPOSED GRADES, DIMENSIONS, AND EXISTING CONDITIONS. REPORT DISCREPANCIES TO THE LANDSCAPE ARCHITECT FOR DIRECTION BEFORE PROCEEDING WITH WORK. WORK STARTED WITHOUT DIRECTION FROM THE LANDSCAPE ARCHITECT WILL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE CORRECTED IF NECESSARY AT HIS/HER EXPENSE.
6. THE CONTRACTOR SHALL CONTACT THE UTILITY PROTECTION SERVICE (811) TO LOCATE ALL ABOVE AND BELOW GROUND UTILITIES PRIOR TO BEGINNING WORK.
7. THE CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL MEASURES AS NEEDED TO ENSURE THE SAFETY OF VEHICULAR AND PEDESTRIAN TRAFFIC WITHIN CONSTRUCTION ZONES.
8. THE CONTRACTOR SHALL MAINTAIN A CLEAN AND COURTEOUS WORK SITE FOR THE DURATION OF THE PROJECT. TRASH AND DEBRIS SHALL BE PICKED UP AND PROPERLY DISPOSED OF EACH DAY. VEHICLES AND EQUIPMENT SHALL BE CLEANED AND MAINTAINED REGULARLY SO AS NOT TO DRIP ANY FLUIDS OR TRACK AND SEDIMENT WITHIN THE PROPERTY.
9. THE CONTRACTOR SHALL ENSURE THAT NO SEDIMENT LEAVES THE WORK SITE DURING CONSTRUCTION. SEDIMENT THAT ACCUMULATES ALONG THE CURB OR ON THE ROADWAY SHALL BE SWEEP UP AT THE END OF EACH WORK DAY AND PRIOR TO EACH RAIN EVENT.
10. ALL CONSTRUCTION DEBRIS SHALL BE HAULED OFF SITE AND PROPERLY DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS.
11. EXISTING PROPERTY THAT IS DAMAGED AS A RESULT OF CONSTRUCTION ACTIVITIES FROM THIS PROJECT SHALL BE REPLACED OR REPAIRED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
12. THE CONTRACTOR SHALL LEAVE THE PROJECT SITE IN A PRISTINE CONDITION UPON COMPLETION OF THE WORK. REMOVE AND PROPERLY DISPOSE OF ALL TRASH, DEBRIS, EXCESS SOIL, ETC. CLEAN ALL VISIBLE SURFACES SO THEY ARE FREE FROM DIRT, SMUDGES, STAINS, ETC.

## TREE PROTECTION NOTES:

1. THE "CRITICAL ROOT ZONE" (CRZ) IS DETERMINED BY CONVERTING THE TREE TRUNK DIAMETER IN INCHES MEASURED AT BREAST HEIGHT (DBH) TO CRZ RADIUS IN FEET. (REFER TO THE MOST CURRENT VERSION OF THE LOCAL ORDINANCE FOR CONVERSION FACTOR.)
2. ALL TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO AND MAINTAINED THROUGHOUT LAND DISTURBING AND CONSTRUCTION ACTIVITIES, AND SHALL NOT BE REMOVED UNTIL THE FINAL LANDSCAPING IS INSTALLED.
3. TREE PROTECTION AREA SHALL INCLUDE NO LESS THAN THE TOTAL AREA BENEATH THE TREE CANOPY AS DEFINED BY THE CRZ OF THE TREE OR GROUP OF TREES COLLECTIVELY, UNLESS OTHERWISE INDICATED ON THE PLANS.
4. TREE PROTECTION FENCES MUST HAVE SIGNAGE IN BOTH ENGLISH AND SPANISH LANGUAGES THAT READS "STAY OUT", "NO ENTRADA", AND "TREE SAVE", "SALVE UN ARBOL", POSTED ON THE FENCE EVERY 20 FEET WITH A MINIMUM OF 4 SIGNS. SIGNS REQUESTING SUBCONTRACTOR COOPERATION AND COMPLIANCE WITH THE TREE PROTECTION STANDARDS SHALL ALSO BE POSTED AT THE JOB SITE ENTRANCES.
5. ANY ACTIVITY THAT INVOLVES DISTURBING SOIL WITHIN THE CRZ OF TREES TO REMAIN (I.E. CUT, FILL, OR COMPACTION) OR CLOSE PHYSICAL CONTACT BETWEEN EQUIPMENT AND TREES TO REMAIN MUST BE REVIEWED AND APPROVED IN ADVANCE BY THE LANDSCAPE ARCHITECT AND THE LOCAL JURISDICTIONAL AUTHORITY.
6. TREE SAVE AREAS SHALL NOT BE USED FOR EMPLOYEE PARKING OR LOITERING, LOCATION OF TEMPORARY SANITATION FACILITIES, ACCESS, STAGING, MATERIALS STORAGE, TRENCHING, GRADING, OR STORAGE OF DEMOLITION EQUIPMENT.
7. NO DEMOLITION, EQUIPMENT FUELING, LUBRICATION, OR MAINTENANCE SHALL BE ALLOWED WITHIN THE TREE SAVE AREAS OR WITHIN THE CRZ OF TREES TO REMAIN.
8. STORAGE OF ROLL OFF DUMPSTERS, FUEL, LUBRICANTS, CHEMICALS, ETC. WILL NOT BE PERMITTED ADJACENT TO THE TREE SAVE AREAS OR THE CRZ OF TREES TO REMAIN.

## LANDSCAPE NOTES:

1. LANDSCAPE PLANS ARE FOR THE LOCATION AND IDENTIFICATION OF PLANT MATERIAL ONLY. NO OTHER WORK IS TO BE PERFORMED BASED ON THESE PLANS.
2. QUANTITIES ON THE PLANT SCHEDULE ARE PROVIDED FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS/HER OWN QUANTITY CALCULATIONS. IN THE EVENT OF A DISCREPANCY BETWEEN THE LANDSCAPE PLANS AND THE PLANT SCHEDULE, THE LANDSCAPE PLAN WILL TAKE PRECEDENCE. THE CONTRACTOR SHALL INFORM THE LANDSCAPE ARCHITECT IMMEDIATELY UPON DISCOVERING QUANTITY DISCREPANCIES.
3. THE CONTRACTOR SHALL NOT CHANGE OR SUBSTITUTE PLANT VARIETIES OR SPECIES WITHOUT PRIOR WRITTEN APPROVAL FROM THE LANDSCAPE ARCHITECT. PLANT MATERIAL SHALL BE PLACED AS SHOWN ON THE LANDSCAPE PLANS.
4. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE OF ALL PLANTING HOLES AND PLANT BEDS PRIOR TO INSTALLATION.
5. NEW SHRUB AND GROUNDCOVER PLANTING SHALL BE A MINIMUM OF 36" AWAY FROM EXISTING TREES.

6. TOPSOIL: ANY AVAILABLE TOP SOIL WITHIN THE LIMITS OF DISTURBANCE SHALL BE STOCKPILED ON SITE FOR RE-USE IN LANDSCAPE WORK. IF NO TOPSOIL IS STOCKPILED, THE CONTRACTOR SHALL IMPORT TOPSOIL, AS REQUIRED, TO COMPLETE LANDSCAPE WORK.

IMPORTED TOP SOIL SHALL BE FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLY FREE OF ROOTS, STUMPS AND LARGE STONES AND FREE OF BRUSH, WEEDS, LITTER, AND OTHER EXTRANEOUS MATTER HARMFUL TO PLANT GROWTH.

OBTAIN FROM LOCAL SOURCES OR AREAS HAVING SIMILAR SOIL CHARACTERISTICS TO THAT FOUND AT PROJECT SITE. OBTAIN TOPSOIL FROM NATURALLY, WELL DRAINED SITES WHERE TOPSOIL OCCURS IN A DEPTH OF NOT LESS THAN FOUR (4) INCHES. DO NOT OBTAIN FROM BOGS OR MARSHES.

7. COMPOST: SHALL BE DARK BROWN IN COLOR. PARENT MATERIAL SHALL NO LONGER BE VISIBLE. STRUCTURE SHALL BE FINE AND MEDIUM SIZE PARTICLES. SMALL SHALL BE RICH HUMUS LIKE THE FOREST FLOOR WITH NO AMMONIA OR ANAEROBIC ODORS. COMPOST SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
  - 7.1. COMPOST SHALL BE "US COMPOSTING COUNCIL-STA" CERTIFIED.
  - 7.2. ORGANIC CONTENT: 35%-65%
  - 7.3. MATURITY TEST: "STABLE" OR "VERY STABLE" RATING BASE ON CO2 RESPIRATION.
  - 7.4. CARBON/NITROGEN RATIO: 14-20
  - 7.5. ELECTRICAL CONDUCTIVITY (CEC): LESS THAN 5.0 dS/m
  - 7.6. PATHOGENS AND METALS: PER USEPA STANDARDS FOR CLASS A BIOSOLIDS.
  - 7.7. CONTAMINANTS: LESS THAN 1% BY WT. FOR METAL, GLASS, PLASTIC AND OTHER "INERTS". LESS THAN 0.5% BY WT. FOR PLASTIC FILM.

8. PLANTING SOIL MIX REFERS TO THE PLANTING MEDIUM USED TO BACKFILL INDIVIDUAL PLANTING HOLES AND SHALL CONSIST OF THE FOLLOWING:
  - 80% (BY VOLUME): TOPSOIL (SEE NOTE #6)
  - 20% (BY VOLUME): AGED COMPOST (SEE NOTE #7)*CONTRACTOR MAY SUBMIT ALTERNATIVE MIX FOR REVIEW.*

9. QUALITY OF PLANT MATERIAL: ALL PLANTS SHALL CONFORM TO THE CURRENT VERSION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1). PLANT MATERIAL SHALL BE FREE OF INSECTS, DISEASE AND/OR INJURY, AND SHALL HAVE A HEALTHY ROOT SYSTEM WITH NO CIRCLING OR KINKED ROOTS. CONTAINER PLANTS SHALL NOT BE ROOT BOUND. TREES SHALL HAVE STRAIGHT TRUNKS, A STRONG DOMINANT CENTRAL LEADER (AS REQUIRED BY SPECIES), DENSE CANOPIES AND STRONG BRANCHING WITH GOOD CROTCH ANGLES.

10. INSPECTION AND APPROVAL OF PLANT MATERIAL: ALL PLANT MATERIAL SHALL BE INSPECTED AND APPROVED BY THE OWNER'S REPRESENTATIVE UPON DELIVERY TO THE SITE AND PRIOR TO INSTALLATION. CONTRACTOR SHALL PROVIDE AT LEAST ONE WEEK NOTICE PRIOR TO PLANT DELIVERY.

11. PLANT MATERIAL SHALL BE SUFFICIENTLY WATERED TO WET THE ENTIRE ROOT BALL WITHIN TWO HOURS OF PLANTING.

## LANDSCAPE NOTES (continued):

13. MAINTENANCE: CONTRACTOR SHALL MAINTAIN ALL PLANT MATERIAL FROM THE TIME IT IS INSTALLED UNTIL FINAL ACCEPTANCE OR WHEN THE OWNER TAKES OVER MAINTENANCE, WHICHEVER OCCURS FIRST. MAINTENANCE SHALL INCLUDE BUT NOT BE LIMITED TO MOWING, EDGING, WEEDING, WATERING, PRUNING, FERTILIZING, ETC.
14. WARRANTY: CONTRACTOR SHALL PROVIDE A WARRANTY ON ALL PLANT MATERIAL AND LABOR FOR A PERIOD OF ONE YEAR OR PER JURISDICTIONAL REQUIREMENTS, WHICHEVER IS LONGER. WARRANTY PERIOD SHALL BEGIN UPON FINAL COMPLETION OR WHEN THE OWNER TAKES OVER MAINTENANCE, WHICHEVER OCCURS FIRST.

THE CONTRACTOR SHALL MAKE PERIODIC INSPECTIONS OF THE PROJECT DURING THE WARRANTY PERIOD TO ENSURE THAT THE ESTABLISHMENT RATE OF GROWTH IS ADEQUATE. ANY METHODS OR PRODUCTS DEEMED NOT NORMAL OR DETRIMENTAL TO GOOD PLANT GROWTH SHALL BE REPORTED TO THE OWNER IN WRITING. FAILURE TO INSPECT AND REPORT WILL BE INTERPRETED AS APPROVAL, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL REPLACEMENTS.

## TREE PLANTING NOTES:

1. **ALL TREES SHALL BE TEN (10) FEET MINIMUM FROM GAS LINES AND SANITARY SEWER, AND FIVE (5) FEET MINIMUM FROM FIRE HYDRANTS AND ALL OTHER UNDERGROUND UTILITIES.**
2. **IF TREES ARE INSTALLED NEAR A BUILDING, LANDSCAPE CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR TO ENSURE THAT NO ROOF OR FOUNDATION DRAIN LINES ARE LOCATED WITHIN FIVE (5) FEET OF SCHEDULED TREES.**
3. TREES SHALL BE SET PLUMB AND LEVEL.
4. CAREFULLY LIFT AND SET TREES BY THE ROOT BALL ONLY. DO NOT LIFT USING THE TRUNK OR STEM. IF TREES ARE TOO LOW OR NOT PLUMB AFTER SETTING IN THE HOLE, RE-SET BY ADJUSTING THE ROOT BALL AS NEEDED.
5. FOR TREES PLANTED IN TREE ISLANDS: EXCAVATE THE ENTIRE TREE ISLAND TO A DEPTH OF 12", LOOSEN ANY HARDPAN, AND BACKFILL WITH TOPSOIL PRIOR TO DIGGING THE PLANTING HOLE.
6. REFER TO PLANTING DETAILS FOR ADDITIONAL INFORMATION.

## TREE STAKING NOTES:

1. TREES 2" CALIPER AND SMALLER SHOULD NOT BE STAKED.
2. STAKING STRAPS SHALL BE SOFT, FLEXIBLE MATERIAL, 3/4" WIDTH, MANUFACTURED FOR THE PURPOSE OF TREE ANCHORING SUCH AS WOVEN POLYPROPYLENE WEBBING.
3. STRAPS SHALL BE ATTACHED IN THE LOWEST BRANCH CROTCH POSSIBLE, BUT NO HIGHER THAN 2/3 THE HEIGHT OF THE MAIN TRUNK.
4. STRAPS SHALL LAY FLAT AGAINST THE TREE TRUNK AND SHALL NOT BE TWISTED OR FOLDED.
5. STRAPS SHALL BE FIRMLY ATTACHED TO DEADMEN AND HAVE SUFFICIENT SLACK TO ALLOW TRUNK TO SWAY APPROXIMATELY 1" TO 2" IN ANY DIRECTION.

## PLANT BED PREPARATION NOTES:

1. FLAG OR STAKE PROPOSED TREE LOCATIONS AND MARK ALL BEDLINES WITH ORANGE OR WHITE PAINT. NOTIFY THE OWNER'S REPRESENTATIVE FOR REVIEW AND FIELD ADJUSTMENTS, AS NEEDED.
2. UPON APPROVAL OF BEDLINES, SPRAY ALL EXISTING VEGETATION WITHIN PLANT BEDS WITH LEGALLY APPROVED WEED KILLER. REMOVE VEGETATION AFTER IT HAS BEEN KILLED.
3. DIG A TRENCH AROUND THE PERIMETER OF EACH BED, PER "TRENCH EDGER DETAIL", SHEET L-500.
4. TILL EACH PLANT BED TO A DEPTH OF SIX (6) INCHES WITH A ROTOTILLER.
5. REMOVE ANY LARGE ROCKS, ROOTS, TRASH OR OTHER HARMFUL MATERIAL FROM THE BED(S).
6. ADD TWO (1) INCHES OF TOP SOIL TO THE SURFACE OF EACH BED. (SEE "LANDSCAPE NOTE" #6).
7. ADD ONE HALF (1/2) INCH OF AGED COMPOST TO THE SURFACE OF EACH BED. (SEE "LANDSCAPE NOTE" #7).
8. AFTER APPLYING TOP SOIL AND COMPOST, TILL EACH BED A SECOND TIME TO THOROUGHLY INCORPORATE AMENDMENTS INTO THE TOP SIX (6) INCHES OF SOIL.
9. AFTER TILLING, RAKE BEDS SMOOTH, FORM A SLIGHT CROWN IN THE CENTER, AND ROLL COMPACT WITH A SOD ROLLER.
10. RE-STAKE ANY PROPOSED TREES WITHIN THE PLANT BEDS FOR APPROVAL PRIOR TO PLANTING. INSTALL TREES PER PLANTING DETAILS.
11. ONCE TREES ARE INSTALLED, LAYOUT REMAINING PLANT MATERIAL IN EACH BED FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE.
12. INSTALL REMAINING PLANT MATERIAL PER PLANTING DETAILS.
13. APPLY AN APPROVED PRE-EMERGENT HERBICIDE (WEED INHIBITOR) TO THE ENTIRE PLANT BED AFTER PLANTS HAVE BEEN INSTALLED. APPLY PER MFG. RECOMMENDATIONS. USE A SEASONALLY APPROPRIATE PRODUCT DEPENDING ON INSTALLATION DATES. SUBMIT PRODUCT INFORMATION TO OWNER'S REPRESENTATIVE FOR APPROVAL.
14. REMOVE ALL PLANT TAGS AFTER APPROVAL OF PLANT INSTALLATION BY LANDSCAPE ARCHITECT.
15. MULCH ALL PLANT BEDS AND TREE RINGS WITH FRESH, CLEAN PINESTRAW TO A MINIMUM DEPTH OF THREE (3) INCHES (UNLESS OTHERWISE NOTED ON PLANS). DO NOT PILE MULCH AROUND THE BASE OF PLANTS OR TREE TRUNKS. ALL MULCH EDGES SHALL BE NEATLY TUCKED. ALL STRING AND/OR BAILING WIRE SHALL BE REMOVED. "DUST" SHRUBS AND GROUND COVER AFTER MULCHING TO REMOVE LOOSE PINESTRAW FROM THE PLANTS.
16. WATER PLANT BEDS IMMEDIATELY AFTER INSTALLING MULCH. ALL PLANTS SHALL BE WATERED THE SAME DAY THEY ARE INSTALLED. APPLY AT LEAST ONE (1) INCH OF WATER TO EACH BED.

## SUBMITTALS:

1. CONTRACTOR SHALL PROVIDE SUBMITTALS AND PRODUCT DATA FOR ALL PLANT MATERIAL, SOIL AMENDMENTS, FERTILIZERS, MULCH, AND OTHER MATERIALS, AS REQUIRED, TO COMPLETE THE WORK. SUBMITTALS SHALL BE PROVIDED TO THE LANDSCAPE ARCHITECT FOR REVIEW AT LEAST TWO WEEKS PRIOR TO ORDERING MATERIALS.

## IRRIGATION NOTES:

1. IF NO PERMANENT IRRIGATION SYSTEM IS INSTALLED FOR THIS PROJECT, THE CONTRACTOR SHALL SUPPLY SLOW-RELEASE WATER BAGS (I.E. GATOR BAGS, OOZE TUBES, OR EQUIVALENT) FOR EACH NEWLY PLANTED TREE.
2. BAGS SHALL BE INSTALLED PER MFG. RECOMMENDATIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-FILLING EACH BAG, AS NEEDED, FROM THE TIME OF INSTALLATION TO THE TIME OF SUBSTANTIAL COMPLETION.
4. BAGS SHALL BECOME PROPERTY OF THE OWNER AT SUBSTANTIAL COMPLETION.

## TURF GRASS SOD NOTES:

1. SOD SHALL CONSIST OF A LIVE, DENSE, WELL-ROOTED GROWTH OF TURF GRASS SPECIES AS NOTED ON THE DRAWINGS. SOD SHALL BE FREE FROM JOHNSON GRASS, NUT GRASS, AND OTHER NOXIOUS WEEDS. SOD SHALL BE FREE OF HARMFUL INSECTS, DISEASE OR INJURY AT THE TIME OF PLANTING.
2. SOD SHALL BE UNIFORM IN THICKNESS, HAVING NOT OVER TWO (2) INCHES OR LESS THAN ONE (1) INCH OF SOIL.
3. SOD STRIPS SHALL HAVE A CONSISTENT WIDTH OF TWELVE (12) OR EIGHTEEN (18) INCHES OR LARGER FOR COMMERCIAL ROLLS.
4. FERTILIZER (5-10-15) USED IN CONNECTION WITH SODDING, SHALL CONTAIN 5 PERCENT NITROGEN, 10 PERCENT PHOSPHORIC ACID, AND 15 PERCENT POTASH. THE FERTILIZER SHALL BE FURNISHED IN STANDARD CONTAINERS WITH THE NAME, WEIGHT, AND GUARANTEED ANALYSIS OF THE CONTENTS CLEARLY MARKED. THE CONTAINERS SHALL ENSURE PROPER PROTECTION IN HANDLING AND TRANSPORTING OF THE FERTILIZER. ALL COMMERCIAL FERTILIZER SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL FERTILIZER LAWS.
5. AMMONIUM NITRATE SHALL BE A STANDARD COMMERCIAL PRODUCT, SHALL CONFORM TO THE REQUIREMENTS FOR OTHER COMMERCIAL FERTILIZERS AS SPECIFIED ABOVE, AND SHALL HAVE A MINIMUM OF 32-1/2 PERCENT NITROGEN.
6. AGRICULTURAL LIMESTONE SHALL BE DOLOMITIC AND CONTAIN NOT LESS THAN 85 PERCENT OF CALCIUM CARBONATE AND MAGNESIUM CARBONATE COMBINED, AND SHALL BE CRUSHED SO THAT AT LEAST 85 PERCENT WILL PASS THE NO. 10 MESH SIEVE AND 50 PERCENT WILL PASS A NO. 40 MESH SIEVE.
7. SOD SHALL BE PLANTED ONLY WHEN THE SOIL IS MOIST AND FAVORABLE FOR GROWTH. NO PLANTING SHALL BE DONE BETWEEN OCTOBER 1 AND APRIL 1 UNLESS WEATHER AND SOIL CONDITIONS ARE CONSIDERED FAVORABLE AND PERMISSION IS GRANTED BY THE LANDSCAPE ARCHITECT.
8. THE AREA TO BE SODDED SHALL BE CONSTRUCTED TO THE LINES AND GRADES INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT.
7. 24 TO 48 HOURS BEFORE SODDING, ADD TWO INCHES OF TOP SOIL (PER "LANDSCAPE NOTE" #6) AND ONE HALF (1/2) INCH OF AGED COMPOST (PER "LANDSCAPE NOTE" #7) EVENLY ACROSS THE ENTIRE SEED BED.
8. AFTER APPLYING TOP SOIL AND COMPOST, THE SOD BED SHALL BE THOROUGHLY CULTIVATED TO A DEPTH OF NOT LESS THAN 6-INCHES WITH A WEIGHTED DISC, TILLER, PULVIMIXER OR OTHER EQUIPMENT, UNTIL THE SURFACE IS SMOOTH AND IN A CONDITION ACCEPTABLE TO THE LANDSCAPE ARCHITECT.
9. ON THE DAY OF SODDING, THE SOD BED SHALL BE SPRINKLED UNTIL SATURATED AT LEAST ONE (1) INCH IN DEPTH. ALLOW SOD BED TO DRAIN SO THERE IS NO STANDING WATER.
10. IMMEDIATELY BEFORE PLACING THE SOD, THE FERTILIZER AND AGRICULTURAL LIMESTONE SHALL BE APPLIED PER MANUFACTURER'S RECOMMENDATIONS, BASED ON SOIL SAMPLES.
11. THE ENTIRE AREA SHALL BE THOROUGHLY COVERED WITH SOD. THE SOD SHALL BE PLACED ON THE PREPARED SURFACE WITH THE EDGES IN CLOSE CONTACT AND, AS FAR AS POSSIBLE, WITH STAGGERED JOINTS. EDGES SHALL BE NEATLY TRIMMED AND TUCKED TO CREATE A SMOOTH TRANSITION WITH ADJACENT SURFACES.
12. THE SOD SHALL BE MAINTAINED MOIST FROM TIME OF REMOVAL UNTIL RESET BUT SHALL BE PLACED AS SOON AS PRACTICABLE AFTER REMOVAL FROM PLACE WHERE GROWING. IMMEDIATELY AFTER PLACING IT SHALL BE ROLLED WITH A LIGHT-WEIGHT ROLLER OR HAND TAMPED TO THE SATISFACTION OF THE LANDSCAPE ARCHITECT.
13. SOD ON SLOPES STEEPER THAN 3 TO 1 SHALL BE HELD IN PLACE BY WOODEN PINS APPROXIMATELY ONE (1) INCH SQUARE AND SIX (6) INCHES LONG, DRIVEN THROUGH THE SOD INTO THE SOIL UNTIL THEY ARE FLUSH WITH THE TOP OF THE ROOT MAT.
14. THE SOD SHALL BE WATERED AS DIRECTED BY THE LANDSCAPE ARCHITECT FOR A PERIOD OF TWO WEEKS AFTER WHICH AMMONIUM NITRATE SHALL BE APPLIED PER MANUFACTURER'S RECOMMENDATIONS AND THE SOD GIVEN A FINAL WATERING.
15. THE CONTRACTOR SHALL NOT ALLOW ANY EQUIPMENT OR MATERIAL TO BE PLACED ON ANY PLANTED AREA AND SHALL ERECT SUITABLE BARRICADES AND GUARDS TO PREVENT CONTRACTOR'S EQUIPMENT, LABOR, OR THE PUBLIC FROM TRAVELING ON OR OVER ANY AREA PLANTED WITH SOD FOR THE DURATION OF THE PROJECT.
16. IT SHALL BE THE OBLIGATION OF THE CONTRACTOR TO SECURE A SATISFACTORY GROWTH OF GRASS BEFORE FINAL ACCEPTANCE OF THE PROJECT.
17. SOD SHALL BE APPROPRIATELY MAINTAINED UNTIL FINAL ACCEPTANCE PER "LANDSCAPE NOTES", "MAINTENANCE" SECTION.



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Date: 09/10/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084  
  
City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:		
NO.	DATE	DESCRIPTION

Sheet Title:  
**Landscape Notes**

Sheet No:  
**LT000**

**IRRIGATION: INSTALLATION SPECIFICATIONS:**

1. ALL MAINLINES TO HAVE A MINIMUM OF 18" OF COVER. (CLASS 200 PVC PIPE).
2. ALL LATERAL AND SUB-MAIN PIPE TO HAVE A MINIMUM OF 12" OF COVER. (CLASS 200 PVC PIPE).
3. NO ROCKS, BOULDER, OR OTHER EXTRANEIOUS MATERIALS TO BE USED IN BACKFILLING OF TRENCH.
4. ALL PIPE TO BE INSTALLED AS PER MANUFACTURERS' SPECIFICATIONS.
5. ALL THREADED JOINTS TO BE COATED WITH TEFLON TAPE OR LIQUID TEFLON.
6. ALL LINES TO BE THOROUGHLY FLUSHED BEFORE INSTALLATION OF SPRINKLER HEADS.
7. ALL ELECTRICAL JOINTS TO BE MADE USING WATERPROOF CONNECTIONS.
8. NO ELECTRICAL CONNECTIONS SHALL BE MADE IN THE FIELD EXCEPT AT A VALVE CONTROL BOX OR ANOTHER VALVE BOX SPECIFICALLY FOR CONNECTIONS.
9. ALL 24 VOLT WIRE SHALL BE #12 UF/UL FOR COMMON WIRE, AND #14 UF/UL FOR CONTROL WIRES, DIRECT BURIAL, SOLID COPPER.
10. CONTRACTOR TO BE RESPONSIBLE FOR PROPER COVERAGE OF AREAS TO BE WATERED. I.E. ADJUST HEADS WITH INSUFFICIENT COVERAGE DUE TO BLOCKAGE BY EXISTING OR PROPOSED SITE FEATURES.
11. CONTRACTOR SHALL PROVIDE EXPANSION COILS AT EACH WIRE CONNECTION IN VALVE BOX (WRAP AROUND 3/4" PIPE 12 TIMES).
12. CONTRACTOR TO UTILIZE APPROPRIATE AUTOMATIC DRAIN DEVICE WHERE LOW HEAD DRAINAGE MAY OCCUR.
13. ALL SPRINKLERS TO BE MOUNTED ON SWING JOINTS.
14. CONTRACTOR SHALL UTILIZE VALVE I.D. TAGS ON ALL REMOTE CONTROL VALVES.
15. 24 VOLT WIRE SHALL BE COLOR CODED; COMMON-WHITE, CONTROL-RED.
16. CONTRACTOR SHALL INSTALL MANUFACTURERS' RECOMMENDED GROUNDING EQUIPMENT FOR POWER SUPPLY AND VALVE OUTPUT WITH (2) 5/8" COPPER CLAD GROUND RODS.
17. CONTRACTOR SHALL INSTALL MANUFACTURERS' RECOMMENDATION ON FAULT GROUND AND LIGHTNING PROTECTION.
18. CONTROLLER GROUNDING MUST BE AS PER ASIC REQUIREMENTS.
19. ALL MAINLINE PIPING ELECTRIC VALVES AND WIRING ARE TO BE INSTALLED IN LANDSCAPE AREAS AND WITHIN PROPERTY BOUNDARIES. CONTRACTOR SHALL REFERENCE THE LANDSCAPE PLAN PRIOR TO THE INSTALLATION OF PIPING TO AVOID CONTACT WITH PLANT MATERIALS EXISTING OR NEW.
20. CONTRACTOR TO ADD EXTENSION RISER TO POP-UP HEADS WHEN NEEDED FOR PROPER COVERAGE.
21. CONTRACTOR SHALL INSTALL SPRINKLER EQUIPMENT 12" FROM FOUNDATIONS. ALSO INSTALL SPRINKLERS 4" FROM CURB OR WALKS.
22. CONTRACTOR SHALL VERIFY RIGHT-OF-WAY AND BACKFLOW REQUIREMENTS.
23. IRRIGATION CONTRACTOR SHALL PROVIDE THE OWNER WITH AN AS-BUILT DRAWING OF THE INSTALLED IRRIGATION SYSTEM.
24. A 1-YEAR WARRANTY PERIOD SHALL BE PROVIDED FOR SYSTEM AFTER SUBSTANTIAL COMPLETION IS ACCEPTED. START UP AND ADJUSTING OF SYSTEM IN SPRING TIME SHALL BE INCLUDED IN WARRANTY.
25. UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL COMPLETE TWO PRESSURE TESTS OF THE IRRIGATION SYSTEM MAINLINE (BOTH TO SHOW NO DROP IN PRESSURE DURING DURATION OF TEST.
  - 25.1. 2-HOUR PRESSURE TEST AT 1.5 TIMES THE SYSTEM STATIC PRESSURE.
  - 25.2. 24-HOUR PRESSURE TEST AT THE SYSTEM STATIC PRESSURE.

**IRRIGATION NOTES (Design-Build):**

1. A PERMANENT IRRIGATION SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR AS A DESIGN-BUILD EFFORT.
2. THE IRRIGATION SYSTEM SHALL PROVIDE SEPARATE ZONES FOR TURF AND LANDSCAPE BEDS. THE SYSTEM SHALL BE EFFICIENTLY DESIGNED TO PROVIDE FULL COVERAGE WITH THE FEWEST ZONES.
3. THE SYSTEM SHALL INCLUDE, AS A MINIMUM, ELECTRIC VALVES CONNECTED TO A TIMER OR CLOCK, WHICH WILL BE LOCATED IN THE FIELD AT THE DIRECTION OF THE OWNER OR THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL PROVIDE SUBMITTALS OF ALL MATERIAL AND EQUIPMENT TO THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO INSTALLATION.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND/OR COORDINATING THE INSTALLATION OF REQUIRED TAPS, METERS, BACKFLOW PREVENTERS, ETC. TO ENSURE THAT THE SYSTEM MEETS ALL OF THE APPLICABLE LOCAL, STATE AND/OR FEDERAL LAWS AND REGULATIONS.
5. IF NO BUBBLERS ARE PROVIDED FOR INDIVIDUAL TREES, THE CONTRACTOR SHALL SUPPLY SLOW-RELEASE WATER BAGS (I.E. GATOR BAGS, OOZE TUBES, OR EQUIVALENT) FOR EACH NEWLY PLANTED TREE. BAGS SHALL BE INSTALLED PER MFG. RECOMMENDATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RE-FILLING EACH BAG, AS NEEDED, FROM THE TIME OF INSTALLATION TO THE TIME OF SUBSTANTIAL COMPLETION. THE BAGS SHALL BECOME THE PROPERTY OF THE OWNER UPON SUBSTANTIAL COMPLETION OF THE PROJECT.
6. UPON SUBSTANTIAL COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL PERFORM A RUN-THROUGH OF THE ENTIRE IRRIGATION SYSTEM, WITH THE OWNER'S REPRESENTATIVE, TO CHECK FOR ANY LEAKS, PRESSURE LOSS OR OTHER MALFUNCTIONS. ALL HEADS SHALL BE ADJUSTED TO ENSURE PROPER COVERAGE AND ELIMINATE OVERSPRAY ONTO SIDEWALKS, PARKING AREAS OR STRUCTURES.
7. THE CONTRACTOR SHALL PROVIDE ALL PAPERWORK, DOCUMENTATION, WARRANTIES, ETC. TO THE OWNER'S REPRESENTATIVE PRIOR TO PROJECT COMPLETION.
8. THE CONTRACTOR SHALL PROVIDE APPROPRIATE TRAINING AND INSTRUCTION ON THE PROPER USE OF THE IRRIGATION SYSTEM TO THE OWNER AND/OR OWNER'S REPRESENTATIVE PRIOR TO PROJECT COMPLETION.

**TURF GRASS SEED INSTALLATION NOTES**

1. SEED SHALL BE DELIVERED IN NEW, SEALED BAGS THAT ARE SOUND AND LABELED IN ACCORDANCE WITH THE U.S. DEPARTMENT OF AGRICULTURE FEDERAL SEED ACT. LEFT OVER SEED FROM PREVIOUS PROJECTS SHALL NOT BE ALLOWED FOR USE IF BAG SEAL HAS BEEN BROKEN OR OUT DATED.
2. ALL SEED SHALL BE FROM THE LAST CROP AVAILABLE AT TIME OF PURCHASE AND SHALL NOT BE MOLDY, WET, OR OTHERWISE DAMAGED IN TRANSIT OR STORAGE.
3. SEED SHALL BEAR THE GROWERS ANALYSIS TESTING TO 98 PERCENT FOR PURITY AND 90 PERCENT FOR GERMINATION. AT THE DISCRETION OF LANDSCAPE ARCHITECT, SAMPLES OF SEED MAY BE TAKEN FOR VERIFICATION AGAINST THE GROWER'S ANALYSIS.
4. FERTILIZER (10-10-10) USED IN CONNECTION WITH SEEDING, SHALL CONTAIN 10 PERCENT NITROGEN, 10 PERCENT PHOSPHORIC ACID, AND 10 PERCENT POTASH. THE FERTILIZER SHALL BE FURNISHED IN STANDARD CONTAINERS WITH THE NAME, WEIGHT, AND GUARANTEED ANALYSIS OF THE CONTENTS CLEARLY MARKED. THE CONTAINERS SHALL ENSURE PROPER PROTECTION IN HANDLING AND TRANSPORTING OF THE FERTILIZER. COMMERCIAL FERTILIZER SHALL COMPLY WITH LOCAL, STATE, AND FEDERAL FERTILIZER LAWS.
5. AGRICULTURAL LIMESTONE SHALL BE DOLOMITIC AND CONTAIN NOT LESS THAN 85 PERCENT OF CALCIUM CARBONATE AND MAGNESIUM CARBONATE COMBINED, AND SHALL BE CRUSHED SO THAT AT LEAST 85 PERCENT WILL PASS THE NO. 10 MESH SIEVE AND 50 PERCENT WILL PASS A NO. 40 MESH SIEVE.
6. BEFORE FERTILIZING AND SEEDING, THE SEED BED SURFACES SHALL BE TRIMMED AND WORKED TO TRUE LINE FROM UNSIGHTLY VARIATION, BUMPS, RIDGES AND DEPRESSIONS AND ALL DETRIMENTAL MATERIAL, ROOTS AND TONES LARGER THAN 3-INCHES IN ANY DIAMETER SHALL BE REMOVED FROM THE SOIL.
7. 24 TO 48 HOURS BEFORE SEED IS TO BE SOWN, ADD TWO INCHES OF TOP SOIL (PER "LANDSCAPE NOTE" #6) AND ONE HALF (1/2) INCH OF AGED COMPOST (PER "LANDSCAPE NOTE" #7) EVENLY ACROSS THE ENTIRE SEED BED.
8. AFTER APPLYING TOP SOIL AND COMPOST, THE SEED BED SHALL BE THOROUGHLY CULTIVATED TO A DEPTH OF NOT LESS THAN 4-INCHES WITH A WEIGHTED DISC, TILLER, PULVIMIXER OR OTHER EQUIPMENT, UNTIL THE SURFACE IS SMOOTH AND IN A CONDITION ACCEPTABLE TO THE LANDSCAPE ARCHITECT.
9. IF THE PREPARED SURFACE BECOMES ERODED AS A RESULT OF RAIN OR FOR ANY OTHER REASON, OR BECOMES CRUSTED BEFORE THE SEED IS SOWN, THE SURFACE SHALL AGAIN BE PLACED IN A CONDITION SUITABLE FOR SEEDING. GROUND PREPARATION OPERATIONS SHALL BE PERFORMED ONLY WHEN THE GROUND IS IN A TILLABLE AND WORKABLE CONDITION.
10. FOLLOWING SEEDBED PREPARATION, FERTILIZER AND LIME SHALL BE APPLIED TO ALL AREAS TO BE SEEDED PER MANUFACTURER'S RECOMMENDATIONS, BASED ON SOIL SAMPLES. FERTILIZER AND LIME SHALL BE SPREAD EVENLY OVER THE SEEDBED AND SHALL BE LIGHTLY HARROWED, RAKED, OR OTHERWISE INCORPORATED INTO THE SOIL FOR A DEPTH OF 1-INCH.
11. SEED SHALL BE SOWN AS SOON AS PREPARATION OF THE SEEDBED HAS BEEN COMPLETED. NO SEED SHALL BE SOWN DURING HIGH WINDS, NOR UNTIL THE SURFACE IS SUITABLE FOR WORKING AND IS IN A PROPER CONDITION. SEEDING SHALL BE PERFORMED DURING DATES AS PER MANUFACTURER'S RECOMMENDATIONS.
12. SEED SHALL BE UNIFORMLY SOWN BY ANY APPROVED MECHANICAL METHOD SUITABLE FOR THE SLOPE AND SIZE OF THE AREAS TO BE SEEDED, PREFERABLY WITH A BROADCAST TYPE SEEDER, WINDMILL HAND SEEDER OR APPROVED MECHANICAL POWER DRAWN SEED DRILL. HYDRO-SEEDING AND HYDRO-MULCHING MAY BE USED ON STEEP EMBANKMENTS, PROVIDED FULL COVERAGE IS OBTAINED. CARE SHALL BE TAKEN TO ADJUST THE SEEDER FOR SEEDING AT THE PROPER RATE BEFORE SEEDING OPERATIONS ARE STARTED AND TO MAINTAIN THEIR ADJUSTMENT DURING SEEDING.
13. IMMEDIATELY AFTER SOWING, THE SEEDS SHALL BE COVERED AND COMPACTED TO A DEPTH OF 1/8 TO 3/8-INCH BY A CULTIPACKER OR SUITABLE ROLLER.
14. ALL SEEDED AREAS SHALL BE UNIFORMLY MULCHED IN A CONTINUOUS BLANKET IMMEDIATELY AFTER SEEDING. APPROXIMATELY 45 PERCENT OF THE GROUND SHALL BE VISIBLE THROUGH THE MULCH BLANKET.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE PROPER MOISTURE CONTENT OF THE SOIL TO INSURE ADEQUATE PLANT GROWTH UNTIL A SATISFACTORY STAND IS OBTAINED.
16. WATERING SHALL BE ACCOMPLISHED BY HOSES, TANK TRUCK OR SPRINKLERS IN SUCH A WAY TO PREVENT EROSION, EXCESSIVE RUNOFF AND OVER-WATERED SPOTS.
17. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ONE APPLICATION OF A MAINTENANCE FERTILIZER ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.



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Date:	09/10/2024
Project No:	2023-019
Drawn By:	PS
Checked By:	MK

**Tucker Pickleball Courts**  
 4898 Lavista Rd, Tucker, GA 30084  
  
 City of Tucker, Parks & Recreation Department  
 4898 Lavista Road  
 Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Landscape Notes**

Sheet No:  
**LT001**



**RELEASED FOR CONSTRUCTION**

**TREE PLAN INDEX:**

LT000	LANDSCAPE NOTES
LT001	TREE PLAN CALCULATIONS
LT100	TREE PLAN: AREA A
LT101	TREE PLAN: AREA B
LT400	TREE PLAN: COURTS ENLARGEMENT PLANTING PLAN
LT500	LANDSCAPE & TREE PLAN DETAILS

**TREE PLAN NOTES**

- ALL TREES WITHIN THE LIMITS OF DISTURBANCE TO BE REMOVED, (UNLESS OTHERWISE NOTED).
- ALL DISTURBED AREAS SHALL BE COVERED WITH SEED AND STRAW PER EROSION CONTROL PLANS, (UNLESS OTHERWISE NOTED).
- ALL NEWLY PLANTED TREES SHALL HAVE A SIX-FOOT DIAMETER PINE STRAW MULCH RING, (UNLESS OTHERWISE NOTED).
- SEE SHEET LT000 FOR ADDITIONAL INFORMATION.
- ALL SHRUBS SHALL BE PLANTED IN A BED WITH THREE INCHES OF PINE STRAW.

**Overstory Percent Calculation**

Trees	Quantity	Overstory	Percent
<i>Acer rubrum</i> 'October Glory'	4	4	5.0%
<i>Amelanchier x grandiflora</i> 'Autumn Brilliance'	6		0.0%
<i>Cercis canadensis</i> 'Merlot'	2		0.0%
<i>Cryptomeria japonica</i>	8	8	10.0%
<i>Ilex x 'Savannah'</i>	13		0.0%
<i>Juniperus virginiana</i>	9	9	11.3%
<i>Prunus caroliniana</i>	14		0.0%
<i>Quercus bicolor</i>	3	3	3.8%
<i>Quercus nuttallii</i>	10	10	12.5%
<i>Ulmus alata</i> 'UAMTF'	11	11	13.8%
<b>TOTAL</b>	<b>80</b>	<b>45</b>	<b>56.3%</b>

At least 50% of replacement trees must be overstory trees (per section (g) (1) or the Tucker Tree Protection Ordinance).

**Species Percent Calculation**

Trees	Quantity	Percent
<i>Acer rubrum</i> 'October Glory'	4	5.0%
<i>Amelanchier x grandiflora</i> 'Autumn Brilliance'	6	7.5%
<i>Cercis canadensis</i> 'Merlot'	2	2.5%
<i>Cryptomeria japonica</i>	8	10.0%
<i>Ilex x 'Savannah'</i>	13	16.3%
<i>Juniperus virginiana</i>	9	11.3%
<i>Prunus caroliniana</i>	14	17.5%
<i>Quercus bicolor</i>	3	3.8%
<i>Quercus nuttallii</i>	10	12.5%
<i>Ulmus alata</i> 'UAMTF'	11	13.8%
<b>TOTAL</b>	<b>80</b>	<b>100.0%</b>

No more than 25% of replacement trees may be any single species (per section (g) (1) or the Tucker Tree Protection Ordinance).

**Evergreen Percent Calculation**

Trees	Quantity	Evergreen	Percent
<i>Acer rubrum</i> 'October Glory'	4		0.0%
<i>Amelanchier x grandiflora</i> 'Autumn Brilliance'	6		0.0%
<i>Cercis canadensis</i> 'Merlot'	2		0.0%
<i>Cryptomeria japonica</i>	8	8	10.0%
<i>Ilex x 'Savannah'</i>	13	13	16.3%
<i>Juniperus virginiana</i>	9	9	11.3%
<i>Prunus caroliniana</i>	14	14	17.5%
<i>Quercus bicolor</i>	3		0.0%
<i>Quercus nuttallii</i>	10		0.0%
<i>Ulmus alata</i> 'UAMTF'	11		0.0%
<b>TOTAL</b>	<b>80</b>	<b>44</b>	<b>55.0%</b>

NOTE:  
 1) No more than 25% of replacement trees may be Evergreen species (per section (g) (1) or the Tucker Tree Protection Ordinance).  
 2) Design team requests exemption from city arborist to allow more than 25% evergreen species as to provide better screening of pickleball complex from neighboring properties.

**TREE CALCULATIONS:**

Existing Tree Data Table								
TREE #	TREES TO REMAIN DBH	TREES TO BE REMOVED DBH	TREE TYPE	CRZ IMPACT %	SRP IMPACT	STATUS	EXISTING DENSITY FACTOR UNITS	SPECIMEN RECOMPENSE DBH
T1	40		Hardwood	10.6%		Saved	17.4	
T2	48		Hardwood	14.2%		Saved	25.2	
T3	48		Hardwood	3.5%		Saved	25.2	
T4	19		Hardwood	21.7%		Prescription	5.4	
T5	8		Hardwood	0.0%		Saved	2.4	
T6	10		Hardwood	0.0%		Saved	3.2	
T7	20		Hardwood	11.1%		Saved		
T8		32	Hardwood	100.0%	Yes	Removed/Specimen		48
T9		13	Pine	100.0%	Yes	Removed		
T10		16	Pine	100.0%	Yes	Removed		
T11		18	Hardwood	100.0%	Yes	Removed		
T12	30		Hardwood	9.3%		Saved	9.8	
T13		18	Hardwood	100.0%	Yes	Removed		
T14	24		Hardwood	0.0%		Saved	6	
T15	9		Hardwood	0.0%		Saved	2.4	
T16	15		Hardwood	0.0%		Saved	4	
T17	7		Hardwood	0.0%		Saved	2.4	
T18	20		Hardwood	0.0%		Saved	5.4	
T19	21		Hardwood	0.0%		Saved	5.4	
T20	12		Hardwood	0.0%		Saved	3.2	
T21	9		Pine	0.0%		Saved	2.2	
T22	12		Hardwood	0.0%		Saved	3.2	
T23	20		Hardwood	0.0%		Saved	5.4	
T24	15		Pine	0.0%		Saved	3.9	
T25	28		Hardwood	0.0%		Saved	8.6	
T26	25		Hardwood	0.0%		Saved	6.8	
T27	36		Hardwood	0.0%		Saved	14.2	
T28	7		Pine	0.0%		Saved	3.9	
T29	13		Hardwood	0.0%		Saved	2.4	
T30	29		Hardwood	0.0%		Saved	9.2	
T31	16		Pine	0.0%		Saved	4.8	
T32	58		Hardwood	20.5%		Prescription	27.2	
T33	9		Pine	0.0%		Saved	2.2	
T34	14		Pine	0.0%		Saved	3.9	
T35	28		Hardwood	5.3%		Saved	8.6	
T36	15		Pine	0.0%		Saved	3.9	
T37	26		Hardwood	0.0%		Saved	7.4	
T38	9		Hardwood	0.0%		Saved	2.4	
T39	26		Hardwood	0.1%		Saved	7.4	
T40	37		Hardwood	1.0%		Saved	15.0	
T41	1		Pine	0.0%		Saved	0.0	
T42	24		Pine	4.9%		Saved	6.0	
T43	20		Pine	0.0%		Saved	5.4	
T44	23		Pine	0.0%		Saved	6.0	
T45	12		Pine	0.0%		Saved	3.1	
T46	20		Pine	0.0%		Saved	5.4	
T47	14		Hardwood	0.0%		Saved	4.0	
T48	21		Pine	0.0%		Saved	5.4	
T49	21		Pine	0.0%		Saved	5.4	
T50	38		Hardwood	7.4%		Saved	15.8	
T51	12		Hardwood	0.0%		Saved	3.2	
T52	26		Hardwood	0.0%		Saved	7.4	
T53	35		Hardwood	0.0%		Saved	13.4	
T54	18		Hardwood	0.0%		Saved	4.8	
T55	22		Hardwood	0.0%		Saved	6.0	
T56		29	Hardwood	29.1%	Yes	Removed		
T57	28		Hardwood	26.9%		Prescription	8.6	
T58	26		Hardwood	22.2%		Prescription	7.4	
T59	9		Hardwood	0.0%		Saved	2.4	
T60		20	Hardwood	100.0%	Yes	Removed		
T61	18		Pine	19.1%		Saved	4.8	
T62	16		Hardwood	27.4%		Prescription		
T63	16		Hardwood	27.7%		Prescription		
T64		14	Hardwood	100.0%	Yes	Removed		
T65		50	Hardwood	100.0%	Yes	Removed/Specimen		75
T66		39	Hardwood	100.0%	Yes	Removed/Specimen		58.5
T67		36	Pine	100.0%	Yes	Removed/Specimen		54
T68	13		Pine	8.8%		Saved	3.9	
T69	6		Hardwood	0.0%		Saved	1.6	
T70		25	Pine	39.0%	Yes	Removed		
T71	20		Hardwood	3.6%		Saved	5.4	
T72	16		Pine	9.5%		Saved	4.8	
T73	22		Pine	13.1%	Yes	Saved	6.0	
T74	16		Pine	0.0%		Saved	4.8	
T75	16		Pine	0.0%		Saved	4.8	
T76	24		Pine	2.6%		Saved	6.0	
B1	12		Hardwood	0.0%		Saved	3.2	
<b>TOTALS</b>	<b>77</b>	<b>1328</b>	<b>310</b>				<b>415.0</b>	<b>235.5</b>

**NOTES:**

- T = Private Tree; B = Private Boundary Tree; P = Public Tree
- Removed = Removed Due to CRZ Impact or SRP Impact
- Removed/Specimen = Removed Due to CRZ Impact or SRP Impact, Specimen Recompense plantings required.
- Saved = Saved Tree
- Prescription = Saved Tree, Arborist Prescription Required
- \*Net CRZ used at Type II Curb & Gutter, Granite Curb, 24" Walls

**Plant Schedule**

Quantity	Botanical Name	Common Name	Size	Spacing	Area per Groundcover (Sq. Ft.)	Remarks	Replacement Tree Density Units	Specimen Recompense Inches	
<b>50' TRANSITIONAL BUFFER PLANTS</b>									
<b>Canopy Trees</b>									
4	<i>Acer rubrum</i> 'October Glory'	October Glory Red Maple	2" Cal.	AS SHOWN		1, 3, 4, 5, 6, 10, 11	1.6	8	
<b>Evergreen Trees</b>									
5	<i>Cryptomeria japonica</i>	Cryptomeria	2" Cal.	AS SHOWN		1, 3, 4, 5, 7, 10, 11	2	10	
13	<i>Ilex x 'Savannah'</i>	Savannah Holly	2" Cal.	AS SHOWN		1, 3, 4, 5, 7, 10, 11	5.2	26	
4	<i>Juniperus virginiana</i>	Eastern Red Cedar	3" Cal.	AS SHOWN		1, 3, 4, 5, 7, 10, 11	2	12	
14	<i>Prunus caroliniana</i>	Cherry Laurel	3" Cal.	AS SHOWN		1, 3, 4, 5, 7, 10, 11	7	42	
<b>Understory Trees</b>									
2	<i>Amelanchier x grandiflora</i> 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2" Cal.	AS SHOWN		2, 4, 5, 6, 8, 10, 11	0.8	4	
<b>Shrubs</b>									
60	<i>Ilex vomitoria</i> 'Nana'	Dwarf Yaupon Holly	3 Gal.	3' O.C.		4, 5, 6, 10, 12			
21	<i>Illicium parviflorum</i>	Hardy Anise Shrub	3 Gal.	6' O.C.		4, 5, 6, 10, 12			
<b>LANDSCAPE STRIP PLANTS</b>									
<b>Evergreen Trees</b>									
3	<i>Cryptomeria japonica</i>	Cryptomeria	2" Cal.	AS SHOWN		1, 3, 4, 5, 7, 10, 11	1.2	6	
5	<i>Juniperus virginiana</i>	Eastern Red Cedar	3" Cal.	AS SHOWN		1, 3, 4, 5, 7, 10, 11	2.5	15	
<b>Shrubs</b>									
31	<i>Ilex x 'Cona'</i>	Oak Leaf Holly	3 Gal.	6' O.C.		4, 5, 6, 10, 12			
24	<i>Ilex vomitoria</i> 'Nana'	Dwarf Yaupon Holly	3 Gal.	3' O.C.		4, 5, 6, 10, 12			
75	<i>Illicium parviflorum</i>	Hardy Anise Shrub	3 Gal.	6' O.C.		4, 5, 6, 10, 12			
31	<i>Myrica cerifera</i>	Wax Myrtle	3 Gal.	6' O.C.		4, 5, 6, 10, 12			
<b>Groundcover</b>									
120	<i>Carex oshimensis</i> 'Evercolor'	Evercolor Sedge	Plug	18" O.C.	2.25	4, 5, 6, 10, 12			
180	<i>Chasmanthium latifolium</i>	River Oats	Plug	18" O.C.	2.25	4, 5, 6, 10, 12			
94	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black Eyed Susan	4" Pot	18" O.C.	2.25	4, 5, 6, 10, 12			
130	<i>Thelypteris kunthii</i>	Southern Shield Fern	4" Pot	24" O.C.	4	4, 5, 6, 10, 12			
<b>PARKING LOT TREES</b>									
10	<i>Quercus nuttallii</i>	Nuttall Oak	2" Cal.	AS SHOWN		1, 3, 4, 5, 6, 10, 11	4	20	
<b>ADDITIONAL SPECIMEN RECOMPENSE TREES &amp; ORNAMENTAL SHRUBS</b>									
<b>Canopy Trees</b>									
3	<i>Quercus bicolor</i>	Swamp White Oak	3" Cal.	AS SHOWN		1, 3, 4, 5, 6, 10, 11	1.5	9	
11	<i>Ulmus alata</i> 'UAMTF'	Kalysta Winged Elm	3" Cal.	AS SHOWN		1, 3, 4, 5, 6, 10, 11	5.5	33	
<b>Understory Trees</b>									
4	<i>Amelanchier x grandiflora</i> 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2" Cal.	AS SHOWN		2, 4, 5, 6, 8, 10, 11	1.6	8	
2	<i>Cercis canadensis</i> 'Merlot'	Merlot Redbud	2" Cal.	AS SHOWN		1, 3, 4, 5, 6, 10, 11	0.8	4	
<b>Shrubs</b>									
38	<i>Ilex vomitoria</i> 'Nana'	Dwarf Yaupon Holly	3 Gal.	3' O.C.		4, 5, 6, 10, 12			
20	<i>Itea virginica</i> 'Henry's Garnet'	Henry's Garnet Itea	3 Gal.	3' O.C.		4, 5, 6, 10, 12			
15	<i>Rhododendron</i> 'Robled'	Autumn Chiffon Encore Azalea	3 Gal.	6' O.C.		4, 5, 6, 10, 12			
40	<i>Viburnum obovatum</i> 'Mrs. Schillers Delight'	Dwarf/Walter's Viburnum	3 Gal.	3' O.C.		4, 5, 6, 10, 12			
<b>80</b>	<b>Total Trees</b>						<b>Totals</b>	<b>35.7</b>	<b>197</b>

**Notes:**

- Tree selections shown are from Appendix A of the Tucker Tree Protection Ordinance.
- At least 50% of replacement trees must be overstory trees.
- No more than 25% of replacement trees may be a single species.
- No more than 25% of replacement trees may be evergreen species.

**Density Calculation**

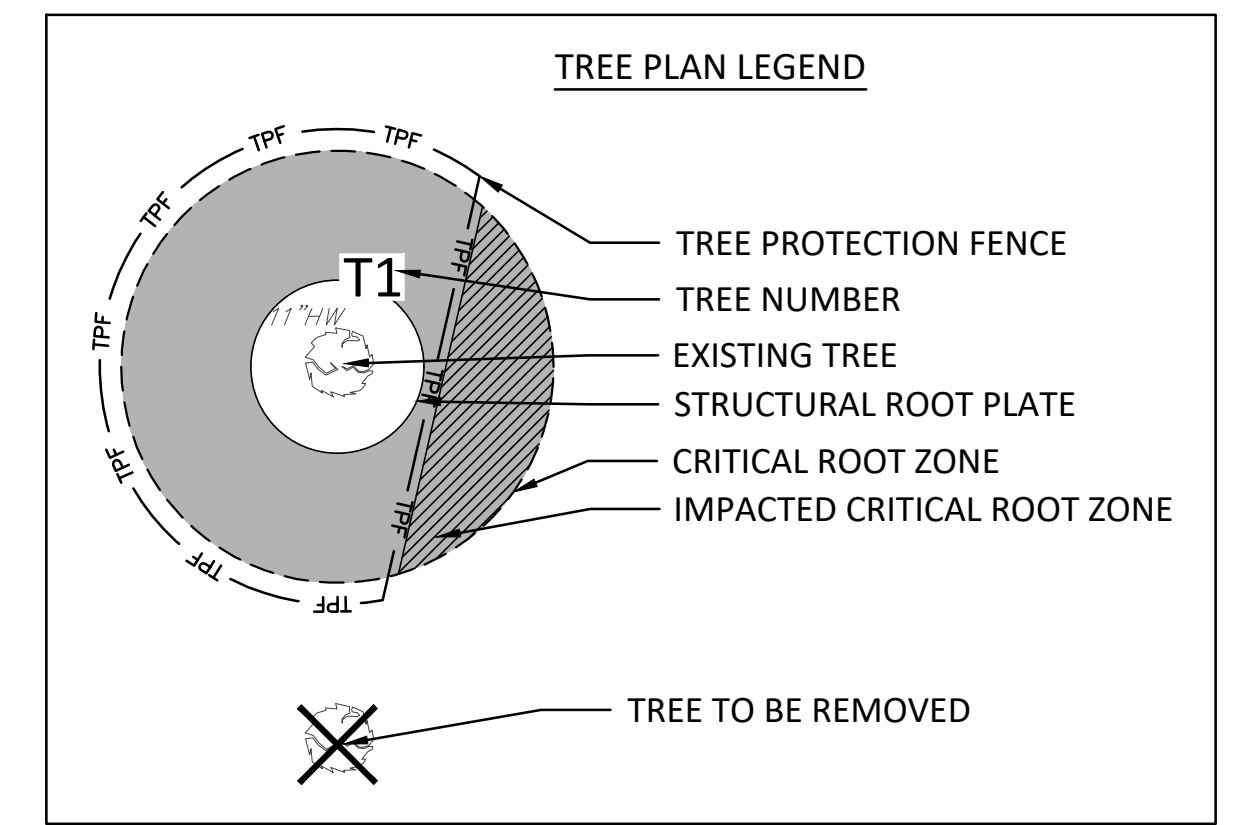
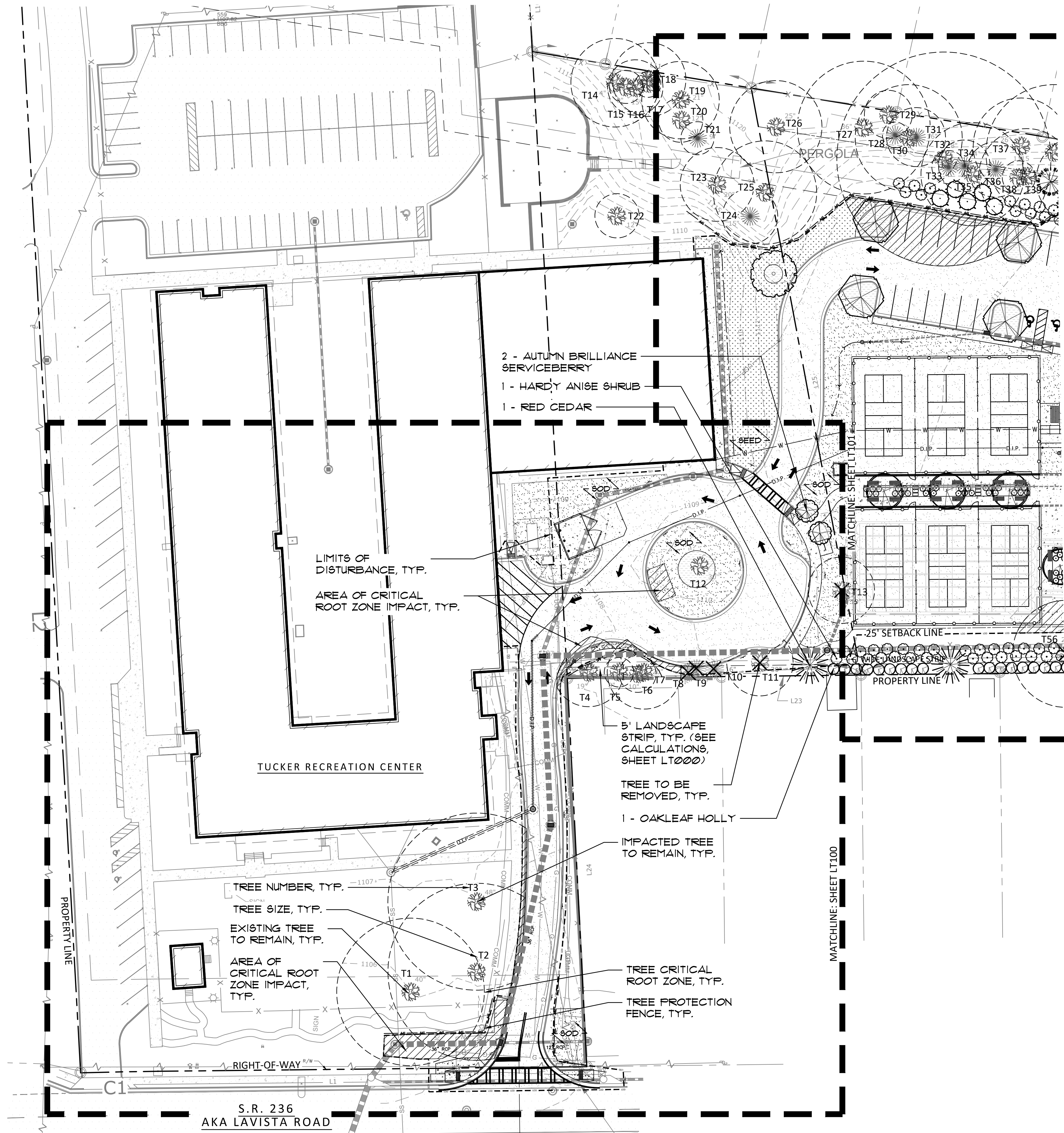
Total Site Area =	8.24	Acres
Required Units per Acre x	30	Units
<b>Equals Required Site Density =</b>	<b>247.2</b>	<b>Units</b>
Units from Trees to be Preserved =	415.0	Units
Units from Proposed Trees +	35.7	Units
<b>Total Units for the Site =</b>	<b>450.7</b>	
<b>***REQUIREMENT MET***</b>		

Note: Requirements shown are from section 22-34 (f) (3) b of the Code of Ordinances of Tucker, GA.

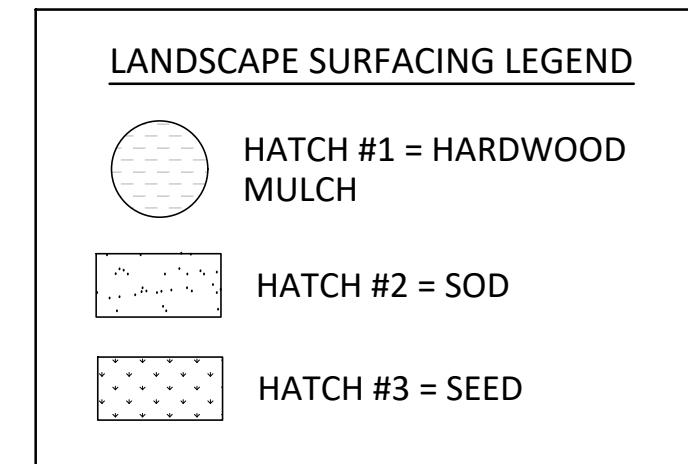
**Significant Tree Calculation**

<b>Required: Either 120 inches per acre or 25 percent of existing significant trees per acre, whichever is less, shall be preserved on the site.</b>	
Existing Inches on Site =	1,638 Inches
Total Site Area /	8.27 Acres
Existing Inches per Acre =	198.1
<b>Number of Preserved Inches per Acre Shown in Plans =</b>	<b>160.6</b>
Existing Significant Trees on Site =	73 Trees
Total Site Area /	8.27 Acres
Existing Significant Trees per Acre =	8.8
x	25%
Equals 25 percent of existing significant trees per acre =	2.2
<b>Number of Preserved Trees per Acre Shown in Plans =</b>	<b>8.8</b>
<b>***REQUIREMENT MET***</b>	

Note: Requirements shown are from section 22-34 (f) (1) of the Code of Ordinances of Tucker, GA.



- ### TREE PLAN NOTES
- ALL TREES WITHIN THE LIMITS OF DISTURBANCE TO BE REMOVED, (UNLESS OTHERWISE NOTED).
  - ALL DISTURBED AREAS SHALL BE COVERED WITH SEED AND STRAW PER EROSION CONTROL PLANS, (UNLESS OTHERWISE NOTED).
  - ALL NEWLY PLANTED TREES SHALL HAVE A SIX-FOOT DIAMETER PINE STRAW MULCH RING, (UNLESS OTHERWISE NOTED).
  - SEE SHEET LT000 FOR ADDITIONAL INFORMATION.
  - ALL SHRUBS SHALL BE PLANTED IN A BED WITH THREE INCHES OF PINE STRAW.



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Seal:

NO. LA001408  
 LANDSCAPE ARCHITECT  
 MICHAEL KIDD

Date: 09/10/2024  
 Project No: 2023-019  
 Drawn By: PS  
 Checked By: MK

**Tucker Pickleball Courts**  
 4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
 4898 Lavista Road  
 Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Tree Plan:  
 Area A**

Sheet No:  
**LT100**

**811**  
 Know what's below.  
 Call before you dig.

0 15' 30' 60' 90'  
 SCALE: 1" = 30'

RELEASED FOR CONSTRUCTION



Seal:



Date: 09/10/2024

Project No: 2023-019

Drawn By: PS

Checked By: MK

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Tucker, GA 30084

Revisions:

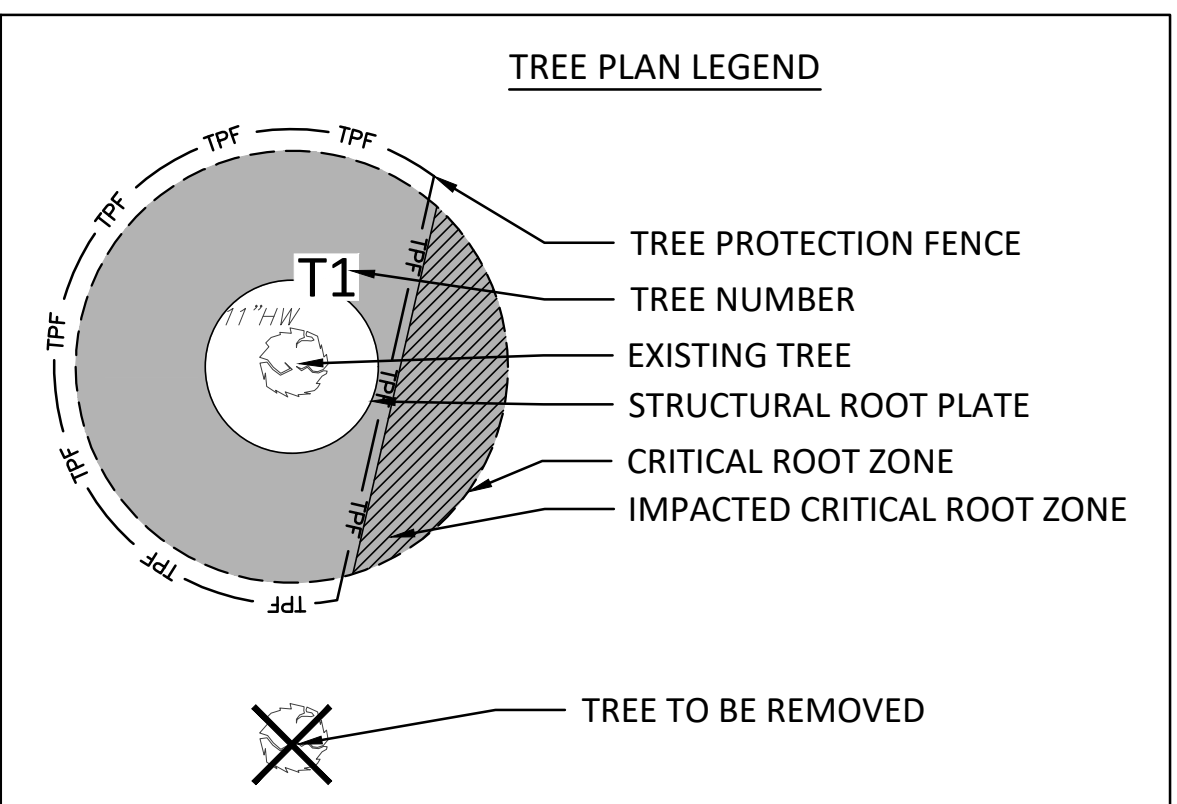
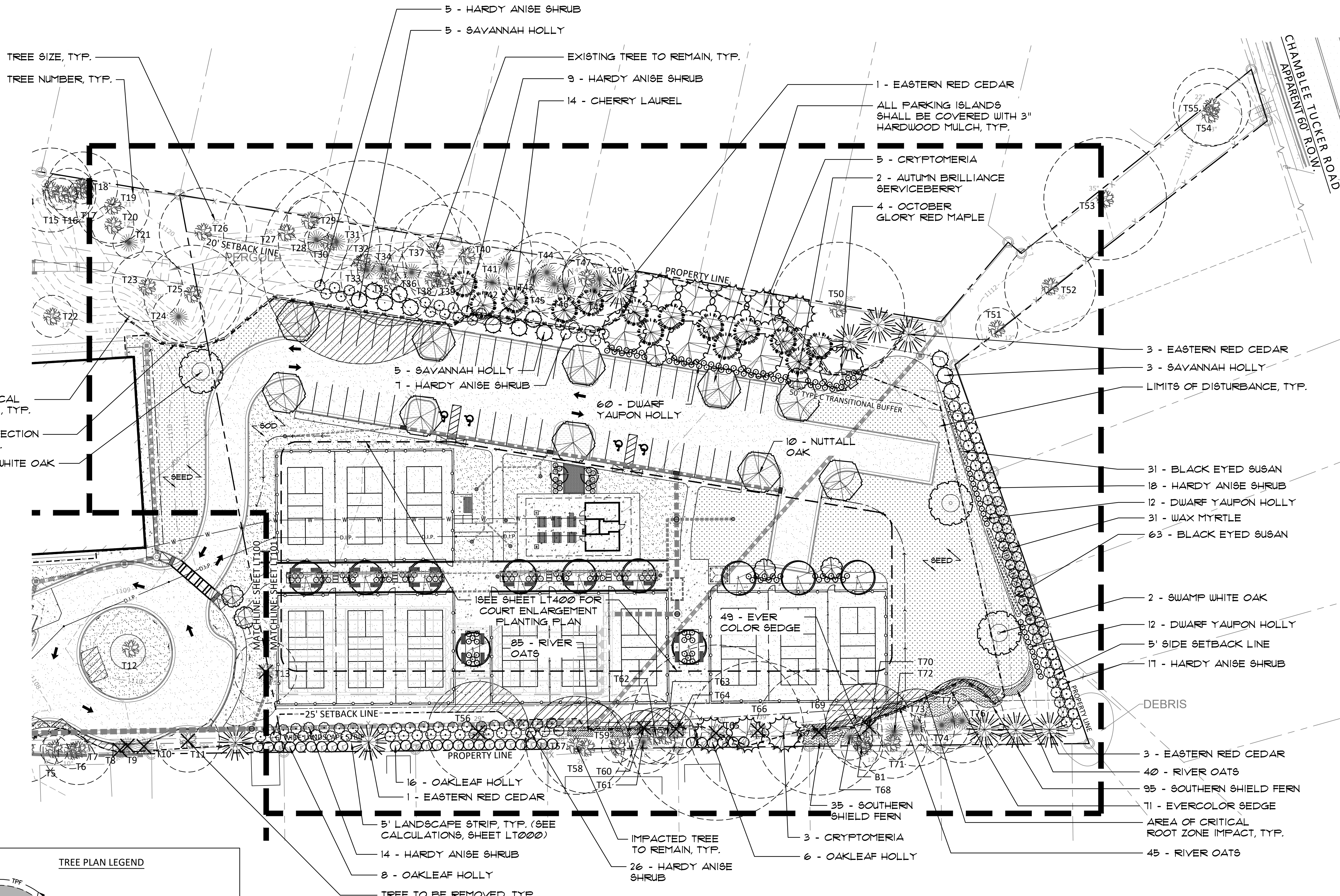
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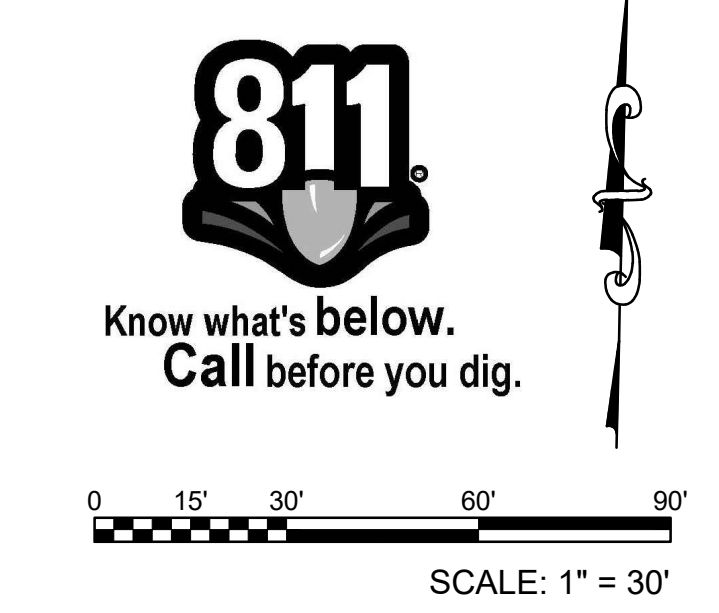
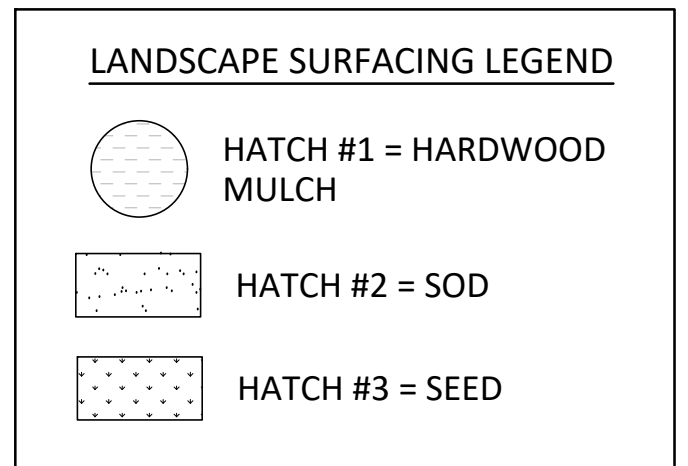
**Tree Plan:  
Area B**

Sheet No:

**LT101**



- TREE PLAN NOTES**
- ALL TREES WITHIN THE LIMITS OF DISTURBANCE TO BE REMOVED, (UNLESS OTHERWISE NOTED).
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Date: 09/10/2024

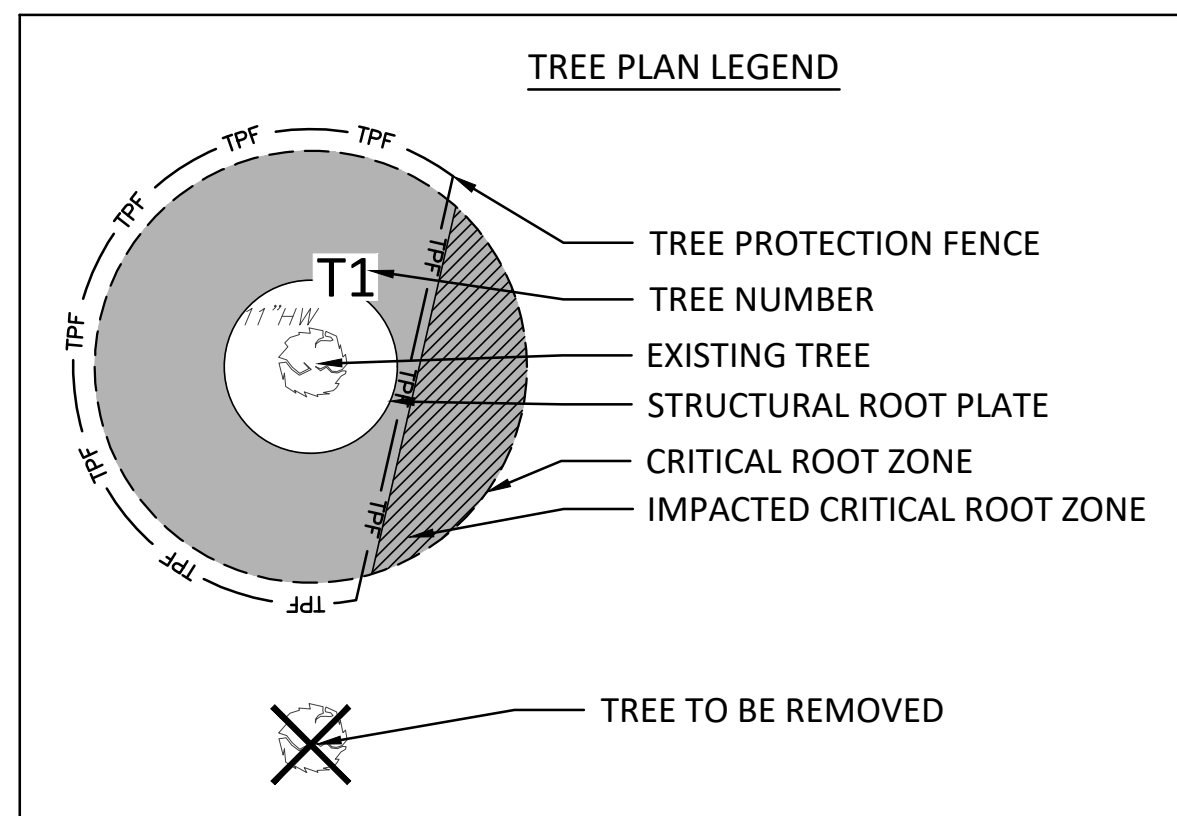
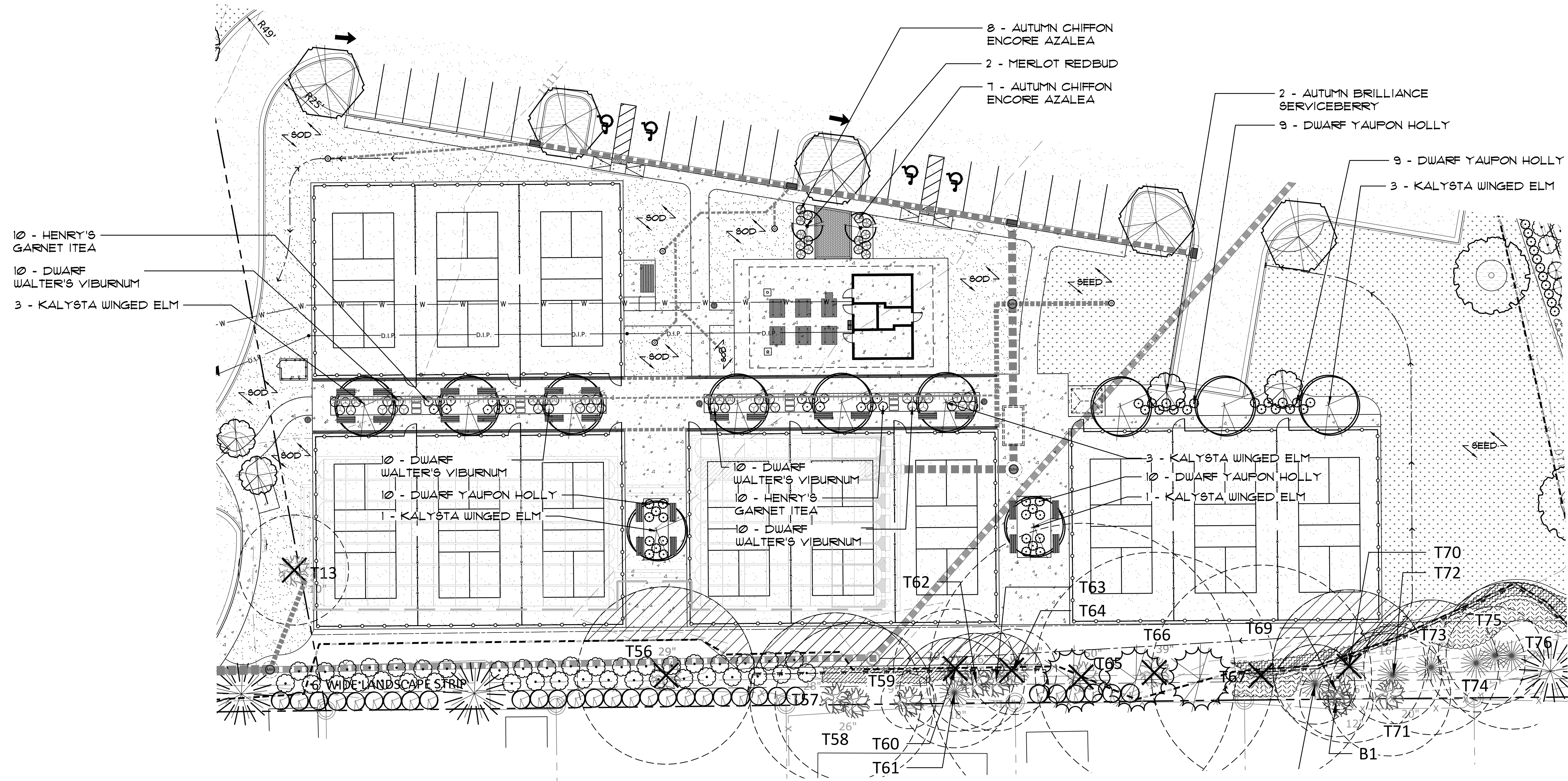
Project No: 2023-019

Drawn By: PS

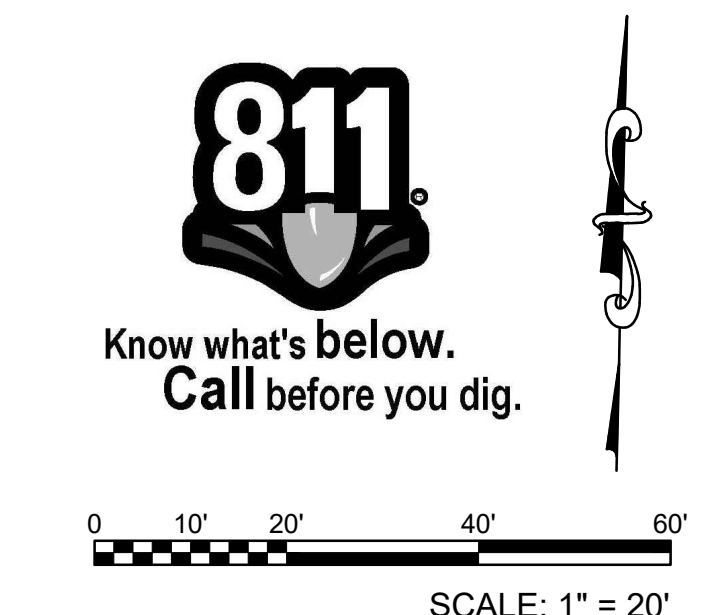
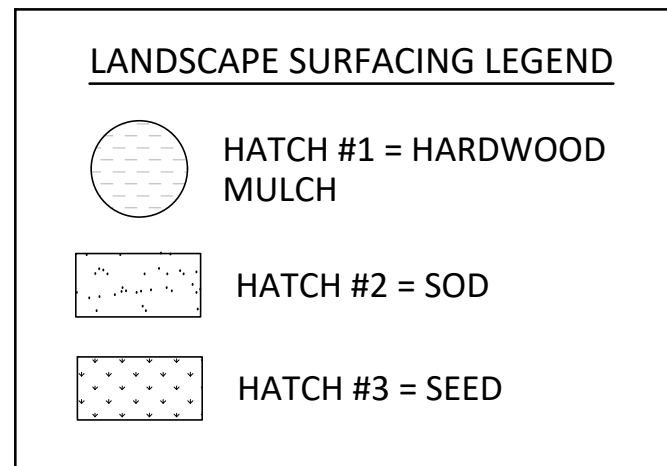
Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084



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Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Tree Plan:  
Courts  
Enlargement  
Planting Plan**

Sheet No:  
**LT400**

Seal:



Date: 09/10/2024  
Project No: 2023-019  
Drawn By: PS  
Checked By: MK

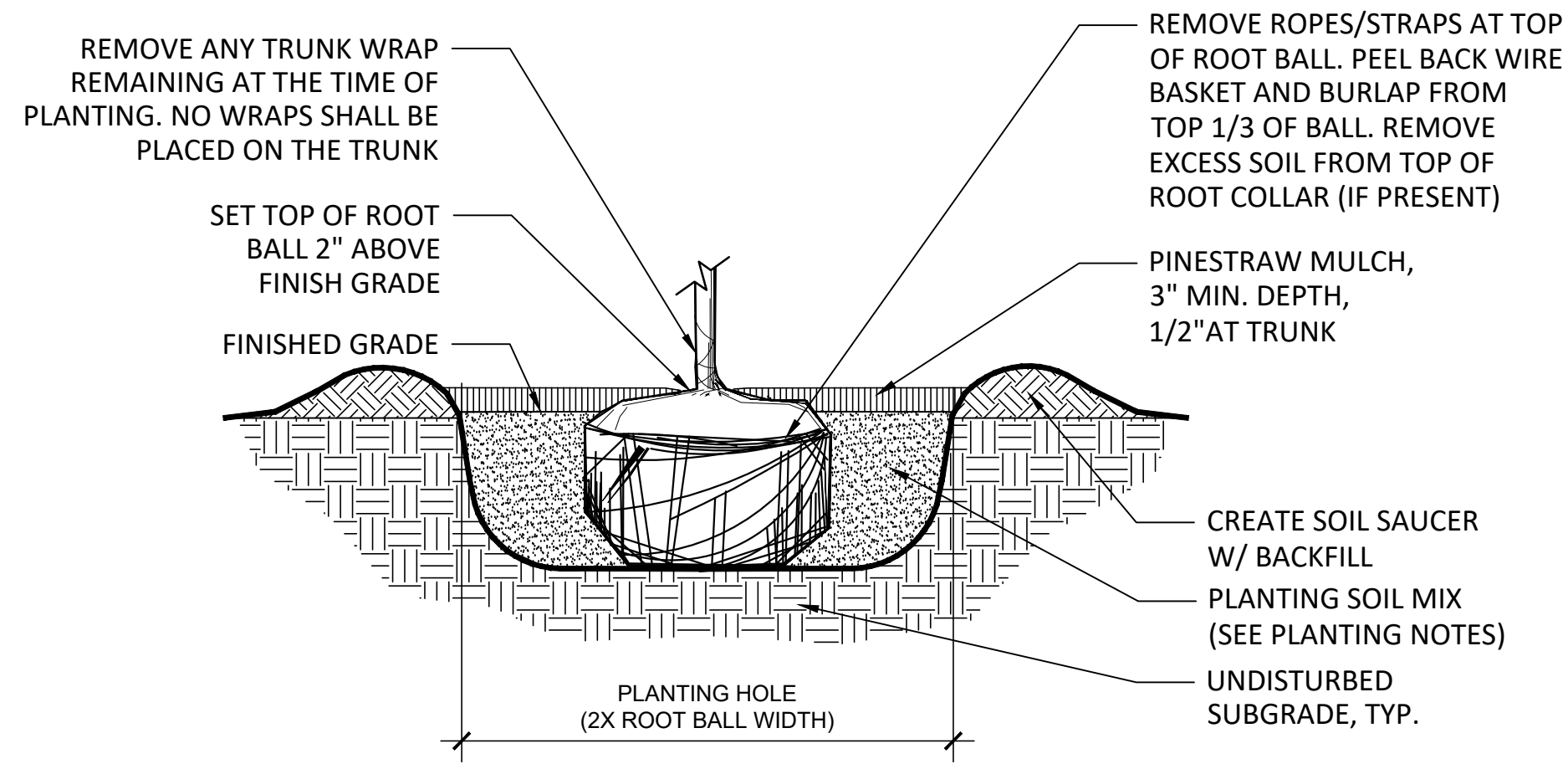
**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084  
City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

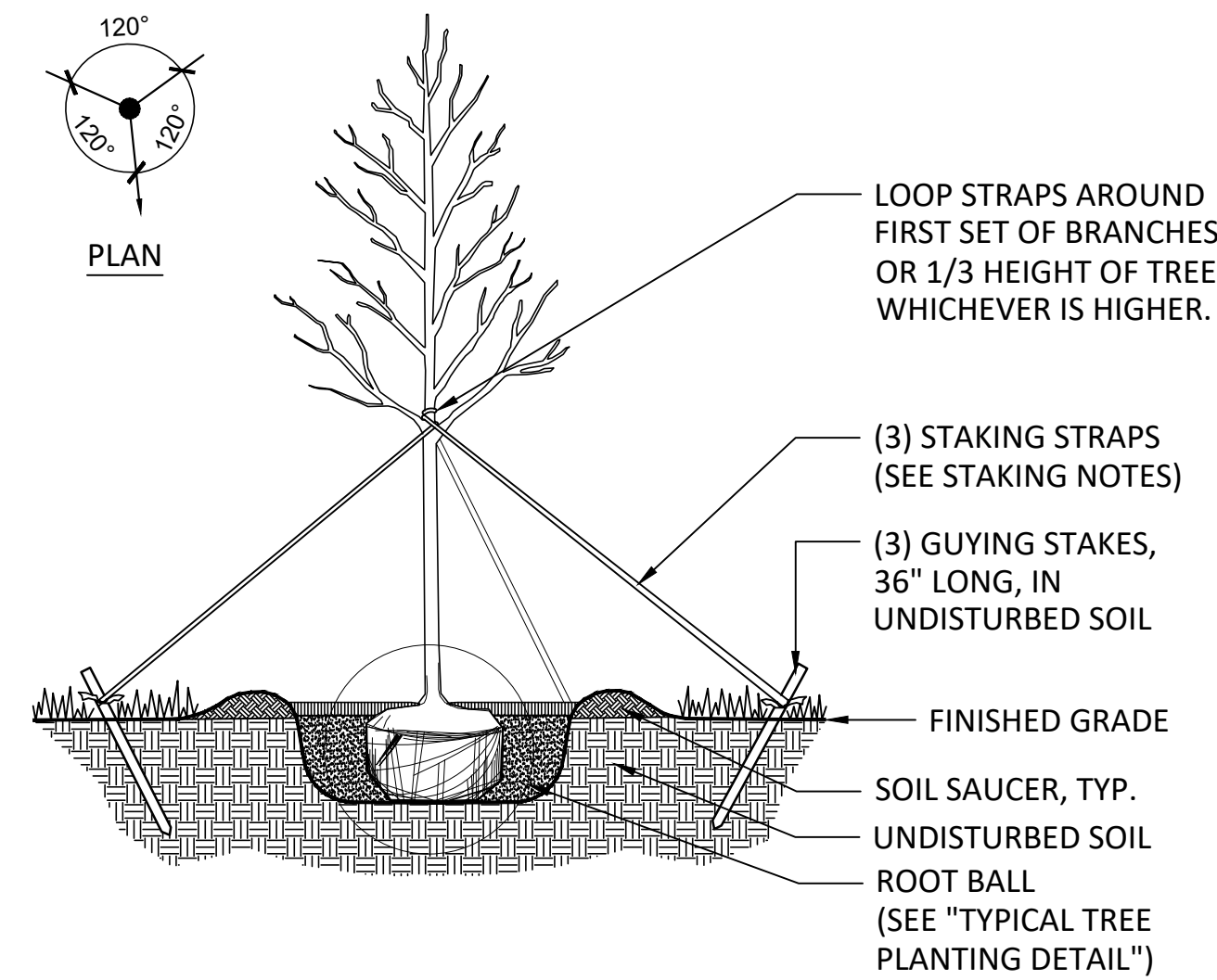
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**Landscape & Tree Plan Details**

Sheet No:  
**LT500**



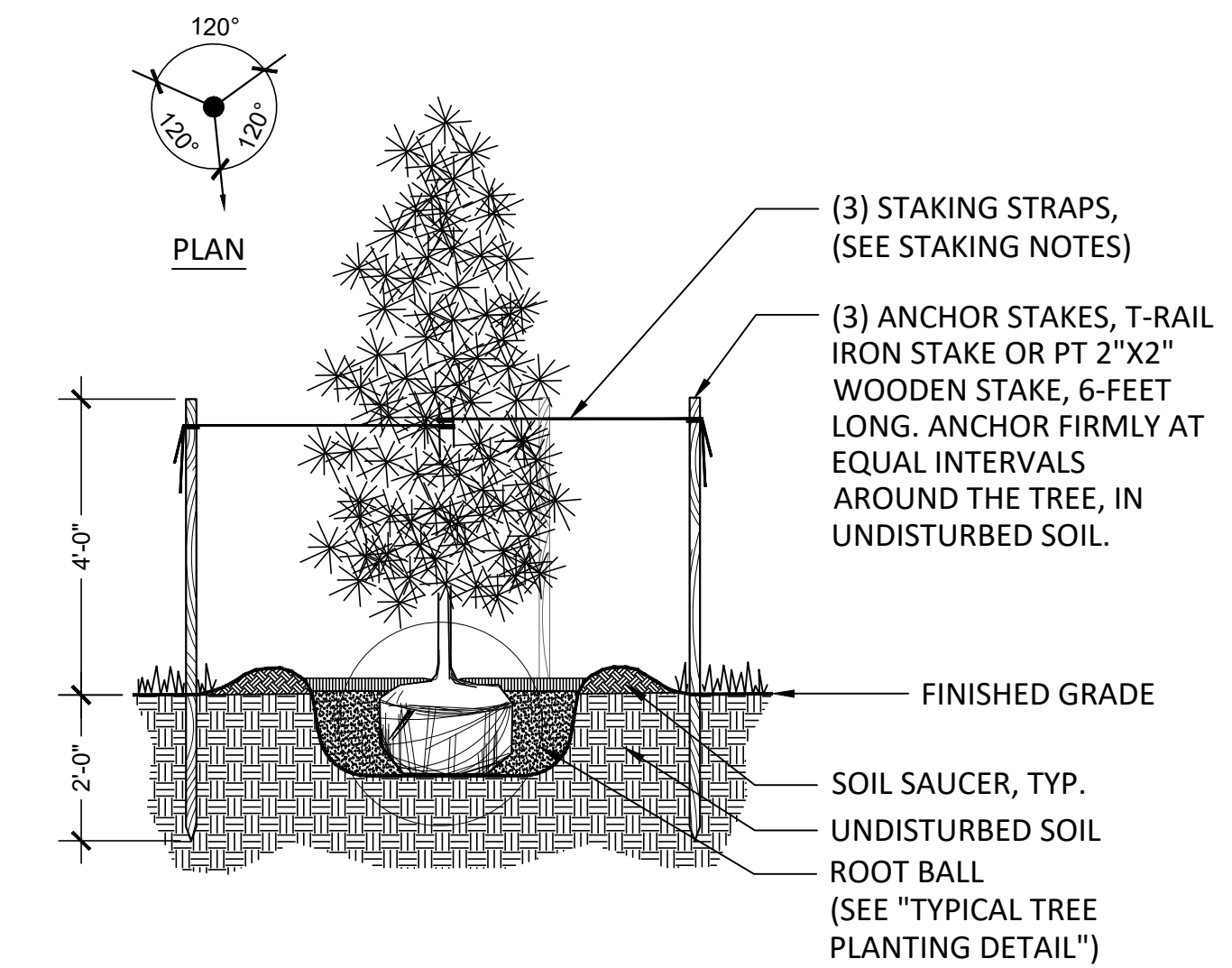
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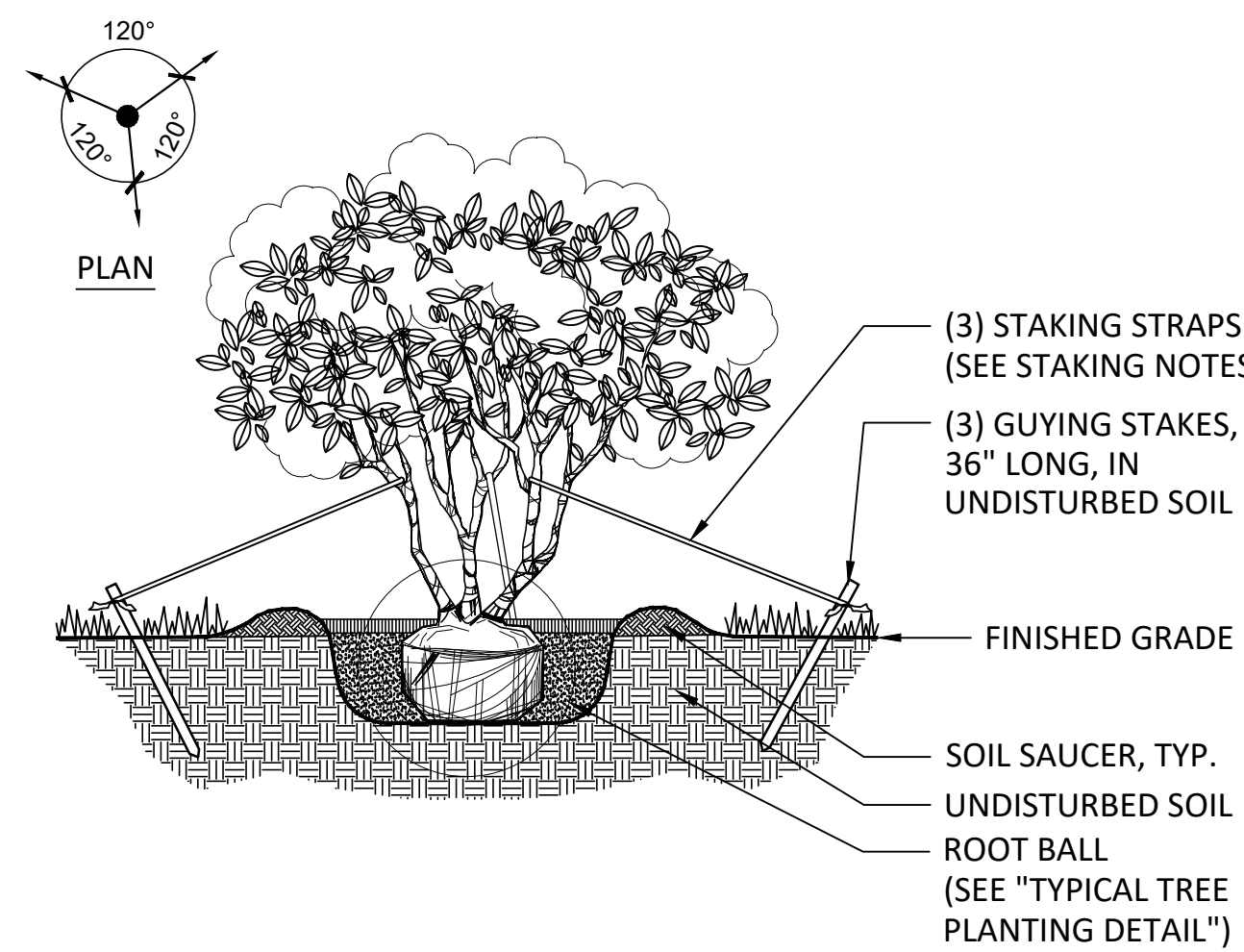
**2 DECIDUOUS TREE STAKING DETAIL (> 2\"/>**

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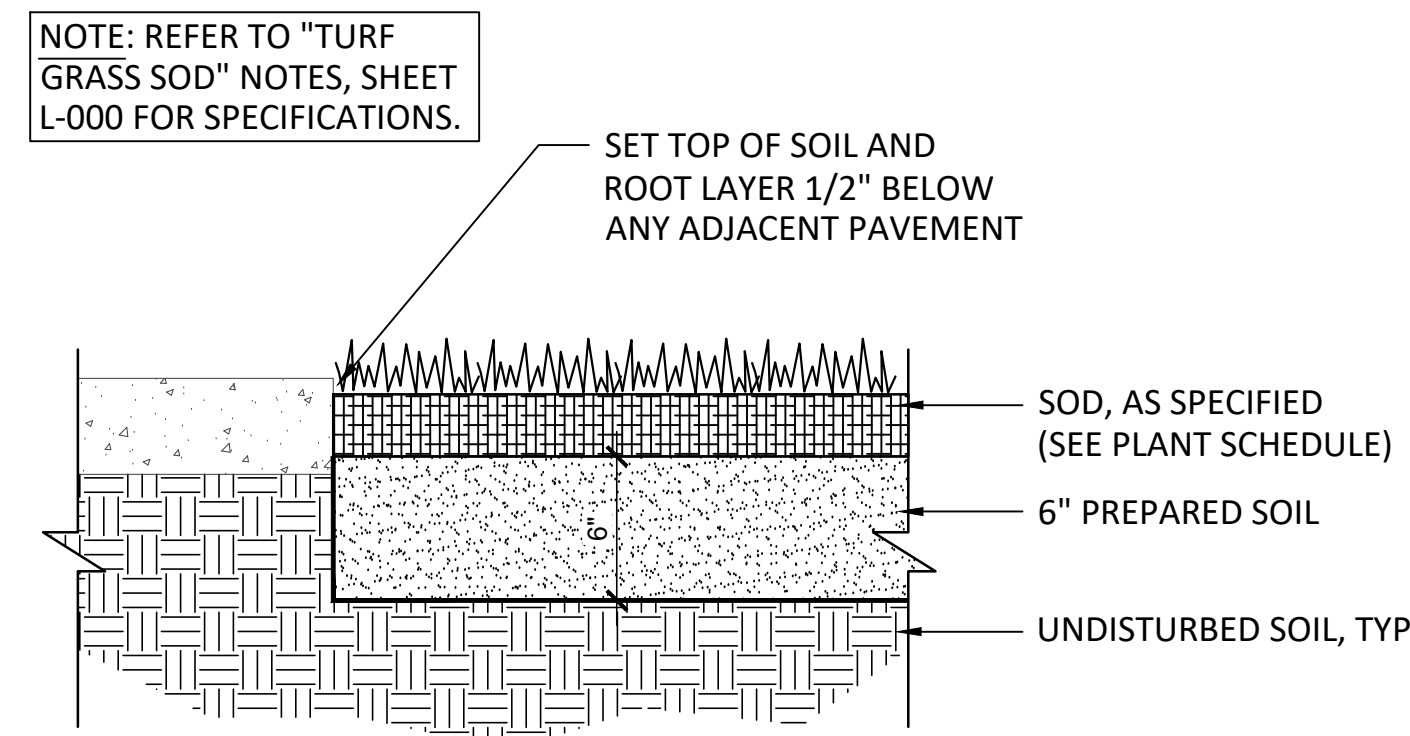
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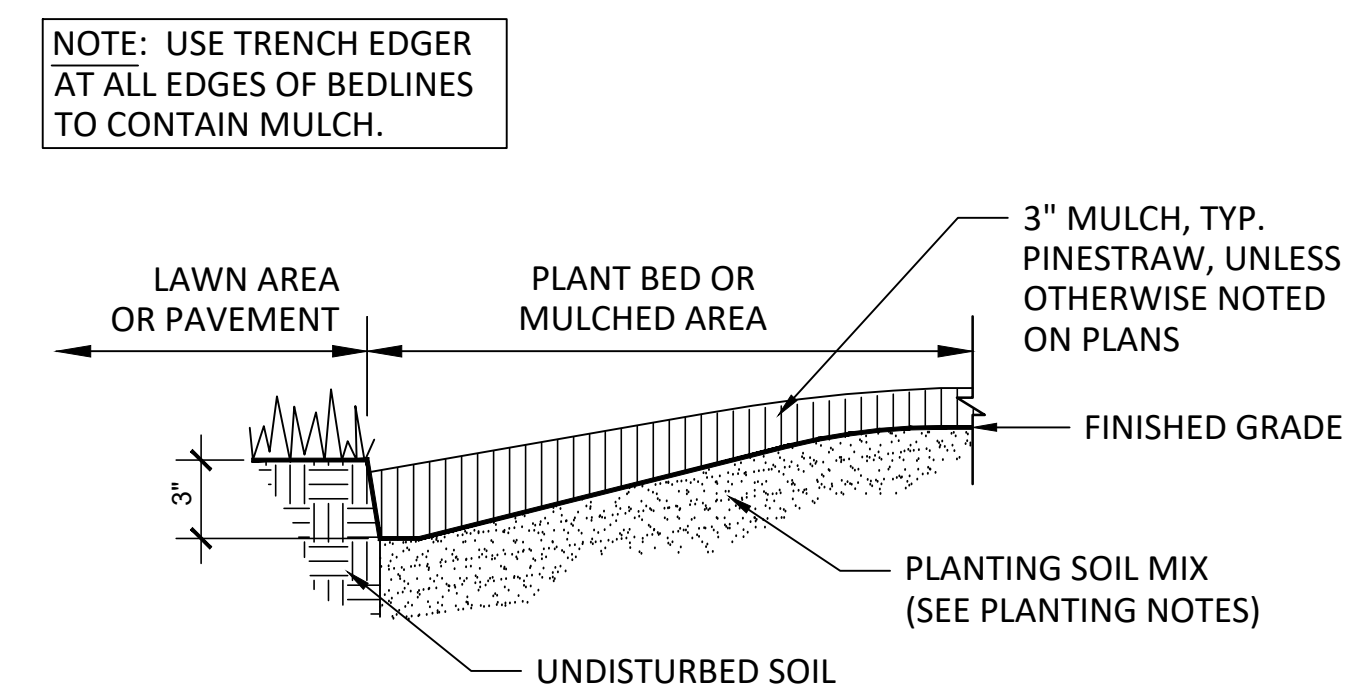
**4 MULTI-TRUNK TREE STAKING DETAIL**

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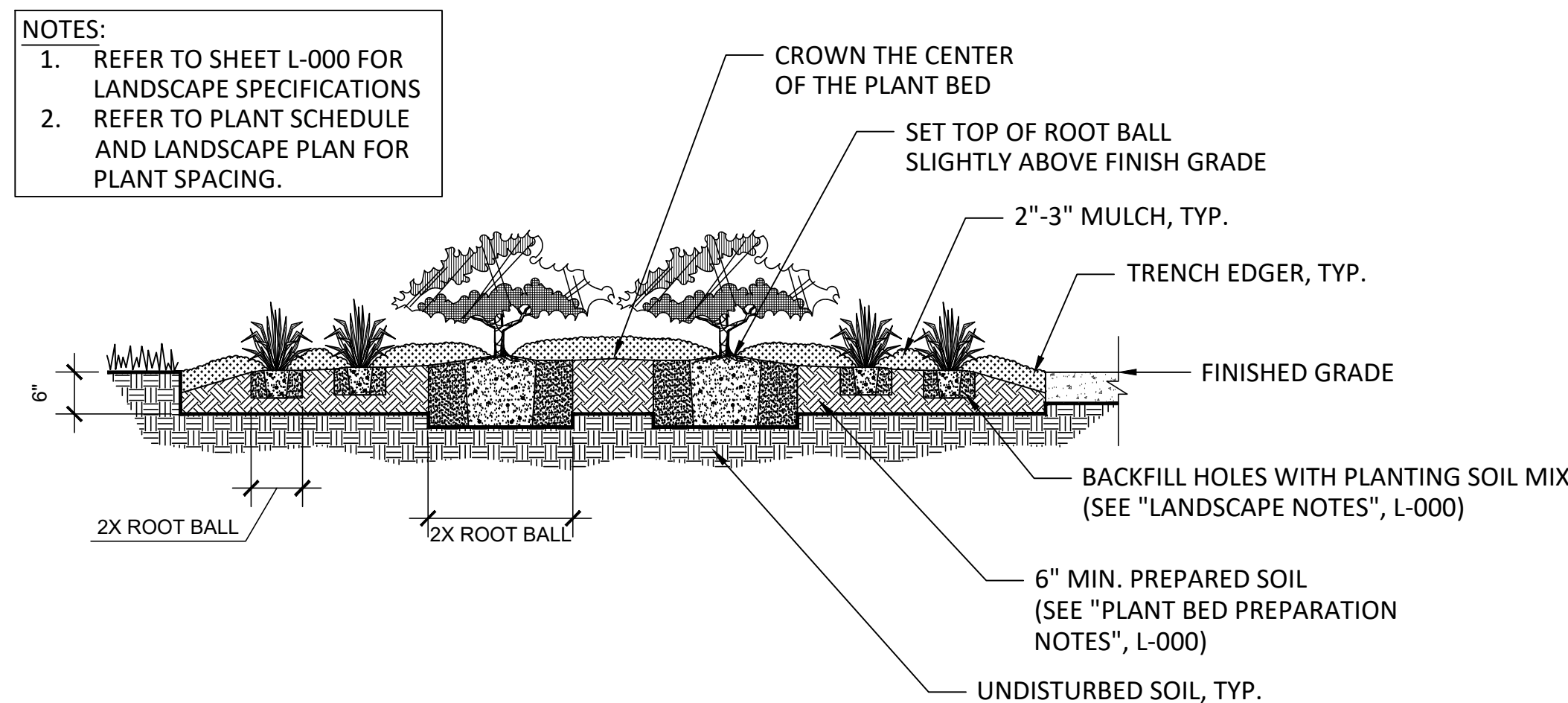
**5 SOD DETAIL**

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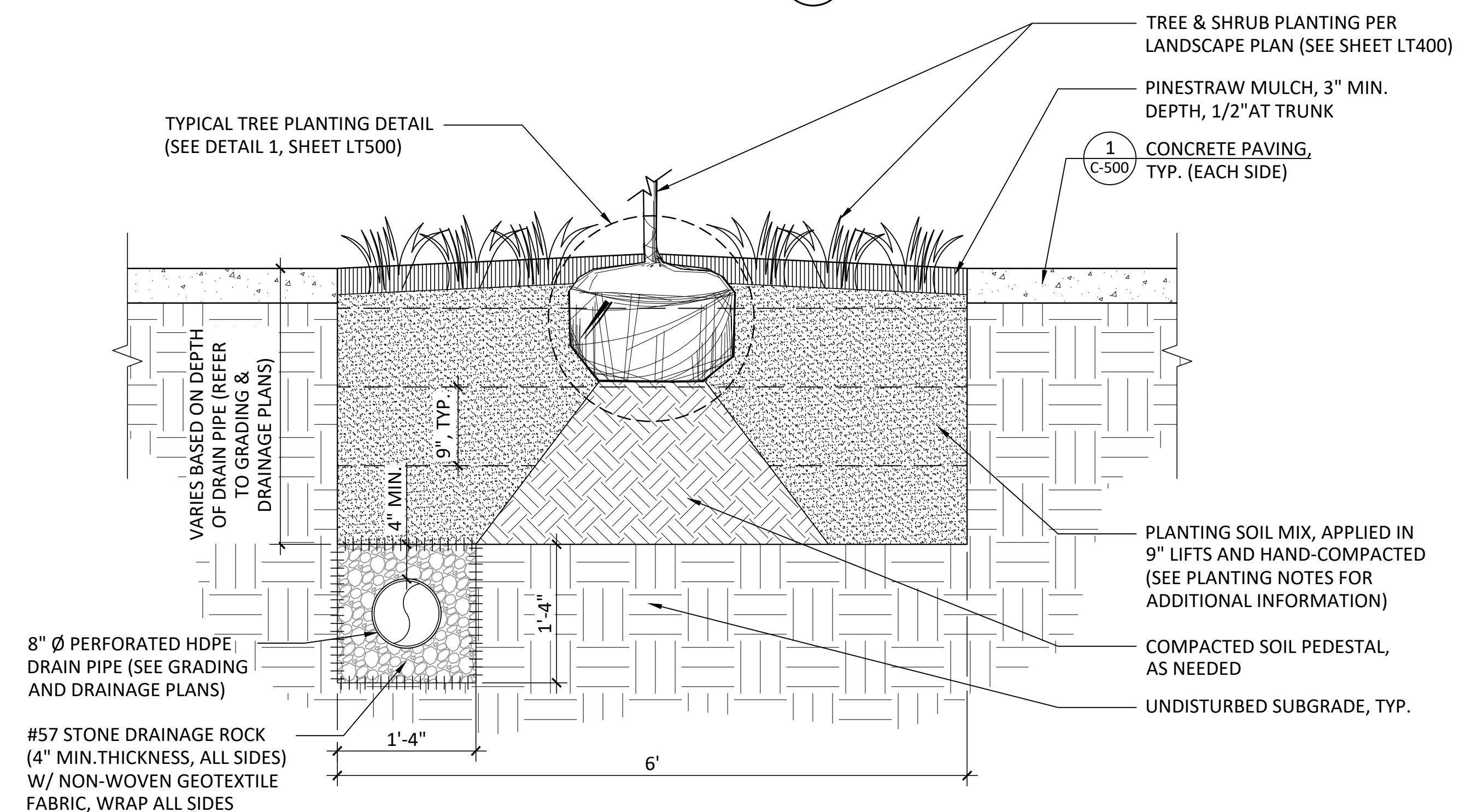
**6 TRENCH EDGER DETAIL**

SCALE: NTS



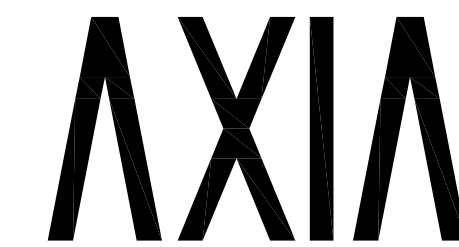
**7 SHRUB & GROUNDCOVER PLANTING DETAIL**

SCALE: NTS



**8 TREE PLANTING ISLAND**

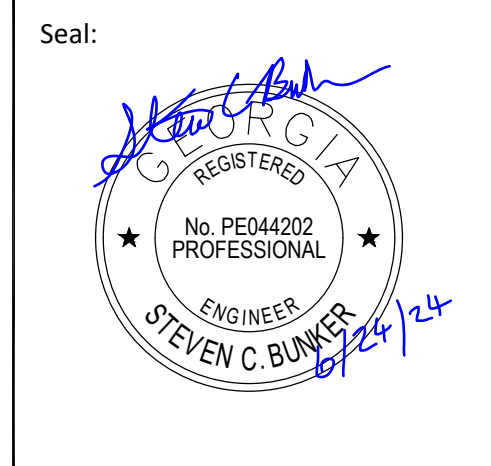
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 Axia Project: 2311



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Date: 6/24/2024  
 Project No: 2023-019  
 Drawn By: NAV  
 Checked By: SCB

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NO.	DATE	DESCRIPTION

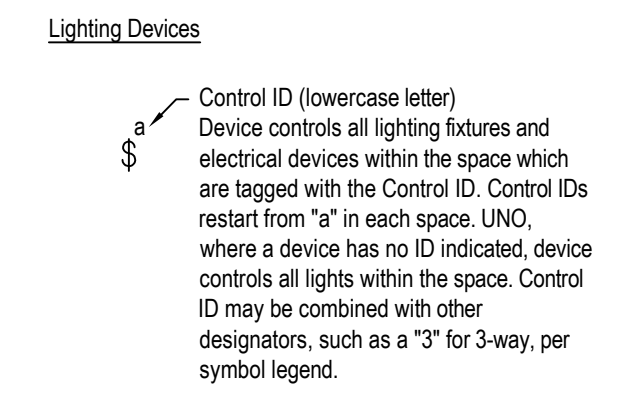
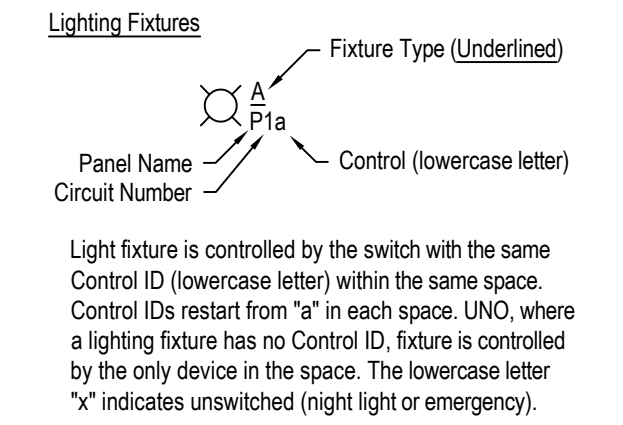
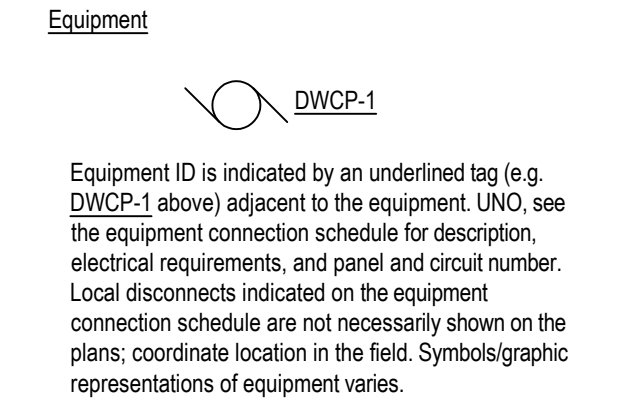
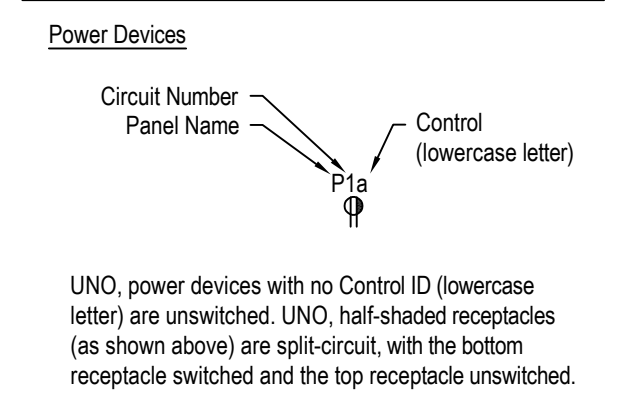
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**Notes & Legends**

Sheet No:  
**E-000**

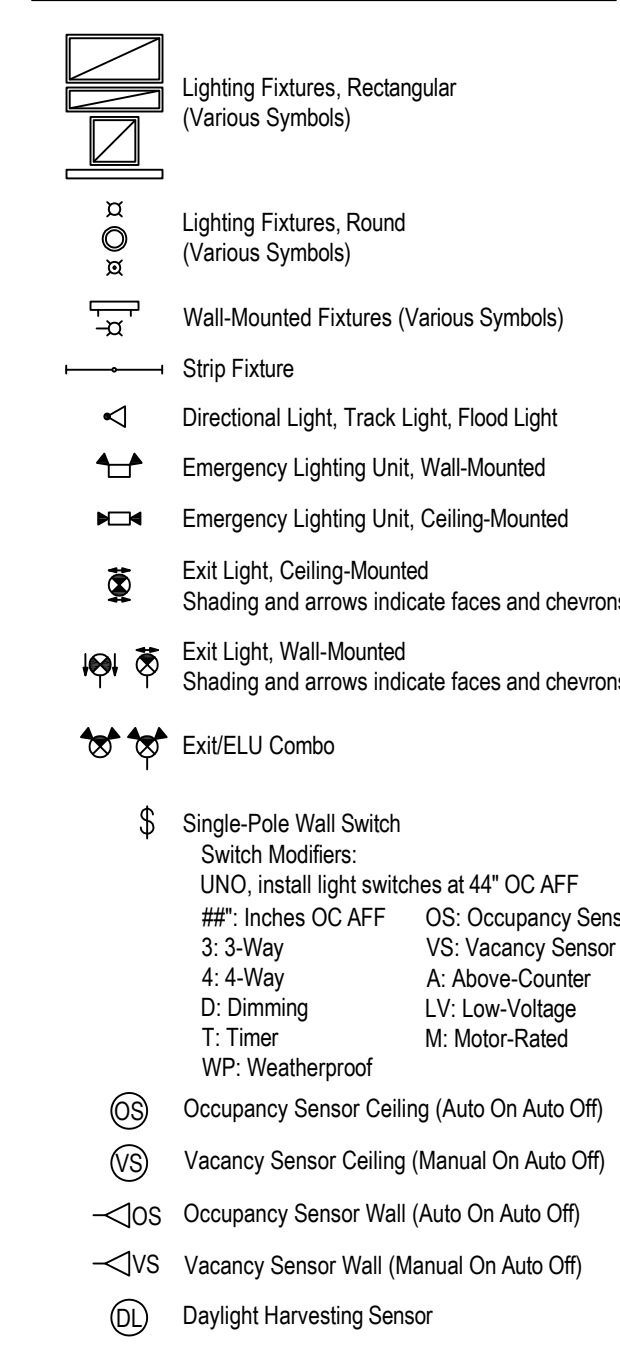
**Abbreviations**

Φ	Electrical Phase	KVA	Kilovolt-Ampere
§	Section	KVAR	Kilovolt-Ampere Reactive
A, AMP	Ampere	LFNC	Liquid-Tight Flexible Non-Metallic Conduit
ADA	Americans With Disabilities Act	LRA	Locked-Rotor Amps
AF	Amp Frame	LTS	Lights, Lighting
AFC	Available Fault Current	LVL	Level (of building)
AFF	Above Finished Floor	MBJ	Main Bonding Jumper
AFG	Above Finished Grade	MCA	Minimum Circuit Ampacity
AFI/AFCI	Arc Fault Circuit Interrupter	MCB	Main Circuit Breaker
AHJ	Authority Having Jurisdiction	MCC	Motor Control Center
AIC	Amps Interrupting Capacity	MCP	Motor Circuit Protector
AL	Aluminum	MFR	Manufacturer
AMSL	Above Mean Sea Level	MH	Metal-Halide
Arch	Architect/Architectural	MLO	Main Lugs Only
ATS	Automatic Transfer Switch	MSL	Mean Sea Level
AV, AVV	Audio/Visual	N	Neutral
AWG	American Wire Gauge	NEC	National Electrical Code
BAS	Building Automation System	NECA	National Electrical Contractors Association
Bldg	Building	NEMA	National Electrical Manufacturer's Association
BFG	Below Finished Grade	NETA	National Electrical Testing Association
BKR	Circuit Breaker	NFPA	National Fire Protection Association
BMS	Building Management System	NRTL	Nationally Recognized Testing Laboratory
BOD	Basis of Design	NTS	Not to Scale
C	Conduit	OC	On Center
C&I	Controls and Indications	OCB	Overcurrent Protection
CB	Circuit Breaker	PC	Photocell
CCT	Controlled Color Temperature	PCP	Pump Control Panel
CGD	Combustible Gas Detector	PCRA	PVC-Coated Rigid Aluminum Conduit
CKT	Circuit	PCRM	PVC-Coated Rigid Metal Conduit
CMD	Command	PCRS	PVC-Coated Rigid Galvanized Steel Conduit
CPT	Control Power Transformer	PM	Preventative Maintenance
CT	Current Transformer	PR	Pair
CTR	Center	PNL	Panel
CTRL	Control	PVC	Polyvinyl Chloride Conduit
CU	Copper	PVC40	PVC Schedule 40 Conduit
D	Deep	PVC80	PVC Schedule 80 Conduit
DEMO	Demolish, Demolition	REC	Receptacle(s)
DESC	Description	REQD	Required
DHL	Delta High-Leg	RGS	Rigid Galvanized Steel Conduit
DISC	Disconnected	RM	Room
DIST	Distribution, Distance	RMC	Rigid Metal Conduit
EC	Electrical Contractor	RTU	Remote (or Radio) Telemetry Unit
ECB	Enclosed Circuit Breaker	RVAT	Reduced Voltage Autotransformer
EG, EGC	Equipment Grounding Conductor	RVSS	Reduced Voltage Solid State
ELEC	Electric, Electrical	SBJ	System Bonding Jumper
ELU	Emergency Lighting Unit	SBT	Solid Bare Tinned Copper
EM	Emergency	SCH	Schedule
EMT	Electrical Metallic Tubing	SCADA	Supervisory Control and Data Acquisition
EPO	Emergency Power-Off	SCCR	Short-Circuit Current Rating
ETM	Elapsed Time Meter	SE	Service Entrance
ETR	Existing-To-Remain	sKVA	Starting kVA
EV	Electric Vehicle	SLC	Signaling Line Circuit (FA)
EVSE	Electric Vehicle Supply Equipment	SLD	Single-Line Diagram
EX	Existing	SPD	Surge Protective Device
FA	Fire Alarm	SST	Supply-Side Bonding Jumper
FACP	Fire Alarm Control Panel	STP	Shielded Twisted Pair
FLA	Full-Load Amps	Telecom	Telecommunications
FLR	Floor	TYP	Typical
FMC	Flexible Metal Conduit	UL	Underwriters Laboratories
FN	Function	UNO	Unless Noted Otherwise
FNVR	Full-Voltage Non-Reversing	UPS	Uninterruptible Power Supply
GC	General Contractor	UTP	Unshielded Twisted Pair
GEC	Grounding Electrode Conductor	V	Volts, Voltage
GEN	Generator	VA	Volt-Amperes
GFI, GFCI	Ground-Fault Circuit Interrupter	VFD	Variable Frequency Drive
GFPE	Ground-Fault Protection for Equipment	W	Watt, Wire
GND	Ground, Grounding	WP	Weatherproof
GRC, GRS	Galvanized Rigid Steel (Conduit)	WWTB	Wet Well Terminal Box
H	High	XFMR	Transformer
HOA	Hand-Off-Automatic (Switch)		
HP	Horsepower		
ID	Identification, Identity		
IG	Isolated Ground		
IMC	Intermediate Metal Conduit		
IO	Input/Output		
JB	Junction Box		
K	Kelvin		
KAIC	Kiloamps Interrupting Capacity		
KW	Kilowatt		

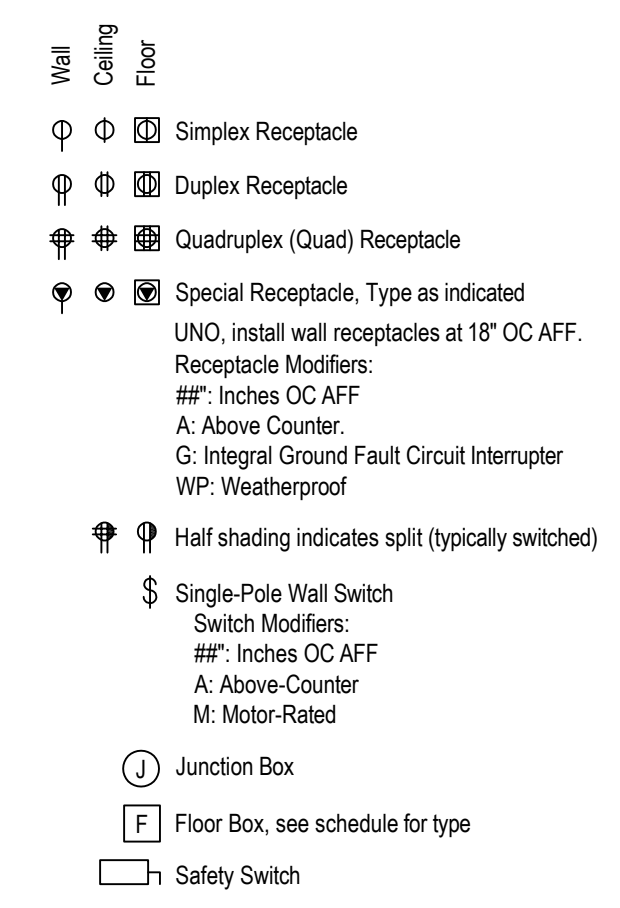
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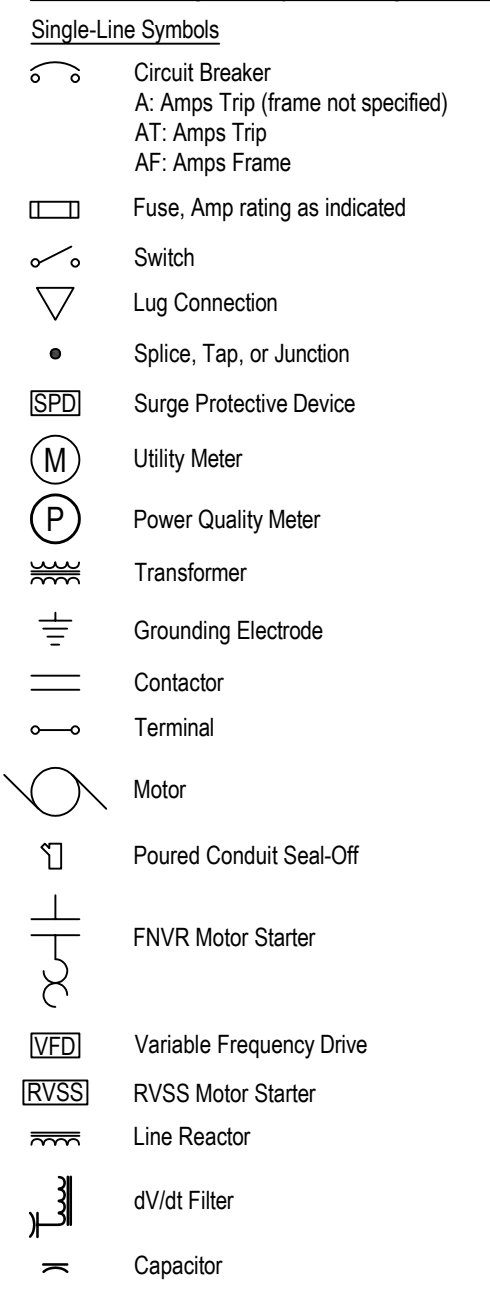
**Lighting Symbols**



**Power Symbols**



**Electrical Diagram Symbol Legend**



**General Electrical Notes and Specifications**

- See book specifications, E-400 series sheets, for additional requirements. These drawings are incomplete without reference to the book specifications.
- UNO, all single-pole 15A and 20A circuits shall be 2-12 AWG, 12 AWG EG, 3/4" C, circuted per panel schedule. Underground conduits shall be 1" minimum.

**Bid Alternates**

- This project contains one bid alternates related to electrical.
- Bid Alternate 1 includes the installation of the pavilion (specified by the Civil Engineer). If the pavilion is not constructed, conduit to future pavilion will be provided without conductors. See keynote on plan.

**Musco Lighting**

- Athletic lighting for this project is provided by Musco Lighting through a separate contract with the Owner. Coordinate requirements.

**Electrical Sheet List**

- E-000 Notes and Legends
- E-100 Site Plans
- E-200 Single-Line Diagrams and Schedules
- E-300 Details
- E-400 Specifications
- E-401 Specifications
- E-402 Specifications
- E-403 Specifications

These electrical plans comprise a portion of the plans and specifications pertinent to this project. Refer to the full set of plans and specifications for all requirements.

**Lighting Fixture Schedule**

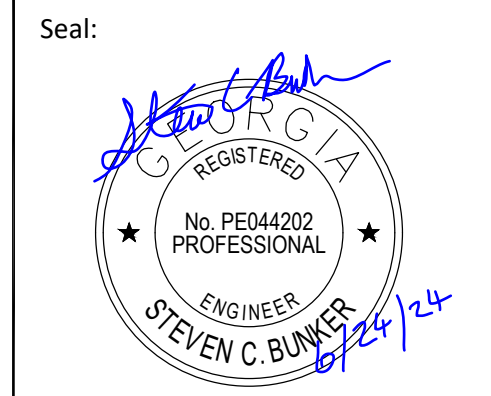
ID	Description	Mounting	Lamp	Lumens	CCT (K)	Voltage	Wattage	Manufacturer	Model	Notes
A1	Area Light, Type IV	Round Pole	Integral LED	5827	4000	240	44	Gardco	CA17L-32L-450-NW-G3-AR2-4-UNV-DD-BLA	Install at 25' on Guardco SRA-STB-5-125-23-D1-DT2-BLA. Install pole on pole base per Pole Base detail, with top of base at 24' AF.G.
AS	Area Light, Type II	See Note	Integral LED	5887	4000	240	44	Gardco	CA17L-32L-450-NW-G3-AR2-2-UNV-DD-BLA with SBRKT-SPK-L1-12-TZD4L-BK	Install on tenon provided by Musco. Coordinate with Musco.
P1-P8	Sports Lighting Poles	-	-	-	-	-	-	Musco	-	Sports lighting by Musco Lighting. Poles, pole bases, lights, and drivers furnished and installed by Musco. Contactor enclosures furnished by Musco, installed by Contractor. Circuit wiring connections to contactors and drivers by Contractor. Coordinate all requirements with Musco prior to installation.



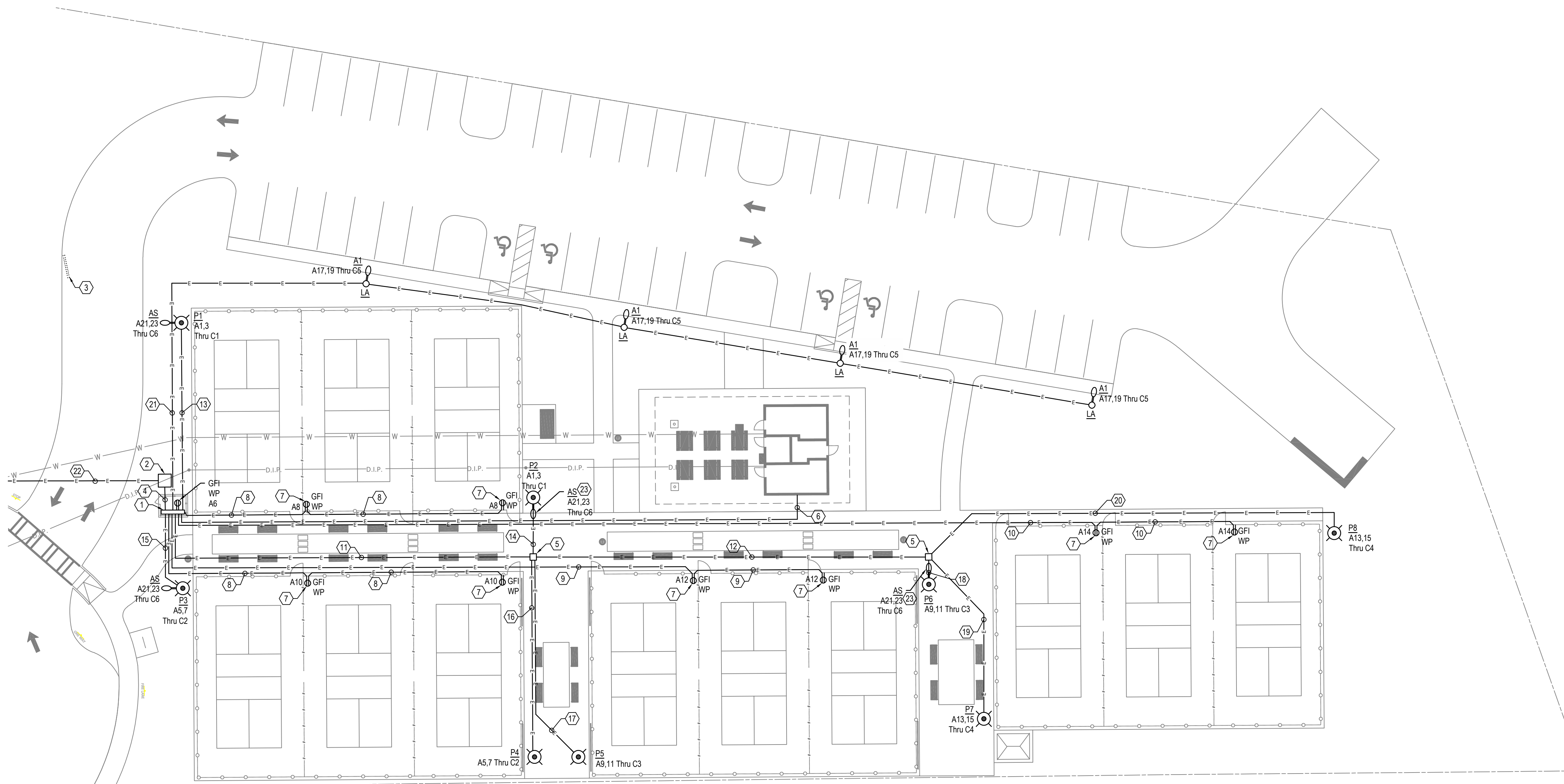
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 Exp: 30 June 2024  
 Axia Project: 2311



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 Checked By: SCB



**Site Plan Keynotes**

- Equipment Rack with Panel A and Musco Lighting Controller. See Equipment Rack Layout detail.
- Proposed location of Utility Transformer. Coordinate with Utility.
- Existing electric scoreboard. Demolish all associated electrical per specs.
- Service laterals. See SLD.
- Provide hand hole pull box. Bundle each circuit and provide waterproof tags identifying each circuit within the box. Do not splice circuit conductors unless required for circuiting as designed. Equipment grounding conductors may be spliced. Size box as required. Field coordinate exact location.
- Pavilion feeder. See SLD. Coordinate exact stub-up location with the pavilion installer. The pavilion is an add-alternate or for future. If the pavilion is not constructed as part of this project, route conduit to within pavilion footprint, stub up, and cap with pullstring.
- Install receptacle on a fence post.
- Receptacle Circuit:  
2-10 AWG, 10 AWG EG, 1" C
- Receptacle Circuit:  
2-8 AWG, 8 AWG EG, 1" C
- Receptacle Circuit:  
2-6 AWG, 6 AWG EG, 1" C
- Three Conduits:  
Conduit 1:  
Pole P2 Musco Lights: 2-12 AWG  
Pole P2 AS Light: 2-12 AWG  
Pole P4: 2-12 AWG  
12 AWG EG  
1" C  
Conduit 2:  
Poles P5 and P6 Musco Lights: 2-12 AWG  
Pole P5 AS Light: 2-12 AWG  
Poles P7 and P8: 2-8 AWG  
8 AWG EG  
1 1/4" C  
Conduit 3: Spare 1" with pull string from Panel A.
- Two Conduits:  
Conduit 1:  
Pole P6 Musco Lights: 2-10 AWG  
Pole P6 AS Light: 2-12 AWG  
Poles P7 and P8: 2-8 AWG  
8 AWG EG  
1" C  
Conduit 2: Spare 1" with pull string
- One conduit with two circuits:  
Pole P1 Musco Lights: 2-12 AWG  
Pole P1 AS Light: 2-12 AWG  
12 AWG EG  
1" C
- One conduit with two circuits:  
Pole P2 Musco Lights: 2-12 AWG  
Pole P2 AS Light: 2-12 AWG  
12 AWG EG  
1" C
- One conduit with two circuits:  
Pole P3 Musco Lights: 2-12 AWG  
Pole P3 AS Light: 2-12 AWG  
12 AWG EG  
1" C
- Circuit for Pole P4:  
2-12 AWG, 12 AWG EG, 1" C
- Circuit for Pole P5:  
2-12 AWG, 12 AWG EG, 1" C
- One conduit with two circuits:  
Pole P6 Musco Lights: 2-10 AWG  
Pole P6 AS Light: 2-12 AWG  
10 AWG EG  
1" C
- Circuit for Pole P7:  
2-12 AWG, 12 AWG EG, 1" C
- Circuit for Pole P8:  
2-12 AWG, 10 AWG EG, 1" C
- Circuit for Poles A1:  
2-12 AWG, 12 AWG EG, 1" C  
Typ between each light
- Proposed utility primary feeder from transformer beside the rec center. Coordinate with Utility.
- Drawing may be unclear due to linework overlap. One line is shown from the handhole to the pole for circuiting. One Type AS fixture is shown on top of this line.

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Sheet Title:  
**Electrical Plan**

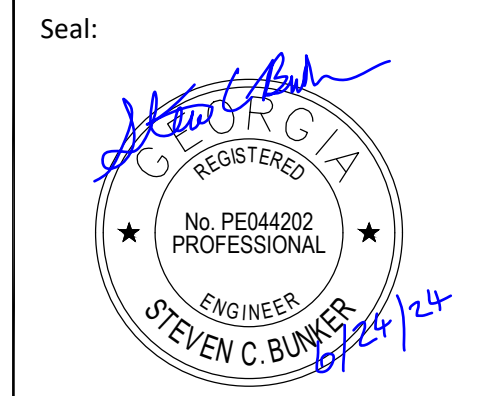
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Panelboard: A		Supply: Utility		Poles: 42		Mains Type: MCB						
Location: Eq. Rack		Voltage: 240/120V 1Ø 3W		Feed-Thru Lugs: No		Mains Rating: 200 A						
Mounting: Surface		Bus Amps: 200 A		SE-Rated: Yes		Mains F/Note: -						
Enclosure: NEMA 3R		Neutral: 100%		Isolated Ground: No		SCCR: 10 kAIC						
Special: -				New/Existing: New								
CKT	Description	Trip (A)	Poles	FN/ Note	Load (kVA)	Phase	Load (kVA)	FN/ Note	Poles	Trip (A)	Description	CKT
1	Musco Pole P1-P2	20	2	-	1.20	A A	5.00	-	2	100	Panel PB Pavilion	2
3	Contactor C1				1.20	B B	5.00					4
5	Musco Pole P3-P4	20	2	-	1.20	A A	0.18	-	1	20	Equipment Rack Receptacle	6
7	Contactor C2				1.20	B B	0.36	-	1	20	North Court Receptacles	8
9	Musco Pole P5-P6	20	2	-	1.20	A A	0.36	-	1	20	Southwest Court Receptacles	10
11	Contactor C3				1.20	B B	0.36	-	1	20	South Court Receptacles	12
13	Musco Pole P7-P8	20	2	-	1.20	A A	0.36	-	1	20	Southeast Court Receptacles	14
15	Contactor C4				1.20	B B	0.00	-	1	20	Spare	16
17	Parking Lot Lights	20	2	-	0.15	A A	0.00	-	1	20	Spare	18
19	Musco Contactor C5				0.15	B B	0.00	-	1	20	Spare	20
21	Security Lights	20	2	-	0.10	A A	0.00	-	1	20	Spare	22
23	Musco Contactor C6				0.10	B B	0.00	-	1	20	Spare	24
25	Musco Control Power	20	1	-	0.50	A A	0.00	-	1	20	Spare	26
27	Spare	20	1	-	0.00	B B	0.00	-	1	20	Spare	28
29	Spare	20	1	-	0.00	A A	0.00	-	1	20	Spare	30
31	Spare	20	1	-	0.00	B B	0.00	-	1	20	Spare	32
33	Spare	20	1	-	0.00	A A	0.00	-	1	20	Spare	34
35	Spare	20	1	-	0.00	B B	0.00	-	1	20	Spare	36
37	Spare	20	1	-	0.00	A A	0.00	-	1	20	Spare	38
39	Spare	20	1	-	0.00	B B	0.00	-	1	20	Spare	40
41	Spare	20	1	-	0.00	A A	0.00	-	1	20	Spare	42

Load Classification	Connected (kVA)		Factor	Demand (kVA)	
	A	B		A	B
Lighting	5.55	5.05	125%	5.94	6.31
Receptacle - General	0.90	0.72	NEC	0.90	0.72
Pavilion	5.00	5.00	100%	5.00	5.00

Phase Totals		
	A	B
Connected Load (kVA):	11.5	10.8
Connected Current (A):	95	90
Demand Load (kVA):	12.8	12.0
Demand Current (A):	107	100

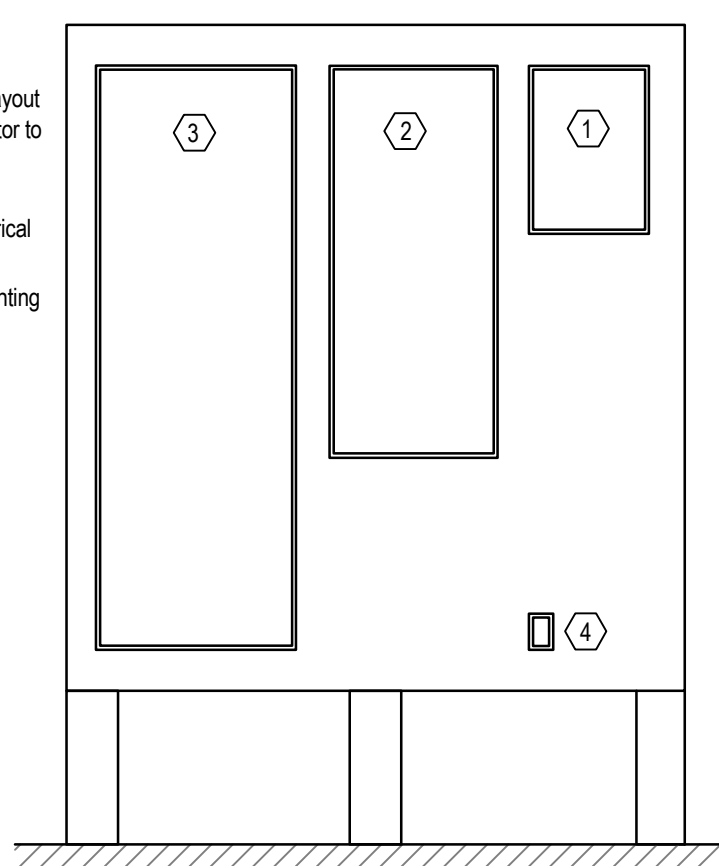
  

Panel Totals		
	A	B
Connected Load (kVA):	22.2	
Connected Current (A):	93	
Demand Load (kVA):	24.9	
Demand Current (A):	104	

Notes:

Equipment Layout Notes

- Layout is conceptual only. Actual layout shall be determined by the contractor to suit equipment provided and field conditions.
- Construct electrical rack per "Electrical Equipment Rack" detail.
- Arrange equipment so that all mounting hardware is accessible without removing structural members.
- Where equipment is provided with ventilation, arrange to not restrict airflow, as directed by equipment manufacturer.



Equipment Tags

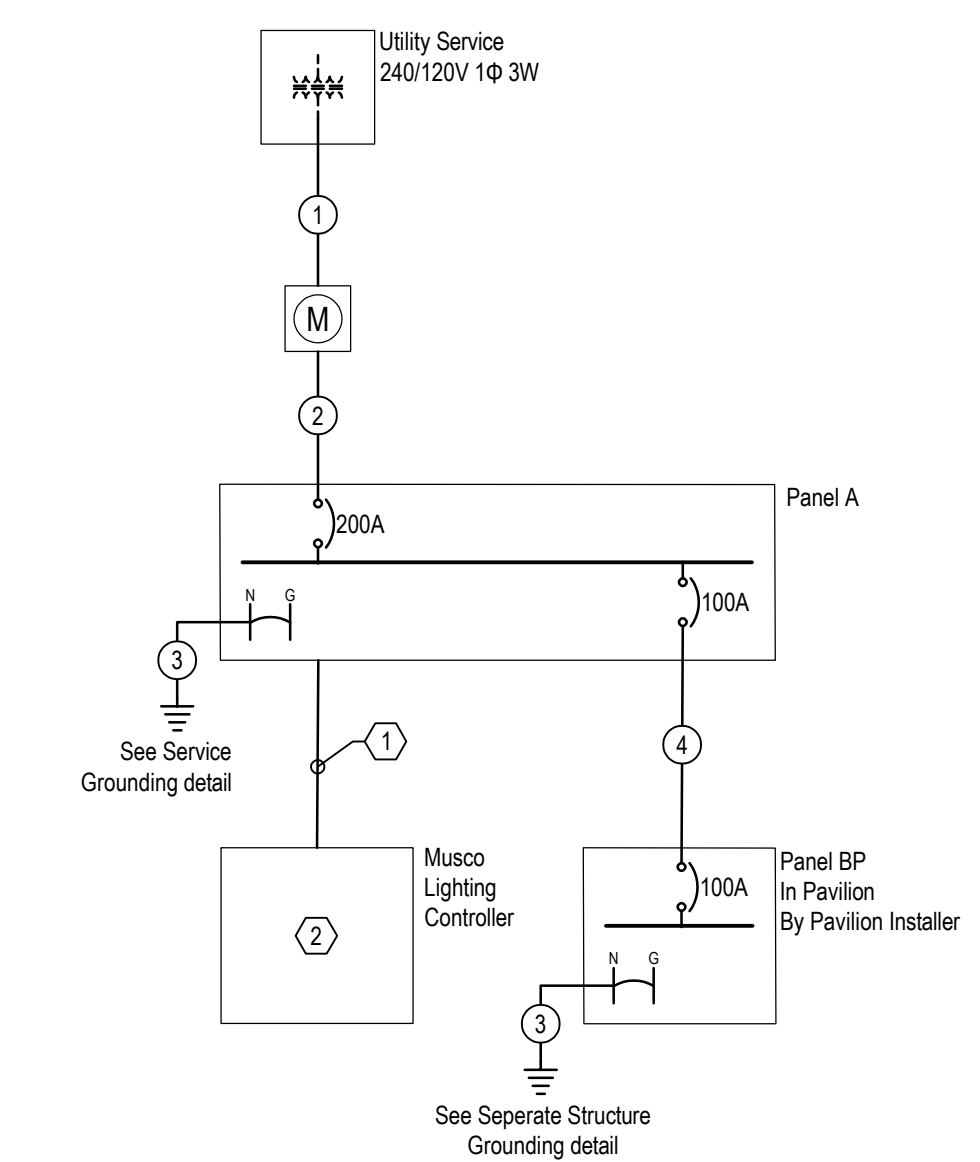
- Meter Base
- Panel A
- Musco Controller
- GFI WP Receptacle

1 Equipment Rack Layout  
 NTS

Breaker Function Schedule

The "Circuit Note / FN" fields in the panel schedules indicates notes, breaker functions, or other information for the circuit, panel, or breaker. Codes are identified below. Codes are intended as a design documentation aid only, including former circuit designations in [braces]; do not include in field-applied circuit directories.

- # For any number, see panel schedule footer note.
- A Arc-Fault Interrupter (AFCI) Protection
- AR Arc Energy Reduction Maintenance Switch
- D Demolished circuit (now Spare or Space) (former circuit in braces)
- E Existing-to-remain circuit
- EM Provide identification per NEC 700.12(I)(2)(4).
- G Ground-Fault Circuit Interrupter (GFCI) Protection (5 mA)
- GF Adjustable Ground-Fault Protection for Equipment
- GE Ground-Fault Protection for Equipment (30 mA)
- H Breaker hasp to prevent unintentional opening
- L Lockable open according to NEC 110.25
- LSI Long-Time, Short-Time, Instantaneous Adjustments
- LSIG Long-Time, Short-Time, Instantaneous, Ground-Fault Adjustments
- N New circuit (in existing panel, previously spare or space)
- NR New circuit to replace existing circuit (former circuit in braces)
- NB New breaker to replace existing breaker or space (new trip rating shown)
- R Relocated circuit
- S Switch-rated per NEC 240.83(D)



SLD Tags

- 3-3/0 AWG 3" C
- 3-3/0 AWG 4 AWG SSBJ 2" C
- 4 AWG GEC
- 3-2 AWG 6 AWG EG 1 1/4" C

Distribution and SLD

- Design assumes an available fault current not exceeding 10,000 amps. Prior to submitting shop drawings, contact the electric utility company and obtain in writing the maximum available fault current at the utility service point. Submit this documentation to the engineer along with equipment submittal. Provide max AFC signage as required per NEC 110.24 and 409.22.
- UNO, series combination ratings shall not be acceptable.

SLD Keynotes

- Multiple circuits through nipple per panel schedule. Nipple size as required. Max length 24".
- Install Musco Lighting Controller per Musco installation instructions. Circuit controls to Panel A per Panel A schedule. Circuit lighting from Panel A per Panel A schedule, through contactors as required. Coordinate exact requirements with Musco.

1 Single-Line Diagram  
 None

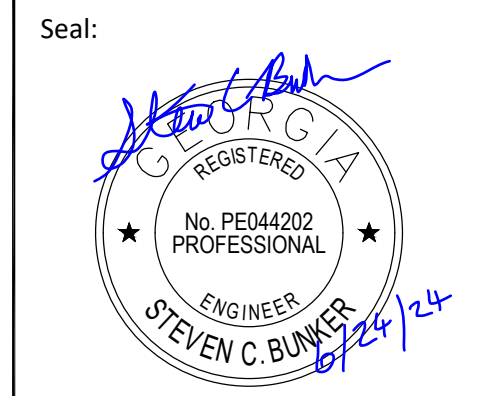
Tucker Pickleball Courts  
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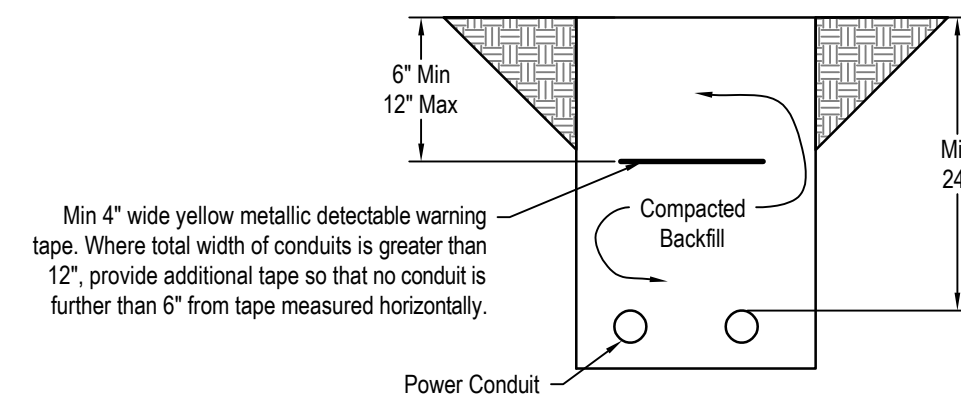
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 Single-Line Diagrams and Schedules

Sheet No:  
 E-200



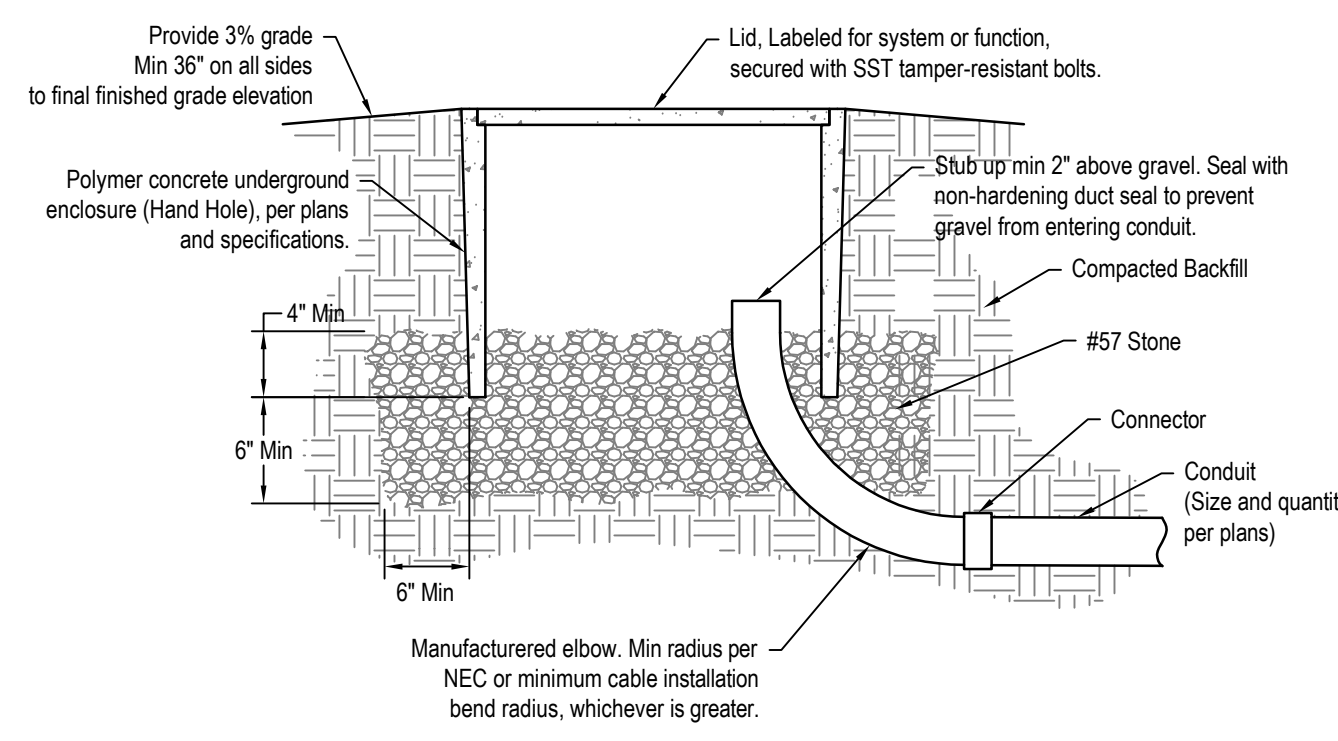
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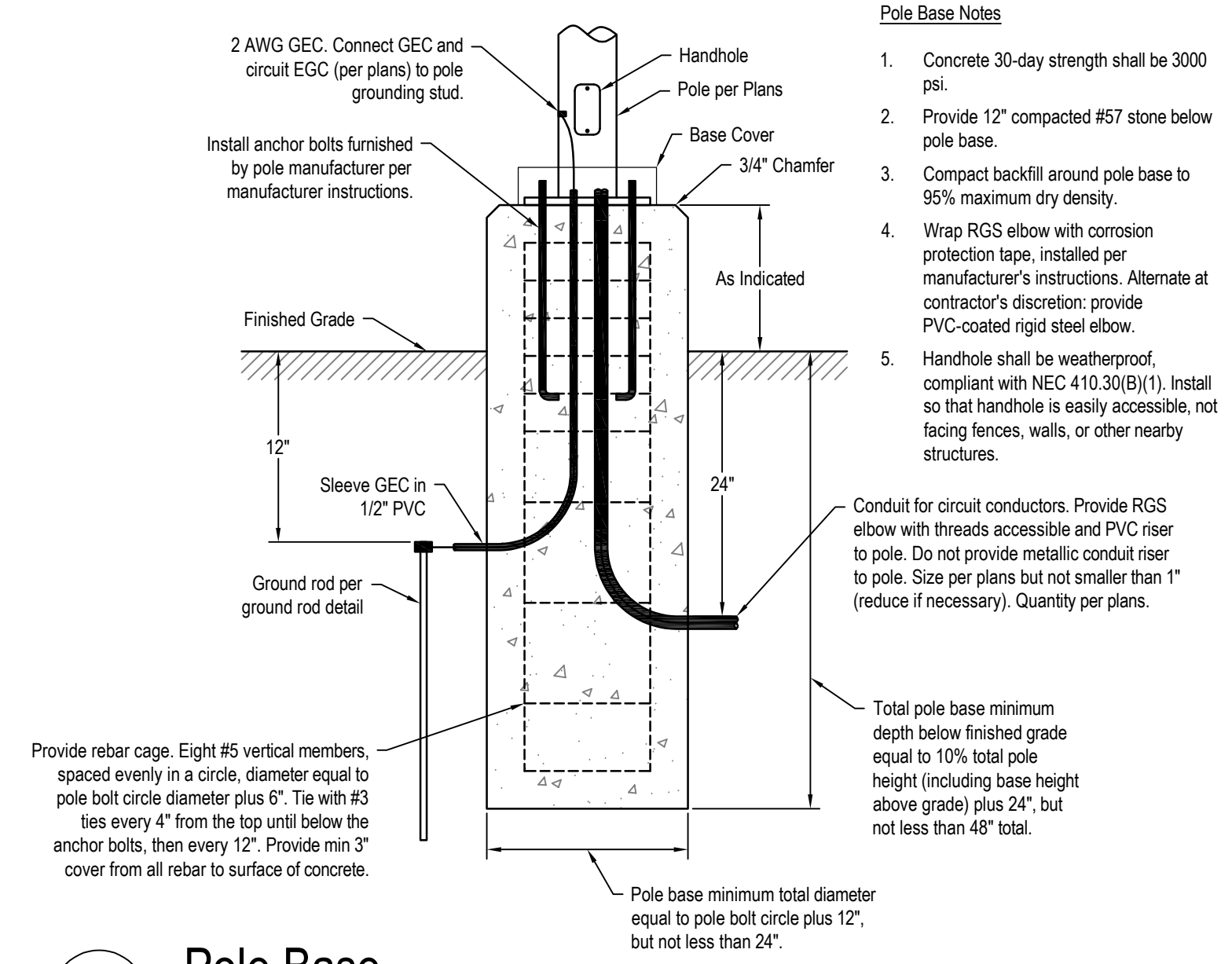
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NTS



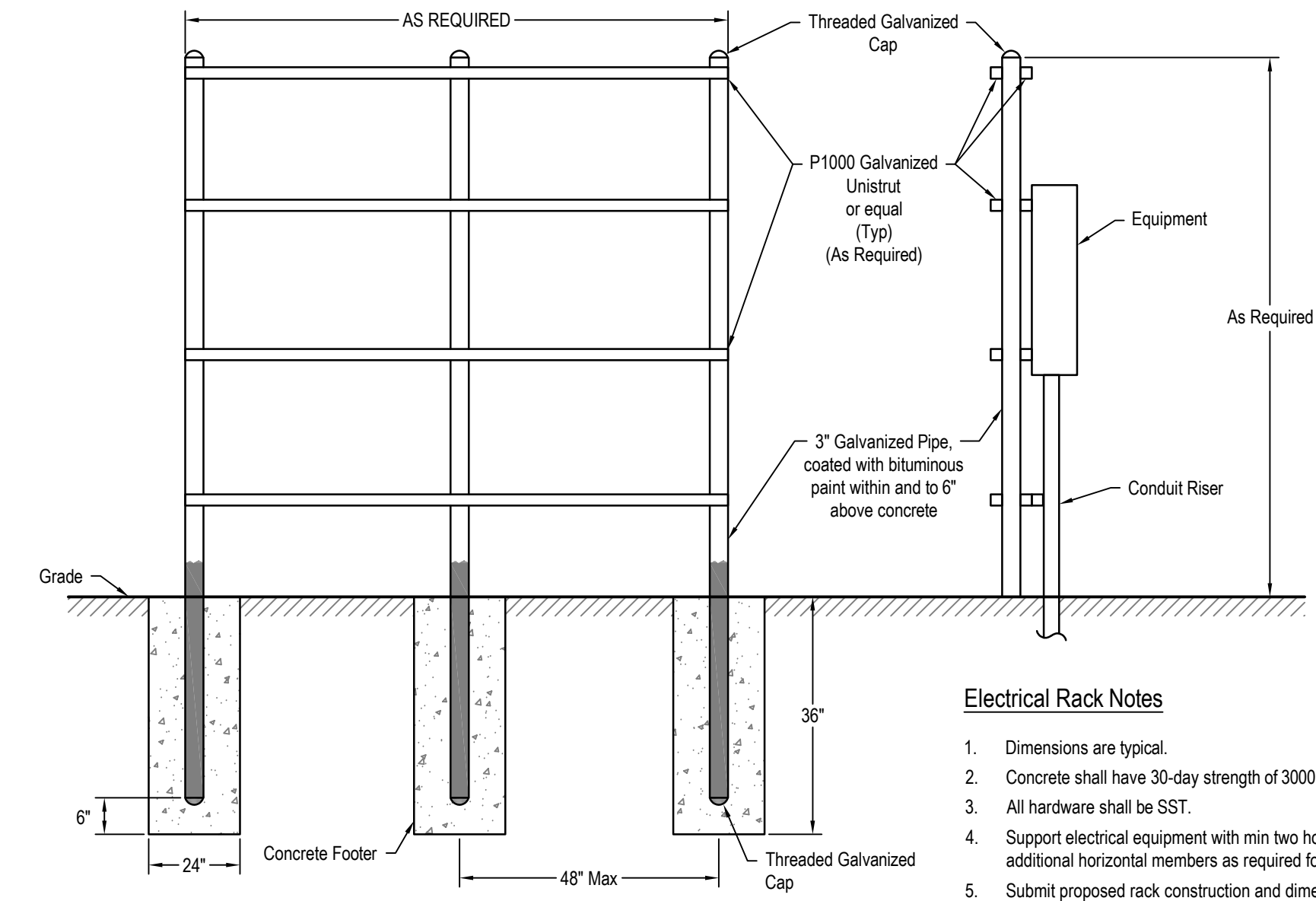
## 5 Hand Hole

NTS



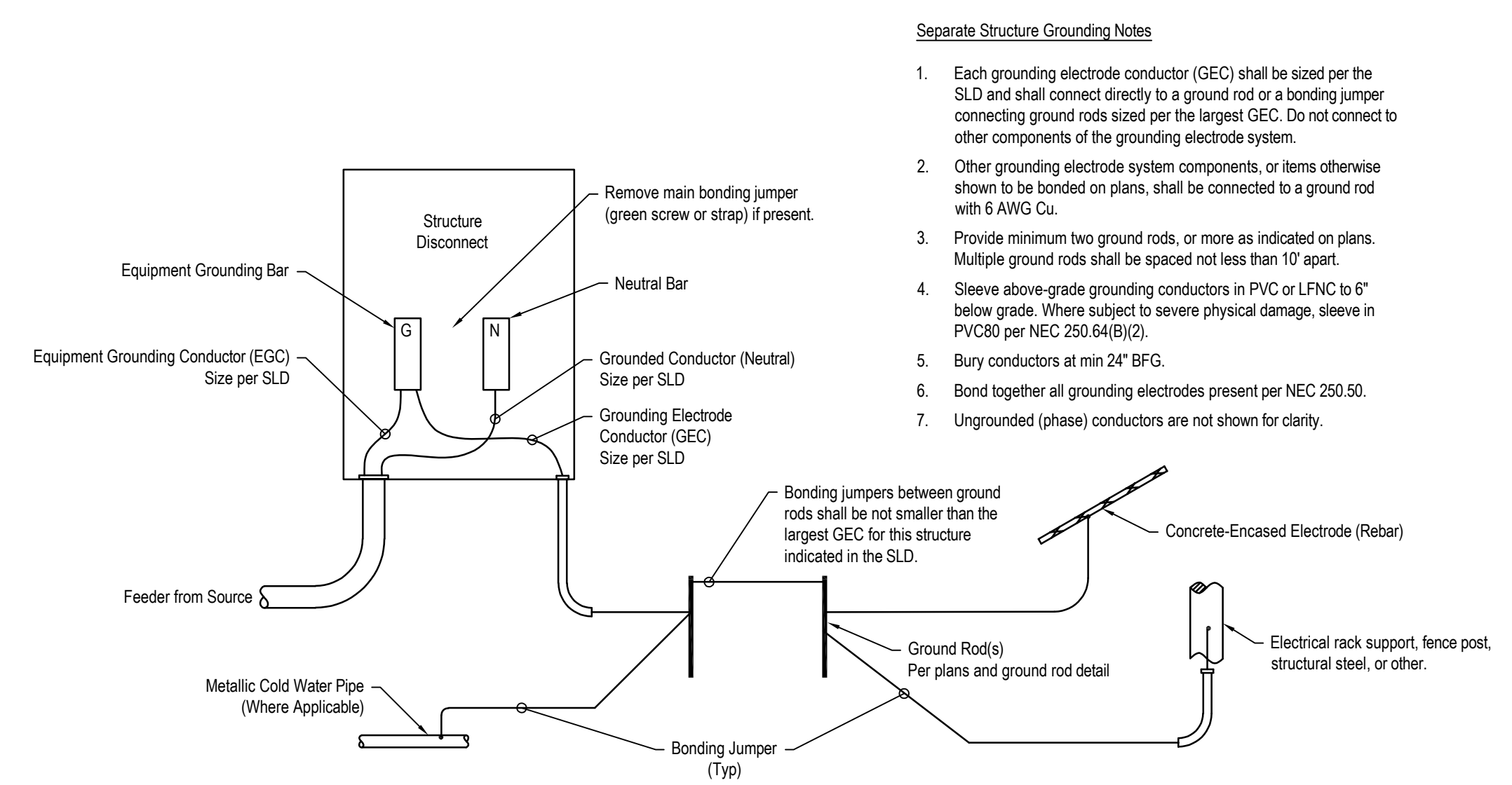
## 4 Pole Base

NTS



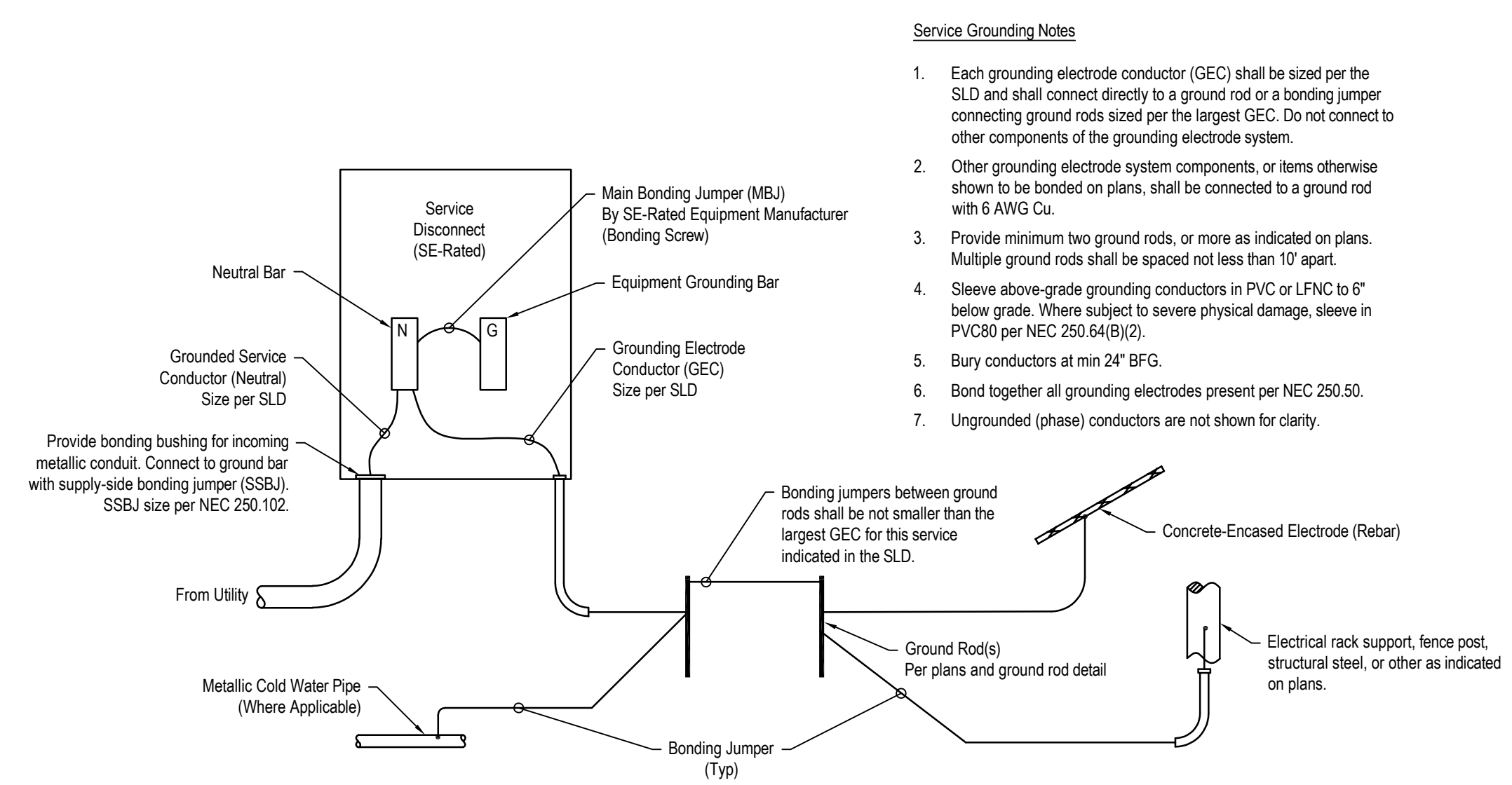
## 3 Electrical Equipment Rack

NTS



## 2 Separate Structure Grounding

NTS



## 1 Grounding Electrode System and Service Grounding

NTS

### Separate Structure Grounding Notes

- Each grounding electrode conductor (GEC) shall be sized per the SLD and shall connect directly to a ground rod or a bonding jumper connecting ground rods sized per the largest GEC. Do not connect to other components of the grounding electrode system.
- Other grounding electrode system components, or items otherwise shown to be bonded on plans, shall be connected to a ground rod with 6 AWG Cu.
- Provide minimum two ground rods, or more as indicated on plans. Multiple ground rods shall be spaced not less than 10' apart.
- Sleeve above-grade grounding conductors in PVC or LFNC to 6" below grade. Where subject to severe physical damage, sleeve in PVC80 per NEC 250.64(B)(2).
- Bury conductors at min 24" BFG.
- Bond together all grounding electrodes present per NEC 250.50.
- Ungrounded (phase) conductors are not shown for clarity.

### Service Grounding Notes

- Each grounding electrode conductor (GEC) shall be sized per the SLD and shall connect directly to a ground rod or a bonding jumper connecting ground rods sized per the largest GEC. Do not connect to other components of the grounding electrode system.
- Other grounding electrode system components, or items otherwise shown to be bonded on plans, shall be connected to a ground rod with 6 AWG Cu.
- Provide minimum two ground rods, or more as indicated on plans. Multiple ground rods shall be spaced not less than 10' apart.
- Sleeve above-grade grounding conductors in PVC or LFNC to 6" below grade. Where subject to severe physical damage, sleeve in PVC80 per NEC 250.64(B)(2).
- Bury conductors at min 24" BFG.
- Bond together all grounding electrodes present per NEC 250.50.
- Ungrounded (phase) conductors are not shown for clarity.

NO.	DATE	DESCRIPTION

Sheet Title:  
**Electrical Details**

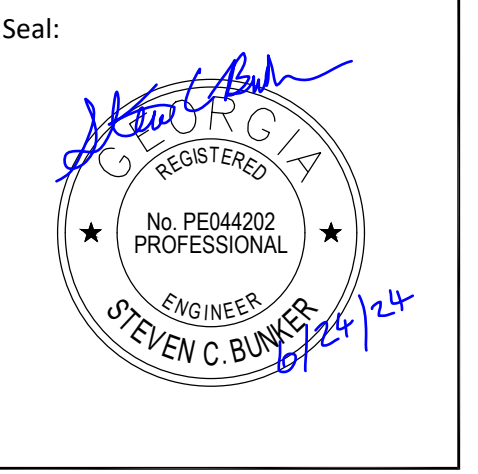
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NO.	DATE	DESCRIPTION

Sheet Title:  
**Electrical Specifications**

Sheet No:  
**E-400**

B. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.  
 C. Verify that field measurements are as indicated.  
 D. Verify that conditions are satisfactory for installation prior to starting work.

**3.02 PREPARATION**  
 A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

**3.03 INSTALLATION**  
 A. Circulating Requirements:  
 1. Unless dimensioned, circuit routing indicated is diagrammatic.  
 2. When circuit installation is indicated without specific routing, determine exact routing required.  
 3. Arrange circuiting to minimize splices.  
 4. Include circuit lengths required to install connected devices within 10 ft (3.0 m) of location indicated.  
 5. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among single phase branch circuits of different phases installed in the same raceway is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.  
 B. Install products in accordance with manufacturer's instructions.  
 C. Perform work in accordance with NECA 1 (general workmanship).  
 D. Installation in Raceway:  
 1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.  
 2. Pull all conductors and cables together into raceway at same time.  
 3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.  
 4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.  
 E. Terminate cables using suitable fittings.  
 F. Install conductors with a minimum of 6 inches (152 mm) of slack at each outlet.  
 G. Where conductors are installed in enclosures for future termination by others, provide a minimum of 4 feet (1.2 m) of slack.  
 H. Neatly tie and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.  
 I. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.  
 J. Make wiring connections using specified wiring connectors.  
 1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies.  
 2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.  
 3. Do not remove conductor strands to facilitate insertion into connector.  
 4. Clean contact surfaces on conductors and connectors to suitably remove corrosion, oxides, and other contaminants. Do not use wire brush on plated connector surfaces.  
 5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.  
 K. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to uninsulated conductors.  
 1. Dry Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.  
 a. For taped connections, first apply adequate amount of rubber splicing electrical tape or electrical filler tape, followed by outer covering of vinyl insulating electrical tape.  
 2. Damp Locations: Use insulating covers specifically designed for the connectors, electrical tape, or heat shrink tubing.  
 a. For connections with insulating covers, apply outer covering of moisture sealing electrical tape.  
 b. For taped connections, follow same procedure as for dry locations but apply outer covering of moisture sealing electrical tape.  
 3. Underground (including within underground enclosures): Use watertight splice kits listed for direct burial and submersible installations.  
 L. Insulate ends of spare conductors using vinyl insulating electrical tape.  
 M. Field-Applied Color Coding: Where vinyl color coding electrical tape is used in lieu of integrally colored insulation as permitted in Part 2 under "Color Coding", apply half overlapping turns of tape for a minimum of 3 inches at each termination and at each location conductors are accessible.  
 N. Identify conductors and cables in accordance with Section 260553.  
 O. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.

END OF SECTION

SECTION 260526  
**GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS**

**PART 1 GENERAL**  
**1.01 SUBMITTALS**  
 A. Product Data: Provide manufacturer's standard catalog pages and data sheets for grounding and bonding system components.  
 B. Field quality control test reports.  
 C. Project Record Documents: Record actual locations of grounding electrode system components and connections.

**1.02 DELIVERY, STORAGE, AND HANDLING**  
 A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.

**PART 2 PRODUCTS**  
**2.01 GROUNDING AND BONDING REQUIREMENTS**  
 A. Do not use products for applications other than as permitted by NFPA 70 and product listing.  
 B. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.  
 C. Grounding Electrode System:  
 1. Provide connection to required and supplemental grounding electrodes indicated to form grounding electrode system.  
 a. Provide continuous grounding electrode conductors without splice or joint.  
 b. Install grounding electrode conductors in nonmetallic raceway.

B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.  
 C. Nonmetallic-sheathed cable is not permitted.  
 D. Underground feeder and branch-circuit cable is not permitted.  
 E. Service entrance cable is not permitted.  
 F. Armored cable is not permitted.  
 G. Metal-clad cable is not permitted.  
 H. Manufactured wiring systems are not permitted.

**2.02 CONDUCTOR AND CABLE GENERAL REQUIREMENTS**  
 A. Provide products that comply with requirements of NFPA 70.  
 B. Provide products listed, classified, and labeled as suitable for the purpose intended.  
 C. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.  
 D. Comply with NEMA WC 70.  
 E. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.  
 F. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.  
 G. Conductors for Grounding and Bonding: Also comply with Section 260526.  
 H. Conductors and Cables Installed Where Exposed to Direct Rays of Sun: Listed and labeled as sunlight resistant.  
 I. Conductor Material:  
 1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.  
 2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.  
 3. Tinned Copper Conductors: Comply with ASTM B33.  
 J. Minimum Conductor Size:  
 1. Branch Circuits: 12 AWG.  
 2. Control Circuits: 14 AWG.  
 K. Power Conductor Color Coding:  
 1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.  
 2. Color Coding Method: Integrally colored insulation.  
 a. Conductors size 4 AWG and larger may have black insulation color coded using vinyl color coding electrical tape.  
 3. Color Code:  
 a. 240/120 V, 1 Phase, 3 Wire System:  
 1) Phase A: Black.  
 2) Phase B: Red.  
 3) Neutral/Grounded: White.  
 b. Equipment Ground, All Systems: Green.  
 c. Travelers for 3-Way and 4-Way Switching: Pink.  
 d. For control circuits, comply with manufacturer's recommended color code.

**2.03 SINGLE CONDUCTOR BUILDING WIRE**  
 A. Description: Single conductor insulated wire.  
 B. Conductor Stranding:  
 1. Feeders and Branch Circuits:  
 a. Size 10 AWG and Smaller: Solid.  
 b. Size 8 AWG and Larger: Stranded.  
 2. Control Circuits: Stranded.  
 C. Insulation Voltage Rating: 600 V.  
 D. Insulation:  
 1. Copper Building Wire: Type THHN/THWN-2 or XHHW-2, rated for 90°C in wet and dry environments.

**2.04 WIRING CONNECTORS**  
 A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.  
 B. Connectors for Grounding and Bonding: Comply with Section 260526.  
 C. Wiring Connectors for Splices and Taps:  
 1. Copper Conductors Size 8 AWG and Smaller : Use twist-on insulated spring connectors.  
 2. Copper Conductors Size 6 AWG and Larger : Use mechanical connectors.  
 3. Underground splices (including within underground enclosures): Use submersible insulated splice connectors.  
 D. Wiring Connectors for Terminations:  
 1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.  
 2. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.  
 3. Where multiple wires are shown to be connected at a single point on any equipment terminal, provide suitable lugs/terminals for the number of conductors as identified by the manufacturer.  
 4. Copper Conductors Size 8 AWG and Larger : Use mechanical connectors where connectors are required .  
 5. Stranded Conductors Size 10 AWG and Smaller: Use crimped terminals for connections to terminal screws.  
 6. Conductors for Control Circuits: Use crimped terminals for all connections.  
 E. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.  
 F. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F (105 degrees C) for standard applications and 302 degrees F (150 degrees C) for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.  
 G. Mechanical Connectors: Provide bolted type or set-screw type.  
 H. Crimped Terminals: Nylon-insulated, with insulation grip and terminal configuration suitable for connection to be made.  
 I. Submersible Insulated Splice Connectors: Insulated wire connectors rated for direct burial and submersible applications.  
 1. Polaris SLWB, SLWOB, IPLWB, or SSWB  
 2. RAB Flood-Seal Wiring Conector  
 3. Burndy DIBS DB  
 4. Ilco PED3-DB

**PART 3 EXECUTION**  
**3.01 EXAMINATION**  
 A. Verify that work likely to damage wire and cable has been completed.

I. Grade the bottom of trenches to provide uniform support for conduits on undisturbed soil at every point along its entire length. Fill overdepths with loose, granular, moist soil, tamped.  
 J. Backfill with unfrozen excavated materials approved for backfilling, consisting of earth, loam, sandy clay, sand, and gravel or soft shale, free from large clods of earth and large stones or boulders.  
 K. Place and compact materials in equal continuous layers not exceeding 6 inches compacted depth.  
 L. Compact materials to 95% maximum dry density. Settling backfill with water is not permitted. Reopen any trenches not meeting compaction requirements or where settlement occurs.  
 M. Any area disturbed during excavation shall be repaired to its original condition, including paving, concrete, grassing, sod, gravel, etc.  
 N. Photograph all underground construction prior to covering. Take photos in quantities, resolution, and detail sufficient to show compliance with project documents, including photos with measuring tape indicating depths. Submit photos, in digital format, to Engineer.

**3.04 CLEANING AND PAINTING**  
 A. Prior to final inspection, clean all oil, dirt, grease, and other foreign materials from all installed electrical materials and equipment.  
 B. Prior to final inspection, scratched or marred surfaces of lighting fixtures, cabinet trims, or other equipment enclosures shall be touched up with paint or other coating furnished by the equipment manufacturer specifically for that purpose.

**3.05 OPERATIONAL TESTS**  
 A. Operational tests shall be completed after system startup and prior to final inspection.  
 B. Perform all operational tests according to the project documents, each manufacturer's written recommendations, and authorities having jurisdiction.  
 C. Provide all labor, equipment, and incidentals required for testing, and pay for utility services (including electric power) required for the tests. Provide manufacturer field services when specified.  
 D. All defective material and workmanship disclosed shall be corrected by the Contractor at no cost to the Owner.  
 E. The Contractor shall show by demonstration in service that all circuits and devices are in good operating condition.  
 F. Tests shall be such that each item of control equipment functions not less than five times.  
 G. After each test/inspection, promptly submit the test or inspection report to the Engineer. Include date issued, project title and number, name of inspector, date and time of inspection or test, identification of the product and specification section, location in the project, type of test/inspection, and results of test/inspection. When requested, provide interpretation of the results.  
 H. Test report submittals are for the Owner's and Engineer's knowledge for the limited purpose of assessing compliance with the information given and the design concept expressed in the contract documents, or for Owner's information.

**3.06 FINAL INSPECTION**  
 A. Upon request by Owner, Engineer, or other inspector, remove equipment covers, perform control functions, test equipment to demonstrate proper working order.  
 B. Upon request by the Owner or Engineer, demonstrate the operation of the system or any of its components.

**3.07 RECORD DOCUMENTS AND CLOSEOUT**  
 A. At the time of final inspection, provide data on electrical equipment used in the project and as-built drawings reflecting all field changes. Submit one electronic (PDF) copy of each document required, plus one (1) bound hardcopy. Record Documents shall include the following items, minimum:  
 1. Contact information for all contractors and subcontractors involved in construction.  
 2. Approved shop drawings, including data sheets, for all installed equipment and each major component.  
 3. Final electrical equipment circuit directories, reflecting field changes, including wire size for each circuit.  
 4. As-built drawings, including dimensioned locations of all electrical wire installations.  
 5. Actual installed locations of all below-grade conduits, including total length of each run.  
 6. Warranty information for all installed equipment and each major component.  
 7. Inventory, operational descriptions, and complete operating and maintenance instructions for all installed equipment and each major component.  
 8. Results of all tests performed.  
 9. Contact information for local service companies for all installed equipment and each major component.  
 10. Contact information for local contractors capable of performing emergency repairs.

**3.08 WARRANTY**  
 A. All systems, component parts, and installations shall be guaranteed for a minimum of one year from the date of final acceptance of the completed project. Defects found during this guarantee period shall be promptly corrected at no additional cost to the Owner.

END OF SECTION  
 SECTION 260519  
 ELECTRICAL CONDUCTORS AND CABLES

**PART 1 GENERAL**  
**1.01 ADMINISTRATIVE REQUIREMENTS**  
 A. Coordination:  
 1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.  
 2. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.  
 3. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.  
 B. Sequencing:  
 1. Do not begin installation of conductors and cables until installation of raceway system between termination points is complete.

**1.02 SUBMITTALS**  
 A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conductors and cables, including detailed information on materials, construction, ratings, listings, and available sizes, configurations, and stranding.

**PART 2 PRODUCTS**  
**2.01 CONDUCTOR AND CABLE APPLICATIONS**  
 A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.

6. Submittals not meeting these requirements will be returned without review for resubmission.  
 B. Submittals will be approved only to the extent of information shown. Approval of an item of equipment shall not be construed to mean approval for components of that item for which the Contractor has provided no information.  
 C. Submittals shall be reviewed for the limited purpose of checking for compliance with information given and the design concept expressed in the Contract Documents.  
 D. Submittal requirements are contained within specification sections pertaining to those items. In addition to submittals required by other sections, submit the following:  
 1. Maximum available fault current (from utility).  
 a. Prior to submitting shop drawings, contact the electric utility company and obtain in writing the maximum available fault current at the utility service point. Submit this information to the Engineer with the electrical gear submittal.  
 2. Shop drawings for fabricated electrical equipment racks, including:  
 a. Dimensioned drawing of rack construction  
 b. Dimensioned drawing of equipment layout/locations on each rack  
 E. Engineer shall review and return submittals within 10 business days of receipt.

**1.09 SUBMITTALS FOR CLOSEOUT**  
 A. Submit project record documents, operations and maintenance data, warranties, and other data indicated in the contract documents.

**PART 2 PRODUCTS**  
**2.01 GENERAL PRODUCT REQUIREMENTS**  
 A. Provide products that comply with requirements of NFPA 70.  
 B. Provide products listed and labeled by a nationally recognized testing laboratory as suitable for the purpose intended.  
 C. All material and equipment shall be the product of an established and reputable manufacturer; shall be new and of first class construction and must be designed and warranted to perform the service required.  
 D. When a specified or indicated item has been superseded or is no longer available, the manufacturer's latest equivalent type or model of material or equipment as approved by the Engineer shall be furnished and installed at no additional cost to the Owner.  
 E. Materials of the same type shall be the product of one manufacturer.  
 F. Provide stands, racks, brackets, supports, and similar equipment required to properly serve the equipment which is furnished.  
 G. Device and equipment terminations rated higher than 30A shall be rated at 75°C.  
 2.02 SUBSTITUTIONS  
 A. Any manufacturer's name or model number indicated in the drawings or specifications is intended to provide a quality standard and a basis of design.  
 B. Contractor may propose substitutions to items identified within the contract documents if they meet all standards of quality and if they are suitable for the purpose intended, as determined by the Owner.  
 C. All costs incurred by the acceptance of substitutions, including redesign costs, shall be borne by the Contractor.

**PART 3 EXECUTION**  
**3.01 INSTALLATION**  
 A. Perform work in accordance with NECA 1 (general workmanship).  
 B. Install all products in accordance with manufacturer's, vendor's, and/or supplier's instructions and recommendations.  
 C. Provide code-required and manufacturer-recommended or required working and maintenance clearances about all equipment.  
 D. Torque feeders and circuitry per the panel, breaker, device, or particular equipment manufacturer's specifications.

**3.02 DEMOLITION AND RENOVATION**  
 A. Verify existing conditions. Items shown on the demolition plans are for reference only. Any items required to be removed or relocated to accommodate new construction shall be done at the contractor's cost, regardless of its presence (or lack of presence) on the drawings.  
 B. Unless otherwise noted, for all items to be demolished, remove all associated boxes, conduit, conductors, cables, supports, and appurtenances to the source of power. Items may be re-used in-place (i.e. not removed and reinstalled elsewhere) where appropriate for the new work plans.  
 C. Coordinate required electrical outages with the Owner with two weeks minimum advance notice. Verify that circuit outages do not affect tenants or staff outside of the area of work.  
 D. After removing conductors, underground conduit may be abandoned in-place where it does not interfere with new construction. Where accessible, demolish conduit from above ground to after the first below-grade bend (demolish the bend). Where abandoned underground conduit enters building from below the building footprint or stubs up through outdoor concrete, cut conduit flush with floor or concrete and seal grout or cement flush with floor.  
 E. Properly dispose of all waste materials, demolition materials, and other trash, including proper disposal of mercury-containing lamps, polychlorinated biphenyls (PCB), and recyclable materials, according to local, state, and federal regulations.  
 F. At no additional cost to the Owner, patch and refinish to like-new condition acceptable to the owner any wall, ceiling, or floor openings resulting from demolition or new work in existing areas. Protect patches of rated constructions or assemblies as required to maintain rating.  
 G. Where conduit is removed from an existing-to-remain enclosure, provide galvanized rigid steel blanks or stainless steel blanks for stainless steel enclosures to cover the opening or hole.

**3.03 EXCAVATION, TRENCHING, AND BACKFILLING**  
 A. The contractor shall perform all excavation required to install the work as specified.  
 B. Provide all erosion control for this project as required by authorities having jurisdiction.  
 C. During excavation, material for backfilling shall be piled back from the banks of the trench to avoid overloading and to prevent slides and cave-ins. All excavated materials not used for backfill shall be removed and disposed by the contractor.  
 D. Grade to prevent surface water from flowing into open trenches. Any water accumulated within the trench shall be removed by pumping.  
 E. Hand trim excavations and remove loose matter.  
 F. Remove large stones and other hard matter that could damage conduit or impede consistent backfilling or compaction.  
 G. Do not interfere with 45 degree bearing splay of foundations.  
 H. Cut trenches wide enough to allow inspection of installed utilities.

DIVISION 26 - ELECTRICAL  
 SECTION 260100  
 ELECTRICAL GENERAL REQUIREMENTS

**PART 1 GENERAL**  
**1.01 GENERAL**  
 A. As used in these documents, the word "furnish" shall mean to order, purchase, and receive delivery, "install" shall mean to make ready for installation, install, connect, test, and make complete and ready for operation, and "provide" shall mean to furnish and install according to the definitions above.  
 B. As used in these documents, the word "verify" shall mean to check the conditions on site against the Drawings and adjust work to match site conditions or notify the Engineer of conflicts or discrepancies which cannot be resolved in the field.  
 C. Provide all labor, transportation, supervision, materials, tools, and equipment, and perform all work and services necessary for, or incidental to, the furnishing and installation of all electrical work as shown on the drawings and as specified in the Contract Documents.  
 D. Unless noted otherwise, provide final electrical connections to all equipment and devices in the contract documents, including those furnished by other trades, as required for a complete, fully functional operating system.  
 E. Coordinate with the work of other trades involved in the construction in order to avoid conflict during construction and to allow for required maintenance and working space for equipment.  
 F. The Contractor is responsible for additional costs which may result from unapproved deviation from the Contract Documents.  
 G. Although such work may not be specifically shown or specified, provide as part of the work all supplementary or miscellaneous items, appurtenances, and devices incidental to or necessary for a sound, secure, and complete installation.  
 H. Electrical work shall be complete and left in operating condition in accordance with the drawings and specifications.

**1.02 DRAWINGS**  
 A. Conduit Routing: Conduits and wiring are shown diagrammatically or conceptually only. The layout does not necessarily show the total number of conduits for the circuits required, nor are the locations of indicated runs intended to show the exact routing of conduits. Actual routing and quantity of conduits shall be determined by the contractor to suit field conditions.  
 B. Equipment Locations: The drawings show the general locations of feeders, transformers, equipment, outlets, conduits, and circuit arrangements. Exact equipment and device layout and locations shall be determined by the contractor to suit field conditions and provided equipment, conforming to the requirements of the contract documents. Where Contractor proposes significantly different equipment arrangement, submit for approval prior to construction.  
 C. Equipment Electrical: Prior to connecting equipment provided by others, verify the voltage and load information on the equipment's nameplate with the Drawings. Contact the Engineer with any discrepancies.  
 D. Do not scale the drawings. Dimensions required for layout of equipment shall be obtained from dimensioned plans unless specifically indicated on the drawings.  
 E. Discrepancies shown on different drawings, between the drawings and the specifications, or between the contract documents and field conditions shall be promptly brought to the attention of the Owner's Representative.

**1.03 ABBREVIATIONS**  
 A. Abbreviations defined within the electrical drawings also apply to Division 26 specifications.  
 B. Abbreviations defined within Division 26 specifications shall also apply to the electrical drawings.

**1.04 LOCAL CONDITIONS**  
 A. Contractor shall examine the site and become familiar with conditions affecting the work. Investigate, determine, and verify any overhead or buried utilities on or near the site, and determine such locations in conjunction with all public and/or private utility companies and with all authorities having jurisdiction. All costs, both temporary and permanent, to connect all utilities shall be included in the bid. The contractor shall be responsible for scheduling and coordinating with the local utility for temporary and permanent services.  
 B. Protect existing underground utilities during construction.

**1.05 NEW ELECTRICAL SERVICE**  
 A. Electrical service shall be: as indicated on the plans.  
 B. Coordinate with the electric utility company to determine all requirements for the electrical service. The Contractor shall apply for and pay for new service for the owner. Contractor shall pay for all electricity charges incurred until final inspection and turnover to the Owner.  
 C. Provide complete utility metering systems in accordance with the utility's standards. Coordinate meter location with the utility. Contractor shall pay all costs required by the utility for metering installation.  
 D. Where required, provide transformer concrete pad in accordance with the utility's standard's.

**1.06 PERMITS**  
 A. Contractor shall apply for and pay for all permits and inspection certificates required by the Authority Having Jurisdiction. Comply with all requirements of the Authority Having Jurisdiction.

**1.07 APPLICABLE CONSTRUCTION CODES AND STANDARDS**  
 A. Installation shall meet or exceed the requirements and recommendations of the following codes, regulations, standards and/or other authorities exercising jurisdiction over the electrical construction work and the project.  
 B. State of Georgia:  
 1. NFPA 70 National Electrical Code, 2020 Edition (NEC)

**1.08 SUBMITTALS FOR REVIEW**  
 A. Submit for review by the Owner and Engineer Product Data required by the Contract Documents.  
 1. Provide sufficient descriptive material (such as catalog pages, data sheets, diagrams) to evaluate the adequacy of the product for the application and compliance with drawings and specifications.  
 2. Submit each item in PDF format. Mark or otherwise indicate exact product selections and options where multiple options are presented on a page. Do not submit pages which contain irrelevant or unrelated content (such as entire catalogs).  
 3. Submittals shall be legible.  
 4. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.  
 5. When revised for resubmission, identify all changes made since previous submission.



2. Metal Underground Water Pipe(s):
  - a. Provide connection to underground metal water service pipe(s) that are in direct contact with earth for at least 10 feet (3.0 m) at an accessible location not more than 5 feet (1.5 m) from the point of entrance to the building.
  - b. Provide bonding jumper(s) around insulating joints/pipes as required to make pipe electrically continuous.
  - c. Provide bonding jumper around water meter, pressure reducing valve, backflow preventer, and other similar devices of sufficient length to permit removal of meter without disconnecting jumper.
3. Metal In-Ground Support Structure:
  - a. Provide connection to metal in-ground support structure that is in direct contact with earth in accordance with NFPA 70.
4. Concrete-Encased Electrode:
  - a. For new installations, where present, provide connection to concrete-encased electrode consisting of not less than 20 feet (6.0 m) of steel reinforcing bars embedded within concrete foundation or footing that is in direct contact with earth in accordance with NFPA 70.
5. Ground Rod Electrode(s):
  - a. Provide electrodes as indicated on the drawings.
  - b. Space electrodes not less than 10 feet (3.0 m) from each other and any other ground electrode.

- D. Service-Supplied System Grounding:
1. For each service disconnect, provide grounding electrode conductor to connect neutral (grounded) service conductor to grounding electrode system. Unless otherwise indicated, make connection at neutral (grounded) bus in service disconnect enclosure.
  2. For each service disconnect, provide main bonding jumper to connect neutral (grounded) bus to equipment ground bus where not factory-installed. Do not make any other connections between neutral (grounded) conductors and ground on load side of service disconnect.

E. Grounding for Separate Building or Structure Supplied by Feeder(s) or Branch Circuits:

1. Provide grounding electrode system for each separate building or structure.
2. Provide equipment grounding conductor routed with supply conductors.
3. For each disconnecting means, provide grounding electrode conductor to connect equipment ground bus to grounding electrode system.
4. Do not make any connections and remove any factory-installed jumpers between neutral (grounded) conductors and ground.

F. Bonding and Equipment Grounding:

1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.
  2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
  3. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
  4. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
- G. Pole-Mounted Luminaires: Also comply with Section 265600.

2.02 GROUNDING AND BONDING COMPONENTS

A. General Requirements:

1. Provide products listed, classified, and labeled as suitable for the purpose intended.
2. Provide products listed and labeled as complying with UL 467 where applicable.

B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 260519:

1. Use insulated copper conductors unless otherwise indicated.
  - a. Exceptions:
    - 1) Use bare copper conductors where installed underground in direct contact with earth.
    - 2) Use bare copper conductors where directly encased in concrete (not in raceway).
    - 3) Use bare copper conductors where installed exterior and not in a raceway.
2. Factory Pre-fabricated Bonding Jumpers: Furnished with factory-installed ferrules; size braided cables to provide equivalent gauge of specified conductors. Where installed on moving parts, attach at locations and provide length as required so that strap neither binds nor becomes taut along the full range of motion.

C. Connectors for Grounding and Bonding:

1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
2. Unless otherwise indicated, use exothermic welded connections or compression connectors for underground, concealed and other inaccessible connections.
3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.

D. Ground Rod Electrodes:

1. Comply with NEMA GR 1.
2. Material: Copper-bonded (copper-clad) steel.
3. Size: 3/4 inch (19 mm) diameter by 10 feet (3.0 m) length, unless otherwise indicated.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that work likely to damage grounding and bonding system components has been completed.
- B. Verify that field measurements are as indicated.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Ground Rod Electrodes: Unless otherwise indicated, install ground rod electrodes vertically. Where encountered rock prohibits vertical installation, install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70 or provide ground plates.
  1. Outdoor Installations: Unless otherwise indicated, install with top of rod 6 inches (150 mm) below finished grade.

D. Bonding Conductors:

1. Protect all bonding conductors by installing within Schedule 80 PVC conduit. Where flexibility is required, LFNC may be used. Conduit may terminate 6" below finished grade where conductor runs bare underground.
  2. Install bonding conductors so that no bend in the conductor has a radius of less than 8 inches, whether within conduit or exposed. Do not install bonding conductors through "L" conduit bodies unless the 8" minimum bend can be maintained.
- E. Make grounding and bonding connections using specified connectors.
1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
  2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
  3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
  4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
  5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- F. Identify grounding and bonding system components in accordance with Section 260553.

END OF SECTION

SECTION 260529

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate sizes and arrangement of supports and bases with actual equipment and components to be installed.
  2. Coordinate work to provide additional framing and materials required for installation.
  3. Coordinate compatibility of support and attachment components with mounting surfaces at installed locations.
  4. Notify Engineer of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
1. Do not install products on or provide attachment to concrete surfaces until concrete has cured.

PART 2 PRODUCTS

2.01 SUPPORT AND ATTACHMENT COMPONENTS

A. General Requirements:

1. Comply with the following. Where requirements differ, comply with most stringent.
  - a. NFPA 70.
  - b. Requirements of authorities having jurisdiction.
2. Provide required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for complete installation of electrical work.
3. Provide products listed, classified, and labeled as suitable for purpose intended, where applicable.
4. Do not use products for applications other than as permitted by NFPA 70 and product listing.
5. Do not use wire, chain, perforated pipe strap, or wood for permanent supports unless specifically indicated or permitted.
6. Steel Components: Use corrosion-resistant materials suitable for environment where installed.
  - a. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel, stainless steel, or approved equivalent unless otherwise indicated.
  - b. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
  - c. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.

B. Conduit and Cable Supports: Straps and clamps suitable for conduit or cable to be supported.

1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
2. Conduit Clamps: Bolted type unless otherwise indicated.

C. Outlet Box Supports: Hangers and brackets suitable for boxes to be supported.

D. Metal Channel/Strut Framing Systems:

1. Description: Factory-fabricated, continuous-slot, metal channel/strut and associated fittings, accessories, and hardware required for field assembly of supports.
2. Comply with MFMA-4.
3. Channel Material:
  - a. Outdoor and Damp or Wet Indoor Locations: Use galvanized steel or stainless steel or as indicated by the drawings.
  - b. Minimum Channel Thickness: Steel sheet, 12 gauge, 0.1046 inch (2.66 mm).
  - c. Minimum Channel Dimensions: 1-5/8 inch (41 mm) width by 13/16 inch (21 mm) height.

E. Anchors and Fasteners:

1. Unless otherwise indicated and where not otherwise restricted, use anchor and fastener types indicated for specified applications.
2. Concrete: Use expansion anchors or screw anchors.
3. Solid or Grout-Filled Masonry: Use expansion anchors or screw anchors.
4. Hollow Masonry: Use toggle bolts.
5. Steel: Use beam clamps, machine bolts, or welded threaded studs.
6. Sheet Metal: Use sheet metal screws.
7. Wood: Use wood screws.
8. Plastic and lead anchors are not permitted.
9. Powder-actuated fasteners are not permitted.
10. Hammer-driven anchors and fasteners are not permitted.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install hangers and supports in accordance with NECA 1.
- C. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.
- D. Equipment Support and Attachment:
  1. Use metal, fabricated supports or supports assembled from metal channel/strut to support equipment as required.
  2. Use metal channel/strut to support surface-mounted equipment and boxes or enclosures with any dimension greater than 4 inches in wet or damp locations to provide space between equipment and mounting surface.

- E. Secure fasteners in accordance with manufacturer's recommended torque settings.
- F. Remove temporary supports.

3.02 FIELD QUALITY CONTROL

- A. Inspect support and attachment components for damage and defects.
- B. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- C. Correct deficiencies and replace damaged or defective support and attachment components.

END OF SECTION

SECTION 260533.13

CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Verify exact conduit termination locations required for boxes, enclosures, and equipment.
2. Notify Engineer of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

B. Sequencing:

1. Do not begin installation of conductors and cables until installation of conduit between termination points is complete.

1.02 SUBMITTALS

- A. Product Data: Provide manufacturer's standard catalog pages and data sheets for conduits, fittings, and accessories, including paint and coatings where specified.
- B. Project Record Documents: Record actual routing for conduits installed underground; conduits embedded within concrete slabs, and conduits 2-inch (53 mm) trade size and larger. Indicate total length of conduit installed underground or embedded in concrete.

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

- A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70, manufacturer's instructions, and product listing.
- B. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit must transition to a different type due to location or environment change, transition to the more restrictive conduit type at least 6 inches before the environment or location change. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit.
- C. Underground:
  1. Under Slab on Grade: Use galvanized steel rigid metal conduit or rigid PVC conduit.
  2. Exterior, Direct-Buried: Use galvanized steel rigid metal conduit or rigid PVC conduit.
  3. Where rigid polyvinyl (PVC) conduit is provided, transition to galvanized steel rigid metal conduit where emerging from underground. Entire bend shall be concealed below grade. Conduit shall rise vertically from grade or through concrete.
  4. Where steel conduit emerges from concrete to soil, use corrosion protection tape or bituminous paint to provide supplementary corrosion protection for a minimum of 4 inches (100 mm) on each side of where conduit emerges.
  5. Where steel conduit emerges from concrete into unconditioned (exterior) air, use bituminous paint to provide supplementary corrosion protection for a minimum of 4 inches (100 mm) on each side of where conduit emerges.
- D. Exposed, Exterior: Use galvanized steel rigid metal conduit.
- E. Connections to Luminaires Above Accessible Ceilings: Use flexible metal conduit.
  1. Maximum Length: 6 feet (1.8 m).
- F. Conduit or Sleeves for Grounding and Bonding conductors: Use non-metallic conduit only.
  1. Not subject to physical damage: PVC Schedule 40
  2. Subject to physical damage: PVC Schedule 80
  3. Where flexibility is required: liquidtight flexible non-metallic conduit (LFNC)

G. Grounding and Bonding Conductors:

1. Where installed above ground, sleeve grounding electrode conductors and bonding jumpers in non-metallic. Provide conduit sleeve from a maximum of 6 inches from each above grounding bonding connection to a minimum of 6 inches below grade.

2.02 CONDUIT - GENERAL REQUIREMENTS

A. Comply with NFPA 70.

B. Fittings for Grounding and Bonding: See Section 260526 for additional requirements.

C. Provide conduit, fittings, supports, and accessories required for complete raceway system.

D. Provide products listed, classified, and labeled as suitable for purpose intended.

E. Minimum Conduit Size, Unless Otherwise Indicated:

1. Branch Circuits: 3/4 inch (21 mm) trade size.
2. Underground, Exterior: 1-inch (27 mm) trade size.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.

B. Fittings:

1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.
2. Material: Use steel or malleable iron.
3. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.04 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

- A. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C.

B. Fittings:

1. Manufacturer: Same as manufacturer of conduit to be connected.
2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.

2.05 LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT (LFNC)

- A. Description: NFPA 70, Type LFNC liquidtight flexible nonmetallic conduit listed and labeled as complying with UL 1660.

B. Fittings:

1. Manufacturer: Same as manufacturer of conduit to be connected.
2. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B; suitable for type of conduit to be connected.

2.06 ACCESSORIES

- A. Corrosion Protection Tape: PVC-based, minimum thickness of 20 mil, 0.020 inch (0.51 mm).

1. Products:
  - a. 3M Scotchtrap 51

- B. Bituminous Paint for Corrosion Protection: solvent-based bitumen, black, identified by the manufacturer for the purpose of corrosion protection of bare metal.

- C. Conduit Joint Compound: Corrosion-resistant, electrically conductive compound listed as complying with UL 2419; suitable for use with conduit to be installed.

- D. Solvent Cement for PVC Conduit and Fittings: As recommended by manufacturer of conduit and fittings to be installed.

- E. Pull Strings: For pull string left within spare conduits, use nylon cord with average breaking strength of not less than 200 pound-force (890 N).

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install conduit in accordance with NECA 1.
- C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.
- D. Install rigid polyvinyl chloride (PVC) conduit in accordance with NECA 111.
- E. Install liquidtight flexible nonmetallic conduit (LFNC) in accordance with NECA 111.
- F. Conduit Routing:
  1. Unless dimensioned, conduit routing indicated is diagrammatic.
  2. When conduit destination is indicated without specific routing, determine exact routing required.
  3. Conduits installed underground or embedded in concrete may be routed in shortest possible manner unless otherwise indicated. Route other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.
    - a. Do not route underground conduit beneath athletic fields unless specifically indicated.
  4. Arrange conduit to provide no more than the equivalent of four 90 degree bends between pull points. Provide pull boxes as required.
    - a. Where underground pull points are required and not shown on plans, submit proposed locations for approval.
  5. Arrange conduit to provide so that manufacturer's recommended maximum pulling tension and conduit sidewall pressure is not exceeded in between pull points.
  6. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect. Maintain minimum clearance of 6 inches (150 mm) between conduits and piping for other systems where possible.
  - 7.

- G. Conduit Support:
1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 260529.
  2. Use conduit strap to support single surface-mounted conduit.
    - a. Use clamp back spacer with conduit strap for damp and wet locations to provide space between conduit and mounting surface.
  3. Use of spring steel conduit clips for support of conduits is not permitted.
  4. Use of wire for support of conduits is not permitted.

H. Connections and Terminations:

1. Use approved conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads. Do not use compression fittings.
3. Wherever feasible, make conduit connections to outdoor enclosures on the bottom of the enclosure. Where it is not feasible to make connections at the bottom of the enclosure, install such that, should the hub leak, water will not drip directly onto live parts.
4. Use suitable adapters where required to transition from one type of conduit to another.
5. Provide drip loops for liquidtight flexible conduit connections to prevent drainage of liquid into connectors.
6. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
7. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
8. Secure joints and connections to provide mechanical strength and electrical continuity.

I. Penetrations:

1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
2. Make penetrations perpendicular to surfaces unless otherwise indicated.
3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
4. Conceal bends for conduit risers emerging above ground.
5. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
6. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and maintain roof warranty.
7. Provide metal escutcheon plates for conduit penetrations exposed to public view.

J. Underground Installation:

1. Minimum Cover, Unless Otherwise Indicated or Required:
  - a. Underground, Exterior: 24 inches (610 mm)
  - b. Under Slab on Grade: 4 inches (100 mm) to bottom of slab.
2. Provide underground warning tape in accordance with Section 260553 along entire conduit length.

K. Corrosion Protection:

1. Prepare surfaces and apply corrosion protection tape according to manufacturer recommendations with minimum 1/2 inch overlap.
2. Prepare surfaces and apply corrosion protection bituminous paint according to manufacturer recommendations with minimum two coats.
- L. Provide pull string in each empty conduit and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches (300 mm) at each end.
- M. Provide grounding and bonding; see Section 260526.

3.02 FIELD QUALITY CONTROL

- A. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.

- B. Repair cuts and abrasions in field-applied coatings and finishes.
- C. Correct deficiencies and replace damaged or defective conduits.

3.03 CLEANING

- A. Clean interior of conduits to remove moisture and foreign matter.

3.04 PROTECTION

- A. Immediately after installation of exterior or underground conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.

END OF SECTION

SECTION 260533.16

BOXES FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 ADMINISTRATIVE REQUIREMENTS

A. Coordination:

1. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
2. Coordinate minimum sizes of boxes with the actual installed arrangement of conductors, clamps, support fittings, and devices, calculated according to NFPA 70.
3. Coordinate minimum sizes of pull boxes with the actual installed arrangement of connected conduits, calculated according to NFPA 70.
4. Coordinate the placement of boxes with millwork, furniture, devices, equipment, etc. installed under other sections or by others.
5. Coordinate the work with other trades to provide walls suitable for installation of flush-mounted boxes where indicated.
6. Notify Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.02 SUBMITTALS

- A. Product Data: Provide manufacturer's standard catalog pages and data sheets for underground boxes/enclosures.
- B. Project Record Documents: Record actual locations for underground boxes/enclosures.

PART 2 PRODUCTS

2.01 BOXES

A. General Requirements:

1. Do not use boxes and associated accessories for applications other than as permitted by NFPA 70 and product listing.
  2. Provide all boxes, fittings, supports, and accessories required for a complete raceway system and to accommodate devices and equipment to be installed.
  3. Provide products listed, classified, and labeled as suitable for the purpose intended.
  4. Where box size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
  5. Provide grounding terminals within boxes where equipment grounding conductors terminate.
- B. Outlet and Device Boxes Up to 100 cubic inches (1,650 cu cm), Including Those Used as Junction and Pull Boxes:
1. Use cast iron boxes or cast aluminum boxes for damp or wet locations unless otherwise indicated or required; furnish with compatible weatherproof gasketed covers.
  2. Use cast iron boxes or cast aluminum boxes where exposed galvanized steel rigid metal conduit or exposed intermediate metal conduit (IMC) is used.
  3. Cast Metal Boxes: Comply with NEMA FB 1, and list and label as complying with UL 514A; furnish with threaded hubs.
  4. Wall Plates: Comply with Section 262726.

C. Underground Boxes/Enclosures:

1. Description: In-ground, open bottom boxes furnished with flush, non-skid covers with legend indicating type of service and stainless steel tamper resistant cover bolts.
  - Size: as required, per NEC, for application indicated on the drawings.
  - Depth: As required to extend below frost line to prevent frost upheaval, but not less than 12 inches (300 mm).
  4. Provide logo on cover to indicate type of service.
  5. Applications:
    - a. Sidewalks and Landscaped Areas Subject Only to Occasional Nondeliberate Vehicular Traffic: Use polymer concrete enclosures, with minimum SCTE 77 Tier 8 load rating.
    - b. Parking Lots, in Areas Subject Only to Occasional Nondeliberate Vehicular Traffic: Use polymer concrete enclosures, with minimum SCTE 77 Tier 22 load rating.
    - c. Do not use polymer concrete enclosures in areas subject to deliberate vehicular traffic.
6. Polymer Concrete Underground Boxes/Enclosures: Comply with SCTE 77.
  - a. Combination fiberglass/polymer concrete boxes/enclosures are acceptable.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive boxes.
- C. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install boxes in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards where mounting heights are not indicated.
- C. Arrange equipment to provide minimum clearances in accordance

E. Unless otherwise indicated, boxes may be surface-mounted where exposed conduits are indicated or permitted.

F. Box Locations:  
1. Locate boxes to be accessible.  
2. Unless dimensioned, box locations indicated are approximate.  
3. Locate junction and pull boxes as indicated, as required to facilitate installation of conductors, and to limit conduit length and/or number of bends between pulling points in accordance with Section 260533.13.

G. Install boxes plumb and level.

H. Underground Boxes/Enclosures:

1. Comply with detail on the drawings.
2. Install enclosure on gravel base, minimum 6 inches (150 mm) deep.
3. Flush-mount enclosures located in concrete or paved areas.
4. Mount enclosures located in landscaped areas with top at 1 inch (25 mm) above finished grade.
5. Install additional bracing inside enclosures in accordance with manufacturer's instructions to minimize box sidewall deflections during backfilling. Backfill with cover bolted in place.
6. Install parallel and perpendicular to nearby site objects such as sidewalks, buildings, and walls.

I. Install permanent barrier between ganged wiring devices connected to different systems or voltages.

J. Close unused box openings.

K. Install blank wall plates on junction boxes and on outlet boxes with no devices or equipment installed or designated for future use.

L. Provide grounding and bonding in accordance with Section 260526.

### 3.03 CLEANING

A. Clean interior of boxes to remove dirt, debris, plaster and other foreign material.

### 3.04 PROTECTION

A. Immediately after installation, protect boxes from entry of moisture and foreign material until ready for installation of conductors.

#### END OF SECTION SECTION 260553 IDENTIFICATION FOR ELECTRICAL SYSTEMS

### PART 1 GENERAL

#### 1.01 FIELD CONDITIONS

A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.

### PART 2 PRODUCTS

#### 2.01 IDENTIFICATION REQUIREMENTS

A. Identification for Equipment:

1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.

a. Panelboards:  
1) Identify voltage and phase.  
2) Identify power source and circuit number. Include location when not within the same space as the equipment.

3) For panelboards with a door, use typewritten circuit directory to identify load(s) served. Identify spares and spaces. Provide a date the directory was completed.  
(a) Outdoor installations (in outdoor enclosures): laminate typewritten circuit directory and affix to the inside of panelboard door with foam tape identified for outdoor use. Trim lamination to provide minimum 1/4 inch of lamination around printed sheet in order to prevent moisture from penetrating lamination. If present, remove clear plastic cover from panelboard door.

2. Service Equipment:  
a. Use identification nameplate to identify each service disconnecting means.

3. Available Fault Current Documentation: Use identification label to identify the available fault current and data calculations were performed at locations requiring documentation by NFPA 70 including but not limited to the following.  
a. Service equipment.

4. Arc Flash Hazard Warning Labels: Use warning labels to identify arc flash hazards for electrical equipment, such as switchboards, panelboards, industrial control panels, meter socket enclosures, and motor control centers that are likely to require examination, adjustment, servicing, or maintenance while energized.  
a. Minimum Size: 3.5 by 5 inches (89 mm by 127 mm).  
b. Legend: Include orange header that reads "WARNING", followed by the word message "Arc Flash and Shock Hazard; Appropriate PPE Required; Do not operate controls or open covers without appropriate personal protection equipment; Failure to comply may result in injury or death; Refer to NFPA 70E for minimum PPE requirements" or approved equivalent.

B. Identification for Conductors and Cables:  
1. Color Coding for Power Conductors 600 V and Less: Comply with Section 260519.

2. Use identification nameplate or identification label to identify color code for ungrounded and grounded power conductors inside door or enclosure at each piece of feeder or branch-circuit distribution equipment.

C. Identification for Raceways:  
1. Use underground warning tape to identify underground raceways.

D. Identification for Devices:  
1. Use identification label to identify serving branch circuit for all receptacles and control devices.  
2. For exterior devices, use identification nameplate.

2.02 IDENTIFICATION NAMEPLATES AND LABELS

A. Identification Nameplates:  
1. Materials:  
a. Outdoor Locations: Use plastic or stainless steel nameplates suitable for exterior use.

2. Plastic Nameplates: Two-layer or three-layer laminated acrylic or electrically non-conductive phenolic with beveled edges; minimum thickness of 1/16 inch (1.6 mm); engraved text.  
a. Exception: Provide minimum thickness of 1/8 inch (3 mm) when any dimension is greater than 4 inches (100 mm).

3. Stainless Steel Nameplates: Minimum thickness of 1/32 inch (0.8 mm); engraved or laser-etched text.

B. Identification Labels:  
1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.  
2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.

C. Format for Equipment Identification:

1. Minimum Size: 1 inch (25 mm) by 2.5 inches (64 mm).
2. Legend:  
a. Equipment designation or other approved description.  
b. Other information as indicated.
3. Text: All capitalized unless otherwise indicated.
4. Minimum Text Height:  
a. Equipment Designation: 1/4 inch (6 mm).  
b. Other Information: 1/4 inch (6 mm).
5. Color:  
a. Normal Power System: White text on black background.

### 2.03 UNDERGROUND WARNING TAPE

A. Materials: Use foil-backed detectable type polyethylene tape suitable for direct burial, unless otherwise indicated.

B. Foil-backed Detectable Type Tape: 6 inches (152 mm) wide, with minimum thickness of 5 mil (0.1 mm), unless otherwise required for proper detection.

C. Legend: Type of service, continuously repeated over full length of tape.

### 2.04 WARNING SIGNS AND LABELS

A. Comply with ANSI Z535.2 or ANSI Z535.4 as applicable.

B. Warning Labels:

1. Materials: Use factory pre-printed or machine-printed self-adhesive polyester or self-adhesive vinyl labels; UV, chemical, water, heat, and abrasion resistant; produced using materials recognized to UL 969.

2. Machine-Printed Labels: Use thermal transfer process printing machines and accessories recommended by label manufacturer.

3. Minimum Size: 2 by 4 inches (51 mm by 102 mm) unless otherwise indicated.

### PART 3 EXECUTION

#### 3.01 PREPARATION

A. Clean surfaces to receive adhesive products according to manufacturer's instructions.

#### 3.02 INSTALLATION

A. Install products in accordance with manufacturer's instructions.

B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:  
1. Surface-Mounted Equipment: Enclosure front.  
2. Interior Components: Legible from the point of access.  
3. Conductors and Cables: Legible from the point of access.  
4. Devices: Outside face of cover.

C. Install identification products centered, level, and parallel with lines of item being identified.

D. Secure nameplates to exterior surfaces of enclosures using epoxy cement and to interior surfaces using self-adhesive backing. Epoxy cement shall be identified by the manufacturer as suitable for the substrates.

E. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.

### 3.03 FIELD QUALITY CONTROL

A. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.

#### END OF SECTION

#### SECTION 262416

#### PANELBOARDS

### PART 1 GENERAL

#### 1.01 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets for panelboards, enclosures, overcurrent protective devices, and other installed components and accessories.

B. Shop Drawings: Indicate outline and support point dimensions, voltage, main bus ampacity, overcurrent protective device arrangement and sizes, short circuit current ratings, conduit entry locations, conductor terminal information, and installed features and accessories.

C. Project Record Documents: Record actual installed locations of panelboards and actual installed circuiting arrangements.

### PART 2 PRODUCTS

#### 2.01 PANELBOARDS - GENERAL REQUIREMENTS

A. Provide products listed, classified, and labeled as suitable for the purpose intended.

B. Short Circuit Current Rating:  
1. Provide panelboards with listed short circuit current rating not less than the available fault current at the installed location as indicated on the drawings.  
2. Listed series ratings are not acceptable.

C. Panelboards Used for Service Entrance: Listed and labeled as suitable for use as service equipment according to UL 869A.

D. Mains: Configure for top or bottom incoming feed as indicated or as required for the installation. Do not train incoming feeder conductors to the opposite end of the enclosure.

E. Branch Overcurrent Protective Devices: Replaceable without disturbing adjacent devices.

F. Bussing: Sized in accordance with UL 67 temperature rise requirements.  
1. Provide fully rated neutral bus unless otherwise indicated, with a suitable lug for each feeder or branch circuit requiring a neutral connection.  
2. Provide solidly bonded equipment ground bus in each panelboard, with a suitable lug for each feeder and branch circuit equipment grounding conductor.

G. Conductor Terminations: Suitable for use with the conductors to be installed.

H. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.  
1. Environment Type per NEMA 250: As indicated on the drawings.  
2. Boxes: Galvanized steel unless otherwise indicated.  
a. Provide wiring gutters sized to accommodate the conductors to be installed.  
b. Increase gutter space as required where sub-feed lugs, feed-through lugs, gutter taps, or oversized lugs are provided.  
3. Lockable Doors: All locks keyed alike unless otherwise indicated.

I. Future Provisions: Prepare all unused spaces for future installation of devices including bussing, connectors, mounting hardware and all other required provisions.

J. Load centers are not acceptable.

### 2.02 LIGHTING AND APPLIANCE PANELBOARDS

A. Description: Panelboards complying with NEMA PB 1, lighting and appliance branch circuit type, circuit breaker type, and listed and labeled as complying with UL 67; ratings, configurations and features as indicated on the drawings.

B. Conductor Terminations:  
1. Main and Neutral Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.  
2. Main and Neutral Lug Type: Mechanical.

C. Bussing:  
1. Phase Bus Connections: Arranged for sequential phasing of overcurrent protective devices.  
2. Phase and Neutral Bus Material: Aluminum or copper.  
3. Ground Bus Material: Aluminum or copper.

D. Circuit Breakers: Thermal magnetic bolt-on type.

### 2.03 OVERCURRENT PROTECTIVE DEVICES

A. Molded Case Circuit Breakers:  
1. Description: Quick-make, quick-break, over center toggle, trip-free, trip-indicating circuit breakers listed and labeled as complying with UL 489, and complying with FS W-C-375 where applicable; ratings, configurations, and features as indicated on the drawings.  
2. Interrupting Capacity:  
a. Provide circuit breakers with interrupting capacity as required to provide the short circuit current rating indicated.  
b. Fully Rated Systems: Provide circuit breakers with interrupting capacity not less than the short circuit current rating indicated.

3. Conductor Terminations:  
a. Lug Material: Aluminum, suitable for terminating aluminum or copper conductors.

4. Thermal Magnetic Circuit Breakers: For each pole, furnish thermal inverse time tripping element for overload protection and magnetic instantaneous tripping element for short circuit protection.

5. Multi-Pole Circuit Breakers: Furnish with common trip for all poles.  
6. Do not use tandem circuit breakers.  
7. Do not use handle ties in lieu of multi-pole circuit breakers.

### PART 3 EXECUTION

#### 3.01 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship).

B. Install products in accordance with manufacturer's instructions.

C. Install panelboards in accordance with NECA 407 and NEMA PB 1.1.

D. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.

E. Provide required support and attachment in accordance with Section 260529.

F. Install panelboards plumb.

G. Mount panelboards such that the highest position of any operating handle for circuit breakers or switches does not exceed 79 inches (2000 mm) above the floor or working platform.

H. Mount floor-mounted power distribution panelboards on properly sized 3 inch (80 mm) high concrete pad.

I. Provide grounding and bonding in accordance with Section 260526.

J. Install all field-installed branch devices, components, and accessories.

K. Group grounded and ungrounded conductors together in the panelboard as required by NFPA 70.

L. Breakers for circuits labeled "Spare" or otherwise made Spare by the scope of work shall be left in the "OFF" position.

M. Provide filler plates to cover unused spaces in panelboards.

N. Identify panelboards in accordance with Section 260553.

### 3.02 ADJUSTING

A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

### 3.03 CLEANING

A. Clean dirt and debris from panelboard enclosures and components according to manufacturer's instructions.

B. Repair scratched or marred exterior surfaces to match original factory finish.

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Wall switches.  
B. Fan speed controllers.  
C. Receptacles.  
D. Wall plates and covers.

### 1.02 ADMINISTRATIVE REQUIREMENTS

A. Coordination:  
1. Coordinate the placement of outlet boxes with millwork, furniture, equipment, etc. installed under other sections or by others.  
2. Coordinate wiring device ratings and configurations with the electrical requirements of actual equipment to be installed.  
3. Coordinate the installation and preparation of uneven surfaces, such as split face block, to provide suitable surface for installation of wiring devices.  
4. Notify Engineer of any conflicts or deviations from Contract Documents to obtain direction prior to proceeding with work.

B. Sequencing:  
1. Do not install wiring devices until final surface finishes and painting are complete.

### 1.03 SUBMITTALS

A. Product Data: Provide manufacturer's catalog information showing dimensions, colors, and configurations.

### 1.04 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

B. Products: Listed, classified, and labeled as suitable for the purpose intended.

### 1.05 DELIVERY, STORAGE, AND PROTECTION

A. Store in a clean, dry space in original manufacturer's packaging until ready for installation.

### PART 2 PRODUCTS

#### 2.01 WIRING DEVICE APPLICATIONS

A. Provide wiring devices suitable for intended use and with ratings adequate for load served.

B. For single receptacles installed on an individual branch circuit, provide receptacle with ampere rating not less than that of the branch circuit.

C. Provide weather resistant GFCI receptacles with specified weatherproof in-use covers for receptacles installed outdoors or in damp or wet locations.

### 2.02 WIRING DEVICE FINISHES

A. Provide wiring device finishes as described below unless otherwise indicated. Where not indicated, verify device and wall plate colors with the architect or owner.

B. Wiring Devices Installed in Unfinished Spaces: Gray with stainless steel wall plate.

C. Wiring Devices Installed in Wet or Damp Locations: Gray with specified weatherproof cover.

### 2.03 WALL SWITCHES

A. Wall Switches - General Requirements: AC only, quiet operating, general-use snap switches with silver alloy contacts, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 20 and where applicable, FS W-S-896; types as indicated on the drawings.

1. Wiring Provisions: Terminal screws for side wiring and screw actuated binding clamp for back wiring with separate ground terminal screw.

B. Standard Wall Switches: Commercial specification grade, 20 A, 120/277 V with standard toggle type switch actuator and maintained contacts; rated for motor loads up to 1/4 HP; single pole single throw, double pole single throw, three way, or four way as indicated on the drawings.

### 2.04 FAN SPEED CONTROLLERS

A. Description: 120 V AC, solid-state, three speed, rotary control type with rotary on/off control, with integral radio frequency interference filtering, fan noise elimination circuitry, power failure preset memory, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 1917.

1. Current Rating: 5 A unless otherwise indicated or required to control the load indicated on the drawings.

### 2.05 RECEPTACLES

A. Receptacles - General Requirements: Self-grounding, complying with NEMA WD 1 and NEMA WD 6, and listed as complying with UL 498, and where applicable, FS W-C-596; types as indicated on the drawings.

1. Wiring Provisions: Terminal screws for side wiring or screw actuated binding clamp for back wiring with separate ground terminal screw.

2. NEMA configurations specified are according to NEMA WD 6.

B. Convenience Receptacles:  
1. Standard Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R; single or duplex as indicated on the drawings.

2. Weather Resistant Convenience Receptacles: Industrial specification grade, 20A, 125V, NEMA 5-20R, listed and labeled as weather resistant type complying with UL 498 Supplement SD suitable for installation in damp or wet locations; single or duplex as indicated on the drawings.

C. GFCI Receptacles:  
1. GFCI Receptacles - General Requirements: Self-testing, with feed-through protection and light to indicate ground fault tripped condition and loss of protection; listed as complying with UL 943, class A.

2. Standard GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style.

3. Weather Resistant GFCI Receptacles: Industrial specification grade, duplex, 20A, 125V, NEMA 5-20R, rectangular decorator style, listed and labeled as weather resistant type complying with UL 498 Supplement SD suitable for installation in damp or wet locations.

### 2.06 WALL PLATES AND COVERS

A. Wall Plates: Comply with UL 514D.  
1. Configuration: One piece cover as required for quantity and types of corresponding wiring devices.  
2. Size: Standard  
3. Screws: Metal with slotted heads finished to match wall plate finish.

B. Stainless Steel Wall Plates: Brushed satin finish, Type 302 stainless steel.

C. Weatherproof Receptacle Covers for Wet Locations: Gasketed, cast aluminum, with hinged lockable cover and corrosion-resistant screws; listed as suitable for use in wet locations while in use with attachment plugs connected and identified as extra-duty type.

### PART 3 EXECUTION

#### 3.01 INSTALLATION

A. Perform work in accordance with NECA 1 (general workmanship) and, where applicable, NECA 130, including mounting heights specified in those standards unless otherwise indicated.

B. Coordinate locations of outlet boxes provided under Section 260533.16 as required for installation of wiring devices provided under this section. Coordinate all device mounting heights and locations with the Architect prior to installation. Mount electrical devices required to be accessible per ANSI A117.1 sections 308 and 309.

1. Mounting Heights (on center): Unless otherwise indicated, as follows:  
a. Wall Switches: 44 inches (1100 mm) above finished floor.  
b. Receptacles: 18 inches (450 mm) above finished floor or 6 inches (150 mm) above counter.

2. Install device boxes flush within the mounting surface except in areas where conduit is permitted to be surface-mounted according to Section 260533.13.

3. Orient outlet boxes for vertical installation of wiring devices unless otherwise indicated.

4. Where multiple receptacles or wall switches are installed at the same location and at the same mounting height, gang devices together under a common wall plate.  
a. Where indicated on the drawings or where more than six wall switches are installed at the same location, install devices at two mounting heights with common vertical centers, with the upper devices at the mounting height specified.

5. Locate wall switches on strike side of door with edge of wall plate 3 inches (80 mm) (on center, to the first device in the gang) from edge of door frame.

C. Install wiring devices in accordance with manufacturer's instructions.

D. Install permanent barrier between ganged wiring devices when served by different systems or voltages.

E. Where required, connect wiring devices using pigtail not less than 6 inches (150 mm) long. Do not connect more than one conductor to wiring device terminals.

F. Connect wiring devices by wrapping conductor clockwise 3/4 turn around screw terminal and tightening to proper torque specified by the manufacturer. Where present, do not use push-in pressure terminals that do not rely on screw-actuated binding.

G. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.

H. Unless otherwise indicated, provide GFCI receptacles with integral GFCI protection at each location indicated. Do not use feed-through wiring to protect downstream devices.

1. Exception: where multiple receptacles are installed within the same box on the same circuit (e.g. quadruplex receptacles), one device may provide GFCI protection to other devices. Label such devices to indicate they are protected by upstream GFCI protection.

I. Locate GFCI receptacles to be readily accessible. Where equipment or fixture location is such that the GFCI receptacle cannot be installed in a readily accessible location, provide a standard receptacle and protect its circuit with a GFCI circuit breaker.

J. Where split-wired duplex receptacles are indicated, remove tabs connecting top and bottom receptacles.

K. Install wiring devices plumb and level with mounting yoke held rigidly in place.

L. Install wall switches with OFF position down.

M. Provide a neutral conductor from each circuit to each wall switch box. If not used for the device installed, cap with a wire nut. Identify each neutral conductor with its associated circuit.

N. Install vertically mounted receptacles with grounding pole on bottom and horizontally mounted receptacles with grounding pole on left.

O. Install wall plates to fit completely flush to wall with no gaps and rough opening completely covered without strain on wall plate. Repair or reinstall improperly installed outlet boxes or improperly sized rough openings. Do not use oversized wall plates in lieu of meeting this requirement.

P. Install blank wall plates on junction boxes and on outlet boxes with no wiring devices installed or designated for future use.

#### END OF SECTION

#### SECTION 265600

#### EXTERIOR LIGHTING

### PART 1 GENERAL

#### 1.01 SUBMITTALS

A. Product Data: Provide manufacturer's standard catalog pages and data sheets including detailed information on luminaire construction, dimensions, ratings, finishes, mounting requirements, listings, service conditions, photometric performance, weight, effective projected area (EPA), and installed accessories; include model number nomenclature clearly marked with all proposed features.

1. LED Luminaires:  
a. Include estimated useful life, calculated based on IES LM-80 test data.

### 1.02 QUALITY ASSURANCE

A. Comply with requirements of NFPA 70.

### 1.03 DELIVERY, STORAGE, AND HANDLING

A. Receive, handle, and store products according to NECA/IESNA 501 and manufacturer's written instructions.

B. Keep products in original manufacturer's packaging and protect from damage until ready for installation.

### 1.04 WARRANTY

A. Provide 2-year manufacturer warranty for all LED luminaires, including drivers.

### PART 2 PRODUCTS

#### 2.01 LUMINAIRES

A. Provide products that comply with requirements of NFPA 70.

B. Provide products that are listed and labeled as complying with UL 1598, where applicable.

C. Provide products listed, classified, and labeled as suitable for the purpose intended.

D. Unless otherwise indicated, provide complete luminaires including lamp(s) and all sockets, ballasts, reflectors, lenses, housings and other components required to position, energize and protect the lamp and distribute the light.

E. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, hardware, poles, foundations, supports, trims, accessories, etc. as necessary for a complete operating system.

F. Provide products suitable to withstand normal handling, installation, and service without any damage, distortion, corrosion, fading, discoloring, etc.

G. LED Luminaires:  
1. Components: UL 8750 recognized or listed as applicable.  
2. Tested in accordance with IES LM-79 and IES LM-80.  
3. LED Estimated Useful Life: Minimum of 100,000 hours at 70 percent lumen maintenance, calculated based on IES LM-80 test data.

H. Exposed Hardware: Stainless steel.

### 2.02 POLES

A. All Poles:  
1. Provide poles and associated support components suitable for the luminaire(s) and associated supports and accessories to be installed.  
2. Material: Aluminum, unless otherwise indicated.  
3. Shape: Round straight, unless otherwise indicated.  
4. Finish: Match luminaire finish, unless otherwise indicated.  
5. Mounting: Install on concrete foundation, height as indicated on the drawings, unless otherwise indicated.

6. Unless otherwise indicated, provide with the following features/accessories:  
a. Top cap.  
b. Handhole compliant with NEC 410.3

- C. Verify that suitable support frames are installed where required.
- D. Verify that branch circuit wiring installation is completed, tested, and ready for connection to luminaires.
- E. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Provide extension rings to bring outlet boxes flush with finished surface.
- B. Clean dirt, debris, plaster, and other foreign materials from outlet boxes.

3.03 INSTALLATION

- A. Coordinate locations of outlet boxes provided under Section 260533.16 as required for installation of luminaires provided under this section.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Install products in accordance with manufacturer's instructions.
- D. Install luminaires in accordance with NECA/IESNA 501.
- E. Provide required support and attachment in accordance with Section 260529.
- F. Install luminaires plumb and square and aligned with building lines and with adjacent luminaires.
  - G. Pole-Mounted Luminaires:
    - 1. Foundation-Mounted Poles:
      - a. Install foundations plumb.
      - b. Install poles plumb, using leveling nuts or shims as required to adjust to plumb.
      - c. Tighten anchor bolt nuts to manufacturer's recommended torque.
      - d. Install anchor base covers as indicated.
    - 2. Grounding:
      - a. Bond luminaires, metal accessories, metal poles, and foundation reinforcement to branch circuit equipment grounding conductor.
      - b. Provide supplementary ground rod electrode as specified in Section 260526 at each pole bonded to grounding system as indicated.
    - 3. Install separate service conductors, 12 AWG copper, from each luminaire down to handhole for connection to branch circuit conductors.
  - H. Install accessories furnished with each luminaire.
  - I. Bond products and metal accessories to branch circuit equipment grounding conductor.

3.04 FIELD QUALITY CONTROL

- A. Inspect each product for damage and defects.
- B. Operate each luminaire after installation and connection to verify proper operation.
- C. Correct wiring deficiencies and repair or replace damaged or defective products. Repair or replace excessively noisy ballasts as determined by Engineer.

3.05 CLEANING

- A. Clean surfaces according to NECA/IESNA 501 and manufacturer's instructions to remove dirt, fingerprints, paint, or other foreign material and restore finishes to match original factory finish.

END OF SECTION



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 info@axiagrp.com  
 GA COA: PEP007950  
 Exp: 30 June 2024  
 Axia Project: 2311



3469 Lawrenceville Highway  
 Suite 204  
 Tucker, Georgia 30084  
 (404) 895-2253  
 www.RootDStudio.com

Seal:



Date: 6/24/2024  
 Project No: 2023-019  
 Drawn By: NAV  
 Checked By: SCB

**Tucker Pickleball Courts**  
 4898 Lavista Rd, Tucker, GA 30084  
 City of Tucker, Parks & Recreation Department  
 4898 Lavista Road  
 Tucker, GA 30084

Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:  
**Electrical Specifications**

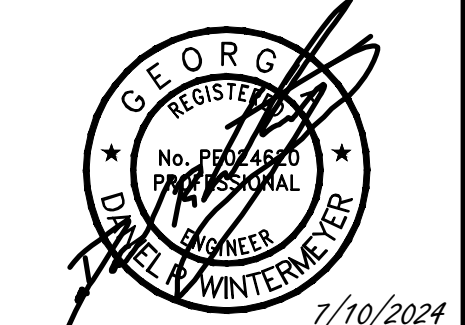
Sheet No:  
**E-403**



Urban Engineers, Inc.

3850 HOLCOMB BRIDGE RD. SUITE 480  
PEACHTREE CORNERS, GEORGIA 30092  
PHONE: (404) 873-5874  
www.urbanengineers.net

PROFESSIONAL SEAL



CERTIFIED LEVEL II  
CERT # 6868  
EXPIRES 03/11/24

REVISIONS

DATE	Δ	DESCRIPTION
04/17/24	01	INFO UPDATE
05/07/24	02	GDOT COMMENTS
06/27/24	03	GDOT COMMENTS

PROJECT NAME

TUCKER  
PICKLEBALL  
COURTS: GDOT  
DRIVEWAY  
ENCROACHMENT



24H CONTACT

RIP ROBERTSON  
470-273-3076  
crobertson@tuckerga.gov

PROJECT INFORMATION

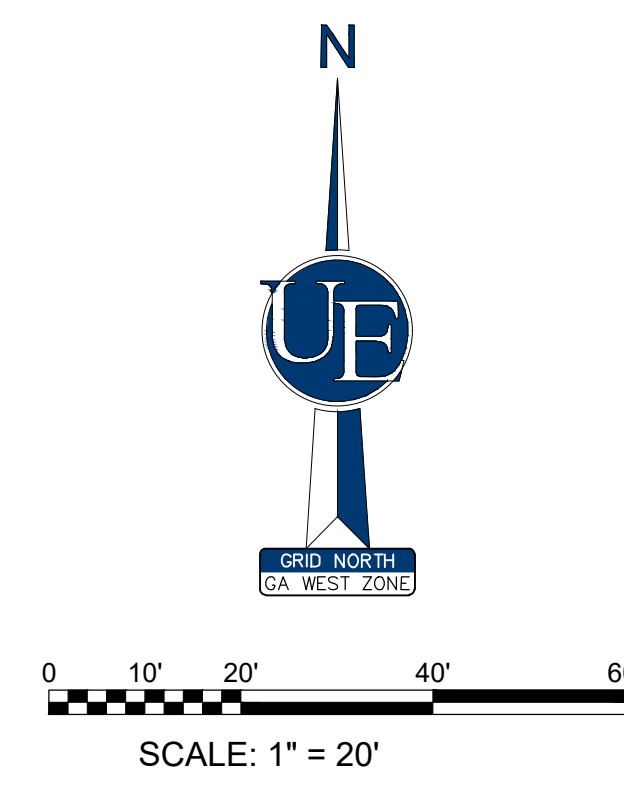
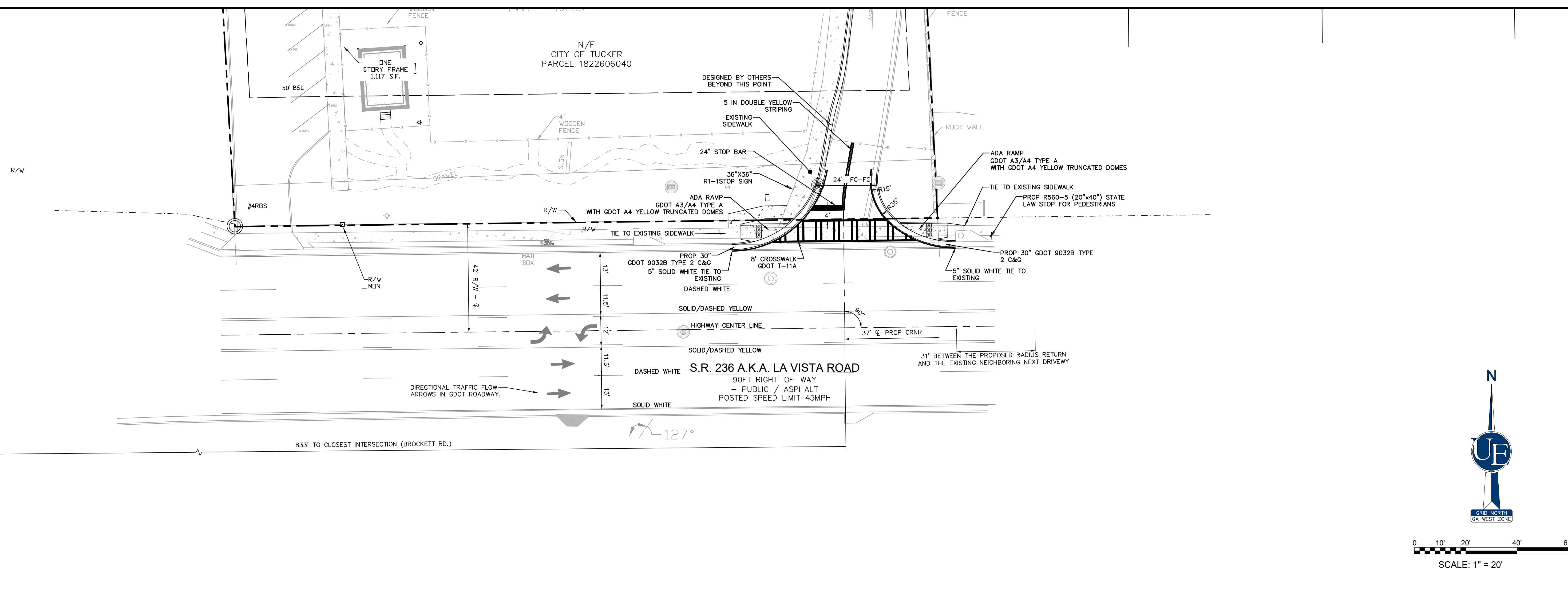
PROJECT No. 2401-08  
LAND LOT(S): 226  
DISTRICT: 18TH  
COUNTY: DEKALB  
SCALE: 1" = 20'  
DATE: 03/25/2024

SHEET NAME

INTERSECTION  
PLAN

SHEET NUMBER

C-10.0.0



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**NOTES**  
**GDOT STANDARD NOTES**

THE WORK AUTHORIZED MUST BEGIN WITHIN THREE MONTHS AND BE COMPLETED WITHIN TWELVE MONTHS ON A SCHEDULE SATISFACTORY TO THE DEPARTMENT FROM THE PERMIT APPROVAL DATE AND ALSO, BE COMPLETED BEFORE THIS FACILITY IS OPEN TO THE PUBLIC.

THE FOLLOWING WILL NOT BE ALLOWED ON DOT RIGHT-OF-WAY: (1) DIVERSION OF ADDITIONAL DRAINAGE AREA ONTO THE RIGHT-OF-WAY, OR INCREASE IN THE CFS OF CURRENT VOLUMES OF WATER (2) GRADING EXCEPT AT DRIVEWAY CONSTRUCTION LOCATION, (3) HEADWALLS, (4) SIGNS, DISPLAY DEVICES, AND OTHER STRUCTURES WHICH ARE DESIGNED, INTENDED, OR USED TO ADVERTISE OR INFORM, (5) LANDSCAPING WITHOUT PRIOR APPROVAL OF THE LANDSCAPE PLAN.

ALL EXISTING UTILITIES WHICH WOULD BE UNDER NEW PAVEMENT OR IN ACCELERATION/DECELERATION LANES SHALL BE RELOCATED BEFORE FINAL GRADING OR PAVING AND AT NO COST TO THE DOT, OR AN APPROVED RETENTION LETTER FROM THE UTILITY OWNER.

CONSTRUCTION OF EROSION CONTROL BARRIERS PER GEORGIA DEPARTMENT OF NATURAL RESOURCES CODE 391-3-7 AND SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.

APPLICANT SHALL RESTORE ALL EXISTING SIGNS AND REGRASS TO DOT SPECIFICATIONS ALL RIGHT OF WAY THAT IS DISTURBED DURING WORK AUTHORIZED HEREIN.

THE PERMIT APPLICANT IS RESPONSIBLE FOR REPLACEMENT OF ALL EXISTING PAVEMENT MARKINGS DAMAGED BY THE PERMIT CONSTRUCTION AND THE ADDITION OF NEW PAVEMENT MARKINGS AND OR SIGNS AS SHOWN ON THE APPROVED PLAN, OR CURRENT M.U.T.C.D., GUIDELINES.

ALL CURBED ISLANDS SHALL BE FILLED TO THE TOP OF CURB WITH TOP SOIL AND GRASSED. NOTE: THIS APPROVAL DOES NOT ALLOW ANY WORK ON STATE RIGHT-OF-WAY IN CONNECTION WITH UTILITY LINES (SANITARY SEWER, WATER, TELEPHONE, GAS, ETC)

REQUIRED PAVEMENT SPECIFICATIONS

1 1/2" 9.5 MM SUPERPAVE  
2" 19 MM SUPERPAVE  
8" 25 MM SUPERPAVE  
12" GRADED AGREGATE BASE COURSE

NOTICE

THIS PERMIT IS APPROVED SUBJECT TO THE REVISIONS AND COMMENTS SHOWN IN RED ON THE ATTACHED PLAN COPY AND SHALL REMAIN DEPENDENT UPON COMPLIANCE WITH THESE.

NO WORK WILL BE ACCOMPLISHED UNDER THIS PERMIT WITHIN THE CONSTRUCTION LIMITS OF ANY DOT PROJECT WITHOUT WRITTEN APPROVAL OF THE PRIME CONTRACTOR.

THE MAINTENANCE OF THE DRIVEWAY FROM THE NORMAL EDGE OF PAVEMENT IS THE RESPONSIBILITY OF THE PERMITEE.

OVERLAY SHALL BE AS DIRECTED BY GDOT PERMIT INSPECTOR.

ALL SIDEWALKS, CROSSWALKS AND RAMPS SHALL MEET ADA STANDARDS GDOT DETAILS.

THE APPLICANT IS RESPONSIBLE TO OBTAIN ALL NECESSARY ENVIRONMENTAL APPROVALS PRIOR TO ANY WORK ON STATE R/W.

ALL WORK PERFORMED WITHIN GDOT R/W SHALL CONFORM TO GDOT STANDARDS AND DETAILS.

ANY UTILITIES RELOCATED WITHIN GDOT R/W SHALL MEET GDOT CLEAR ZONE AT NO COST TO THE DEPARTMENT.

**NOTES**  
**GDOT PLAN NOTES**

- CONTRACTOR SHALL CONTACT UNDERGROUND LOCATOR PRIOR TO ANY EXCAVATION.
- UNDERGROUND UTILITIES SHOWN SHALL BE CONSIDERED APPROXIMATE AND SHALL BE FIELD-VERIFIED PRIOR TO ANY EXCAVATION WORK.
- CONTRACTOR SHALL COORDINATE ALL UTILITY WORK WITH THE UTILITY COMPANIES INVOLVED.
- CONTRACTOR SHALL NOTIFY A GA. D.O.T. INSPECTOR AT LEAST 24 HOURS PRIOR TO STARTING ANY WORK ON THE GA.D.O.T. RIGHT-OF-WAY.
- CONTRACTOR SHALL COMPLY WITH STATE AND LOCAL REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL.
- TOTAL FRONTAGE ALONG S.R. 236 A.K.A. LA VISTA ROAD = 274'. PROJECT LENGTH = 88'.
- ALL SIGN AND PAINT STRIPPING AS PER MUTCD MANUAL AND/OR A.D.O.T. INSPECTOR.
- ALL DISTURBED AREAS TO BE GRASSED.
- NO PORTION OF THIS SITE LIES IN THE 100-YEAR FLOOD PAIN AS SHOWN ON FLOOD INSURANCE RATE MAP PANEL 13089C0077L OF THE F.E.M.A. OFFICIAL FLOOD INSURANCE RATE MAP DATED AUGUST 15, 2019.
- PROPOSED WORK IS UPDATING THE ENTRANCE OF THE EXISTING DRIVEWAY.
- FIRE HYDRANTS TO BE RELOCATED AT LEAST 8 FT BEHIND THE FACE OF CURB, AND TO BE A BREAKAWAY FIRE HYDRANT.
- ALL POLES TO BE RELOCATED BEHIND ANY PROPOSED SIDEWALK OUR OUT OF THE ESTABLISHED CLEAR ZONE AS PER CHAPTER 5 AND CHAPTER 8 OF THE UTILITY ACCOMMODATIONS MANUAL 2016
- A GDOT PERMIT WILL BE REQUIRED FOR ALL PROPOSED RELOCATIONS, ADJUSTMENTS, PAVEMENT CUTS, AND TAPS ON GDOT'S R/W PRIOR TO BEGINNING ANY WORK IN THE R/W.
- ALL GAS INFRASTRUCTURE TO BE RELOCATED AT LEAST 8 FT BEHIND BACK OF CURB
- ALL UTILITY WORK IN THE R/W IS TO BE PERMITTED SEPARATELY THROUGH GDOT DISTRICT 7 UTILITIES OFFICE.
- D/W MATCH CROSS-SLOPE FOR FIRST 12 FT.

**POSTED SPEED LIMIT 45 MPH**  
**AADT 25,400**

**GA DOT PERMIT#**  
**A-089-011036-7**

**NOTES**  
**UTILITY PROVIDERS**

ELECTRICITY - GEORGIA POWER  
GEORGIA POWER DECATUR OFFICE  
1841 CHAMBLEE TUCKER RD 1-1A  
CHAMBLEE, GEORGIA, 30341  
(888) 660-5890

GAS-ATLANTA GAS LIGHT CO  
1219 CAROLINE ST NE  
ATLANTA, GA  
(404) 584-4000

CABLE-COMCAST SERVICE CENTER  
3637 PEACHTREE RD SUITE C1,  
ATLANTA, GA 30319  
(800) 266-2278

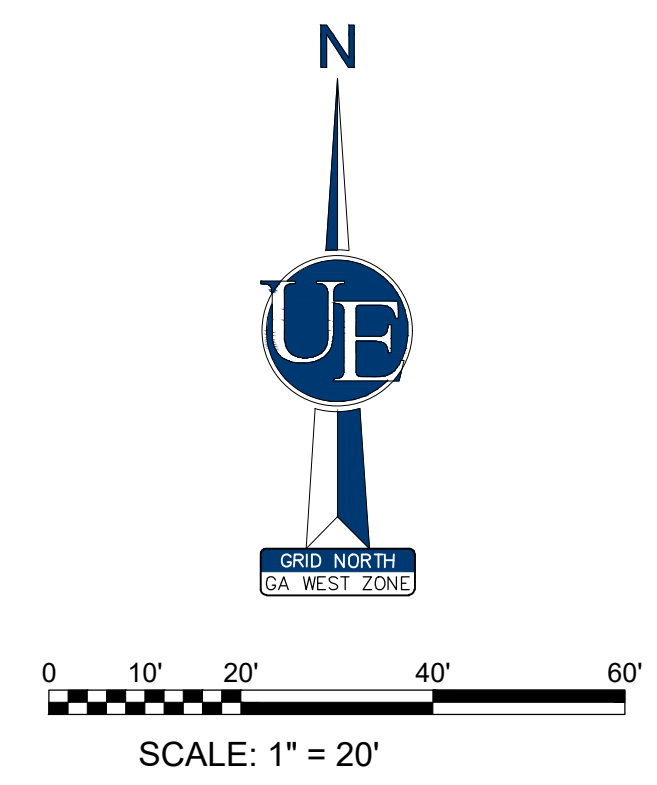
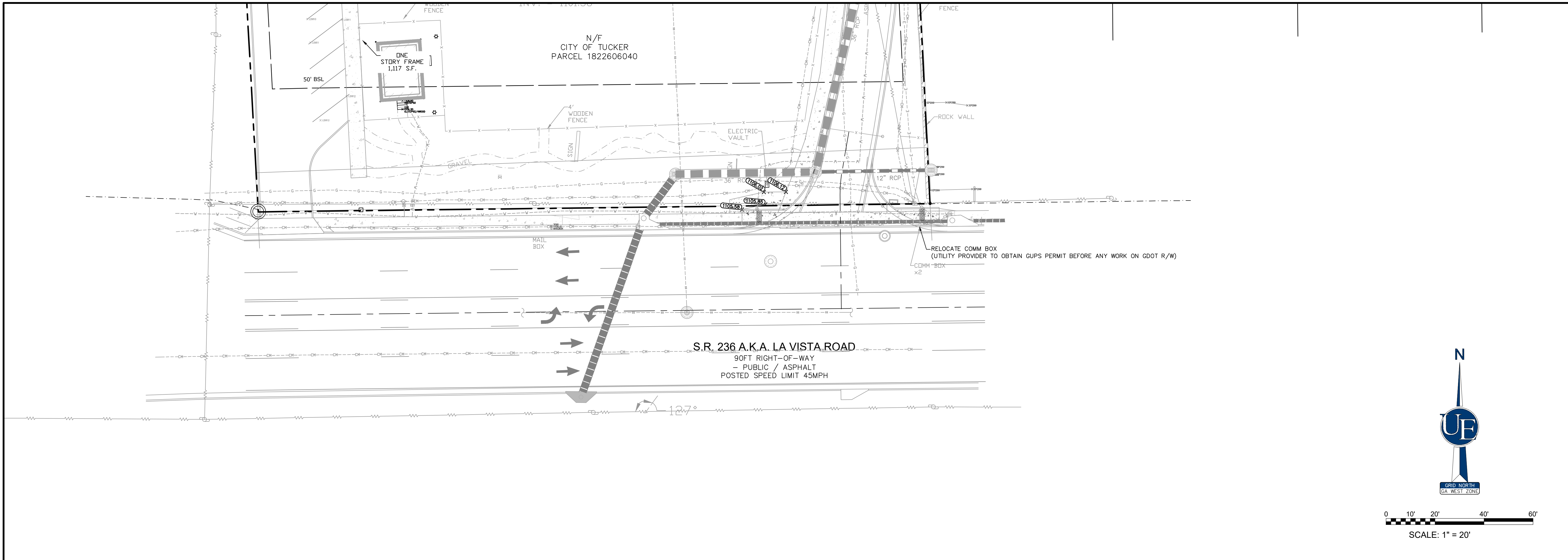
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**NOTES**

**GDOT STANDARD NOTES**

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CONSTRUCTION OF EROSION CONTROL BARRIERS PER GEORGIA DEPARTMENT OF NATURAL RESOURCES CODE 391-3-7 AND SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED.

APPLICANT SHALL RESTORE ALL EXISTING SIGNS AND REGRASS TO DOT SPECIFICATIONS ALL RIGHT OF WAY THAT IS DISTURBED DURING WORK AUTHORIZED HEREIN.

THE PERMIT APPLICANT IS RESPONSIBLE FOR REPLACEMENT OF ALL EXISTING PAVEMENT MARKINGS DAMAGED BY THE PERMIT CONSTRUCTION AND THE ADDITION OF NEW PAVEMENT MARKINGS AND OR SIGNS AS SHOWN ON THE APPROVED PLAN, OR CURRENT M.U.T.C.D., GUIDELINES.

ALL CURBED ISLANDS SHALL BE FILLED TO THE TOP OF CURB WITH TOP SOIL AND GRASSED. NOTE: THIS APPROVAL DOES NOT ALLOW ANY WORK ON STATE RIGHT-OF-WAY IN CONNECTION WITH UTILITY LINES (SANITARY SEWER, WATER, TELEPHONE, GAS, ETC)

**REQUIRED PAVEMENT SPECIFICATIONS**

1 1/2" 9.5 MM SUPERPAVE  
 2" 19 MM SUPERPAVE  
 8" 25 MM SUPERPAVE  
 12" GRADED AGREGATE BASE COURSE

**NOTICE**

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NO WORK WILL BE ACCOMPLISHED UNDER THIS PERMIT WITHIN THE CONSTRUCTION LIMITS OF ANY DOT PROJECT WITHOUT WRITTEN APPROVAL OF THE PRIME CONTRACTOR.

THE MAINTENANCE OF THE DRIVEWAY FROM THE NORMAL EDGE OF PAVEMENT IS THE RESPONSIBILITY OF THE PERMITEE.

OVERLAY SHALL BE AS DIRECTED BY GDOT PERMIT INSPECTOR.

ALL SIDEWALKS, CROSSWALKS AND RAMPS SHALL MEET ADA STANDARDS GDOT DETAILS.

THE APPLICANT IS RESPONSIBLE TO OBTAIN ALL NECESSARY ENVIRONMENTAL APPROVALS PRIOR TO ANY WORK ON STATE R/W.

ALL WORK PERFORMED WITHIN GDOT R/W SHALL CONFORM TO GDOT STANDARDS AND DETAILS.

ANY UTILITIES RELOCATED WITHIN GDOT R/W SHALL MEET GDOT CLEAR ZONE AT NO COST TO THE DEPARTMENT.

- NOTES**
- GDOT PLAN NOTES**
- CONTRACTOR SHALL CONTACT UNDERGROUND LOCATOR PRIOR TO ANY EXCAVATION.
  - UNDERGROUND UTILITIES SHOWN SHALL BE CONSIDERED APPROXIMATE AND SHALL BE FIELD-VERIFIED PRIOR TO ANY EXCAVATION WORK.
  - CONTRACTOR SHALL COORDINATE ALL UTILITY WORK WITH THE UTILITY COMPANIES INVOLVED.
  - CONTRACTOR SHALL NOTIFY A GA. D.O.T. INSPECTOR AT LEAST 24 HOURS PRIOR TO STARTING ANY WORK ON THE GA.D.O.T. RIGHT-OF-WAY.
  - CONTRACTOR SHALL COMPLY WITH STATE AND LOCAL REQUIREMENTS FOR EROSION AND SEDIMENT CONTROL.
  - TOTAL FRONTAGE ALONG S.R. 236 A.K.A. LA VISTA ROAD = 274'. PROJECT LENGTH = 88'.
  - ALL SIGN AND PAINT STRIPPING AS PER MUTCD MANUAL AND/OR A.D.O.T. INSPECTOR.
  - ALL DISTURBED AREAS TO BE GRASSED.
  - NO PORTION OF THIS SITE LIES IN THE 100-YEAR FLOOD PAIN AS SHOWN ON FLOOD INSURANCE RATE MAP PANEL 13089C0077L OF THE F.E.M.A. OFFICIAL FLOOD INSURANCE RATE MAP DATED AUGUST 15, 2019.
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**POSTED SPEED LIMIT 45 MPH**  
**AADT 25,400**

**GA DOT PERMIT#**  
**A-089-011036-7**

- NOTES**
- UTILITY PROVIDERS**
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 CHAMBLEE, GEORGIA, 30341  
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 3850 HOLCOMB BRIDGE RD, SUITE 480  
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 PHONE: (404) 873-5874  
 www.urbanengineers.net

**PROFESSIONAL SEAL**

DANIEL R. WINTERMYER  
 REGISTERED PROFESSIONAL ENGINEER  
 No. PE 12500  
 State of Georgia  
 7/10/2024  
 CERTIFIED LEVEL II  
 CERT # 6868  
 EXPIRES 03/11/24

**REVISIONS**

DATE	REVISION	DESCRIPTION
04/17/24	01	INFO UPDATE
05/07/24	02	GDOT COMMENTS
06/27/24	03	GDOT COMMENTS

**PROJECT NAME**

**TUCKER PICKLEBALL COURTS: GDOT DRIVEWAY ENCROACHMENT**

---



**24H CONTACT**

**RIP ROBERTSON**  
 470-273-3076  
 robertson@tuckerga.gov

**PROJECT INFORMATION**

PROJECT No. 2401-08  
 LAND LOT(S): 226  
 DISTRICT: 18TH  
 COUNTY: DEKALB  
 SCALE: 1" = 20'  
 DATE: 03/25/2024

**SHEET NAME**

**INTERSECTION UTILITY PLAN**

**SHEET NUMBER**

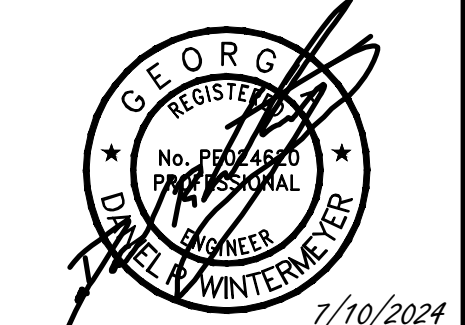
**C-10.0.2**



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PROFESSIONAL SEAL



CERTIFIED LEVEL II  
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470-273-3076  
rrobertson@tuckerga.gov

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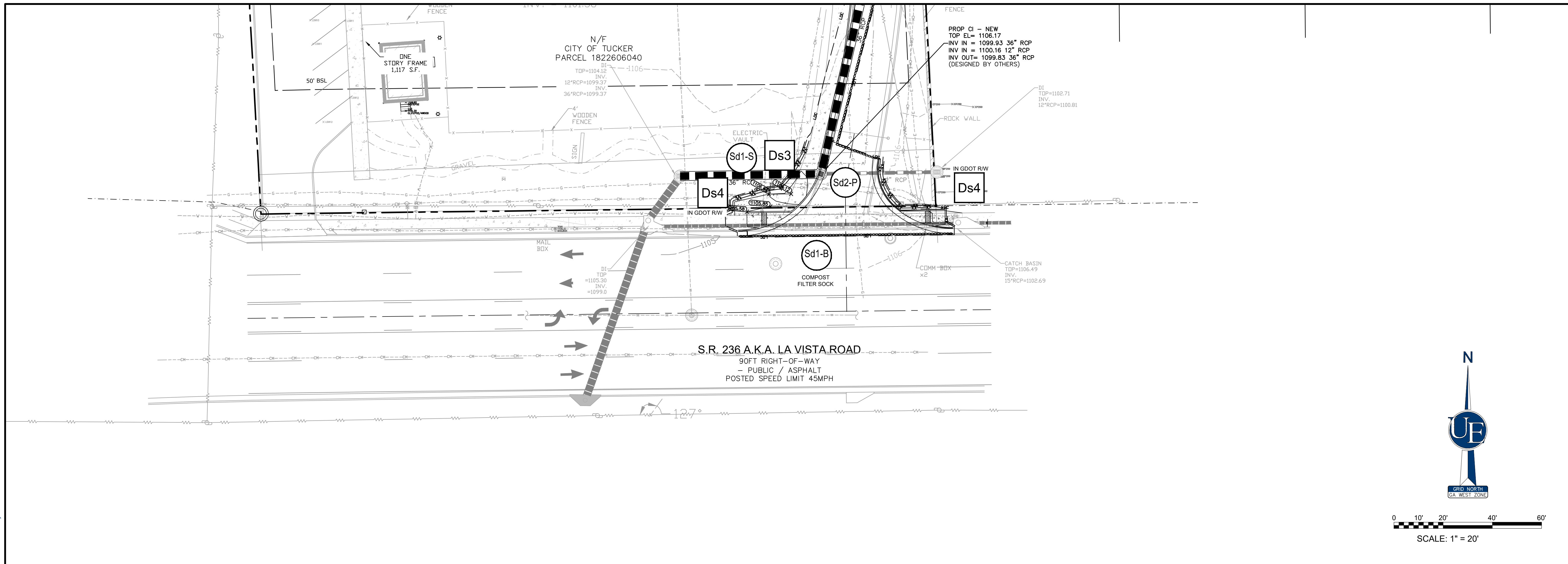
INTERSECTION ES&PC PLAN

SHEET NUMBER

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REQUIRED PAVEMENT SPECIFICATIONS  
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 2" 19 MM SUPERPAVE  
 8" 25 MM SUPERPAVE  
 12" GRADED AGREGATE BASE COURSE

NOTICE  
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POSTED SPEED LIMIT 45 MPH  
AADT 25,400

GA DOT PERMIT#  
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UTILITY PROVIDERS

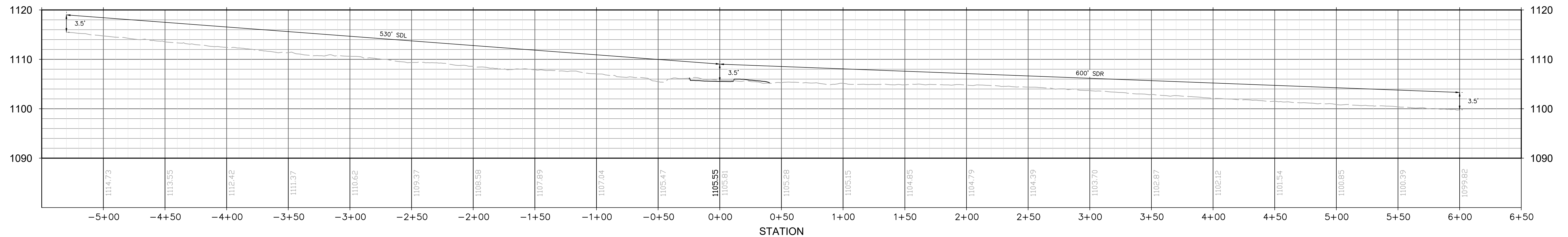
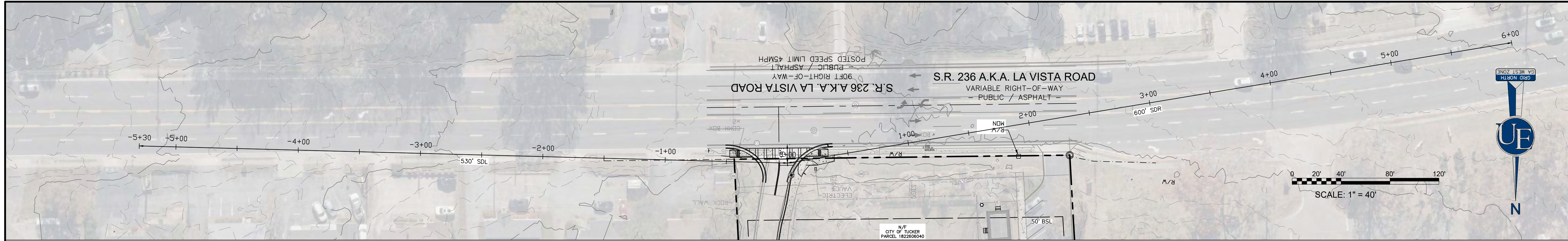
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**PROFILE OF ISD**  
VERT. SCALE 1"= 10'  
HORZ. SCALE 1"= 40'

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**PROFESSIONAL SEAL**

CERTIFIED LEVEL II  
CERT # 6868  
EXPIRES 03/11/24

**REVISIONS**

DATE	DESCRIPTION
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06/27/24	03 GDOT COMMENTS

**PROJECT NAME**

**TUCKER PICKLEBALL COURTS: GDOT DRIVEWAY ENCROACHMENT**

Serving Metro Atlanta for more than 40 years.

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**POSTED SPEED LIMIT 45 MPH**  
**AADT 25,400**

**GA DOT PERMIT#**  
**A-089-011036-7**

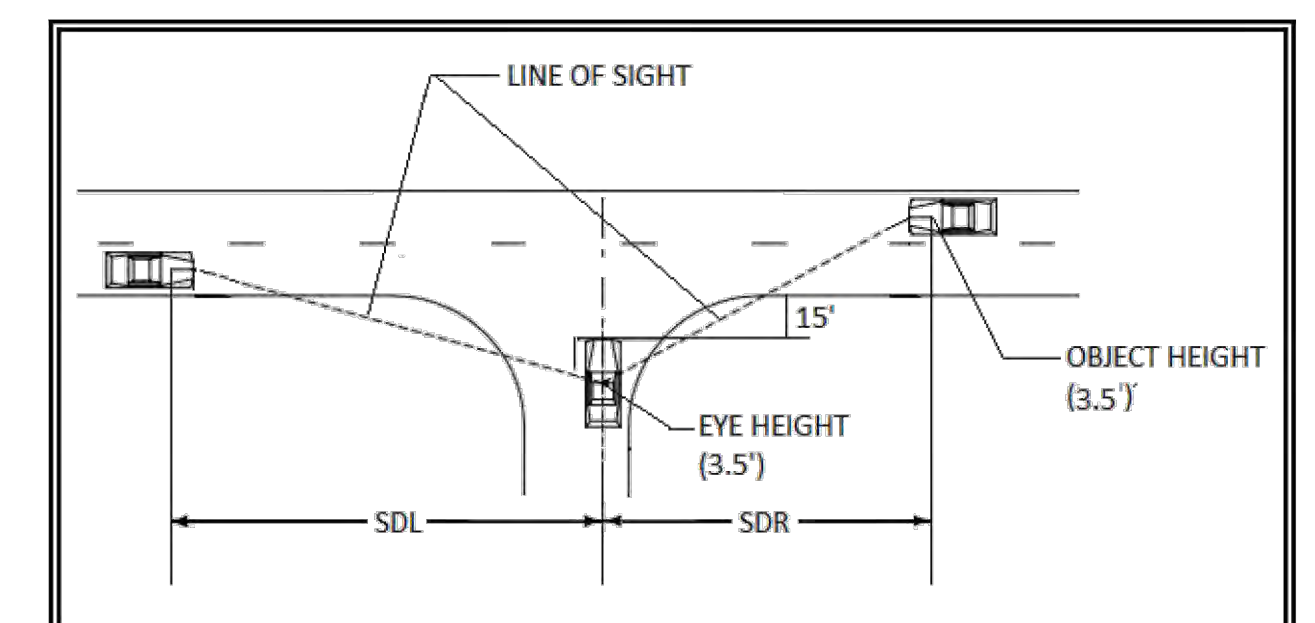
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774 JORDAN LANE SUITE 200  
DECATUR, GA 30033  
(404) 371-6294

**Sight Distance Certification**

I, the undersigned, hereby certify the sight distance for the project is designed with adequate distance. The regulated speed limit on the approaching thoroughfare is 45 mph. The designed sight distance provides visibility of 555 feet to the left, and 625 feet to the right. The sight distance shall be measured from a point of 15 feet from travel lane at an eye level of 3.5 feet and looking at an object 3.5 feet above the centerline.

Signed Rip Robertson Date 03/25/2024

**Regulations for Driveway & Encroachment Control Manual**



ARTERIAL SPEED (MPH)	SIGHT DISTANCE, FT.*							
	2 Lane		3 Lanes		4 Lanes		5 Lanes	
	SDL=SDR	SDL	SDR	SDL	SDR	SDL	SDR	
30	335	310	355	335	375	355	400	
35	390	365	415	390	440	415	465	
40	445	415	475	445	500	475	530	
45	500	465	530	500	565	530	600	
50	555	515	590	555	625	590	665	
55	610	570	650	610	690	650	730	
60	665	620	710	665	750	710	795	
65	720	670	765	720	815	765	860	

**Table 3-4 Intersection Sight Distance Requirements**

**NOTE: Sight distance chart reflects proposed conditions in addition to auxiliary lanes. Meeting minimum sight distance is mandatory in order to obtain a commercial driveway permit. A signed and dated sight distance certification statement is required on the permitted plans.**

The sight distance criteria are based on the time required for a vehicle to make a left turn from a stop-controlled approach to the State Highway (AASHTO Case B1). The time to execute the maneuver is based on recommendations contained in NCHRP Report 383, Intersection Sight Distance. A time gap of 7.5 seconds is used for calculating the sight distance for a stopped vehicle making a left turn onto a two-lane highway with no median and grades 3 percent or less. The time gap is decreased by 1.0 seconds for right-turn maneuvers without undue interference with major road-traffic. The time is increased by 0.5 seconds for each additional lane to be crossed.

The sight distances given in Table 3-4 are for undivided highways. If the highway is divided, the effect of the median should be considered in determining the required sight distance. In very rare cases, where the raised median is at least 40', it may be feasible for the crossing maneuver to be done in two stages with a stop in the median. However, the intersection should only be treated in this manner if the signing and marking is accordingly provided. Otherwise, the sight distance



**24H CONTACT**

**RIP ROBERTSON**  
470-273-3076  
crobertson@tuckerga.gov

**PROJECT INFORMATION**

PROJECT No. 2401-08  
LAND LOT(S): 226  
DISTRICT: 18TH  
COUNTY: DEKALB  
SCALE: 1" = 40'  
DATE: 03/25/2024

**SHEET NAME**

**INTERSECTION SIGHT DISTANCE PLAN**

**SHEET NUMBER**

**C-10.1.0**

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THESE PLAN VIEW AND ELEVATION DRAWINGS ARE A PRELIMINARY ARCHITECTURAL REPRESENTATION OF THE BUILDING. ALL DIMENSIONS, FEATURES AND COMPONENTS SHOWN ON THESE PRELIMINARY DRAWINGS MAY OR MAY NOT BE PART OF THE QUOTE. PLEASE REFER TO THE "SCOPE OF SUPPLY AND SERVICES" LETTER PROVIDED WITH YOUR QUOTE FOR ROMTEC'S PROPOSED SCOPE OF SUPPLY.



**ROMTEC**  
18240 NORTH BANK ROAD - ROSEBURG, OR 97470  
(541)-496-3541 FAX (541)-496-0803

# TUCKER PICKLEBALL COURT RESTROOM & PAVILION

SHEET SCHEDULE	
SHEET	CONTENTS
1	TITLE PAGE
2	FLOOR PLAN & ELEVATIONS
3	CMU PLAN & DETAILS
4	FOUNDATION PLAN & DETAILS

PROJECT: TUCKER PICKLEBALL COURT - RESTROOM & PAVILION  
TUCKER, GEORGIA

PROJECT #: 2153  
DATE: 8/14/2024  
DRAWN BY: TY/JRM

NO.	DATE	BY

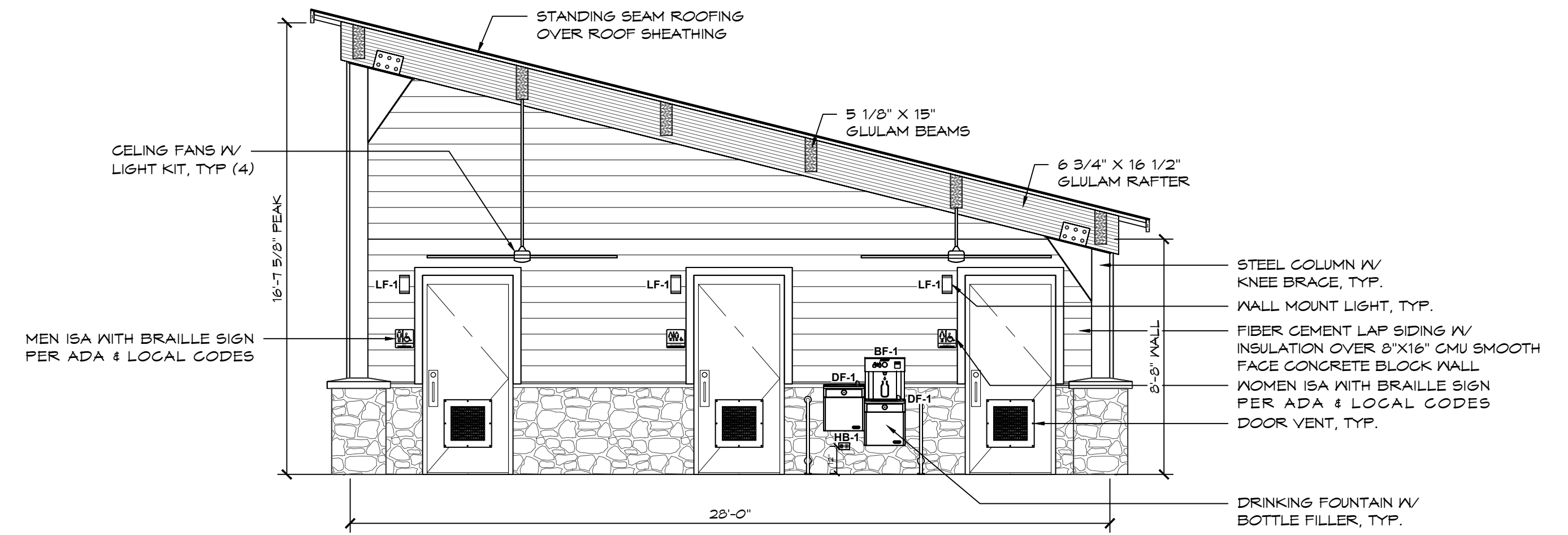
REVISIONS:  
SHEET NO: 1

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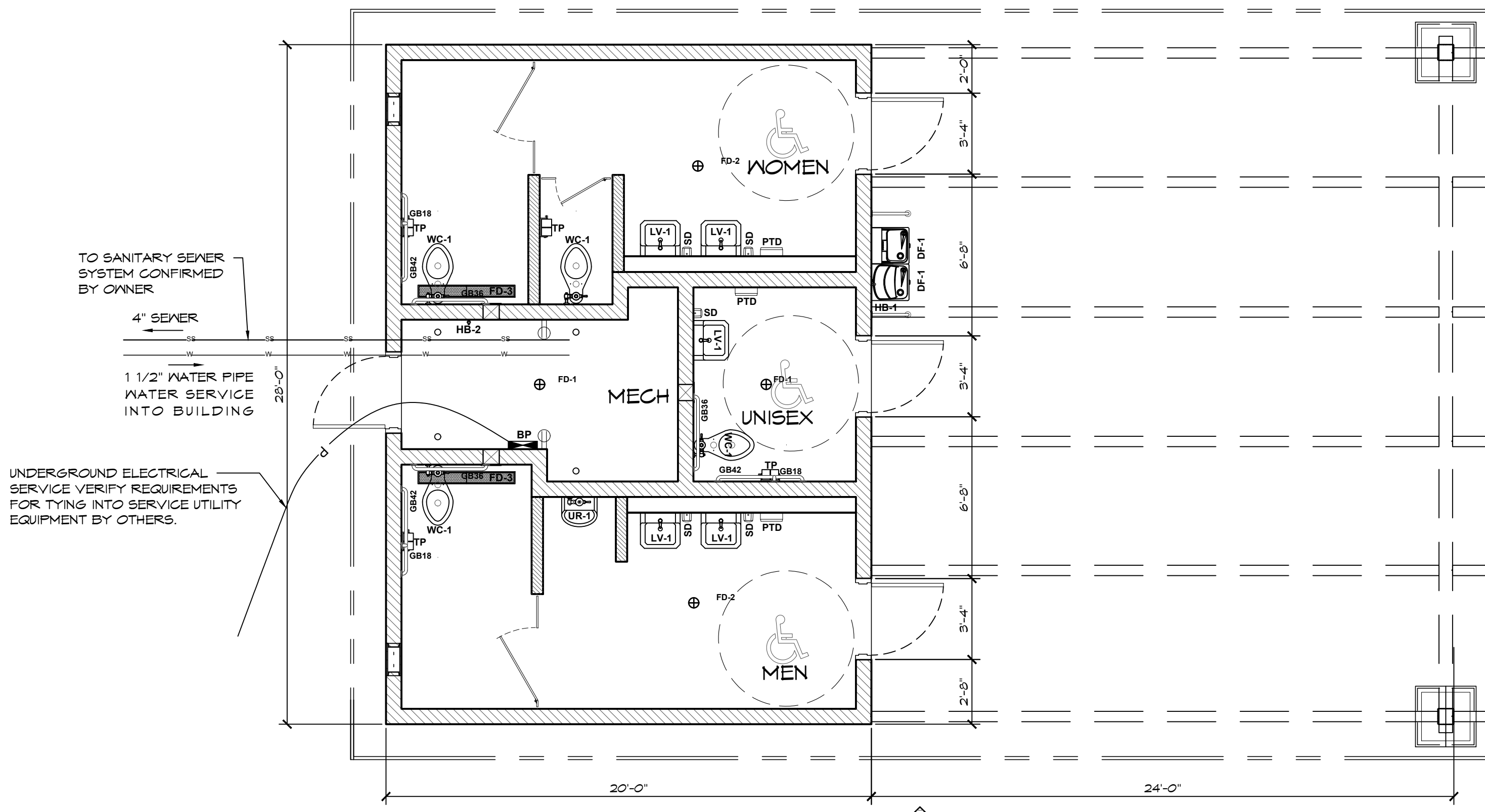


LEGEND		
SYMBOL	DESCRIPTION	AREA/ QUANTITY
[Symbol]	EXTERIOR WALL LIGHTS	4
[Symbol]	INTERIOR CEILING LIGHTS	6

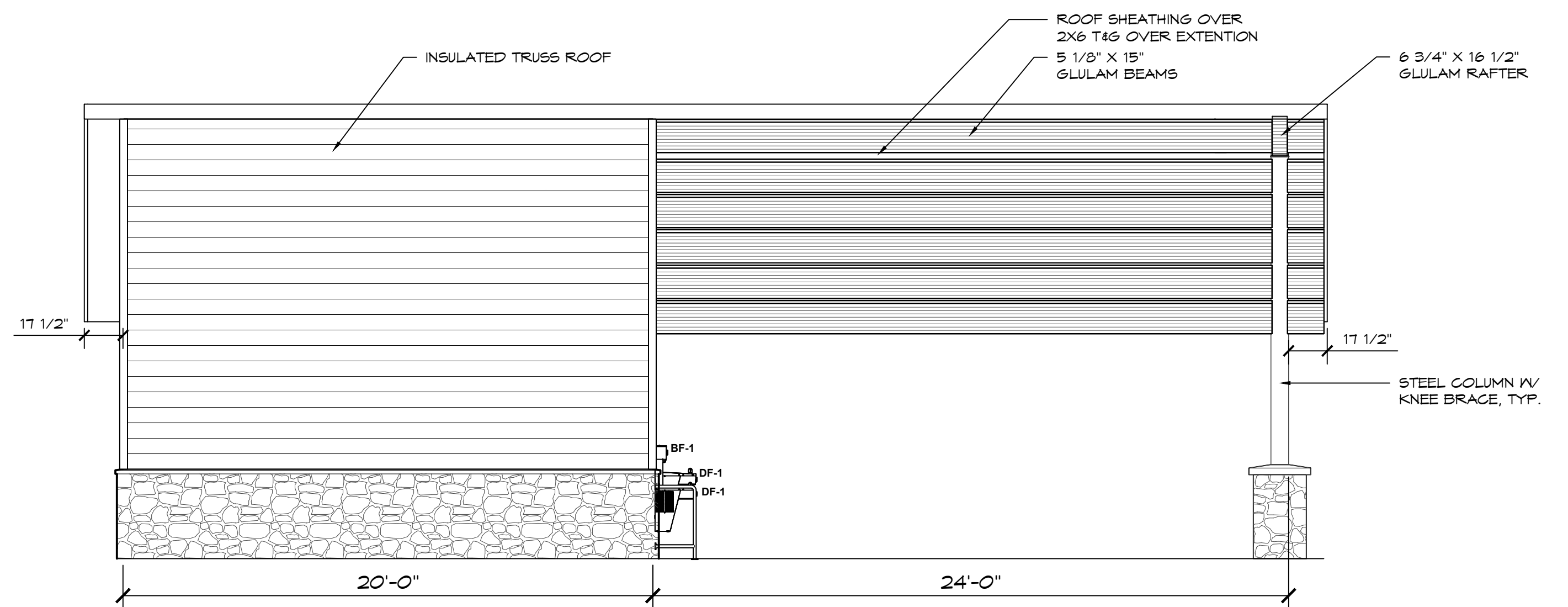
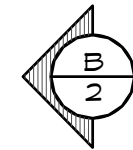
WALL TYPE SCHEDULE	
[Symbol]	8" REINFORCED CONCRETE MASONRY BLOCK WALL WITH MORTAR JOINTS, GROUTED SOLID ALL CELLS RUNNING BOND PATTERN.
[Symbol]	8" WOOD FRAMED WALL



**B** ELEVATION VIEW  
SCALE: 1/4" = 1'-0"



**1** FLOOR PLAN  
SCALE: 1/4" = 1'-0"



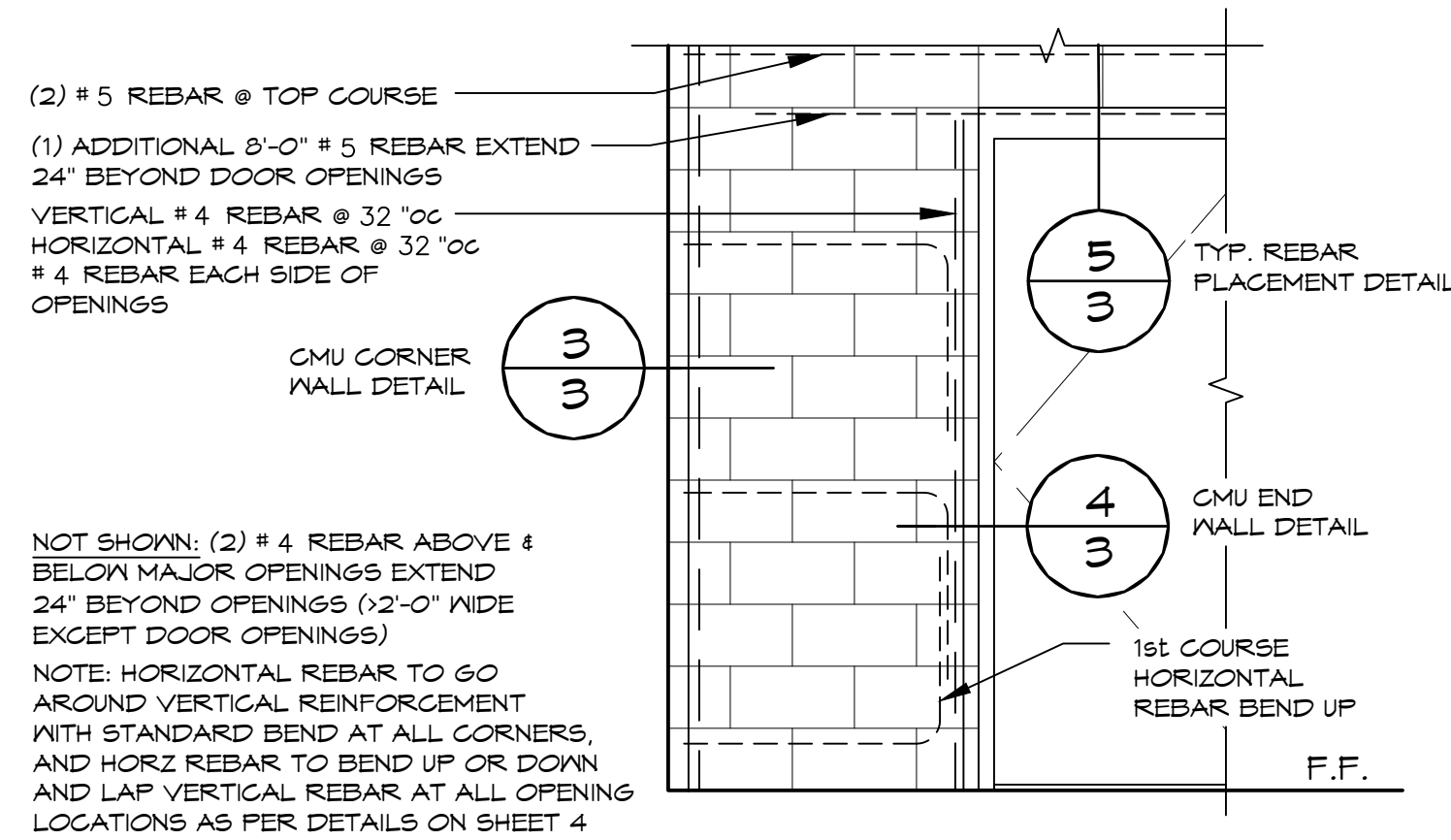
**C** ELEVATION VIEW  
SCALE: 1/4" = 1'-0"

TUCKER PICKLEBALL COURT - RESTROOM & PAVILION  
TUCKER, GEORGIA

PROJECT #	2153
DATE	8/14/2024
DRAWN BY	TY/JRM
REVISIONS	
SHEET NO.	2

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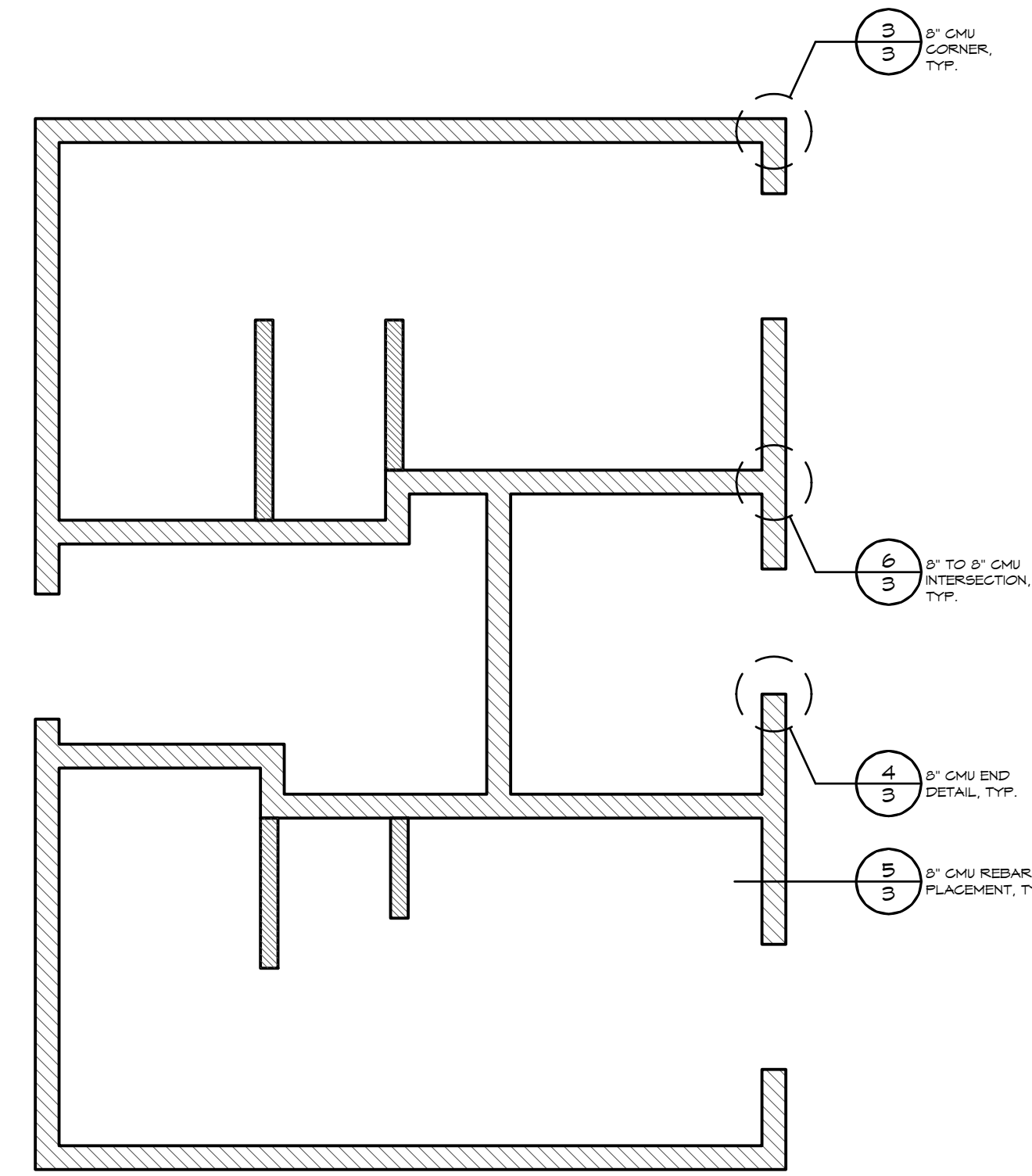


REBAR	MIN. LAP	BEND DIAMETER
#4	24"	3" MIN.
#5	30"	3-3/4" MIN.

**CMU REBAR NOTES:**  
 - BENDS: MIN. INSIDE BEND DIAMETER SHALL BE NOT LESS THAN 6d AS PER TMS 402-16 SECTION 6.1.8.2  
 - SPLICES: LAP SPLICES ARE PERMITTED AS PER TMS 402-16 SECTION 6.1.6.1.1

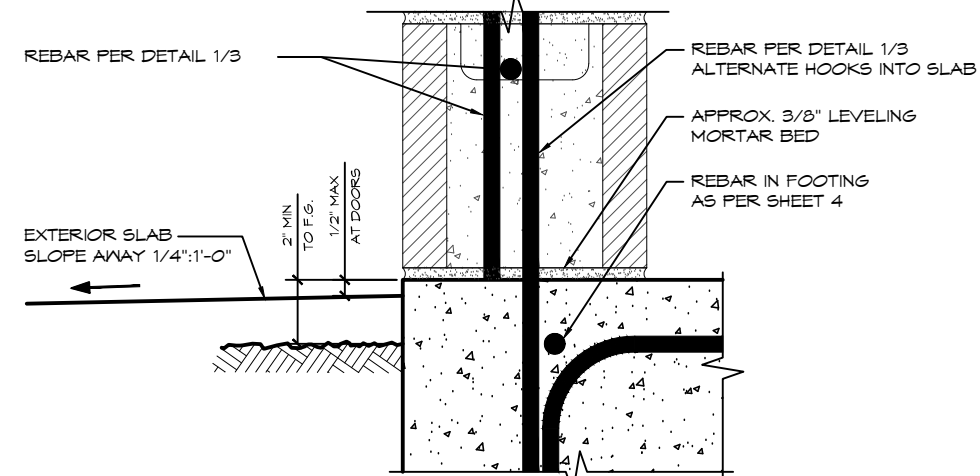
**PIPES INSTALLED THROUGH CMU WALL NOTES:**  
 - SUPPLY: THE FIXTURE SUPPLY LINE SHOULD BE BORED A 1/2" LARGER THAN REQUIRED LINE SIZE AND THE PORTION OF PIPE LOCATED IN CMU WALL SHALL BE WRAPPED WITH 10MIL BLACK TAPE  
 - WASTE PIPE: THE FIXTURE WASTE LINE SHOULD BE BORED A 1/2" LARGER THAN REQUIRED LINE SIZE.

**1 CMU REBAR LAYOUT DETAIL**  
 SCALE: 1" = 1'-0"

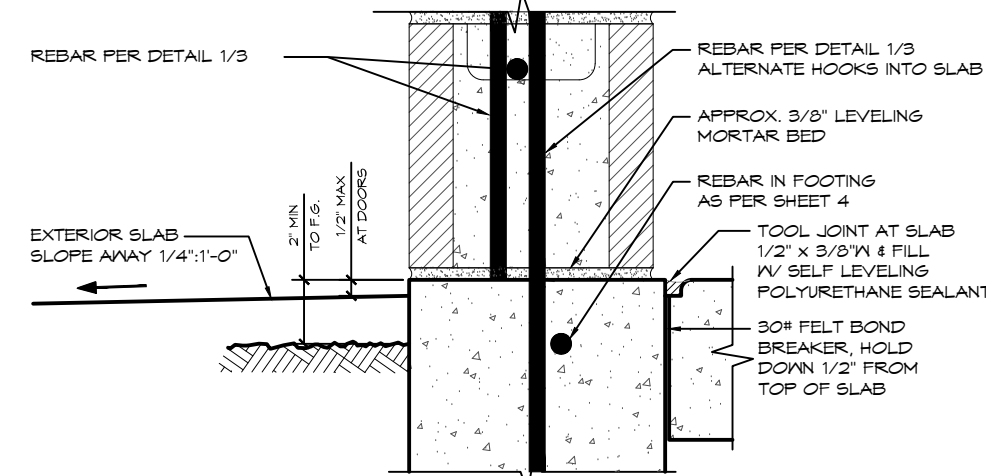


**A STRUCTURAL CMU PLAN**  
 SCALE: 1/4" = 1'-0"

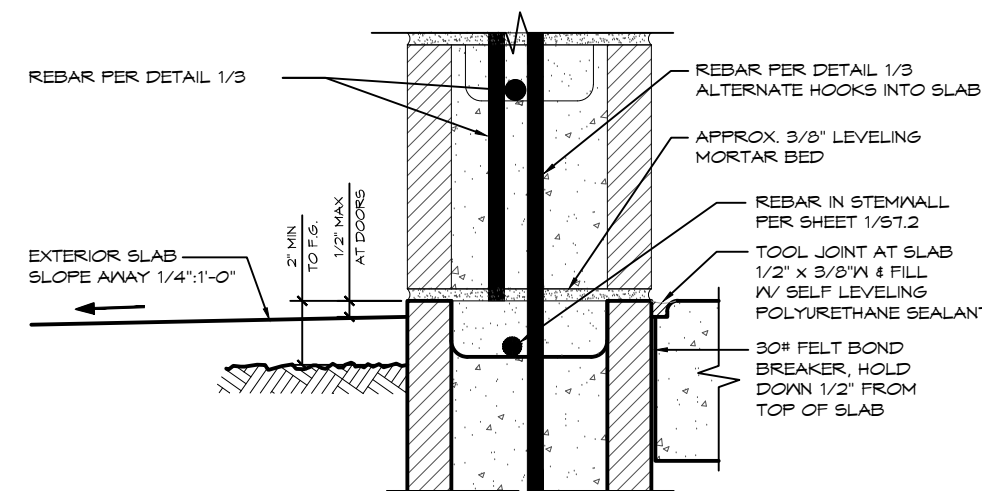
**EXTERIOR WALL CONNECTIONS - PER DETAIL 1/4**



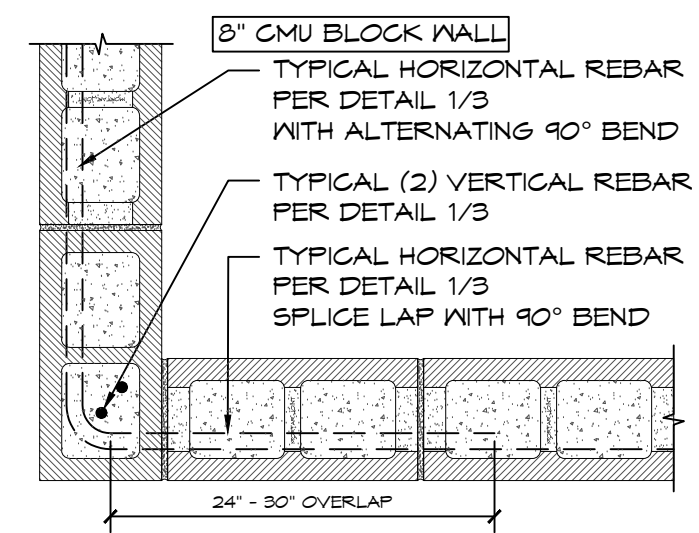
**2A WALL-SLAB CONNECTION - MONO**  
 SCALE: 3/4" = 1'-0"



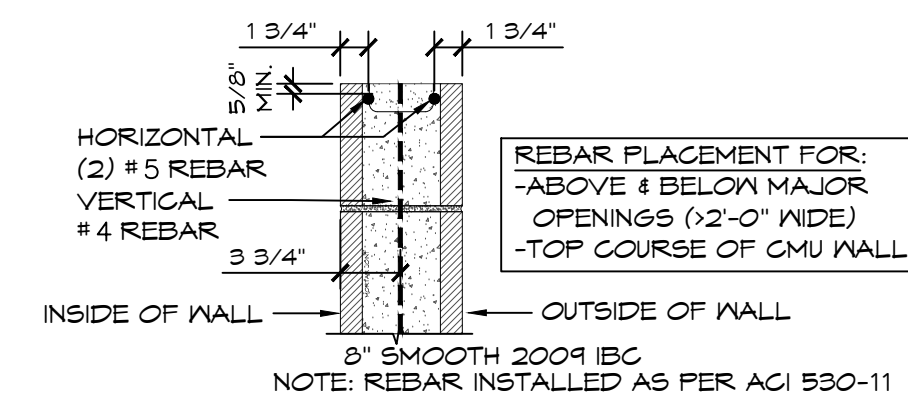
**2B WALL-SLAB CONNECTION - STEM**  
 SCALE: 3/4" = 1'-0"



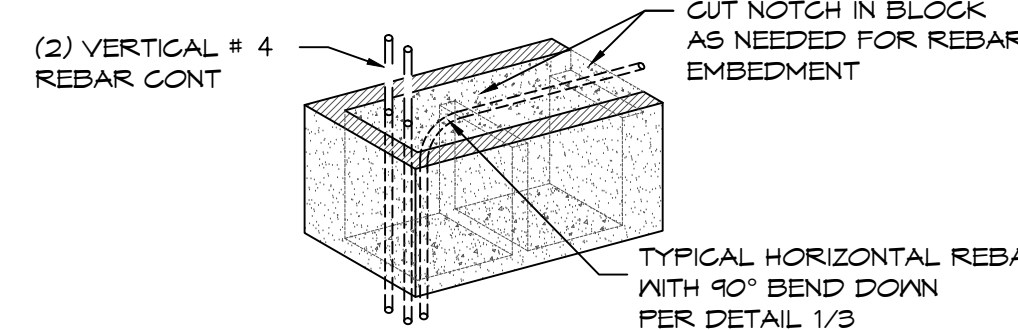
**2C WALL-SLAB CONNECTION - CMU STEM**  
 SCALE: 3/4" = 1'-0"



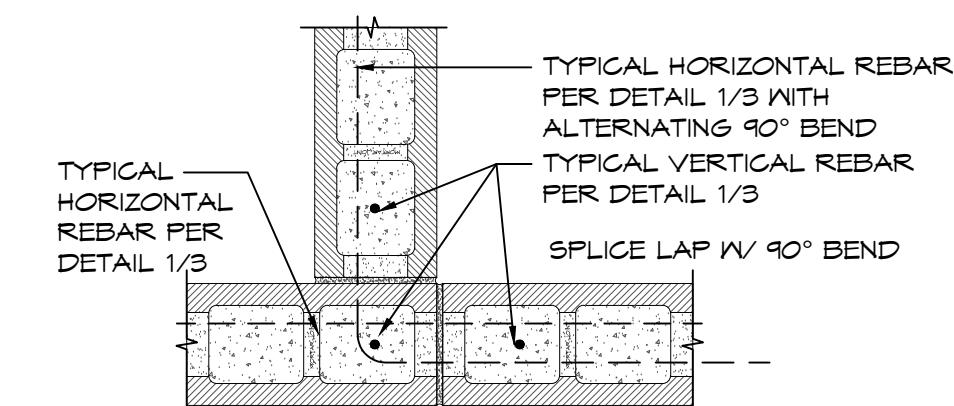
**3 MORTAR JOINT CMU CORNER DETAIL**  
 SCALE: 1" = 1'-0"



**5 8" CMU REBAR PLACEMENT**  
 SCALE: 1" = 1'-0"



**4 MORTAR JOINT CMU WALL END DETAIL**  
 SCALE: 1" = 1'-0"



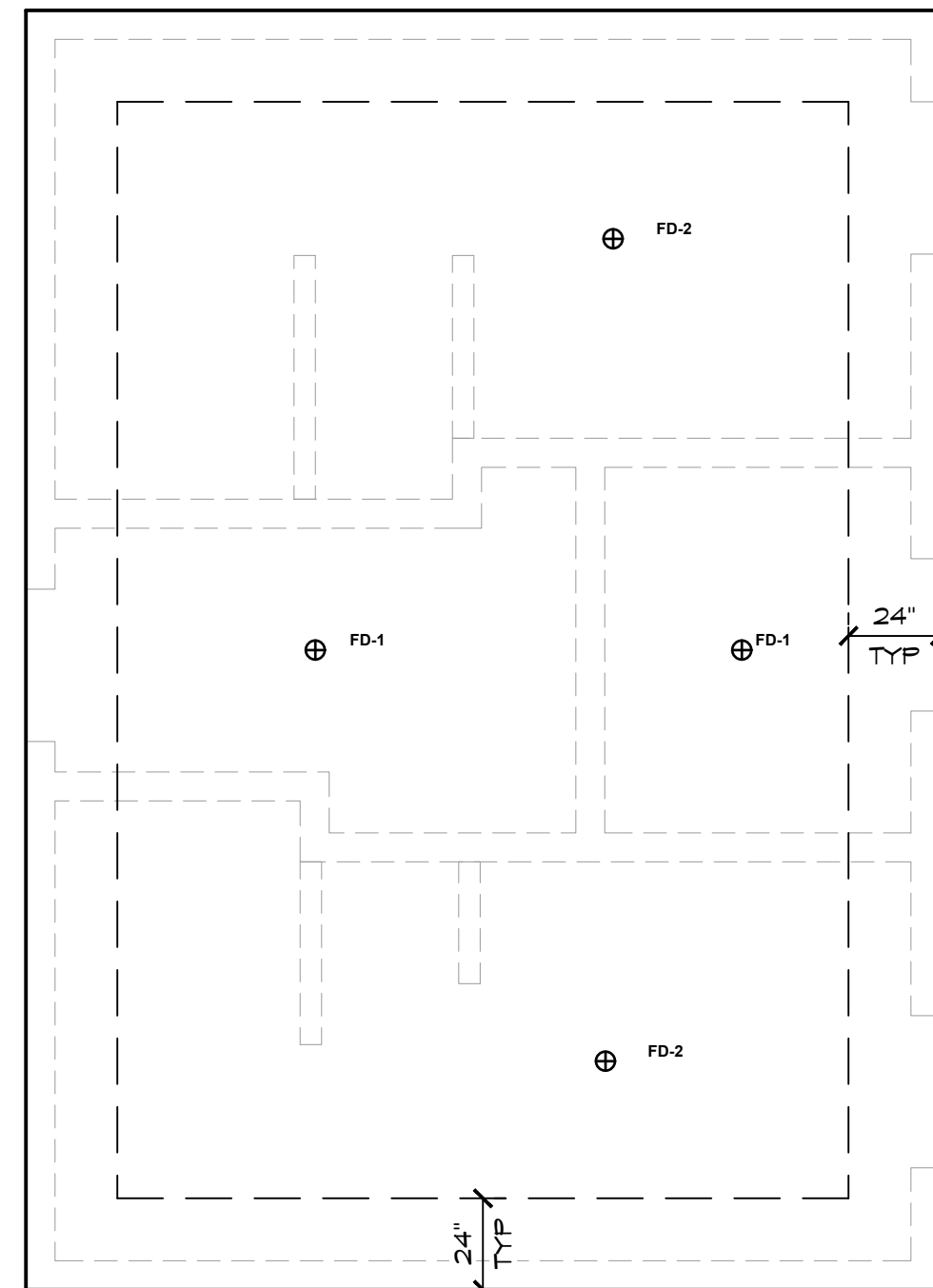
**6 8" TO 8" MORTAR JOINT CMU INTERSECTION DETAIL**  
 SCALE: 1" = 1'-0"

TUCKER PICKLEBALL COURT - RESTROOM & PAVILION  
 TUCKER, GEORGIA

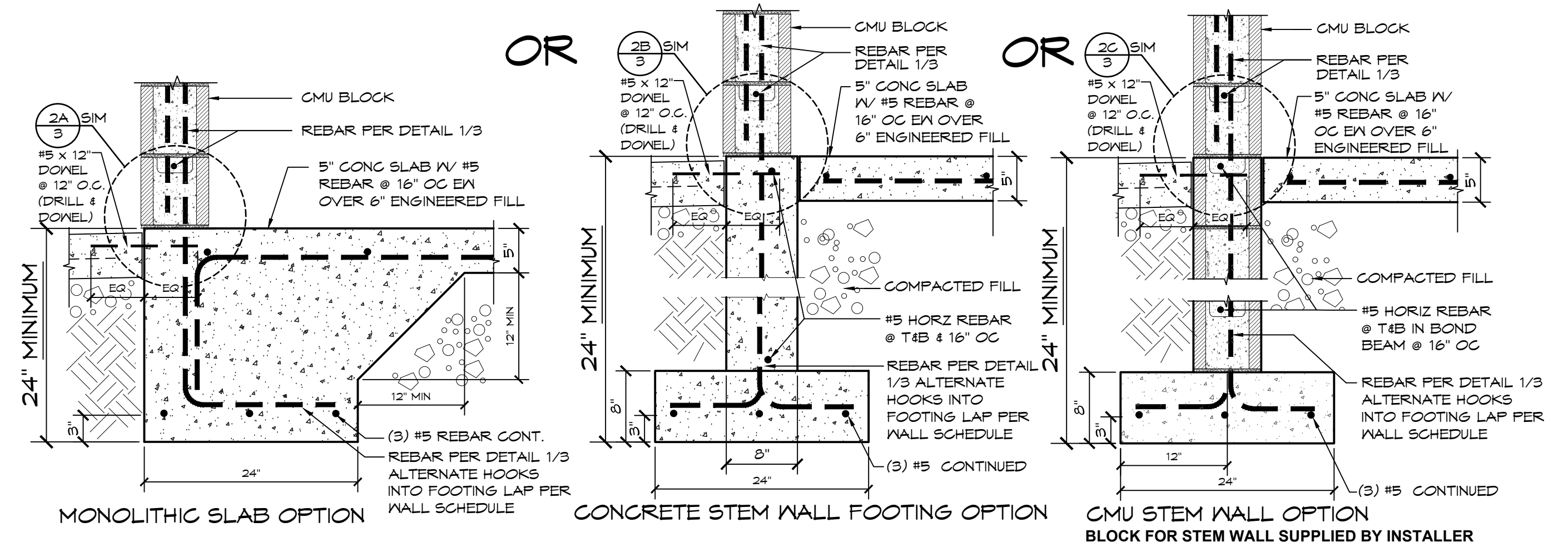
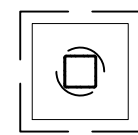
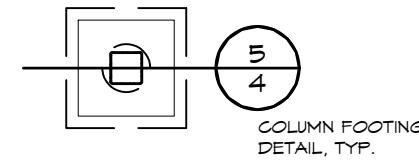
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EXTERIOR WALL FOUNDATIONS - CHOOSE ONE OF THE FOLLOWING

SEE FLOOR PLAN FOR EXTERIOR WALL LOCATIONS, SHEET 3



A FOUNDATION PLAN  
SCALE: 1/4" = 1'-0"

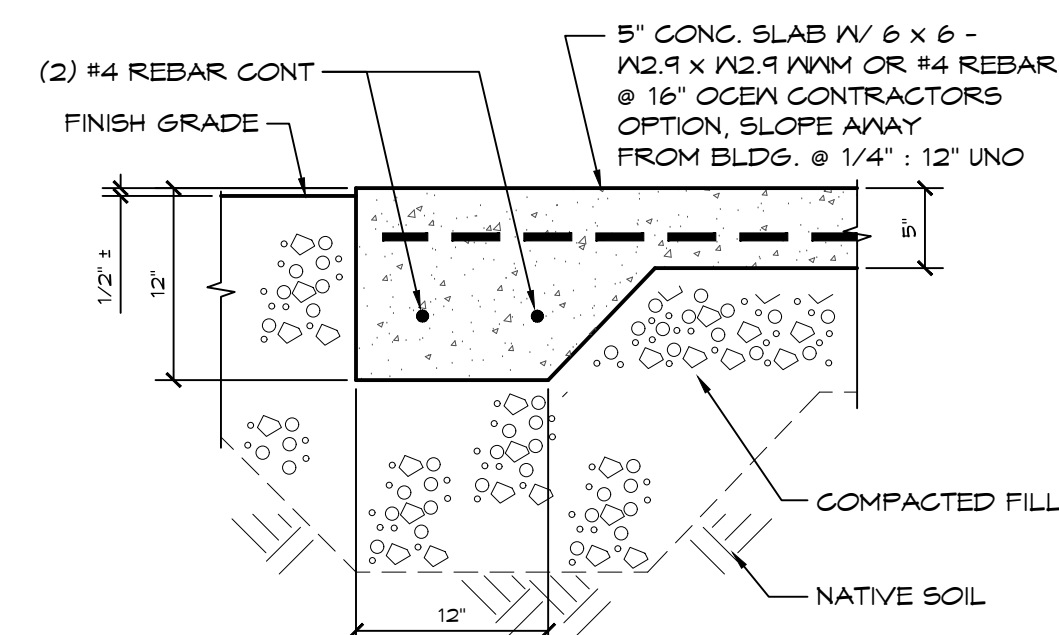


1 EXTERIOR WALL FOUNDATION DETAIL OPTIONS  
SCALE: 1" = 1'-0"

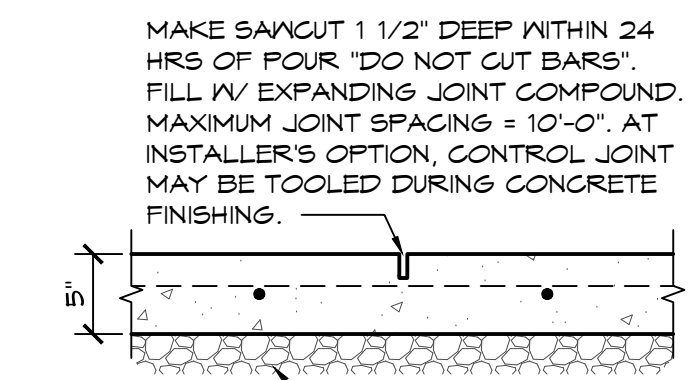
GENERAL NOTES:

- \* WHEN USING EITHER STEM WALL OPTION RECESS STEM WALL THE THICKNESS OF SLAB AT DOOR THRESHOLD
- \* PRIVACY WALLS TO HAVE A 30" WIDE X 12" DEEP FOOTING, IF APPLICABLE
- \* CMU STEM WALL OPTION, CMU BLOCK IS BY INSTALLER
- \* VERTICAL REBAR IN SLAB/STEM WALL TO MATCH VERTICAL WALL REINFORCEMENT LAP PER WALL SCHEDULE

FOUNDATION DESIGN SHOWN HERE IS PRELIMINARY AND SUBJECT TO CHANGE. FINAL FOUNDATION DESIGN TO BE DETERMINED DURING THE FORTHCOMING FULL DESIGN PHASE FOR THE BUILDING. ANY INCREASED COSTS OR TIME NEEDED TO CONSTRUCT THE FINAL FOUNDATION DESIGN IS BETWEEN THE END OWNER AND THE BUILDING INSTALLER

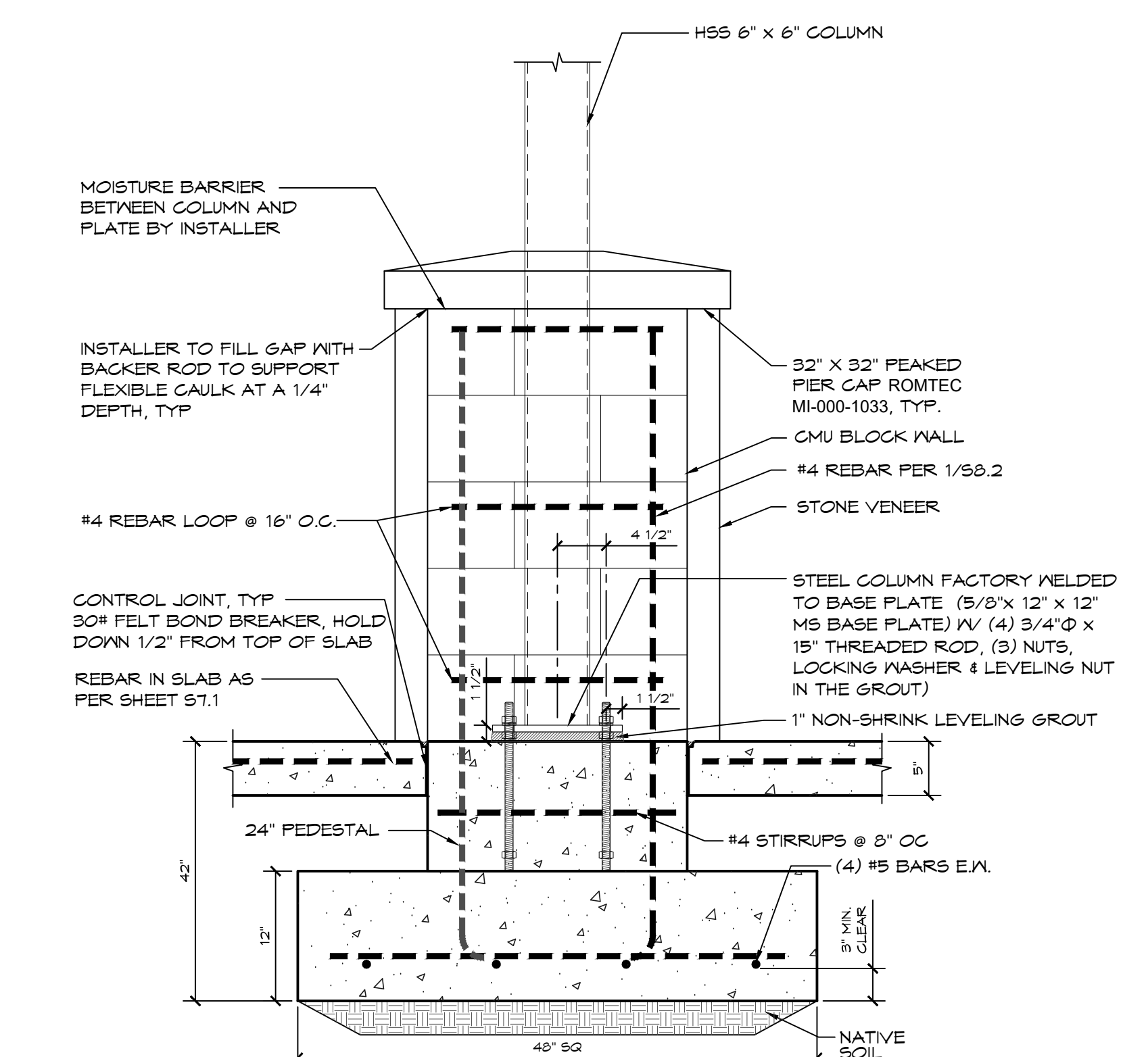


2 EDGE OF CONC. WALKWAY  
SCALE: 1" = 1'-0"



3 SAWCUT JOINT  
SCALE: 1" = 1'-0"

MAKE SAWCUT 1 1/2" DEEP WITHIN 24 HRS OF POUR "DO NOT CUT BARS". FILL W/ EXPANDING JOINT COMPOUND. MAXIMUM JOINT SPACING = 10'-0". AT INSTALLER'S OPTION, CONTROL JOINT MAY BE TOOLED DURING CONCRETE FINISHING.



5 COLUMN FOOTING DETAIL  
SCALE: 1" = 1'-0"

TUCKER PICKLEBALL COURT - RESTROOM & PAVILION  
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Date: 09/10/2024

Project No: 2023-019

Drawn By: PS

Checked By: MK

**Tucker Pickleball Courts**  
4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

PROJECT INFORMATION	
ENGINEERED PRODUCT MANAGER	ED PISOWICZ 404-433-7452 EDWARD.PISOWICZ@ADSPPIPE.COM
ADS SALES REP	PAUL ROOT 678-858-3360 PAUL_ROOT@ADS-PIPE.COM
PROJECT NO.	S370943



## TUCKER PICKLEBALL COURTS TUCKER, GA, USA

### MC-3500 STORMTECH CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-3500.
- CHAMBERS SHALL BE ARCH-SHAPED AND SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNOBSTRUCTED INTERNAL SPACE WITH NO INTERNAL SUPPORTS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL BE DESIGNED, TESTED AND ALLOWABLE LOAD CONFIGURATIONS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS". LOAD CONFIGURATIONS SHALL INCLUDE: 1) INSTANTANEOUS (-1 MIN) AASHTO DESIGN TRUCK LIVE LOAD ON MINIMUM COVER 2) MAXIMUM PERMANENT (75-YR) COVER LOAD AND 3) ALLOWABLE COVER WITH PARKED (1-WEEK) AASHTO DESIGN TRUCK.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT<sup>2</sup>. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. UPON REQUEST BY THE SITE DESIGN ENGINEER OR OWNER, THE CHAMBER MANUFACTURER SHALL SUBMIT A STRUCTURAL EVALUATION FOR APPROVAL BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE AS FOLLOWS:
  - THE STRUCTURAL EVALUATION SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER.
  - THE STRUCTURAL EVALUATION SHALL DEMONSTRATE THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.95 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY SECTIONS 3 AND 12.12 OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR THERMOPLASTIC PIPE.
  - THE TEST DERIVED CREEP MODULUS AS SPECIFIED IN ASTM F2418 SHALL BE USED FOR PERMANENT DEAD LOAD DESIGN EXCEPT THAT IT SHALL BE THE 75-YEAR MODULUS USED FOR DESIGN.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

### IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-3500 CHAMBER SYSTEM

- STORMTECH MC-3500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR AN EXCAVATOR SITUATED OVER THE CHAMBERS. STORMTECH RECOMMENDS 3 BACKFILL METHODS:
  - STONESHOOTER LOCATED OFF THE CHAMBER BED.
  - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
  - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM - 6" (150 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE MEETING THE AASHTO M43 DESIGNATION OF #3 OR #4.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE SITE DESIGN ENGINEER.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

### NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-3500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-3500 CHAMBERS IS LIMITED:
  - NO EQUIPMENT IS ALLOWED ON BARE CHAMBERS.
  - NO RUBBER Tired LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
  - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3500/MC-4500 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.

**USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.**

CONTACT STORMTECH AT 1-888-892-2694 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

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Revisions:

NO.	DATE	DESCRIPTION

Sheet Title:

**Stormtech  
Chamber System  
Notes &  
Specifications**

Sheet No:

**ST100**



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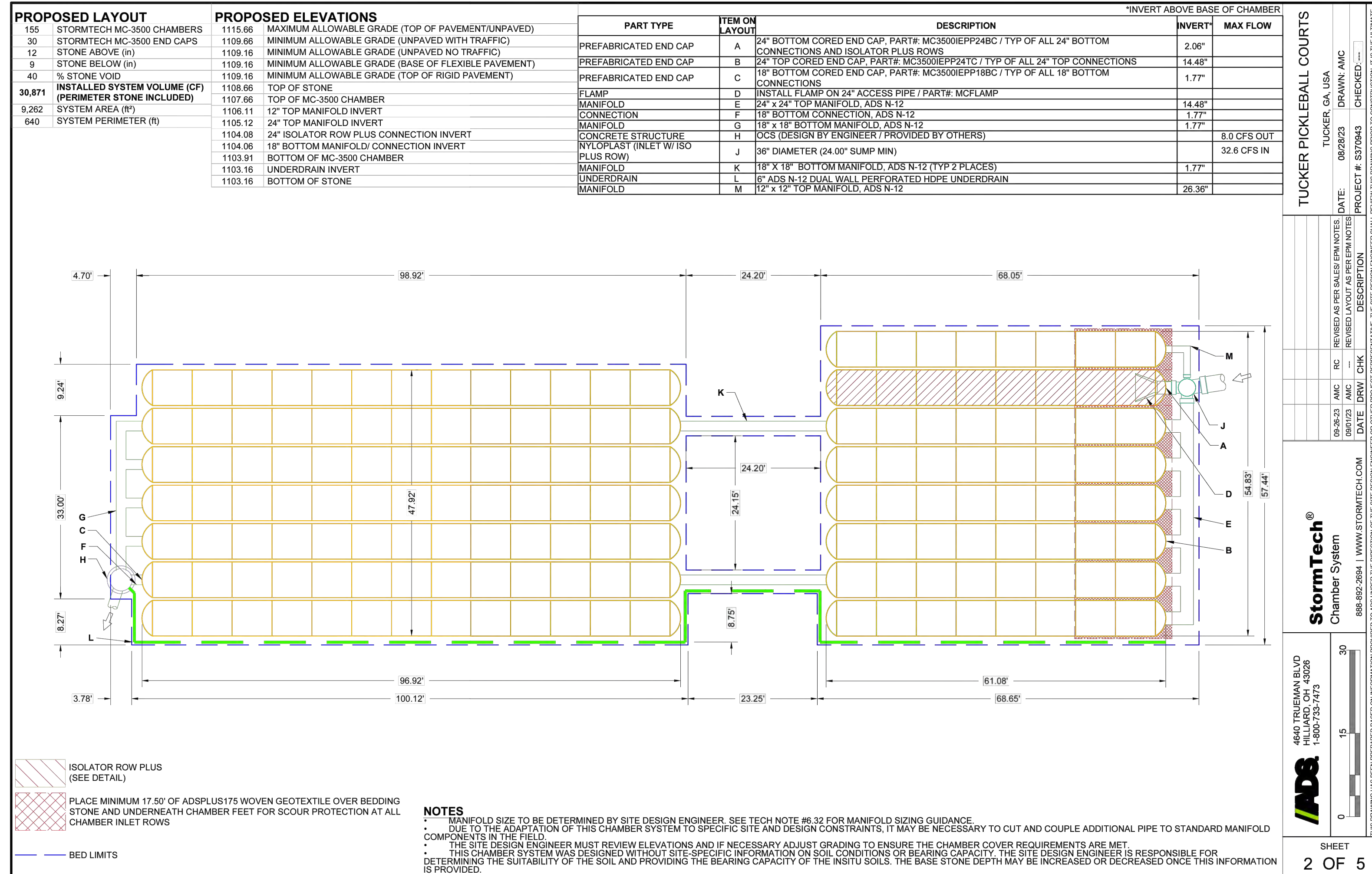
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# Tucker Pickleball Courts

4898 Lavista Rd, Tucker, GA 30084

City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084



**StormTech Chamber System**  
888-892-2694 | WWW.STORMTECH.COM

**ADG**  
6545 TERRELLAN BLVD  
HILARIO, CA 94526  
1-800-735-7473

**TUCKER PICKLEBALL COURTS**  
TUCKER, GA, USA  
DATE: 08/28/23  
DRAWN: AMC  
PROJECT #: S270943  
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08/28/23 AMC RC REVISED AS PER SALES FIRM NOTES  
09/01/23 AMC --- REVISED LAYOUT AS PER FIRM NOTES

DATE: 08/28/23  
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Sheet Title:  
Stormtech Chamber System Layout Plan

Sheet No:  
ST101



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City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
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NO.	DATE	DESCRIPTION

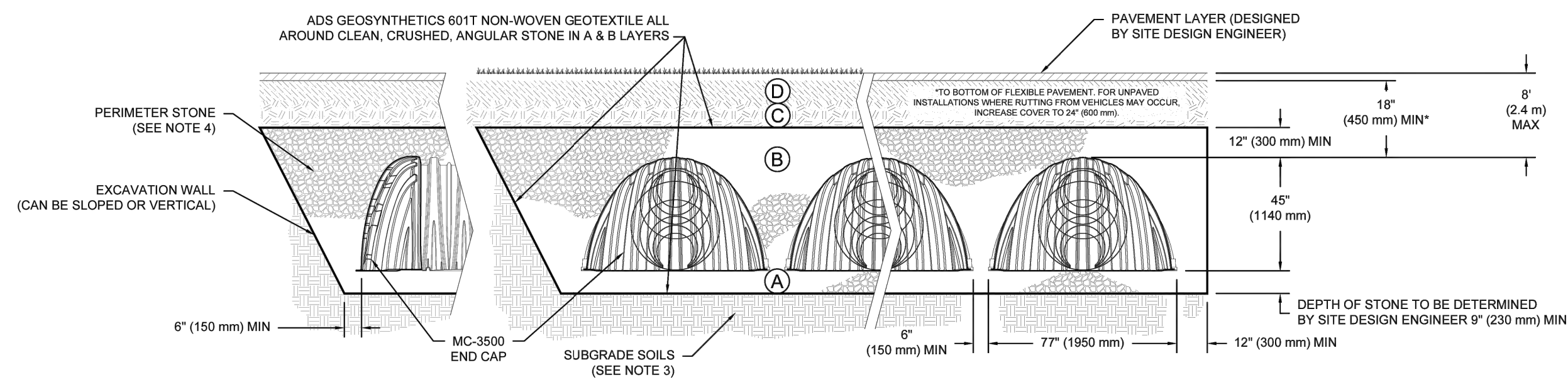
Sheet Title:  
**Stormtech Chamber System Fill Materials Schedule**

Sheet No:  
**ST102**

**ACCEPTABLE FILL MATERIALS: STORMTECH MC-3500 CHAMBER SYSTEMS**

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	<b>FINAL FILL:</b> FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C	<b>INITIAL FILL:</b> FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	AASHTO M145 <sup>1</sup> A-1, A-2-4, A-3  OR AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B	<b>EMBEDMENT STONE:</b> FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	AASHTO M43 <sup>1</sup> 3, 4	NO COMPACTION REQUIRED.
A	<b>FOUNDATION STONE:</b> FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	AASHTO M43 <sup>1</sup> 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
  - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR.
  - WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.
  - ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.



**NOTES:**

- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" CHAMBER CLASSIFICATION 45x76 DESIGNATION SS.
- MC-3500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- REQUIREMENTS FOR HANDLING AND INSTALLATION:
  - TO MAINTAIN THE WIDTH OF CHAMBERS DURING SHIPPING AND HANDLING, CHAMBERS SHALL HAVE INTEGRAL, INTERLOCKING STACKING LUGS.
  - TO ENSURE A SECURE JOINT DURING INSTALLATION AND BACKFILL, THE HEIGHT OF THE CHAMBER JOINT SHALL NOT BE LESS THAN 3".
  - TO ENSURE THE INTEGRITY OF THE ARCH SHAPE DURING INSTALLATION, a) THE ARCH STIFFNESS CONSTANT SHALL BE GREATER THAN OR EQUAL TO 450 LBS/FT<sup>3</sup>. THE ASC IS DEFINED IN SECTION 6.2.8 OF ASTM F2418. AND b) TO RESIST CHAMBER DEFORMATION DURING INSTALLATION AT ELEVATED TEMPERATURES (ABOVE 73° F / 23° C), CHAMBERS SHALL BE PRODUCED FROM REFLECTIVE GOLD OR YELLOW COLORS.

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CHECKED: ---

TUCKER PICKLEBALL COURTS  
TUCKER, GA, USA

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DATE: [REDACTED]  
DATE: [REDACTED]  
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**Tucker Pickleball Courts**  
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City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
Tucker, GA 30084

**MC-3500 ISOLATOR ROW PLUS DETAIL**  
NTS

**INSPECTION & MAINTENANCE**

STEP 1) INSPECT ISOLATOR ROW PLUS FOR SEDIMENT

A. INSPECTION PORTS (IF PRESENT)

A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN

A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED

A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG

A.4. LOWER A CAMERA INTO ISOLATOR ROW PLUS FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)

A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

B. ALL ISOLATOR PLUS ROWS

B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW PLUS

B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW PLUS THROUGH OUTLET PIPE

i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY

ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE

B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW PLUS USING THE JETVAC PROCESS

A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED

B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN

C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

**NOTES**

1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.

2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

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**Stormtech  
Chamber System  
Isolater Row  
Detail**

Sheet No:  
**ST103**



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Project No: 2023-019

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**Tucker Pickleball Courts**  
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City of Tucker, Parks & Recreation Department  
4898 Lavista Road  
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### UNDERDRAIN DETAIL

NTS

**MC-SERIES END CAP INSERTION DETAIL**

NTS

NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

### MC-3500 TECHNICAL SPECIFICATION

NTS

**NOMINAL CHAMBER SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	CHAMBER STORAGE	MINIMUM INSTALLED STORAGE*	WEIGHT
77.0" X 45.0" X 86.0" (1956 mm X 1143 mm X 2184 mm)	109.9 CUBIC FEET (3.11 m <sup>3</sup> )	175.0 CUBIC FEET (4.96 m <sup>3</sup> )	134 lbs. (60.8 kg)

**NOMINAL END CAP SPECIFICATIONS**

SIZE (W X H X INSTALLED LENGTH)	END CAP STORAGE	MINIMUM INSTALLED STORAGE*	WEIGHT
75.0" X 45.0" X 22.2" (1905 mm X 1143 mm X 564 mm)	14.9 CUBIC FEET (0.42 m <sup>3</sup> )	45.1 CUBIC FEET (1.28 m <sup>3</sup> )	49 lbs. (22.2 kg)

\*ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION, 6" SPACING BETWEEN CHAMBERS, 6" (152 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B"  
STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"  
END CAPS WITH A WELDED CROWN PLATE END WITH "C"  
END CAPS WITH A PREFABRICATED WELDED STUB END WITH "W"

PART #	STUB	B	C
MC3500IEPP06T	---	33.21" (844 mm)	---
MC3500IEPP08B	6" (150 mm)	---	0.66" (17 mm)
MC3500IEPP08T	---	31.16" (791 mm)	---
MC3500IEPP08B	8" (200 mm)	---	0.81" (21 mm)
MC3500IEPP10T	---	29.04" (738 mm)	---
MC3500IEPP10B	10" (250 mm)	---	0.93" (24 mm)
MC3500IEPP12T	---	26.36" (670 mm)	---
MC3500IEPP12B	12" (300 mm)	---	1.35" (34 mm)
MC3500IEPP15T	---	23.39" (594 mm)	---
MC3500IEPP15B	15" (375 mm)	---	1.50" (38 mm)
MC3500IEPP18TC	---	20.03" (509 mm)	---
MC3500IEPP18TW	18" (450 mm)	---	1.77" (45 mm)
MC3500IEPP18BC	---	---	---
MC3500IEPP18BW	---	---	---
MC3500IEPP24TC	---	14.48" (368 mm)	---
MC3500IEPP24TW	24" (600 mm)	---	---
MC3500IEPP24BC	---	---	2.06" (52 mm)
MC3500IEPP24BW	---	---	2.75" (70 mm)
MC3500IEPP30BC	30" (750 mm)	---	---

NOTE: ALL DIMENSIONS ARE NOMINAL

StormTech Chamber System

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TUCKER PICKLEBALL COURTS

TUCKER, GA, USA

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REVISED AS PER SALES REPRESENTATIVE. THE SITE DESIGN ENGINEER SHALL REVIEW THE DRAWING PRIOR TO CONSTRUCTION. IF IT IS THE ULTIMATE LAYOUT AS PER PERMITS NOTES.

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Sheet Title:  
**Stormtech Chamber System Construction Details**

Sheet No:  
**ST104**



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Sheet Title:  
**Stormtech Chamber System Drain Basin Detail**

Sheet No:  
**ST105**

### 36" (900 mm) NYLOPLAST DRAIN BASIN

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**TRAFFIC LOADS:** CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, AND OTHER APPLICABLE DESIGN FACTORS. SEE DRAWING NO. 7001-110-111 FOR NON TRAFFIC INSTALLATION.

INTEGRATED DUCTILE IRON FRAME & GRATE/SOLID COVER TO MATCH BASIN O.D. (SEE NOTES 1 & 2)

24" (600 mm) MIN. MANUFACTURING REQUIREMENT FROM TOP OF GRATE TO TOP OF PIPE.

16" (450 mm) MIN WIDTH GUIDELINE

8" (200 mm) MIN THICKNESS GUIDELINE

36" X 30" (900 X 750 mm) DUCTILE IRON REDUCING TOP

VARIABLE SUMP DEPTH ACCORDING TO PLANS (10" (250 mm) MIN. BASED ON MANUFACTURING REQ.) (SEE NOTE 3)

6" (150 mm) MIN

VARIABLE INVERT HEIGHTS AVAILABLE (ACCORDING TO PLANS/TAKE OFF) (SEE NOTE 3)

VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE:  
4" - 30" (100 - 750 mm) FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL, ADS/HANCOR SINGLE WALL), N-12 HP, PVC SEWER (EX: SDR 35), PVC DWV (EX: SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC (SEE NOTE 4)

WATERTIGHT JOINT (CORRUGATED HDPE SHOWN)

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

**NOTES**

- GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 64" (2.13 m) DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
- DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
- ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

GRATE OPTION	LOAD RATING	PART #	DWG #
PEDESTRIAN	MEETS H-20	3099CGP	7001-110-220
STANDARD	MEETS H-20	3099CGS	7001-110-221
SOLID COVER	MEETS H-20	3099CGC	7001-110-222
DOME	N/A	3099CGD	7001-110-223

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**Tucker Pickleball Courts**  
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**Tucker Pickleball**

Tucker, GA

**Lighting System**

**Pole / Fixture Summary**

Pole ID	Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Circuit
P1-P2	40'	40'	2	TLC-LED-550	1.08 kW	A
P3-P4	40'	40'	2	TLC-LED-550	1.08 kW	B
P5-P6	40'	40'	2	TLC-LED-550	1.08 kW	C
P7-P8	40'	40'	2	TLC-LED-550	1.08 kW	D
<b>8</b>			<b>16</b>		<b>8.64 kW</b>	

**Circuit Summary**

Circuit	Description	Load	Fixture Qty
A	Pickleball 1-3	2.16 kW	4
B	Pickleball 4-6	2.16 kW	4
C	Pickleball 7-9	2.16 kW	4
D	Pickleball 10-12	2.16 kW	4

**Fixture Type Summary**

Type	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-550	LED 5700K - 75 CRI	540W	67,000	>120,000	>120,000	>120,000	16

**Single Luminaire Amperage Draw Chart**

Driver (30 min power factor)	Max Line Amperage Per Luminaire					
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	480 (60)
TLC-LED-550	3.2	3.0	2.8	2.4	1.9	1.8

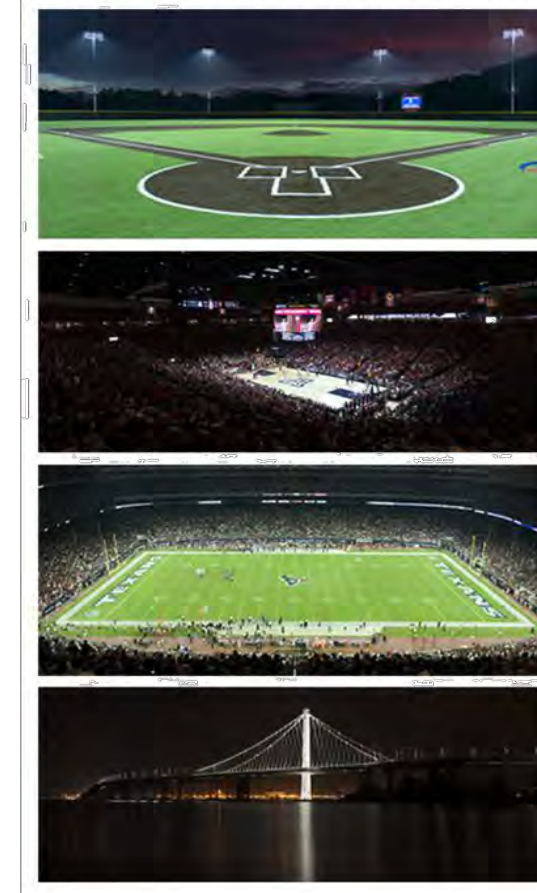
**Light Level Summary**

**Calculation Grid Summary**

Grid Name	Calculation Metric	Illumination				Circuits	Fixture Qty
		Ave	Min	Max	Max/Min		
Glare (cd) - 150' Offset	Max Candela (by Fixture)	0	0	0	0.00	A,B,C,D	16
Pickleball 1-3	Horizontal Illuminance	30.8	23.4	41.3	1.76	A	4
Pickleball 10-12	Horizontal Illuminance	31.1	23.2	42.8	1.84	D	4
Pickleball 4-6	Horizontal Illuminance	30.7	23.3	41.5	1.78	B	4
Pickleball 7-9	Horizontal Illuminance	30.6	23.6	41.3	1.75	C	4
Spill (fc) - 150' Offset	Horizontal	0	0	0	0.00	A,B,C,D	16
Spill (fc) - 150' Offset	Max Vertical Illuminance Metric	0	0	0	0.00	A,B,C,D	16

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**Lighting System Summary**

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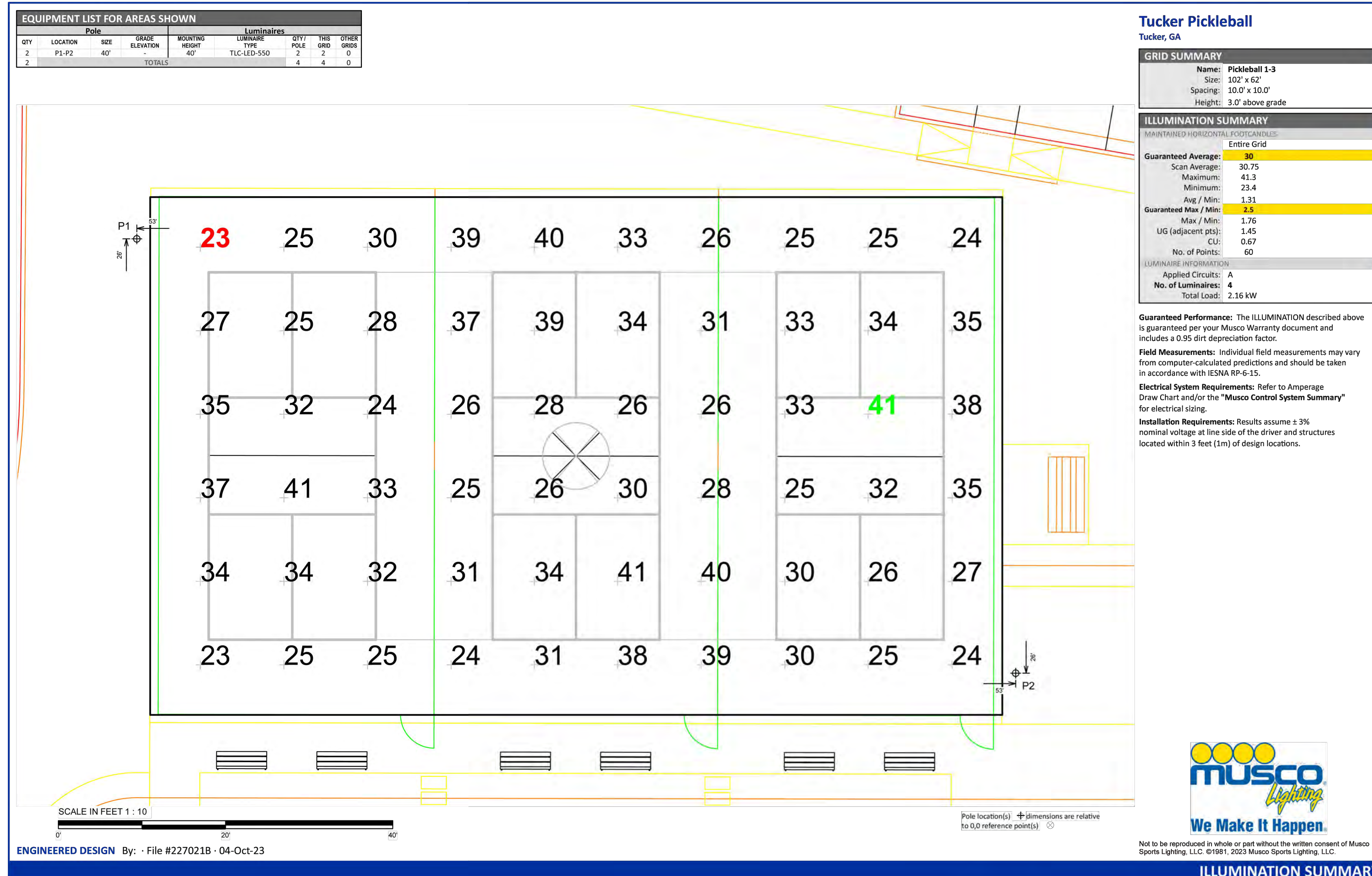
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Lights P1 & P2  
Illumination  
Summary

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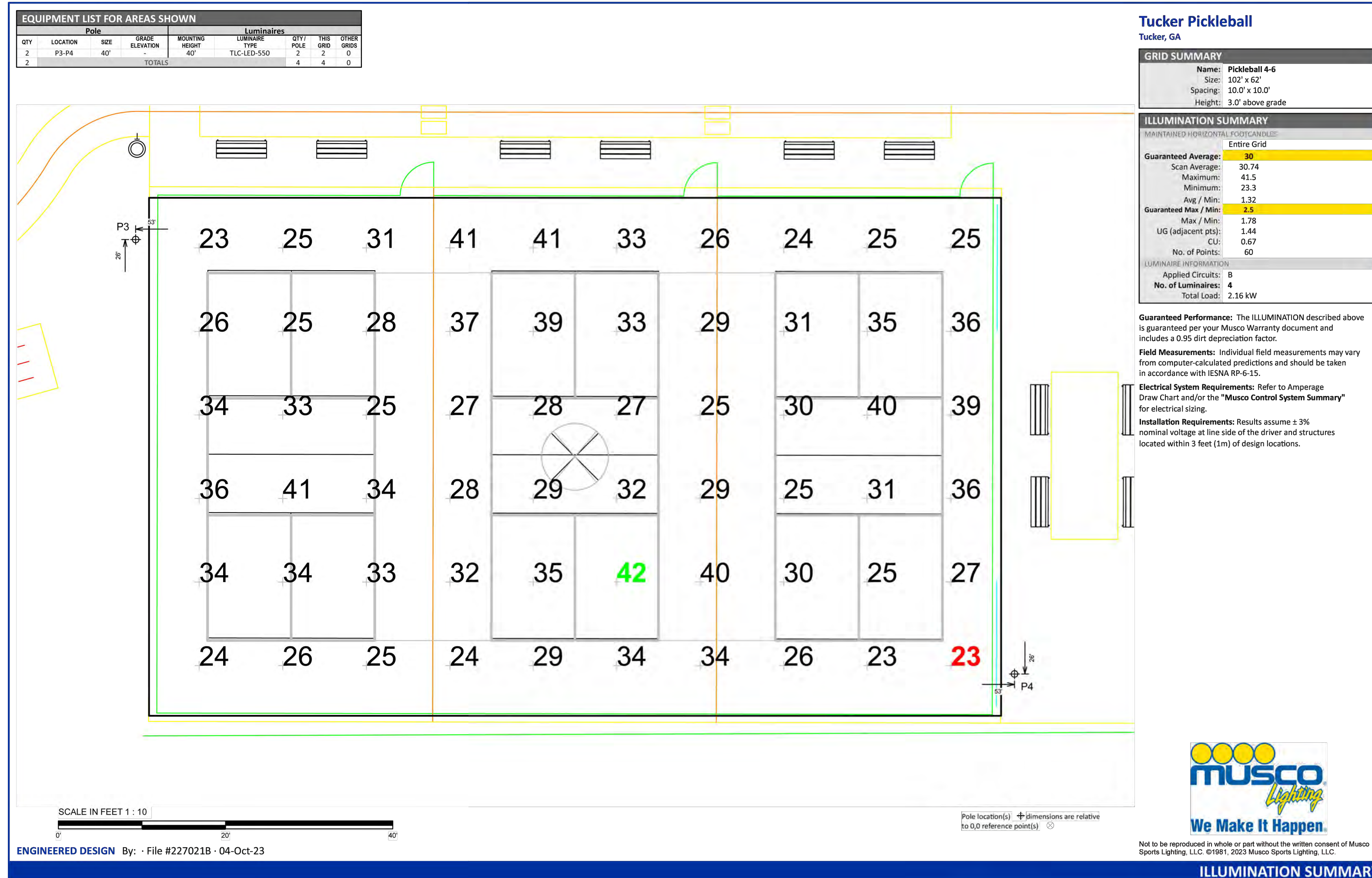
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Sheet Title:  
**Lights P3 & P4  
Illumination  
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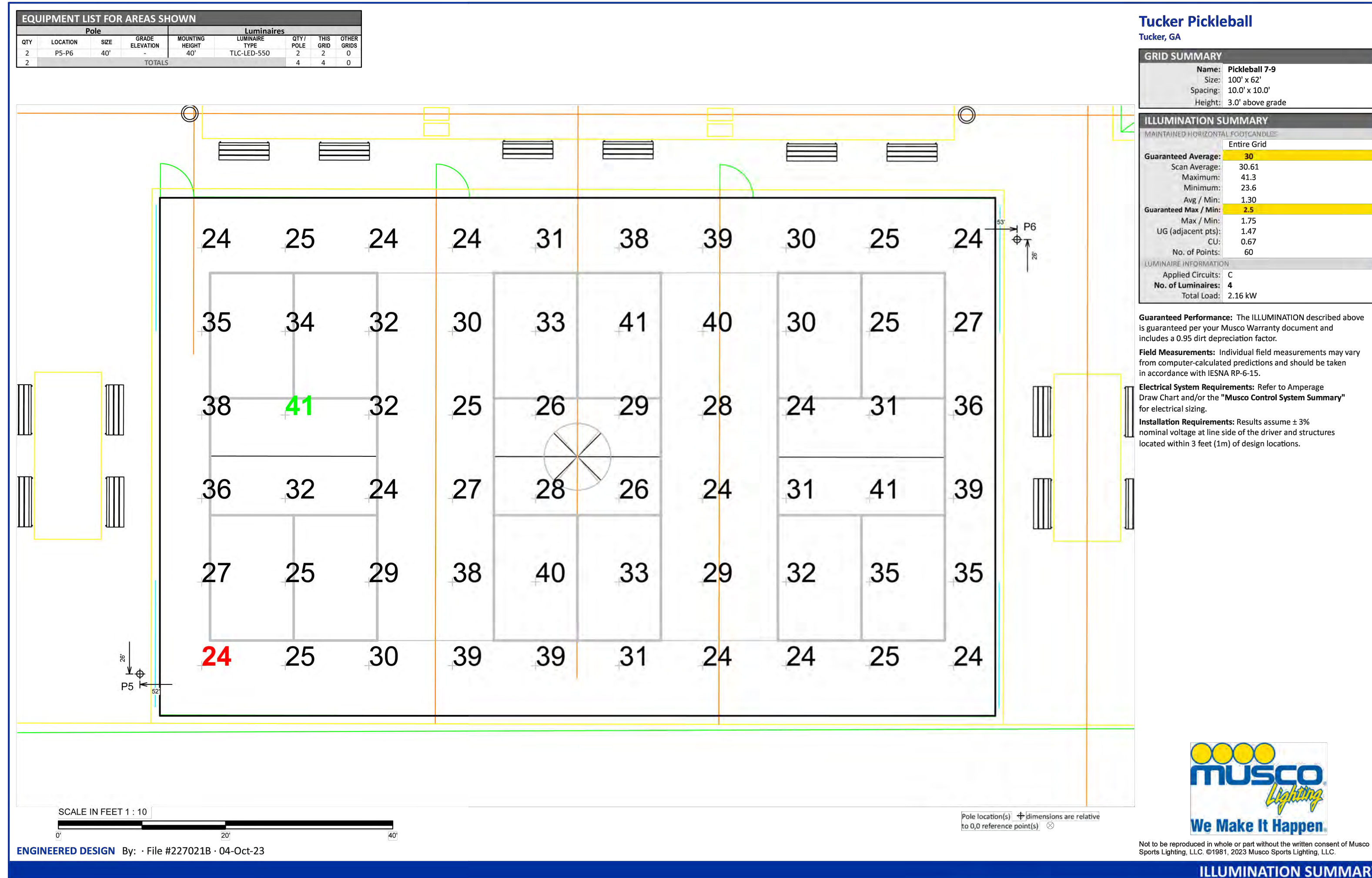
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Sheet Title:  
**Lights P5 & P6  
Illumination  
Summary**

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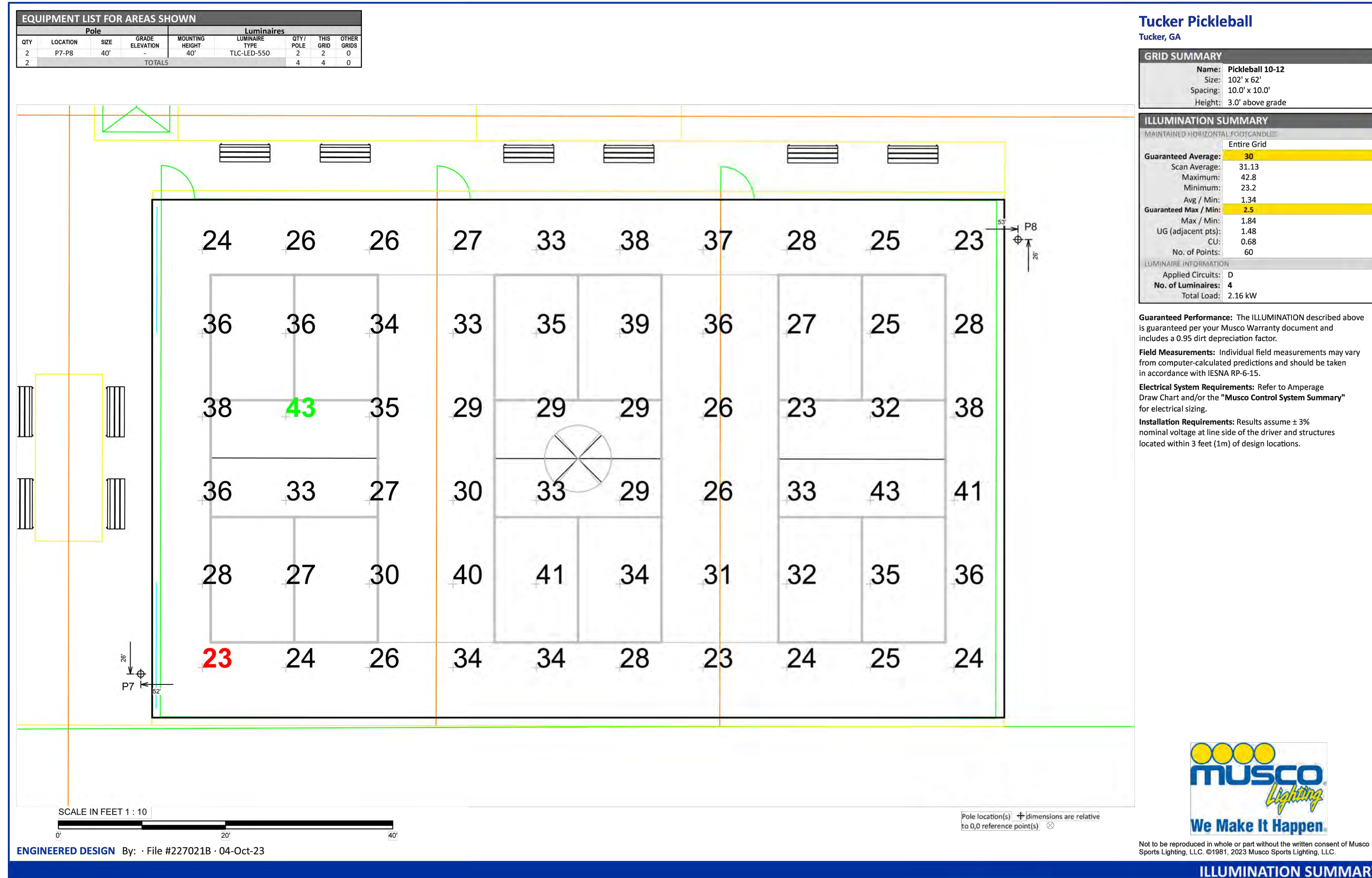
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Sheet Title:  
**Lights P7 & P8  
Illumination  
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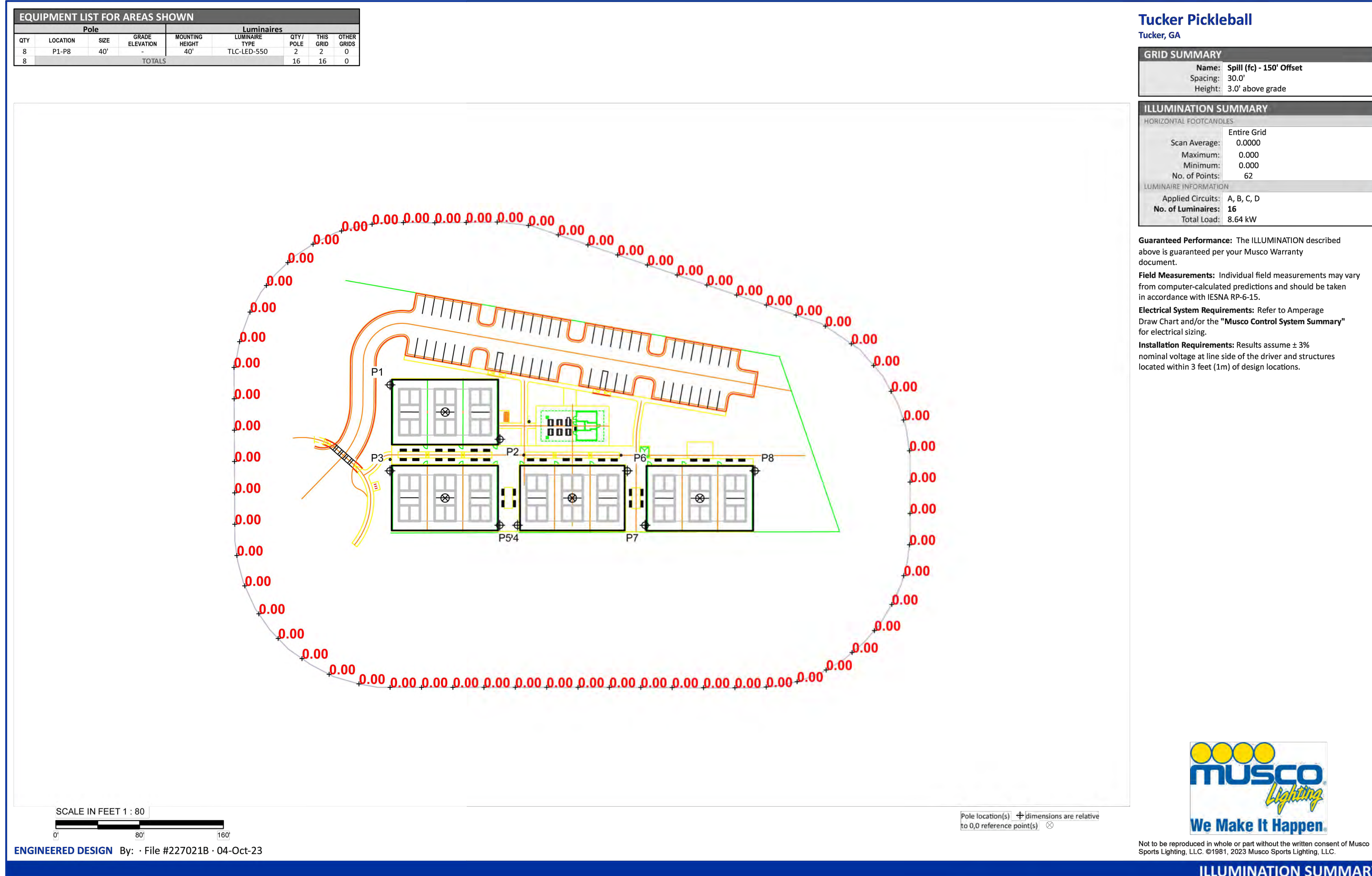
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Sheet Title:  
**150' Offset Spill Diagram (Horizontal)**

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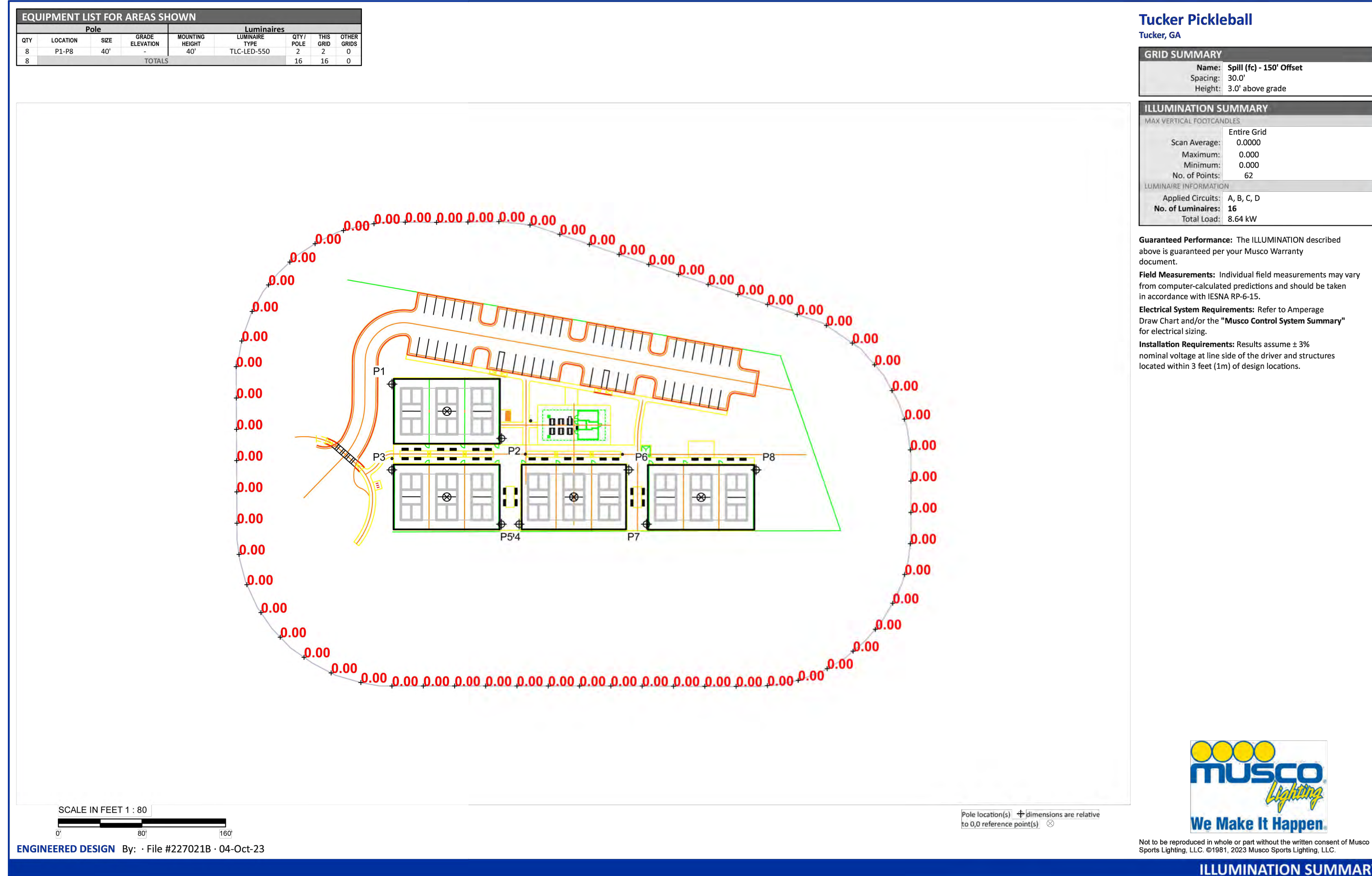
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Sheet Title:  
**150' Offset Spill  
Diagram  
(Vertical)**

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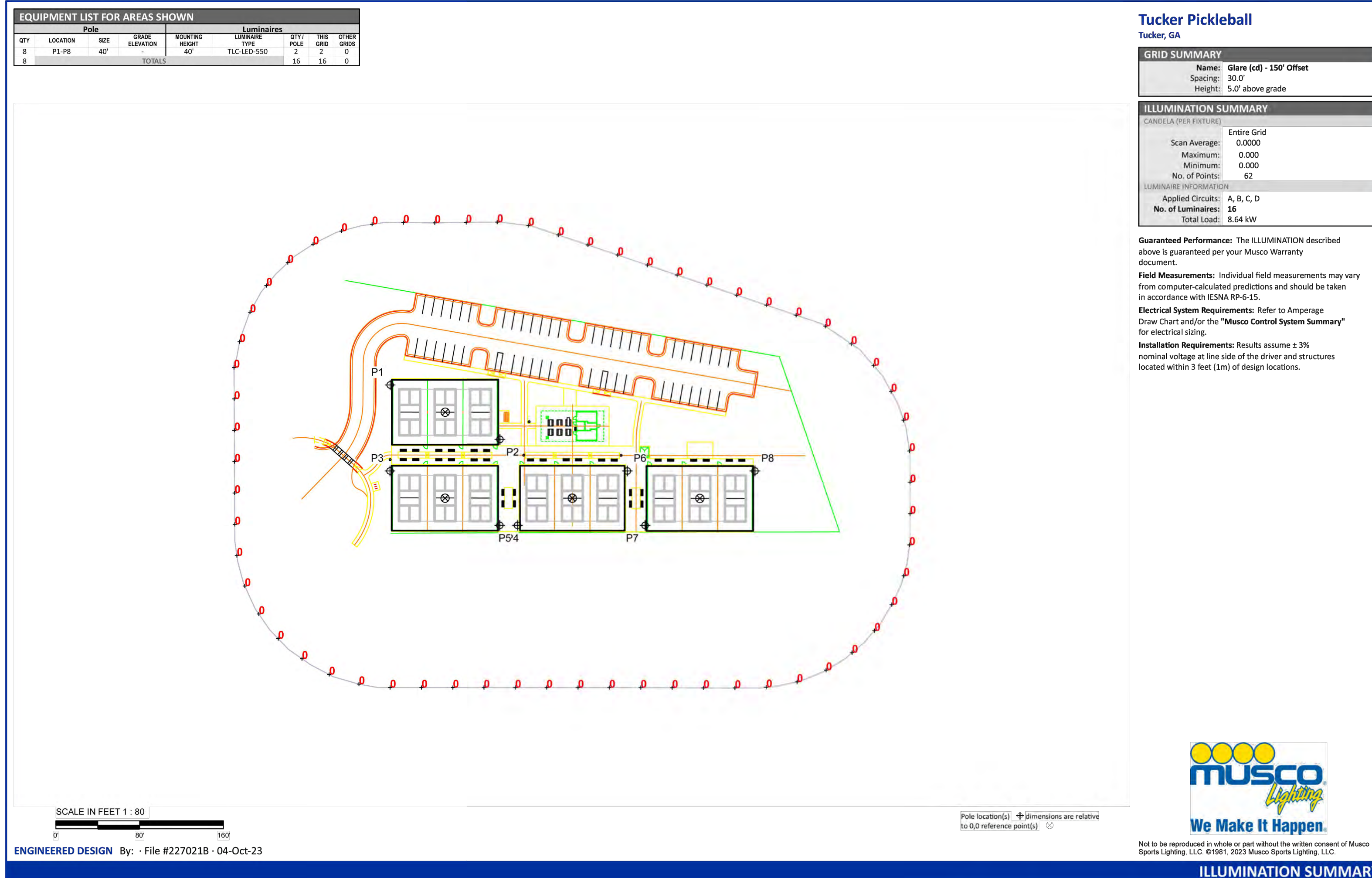
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150' Offset Glare Diagram

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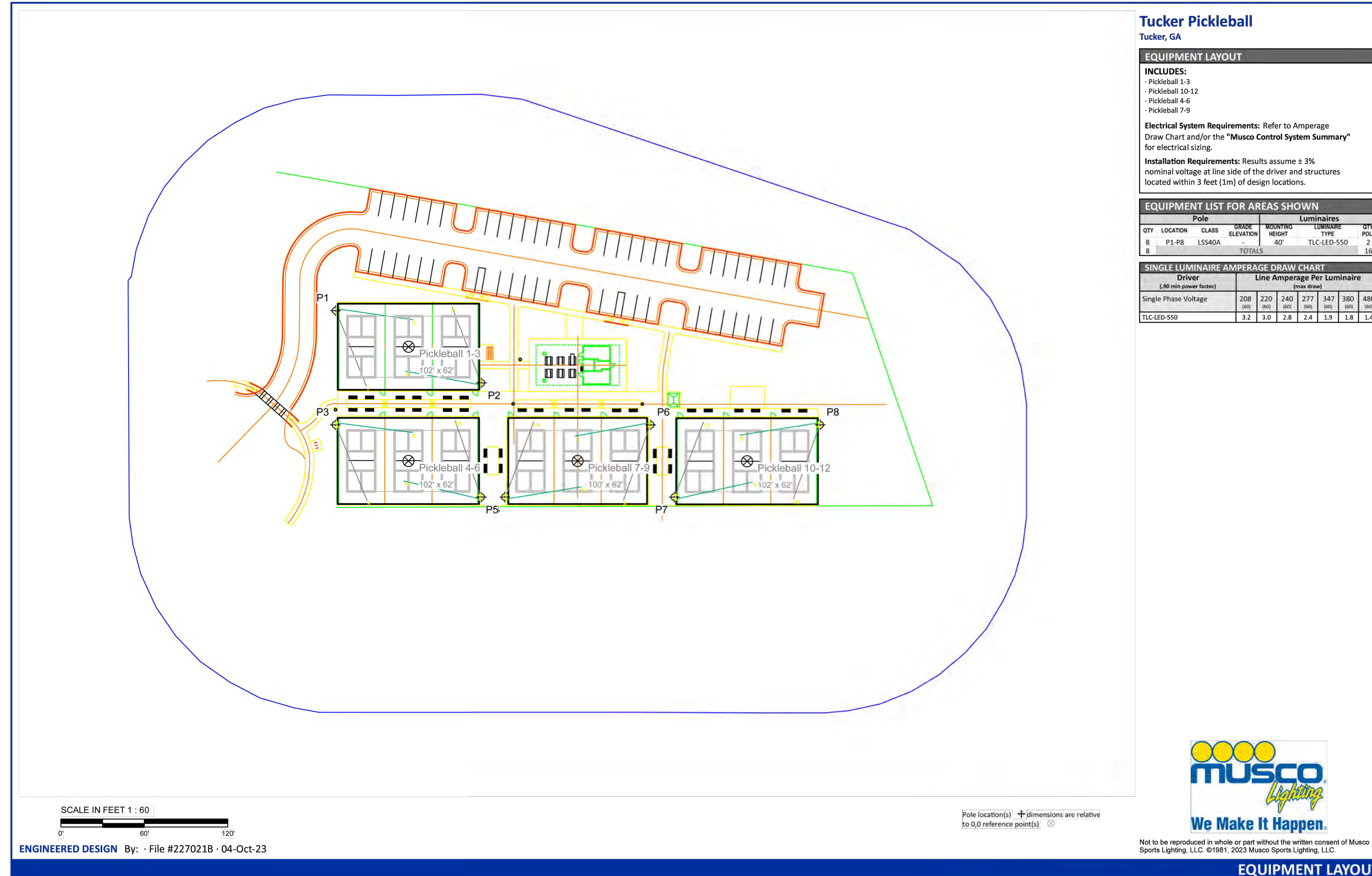
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Equipment List

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