

MINNEOLA ATHLETIC COMPLEX LEGAL DESCRIPTION

TRACT 1 (PARK), RESERVE AT MINNEOLA PHASE I, according to the plat thereof, as recorded in Plat Book 63, Pages 36 through 40, of the Public Records of Lake County, Florida, and that part of Section 8, Township 22 South, Range 26 East, Lake County, Florida, described as follows:

BEGIN at the Southeast corner of said Tract 1; thence N89°46'22"W along the South line of said Tract 1, 1368.31 feet to the Southwest corner thereof; thence N00°45'59"E along the West line of said Tract 1 and the Northerly prolongation thereof, 490.70 feet; thence N54°17'46"E, 139.84 feet to a point on a non-tangent curve concave Northerly having a radius of 50.00 feet and a chord bearing of S87°54'37"E; thence Easterly along the arc of said curve through a central angle of 104°24'45" for a distance of 91.12 feet to a non-tangent line; thence S50°08'59"E, 138.54 feet; thence N00°09'17"E, 37.54 feet; thence N55°26'26"E, 119.88 feet to a point on a non-tangent curve concave Northerly having a radius of 50.00 feet and a chord bearing of N55°11'03"E; thence Northeasterly along the arc of said curve and the Westerly line of said Tract 1 through a central angle of 209°23'01" for a distance of 192.72 feet to the point of reverse curvature of a curve concave Northeasterly having a radius of 25.00 feet and a chord bearing of N24°40'36"W; thence run the following ten (10) courses along the boundaries of said Tract 1; thence Northwesterly along the arc of said curve through a central angle of 49°39'44" for a distance of 21.67 feet to the point of tangency; thence N00°09'17"E, 314.20 feet to the point of curvature of a curve concave Southeasterly having a radius of 25.00 feet and a chord bearing of N45°09'17"E; thence Northeasterly along the arc of said curve through a central angle of 90°00'00" for a distance of 39.27 feet to the point of tangency; thence S89°50'43"E, 638.74 feet; thence S88°32'17"E, 65.91 feet; thence S00°09'17"W, 28.50 feet; thence S89°50'43"E, 84.39 feet; thence S42°48'35"E, 81.99 feet; thence S89°50'43"E, 32.98 feet; thence S00°41'55"W, 910.82 feet to the POINT OF BEGINNING.

Containing 26.274 acres more or less and being subject to any rights-of-way, restrictions and easements of record.

MINNEOLA ATHLETIC COMPLEX IMPROVEMENTS CONSTRUCTION PLANS

SECTION 08, TOWNSHIP 22S, RANGE 26E
MINNEOLA, LAKE COUNTY, FLORIDA

CIVIL ENGINEER

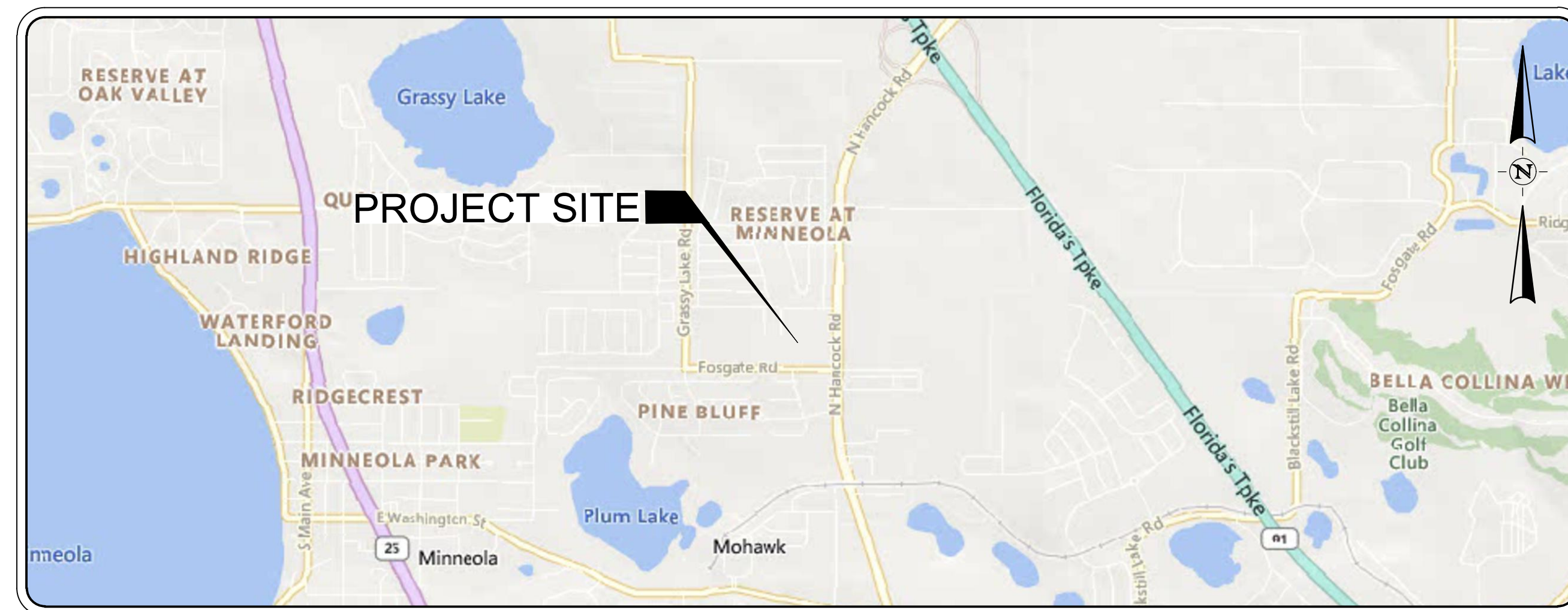
HALFF ASSOCIATES, INC.
902 NORTH SINCLAIR AVE
TAVARES, FL 32778
CONTACT: CECILY LYNN BARNES, PE
EMAIL: CBARNES@HALFF.COM
TEL: 352-343-8481

SURVEYOR

HALFF ASSOCIATES, INC.
902 NORTH SINCLAIR AVE
TAVARES, FL 32778
CONTACT: SUZANNE OSBORNE, PSM
EMAIL: SOSBORNE@HALFF.COM
TEL: 352-343-8481

ELECTRICAL ENGINEER

ELECTRIC SERVICES, INC.
1746 US HWY 441
LEESBURG, FL 34748
CONTACT: WOOD T. BRAZILL, PE
EMAIL: WBRAZILL@ELECTRIC-SERVICES.COM
TEL: 352-787-1322



LOCATION MAP

SCALE: 1" = 2,000'

INDEX OF SHEETS

- C-100 COVER SHEET
- C-200 AERIAL PLAN
- C-201 TOWER TRUCK AUTOTURN ANALYSIS
- C-300 DEMO & EROSION PLAN
- C-400 GEOMETRY PLAN
- C-500 GRADING & DRAINAGE PLAN
- C-600 UTILITY PLAN
- C-700 GENERAL DETAILS
- C-800 WATER DETAILS
- C-801 WATER DETAILS
- C-900 SEWER DETAILS
- C-1000 CONSTRUCTION DETAILS
- C-1001 CONSTRUCTION DETAILS
- C-1002 CONSTRUCTION DETAILS

ELECTRICAL PLANS (SIGNED AND SEALED BY OTHERS)

- E001 LEGEND, SCHEDULES & DETAILS - ELECTRICAL
- E100 SITE PLANS - ELECTRICAL PHOTOMETRICS
- E200 SPECIFICATIONS - ELECTRICAL

SURVEYED DATE:

FEBRUARY 26, 2024

BENCHMARK(S):

BENCHMARK #1
N: 1545800.4720
E: 423379.2130
ELEVATION: 228.11'
SET 5/8" IRC TRAV
(LB8384)
(FIELD POINT: 1)

BENCHMARK #2
N: 1546037.5580
E: 423077.6760
ELEVATION: 230.07'
SET 5/8" IRC TRAV
(LB8384)
(FIELD POINT: 2)

BENCHMARK #3
N: 1545789.9080
E: 422842.5510
ELEVATION: 227.93'
SET 5/8" IRC TRAV
(LB8384)
(FIELD POINT: 3)

OWNER



City of Minneola
800 N. US Hwy 27
Minneola, FL 34715
TEL: 352-394-3598
www.minneola.us

CLIENT:

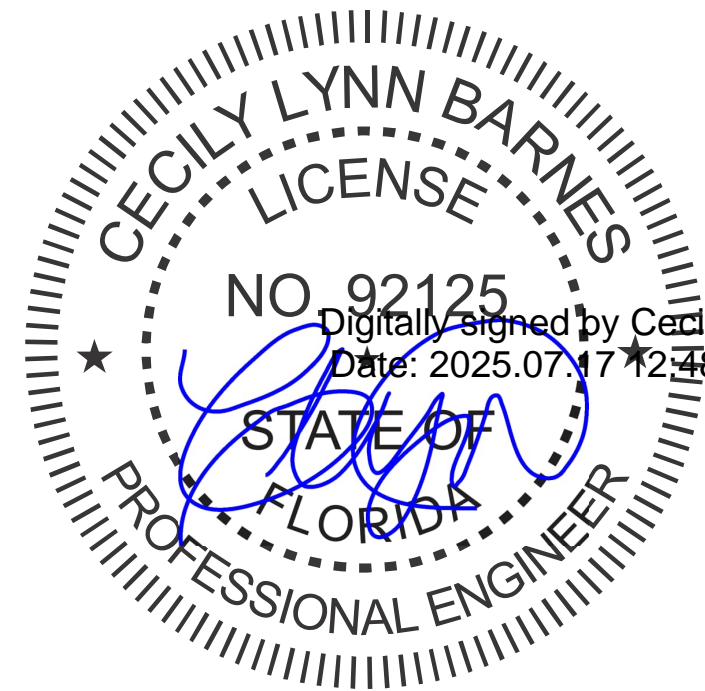


Lake County
315 W. Main St.
Tavares, FL 32778
TEL: 352-343-9800
Email: contact@Lakecountyfl.gov

PREPARED BY:



902 NORTH SINCLAIR AVE
TAVARES, FL 32778
TEL: 3523438481
www.halff.com



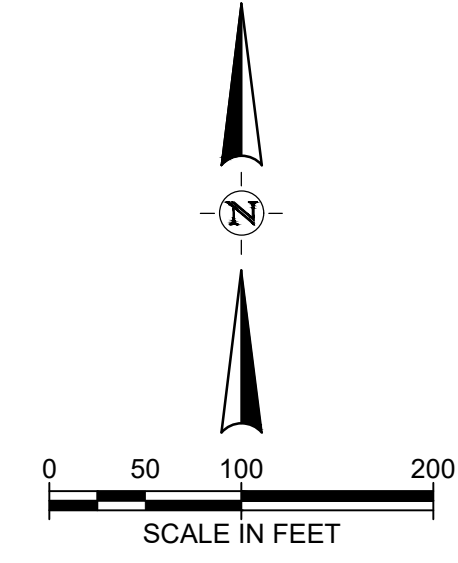
APPARENT ERRORS, DISCREPANCIES, OR OMISSIONS SHALL BE BROUGHT TO THE ENGINEER OF RECORD'S ATTENTION WITHIN A REASONABLE TIME FRAME, LESS THAN 48 HOURS AFTER DISCOVERED. ADVANTAGE WILL NOT BE TAKEN OF APPARENT ERROR OR OMISSION IN THE DRAWINGS OR SPECIFICATIONS, AND THE ENGINEER SHALL BE PERMITTED TO MAKE CORRECTIONS AND INTERPRETATIONS AS MAY BE DEEMED NECESSARY FOR FULFILLMENT OF THE INTENT OF THE DESIGN.

THE INFORMATION SHOWN ON THESE DRAWINGS INDICATING SIZE, TYPE AND LOCATION OF UNDERGROUND, SURFACE, AND AERIAL UTILITIES IS NOT GUARANTEED TO BE EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT THE "SUNSHINE 811" SYSTEM AT 1-800-432-4770 48 HOURS PRIOR TO BEGINNING ANY EXCAVATION FOR EXISTING UTILITY LOCATIONS. THE CONTRACTOR SHALL ALSO BE FULLY RESPONSIBLE FOR FIELD VERIFYING LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES AFFECTED BY CONSTRUCTION FOR THIS PROJECT IN ORDER TO AVOID DAMAGING THOSE UTILITIES, AND SHALL IMMEDIATELY ARRANGE FOR REPAIR AND RESTORATION OF CONTRACTOR-DAMAGED UTILITIES TO THE UTILITY COMPANY'S APPROVAL AT THE EXPENSE OF THE CONTRACTOR.



Know what's below.
Call before you dig.

FILE NAME: A:\43000\43862\077\PW\CADD\Sheets\043862.077 Minneola Athletic Complex Improvements BASE.dwg DATE: July 7, 2025, TIME: 11:31 AM, USER: ah4672 AVO: 043862.077



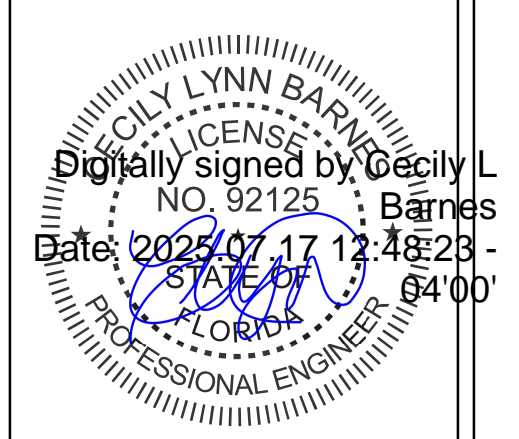
MINNEOLA ATHLETIC COMPLEX
IMPROVEMENTS
MINNEOLA



half
680 NORTH GOLF COURSE AVE
TAVARES, FLORIDA 32776
TEL: (352) 843-8481

CERTIFICATE OF AUTHORIZATION NUMBER: 83380

REVISION NO.	DATE	DESCRIPTION



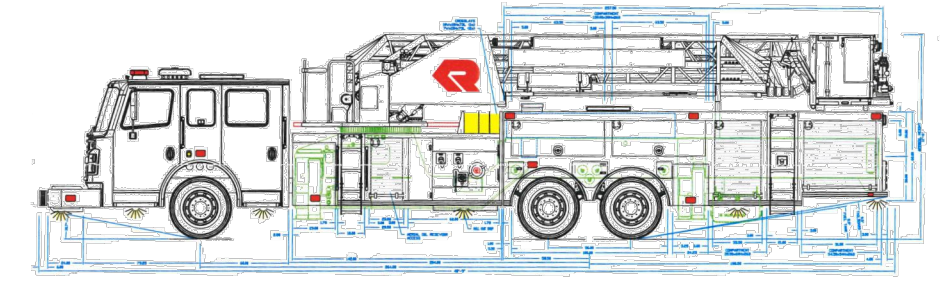
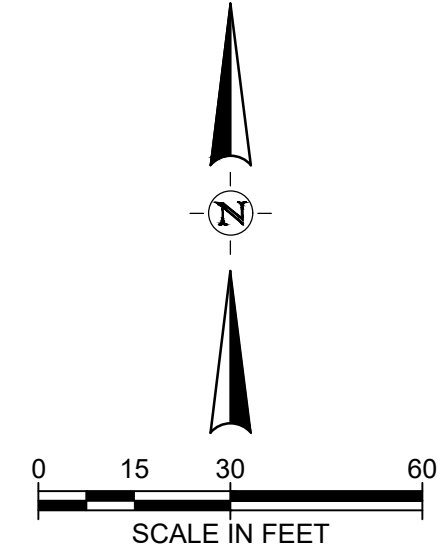
THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY:
CECILY LYNN BARNES, PE 92125
NAME FE LICENSE NO.
DATE 7/7/2025
THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF:
HALFF ASSOCIATES, INC.
HALFF FLA CA 33380 & FL LC 26000645 FL
FIRM OR BUSINESS NO. STATE

PROJECT NO.: 043862.077
ISSUED: JULY 2025
DRAWN BY: MC
CHECKED BY: CLB
SCALE: 1" = 100'
SHEET TITLE:

AERIAL

C-200

FILE NAME: A:\43000\43862\077\PW\CADD\Sheets\043862.077 Minneola Athletic Complex Improvements BASE.dwg DATE: July 7, 2025, TIME: 9:48 AM, USER: ah4872, A/C: 043862.077



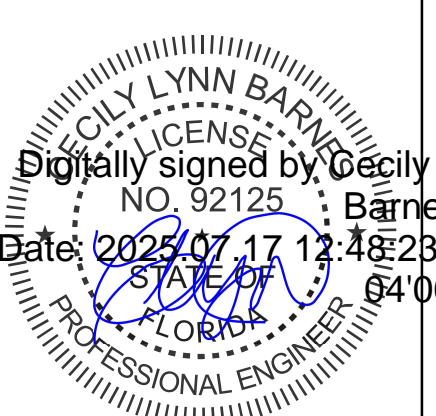
Tower Truck
 Overall Length 48.500ft
 Overall Width 8.410ft
 Overall Body Height 1.473ft
 Min Body Ground Clearance 1.473ft
 Track Width 8.416ft
 Lock-to-lock time 4.80s
 Curb to Curb Turning Radius 43.080ft

MINNEOLA ATHLETIC COMPLEX
 IMPROVEMENTS
 MINNEOLA



CERTIFICATE OF AUTHORIZATION NUMBER: 33380

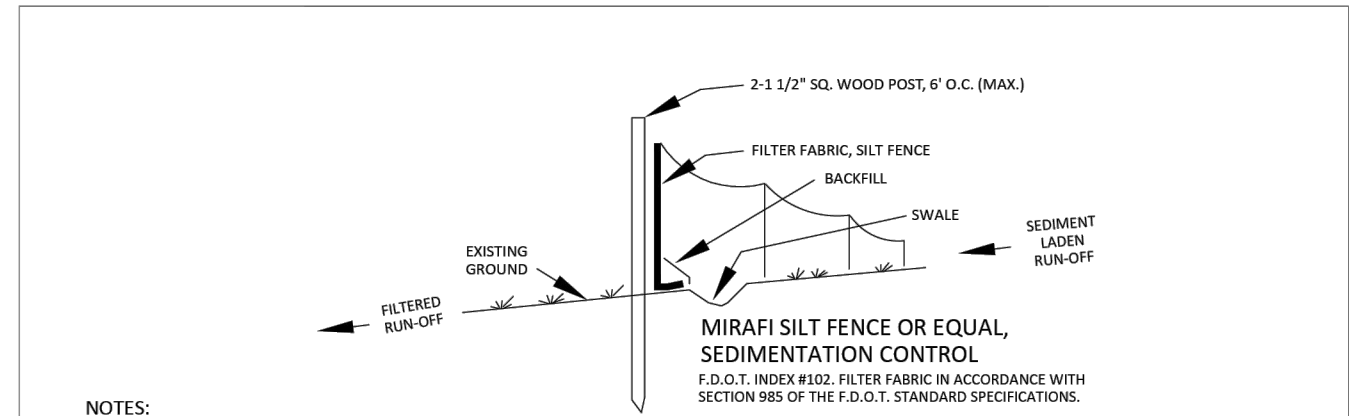
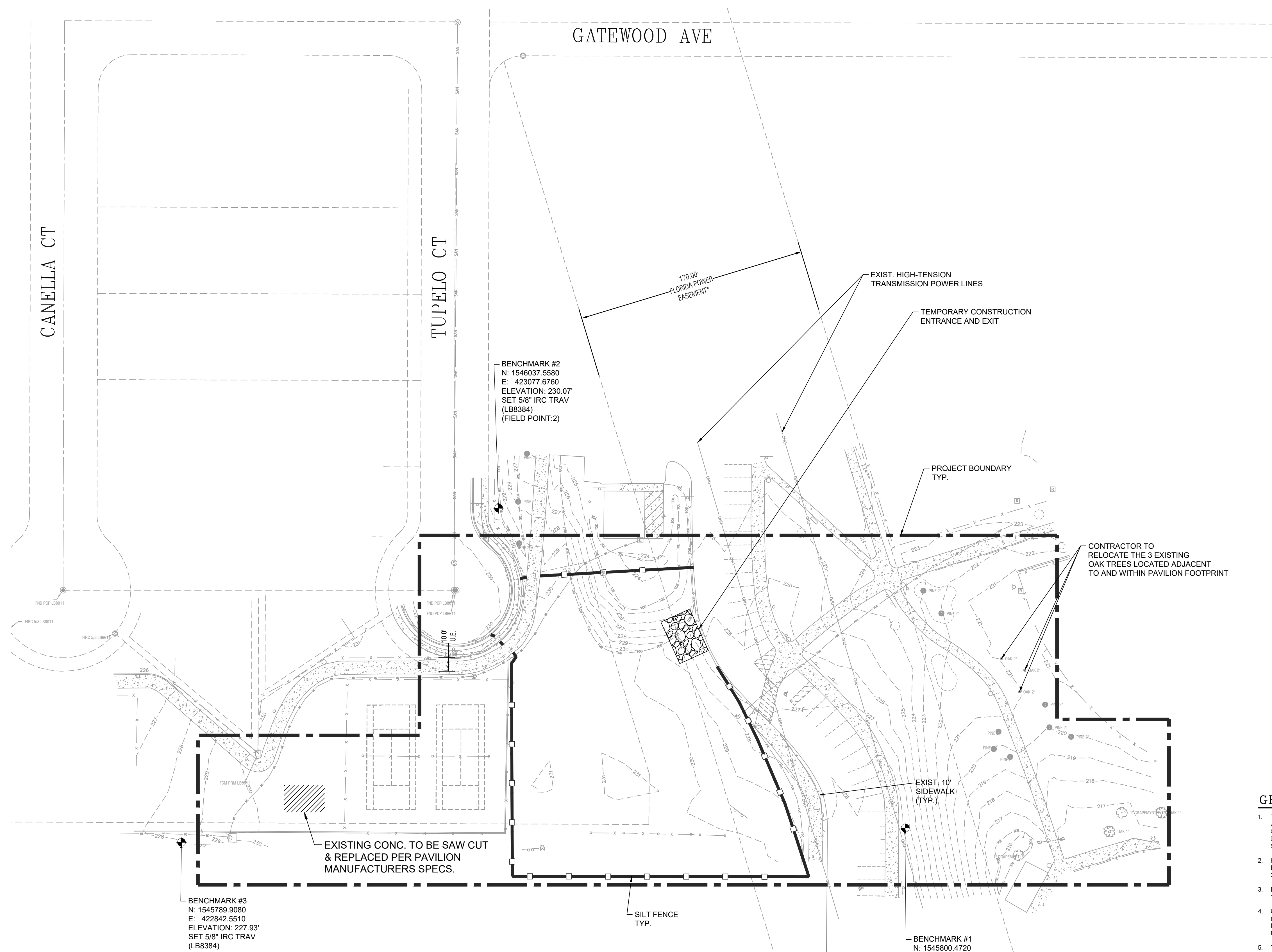
REVISION NO.	DATE	DESCRIPTION



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 NAME FE LICENSE NO.
 7/7/2025 DATE
 THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF:
 HALFF ASSOCIATES, INC.
 HALFF FLA CA 33380 & FL LC 26000645 FL
 FIRM OR BUSINESS NO. STATE

PROJECT NO.: 043862.077
 ISSUED: JULY 2025
 DRAWN BY: MC
 CHECKED BY: CLB
 SCALE: 1" = 50'
 SHEET TITLE:
 TOWER TRUCK
 AUTOTURN
 ANALYSIS

FILE NAME: A:\430003\43862\077\WICADD\Sheets\043862\077 Minneola Athletic Complex Improvements BASE.dwg DATE: July 7, 2025, TIME: 9:48 AM, USER: ah4872, AVO: 043862.077



- NOTES:**
- TEMPORARY EROSION CONTROL STRUCTURE TO BE UTILIZED DURING CONSTRUCTION AT AREAS DESIGNATED BY ENGINEER OR AREAS ON-SITE WHERE UNSTABILIZED GRADES MAY CAUSE EROSION PROBLEMS. EROSION CONTROL STRUCTURE MAY BE REMOVED AFTER UPSLOPE AREA HAS BEEN STABILIZED BY SOD, OR COMPACTED AS DETERMINED BY CONTRACTOR.
 - ALTERNATE EROSION CONTROL STRUCTURE: STRAW BALES ENTRENCHED W/ WOOD STAKES (2\"/>
 - CONSTRUCT STORMWATER SYSTEMS BEFORE ANY BUILDING OR ROAD CONSTRUCTION IS STARTED.
 - PROTECT SWALE FROM SILTING AND DEBRIS BY METHODS PROVIDED IN DETAILS.
 - PROTECT SWALE BOTTOM FROM SEALING BY EXCAVATING ALL SILT DEPOSITS DURING CONSTRUCTION. THIS SHALL BE DONE BEFORE SOD & SEEDING & MULCHING IS FINISHED.

THE FOLLOWING LIST REPRESENTS A BASIC EROSION AND SEDIMENT CONTROL PROGRAM WHICH IS TO BE IMPLEMENTED TO HELP PREVENT OFF-SITE SEDIMENTATION DURING AND AFTER CONSTRUCTION OF THE PROJECT. PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AT THE EARLIEST PRACTICAL TIME CONSISTENT WITH GOOD CONSTRUCTION PRACTICES. ONE OF THE FIRST CONSTRUCTION ACTIVITIES SHOULD BE THE PLACEMENT OF PERMANENT AND TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AROUND THE PERIMETER OF THE PROJECT OR THE INITIAL WORK AREA TO PROTECT THE PROJECT, ADJACENT PROPERTIES AND WATER RESOURCES. TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE COORDINATED WITH PERMANENT MEASURES TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS CONTROL THROUGHOUT THE CONSTRUCTION PHASE. TEMPORARY MEASURES SHALL NOT BE CONSTRUCTED FOR EXPEDIENCY IN LIEU OF PERMANENT MEASURES. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADEQUATELY MAINTAINED TO PERFORM THEIR INTENDED FUNCTION DURING CONSTRUCTION OF THE PROJECT. NECESSARY REPAIRS TO BARRIERS OR REPLACEMENT OF BARRIERS SHALL BE ACCOMPLISHED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH RAINFALL. THEY MUST BE REMOVED WHEN THE LEVEL OF DEPOSITION REACHES APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. MATERIAL FROM SEDIMENT TRAPS SHALL NOT BE STOCKPILED OR DISPOSED OF IN A MANNER WHICH MAKES THEM READILY SUSCEPTIBLE TO BEING WASHED INTO ANY WATERCOURSE BY RUNOFF OR HIGH WATER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE BARRIERS ARE NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

	EROSION CONTROL STRUCTURE	G-1
	CITY OF MINNEOLA	Not To Scale November 2017

GENERAL NOTES:

- THE PURPOSE OF THIS SURVEY WAS TO PROVIDE A TOPOGRAPHIC SURVEY IN ACCORDANCE WITH SJ-17, FLORIDA ADMINISTRATIVE CODE, STANDARDS OF PRACTICE FOR LAND SURVEYING IN THE STATE OF FLORIDA UNDER LAKE COUNTY ON CALL - PROFESSIONAL SURVEY SERVICES RSO# 22-9308. THE APPROXIMATE LIMITS OF SAID TOPOGRAPHIC SURVEY WERE DEFINED BY SURVEY EMBLEM "A" OF CONTRACT DATED DECEMBER 8, 2023 AND IS SHOWN HEREON AS "TOPOGRAPHIC SURVEY LIMITS (BY CONTRACT SCOPE)".
- HORIZONTAL DATUM AND BEARINGS SHOWN HEREON ARE FLORIDA STATE PLANE COORDINATE EAST ZONE (901) BASED ON TRIMBLE VIRTUAL REFERENCE STATION NETWORK AND IS BASED ON NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (SPCS'83-2011). ALL DISTANCES SHOWN ARE IN UNITED STATES SURVEY FEET.
- BENCHMARKS AND ELEVATIONS SHOWN HEREON ARE BASED ON NATIONAL GEODETIC SURVEY BENCHMARK "LK 160," HAVING AN ELEVATION OF 130.81' NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- UNDERGROUND UTILITIES SHOWN HEREON WERE DELINEATED AND MARKED BY PRECISE LOCATING SERVICES, INC. (352-516-4157) AND THOSE MARKINGS WERE LOCATED BY THIS COMPANY. FURTHER UTILITY LOCATOR'S LOG NOTED: "NO AS-BUILTS OR UTILITY DESIGNS WERE GIVEN. UTILITIES SEEN/FOUND WERE LOCATED. FIELD LIGHTS NOT LOCATED. NO ACCESS AT POLES TO WIRES FOR LOCATING."
- THE POSITION OF ADJOINING PROPERTIES IS APPROXIMATE. RECORDING DATA FOR ADJOINING PROPERTIES WAS OBTAINED FROM THE LAKE COUNTY PUBLIC ACCESS SYSTEM.
- THERE MAY BE EASEMENTS AND RESTRICTIONS OF RECORD AND/OR PRIVATE AGREEMENTS NOT FURNISHED TO THIS SURVEYOR OR SHOWN ON THIS SURVEY THAT MAY AFFECT PROPERTY RIGHTS AND/OR LAND USE RIGHTS OF THE SUBJECT PROPERTY.
- UNLESS OTHERWISE NOTED OR SHOWN HEREON, THERE ARE NO APPARENT AND/OR UNOBSTRUCTED ABOVE GROUND ENCROACHMENTS. THE DISPOSITION/OWNERSHIP OF ANY POTENTIAL ENCROACHING IMPROVEMENTS SHOWN IS BEYOND PROFESSIONAL PURVIEW AND SUBJECT TO LEGAL INTERPRETATION.
- UNLESS OTHERWISE NOTED OR SHOWN HEREON, APPARENT AND/OR UNOBSTRUCTED, ABOVE GROUND IMPROVEMENTS WERE LOCATED. UNDERGROUND IMPROVEMENTS, SUCH AS FOUNDATIONS AND UTILITIES, WERE NOT LOCATED. NO ATTEMPT WAS MADE TO LOCATE UNDERGROUND UTILITIES. AN ASCE QUALITY A OR B DESIGNATION WILL BE NECESSARY BEFORE ANY ON-SITE WORK TAKES PLACE. CONTACT SUNSHINE ONE CALL AT 811 FOR FURTHER INFORMATION.
- THIS SURVEY HAS BEEN PREPARED UNDER THE DIRECTION AND SUPERVISION OF THE UNDERSIGNED BELOW IN ACCORDANCE WITH THE ADOPTED "STANDARDS OF PRACTICE" FOR LAND SURVEYING AS REQUIRED BY CHAPTER SJ-17, FLORIDA ADMINISTRATIVE CODE PURSUANT TO SECTION 472.027, FLORIDA STATE STATUTES.
- SYMBOLS SHOWN HEREON ARE NOT TO SCALE AND ARE FOR INFORMATIONAL PURPOSES ONLY.
- THIS COMPANY ACCEPTS NO RESPONSIBILITY FOR THE MARKETABLE STATUS OF THIS PROPERTY. THIS PROPERTY IS SUBJECT TO ANY AND/OR ALL CITY, COUNTY, STATE AND FEDERAL PLANNING AND ZONING REGULATIONS.
- THERE MAY BE ENVIRONMENTAL ISSUES AND/OR OTHER MATTERS REGULATED BY VARIOUS DEPARTMENTS OF FEDERAL, STATE OR LOCAL GOVERNMENTS AFFECTING THE SUBJECT PROPERTY NOT SHOWN ON THIS SURVEY.
- OWNERSHIP OF FENCES SHOWN HEREON, IF ANY, WAS NOT DETERMINED BY THIS SURVEY, SAID FENCES WERE LOCATED ONLY WHERE DIMENSIONED AND MAY NOT RUN STRAIGHT.
- FIELD SURVEY DATE: 02/26/2024.

- GENERAL NOTES:**
- CONTRACTOR TO DESILT ALL PIPES PRIOR TO COMPLETION OF CONSTRUCTION OF PROJECT.
 - SILT FENCE SHOWN IS STRICTLY SCHEMATIC, FOR ILLUSTRATION ONLY, ALL FENCE TO BE WITHIN THE PROPERTY LINE OF THE PROJECT SITE.
 - THE CONTRACTOR SHALL APPLY WITH AND OBTAIN NPDES PERMIT FROM THE FLORIDA DEPT. OF ENVIRONMENTAL PROTECTION (FDEP).
 - ALL STORMWATER INLETS TO HAVE EROSION CONTROL MEASURES APPLIED UPON THE COMPLETION OF THEIR INSTALLATION. THIS EROSION CONTROL MEASURE CAN BE A "SOCK" WITH ROCK BAGS THAT WILL NOT ALLOW FOR SEDIMENTS TO ENTER INTO THE INLETS AND ULTIMATELY ENTER INTO THE DRA. OTHER METHODS OF PROTECTION CAN BE OBTAINED FROM THE MOST RECENT FDOT STANDARD SPECIFICATIONS, HOWEVER PLEASE NOTE THE USE OF HAY/STRAW BALES IS NOT PERMITTED, A SYNTHETIC BALE MAY BE USED INSTEAD.
 - TEMPORARY EROSION CONTROL STRUCTURE TO BE UTILIZED DURING CONSTRUCTION AT AREAS DESIGNATED BY THE ENGINEER OR AREAS ON-SITE WHERE UNSTABILIZED GRADES MAY CAUSE EROSION PROBLEMS. EROSION CONTROL STRUCTURE MAY BE REMOVED AFTER UPSLOPE AREA HAS BEEN STABILIZED BY SOD, OR COMPACTED AS DETERMINED BY CONTRACTOR.
 - ALTERNATE EROSION CONTROL STRUCTURE: WOVEN FILTER FABRIC SILT FENCE IN ACCORDANCE WITH THE MOST RECENT FDOT STANDARD SPECIFICATIONS.
 - TEMPORARY CONSTRUCTION ENTRANCE AREA SHALL BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL. A GEOTEXTILE SHOULD BE LAID DOWN TO IMPROVE STABILITY AND SIMPLIFY MAINTENANCE. THE GRAVEL SHALL THEN BE PLACED OVER THE GEOTEXTILE TO THE SPECIFIED DIMENSIONS.
 - TEMPORARY CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF MUD ONTO PUBLIC ROADS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2-INCH STONE AS CONDITIONS DEMAND. ALL MATERIALS SPILLED, DROPPED, OR TRACKED FROM VEHICLES ONTO ROADWAYS MUST BE REMOVED IMMEDIATELY. LOOK FOR SIGNS OF TRUCKS TRAILERED EQUIPMENT "CUTTING CORNERS" WHERE THE GRAVEL MEETS THE ROADWAY. SWEEP THE PAVED ROAD DAILY FOR SEDIMENTS.
 - CONSTRUCTION SITE OPERATORS MUST CONTROL WASTE SUCH AS DISCARDED BUILDING MATERIALS, CONCRETE TRUCK WASHOUT, CHEMICALS, LITTER AND SANITARY WASTE AT THE CONSTRUCTION SITE THAT MAY CAUSE ADVERSE IMPACTS TO WATER QUALITY.
 - ALL DISTURBED AREAS TO BE SODDED.

MINNEOLA ATHLETIC COMPLEX
IMPROVEMENTS
MINNEOLA

LAKE COUNTY, FL
REAL FLORIDA • REAL CLOSE

half
GRADES, SURVEYS, ASSESMENTS
TALLAHASSEE, FLORIDA 32376
TEL: (904) 843-8481

CERTIFICATE OF AUTHORIZATION NUMBER: 33380

REVISION NO.	DATE	DESCRIPTION

CECILY LYNN BARNES
Digitally signed by Cecily L Barnes
Date: 2025.07.17 12:48:23 -0400

THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY:

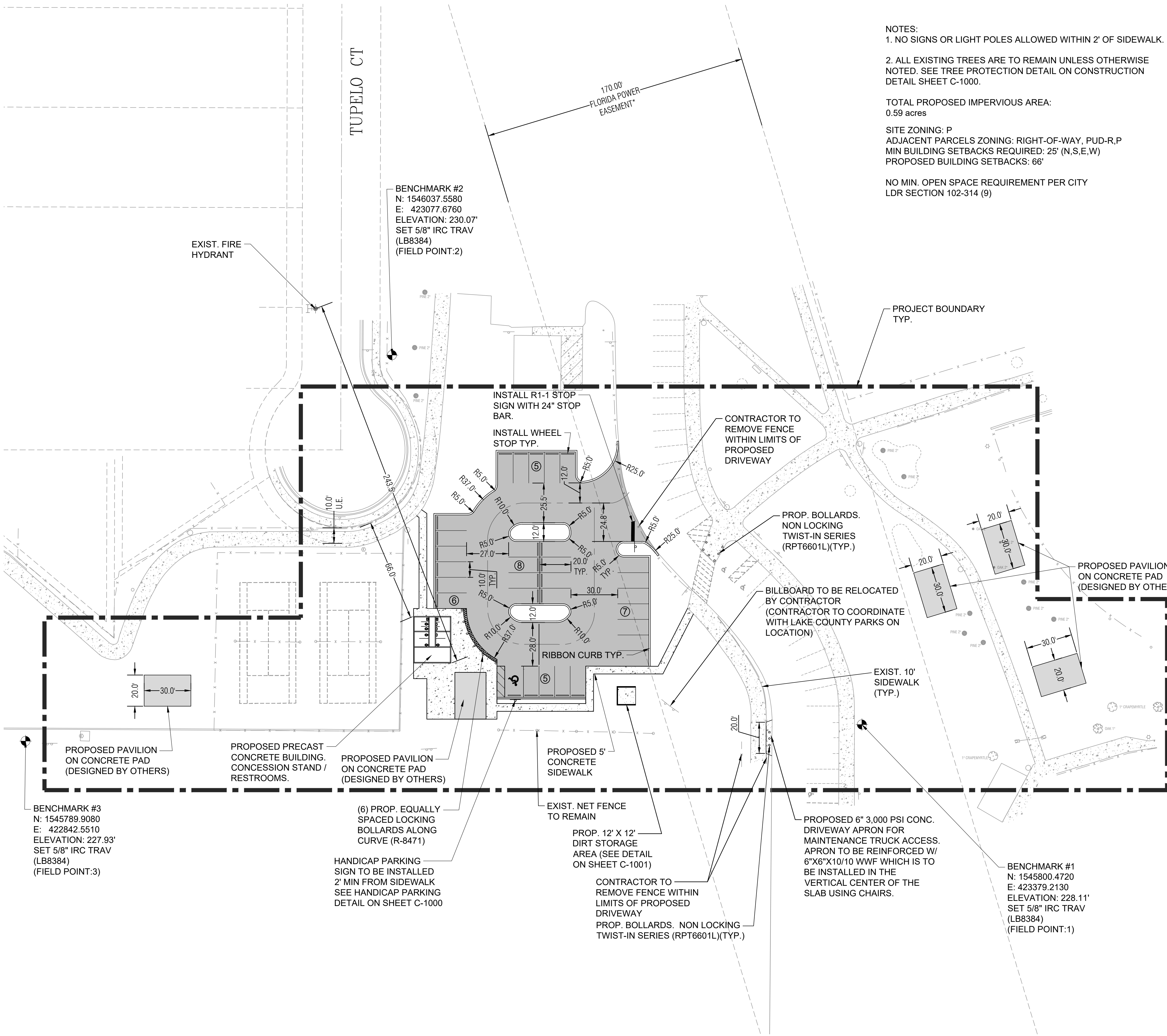
CECILY LYNN BARNES, PE 92125
NAME FE LICENSE NO.
DATE 7/7/2025

THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF:
HALFF ASSOCIATES, INC.

HALFF FLA CA 33380 & FL LC 26000645 FL
FIRM OR BUSINESS NO. STATE

PROJECT NO.: 043862.077
ISSUED: JULY 2025
DRAWN BY: MC
CHECKED BY: CLB
SCALE: 1" = 40'
SHEET TITLE:
DEMO & EROSION PLAN
C-300

FILE NAME: A:\4300043862\077\PCADD\Sheets\043862.077 Minneola Athletic Complex Improvements BASE.dwg DATE: July 7, 2025, TIME: 9:48 AM, USER: ah4672, AWC, 043862.077

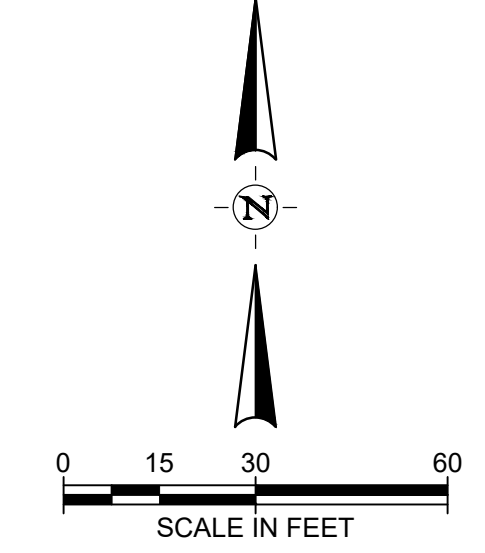


NOTES:
 1. NO SIGNS OR LIGHT POLES ALLOWED WITHIN 2' OF SIDEWALK.
 2. ALL EXISTING TREES ARE TO REMAIN UNLESS OTHERWISE NOTED. SEE TREE PROTECTION DETAIL ON CONSTRUCTION DETAIL SHEET C-1000.

TOTAL PROPOSED IMPERVIOUS AREA:
 0.59 acres

SITE ZONING: P
 ADJACENT PARCELS ZONING: RIGHT-OF-WAY, PUD-R,P
 MIN BUILDING SETBACKS REQUIRED: 25' (N,S,E,W)
 PROPOSED BUILDING SETBACKS: 66'

NO MIN. OPEN SPACE REQUIREMENT PER CITY
 LDR SECTION 102-314 (9)



half
 6000 W. UNIVERSITY BLVD.
 TAVARES, FLORIDA 32776
 TEL: (352) 343-8481

CERTIFICATE OF AUTHORIZATION NUMBER: 83380

REVISION NO.	DATE	DESCRIPTION

Cecily Lynn Barnes
 No. 92125
 Date: 2025-07-17 12:48:23 -0400
 PROFESSIONAL ENGINEER

THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY:
 CECILY LYNN BARNES, PE 92125
 NAME PE LICENSE NO.
 7/7/2025 DATE

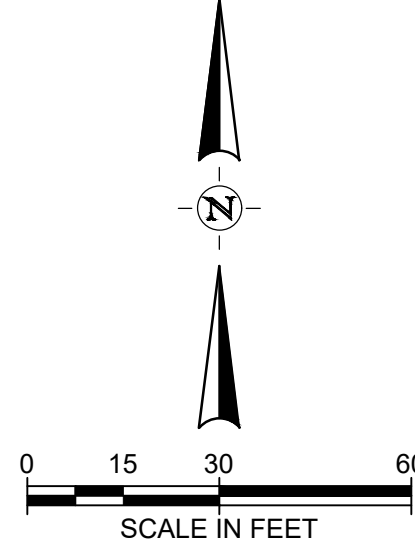
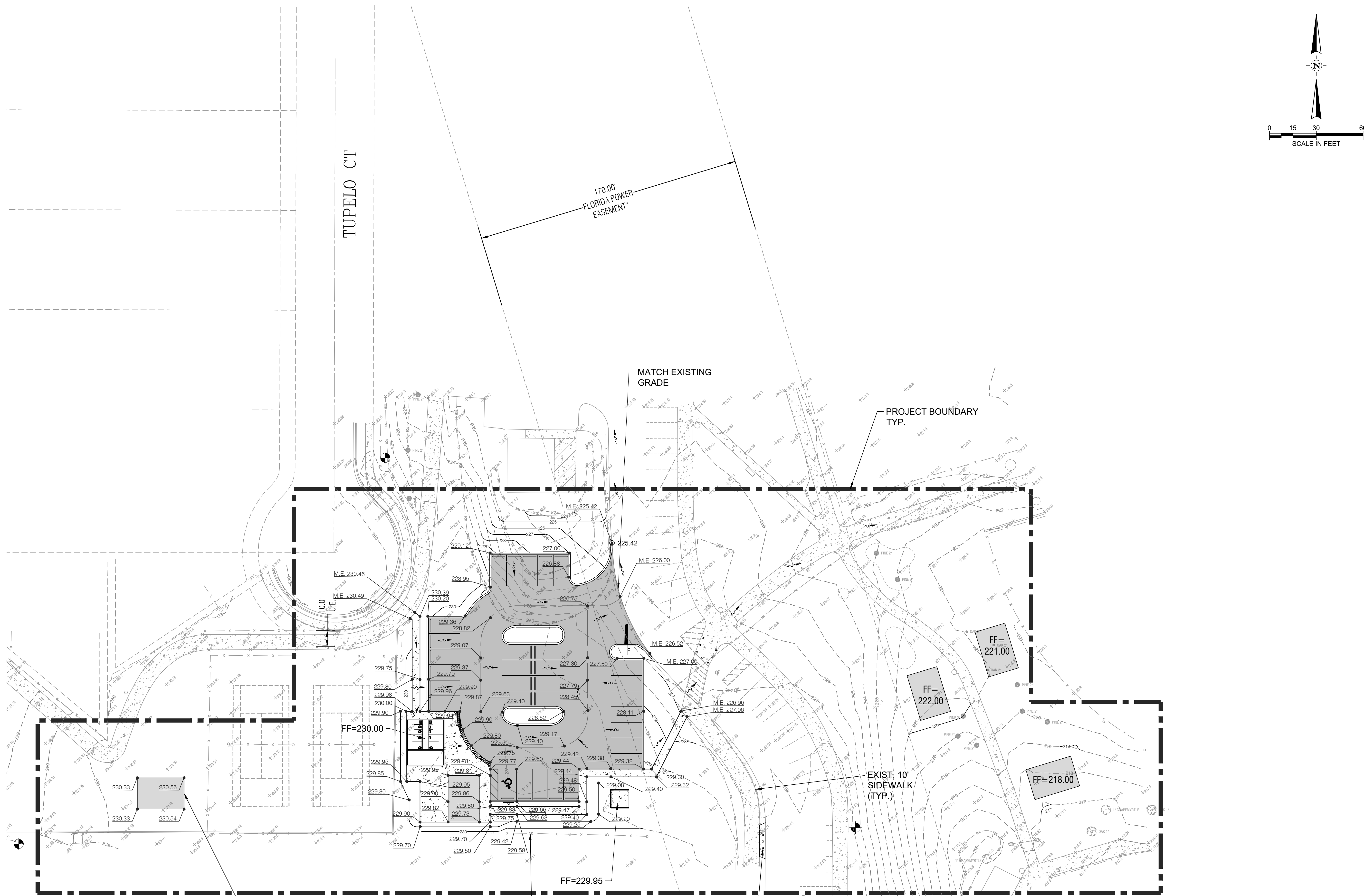
THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF:
 HALFF ASSOCIATES, INC.
 HALFF FLA CA 33380 & FL LC 26000645 FL FIRM OR BUSINESS NO. STATE

PROJECT NO.: 043862.077
 ISSUED: JULY 2025
 DRAWN BY: MC
 CHECKED BY: CLB
 SCALE: 1" = 30'
 SHEET TITLE:

GEOMETRY
 PLAN

C-400

FILE NAME: A:\3000\043862\077\PW\CADD\Sheets\043862.077 Minneola Athletic Complex Improvements BASE.dwg DATE: July 7, 2025, TIME: 9:48 AM, USER: ah4872, AVO: 043862.077



NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CLEAN FILL MATERIAL, GRADING AND COMPACTION TO LEVEL SITE AREA BEFORE CONSTRUCTION OF PROPOSED IMPROVEMENTS.

EXISTING CONC. TO BE SAW CUT & REPLACED PER PAVILION MANUFACTURERS SPECS.

NOTE: THE MAX SLOPE ALLOWED ONSITE IS 4:1. THE MAX SLOPE ALLOWED WITHIN 2' OF SIDEWALK IS 6:1.

EXIST. NET FENCE TO REMAIN

PROP. BOLLARDS, NON LOCKING TWIST-IN SERIES (RPT6601L)(TYP.)

MINNEOLA ATHLETIC COMPLEX
IMPROVEMENTS
MINNEOLA



half
 6700 STATE ROAD 300, SUITE 100
 TAVARES, FLORIDA 32778
 TEL: (352) 343-8481

CERTIFICATE OF AUTHORIZATION NUMBER: 33380

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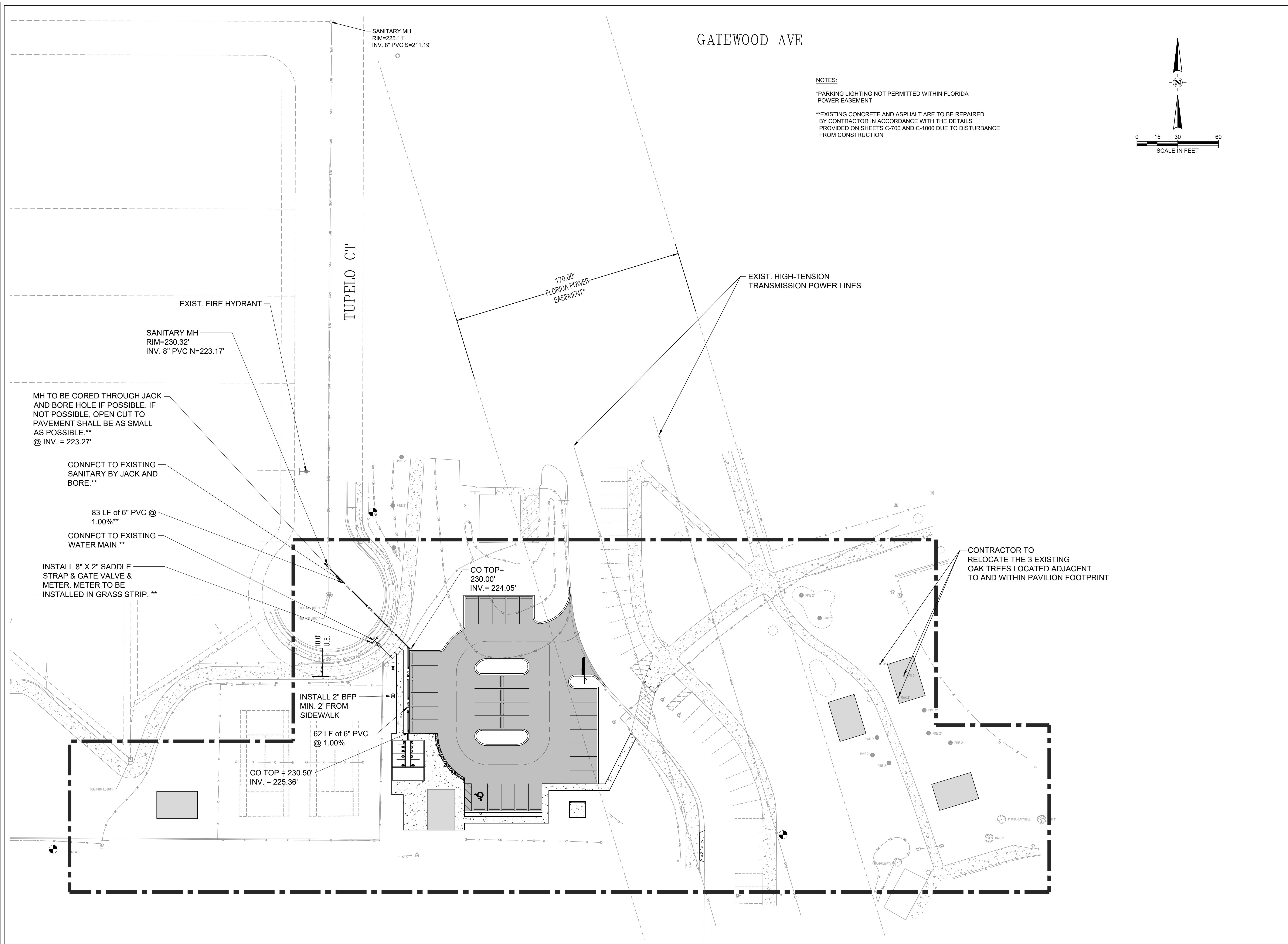
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 FIRM OR BUSINESS NO. STATE

PROJECT NO.:	043862.077
ISSUED:	JULY 2025
DRAWN BY:	MC
CHECKED BY:	CLB
SCALE:	1" = 30'
SHEET TITLE:	GRADING & DRAINAGE PLAN

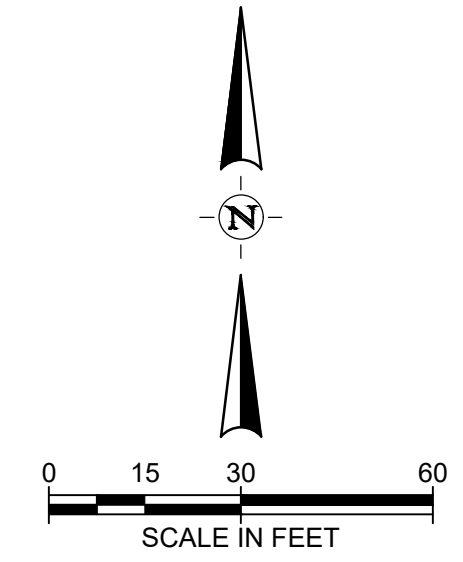
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GATEWOOD AVE

NOTES:
 *PARKING LIGHTING NOT PERMITTED WITHIN FLORIDA POWER EASEMENT
 **EXISTING CONCRETE AND ASPHALT ARE TO BE REPAIRED BY CONTRACTOR IN ACCORDANCE WITH THE DETAILS PROVIDED ON SHEETS C-700 AND C-1000 DUE TO DISTURBANCE FROM CONSTRUCTION



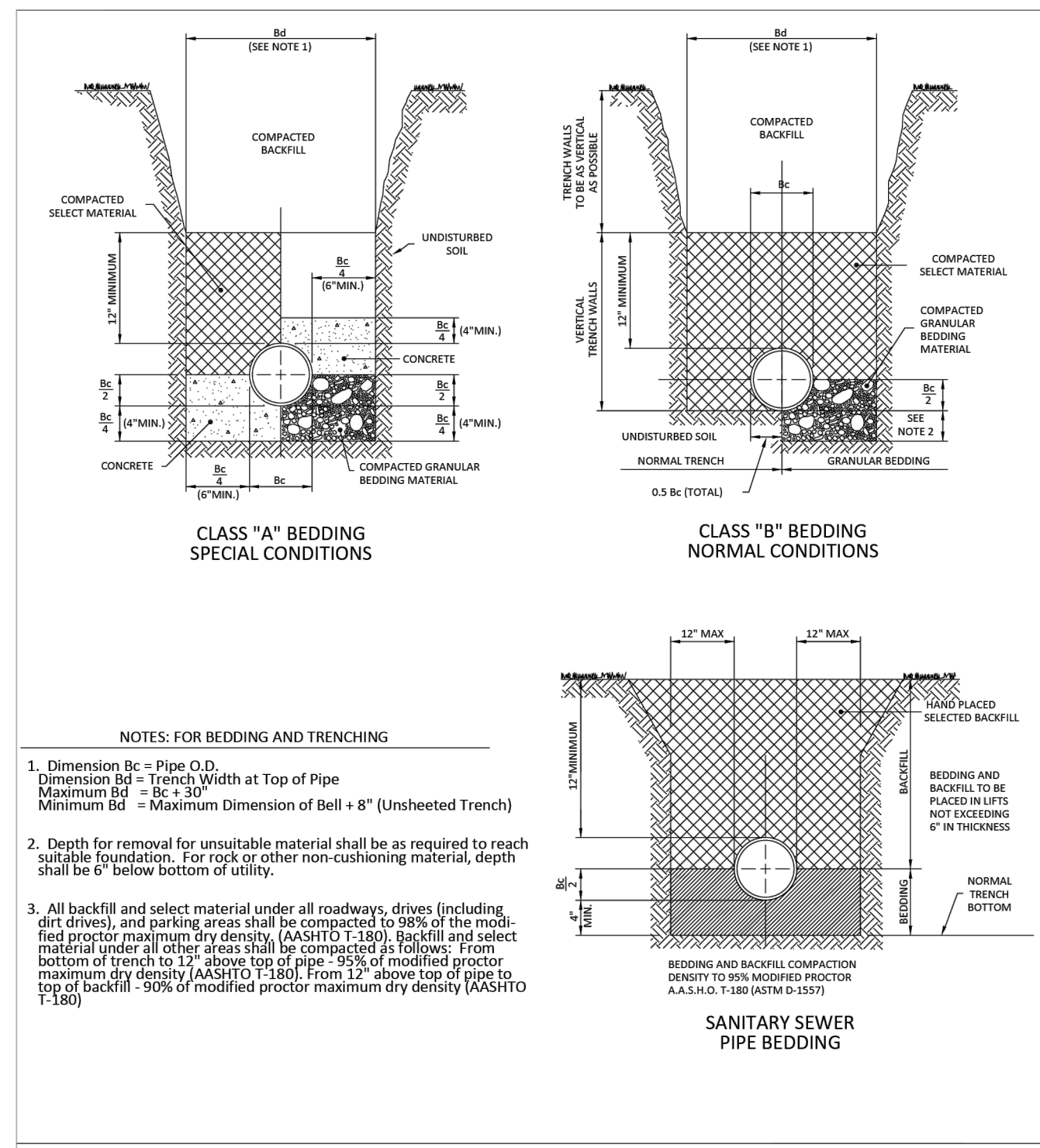
REVISION NO.	DATE	DESCRIPTION

CIVIL ENGINEER
 Cecily Lynn Barnes
 No. 92125
 State of Florida
 Date: 2025-07-17 12:48:23 -0400

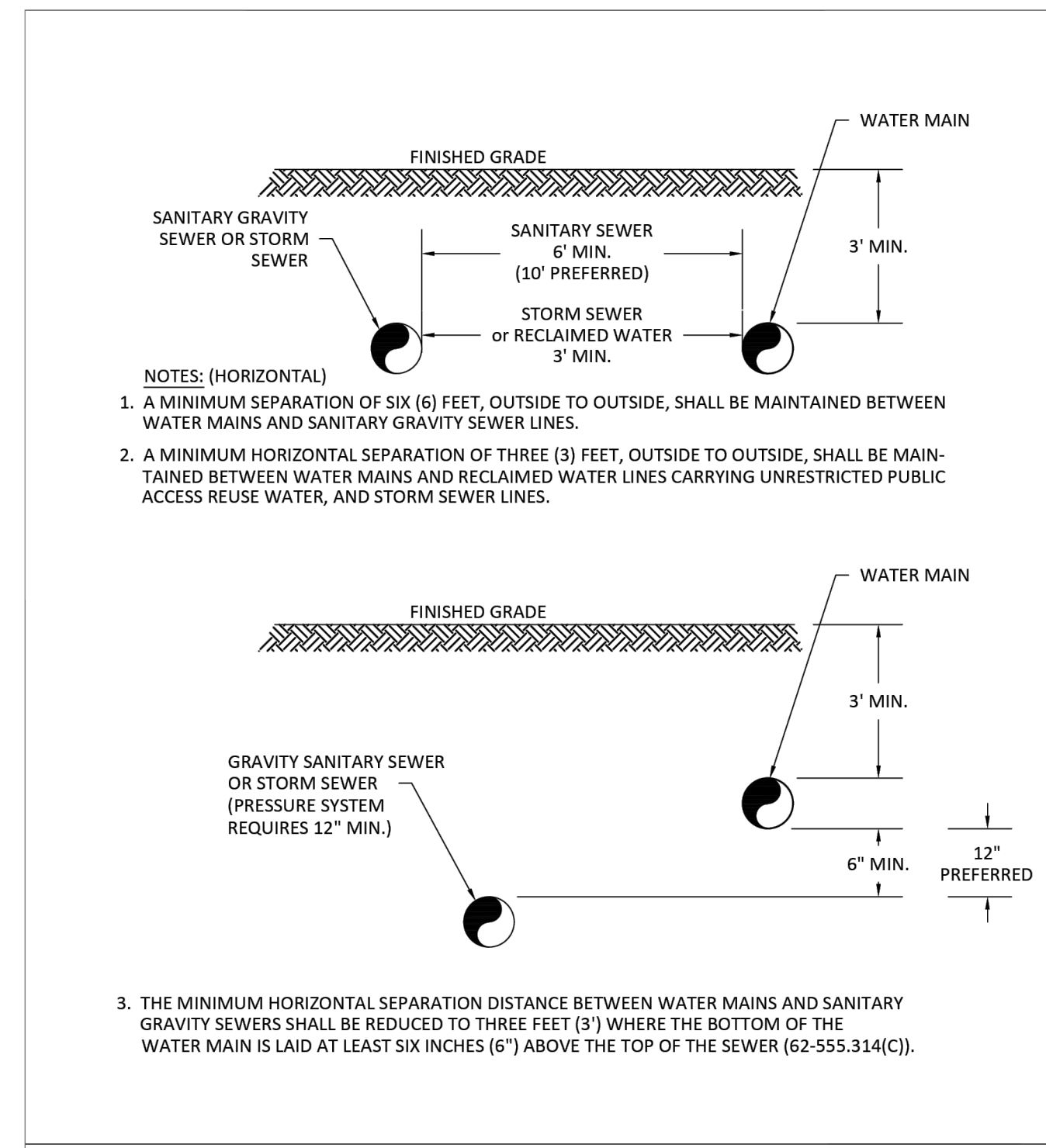
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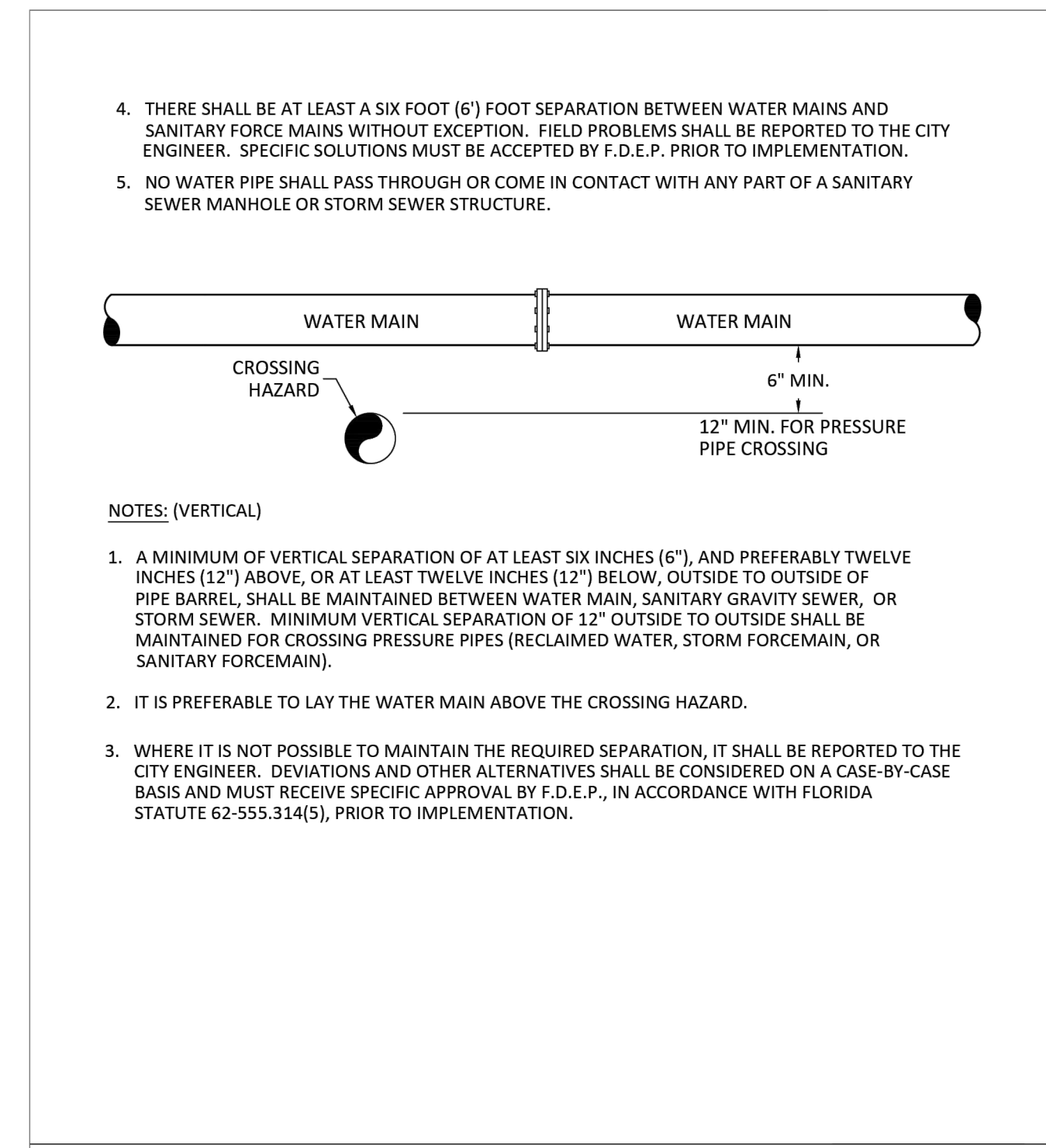
PROJECT NO.: 043862.077
 ISSUED: JULY 2025
 DRAWN BY: MC
 CHECKED BY: CLB
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UTILITY PLAN



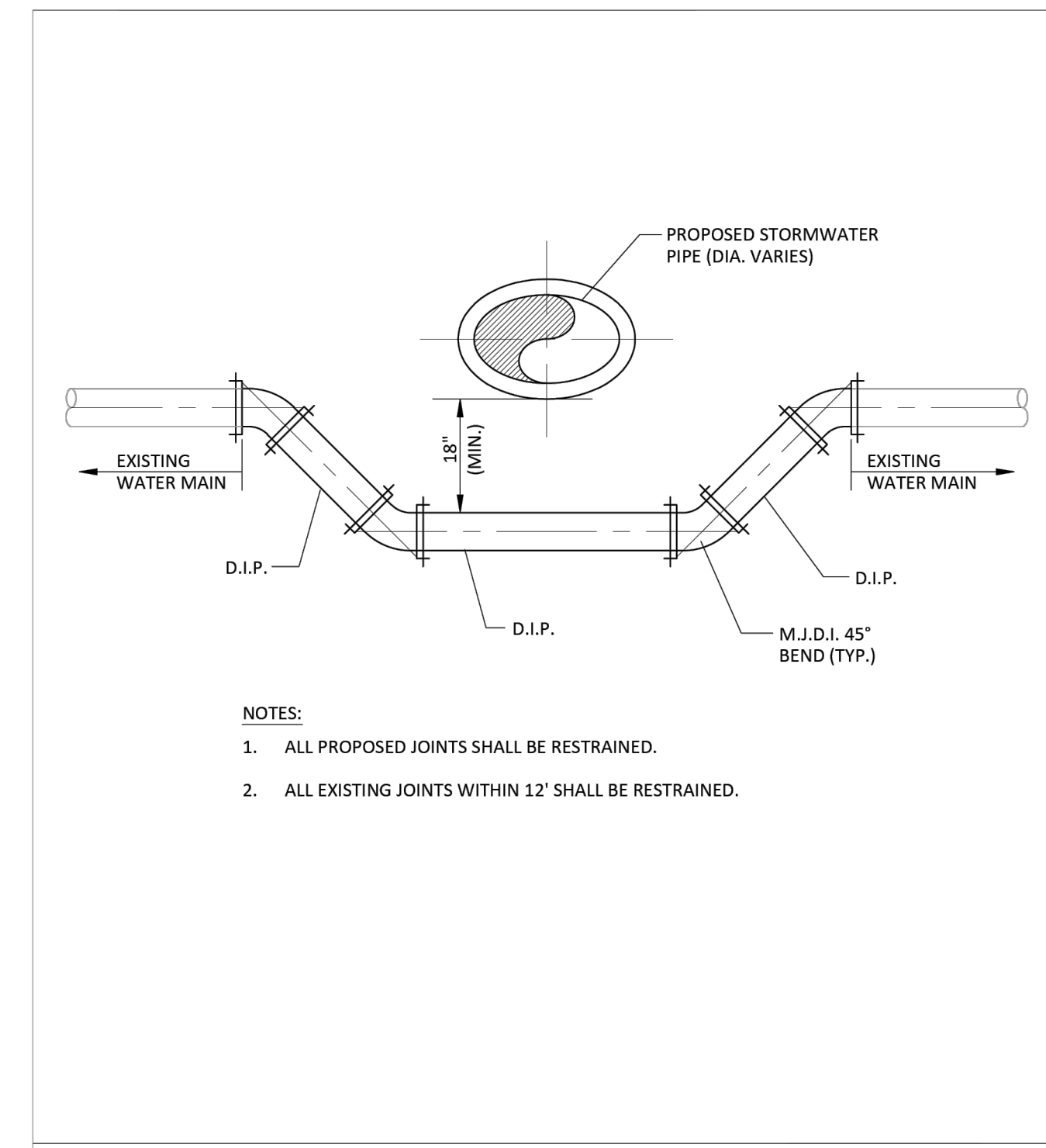
BEDDING DETAILS **G-3**
 Not To Scale
 November 2017
 CITY OF MINNEOLA



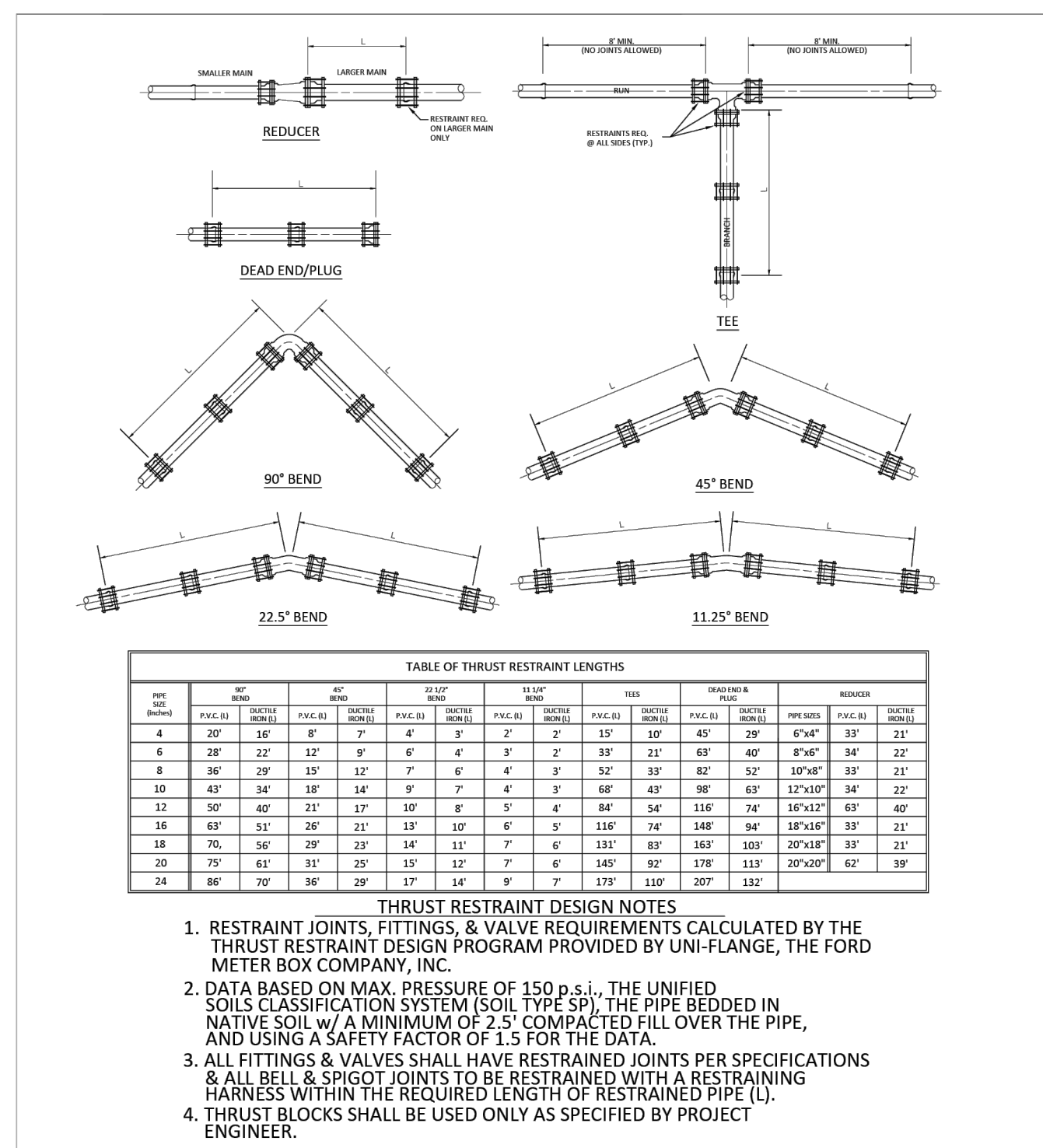
PIPING CLEARANCES **G-4.1**
 Not To Scale
 November 2017
 CITY OF MINNEOLA



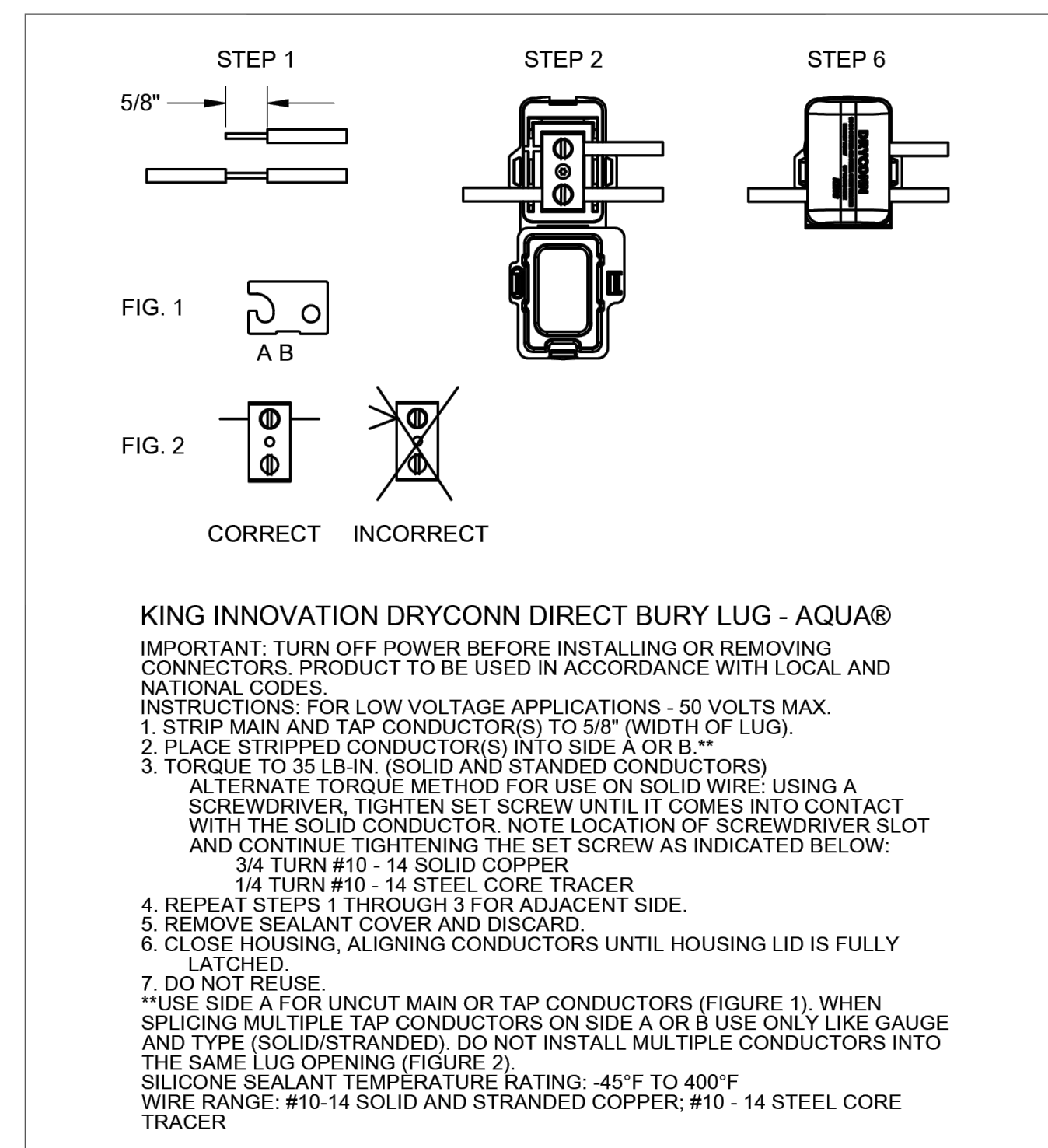
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 Not To Scale
 November 2017
 CITY OF MINNEOLA



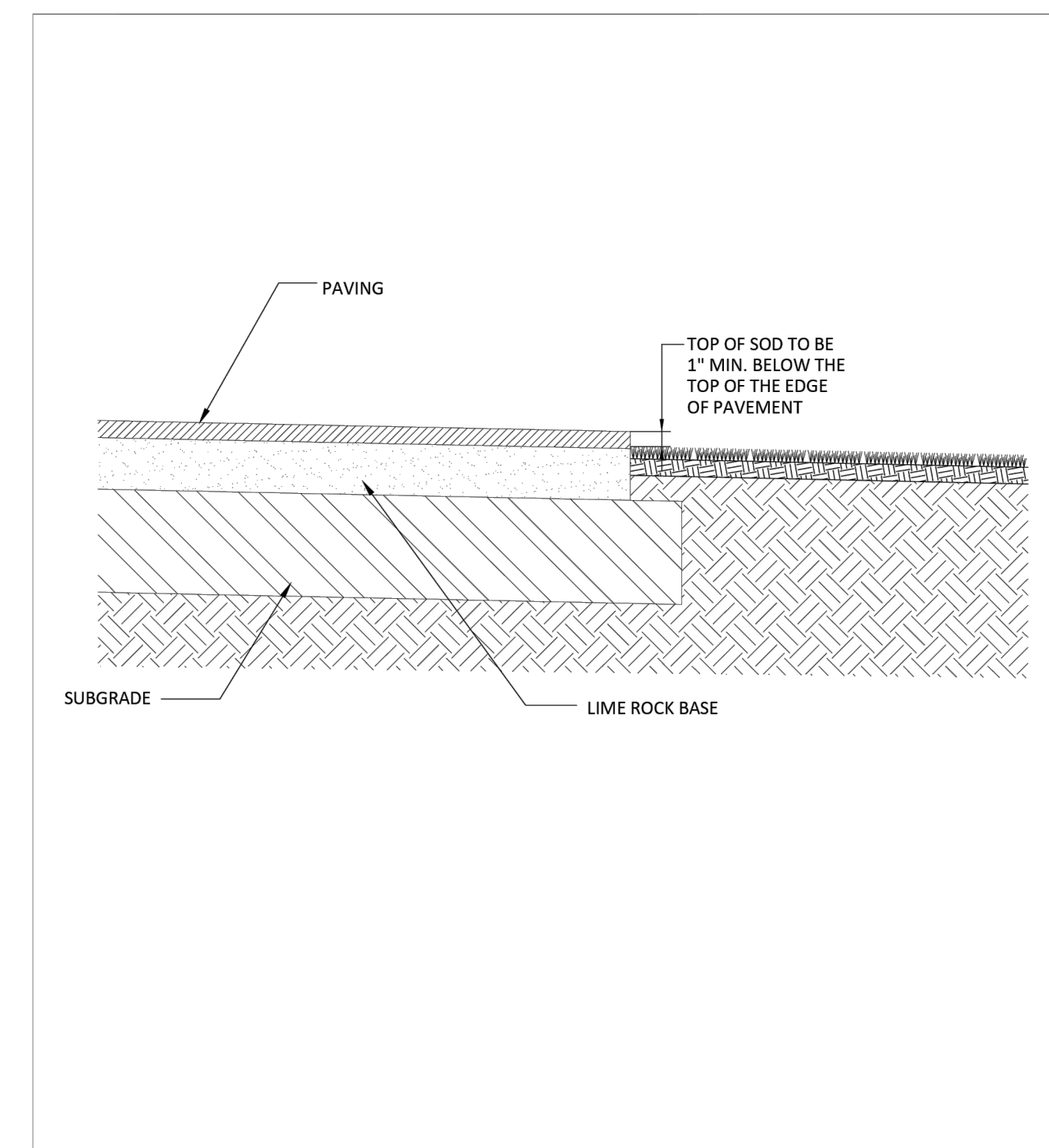
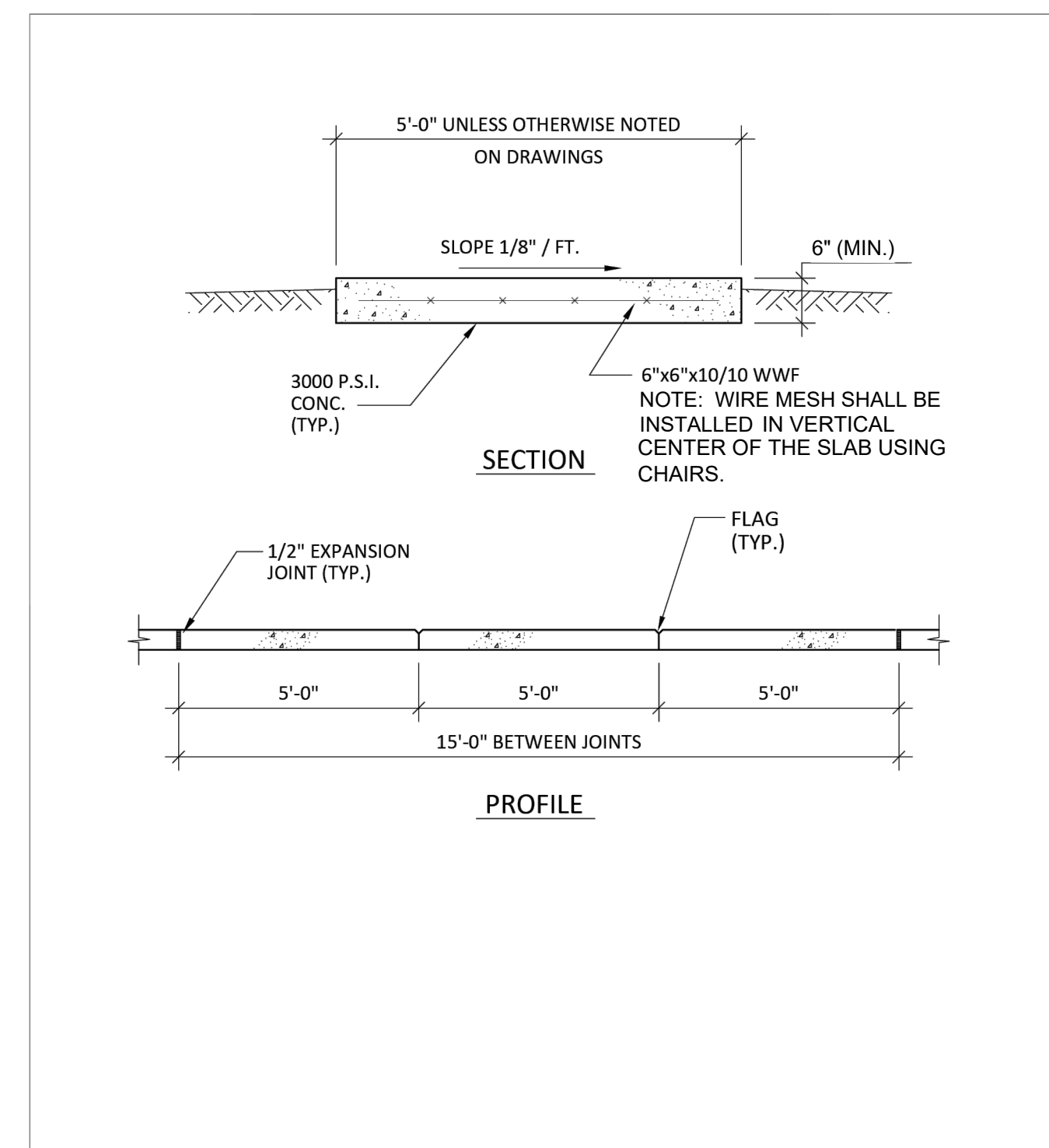
WATER LINE CROSSING **G-5**
 Not To Scale
 November 2017
 CITY OF MINNEOLA



THRUST RESTRAINT DETAILS **G-6**
 Not To Scale
 November 2017
 CITY OF MINNEOLA



LOCATING WIRE SPLICING **G-8**
 Not To Scale
 November 2017
 CITY OF MINNEOLA



MINNEOLA ATHLETIC COMPLEX IMPROVEMENTS
MINNEOLA

LAKE COUNTY, FL
 REAL FLORIDA • REAL CLOSE

half
 678 W. STATE ST. SUITE 100
 TALLAHASSEE, FLORIDA 32310
 TEL: (904) 843-8481

CERTIFICATE OF AUTHORIZATION NUMBER: 33380

REVISION NO.	DATE	DESCRIPTION

CITY OF MINNEOLA
 Digitally signed by Cecily L. Barnes
 Date: 2025.07.17 12:48:23 -0400
 PROFESSIONAL ENGINEER

THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY:
 CECILY LYNN BARNES, P.E. 92125
 NAME FE LICENSE NO.
 7772025
 DATE

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 HALF FLA CA 33380 & FL LC 26000645 FL FIRM OR BUSINESS NO. STATE

PROJECT NO.: 043862.077
 ISSUED: JULY 2025
 DRAWN BY: MC
 CHECKED BY: CLB
 SCALE: N/A
 SHEET TITLE:
GENERAL DETAILS
C-700

FILE NAME: A:\43000\043862\077\PW\CADD\Sheets\043862.077 Minneola Athletic Complex Improvements BASE.dwg DATE: July 7, 2025, TIME: 9:48 AM, USER: ah4872, AVO: 043862.077

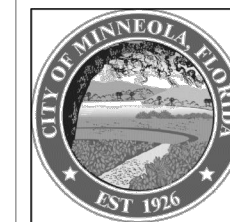
1. THE CITY'S PUBLIC SERVICES DEPARTMENT SHALL BE NOTIFIED 48 HOURS PRIOR TO BEGINNING ANY WATER SYSTEM'S CONSTRUCTION.
2. PRIOR TO TAKING ANY WATER LINES OUT OF SERVICE, THE CONTRACTOR SHALL NOTIFY THE CITY AND AFFECTED CUSTOMERS, IN WRITING, 48-HOURS PRIOR TO SHUTDOWN.
3. WATER MAINS SHALL BE PVC AWWA CLASS C-900, MINIMUM CL-150 (DR-18) DUCTILE IRON PIPE PRESSURE RATING FOR PIPE SIZES 4"-12". PVC PIPES 14" OR LARGER SHALL BE AWWA CLASS C-905 (DR-21). ALL COUPLINGS, COMPOUNDS, SOLVENTS, LUBRICANTS AND PIPE PREPARATION FOR LAYING SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURER'S LATEST RECOMMENDATIONS.
4. ALL WATER MAINS SHALL BE NSF APPROVED AND BEAR THE "NSF" SEAL FOR POTABLE WATER USE, AND HAVE A MINIMUM OF 36 INCHES OF COVER (MAXIMUM COVER OF 60 INCHES). IN SPECIAL CASES WHERE IT IS IMPOSSIBLE TO PROVIDE ADEQUATE COVER, DUCTILE IRON PIPE OR ENCASEMENT MAT BE USED AS APPROVED BY THE CITY AND FDEP.
5. DE-WATERING SHALL BE PROVIDED TO KEEP GROUND WATER ELEVATION A MINIMUM OF 6 INCHES BELOW PROPOSED WATER MAIN.
6. ALL WATER MAINS SHALL BE INSTALLED ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
7. TRENCHES SHALL BE BACK FILLED WITH MATERIAL ACCEPTABLE TO THE CITY, WITH A MINIMUM COMPACTION OF 98% (AASHTO T-180) IN PAVED AREAS AND 95% (AASHTO T-180) IN UNPAVED AREAS.
8. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 1 FOOT ABOVE THE PIPE AND AT 2 FEET VERTICAL INTERVALS TO FINISH GRADE AT A MINIMUM SPACING OF EVERY 300 FEET. RESULTS OF TESTING MUST BE PROVIDED TO THE CITY.
9. AS STANDARD PRACTICE, WATER MAINS SHALL BE INSTALLED 5 FEET OFF THE BACK OF THE CURB ON THE OPPOSITE SIDE OF THE RECLAIMED WATER LINES OR AS APPROVED BY THE CITY.
10. ALL WATER MAINS UNDER PAVEMENT SHALL BE DUCTILE IRON AND SHALL EXTEND 5 FEET OFF THE BACK OF CURB.
11. ALL SLEEVES UNDER PAVEMENT SHALL EXTEND 5 FEET BEYOND THE BACK OF CURB.
12. PIPE WARNING TAPE SHALL BE LOCATED 18 INCHES BELOW FINISH GRADE FOR ALL PIPES. PIPE IDENTIFICATION TAPE SHALL BE PROVIDED ON ALL PIPES.
13. WATER VALVES SHALL BE PLACED AT ALL STREET INTERSECTIONS AND AT MAXIMUM SPACING OF 1,000 FEET FOR RESIDENTIAL SERVICE (500' FOR COMMERCIAL, MULTIFAMILY AND INDUSTRIAL). AT ALL WATER TEES AND CROSSES, VALVES SHALL BE INSTALLED ON ALL BRANCHES.



GENERAL WATER NOTES
CITY OF MINNEOLA

W-1.1
Not To Scale
November 2017

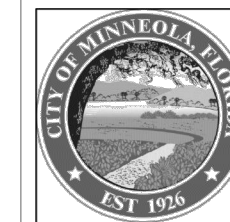
14. APPROVED WATER VALVE TYPES ARE THE FOLLOWING:
 - A. BRASS BALL-TYPE VALVE FOR VALVES LESS THAN 2" DIAMETER.
 - B. STANDARD GATE VALVES 2" AND LARGER DIAMETER, RESILIENT WEDGE GATES VALVES(AWWA C-509)
 - C. TAPPING VALVES WITH MECHANICAL TAPPING SLEEVE FOR SIZE ON SIZE STAINLESS STEEL OR EPOXY COATED SLEEVE WITH STAINLESS STEEL BOLTS AND NUTS FOR OTHERS.
15. ALL POTABLE WATER VALVE BOXES SHALL ADJUSTED TO FINISH GRADE AND THE CAPS SHALL BE PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE. VALVES NOT IN PAVEMENT MUST HAVE 24"x24"x4" CONCRETE COLLAR.
16. WATER VALVES SHALL BE COMPLETELY OPENED BY THE CITY WATER/WASTEWATER DIVISION, IN THE PRESENCE OF THE CONTRACTOR, PRIOR TO FINAL ACCEPTANCE OF ANY NEW WATER SYSTEM.
17. MEGALUGS, SPLIT-RESTRAINED BOLTLESS RESTRAINED JOINTS, OR GRIPPER GASKETS MAY BE USED ON ALL PIPES NOT MEETING REQUIRED COVER REQUIREMENTS SHALL FOLLOW THE MOST RECENT DIPRA THRUST RESTRAINT DESIGN GUIDELINES.
18. ALL WATER SERVICES SHALL BE MARKED ALONG THE OUTSIDE EDGE OF CURB WITH UPSIDE-DOWN "W" OR BY METAL TABS SET INTO PAVEMENT. VALVES FOR WATER SHALL BE MARKED BY A "V" OR METAL TABS SET INTO THE PAVEMENT. BLOW-OFFS SHALL BE MARKED WITH A "B".
19. ALL SINGLE RESIDENTIAL WATER SERVICES SHALL BE MINIMUM 1" AND DOUBLE RESIDENTIAL SERVICES SHALL BE MINIMUM 1-1/2" BLACK OR BLUE POLYETHYLENE TUBING. POLYBUTYLENE SHALL NOT BE USED.
20. WATER SERVICES SHOULD BE DOUBLE 1-1/2" SERVICES LOCATED AT SIDE LOT LINES, ALTERNATING WITH RECLAIMED WATER SERVICE LOCATIONS. IN INSTANCES WHERE WATER SERVICES NEED TO BE OFFSET, 1" SERVICES SHALL BE SPECIFIED. THESE SERVICES MAY BE OFFSET FROM THE LOT LINE A MAXIMUM DISTANCE OF 5.0 FEET.
21. ALL WATER SERVICE ENDINGS SHALL BE MARKED BY 2"x4" LUMBER (PRESSURE TREATED). ALL SERVICE SHALL EXTEND 6 INCHES ABOVE GRADE, SECURED TO THE BASE OF THE LUMBER. ALL SERVICES MUST BE ADJUSTED TO FINAL METER BOX LOCATION BY OWNER PRIOR TO INITIAL METER INSTALLATION.
22. WATER DISTRIBUTION SYSTEM SHALL BE DESIGNED TO COMPLY WITH THE CITY'S FIRE (WATER) FLOW CODE.
23. HYDRANT LOCATION AND SPACING SHALL BE AS PER THE CITY'S LAND DEVELOPMENT CODE.
24. BLUE REFLECTORS SHALL BE SECURELY AFFIXED TO ROADWAY (CENTER LINE OF ROAD) ADJACENT TO HYDRANT LOCATION.



GENERAL WATER NOTES
CITY OF MINNEOLA

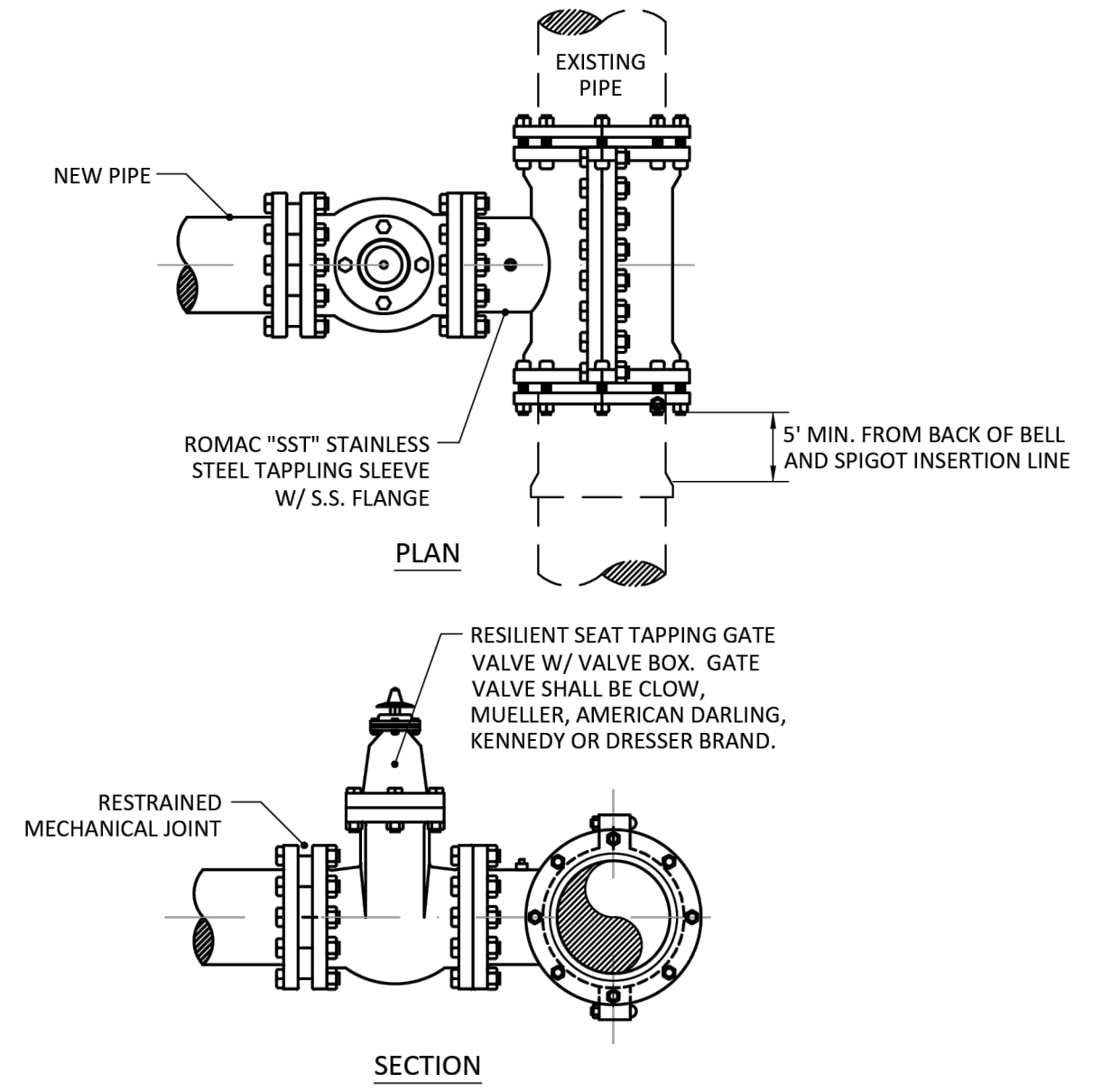
W-1.2
Not To Scale
November 2017

25. ALL FIRE HYDRANTS SHALL BE CONSTRUCTED TO MAKE THEM EASILY ACCESSIBLE TO FIRE PERSONNEL IN CASE OF FIRE. THE MAIN NOZZLE SHOULD ALWAYS FACE THE STREET AND BE 18"-22" ABOVE GRADE.
26. OUT-OF-SERVICE FIRE HYDRANTS MUST BE CLEARLY MARKED (RED RING ON NOZZLE, LABELED DISK ON NOZZLE) FACING ROADWAY.
27. WATER SYSTEMS WILL BE PRESSURE TESTED AT 150 PSI STATIC PRESSURE FOR A PERIOD OF 2 HOURS PER AWWA STANDARDS.
28. ALL WATER MAINS TO BE CLEARED FOR SERVICE SHALL BE FLUSHED, DISINFECTED, PRESSURE TESTED, AND BACTERIOLOGICALLY CLEANSED FOR SERVICE, IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND CHAPTER 62-555 FLORIDA ADMINISTRATIVE CODE.
29. UPON CONSTRUCTION COMPLETION AND ACCEPTANCE OF THE SYSTEM, IT SHALL BE THE DESIGN ENGINEER'S RESPONSIBILITY TO INSURE THAT THE SYSTEM IS PROPERLY CERTIFIED AND ACCEPTED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION OR THE CITY PUBLIC SERVICES AND "AS-BUILTS" ARE PROVIDED TO THE CITY ENGINEER, PRIOR TO ANY USE OF THIS SYSTEM.



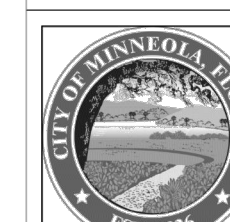
GENERAL WATER NOTES
CITY OF MINNEOLA

W-1.3
Not To Scale
November 2017



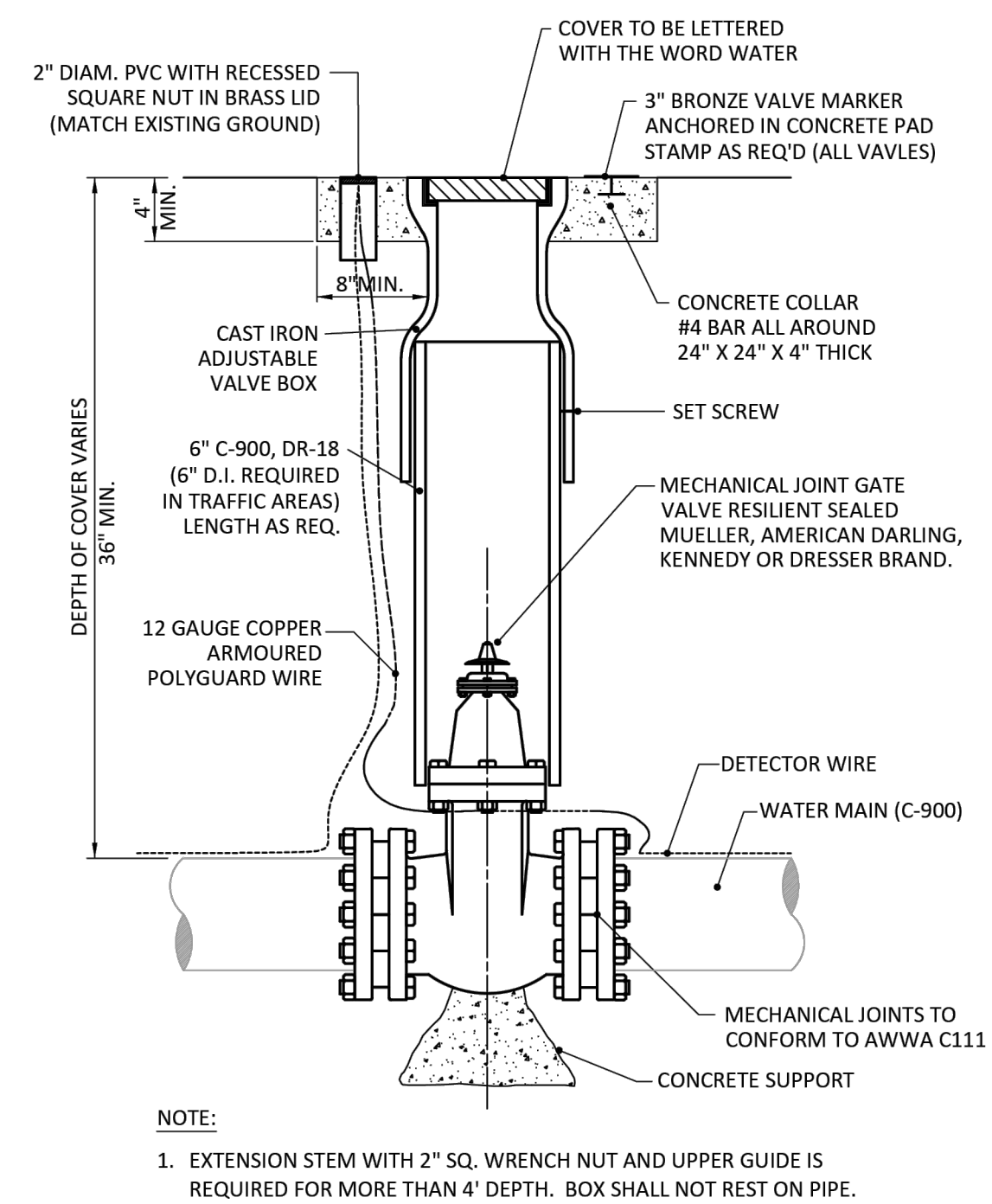
NOTES:

1. SIZE ON SIZE WET TAPS WILL CALL FOR FULL ENCLICEMENT STAINLESS STEEL MJ TAPPING SLEEVE.
2. ALL NEWLY INSTALLED TAPPING SLEEVES AND TAPPING VALVES SHALL BE PNEUMATICALLY PRESSURE TESTED AT A TEST PRESSURE OF 150 PSI FOR A PERIOD OF 30 MINUTES.

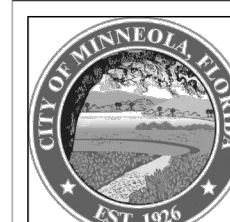


WET TAP TIE-IN DETAIL - WATER MAIN
CITY OF MINNEOLA

W-2
Not To Scale
November 2017

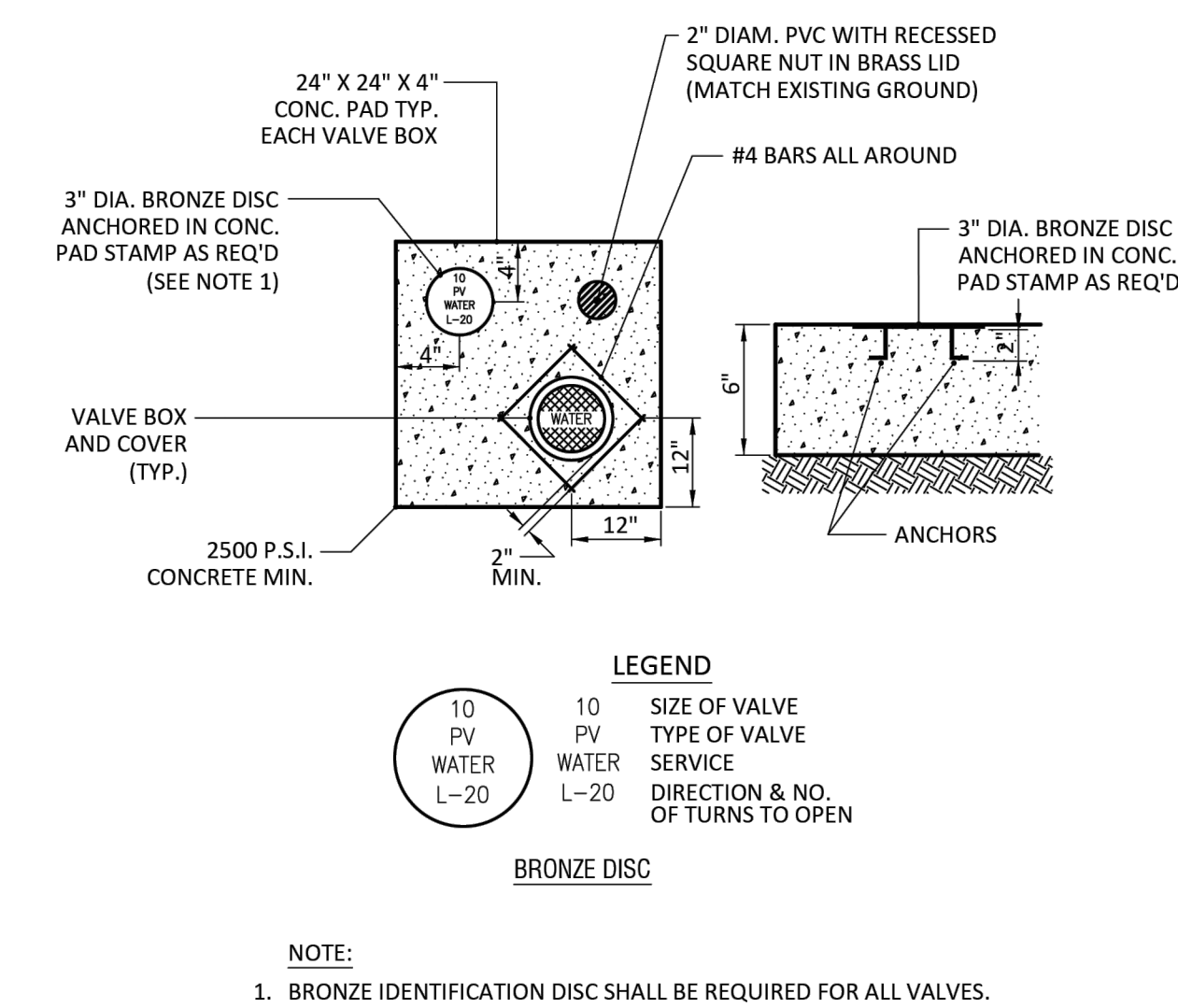


- NOTE:
1. EXTENSION STEM WITH 2" SQ. WRENCH NUT AND UPPER GUIDE IS REQUIRED FOR MORE THAN 4' DEPTH. BOX SHALL NOT REST ON PIPE.

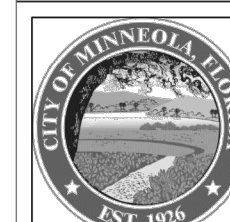


GATE VALVE & BOX
CITY OF MINNEOLA

W-3
Not To Scale
November 2017



- NOTE:
1. BRONZE IDENTIFICATION DISC SHALL BE REQUIRED FOR ALL VALVES.



VALVE COLLAR
CITY OF MINNEOLA

W-5
Not To Scale
November 2017

MINNEOLA ATHLETIC COMPLEX
IMPROVEMENTS
MINNEOLA

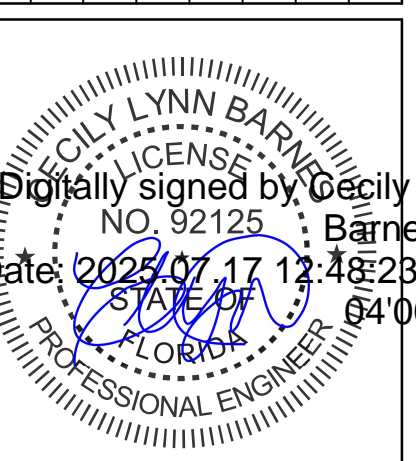


half

600 NORTH COUNTY ROAD
TAVARES, FLORIDA 32776
TEL: (352) 343-8481

CERTIFICATE OF AUTHORIZATION NUMBER: 33380

REVISION NO.	DATE	DESCRIPTION



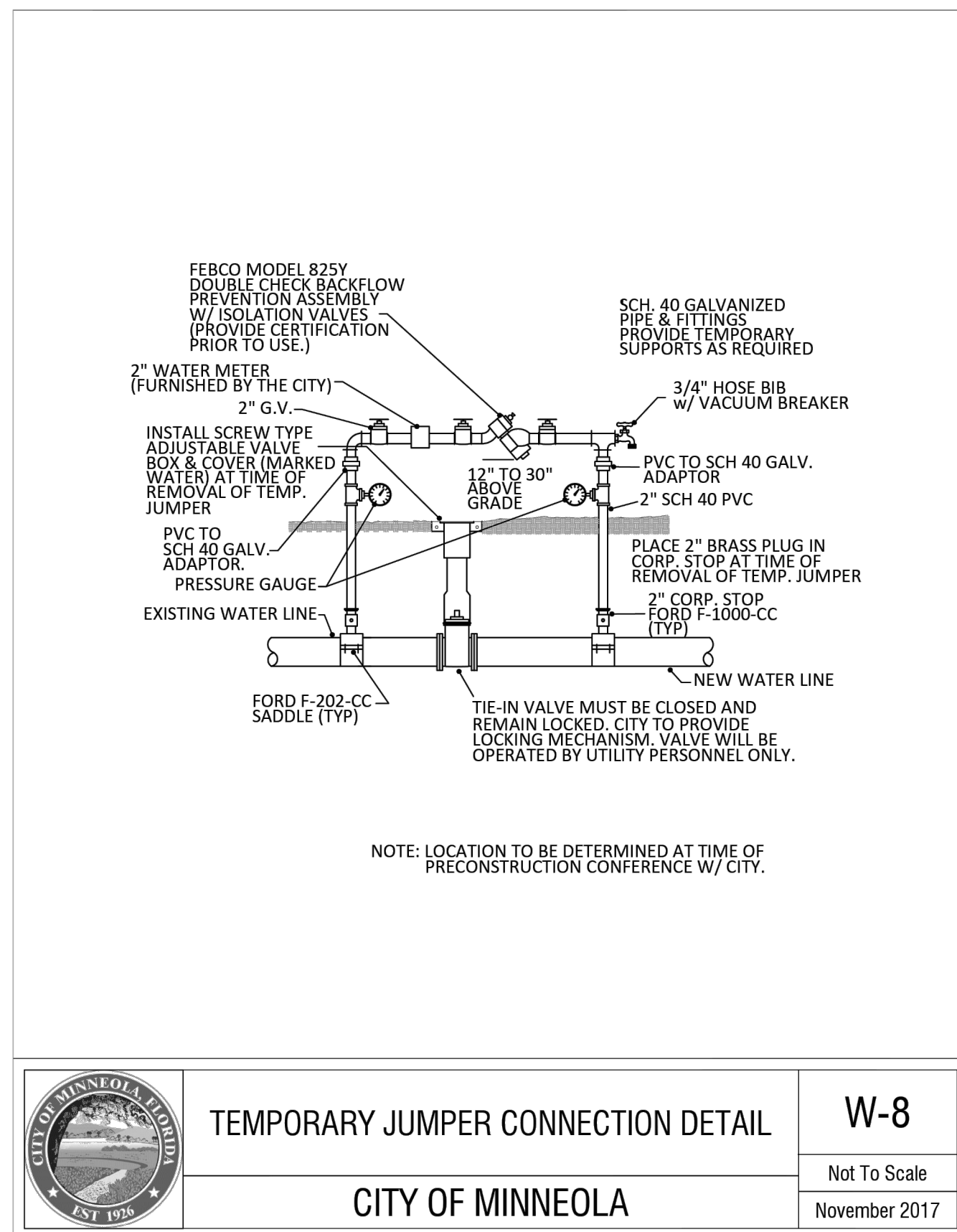
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HALFF FLA CA 33380 & FL LC 28000645 FL STATE
FIRM OR BUSINESS NO.

PROJECT NO.: 043862.077
ISSUED: JULY 2025
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CHECKED BY: CLB
SCALE: N/A
SHEET TITLE:

WATER
DETAIL

C-800

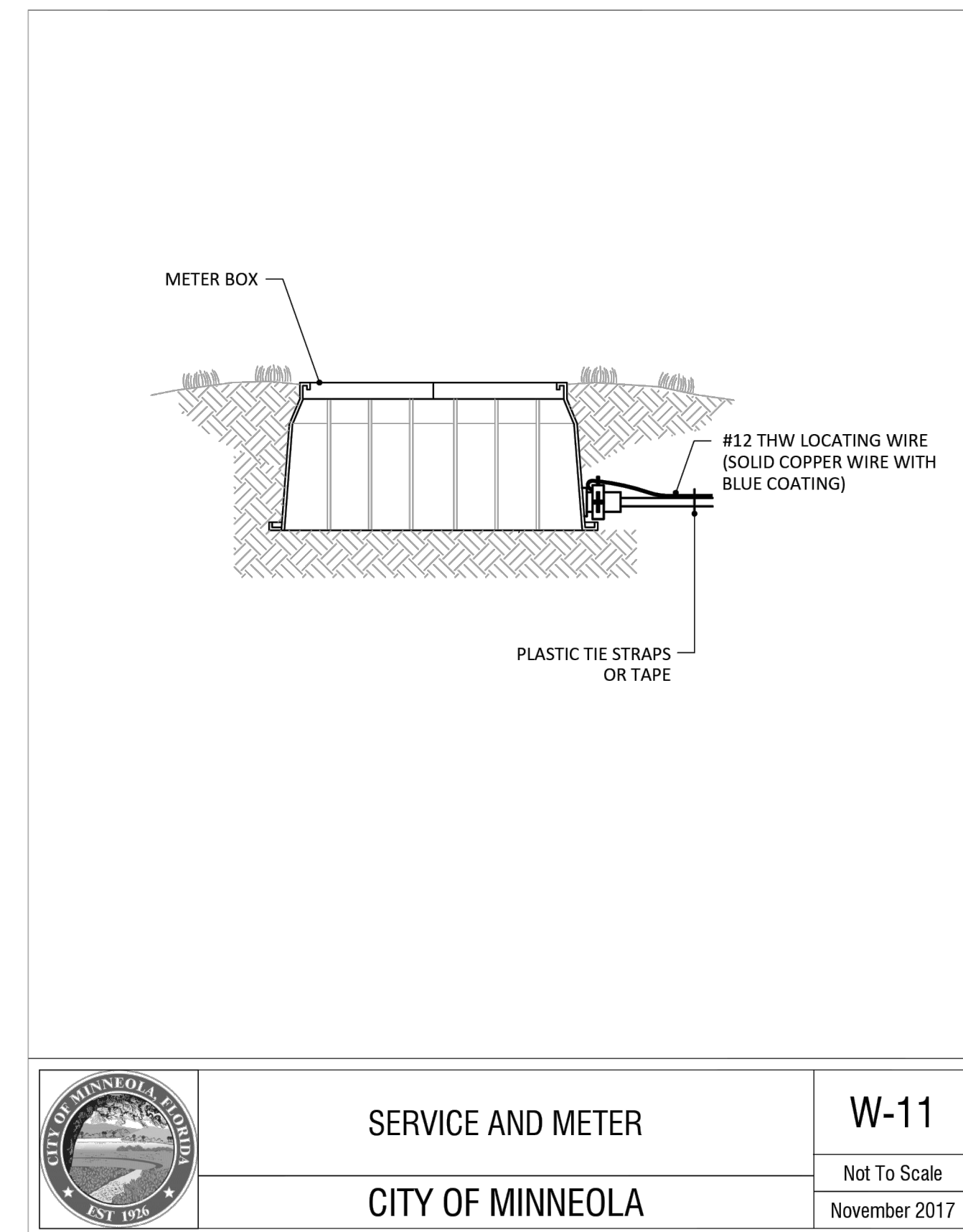
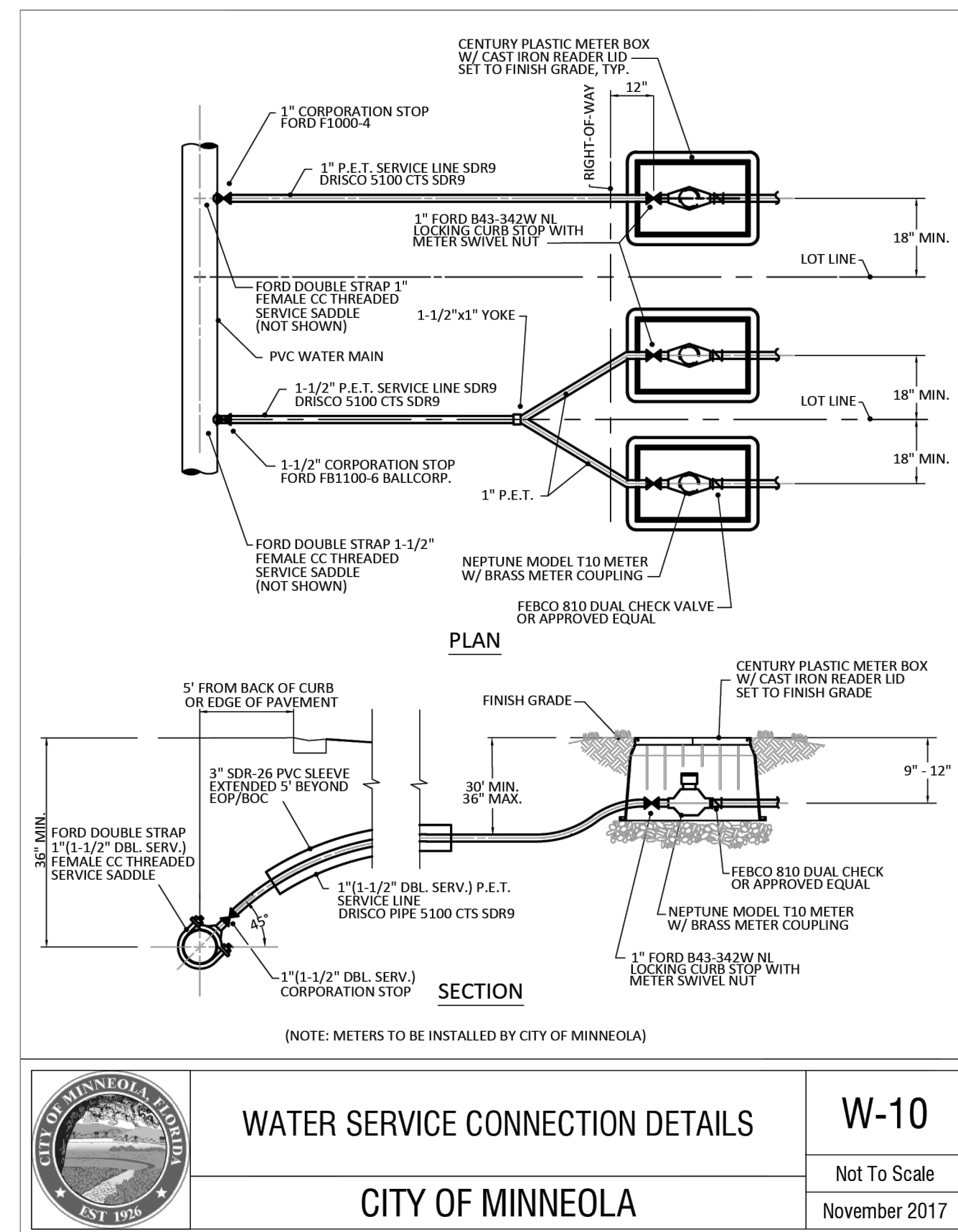
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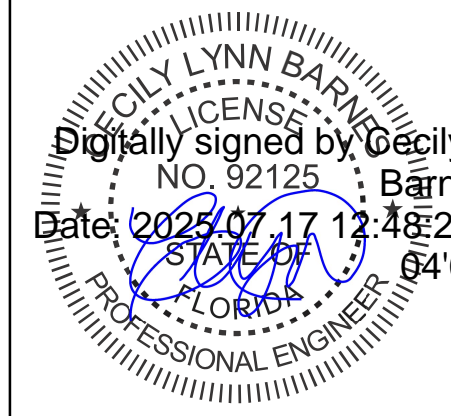
- TEMPORARY JUMPER CONNECTION NOTES**
- W-9**
- Not To Scale
November 2017
- CITY OF MINNEOLA
- A TEMPORARY JUMPER CONNECTION IS REQUIRED AT ALL CONNECTIONS BETWEEN EXISTING ACTIVE WATER MAINS AND PROPOSED NEW WATER MAIN IMPROVEMENTS.
 - THE DETAILS TO BE USED FOR FILLING ANY WATER MAIN OF ANY SIZE FROM EXISTING ACTIVE WATER MAINS AND FOR FLUSHING OF NEW MAINS UP TO 8" DIAMETER (2.5 FPS MINIMUM VELOCITY) AND FOR PULLING BACTERIOLOGICAL SAMPLES FROM ANY NEW WATER MAIN OF ANY SIZE. THE JUMPER CONNECTION SHALL BE MAINTAINED UNTIL AFTER FILLING, FLUSHING, TESTING AND DISINFECTION OF THE NEW MAIN HAS BEEN SUCCESSFULLY COMPLETED AND CLEARANCE FOR USE FROM THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) AND OTHER PERTINENT AGENCIES HAS BEEN RECEIVED. THE JUMPER CONNECTION SHALL ALSO BE USED TO MAINTAIN A MINIMUM PRESSURE OF 20 PSI IN THE NEW MAINS ALL THE TIME AFTER DISINFECTION AND UNTIL THE FDEP CLEARANCE LETTER IS OBTAINED. ADEQUATE THRUST BLOCKING AND/OR RESTRAINTS SHALL BE PROVIDED TEMPORARILY AS REQUIRED. PIPE AND FITTINGS USED FOR CONNECTING THE NEW PIPES TO THE EXISTING PIPE SHALL BE DISINFECTED PRIOR TO INSTALLATION IN ACCORDANCE WITH AWWA C651-1992 EDITION. THIS TAPPING SLEEVE AND THE EXTERIOR OF THE MAIN TO BE TAPPED SHALL BE DISINFECTED BY SPRAYING OR SWABBING PER SECTION II OF AWWA C651-92.
 - FLUSHING OF 10" DIAMETER AND LARGE WATER MAINS MAY BE DONE THROUGH THE TIE-IN VALVE, IN THE PRESENCE OF THE UTILITY DEPART. THE UTILITY DEPARTMENT WILL NOTIFIED IN WRITING 48 HOURS PRIOR TO THE FLUSHING OF SAID MAINS.

THE FOLLOWING PROCEDURES SHALL BE FOLLOWED:

 - THE TIE-IN VALVES SHALL BE OPERATED AND PRESSURE TESTED IN THE PRESENCE OF THE UTILITY COMPANY AND ENGINEER TO VERIFY WATER TIGHTNESS PRIOR TO THE TIE-IN VALVES WHICH ARE NOT WATER TIGHT SHALL BE REPLACED OR A NEW VALVE INSTALLED IMMEDIATELY ADJACENT TO THE LEAKING VALVE.
 - THE TEMPORARY JUMPER CONNECTION SHALL BE CONSTRUCTED AS DETAILED. THE JUMPER CONNECTION SHALL BE USED TO FILL THE NEW WATER MAIN AND FOR PROVIDING WATER FOR BACTERIOLOGICAL SAMPLING OF THE NEW MAIN AS REQUIRED BY THE FDEP PERMIT.
 - FLUSHING SHALL NOT BE ATTEMPTED DURING PEAK DEMAND HOURS OF THE EXISTING WATER MAIN.
 - ALL DOWNSTREAM VALVES IN THE NEW SYSTEM MUST BE OPEN PRIOR TO OPENING THE TIE-IN VALVE.
 - PROVIDE FOR AND MONITOR THE PRESSURE AT THE TIE-IN POINT, THE PRESSURE IN THE EXISTING MAIN MUST NOT DROP BELOW 35 PSI.
 - TIE-IN VALVE SHALL BE OPENED A FEW TURNS ONLY, ENSURING A PRESSURE DROP ACROSS THE VALVE IS ALWAYS GREATER THAN 10 PSI.
 - THE TIE-IN VALVE SHALL BE LOCKED CLOSED BY THE CITY UNTIL FLUSHING BEGINS.
 - THE TIE-IN VALVE SHALL BE OPENED ONLY A FEW TURNS FOR FLUSHING OF THE NEW MAIN. THE PROCEDURE SHALL BE DIRECTED BY THE CITY AND OBSERVED BY THE ENGINEER.
 - AFTER FLUSHING THE TIE-IN VALVE SHALL BE CLOSED AND LOCKED IN THE CLOSED POSITION BY THE CITY.
 - THE CONTRACTOR SHALL PROVIDE DOCUMENTATION DEMONSTRATING THAT THE DOUBLE CHECK BACKFLOW PREVENTION DEVICE HAS BEEN TESTED WITHIN ONE YEAR AT THE TIME OF INSTALLATION AND IS IN GOOD WORKING ORDER AT THE TIME OF INSTALLATION. THE TEST SHALL BE PERFORMED BY A QUALIFIED BACKFLOW PREVENTION TECHNICIAN.
 - EXCEPT AS REQUIRED TO FLUSH LINES OF GREATER THAN 8" IN DIAMETER, THE TIE-IN VALVE SHALL REMAIN CLOSED AND SHALL BE LOCKED IN THE CLOSED POSITION BY THE CITY. THE TIE-IN VALVE SHALL REMAIN LOCKED CLOSED UNTIL THE NEW SYSTEM HAS BEEN CLEARED FOR USE BY FDEP AND ALL OTHER PERTINENT AGENCIES.
 - UPON RECEIPT OF CLEARANCE FOR USE FROM FDEP AND ALL OTHER PERTINENT AGENCIES THE CONTRACTOR SHALL REMOVE THE JUMPER CONNECTION. THE CORPORATION STOPS ARE TO BE CLOSED AND PLUGGED WITH 2" BRASS PLUGS.
 - ALL INSTALLATION AND MAINTENANCE OF THE TEMPORARY JUMPER CONNECTION AND ASSOCIATED BACKFLOW PREVENTION DEVICE FITTINGS, VALVE, ETC., SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



REVISION NO.	DATE	DESCRIPTION



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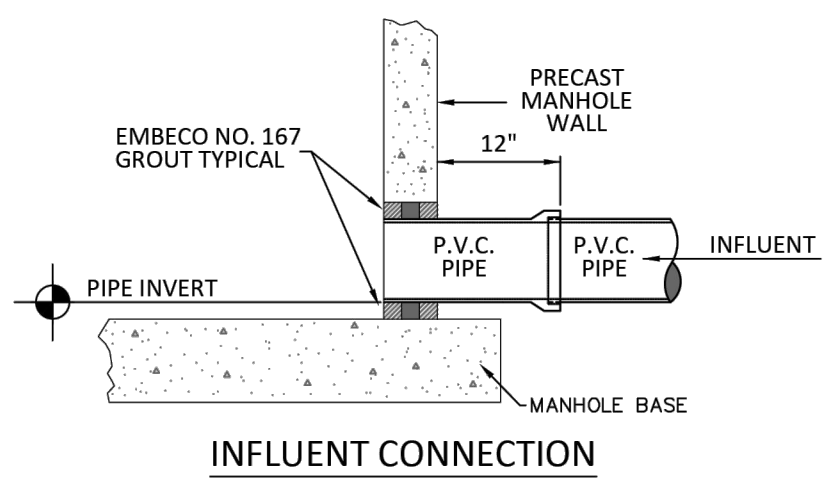
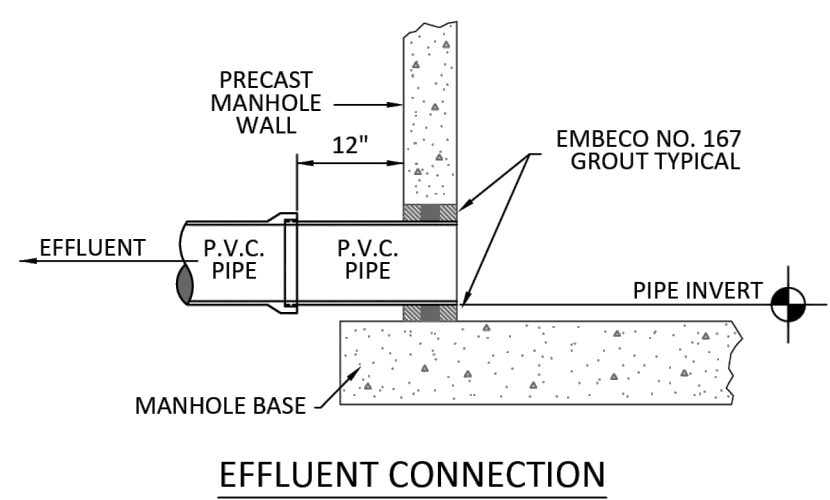
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NAME PE LICENSE NO.
7/7/2025
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FIRM OR BUSINESS NO. STATE

PROJECT NO.: 043862.077
ISSUED: JULY 2025
DRAWN BY: MC
CHECKED BY: CLB
SCALE: N/A
SHEET TITLE:
WATER
DETAIL

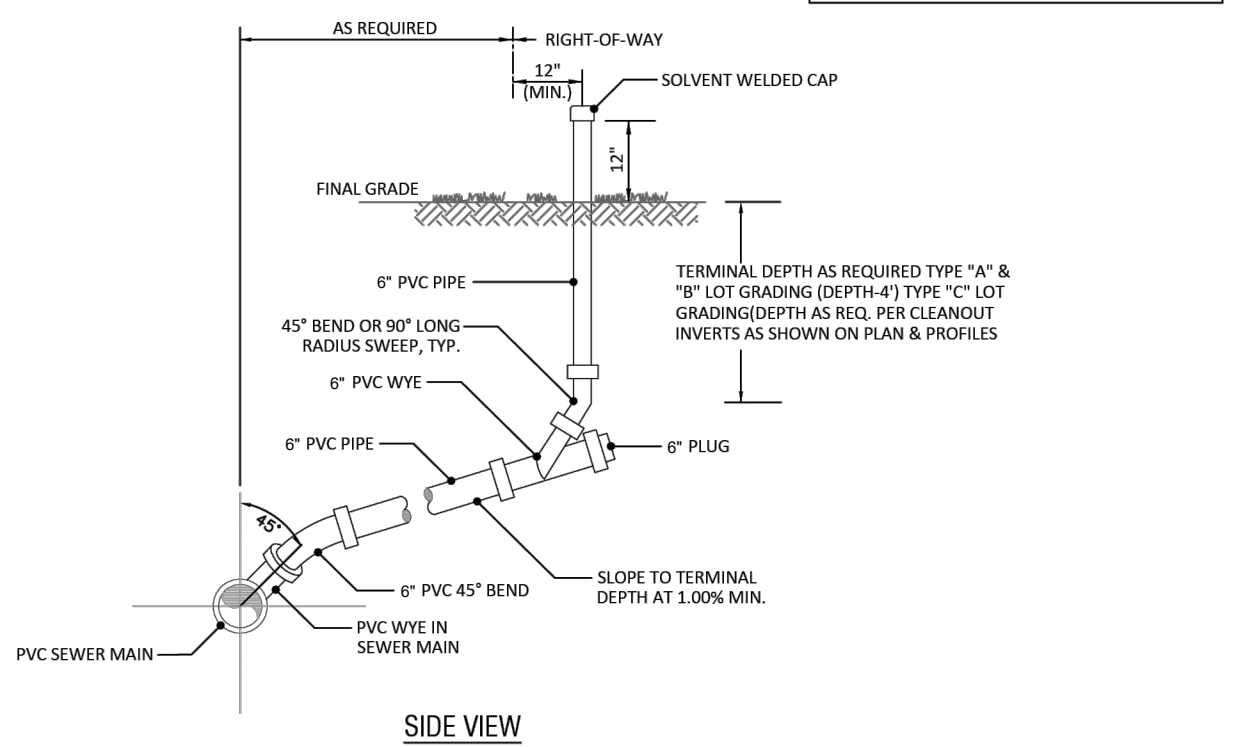
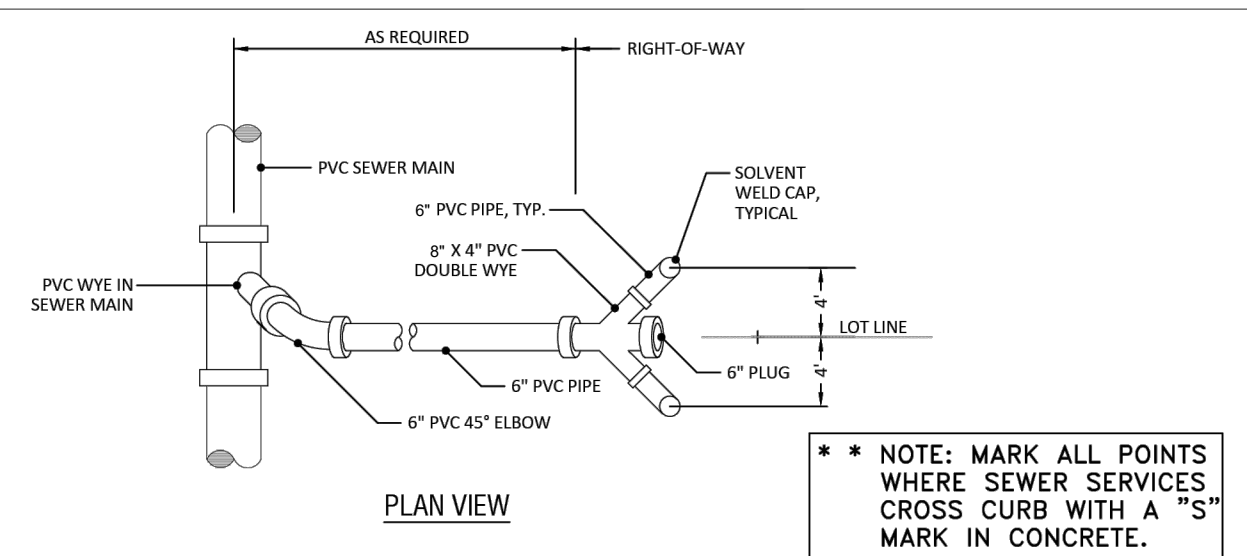
C-801



PIPE CONNECTION TO PRECAST
SANITARY MANHOLE
CITY OF MINNEOLA

S-2

Not To Scale
November 2017

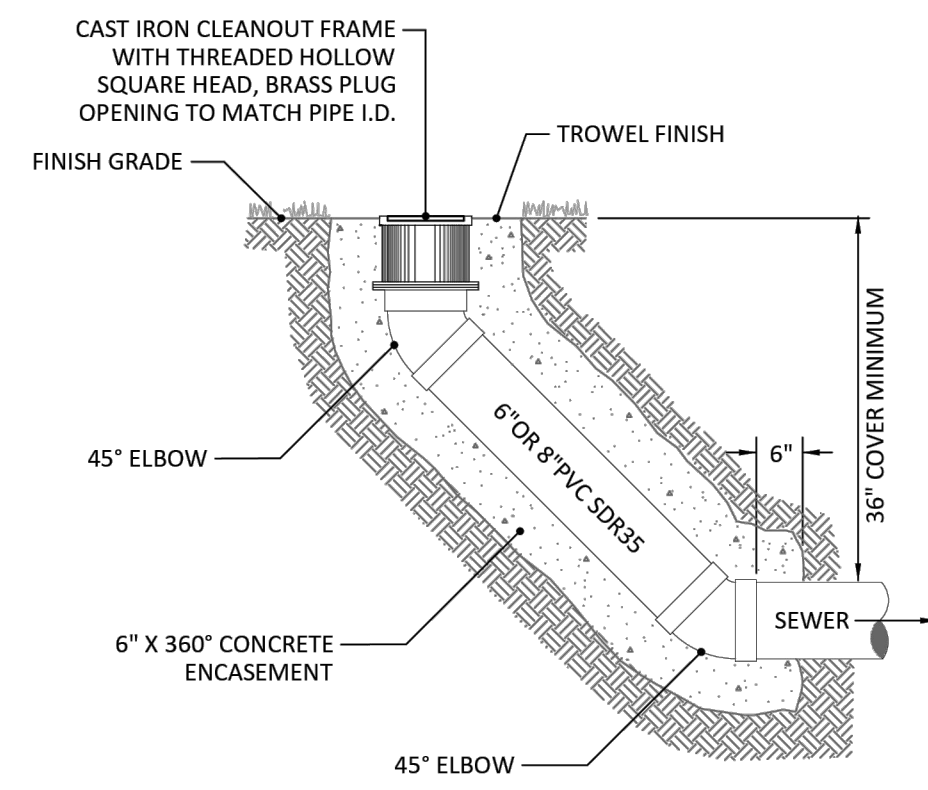


SANITARY SEWER SERVICE (PVC DOUBLE SERVICE)
NOT TO SCALE

SANITARY SEWER SERVICE
(PVC DOUBLE SERVICE)
CITY OF MINNEOLA

S-6

Not To Scale
November 2017

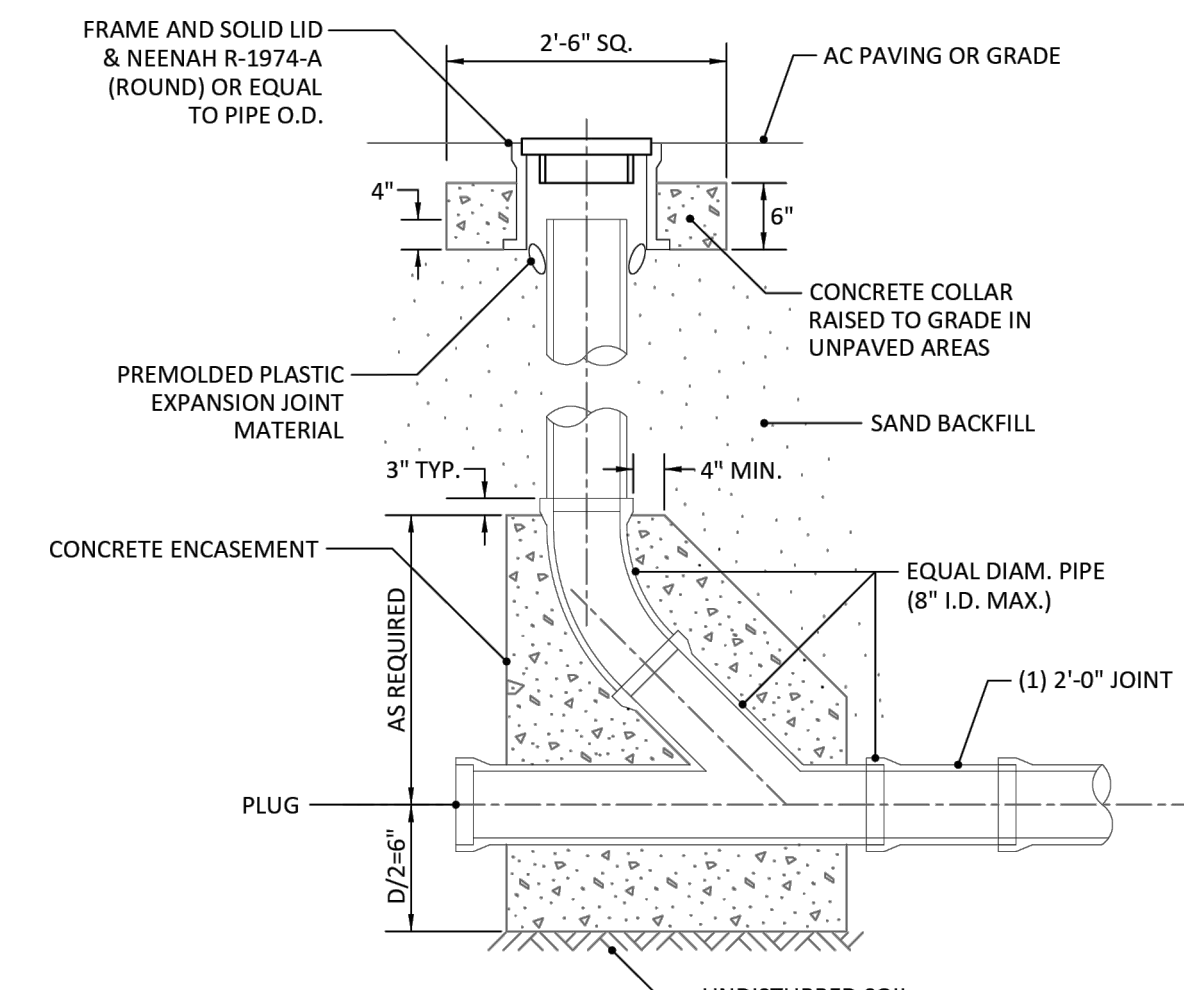


TRUNK LINE CLEANOUT
NOT TO SCALE

TRUNK LINE CLEANOUT
CITY OF MINNEOLA

S-8

Not To Scale
November 2017

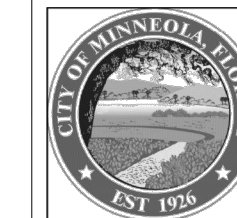
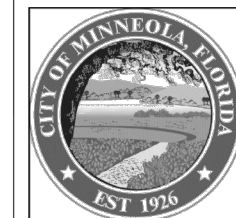
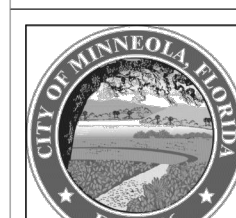


GRAVITY CLEANOUT
NOT TO SCALE

GRAVITY CLEANOUT
CITY OF MINNEOLA

S-9

Not To Scale
November 2017



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MINNEOLA ATHLETIC COMPLEX
IMPROVEMENTS
MINNEOLA



half
CERTIFICATE OF AUTHORIZATION NUMBER: 33380

REVISION NO.	DATE	DESCRIPTION

CECILY LYNN BARNES
Professional Engineer
No. 92125
Date: 2025-07-17 12:48:23 -0400

THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY:
CECILY LYNN BARNES, PE 92125
NAME PE LICENSE NO.
DATE: 7/7/2025

THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF:
HALFF ASSOCIATES, INC.
HALFF FL CA 33380 & FL LC 26000645 FL STATE
FIRM OR BUSINESS NO.

PROJECT NO.: 043862.077
ISSUED: JULY 2025
DRAWN BY: MC
CHECKED BY: CLB
SCALE: N/A
SHEET TITLE:
SEWER
DETAIL

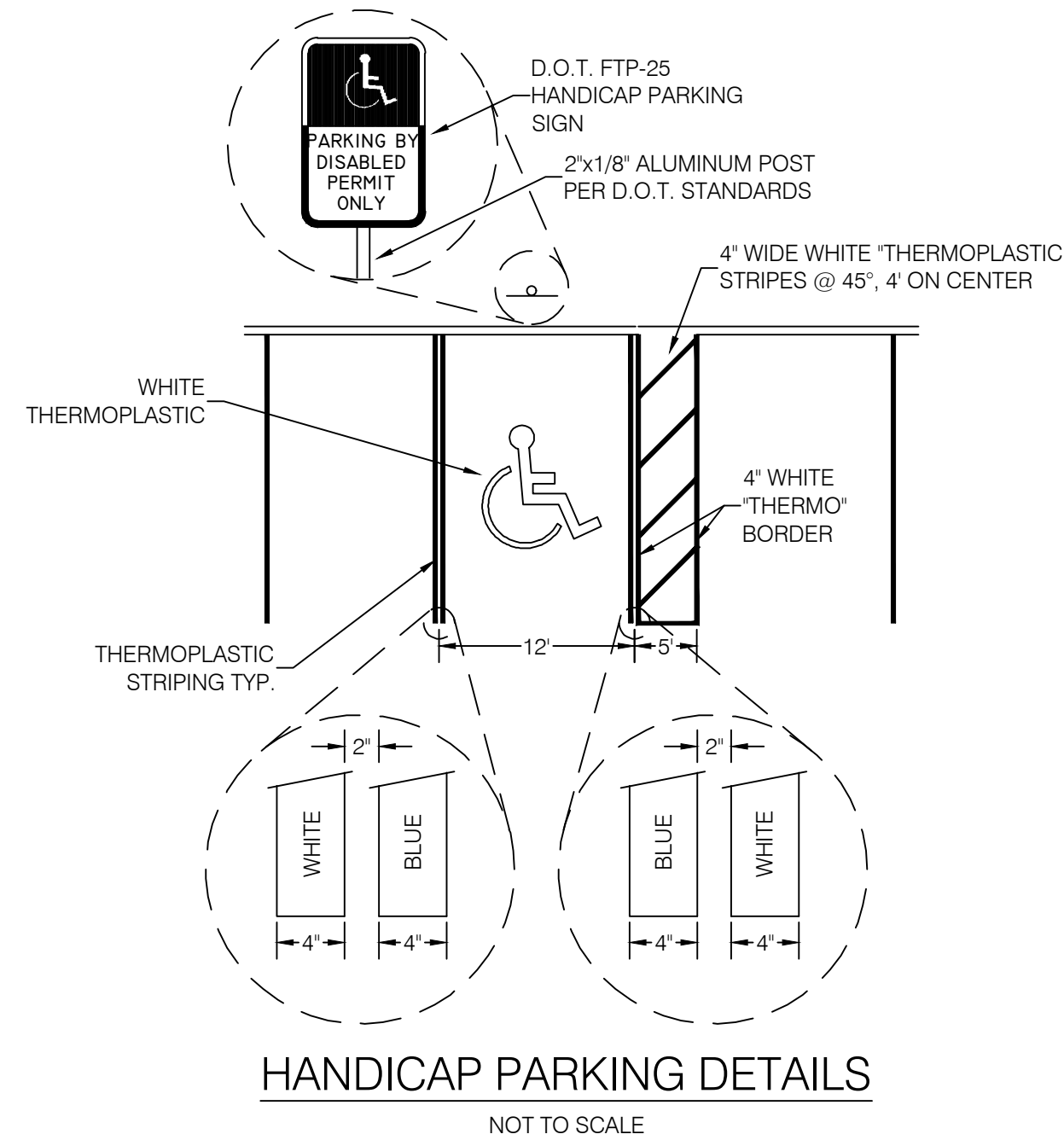
C-900



NOTES:

1. ALL LETTERS ARE 1" SERIES "C".
2. TOP PORTION OF SIGN SHALL HAVE A REFLECTORIZED BLUE BACKGROUND WITH WHITE REFLECTORIZED SYMBOL AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED WHITE BACKGROUND WITH BLACK OPAQUE SYMBOL AND BORDER.

HANDICAP SIGN DETAIL
NOT TO SCALE



HANDICAP PARKING DETAILS
NOT TO SCALE

Tree Protection During Development and Construction

- A. General**
1. The protection measures described in this subsection are based on those described in the Florida Division of Forestry, Department of Agriculture and Consumer Services Publication: Tree Protection Manual for Builders and Developers, a copy of which is available from the County Manager or designee. This publication should be used to supplement the required protection measures. It also provides information on the economic value of trees to developments and their incorporation into designs as well as guidelines on professional tree care, tree planting and tree transplanting.
 2. The applicable protection measures in this subsection shall be implemented for:
 - a. Any exempt tree that will not be removed;
 - b. Any non-exempt tree that has not been permitted for removal; and
 - c. All Trees that are preserved, relocated or replaced pursuant to Section 110-10 of the Minneola Land Development Code, Tree Protection. These trees shall herein be referred to as "PROTECTED TREES".
 3. It shall be unlawful for any person, during the construction of any structures or other improvements, to place solvents, materials, construction machinery or temporary soil deposits within the drip line of any tree not permitted to be removed and/or all trees that are retained or replaced pursuant to the clear and tree removal permit.
- B. Avoiding mechanical injuries**
- In order to protect against mechanical injuries to roots, trunks and branches, and injuries by chemical poisoning, grade changes, excavations, paving, and attachments or wires, the applicable protection measures set out below shall be implemented prior to commencement of permitted construction.
1. A protective barrier (Figure 1) shall be placed around all protected trees that are within 10' of the proposed site work prior to any land preparation or construction of structures or other improvements in accordance with the following measures:
 - a. Posts shall be placed at points not closer than drip-line of the tree.
 - b. The posts shall be connected with highly visible plastic tape or ribbon, or rope. Each section of the barrier shall be clearly visible. No attachments or wires other than those with protective or non-damaging nature shall be attached to any tree.
 - c. No fuel, paint, solvent, oil, thinner, asphalt, cement, grout or any other construction chemicals of any kind shall be stored or be placed within the protective barrier. Protective barriers shall remain in place until all construction activity is terminated. No equipment, construction materials or debris shall be placed within the protective barrier.

Figure 1.

- 1) Tree Protection Fencing to be installed around edge of drip edge for all trees within 10' of the proposed work shown to remain, and new and relocated trees.
- 2) Any proposed trenching within drip edge of trees to remain, shall be constructed by hand only.

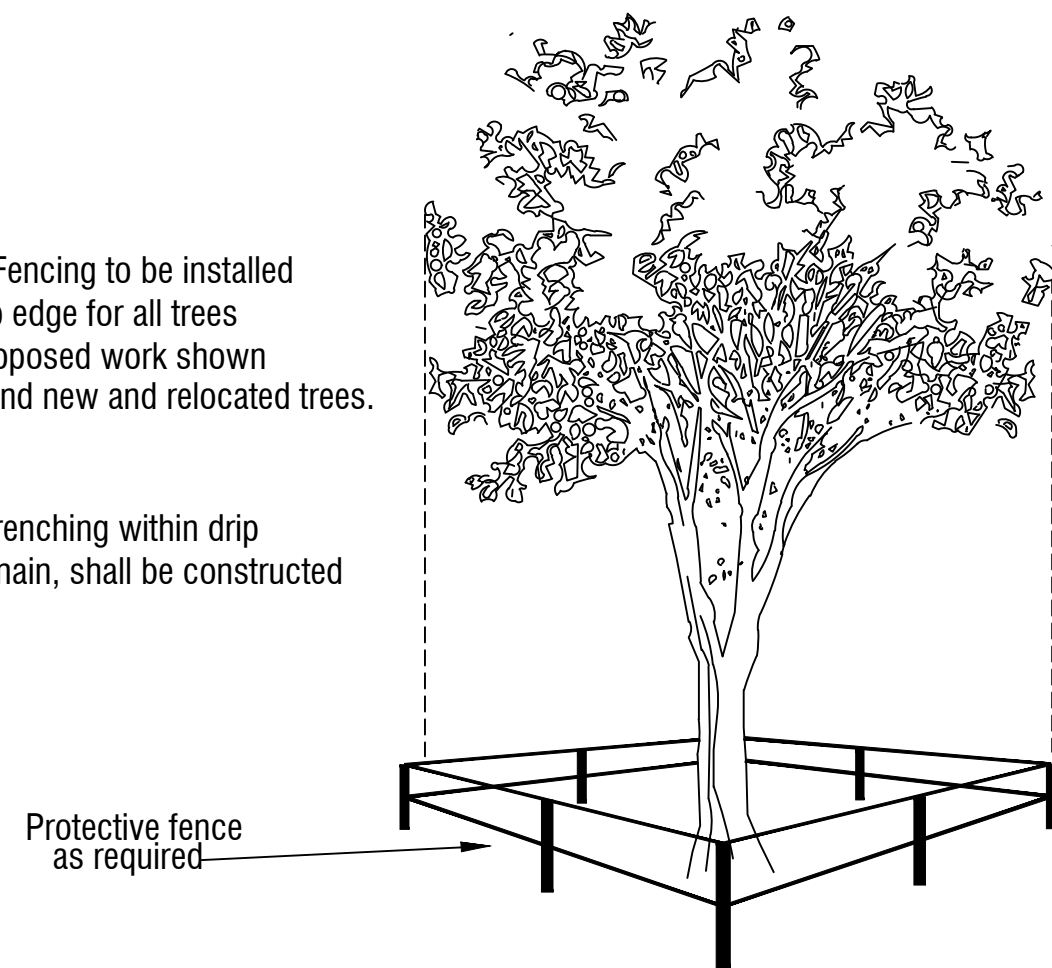
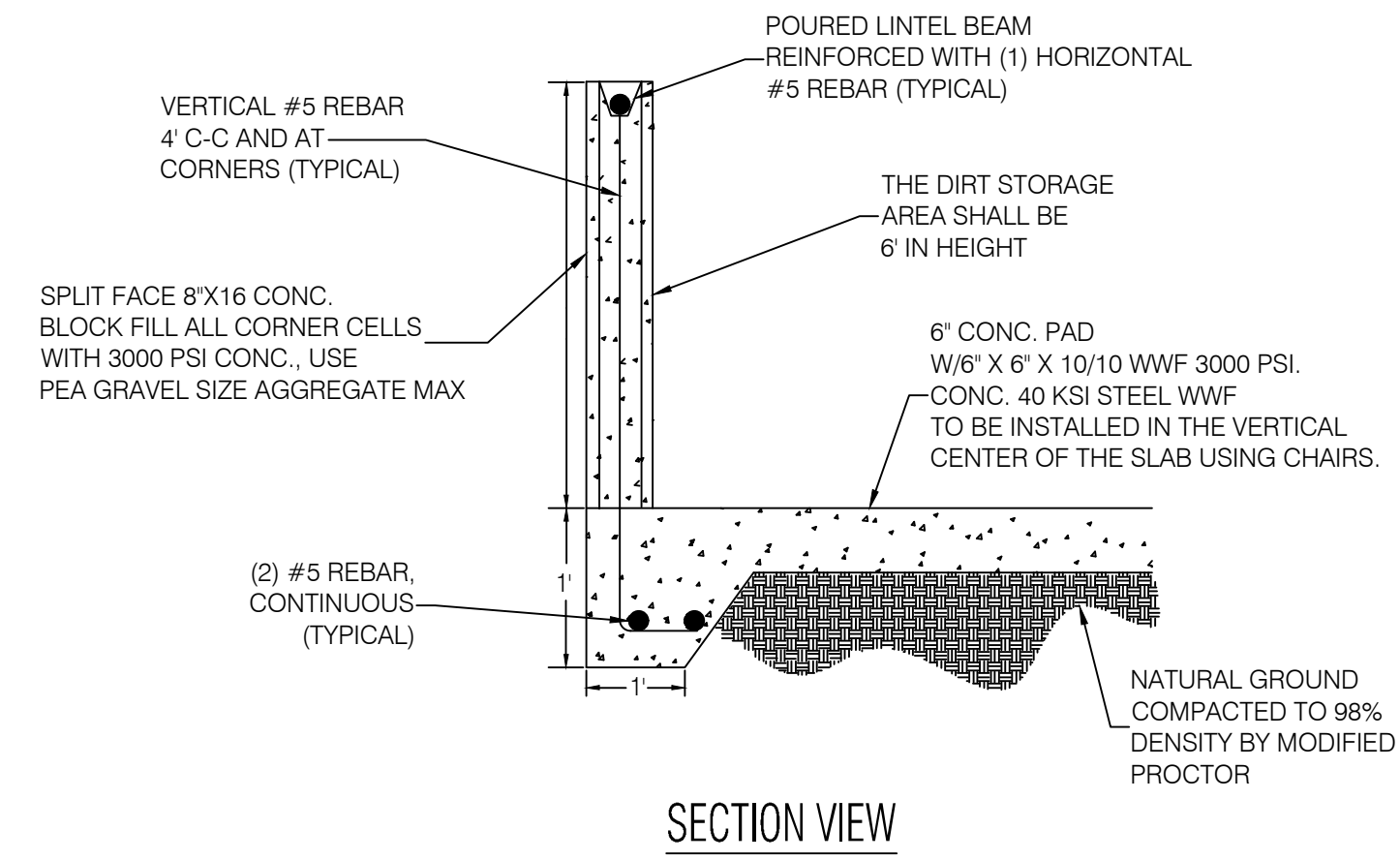
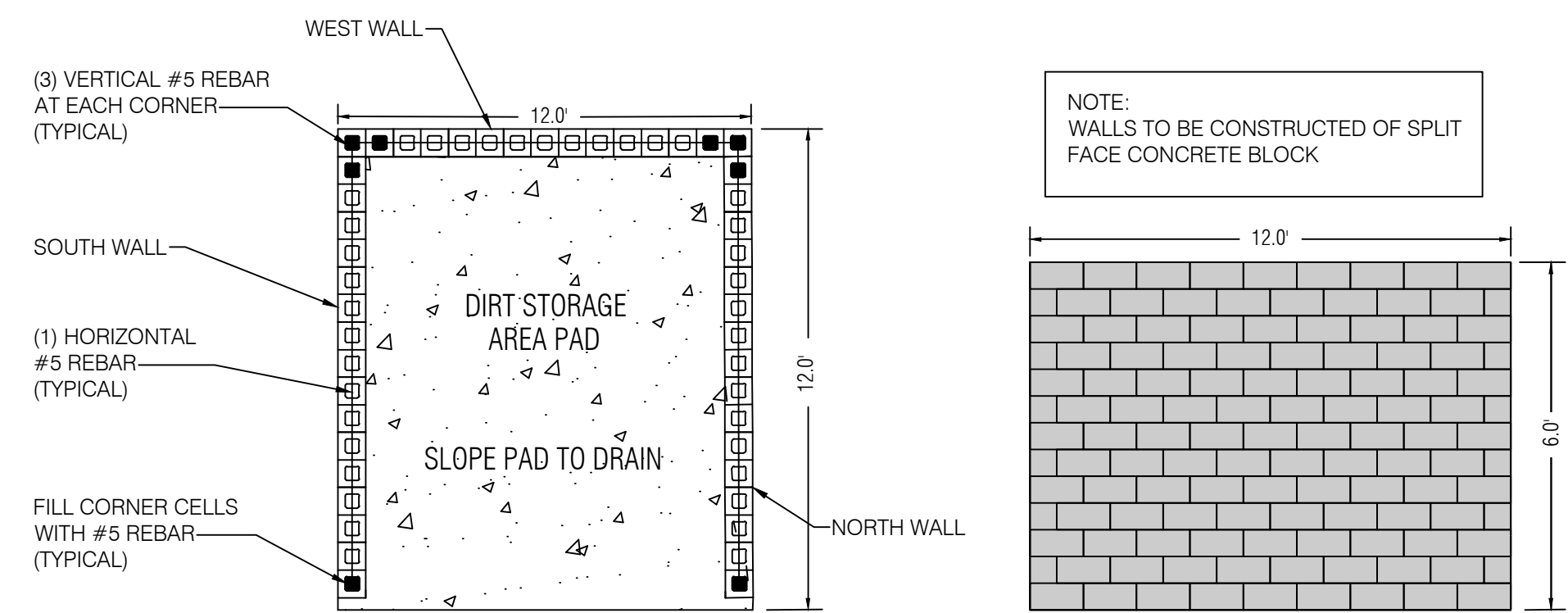


Figure 1.



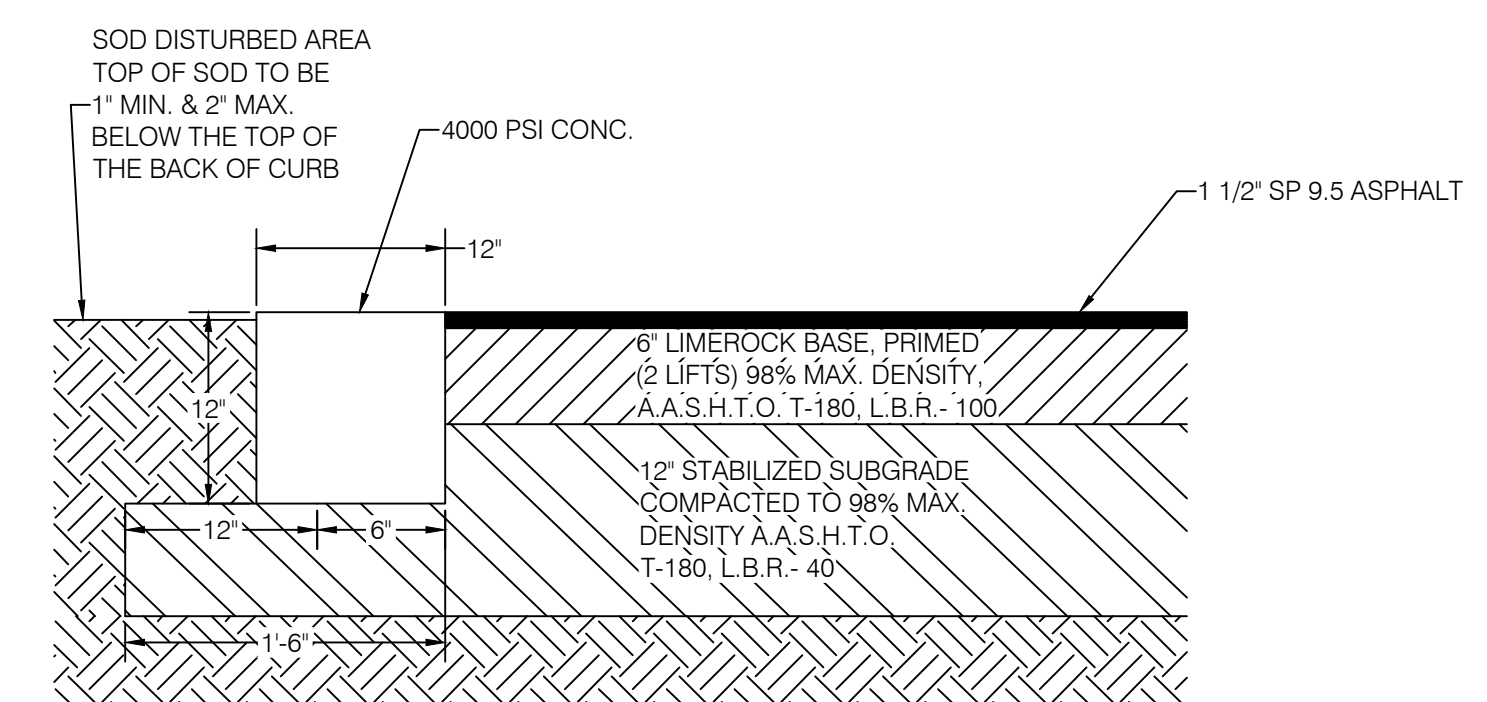
SECTION VIEW



PLAN VIEW

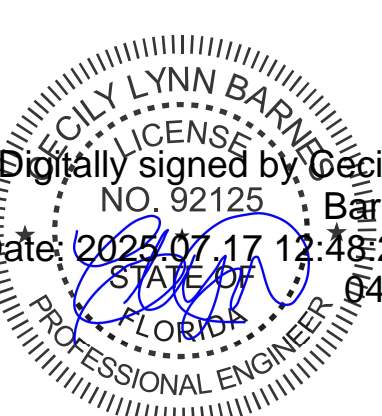
SECTION VIEW

DIRT STORAGE AREA DETAILS
NOT TO SCALE



TYPICAL PAVING DETAIL
NOT TO SCALE

REVISION NO.	DATE	DESCRIPTION

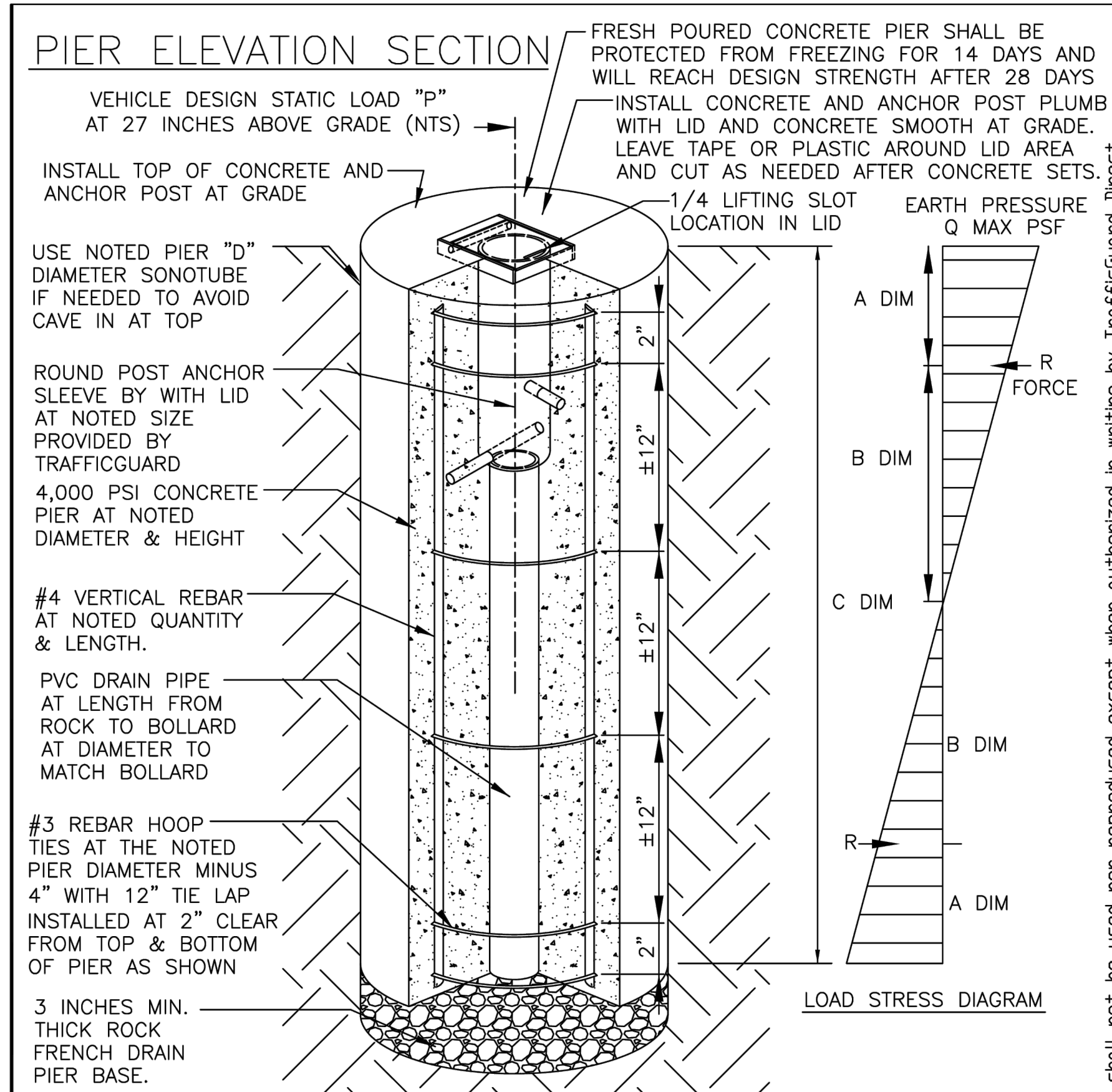


THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY:
CECILY LYNN BARNES, P.E. 92125
NAME FE LICENSE NO.
DATE 7/7/2025
THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF:
HALFF ASSOCIATES, INC.
HALFF FLA CA 33380 & FL LC 28000645 FL
FIRM OR BUSINESS NO. STATE

PROJECT NO.: 043862.077
ISSUED: JULY 2025
DRAWN BY: MC
CHECKED BY: CLB
SCALE: N/A
SHEET TITLE:

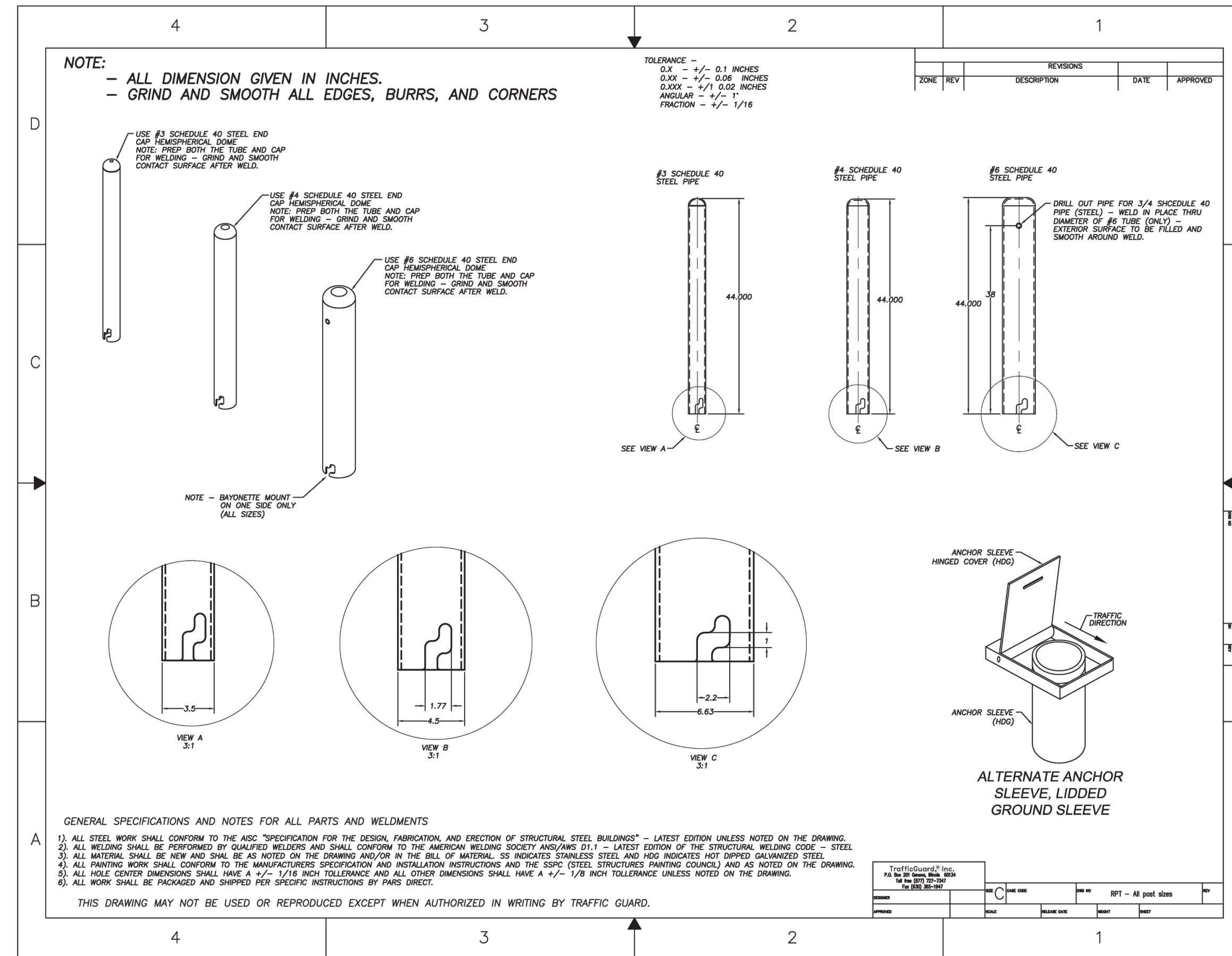
CONSTRUCTION DETAILS

FILE NAME: A:\3000s\43862\077\WICADD\Sheets\043862.077 Minneola Athletic Complex Improvements BASE.dwg DATE: July 7, 2025, TIME: 9:49 AM, USER: ah4872, AVO: 043862.077



HOOP REBAR #3	PROVIDED BY OWNER		
VERTICAL REBAR #4	PROVIDED BY OWNER	CONCRETE AND ROCK	PROVIDED BY OWNER
SONOTUBE FORM TUBE	PROVIDED BY OWNER	DRAIN PVC PIPE	PROVIDED BY OWNER
DESCRIPTION	PROVIDED BY CONTRACTOR	DESCRIPTION	REMARKS
NOTE REFER TO THE ANCHORAGE SYSTEMS, DESIGN LOADS, ANCHORING ANTITIES, AND OTHER PROVIDED BY CONTRACTOR A.			
LID ROUND POST BOLLARD LRPAS		THIRD ANGLE PROJECTION	Toll Free TrafficGuard® P.O. Box 201, Geneva, IL 60134 Bus: 1.877.727.7347 Fax: 1.800.814.7194
3	-	-	Action by
2	-	-	Design wkz Dwg. Scale: nts Assembly Shipping Weight Drawing Number:
1	-	-	Drawn wkz Copywrite: 2010 Varies per Model LRPAS1
Rev.	Date	by	Description

This Drawing shall not be used nor reproduced except when authorized in writing by TrafficGuard Direct



CONSTRUCTION DATA SCHEDULE RPAS

- THE DESIGN LOAD IS A STATIC LOAD "P" APPLIED AT 27 INCHES ABOVE GRADE.
- THE EARTH PRESSURE VALUE IS SHOWN AT DESIGN LOAD AND THE OWNER SHOULD VERIFY THAT THE EARTH IS ADEQUATE TO WITHSTAND THE NOTED EARTH DESIGN PRESSURE.
- ANCHORAGE SYSTEMS BY OTHERS THAN TRAFFICGUARD, INC. MAY CAUSE PREMATURE FAILURE OF THE BOLLARD.

DESIGN LOAD	BOLLARD Out Dia.	BOLLARD Ins Dia.	EARTH "Q" MAX.	PIER HT. "C" MIN.	VERT. REBAR LENGTH	HOOP TIES	PIER CONCRETE	FRENCH DRAIN	PIER "D"
600 #	1.910"	1.620"	992 PSF	42 INCH	38 INCH	3 6 EA.	6 Cu Ft	1.2 CF	8"
1200 #	2.440"	2.064"	1984 PSF	42 INCH	38 INCH	3 6 EA.	6 Cu Ft	1.2 CF	8"
3000 #	3.500"	3.068"	2204 PSF	42 INCH	38 INCH	4 6 EA.	6 Cu Ft	0.5 CF	18"
6000 #	4.500"	4.026"	4408 PSF	42 INCH	38 INCH	4 6 EA.	6 Cu Ft	0.5 CF	18"
6000 #	4.500"	4.026"	2667 PSF	54 INCH	50 INCH	4 7 EA.	8 Cu Ft	0.5 CF	18"
10000 #	5.563"	5.047"	4444 PSF	54 INCH	50 INCH	4 7 EA.	8 Cu Ft	0.5 CF	18"
10000 #	5.563"	5.047"	3600 PSF	60 INCH	56 INCH	4 8 EA.	9 Cu Ft	0.5 CF	18"
10000 #	5.563"	5.047"	2975 PSF	66 INCH	62 INCH	4 8 EA.	10 Cu Ft	0.5 CF	18"
15000 #	6.625"	6.065"	3750 PSF	72 INCH	68 INCH	4 9 EA.	11 Cu Ft	0.5 CF	18"
15000 #	6.625"	6.065"	3195 PSF	78 INCH	72 INCH	4 9 EA.	12 Cu Ft	0.5 CF	18"
15000 #	6.625"	6.065"	3240 PSF	60 INCH	56 INCH	8 8 EA.	25 Cu Ft	1.6 CF	30"
15000 #	6.625"	6.065"	3333 PSF	54 INCH	50 INCH	8 7 EA.	32 Cu Ft	1.8 CF	36"

THIS IS A GUIDELINE FOR ESTIMATING, SITE SPECIFIC CONDITIONS SHOULD BE VERIFIED.
This Drawing shall not be used nor reproduced except when authorized in writing by TrafficGuard, Inc.

ROUND POST BOLLARD RPAS ANCHORAGE SYSTEM DETAILS		THIRD ANGLE PROJECTION	Toll Free TrafficGuard, Inc. P.O. Box 201, Geneva, IL 60134 Bus: 1.877.727.7347 Fax: 1.800.814.7194
3	-	-	Action by
2	-	-	Design wkz Dwg. Scale: nts Assembly Shipping Weight Drawing Number:
1	-	-	Drawn wkz Copywrite: 2010 Varies per Model RPAS-2
Rev.	Date	by	Description

MINNEOLA ATHLETIC COMPLEX IMPROVEMENTS MINNEOLA
LAKE COUNTY, FL
REAL FLORIDA • REAL CLOSE

half
CERTIFICATE OF AUTHORIZATION NUMBER: 33380

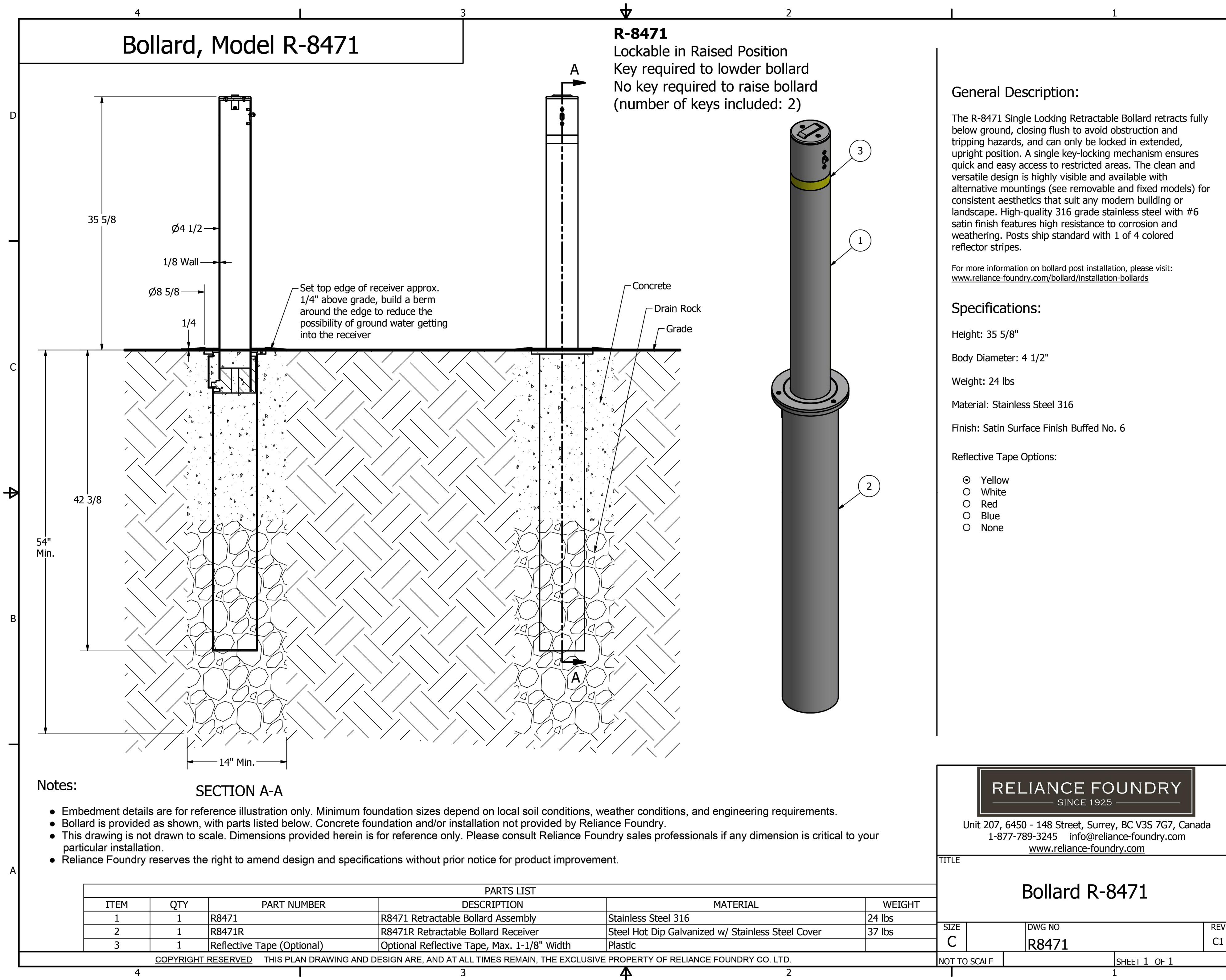
REVISION NO.	DATE	DESCRIPTION

Cecil Lynn Barnes
Digitally signed by Cecil Lynn Barnes
Date: 2025.07.17 12:48:23 -0400
PROFESSIONAL ENGINEER

THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY:
CECIL LYNN BARNES, PE 92125
NAME FE LICENSE NO.
DATE 7/17/2025
THE RECORD COPY OF THIS DRAWING IS ON FILE AT THE OFFICES OF:
HALFF ASSOCIATES, INC.
HALFF FLA CA 33380 & FL LC 26000645 FL FIRM OR BUSINESS NO. STATE

PROJECT NO.: 043862.077
ISSUED: JULY 2025
DRAWN BY: MC
CHECKED BY: CLB
SCALE: N/A
SHEET TITLE: CONSTRUCTION DETAILS
C-1001

FILE NAME: A:\43000\043862\077\DWG\CADD\Sheets\043862\077 Minneola Athletic Complex Improvements BASE.dwg DATE: July 7, 2025, TIME: 9:49 AM, USER: ah4872, AVO: 043862.077



MINNEOLA ATHLETIC COMPLEX IMPROVEMENTS MINNEOLA

REAL FLORIDA • REAL CLOSE

half
CECILY LYNN BARNES, P.E.
TAVARES, FLORIDA 32776
TEL: (352) 343-8481

CERTIFICATE OF AUTHORIZATION NUMBER: 33380

REVISION NO.	DATE	DESCRIPTION

Digitally signed by Cecily L. Barnes
Date: 2025.07.17 12:48:23 -0400

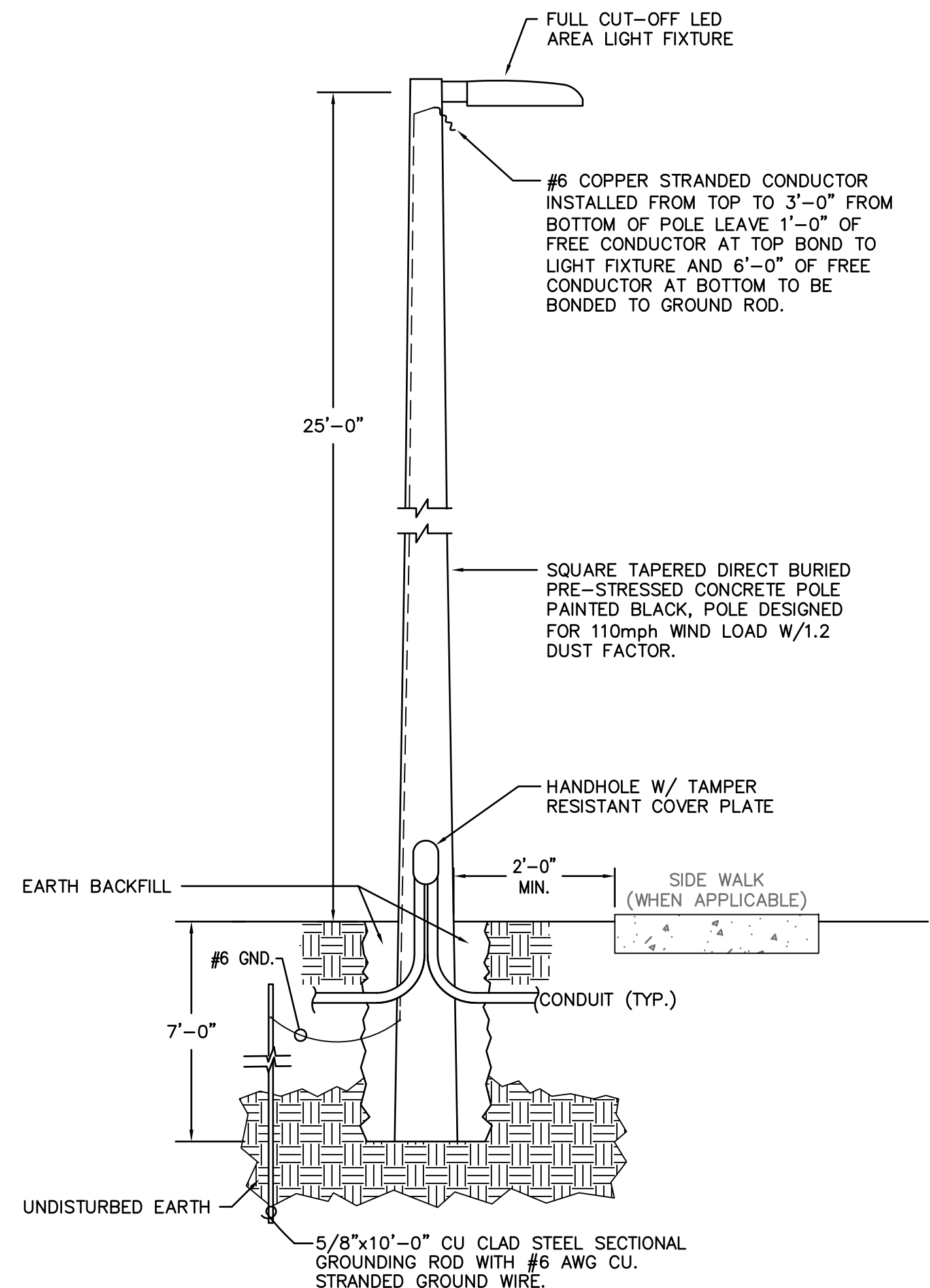
CECILY LYNN BARNES, P.E.
Professional Engineer
No. 92125
FLORIDA

THE SEAL ORIGINALLY APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY:
CECILY LYNN BARNES, P.E. 92125
NAME FE LICENSE NO.
DATE 7/17/2025

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HALFF ASSOCIATES, INC.
HALFF FLA CA 33380 & FL LC 26000645 FL
FIRM OR BUSINESS NO. STATE

PROJECT NO.: 043862.077
ISSUED: JULY 2025
DRAWN BY: MC
CHECKED BY: CLB
SCALE: N/A
SHEET TITLE:
CONSTRUCTION DETAILS

C-1002



2 TYPICAL POLE MOUNTING DETAIL
E001 NOT TO SCALE

SYMBOL LEGEND			
	POLE MOUNT LIGHT FIXTURE		PANELBOARD - 208Y/120-VOLT
	TIME SWITCH, 7-DAY 24-HOUR WITH BATTERY BACK-UP.		PANELBOARD - 480Y/277-VOLT
	DUPLEX RECEPTACLE, FLUSH MOUNT (18" AFF)		HOMERUN TO PANEL, ONE ARROW PER CIRCUIT
	DRY TYPE TRANSFORMER, DESIGNATION INDICATED		BRANCH CIRCUIT CONDUCTORS IN CONDUIT, CROSSMARKS INDICATE NUMBER OF CONDUCTORS. EQUIPMENT GROUND REQUIRED BUT NOT SHOWN. TWO CONDUCTORS PLUS GROUND UNLESS OTHERWISE SHOWN.
	MP = WEATHERPROOF (METALLIC IN-USE COVER)		
	GFI = GROUND FAULT INTERRUPTER		

DRAWING INDEX	
E001	LEGEND, SCHEDULES AND DETAILS - ELECTRICAL
E100	SITE PLANS - ELECTRICAL AND PHOTOMETRICS
E200	SPECIFICATIONS - ELECTRICAL

LIGHT FIXTURE SCHEDULE								
Mark	Lamp Data		Fixture Description	Fixture Data		Voltage	Notes	
	No.	Type		Manufacturer	Catalog Number			Mount
SL1	-	LED (110W)	POLE MOUNTED LIGHT FIXTURE, 25'-0" AFG WITH TYPE-4 DISTRIBUTION	BEACON	VP-1-160L-115-3K7-4W-120V-A-BLT	POLE	120	1

LIGHTING FIXTURE GENERAL NOTES:

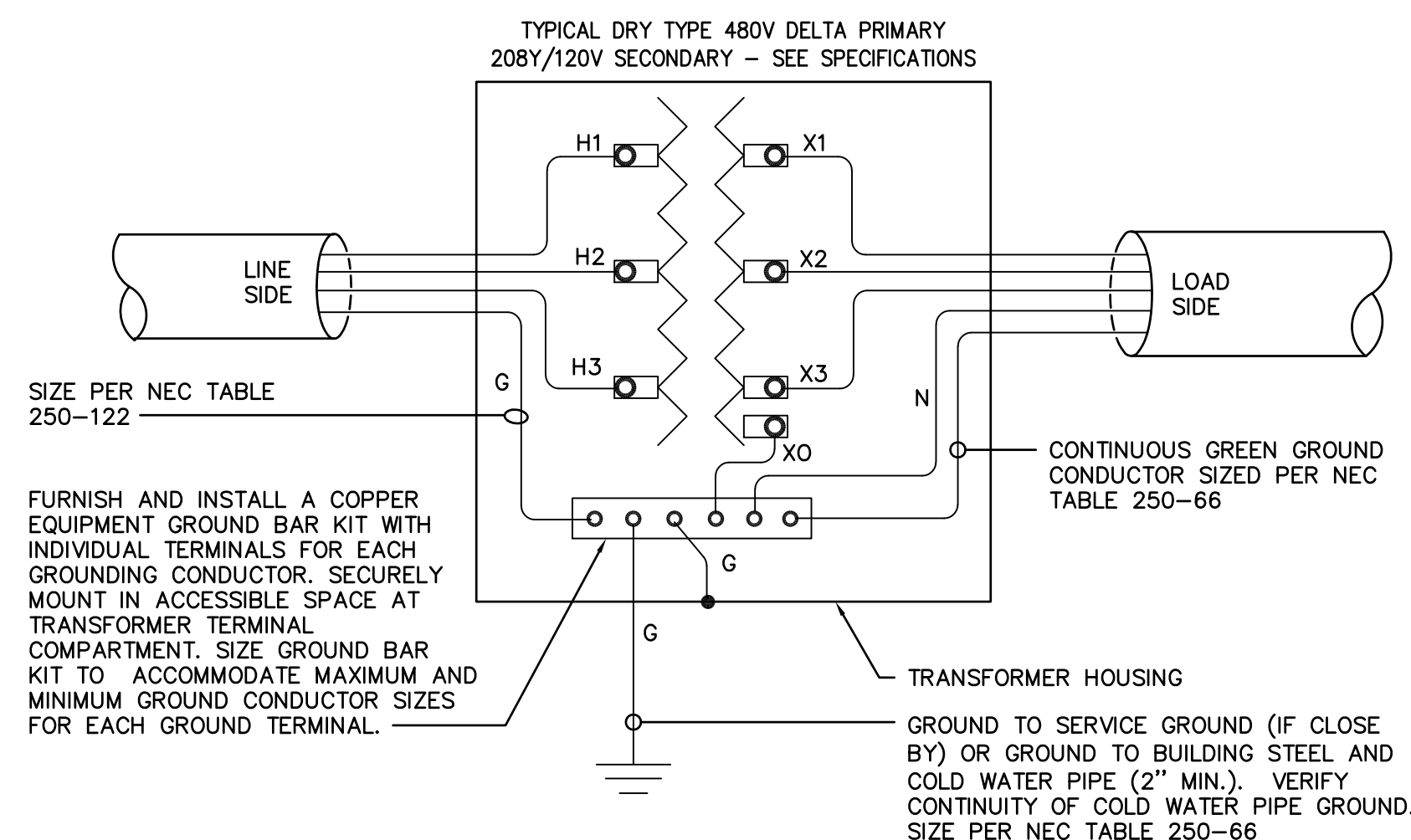
- PRIOR TO PLACING ORDERS FOR RECESSED FIXTURES, THIS CONTRACTOR SHALL VERIFY THE TYPES OF CEILING AND SUSPENSION SYSTEM THAT HAVE BEEN APPROVED FOR THE PROJECT AND SHALL ORDER FIXTURES WITH FLANGES AS REQUIRED TO FIT IN THE APPROVED CEILINGS.
- PROJECT MUST BE BID AS SPECIFIED. ANY ALTERNATE TO THE BASE (AS SPECIFIED) BID MUST BE ACCOMPANIED BY A CREDIT TO THE OWNER WHICH WILL BE EVALUATED BY THE SPECIFIER.
- CONTRACTOR SHALL PROVIDE ALL REQUIRED FIXTURE MOUNTING HARDWARE.

LIGHTING FIXTURE SCHEDULE NOTES:

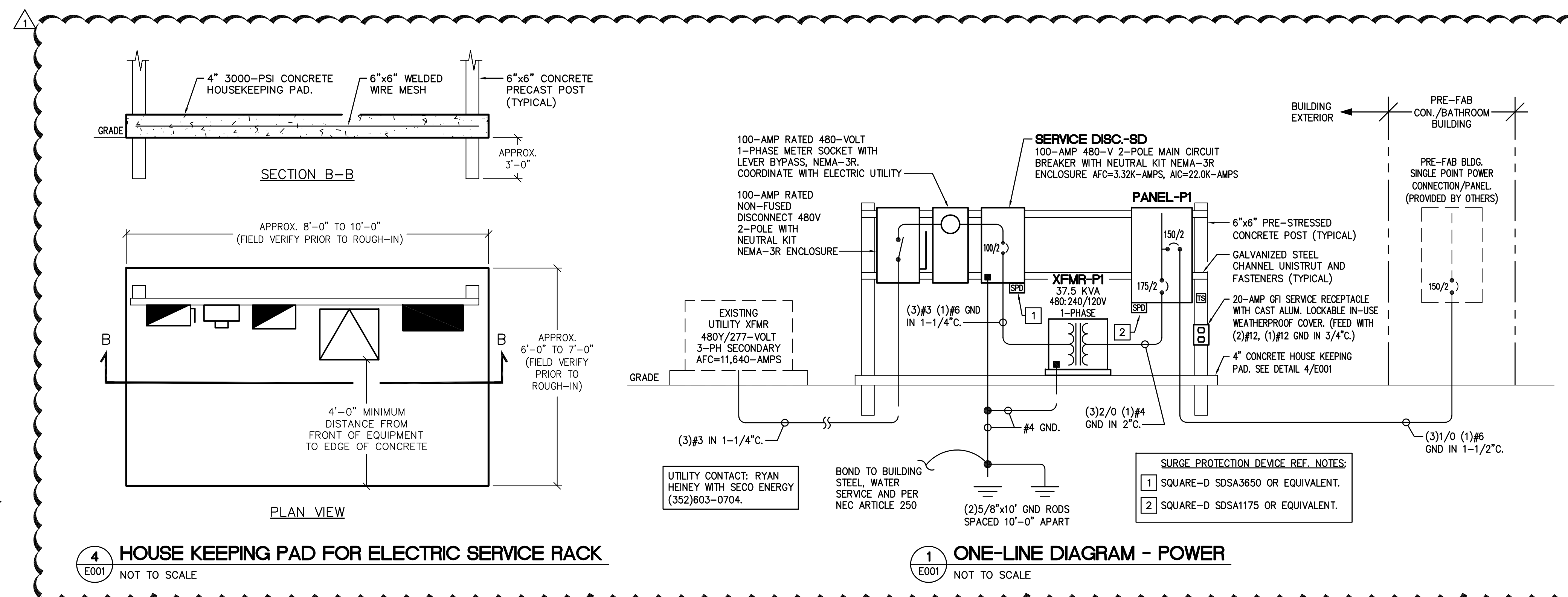
- POLE AND LIGHT FIXTURE SHALL BE BLACK.

PANEL DESIGNATION:		VOLTAGE:		MAIN:		AIC RATING:		10.0K AMPS		BASIS OF DESIGN:	
P1		240/120		175A MCB		10.0K		AMPS		SQUARE-D	
LOCATION: BATHROOM EXTERIOR		ENCLOSURE: NEMA-3R		WRING: 1-PHASE, 3W		AFC AT PANEL: 3.81K		AMPS			
FED FROM: SERVICE DISC.-SD		MOUNTING: SURFACE		OPTIONS:		BUS RATING: 225		AMPS			

REF. NOTES	LOAD DESCRIPTION	KE LOAD	EQ LOAD	REC LOAD	LTG LOAD	CKT BKR	CKT No.	KVA PER PHASE A	KVA PER PHASE B	CKT No.	CKT BKR	LTG LOAD	REC LOAD	EQ LOAD	KE LOAD	LOAD DESCRIPTION	REF. NOTES	
	AREA LIGHTING				0.22	20/1	1	14.62		2	150/2			14.40		PRE-FAB BUILDING		
	SERVICE RECEPTACLE			0.18		20/1	3		14.58	4				14.40				
	SPACE					20/1	5	0.00		6						SPACE		
	SPACE						7		0.00	8						SPACE		
	SPACE						9	0.00		10						SPACE		
	SPACE						11		0.00	12						SPACE		
	SPACE						13	0.00		14						SPACE		
	SPACE						15		0.00	16						SPACE		
	SPACE						17	0.00		18	30/2					SPACE PROTECTION DEVICE		
	SPACE						19		0.00	20								
SUB TOTAL DEMAND KVA								SUB TOTALS, CONN KVA PER PHASE								L-L VOLTAGE		240.00
LTG	Actual x 125%	0.28	220.3(A)	0	3.5	0	PHASE-A		14.62			TOTAL CONN. KVA				29.20		
REC	NEC 220.13	0.18					PHASE-B		14.58			TOTAL DEMAND KVA				29.26		
KE	NEC 220.20	0.00	QTY. OF KE	0							DEMAND AMPS				121.90			
EQ	100%	28.80																



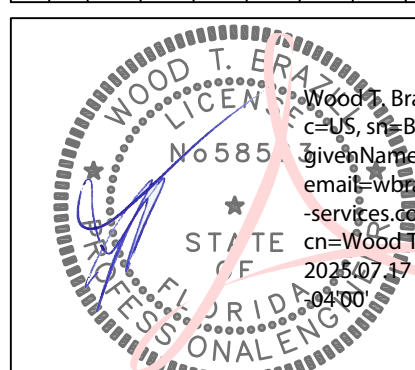
3 TYPICAL TRANSFORMER GROUNDING DETAIL
E001 NOT TO SCALE (3-PHASE SHOWN FOR REFERENCE)



4 HOUSE KEEPING PAD FOR ELECTRIC SERVICE RACK
E001 NOT TO SCALE

1 ONE-LINE DIAGRAM - POWER
E001 NOT TO SCALE

REVISION NO.	DATE	DESCRIPTION	OWNER REQUESTED CHANGES
1	04/03/2025		



WOOD T. BRAZILL, PE
Registered Eng 5855-3
THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WOOD T. BRAZILL, PE ON THE DATE 2025/02/10 10:58:01

Electric Services, Inc.
1746 US Highway 441 Leesburg, FL 34748
P: 352-787-1322 F: 352-787-7871
CA #9435 : EC #13004103
ES1 Job #E2402.01

PROJECT NO.: 043862.077
ISSUED: FEBRUARY 2025
DRAWN BY: JEN
CHECKED BY: WTB
SCALE: AS NOTED
SHEET TITLE:
LEGEND, SCHEDULES AND DETAILS - ELECTRICAL



VIPER Area/Site

VIPER LUMINAIRE

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

FEATURES

- Low profile LED area/site luminaire with a variety of IES distributions for lighting applications such as auto dealerships, retail, commercial, and campus parking lots
- Features two different optical technologies, Strike and Micro Strike Optics, which provide the best distribution patterns for retrofit or new construction
- Rated for high vibration applications including bridges and overpasses. All sizes are rated for 1.5G
- Control options including photo control, occupancy sensing, NX Lighting Controls®, LightGRID™ and 7-pin with networked controls
- New customizable lumen output feature allows for the wattage and lumen output to be customized in the factory to meet whatever specification requirements may entail
- Field interchangeable mounting provides additional flexibility after the fixture has shipped



CONTROL TECHNOLOGY



SERVICE PROGRAMS



SPECIFICATIONS

CONSTRUCTION

- Die-cast housing with hollow vertical heat fins are optimal for heat dissipation while keeping a clean smooth outer surface
- Corrosion resistant, die-cast aluminum housing with 1000 hour powder coat paint finish
- External hardware is corrosion resistant

OPTICS

- Micro Strike Optics (80, 92, 104, or 182 LED counts) maintains uniformity in applications and control systems with micro-LEDs which evenly illuminate the entire luminous surface and to provide a low glare appearance. Catalog logic found on page 4
- Strike Optics (80, 92, 104, or 182 LED counts) provide best in class distributions and maximum pole spacing in new applications with high powered LEDs. Strike optics are field in place with polarized optics to mimic the appearance of the Micro Strike Optics as both solutions can be combined on the same application. Catalog logic found on page 3

- Both optics maintain target zone illumination with minimal losses at the house-alea, reducing light trespass issues. Additional backlight control shades and house-alea shields can be added for further reduction of illumination behind the pole
- One-piece silicone gasket ensures a weatherproof seal
- Zero up-light at 0 degrees of tilt
- Field-rotatable optics

INSTALLATION

- Mounting parameters for each arm can be found on page 11
- Optional universal mounting block for ease of installation during retrofit applications. Available as an option (ASQU) or necessary for square and round poles
- All mounting hardware included
- Knuckle arm filter option available for 2-3/8" OD sensor
- For products with E96 less than 1' mounted to a pole greater than 20', a vibration damper is recommended

WARRANTY

- 5 year warranty

NOTES

- Items with a grey background can be done as a custom order. Contact brand representative for more information
- Not available with 2-pin
- Not available with 2-pin
- Not available with 2-pin
- Not available with 2-pin
- Not available with 2-pin

REVISIONS

NO.	DATE	DESCRIPTION
1	04/03/2025	OWNER REQUESTED CHANGES
2	07/17/2025	OWNER REQUESTED CHANGES

APPROXIMATE LOCATION OF EXISTING 480Y/277-VOLT 3-PHASE UTILITY TRANSFORMER

BELOW GRADE FEEDERS

NEW ELECTRIC SERVICE LOCATION WITH UTILITY METER, SERVICE DISC-SD, PANEL-P1 AND XFMR-P1

SEE ONE-LINE DIAGRAM 1/E001 FOR ADDITIONAL INFO.

REVISION NOTES:

- APPROXIMATE LOCATION OF SINGLE POINT POWER CONNECTION TO PRE-FAB BUILDING, COORDINATE FINAL LOCATION AND REQUIREMENTS WITH OWNER PRIOR TO ROUGH-IN.

SCALE: 1"=20'-0"

0 10' 20' 40'

NORTH

1 E100

DATE: LOCATION:

TYPE: PROJECT:

CATALOG #:

Example: VP-2-320L-145-3K7-2-R-UNV-A3-BL-T

CATALOG #:

VP

VP-Viper

Micro Strike

1-1000

180L-38"

5500 Lumens

180L-40"

7500 Lumens

180L-76"

10000 Lumens

180L-100"

15000 Lumens

180L-116"

15000 Lumens

180L-136"

15000 Lumens

180L-160"

21000 Lumens

180L-165"

21000 Lumens

320L-190"

21000 Lumens

320L-195"

21000 Lumens

320L-195"

21000 Lumens

320L-210"

30000 Lumens

320L-225"

30000 Lumens

320L-255"

30000 Lumens

320L-315"

40000 Lumens

480L-385"

40000 Lumens

480L-390"

44000 Lumens

480L-340"

45000 Lumens

480L-380"

52000 Lumens

480L-425"

55000 Lumens

480L-470"

55000 Lumens

720L-435"

55000 Lumens

720L-475"

55000 Lumens

720L-515"

55000 Lumens

720L-555"

75000 Lumens

720L-600"

80000 Lumens

CLD

Custom Lumen Output

AP

AP-Airborne

Processor

Converted

1

Type 2

3

Type 3

4F

Type 4

Power

4W

Type 4

Wide

70 CR

3K3

3000K

80 CR

3K3

3000K

80 CR

3K3

3000K

80 CR

3K3

3000K

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**DIVISION 16
ELECTRICAL SPECIFICATIONS**

SECTION 16028 – CODES, FEES, AND STANDARDS

CODES AND FEES

UNLESS SPECIFICALLY NOTED TO THE CONTRARY, FURNISH ALL EQUIPMENT, MATERIALS LABOR, AND INSTALL AND TEST IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE FOLLOWING CODES AND STANDARDS:

- NFPA-70 (2020) NATIONAL ELECTRICAL CODE
- ACCESSIBILITY REQUIREMENTS MANUAL, DEPARTMENT OF COMMUNITY AFFAIRS
- EIGHTH EDITION (2023) FLORIDA BUILDING CODE
- 2023 FLORIDA FIRE PREVENTION CODE
- ANSI: AMERICAN STANDARDS INSTITUTE, INC.
- ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIALS
- NEMA: NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
- NESJ: NATIONAL ELECTRIC SAFETY CODE
- NFPA: NATIONAL FIRE PROTECTION ASSOCIATION
- UL: UNDERWRITERS' LABORATORIES, INC.
- APPLICABLE LOCAL CODES

OBTAIN PERMITS AND INSPECTIONS FROM AUTHORITIES HAVING JURISDICTION. DELIVER CERTIFICATES OF INSPECTION TO THE OWNER AT TIME OF ACCEPTANCE INSPECTION.

STANDARDS

ALL MATERIALS SHALL BE NEW, FREE OF DEFECTS, AND SHALL BE UL LISTED, BEAR THE UL LABEL OR BE LABELED OR LISTED WITH AN APPROVED, NATIONALLY RECOGNIZED ELECTRICAL TESTING AGENCY. WHERE NO LABELING OR LISTING SERVICE IS AVAILABLE FOR CERTAIN TYPE OF EQUIPMENT, TEST DATA SHALL BE SUBMITTED TO PROVE TO THE OWNER THAT EQUIPMENT MEETS OR EXCEEDS AVAILABLE STANDARDS.

MATERIALS AND/OR EQUIPMENT FURNISHED, OR WORK PERFORMED BY THE CONTRACTORS SHALL FULLY CONFORM TO ALL REQUIREMENTS OF THE CONSTRUCTION DOCUMENTS AND IS FREE OF ANY DEFECT IN EQUIPMENT, MATERIAL OR WORKMANSHIP PERFORMED AND PROVIDED BY THE CONTRACTOR. THIS WARRANTY PERIOD SHALL CONTINUE FOR A MINIMUM OF ONE YEAR COMMENCING ON THE SUBSTANTIAL COMPLETION DATE OF THE PROJECT.

SECTION 16050 – BASIC REQUIREMENTS

1.1 RELATED DOCUMENTS

THE OTHER CONTRACT DOCUMENTS COMPLEMENT THE REQUIREMENTS OF THIS SECTION.

1.2 SCOPE

THE WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, FURNISHING A COMPLETE ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS.

DRAWINGS FOR THE WORK ARE DIAGRAMMATIC, INTENDED TO CONVEY THE SCOPE OF THE WORK AND TO INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE WORK. BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN BASIC ITEMS, SUCH AS CONDUIT FITTINGS, ACCESS PANELS, SLEEVES, PULL AND JUNCTION BOXES MAY NOT BE SHOWN. WHERE SUCH ITEMS ARE REQUIRED BY CODE OR BY OTHER SECTIONS, SUCH ITEMS SHALL BE INCLUDED.

EQUIPMENT SPECIFICATION MAY NOT DEAL INDIVIDUALLY WITH MINUTE ITEMS SUCH AS COMPONENTS, PARTS, CONTROLS AND DEVICES WHICH MAY BE REQUIRED TO PRODUCE THE EQUIPMENT PERFORMANCE SPECIFIED OR AS REQUIRED TO MEET THE EQUIPMENT WARRANTIES. WHERE SUCH ITEMS ARE REQUIRED, THEY SHALL BE INCLUDED BY THE SUPPLIER OF THE EQUIPMENT, WHETHER OR NOT SPECIFICALLY INDICATED.

COORDINATE WITH ALL TRADES IN SUBMITTAL OF SHOP DRAWINGS. SHOP DRAWINGS SHALL DETAIL SPACE CONDITIONS TO THE SATISFACTION OF ALL CONCERNED TRADES, SUBJECT TO REVIEW AND FINAL ACCEPTANCE BY THE ARCHITECT. IN THE EVENT THAT THE CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATING WITH OTHER TRADES OR SO AS TO CAUSE ANY INTERFERENCE WITH WORK OF OTHER TRADES, THE NECESSARY CHANGES SHALL BE MADE IN THE WORK TO CORRECT THE CONDITION, AT NO ADDITIONAL COST TO THE OWNER.

1.3 TEMPORARY LIGHTING AND POWER

FURNISH, INSTALL AND MAINTAIN TEMPORARY LIGHTING AND POWER TO BE USED BY ALL TRADES DURING CONSTRUCTION. THE ENTIRE SYSTEM SHALL BE GROUNDED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY COSTS FOR TEMPORARY SERVICE.

1.4 SUPERVISION OF THE WORK

PROVIDE FIELD SUPERINTENDENT WHO HAS HAD A MINIMUM OF FOUR (4) YEARS PREVIOUS SUCCESSFUL EXPERIENCE ON PROJECTS OF COMPARABLE SIZES AND COMPLEXITY. SUPERINTENDENT SHALL BE PRESENT AT ALL TIMES THAT WORK UNDER THIS DIVISION IS BEING INSTALLED OR AFFECTED.

1.5 DELIVERY AND STORAGE

HANDLE, STORE AND PROTECT EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND WITH THE REQUIREMENTS OF NAPA 70B, APPENDIX J, TITLED "EQUIPMENT STORAGE AND MAINTENANCE DURING CONSTRUCTION". REPLACE DAMAGED OR DEFECTIVE ITEMS WITH NEW ITEMS.

1.6 ELECTRICAL CONNECTIONS

CONNECTIONS SHALL BE TIGHTENED TO THE TORQUE VALUES RECOMMENDED BY THAT DEVICE MANUFACTURERS INSTRUCTIONS. IF THESE VALUES ARE NOT LISTED, TIGHTEN TO POUND-INCH OR POUND-FOOT VALUES RECOMMENDED IN UL STANDARD 486B, A SUMMARY OF WHICH MAY BE FOUND IN SECTION 110-14 OF THE NATIONAL ELECTRIC CODE HANDBOOK.

1.7 INTERRUPTIONS OF SERVICE

POWER INTERRUPTIONS SHALL BE HELD TO AN ABSOLUTE MINIMUM. ALL INTERRUPTIONS TO EXISTING BUILDINGS REQUIRED SHALL BE APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE. IN WRITING 14 DAYS PRIOR TO THE TIME THE INTERRUPTION IS REQUESTED TO PERMIT SCHEDULING WITH THE OWNER'S STAFF.

ANY POWER INTERRUPTION SHALL NOT EXCEED TWO (2) HOURS IN THE DURATION APPROVED BY THE OWNER.

1.8 TESTS

SYSTEMS SHALL BE TESTED BY THE CONTRACTOR AND PLACED IN PROPER WORKING ORDER PRIOR TO DEMONSTRATING SYSTEMS TO OWNER.

AFTER WORK IS COMPLETED, A LOAD BALANCE TEST SHALL BE MADE FOR EACH PANELBOARD TO DEMONSTRATE THAT WITH FULL LIGHTING AND MECHANICAL LOAD, THE BALANCE BETWEEN PHASES IS WITHIN 15% UNBALANCED BEYOND THIS LIMIT SHALL BE CORRECTED, MAINTAINING PROPER PHASE RELATION TO NEUTRAL AT ALL TIMES.

PERFORM SUCH TESTS AS REQUIRED BY AUTHORITIES HAVING JURISDICTION OVER THE SITE.

1.9 DEMONSTRATIONS

PRIOR TO ACCEPTANCE OF THE WORK, THE CONTRACTOR SHALL DEMONSTRATE TO THE OWNER, OR HIS DESIGNATED REPRESENTATIVE, ALL FEATURES AND FUNCTIONS OF ALL SYSTEMS AND SHALL INSTRUCT THE OWNER IN THE PROPER OPERATION OF THE SYSTEMS. EACH SYSTEM SHALL BE DEMONSTRATED ONCE.

THE DEMONSTRATIONS SHALL CONSIST OF NOT LESS THAN THE FOLLOWING:

- POINT OUT THE ACTUAL LOCATION OF EACH COMPONENT OF A SYSTEM AND DEMONSTRATE ITS FUNCTION AND ITS RELATIONSHIP TO OTHER COMPONENTS WITHIN THE SYSTEM.
- DEMONSTRATE THE ELECTRICAL SYSTEMS BY ACTUAL "START-STOP" OPERATION SHOWING HOW TO WORK CONTROLS, HOW TO RESET PROTECTIVE DEVICES, AND WHAT TO DO IN AN EMERGENCY.
- DEMONSTRATE COMMUNICATION, SIGNAL, ALARM AND DETECTION SYSTEMS BY ACTUAL OPERATION OF THE SYSTEMS AND SHOW HOW TO RESET SIGNAL, ALARM AND DETECTION DEVICES.

SYSTEMS TO BE DEMONSTRATED SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- POWER DISTRIBUTION SYSTEMS
- LIGHTING AND LIGHTING CONTROL SYSTEMS

CONTRACTOR SHALL FURNISH THE NECESSARY TRAINED PERSONNEL TO PERFORM THE DEMONSTRATIONS AND INSTRUCTIONS, AND SHALL ARRANGE TO HAVE THE MANUFACTURER'S REPRESENTATIVES PRESENT TO ASSIST WITH THE DEMONSTRATIONS.

CONTRACTOR SHALL ARRANGE WITH THE OWNER, THE ARCHITECT AND THE ENGINEER, THE DATES AND TIMES FOR PERFORMING EACH DEMONSTRATION.

1.10 IDENTIFICATION

CONTRACTOR SHALL PROVIDE IDENTIFICATION FOR WIRING SYSTEMS AND EQUIPMENT.

LETTERING FOR IDENTIFICATION SHALL BE OF SIGN PAINTERS QUALITY OR STENCIL LETTERING. PAINT SHALL BE FAST DRYING SIGN ENAMEL. ALL PULL AND JUNCTION BOXES FOR THESE SYSTEMS IN SERVICE AREAS, ABOVE ACCESSIBLE CEILINGS AND IN ACCESSIBLE CHASES SHALL HAVE ONE-HALF INCH HIGH BLACK LETTERING IDENTIFYING THE SYSTEM. LETTERING PRINTED NEATLY AND LEGIBLY WITH PERMANENT "MAGIC MARKER" IS ACCEPTABLE FOR LETTERING OF BOXES ABOVE CEILINGS.

POWER AND LIGHTING CIRCUITS SHALL HAVE CONDUCTORS COLOR CODED OR BANDED, PER 16120 "WIRE AND CABLE" IN EACH JUNCTION AND PULL BOX.

NAMEPLATES:

- THE FOLLOWING ITEMS SHALL BE EQUIPPED WITH NAME-PLATES: ALL MOTOR STARTERS, PUSHBUTTON STATIONS, CONTROL PANELS, TIME SWITCHES, DISCONNECT SWITCHES, PANELBOARDS, TRANSFORMERS, CONTACTORS OR RELAYS IN SEPARATE ENCLOSURES, POWER RECEPTACLES WHERE THE NOMINAL VOLTAGE BETWEEN ANY PAIR OR CONTACTS IS GREATER THAN 150V, ALL SWITCHES CONTROLLING OUTLETS OR EQUIPMENT WHERE THE OUTLETS ARE NOT LOCATED WITHIN SIGHT OF THE CONTROLLING SWITCH, AND CABINETS. SPECIAL ELECTRICAL SYSTEMS SHALL BE IDENTIFIED AT TERMINAL CABINETS AND EQUIPMENT RACKS.

- NAMEPLATES SHALL ADEQUATELY DESCRIBE THE FUNCTION OF THE PARTICULAR EQUIPMENT INVOLVED. WHERE NAMEPLATES ARE DETAILED ON THE DRAWINGS, INSCRIPTION AND SIZE OF LETTERS SHALL BE AS SHOWN ON THE SHOP DRAWINGS SUBMITTED FOR APPROVAL. NAMEPLATES FOR PANELBOARD SHALL INCLUDE THE PANEL DESIGNATION, VOLTAGE, PHASE, AND SOURCE. FOR EXAMPLE, "PANEL 3PA, 120/208V, 3-PHASE, 4-WIRE, FED FROM XFMR T-3A. THE NAME OF THE MACHINE ON THE NAMEPLATES FOR A PARTICULAR MACHINE SHALL BE THE SAME AS THE ONE USED ON ALL MOTOR STARTERS, DISCONNECT AND P.B. STATION NAMEPLATES FOR THAT MACHINE.

- NAMEPLATES SHALL BE LAMINATED PHENOLIC PLASTIC, BLACK FRONT WITH WHITE CORE, SELF ADHESIVE BACK WITH LETTERING ETCHED THROUGH THE OUTER COVERING. WITH PLATED OR STAINLESS STEEL SCREWS. NAMEPLATES TO IDENTIFY EMERGENCY AND FIRE ALARM DEVICES SHALL BE RED LAMINATE.

PANELBOARDS SHALL HAVE TYPE-WRITTEN CIRCUIT DIRECTORIES INSTALLED INSIDE THE DOORS UNDER TRANSPARENT PLASTIC COVERS.

1.11 SUBMITTALS

PRODUCT DATA: FOR EACH TYPE OF PRODUCT INDICATED.

- WITHIN THIRTY (30) DAYS AFTER AWARD OF THE CONTRACT, THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT, FOR APPROVAL, A LIST OF MANUFACTURER'S NAMES OF MATERIAL AND EQUIPMENT HE PROPOSES TO PROVIDE. IN THE EVENT ANY ITEMS OF MATERIAL OR EQUIPMENT CONTAINED THEREIN FAIL TO COMPLY WITH THE CONTRACT DOCUMENTS, SUCH ITEMS WILL BE REJECTED.

- ALL SUBMITTALS SHALL BE A MINIMUM OF SIX (6) COPIES AND SHALL BE BOUND IN A THREE RING BINDER. SUBMITTALS SHALL BE DIVIDED WITH TABBED SEPARATORS INDICATING SPECIFICATION SECTION NUMBERS. ALL PRODUCT DATA SHALL BE CLEARLY MARKED IN INK WITH THE CORRESPONDING EQUIPMENT IDENTIFICATION NUMBERS AS INDICATED IN THE CONTRACT DOCUMENTS.

- MARK-OUT ITEMS ON PRODUCT DATA SHEETS WHICH CONSTITUTE INFORMATION NOT PERTAINING TO THE EQUIPMENT SPECIFIED.

SUBMITTAL DATA FOR ELECTRICAL EQUIPMENT SHALL CONSIST OF SHOP DRAWINGS AND/OR CATALOG CUTS SHOWING TECHNICAL DATA NECESSARY TO EVALUATE THE MATERIAL OR EQUIPMENT, TO INCLUDE DIMENSIONS, WIRING DIAGRAMS, PERFORMANCE CURVES, RATINGS, CONTROL SEQUENCE AND OTHER DESCRIPTIVE DATA NECESSARY TO DESCRIBE FULLY THE ITEM PROPOSED AND ITS OPERATING CHARACTERISTICS. ANY SUBMITTAL DATA IN THE FOLLOWING ELECTRICAL SECTIONS, SPECIFIC TO THAT SECTION, IS IN ADDITION TO SUBMITTAL REQUIREMENTS OF THIS SECTION.

1.12 FIRE STOPPING

PENETRATIONS OF RATED WALLS AND FLOORS SHALL BE SEALED TO PREVENT PASSAGE OF FIRE, SMOKE, TOXIC GASES AND WATER. MAINTAIN THE FIRE/OR SMOKE RATING OF ALL RATED WALL AND FLOORS.

SEALING MATERIAL SHALL BE PERFORMED WITH THE USE OF MATERIAL SPECIFICALLY INTENDED FOR THE PURPOSE AND APPLICATION. METHOD OF INSTALLATION SHALL CONFORM TO THE MANUFACTURERS INSTRUCTIONS AND TO APPLICABLE CODES AND STANDARDS.

1.13 RECORD DRAWINGS

AT THE JOB SITE, MAINTAIN A SET OF PRINTS ON WHICH ARE RECORDED ALL FORMAL FIELD CHANGES AND OTHER PORTIONS OF THE WORK THAT VARY SIGNIFICANTLY FROM THE CONTRACT DOCUMENTS. INDICATE ACTUAL ROUTING OF ELECTRICAL FEEDERS.

DELIVER RECORD DRAWINGS TO THE ARCHITECT IN THE QUANTITY AND MANNER SPECIFIED IN DIVISION 1 – GENERAL REQUIREMENTS.

1.14 MAINTENANCE MANUALS

PROVIDE THREE (3) MAINTENANCE MANUALS CONTAINING PRODUCT DATA, SHOP DRAWINGS, WIRING DIAGRAMS, INSTRUCTIONS AND PART LISTS FOR MAINTAINING AND OPERATION ELECTRICAL SYSTEMS AND EQUIPMENT. INCLUDE A DESCRIPTION OF NORMAL ADJUSTMENTS AND A LIST OF ITEMS REQUIRING PERIODIC MAINTENANCE AND THE FREQUENCY REQUIRED. PROVIDE OWNER WITH ANY SPECIAL TOOLS REQUIRED.

DELIVER MAINTENANCE MANUALS TO THE OWNER AT THE TIME OF THE DEMONSTRATION OF SYSTEMS AND EQUIPMENT.

1.15 CONCRETE WORK

FURNISH AND INSTALL REINFORCED CONCRETE PADS FOR TRANSFORMERS OF SIZE REQUIRED. PADS SHALL BE THREE INCHES HIGH AND SHALL EXCEED DIMENSIONS OF EQUIPMENT BEING SET ON THEM BY SIX INCHES ON ALL SIDES. CHAMFER TOP EDGES TO ONE-HALF INCH. TROWEL ALL SURFACES SMOOTH. REINFORCE PADS WITH 6"x6" X 9/9 WELDED WIRE FABRIC.

THIS CONTRACTOR SHALL FURNISH ALL EQUIPMENT ANCHOR BOLTS AND SHALL BE RESPONSIBLE FOR THEIR PROPER INSTALLATION AND ACCURATE LOCATION.

EXPOSED CONDUIT BUNDLES THROUGH FLOORS UP INTO SURFACE MOUNTED PANELBOARDS SHALL HAVE 3" HIGH HOUSEKEEPING PAD POURED AROUND THEM.

SECTION 16111 – RACEWAYS

APPROVED RACEWAY MATERIALS INCLUDE GRS, IMC, EMT AND MC-CABLE AS LIMITED BELOW. SCHEDULE-40 PVC RACEWAYS ARE PERMITTED FOR UNDERGROUND ONLY. NO OTHER RACEWAY MATERIALS ARE PERMITTED WITH OUT PRIOR AUTHORIZATION.

HOT-DIPPED GALVANIZED (GRS). THREADED TYPE CONFORMING TO ANSI C80.1 AND UL 6. USE WHERE EXPOSED TO THE EXTERIOR AND AT ALL CONCRETE PENETRATIONS. BITUMASTIC COATING REQUIRED AT CONCRETE PENETRATIONS.

ELECTRICAL METALLIC TUBING (EMT) AND INTERMEDIATE METAL CONDUIT (IMC)

MC-CABLE IS ACCEPTABLE WITH THE EXCEPTION OF HOMERUN CIRCUITS AND EXAMINATION ROOMS. EXAMINATION ROOMS RACEWAYS SHALL BE EMT OR AC TYPE CABLE (HOSPITAL GRADE).

HOMERUNS SHALL BE DEFINED AS ORIGINATING AT THE BRANCH OVER CURRENT DEVICE AND CONTINUE TO THE FIRST BRANCH EQUIPMENT, DEVICE OR FIXTURE. MC-CABLE SHALL NOT ORIGINATE AT THE PANEL LOCATION.

ALL RACEWAYS SHALL BE RUN PARALLEL AND PLUMB TO BUILDING STRUCTURE.

SECTION 16120 – WIRES AND CABLES (600 VOLTS AND LESS)

WIRE AND CABLE

ALL CONDUCTORS SHALL BE COPPER.

TYPE THHN/THWN, SINGLE CONDUCTOR, NO. 12 MINIMUM FOR GENERAL USE WIRING.

ALL SPECIFIED CONDUCTOR SIZES HAVE BEEN SIZED TO ACCOMMODATE FOR VOLTAGE DROP AS REQUIRED BY FBC 13-413 AND NEC 210.19(A)(1) FPN #4.

CONDUCTOR SIZES FOR LIGHTING, RECEPTACLES AND SMALL MOTOR BRANCH CIRCUITS, WITH LESS THAN 30 AMPERE CONNECTED LOAD, MAY NOT BE SHOWN ON DRAWING. CONDUCTORS FOR SUCH CIRCUITS SHALL BE SIZED AS FOLLOWS:

120 VOLT CIRCUITS: CONDUCTOR SIZE FOR BRANCH CIRCUITS 75 FEET IN LENGTH FOR BRANCH CIRCUIT PANEL TO CENTER OF LOAD SHALL NOT BE SMALLER THAN No. 12; UP TO 125 FEET NOT SMALLER THAN No. 10, UP TO 175 FEET NOT SMALLER THAN No. 8.

277 VOLT CIRCUITS: CONDUCTOR SIZE FOR BRANCH CIRCUITS 150 FEET IN LENGTH FOR BRANCH CIRCUIT PANEL TO CENTER OF LOAD SHALL NOT BE SMALLER THAN No. 12; UP TO 200 FEET NOT SMALLER THAN No. 10, UP TO 350 FEET NOT SMALLER THAN No. 8.

EACH MULTIWIRE BRANCH CIRCUIT SHALL BE PROVIDED WITH MEANS THAT WILL SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS AT THE POINT WHERE THE BRANCH CIRCUIT ORIGINATES.

SECTION 16130 – BOXES

OUTLET BOXES – SURFACE MOUNTED

GENERAL USE OUTLET BOXES: SINGLE OR MULTIPLE GANCED CADMIUM PLATED MALLEABLE IRON OR FERRALOY TYPE FS OR FD CAST BOXES WITH THREADED HUBS, OR 4 INCH SQUARE PRESSED STEEL BOXES.

OUTLET BOX LOCATIONS
SWITCHES: 48 INCHES ABOVE FLOOR TO CENTER. LOCATE ON LATCH SIDE OF DOOR.

RECEPTACLES AND TELEPHONE OUTLETS: 18 INCHES ABOVE FLOOR TO CENTER OR 6 INCHES ABOVE COUNTERS.

MOTOR STARTERS AND DISCONNECT SWITCHES: 60 INCHES ABOVE FLOOR.

SECTION 16140 – WIRING DEVICES

RECEPTACLES

HEAVY DUTY DUPLEX: SPECIFICATION GRADE DUPLEX RECEPTACLES, 2 POLE, 3 WIRE, GROUNDING, 20 AMPERES, 125 VOLTS, WITH NEMA CONFIGURATION 5-20R UNLESS OTHERWISE INDICATED.

GROUND-FAULT CIRCUIT INTERRUPTERS: PROVIDE GROUND FAULT CIRCUIT INTERRUPTER, WITH HEAVY DUTY DUPLEX RECEPTACLES. SHALL BE GROUNDING TYPE, RATED 20 AMPERES, 120 VOLTS, 60 HZ; WITH SOLID-STATE GROUND FAULT SENSING.

SECTION 16160 – PANELBOARDS

PANELBOARDS AND DISTRIBUTION PANELS

PROVIDE DEAD FRONT PANELBOARDS WITH SWITCHING AND PROTECTIVE DEVICES IN QUANTITIES, RATING, TYPES, AND ARRANGEMENTS SHOWN; WITH LUG CONNECTORS APPROVED FOR COPPER CONDUCTORS.

PANELBOARDS SHALL BE SQUARE D, SIEMENS, CUTLER HAMMER, OR GENERAL ELECTRIC COMPANY.

AIC RATINGS MUST BE OBTAINED BY FULLY RATING OR SERIES RATING OF CIRCUIT BREAKERS INDICATED.

SECTION 16170 – MOTOR AND CIRCUIT DISCONNECTS

GENERAL DUTY DISCONNECT SWITCHES

PROVIDE SURFACE MOUNTED, GENERAL DUTY TYPE, SHEET STEEL ENCLOSED SWITCHES, THAT ARE FUSIBLE OR NON-FUSIBLE, WITH VOLTAGE RATING FOR CIRCUIT, AMPERAGE, NUMBER OF POLES AND INDICATED ON DRAWINGS AND INCORPORATING SPRING ASSISTED, QUICK MAKE, QUICK BREAK SWITCHES WHICH ARE SO CONSTRUCTED THAT SWITCH BLADES ARE VISIBLE IN "OFF" POSITION WITH DOOR OPEN. UNLESS OTHERWISE INDICATED, PROVIDE NEMA TYPE 1 ENCLOSURE WITH STAMPED ENCLOSURE KNOCKOUTS. OUTDOOR ENCLOSURES SHALL BE NEMA 3R.

ALL SAFETY SWITCHES 30-600 AMPS, SHALL BE PROVIDED WITH CLASS R REJECTION STYLE FUSE CLIPS. THE COMBINATION RATING OF THE SAFETY SWITCH AND R FUSE SHALL BE 100,000 SYM AMPS AND LABELED AS SUCH.

SECTION 16450 – GROUNDING

CONDUCTORS

PROVIDE ELECTRICAL GROUNDING CONDUCTORS FOR GROUNDING CONNECTIONS MATCHING POWER SUPPLY WIRING MATERIALS AND SIZED ACCORDING TO NEC. CONDUCTORS SHALL BE COPPER.

SECTION 16500 – LIGHTING FIXTURES

FABRICATE OF SHEET STEEL, DIE-FORMED TO PROVIDE STRUCTURAL

TREAT FIXTURES FOR ACCEPTANCE OF BAKED WHITE HIGH REFLECTANCE ENAMEL OR PORCELAIN ENAMEL FINISH COAT.

LENS PANELS FOR SURFACE BOX TYPE FIXTURES AND FOR RECESSED TROFFERS SHALL BE FRAMED AND BE EQUIPPED WITH HINGE AND LATCH. EQUIP FRAMES AND LOUVERS WITH RETAINING MEANS TO SUPPORT FRAME DURING RELAMPING.

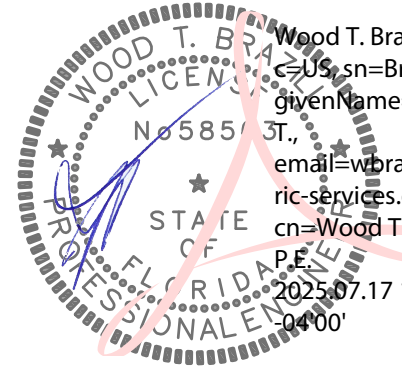
PROVIDE FIXTURES AS SCHEDULED ON THE DRAWINGS.

**MINNEOLA ATHLETIC
COMPLEX IMPROVEMENTS
MINNEOLA**



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REVISION NO.	DATE	DESCRIPTION



WOOD T. BRAZILL, PE
 Registered Eng 58563

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY WOOD T. BRAZILL, P.E. ON THE DATE ADJACENT TO THE SEAL.

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