

# BLACK HILLS DOG PARK

## BID # 23/24-003 PWP # WA-2024-041

### CITY OF SPARKS OFFICIALS

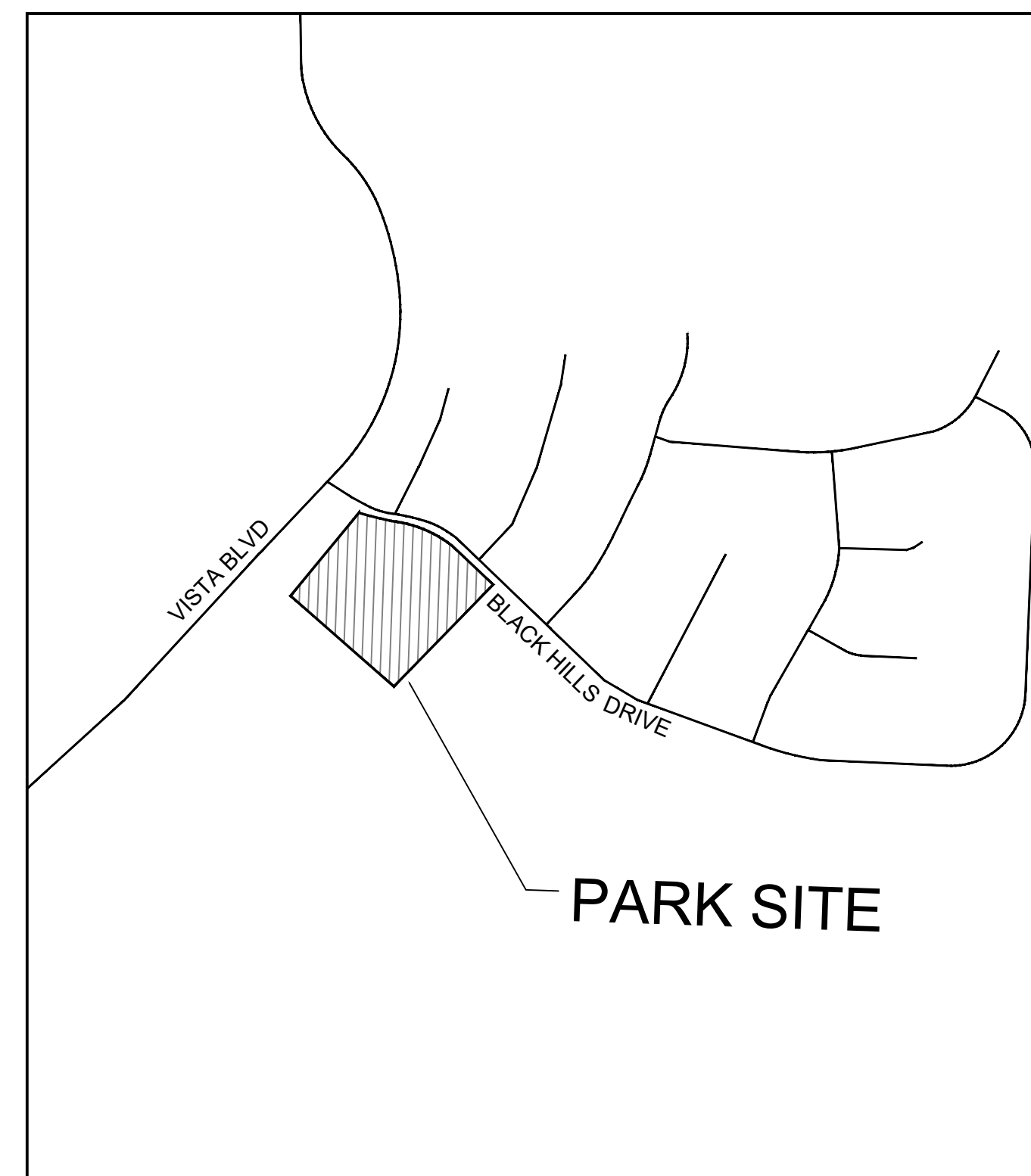
Ed Lawson	Mayor
Donald Abbott	Council Member Ward 1
Dian VanderWell	Council Member Ward 2
Paul Anderson	Council Member Ward 3
Charlene Bybee	Council Member Ward 4
Kristopher Dahir	Council Member Ward 5
Neil C. Krutz	City Manager

### DESIGNED FOR

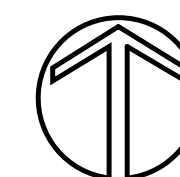


**CITY OF SPARKS**  
98 Richards Way  
Sparks, NV 89431

Jon R. Ericson P.E. PTOE, City Engineer



NOT TO SCALE



### SHEET INDEX

- L1 Landscape Cover Sheet and Specifications
- L2 Planting Plan
- L3 Irrigation Plan
- L4 Landscape and Irrigation Details
- L5 Landscape and Irrigation Details
- L6 Amenities Details
- N-1 General Notes and Abbreviations
- G-1 Grading Plan Sheet
- S-1 Site Plan Sheet
- D-1 Detail Sheet
- W-1 Water Plan Title Sheet
- W-2 Water Plan
- E1 Electrical Specifications, Symbols, and Notes
- E2 Single-Line Diagram and Details
- E3 Site Electrical Plans
- E4 Site Photometric

### PARKS COORDINATOR

**CITY OF SPARKS**  
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431 Prater WAY  
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### LANDSCAPE ARCHITECT

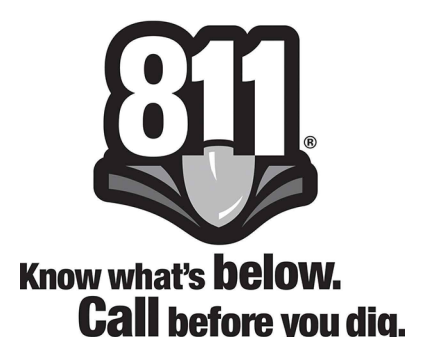
**L.A. STUDIO NEVADA, LLC**  
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### CIVIL ENGINEER

**WOOD RODGERS INC.**  
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# LANDSCAPE SPECIFICATIONS

## GENERAL

1. PLAN IS DIAGRAMMATIC ONLY. ALL LOCAL GOVERNING CODES SHALL BE MET. EXACT LOCATION OF TREES AND SHRUBS SHALL BE DETERMINED IN THE FIELD (INSTALL AS PER DETAILS) AND APPROVED BY THE OWNER'S REPRESENTATIVE.
2. A MINIMUM OF TWO WORKING DAYS BEFORE PERFORMING ANY DIGGING, CALL UNDERGROUND SERVICE ALERT FOR INFORMATION ON THE LOCATION OF NATURAL GAS LINES, ELECTRIC CABLES, TELEPHONE CABLES, ETC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND PROTECTION OF ALL UTILITIES, AND REPAIR OF ANY DAMAGE RESULTING FROM HIS WORK AT NO ADDITIONAL COST TO THE OWNER.
3. DAMAGES: CONTRACTOR SHALL PROMPTLY REPAIR ALL DAMAGES TO EXISTING SITE AT NO COST TO OWNER.
4. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES (I.E., PAVING, PLUMBING, ELECTRICAL, ETC.)
5. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY SITE CONDITIONS PRIOR TO CONSTRUCTION AND TO NOTIFY THE OWNER'S REPRESENTATIVE SHOULD CONDITIONS EXIST WHICH PREVENT CONSTRUCTION AS PER THESE PLANS. COMMENCEMENT OF WORK SHALL CONSTITUTE ACCEPTANCE OF CONDITIONS AND RESPONSIBILITY FOR CORRECTIONS.
6. CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR ASSUMES SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS AND CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY, AND HOLD HARMLESS THE OWNER FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THE PROJECT.

## PLANTING

7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FINISH GRADING THROUGHOUT ALL LANDSCAPE AREAS SUCH THAT THERE ARE NO HUMPS OR DEPRESSIONS AND POSITIVE DRAINAGE OCCURS THROUGHOUT.
8. SOIL TEST: CONTRACTOR SHALL PROVIDE SOIL TEST RESULTS FOR EXISTING SITE SOIL AS FOLLOWS:
  - ANALYSIS PACKAGE LTP.4 BY SUNLAND ANALYTICAL (916)852-8551 (OAE).
  - TEST RESULTS SHALL INCLUDE SOIL SATURATION PERCENT, SOIL TEXTURE, INFILTRATION RATE, pH, CONDUCTIVITY, TOTAL DISSOLVED SALTS, CATION EXCHANGE CAPACITY, POTASSIUM, SODIUM, CALCIUM, MAGNESIUM, NITRATE & PHOSPHORUS, SULFUR, CHLORIDE, BORON, COPPER, IRON, MANGANESE, ZINC & LIME REQUIREMENT OR GYPSUM REQUIREMENT, SODIUM ABSORPTION RATIO, EXCHANGEABLE SODIUM PERCENT & ORGANIC MATTER, ALONG WITH RECOMMENDATIONS FOR SOIL AMENDMENT BASED ON ANALYSIS RESULTS.
  - CONTRACTOR SHALL FOLLOW RECOMMENDATIONS OF SOIL TEST.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TOTAL AND CONFIRM ALL MATERIAL QUANTITIES. ITEMS QUANTIFIED BY AN AREA (I.E. SQUARE FEET = SF, SQUARE YARD = SY) OR VOLUME (CUBIC FEET = CU FT, CUBIC YARD = CU YD) SHALL BE CALCULATED AND CONFIRMED BY THE CONTRACTOR. THE QUANTITIES LISTED ON THE PLANT LIST ARE ESTIMATED. IN THE EVENT OF A DISCREPANCY BETWEEN THE TOTALS LISTED ON THE PLANT LIST AND THE QUANTITY OF GRAPHIC PLANT SYMBOLS DEPICTED ON THE DRAWINGS, THE GRAPHIC SYMBOLS ON THE PLANS SHALL GOVERN. THE ACTUAL TOTAL QUANTITIES SHALL BE DETERMINED BY THE CONTRACTOR.
10. SOIL AMENDMENT: UNLESS OTHERWISE INDICATED BY THE SOIL TEST, SOIL AMENDMENT SHALL BE HUMUS COMPOSED OF TOPSOIL, BARK HUMUS, AND COMPOST. SUBMIT TO OWNER'S REPRESENTATIVE FOR APPROVAL.
11. ALL PLANTS NOT MEETING OR EXCEEDING REQUIREMENTS AND RECOMMENDATIONS OF THE LATEST EDITION OF THE ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK" BY THE AMERICAN ASSOCIATION OF NURSERYMEN SHALL BE REJECTED. CONTRACTOR SHALL RECEIVE ON-SITE APPROVAL OF PLANT MATERIAL BY OWNER'S REPRESENTATIVE PRIOR TO PLANTING. FAILURE TO RECEIVE PRIOR APPROVAL MAY RESULT IN REJECTION OF PLANT MATERIAL FOLLOWING INSTALLATION. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO INSPECT AND EVALUATE PLANT MATERIAL THROUGHOUT THE CONSTRUCTION AND MAINTENANCE PERIOD.
12. ALL PLANTING BEDS SHALL RECEIVE TOP-DRESSING OF MULCH AS FOLLOWS:
  - DECOMPOSED GRANITE (D6) - INSTALL 4" MIN. DEPTH OF  $\frac{3}{8}$ " COURSE OXBORROW D6 (OAE) - DO NOT INSTALL WEED FABRIC UNDER D6 MULCH.
  - ROCK - SCREENED ON-INSTALL 4" MIN. DEPTH OF ON-SITE ROCK SIZED 6"+/- OVER LANDSCAPE FABRIC.
  - BARK MULCH - INSTALL "WALK-ON" BARK MULCH (OAE) IN TREE AND SHRUB WATERING WELLS LOCATED WITHIN ROCK MULCH AREAS. - DO NOT INSTALL LANDSCAPE FABRIC UNDER BARK.
  - GRANULAR PRE-EMERGENT HERBICIDE - APPLY RONSTAR TURF & ORNAMENTAL HERBICIDE (OAE) TO ALL PLANTING BEDS PER MFG'S SPECIFICATIONS.

## SOD

13. LOOSEN SUBGRADE OF LAWN AREAS TO A MINIMUM DEPTH OF 6 INCHES. REMOVE STONES MEASURING OVER 1 INCH IN ANY DIMENSION. REMOVE STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEIOUS MATTER. LIMIT PREPARATION TO AREAS WHICH WILL BE PLANTED PROMPTLY AFTER PREPARATION.
14. SPREAD MINIMUM 6 CY SOIL AMENDMENT (GROUND BARK BASED PRODUCT, 1/4" MAXIMUM PARTICLE SIZE, NITROGEN STABILIZED) PER 1,000 SF OVER AREA TO BE PLANTED. PLACE APPROXIMATELY 1/2 OF TOTAL AMOUNT OF SOIL AMENDMENT REQUIRED. WORK INTO TOP OF LOOSENED SUBGRADE BY ROTOTILLING TO CREATE A TRANSITION LAYER AND THEN PLACE REMAINDER OF SOIL AMENDMENT.
15. FINE GRADE LAWN AREAS TO SMOOTH, EVEN SURFACE WITH LOOSE, EVEN SURFACE WITH LOOSE, UNIFORMLY FINE TEXTURE. ROLL, RAKE, AND DRAG LAWN AREAS, REMOVE RIDGES AND FILL DEPRESSIONS AS REQUIRED TO MEET FINISH GRADES. LIMIT FINE GRADING TO AREAS WHICH WILL BE PLANTED IMMEDIATELY AFTER GRADING. FINISH GRADES SHALL BE AS NEEDED BELOW PAVEMENT EDGES TO ALLOW FOR SOD PLACEMENT.
16. MOISTEN PREPARED LAWN AREAS BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE MOISTURE TO DRY BEFORE PLANTING LAWNS. DO NOT CREATE A MUDDY SOIL CONDITION.
17. LAY SOD PIECES TIGHTLY TOGETHER WITH NO GAPS BETWEEN PIECES. STAGGER PIECES SUCH THAT SEAMS ALTERNATE EVERY OTHER ROW.
18. IRRIGATE AND ROLL ENTIRE SOD AREA WITH 200 LB (MIN.) ROLLER SUCH THAT THE FINISH SOD LAWN IS FREE OF HUMPS AND DEPRESSIONS.
19. REPAIR ANY DAMAGE FROM OTHER CONSTRUCTION ACTIVITIES AND REPLACE ANY PIECES WHICH DO NOT ROOT AND GROW, SUCH THAT THERE ARE NO BARE SPOTS THROUGHOUT SOD LAWN.

## OBSERVATIONS/APPROVALS/SUBMITTALS

20. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING OWNER'S REPRESENTATIVE, A MINIMUM OF 48 HOURS IN ADVANCE, FOR THE FOLLOWING SITE OBSERVATIONS AND/OR MEETINGS:
  - PRECONSTRUCTION MEETING WITH ALL PARTIES
  - PLANT MATERIAL ON SITE, PRIOR TO INSTALLATION
  - OPEN TRENCH, MAINLINE (WITH VALVES ATTACHED) PRESSURE TEST
  - FINAL PROJECT WALK-THROUGH
  - ADDITIONAL SITE OBSERVATIONS AS DEEMED NECESSARY BY THE OWNER'S REPRESENTATIVE.
21. SUBMIT AMENDMENT AND MULCH SAMPLES TO OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION. FAILURE TO COMPLY MAY RESULT IN REJECTION OF MULCH OR AMENDMENT PRIOR TO OR FOLLOWING INSTALLATION.
22. PLANT SUBSTITUTIONS - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE AND PROVIDE PLANT MATERIAL AS SPECIFIED ON THIS PLAN. THE CONTRACTOR MAY SUBMIT A REQUEST TO PROVIDE SUBSTITUTIONS FOR THE SPECIFIED PLANT MATERIAL UNDER THE FOLLOWING CONDITIONS:
  - ANY SUBSTITUTIONS PROPOSED SHALL BE SUBMITTED TO THE PROJECT OWNER'S REPRESENTATIVE WITHIN TWO WEEKS OF THE AWARD OF CONTRACT. SUBSTITUTIONS MUST MEET EQUIVALENT DESIGN AND FUNCTIONAL GOALS OF THE ORIGINAL MATERIALS AS DETERMINED BY THE OWNER'S REPRESENTATIVE. ANY CHANGES MUST HAVE THE APPROVAL OF THE OWNER'S REPRESENTATIVE.
  - THE REQUEST WILL BE ACCOMPANIED BY AT LEAST THREE NOTICES FROM PLANT MATERIAL SUPPLIERS THAT THE PLANT MATERIAL SPECIFIED IS NOT AVAILABLE AND WILL NOT BE AVAILABLE PRIOR TO CONSTRUCTION.
23. SUBMIT REQUIRED SOIL REPORT, AND SAMPLE OF PROPOSED SOIL AMENDMENTS TO OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
24. RECORD (AS-BUILT) DRAWINGS - FOLLOWING COMPLETION OF PROJECT INSTALLATION, AND PRIOR TO FINAL APPROVAL, CONTRACTOR SHALL PREPARE AND SUBMIT RECORD DRAWINGS DEPICTING A COMPLETE LANDSCAPE AND IRRIGATION INSTALLATION. PROCURE FROM OWNER DIGITAL COPIES OF CONTRACT DRAWINGS. CONSTRUCTION DRAWINGS SHALL BE ON THE PROJECT SITE AT ALL TIMES DURING INSTALLATION. CONTRACTOR SHALL MAKE A DAILY RECORD OF ALL WORK INSTALLED DURING EACH DAY. ACTUAL LOCATION OF TREES AND SHRUB BEDS, IRRIGATION VALVES, AND ALL IRRIGATION AND DRAINAGE PIPING SHALL BE SHOWN ON THE PRINTS BY DIMENSIONS FROM EASILY IDENTIFIED PERMANENT FEATURES, SUCH AS BUILDING, CURBS, FENCES, WALKS, OR PROPERTY LINES. DRAWINGS SHALL SHOW MANUFACTURER'S NAME AND CATALOG NUMBER. THE DRAWINGS SHALL BE TO SCALE. ALL INFORMATION NOTED ON THE PRINT SHALL BE TRANSFERRED TO THE COPIES BY CONTRACTOR AND ALL INDICATIONS SHALL BE RECORDED IN A NEAT, ORDERLY MANNER. THE RECORD COPIES SHALL BE TURNED OVER TO THE OWNER'S REPRESENTATIVE.

## GUARANTEES/WARRANTY

25. ALL PLANTED AREAS SHALL BE MAINTAINED FOR A PERIOD OF ONE YEAR FOLLOWING WRITTEN ACCEPTANCE BY OWNER'S REPRESENTATIVE. LANDSCAPE CONTRACTOR WILL GUARANTEE ALL PLANT MATERIAL (INCLUDING BUT NOT LIMITED TO TREES, SHRUBS, GROUNDCOVER, AND GRASSES) FOR A PERIOD OF ONE FULL YEAR FOLLOWING FINAL ACCEPTANCE OF THE LANDSCAPE INSTALLATION BY THE OWNER'S AUTHORIZED REPRESENTATIVE. IN BIDDING AND INSTALLING THE PLANT MATERIAL SPECIFIED ON THESE PLANS, THE LANDSCAPE CONTRACTOR AGREES THAT THE PLANT MATERIAL SPECIFIED IS SUITABLE TO THE PROJECT SITE. FURTHERMORE, THE LANDSCAPE CONTRACTOR AGREES TO HONOR THE WARRANTY AND, IF NECESSARY, REPLACE SPECIES WITH A MORE HARDY PLANT TYPE IF DEEMED NECESSARY DUE TO EXCESSIVE DIE OUT. IF THE LANDSCAPE CONTRACTOR DOES NOT BELIEVE CERTAIN PLANT MATERIAL IS SUITABLE FOR THE SITE AND/OR ITS MICRO-CLIMATES, THE LANDSCAPE CONTRACTOR SHALL REQUEST TO MAKE PLANT MATERIAL SUBSTITUTIONS IN WRITING TO THE LANDSCAPE ARCHITECT PRIOR TO THE START OF INSTALLATION. PROPOSED SUBSTITUTIONS WILL RESULT IN NO ADDED COST.

# REVEGETATION SPECIFICATIONS

1. WHERE POSSIBLE, STRIP & STOCKPILE EXISTING 6" OF NATIVE SITE TOPSOIL. CONTRACTOR SHALL PROVIDE DUST CONTROL FOR STOCKPILED TOPSOIL AS REQUIRED BY REGULATORY AGENCIES.
2. FOLLOWING COMPLETION OF ROUGH GRADING RE-APPLY A MINIMUM OF 6" OF STOCKPILED TOPSOIL (IF AVAILABLE) TO REVEGETATION AREAS. TOPSOIL SHALL CONSIST OF NATURAL SURFACE SOIL, FRIABLE, AND LOAMY IN CHARACTER. TOPSOIL SHALL BE FREE OF LARGE BRUSH OR STUMPS, OBJECTIONABLE WEEDS, LARGE STONES OR ROCKS (EXCEPT AS DEPICTED ON PLANS) AND SUBSTANCES TOXIC TO PLANTS.
3. SCARIFY PLACED TOPSOIL TO CREATE FRIABLE CONDITIONS, EVENLY BLENDING PLACED TOPSOIL WITH TOP 6" OF SUBGRADE SOIL MATERIAL.
4. REVEGETATION SEEDING IS RECOMMENDED TO TAKE PLACE IN THE FALL TO ALLOW WINTER MOISTURE TO GERMINATE SEEDS. REVEGETATION SEED BLENDS MAY BE APPLIED IN HYDROSEED SLURRY. THE APPLICATION RATE (LBS PER ACRE) IN THE FALL SHALL BE APPLIED AT A MINIMUM RATE OF 32 PLS LBS/ACRE.
5. REVEGETATION SEEDING IN THE SUMMER SHALL BE APPLIED AT 125% OF THE FALL APPLICATION RATE, IMMEDIATELY FOLLOWED BY A TACKIFIER APPLICATION USING 150% OF THE MANUFACTURER'S RECOMMENDED RATE
6. FOLLOWING SEEDING, APPLY HYDRO-SLURRY MIX OVER SEEDED SLOPE PER MFG'S SPECIFICATIONS. SLURRY SHALL CONSIST OF THE FOLLOWING:

FERTILIZER: 0-10-10 @ 200 LBS/ACRE  
TACKIFIER: M-BINDER @ 60 LBS/ACRE  
MULCH: FIBER MULCH @ 1650 LBS/ACRE  
SEED: REVEGETATION SEED BLEND
7. CONTRACTOR SHALL MAINTAIN SEEDING UNTIL ESTABLISHED. REPAIR ANY SURFACE EROSION/RILLING UPON DISCOVERY.
8. COVERAGE REQUIREMENT: NON-IRRIGATED REVEG SEEDING RELIES ON NATURAL PRECIPITATION. ADDITIONAL ANNUAL SEEDING APPLICATIONS (INCLUDING APPROPRIATE TACKIFIER TREATMENTS) MAY BE REQUIRED TO INSURE SUCCESSFUL GERMINATION AND ESTABLISHMENT. FURTHER APPLICATIONS WILL BE REQUIRED UNTIL COVERAGE REQUIREMENTS (CONSISTENT WITH NON-DISTURBED NATURAL CONDITIONS) ARE ACHIEVED AND ACCEPTED BY THE REVIEW AGENCY.

SPECIES	PLS #/ACRE
Grasses	
Wheatgrass streambank	4.00
Bluegrass sandberg	3.00
Wildrye Great Basin	2.00
Fescue sheep	3.00
Indian ricegrass	5.00
Shrubs	
Sagebrush Wyoming	.50
Rabbitbrush rubber	.50
Saltbush fourwing	2.00
Mormon tea Green	.50
Bitterbrush	1.00
Spring hoggage	.50
Desert Peach	1.00
Flowers	
Dryland aggressive blend	2.00
Nurse crop	
Ryegrass annual	6.00
Total PLS #/acre:	31.00

SEED AVAILABLE FROM COMSTOCK SEED, MINDEN NV

## SHEET INDEX

- L1 Landscape Cover Sheet and Specifications
- L2 Planting Plan
- L3 Irrigation Plan
- L4 Landscape and Irrigation Details
- L5 Landscape and Irrigation Details
- L6 Amenities Details
- N-1 General Notes and Abbreviations
- G-1 Grading Plan Sheet
- S-1 Site Plan Sheet
- D-1 Detail Sheet
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## ELECTRICAL ENGINEER

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## CIVIL ENGINEERS

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## LANDSCAPE ARCHITECT

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Sparks, Nevada 89431  
(775) 323-2223

# IRRIGATION SPECIFICATIONS

## GENERAL

1. PLAN IS DIAGRAMMATIC ONLY. FINAL LOCATION OF LINES AND HEADS SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE OWNER'S REPRESENTATIVE. LINES SHALL BE IN A COMMON TRENCH WHEREVER POSSIBLE. THE POINT-OF-CONNECTION SHALL BE AS INDICATED ON THE PLAN.
2. THE CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS AND ENSURE THAT ALL LOCAL CODES ARE MET.
3. THE CONTRACTOR SHALL APPLY AND PAY FOR ALL PERMITS REQUIRED FOR INSTALLATION OF THE IRRIGATION SYSTEM AS DEPICTED ON THESE PLANS.
4. CONTRACTOR SHALL VERIFY AVAILABLE FLOW AND PRESSURE DOWNSTREAM FROM THE POINT-OF-CONNECTION PRIOR TO SYSTEM INSTALLATION. CONTRACTOR SHALL NOTIFY OWNER'S REPRESENTATIVE IMMEDIATELY IF AVAILABLE FLOW IS LESS THAN REQUIRED TO RUN THE LARGEST ZONE. CONTRACTOR SHALL NOT PROCEED ANY FURTHER WITH INSTALLATION OF THE SYSTEM UNTIL NECESSARY DESIGN REVISIONS HAVE BEEN DETERMINED BY OWNER'S REPRESENTATIVE.
5. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS OR DIFFERENCES IN DIMENSIONS EXIST THAT MIGHT HAVE BEEN UNKNOWN DURING ENGINEERING. SUCH OBSTRUCTIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS NECESSARY AT NO ADDITIONAL COST TO OWNER.
6. ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
7. CONTRACTOR SHALL COORDINATE THE INSTALLATION OF ALL SPRINKLER MATERIALS, INCLUDING PIPE, WITH THE LANDSCAPE DRAWINGS TO AVOID INTERFERING WITH THE PLANTING OF TREES, SHRUBS, OR OTHER PLANTINGS.
8. ALL VALVES ARE TO BE LOCATED IN PLANTING AREAS WHEREVER POSSIBLE.
9. ALL ELECTRICAL WIRE FROM CONTROLLER TO VALVES SHALL BE 12 GAUGE UL DIRECT BURIAL OR LARGER AS REQUIRED BY LENGTH PER MANUFACTURER'S SPECIFICATIONS.
10. BACKFILL FOR TRENCHING SHALL BE COMPACTED TO A DRY DENSITY EQUAL TO THE UNDISTURBED ADJACENT SOIL AND SHALL CONFORM TO ADJACENT GRADES WITHOUT DIPS, HUMPS, OR OTHER IRREGULARITIES.
11. A MINIMUM OF TWO WORKING DAYS PRIOR TO PERFORMING ANY DIGGING, CALL UNDERGROUND SERVICE ALERT AT 1-800-227-2600 FOR INFORMATION ON THE LOCATION OF NATURAL GAS LINES, ELECTRICAL CABLES, TELEPHONE CABLES, ETC.
12. CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS.
13. INSTALL ALL PIPE AND CONTROL WIRES IN LANDSCAPE BEDS AND IN COMMON TRENCHES WHEREVER POSSIBLE.
14. INSTALL ALL PIPE AND CONTROL WIRE, WHICH RUNS UNDER PAVING, WITHIN SCH. 40 PVC SLEEVES 4" DIA. MINIMUM SIZE AS REQUIRED TO ALLOW INSTALLATION WITHOUT BINDING. PROVIDE (1) SLEEVE PER PIPE. PROVIDE SEPARATE SLEEVES FOR CONTROL WIRE.
15. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE FOR COMPLETE DRAINAGE OF THE MAINLINES BY INSTALLING MANUAL DRAINS AS INDICATED ON PLAN AND AT ALL SYSTEM LOW POINTS.

## FLUSHING AND TESTING

16. PIPING SHALL BE COMPLETELY FLUSHED OF FOREIGN PARTICLES BEFORE ATTACHING IRRIGATION COMPONENTS AND DRAIN VALVES.
17. AFTER FLUSHING, AND WHEN ALL VALVES AND QUICK COUPLERS ARE IN PLACE, ALL MAIN SUPPLY LINES SHALL BE TESTED AT 100 POUNDS PER SQUARE INCH (100 PSI) WITH VALVES CLOSED. MAINTAIN PRESSURE FOR A PERIOD OF NOT LESS THAN (4) CONSECUTIVE HOURS. ALL JOINTS SHOWING LEAKS SHALL BE CLEANED, REMADE, AND TESTED.
18. AFTER FLUSHING, LATERAL PIPES SHALL BE TESTED WITH RISERS GAPPED AND DRAIN VALVES CLOSED. THE TEST SHALL BE MADE AT MAXIMUM OPERATING PRESSURE FOR A PERIOD OF NOT LESS THAN (1) HOUR. ALL JOINTS SHOWING LEAKS SHALL BE CLEANED, REMADE, AND TESTED. ALL TESTING SHALL BE DONE IN THE PRESENCE OF THE OWNER'S REPRESENTATIVE PRIOR TO BACKFILLING OVER PIPING.
19. OPERATIONAL TESTING: PERFORM OPERATIONAL TESTING AFTER HYDROSTATIC TESTING IS COMPLETED. DEMONSTRATE TO THE OWNER'S REPRESENTATIVE THAT THE SYSTEM MEETS COVERAGE REQUIREMENTS (100%) AND THAT AUTOMATIC CONTROLS FUNCTION PROPERLY.
20. AFTER COMPLETION OF GRADING AND SOD PLACEMENT, CAREFULLY ADJUST SPRINKLER HEADS TO MEET HEIGHT INDICATED ON DRAWINGS.

## SUBMITTALS

21. MATERIALS LIST: WITHIN (15) DAYS AFTER AWARD OF CONTRACT, SUBMIT TO OWNER'S REPRESENTATIVE (3) COPIES OF A COMPLETE MATERIAL LIST (PARTIAL LIST NOT ACCEPTABLE) OF ALL MATERIALS TO BE USED ON THE PROJECT, SPECIFYING MANUFACTURER, GRADE, TRADE NAME, CATALOG NUMBER, SIZE, ETC. THIS SHALL IN NO WAY BE CONSTRUED AS ALLOWING A SUBSTITUTION FOR ANY ITEM SPECIFIED ON THE PLANS. EQUIPMENT OR MATERIALS INSTALLED OR FURNISHED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE MAY BE REJECTED AND THE CONTRACTOR REQUIRED TO REMOVE THE MATERIALS AT HIS OWN EXPENSE.

INSTALLATION AND PERFORMANCE OF APPROVED SUBSTITUTIONS ARE THE CONTRACTOR'S RESPONSIBILITY. ANY CHANGES REQUIRED FOR INSTALLATION OF ANY APPROVED SUBSTITUTION MUST BE MADE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE WITHOUT ADDITIONAL COST TO OWNER.

22. PRIOR TO SYSTEM INSTALLATION CONTRACTOR SHALL VERIFY AND SUBMIT TO OWNER'S REPRESENTATIVE IN WRITING, AVAILABLE FLOW AND PRESSURE AT POINT-OF-CONNECTION AS DESCRIBED IN SPECIFICATION #4 ABOVE.

23. COMPLETE WARRANTY CARDS FOR AUTOMATIC CONTROLLER AND OTHER IRRIGATION MATERIAL (CONTROLLER KEYS, ETC.) SHALL BE DELIVERED TO OWNER.

24. CONTRACTOR SHALL PREPARE AND ISSUE TO THE OWNER (AT COMPLETION OF THE INSTALLATION) AN ANNUAL CHART INDICATING LOCATION, OPERATING DATES, CYCLES, AND TIME FOR EACH ZONE.

25. ASBUILT IRRIGATION DRAWINGS: CONTRACTOR SHALL FURNISH ASBUILTS OF THE COMPLETE IRRIGATION SYSTEM. PROCURE FROM OWNER'S REPRESENTATIVE DIGITAL COPIES OF CONTRACT DRAWINGS. CONSTRUCTION DRAWINGS SHALL BE ON THE CONSTRUCTION SITE AT ALL TIMES WHILE THE IRRIGATION SYSTEM IS BEING INSTALLED. CONTRACTOR SHALL MAKE A DAILY RECORD OF ALL WORK INSTALLED DURING EACH DAY. ACTUAL LOCATION OF VALVES AND ALL IRRIGATION AND DRAINAGE PIPING SHALL BE SHOWN ON THE PRINTS BY DIMENSIONS FROM EASILY IDENTIFIED PERMANENT FEATURES, SUCH AS BUILDINGS, CURBS, FENCES, WALKS OR PROPERTY LINES. DRAWINGS SHALL SHOW APPROVED MANUFACTURER'S NAME AND CATALOG NUMBER. THE DRAWINGS SHALL BE TO SCALE AND ALL INDICATIONS SHALL BE NEAT. ALL INFORMATION NOTED ON THE PRINT SHALL BE TRANSFERRED TO THE COPIES BY CONTRACTOR AND ALL INDICATIONS SHALL BE RECORDED IN A NEAT, ORDERLY MANNER. THE RECORD COPIES SHALL BE TURNED OVER TO THE OWNER'S REPRESENTATIVE AT OR BEFORE FINAL ACCEPTANCE/APPROVAL OF THE PROJECT.

## GUARANTEE/FINAL ACCEPTANCE

26. CONTRACTOR SHALL UNCONDITIONALLY GUARANTEE THE IRRIGATION SYSTEM FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE. MANUFACTURER WARRANTIES SHALL ONLY EXCEED THIS GUARANTEE AND CONTRACTOR SHALL BE LIABLE FOR REPAIRS/REPLACEMENT OF FAILED MATERIAL/WORKMANSHIP.

## MAINTENANCE

27. AFTER SYSTEM IS INSTALLED AND APPROVED, INSTRUCT OWNER'S DESIGNATED PERSONNEL IN COMPLETE OPERATION AND MAINTENANCE PROCEDURES. DRAIN ENTIRE SYSTEM AT END OF FIRST WATERING SEASON FOLLOWING INSTALLATION. TRAIN OWNER'S DESIGNATED PERSONNEL BY HAVING THEM ASSIST IN WINTERIZING PROCEDURE.



## No. Revision Date

No.	Revision Date

LA No.	291-508-01-22
Designed	LE
Drawn	LE
Checked	RWH
Date:	5-5-23























**GENERAL NOTES**

- THESE PLANS, SHEETS N-1 THROUGH D-1, HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED ENGINEERING PROCEDURES AND GUIDELINES, AND ARE IN SUBSTANTIAL COMPLIANCE WITH APPLICABLE STATUTES, CITY ORDINANCES OR STANDARDS. IN THE EVENT OF CONFLICT BETWEEN ANY PORTION OF THESE PLANS AND CITY OF SPARKS STANDARDS, THE STANDARDS SHALL APPLY AND THE ENGINEER SHALL BE CONTACTED IMMEDIATELY.
- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE ORANGE BOOK 2012 INCLUDING THE LATEST REVISION ADOPTED AND DISTRIBUTED BY WASHOE COUNTY, THE CITY OF SPARKS DESIGN MANUAL, AND INCLUDING ANY ADDITIONS AND MODIFICATIONS THAT ARE SET FORTH IN THE DRAWINGS AND SPECIFICATIONS AND OTHER ORDINANCES AND REGULATIONS THAT MAY APPLY.
- A GEOTECHNICAL INVESTIGATION WAS PERFORMED FOR THE PROJECT BY BLACK EAGLE CONSULTING TITLED PRELIMINARY GEOTECHNICAL INVESTIGATION, 750-AC TUCKER PROPERTY, SPANISH SPRINGS, SPARKS, NV DATED JANUARY 2003. A SITE SPECIFIC GEOTECHNICAL REPORT WAS PREPARED BY WOOD RODGERS TITLED "THE FOOTHILLS AT WINGFIELD PHASE II AND III - VILLAGES 2,3,5,7,9,10,11,12" DATED JULY 7, 2004. THE CONTRACTOR SHALL ATTENTIVELY EXAMINE THE SITE IN SUCH A MANNER THAT HE CAN CONFIRM EXISTING SURFACE CONDITIONS WITH THOSE PRESENTED IN THE GEOTECHNICAL REPORT. HE SHALL SATISFY HIMSELF THAT THE QUALITY AND QUANTITY OF EXPOSED MATERIALS AND SUBSURFACE SOIL OR ROCK DEPOSITS HAVE BEEN SATISFACTORILY REPRESENTED BY THE GEOTECHNICAL ENGINEER'S REPORT AND CIVIL ENGINEER'S DRAWINGS. ANY DISCREPANCY THAT MAY BE OF PRIOR KNOWLEDGE TO THE CONTRACTOR THAT IS REVEALED THROUGH HIS INVESTIGATIONS SHALL BE MADE AVAILABLE TO THE OWNER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE GEOTECHNICAL REPORT PRIOR TO CONSTRUCTION. RESULTS OF THE GEOTECHNICAL INVESTIGATION ALONG WITH THEIR RECOMMENDATIONS SHALL BECOME PART OF THE SPECIFICATIONS BUT DO NOT CONSTITUTE A GUARANTEE OF THE SUBSURFACE CONDITIONS IN ANY WAY.
- THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; AND THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY, AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION AND SHORING PROCEDURES AND CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
- THE CONTRACTOR SHALL MAINTAIN AN ON-GOING DUST CONTROL PROGRAM, INCLUDING WATERING OF OPEN AREAS, IN ORDER TO CONFORM WITH THE LATEST STATE AND COUNTY AIR POLLUTION REGULATIONS. THE CONTRACTOR SHALL HAVE A DUST CONTROL PLAN APPROVED BY THE WASHOE COUNTY DISTRICT HEALTH DEPARTMENT AIR POLLUTION CONTROL DIVISION PRIOR TO COMMENCEMENT OF ANY WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DAILY REMOVAL OF ALL CONSTRUCTION MATERIALS SPILLED ON PAVED STREETS, ONSITE AND OFFSITE.
- THE CONTRACTOR SHALL PURSUE THE WORK IN A CONTINUOUS AND DILIGENT MANNER, CONFORMING TO ALL THE PERTINENT SAFETY REGULATIONS, TO INSURE A TIMELY COMPLETION OF THE PROJECT.
- THE CONTRACTOR SHALL NOTIFY ALL ENTITIES INVOLVED (PUBLIC AND PRIVATE) 48 HOURS PRIOR TO BEGINNING CONSTRUCTION, AND PROVIDE 48 HOURS PRIOR NOTICE FOR ALL SURVEYING AND INSPECTIONS DURING CONSTRUCTION.
- ALL AREAS DISTURBED AND LEFT UNDEVELOPED FOR A PERIOD OF MORE THAN 14 DAYS SHALL BE STABILIZED BY THE APPLICATION OF AN APPROVED DUST PALLIATIVE AT THE COST OF THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND/OR COORDINATE WITH THE OWNER AND PAY FOR ALL NECESSARY PERMITS AND FEES REQUIRED FOR CONSTRUCTION. CONTRACTOR TO PROVIDE ALL NECESSARY TRAFFIC CONTROL, MAINTAIN ACCESS TO ALL PARCELS, PROVIDE ALL TEMPORARY AND/OR PERMANENT PATCHING AS REQUIRED BY THE CITY OF SPARKS ORDINANCES AND POLICY STANDARDS.
- ALL EXISTING UTILITY LOCATIONS, SIZES, AND DESCRIPTIONS AS SHOWN ON THESE DRAWINGS ARE TO BE USED IN CONJUNCTION WITH AVAILABLE RECORDS, REFERENCE MAPS, DRAWINGS, AND VERBAL STATEMENTS SUPPLIED BY UTILITY COMPANIES, AND MAY NOT BE WHOLLY ACCURATE OR RELIABLE. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES WHICH MAY BE AFFECTED BY THE WORK TO OBTAIN ASSISTANCE IN THE LOCATION OF EXISTING MAINS AND SERVICE CONNECTIONS. THE CONTRACTOR SHALL ALSO CALL U.S.A. (1-800-642-2444) PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SIGNING, BARRICADES AND TRAFFIC DELINEATION TO CONFORM TO THE STATE OF NEVADA, DEPARTMENT OF TRANSPORTATION, "NEVADA WORK ZONE TRAFFIC CONTROL MANUAL".
- THE WORK IN THIS CONTRACT INCLUDES ALL ONSITE AND OFFSITE WORK SHOWN ON THESE DRAWINGS, DESCRIBED IN THE SPECIFICATIONS, OR REASONABLY IMPLIED.
- SHOULD ANY PREHISTORIC OR HISTORIC REMAINS/ARTIFACTS BE DISCOVERED DURING SITE DEVELOPMENT, WORK SHALL TEMPORARILY BE HALTED AT THE SPECIFIC SITE AND THE DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, DIVISION OF HISTORIC PRESERVATION AND ARCHEOLOGY, SHALL BE NOTIFIED TO RECORD AND PHOTOGRAPH THE SITE. THE PERIOD OF TEMPORARY DELAY SHALL BE LIMITED TO A MAXIMUM OF TWO WORKING DAYS FROM THE DATE OF NOTIFICATION.
- ALL DIMENSIONS AND DISTANCES ARE TO BACK OF CURB, CURB RETURN, FACE OF BUILDING, FACE OF WALL, FLOW LINE, PROPERTY LINE, CENTER OF STRIPING, CENTER LINE OF PIPE, OR END OF IMPROVEMENTS UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL, AT ALL TIMES DURING CONSTRUCTION, PROTECT FROM DAMAGE EXISTING IMPROVEMENTS ON AND AROUND THE SITE, INCLUDING, BUT NOT LIMITED TO, PAVEMENT, CURB & GUTTER, SIDEWALK, LANDSCAPING, SIGNAGE, STORM & SANITARY SEWERS, AND ALL UTILITIES. THE CONTRACTOR SHALL ASSUME SOLE RESPONSIBILITY FOR THE REPAIR OF ANY IMPROVEMENTS (EXISTING OR PROPOSED) DAMAGED THROUGHOUT THE COURSE OF CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES EMERGENCY ACCESS TO THE PROJECT SITE TO THE SATISFACTION OF THE CITY OF SPARKS FIRE DEPARTMENT.
- THE CONTRACTOR SHALL, UPON COMPLETION OF THE PROJECT, PREPARE AND SUBMIT TO THE OWNER RECORD DRAWINGS INDICATING BY DIMENSION AND DESCRIPTION ANY FACILITY CONSTRUCTED CONTRARY TO THAT SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL MATERIALS TO BE USED ON THE SITE TO INCLUDE, BUT NOT BE LIMITED TO, A.C. AND P.C.C. MIX DESIGN, AGGREGATE BASE QUALIFICATIONS, PRECAST CONCRETE, CAST IRON GRATES AND COVERS, PIPING, FENCING, AND SIGNS TO THE PROJECT ENGINEER FOR APPROVAL PRIOR TO THE MANUFACTURE OR USE OF SUCH ITEMS.
- ALL QUANTITIES SHOWN HEREIN ARE APPROXIMATE AND USED FOR PERMIT AND BOND PURPOSES ONLY. THEY SHALL NOT BE USED IN ANY WAY FOR BIDDING OR CONSTRUCTION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO CONDUCT QUANTITY TAKE-OFFS FOR BIDDING AND CONSTRUCTION PURPOSES.
- INSPECTION REQUIREMENTS SHALL BE IN ACCORDANCE WITH CITY OF SPARKS STANDARDS OR THE STANDARD SPECIFICATIONS, WHICH EVER IS THE MORE STRINGENT.
- CONTRACTOR SHALL REVIEW THE STORM WATER POLLUTION PREVENTION PLANS (SWPPP) AND CONSTRUCT ALL REQUIRED ITEMS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY. CONTRACTOR TO COORDINATE WITH OWNER/DEVELOPER FOR THE MAINTENANCE AND UPDATING OF REQUIREMENTS PER THE SWPPP.
- THE CONTRACTOR SHALL ELIMINATE ALL MOSQUITO BREEDING PLACES WITHIN THE GRADED AREAS.

**GENERAL NOTES (CONTINUED)**

- UNTIL A REGIONAL TESTING AND CERTIFICATION PROGRAM IS DEVELOPED AND IN-PLACE, A BITUMINOUS MIXING PLANT INSPECTION SHALL BE REQUIRED FOR EACH DAY OF ASPHALT PAVEMENT PLACEMENT OR PORTION THEREOF. THIS INSPECTION SHALL INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING:
  - COLLECTION OF SAMPLES-AGGREGATE AND ALPHALT CEMENT;
  - VERIFICATION OF LIME ADDITION TO THE MIX;
  - VERIFICATION OF TEMPERATURE OF MIX LEAVING PLANT;
  - VERIFICATION OF ASPHALT CEMENT TYPE AND OBTAINANCE OF REFINERY CERTIFICATION.
- SHOULD AN OBVIOUS PROBLEM BE OBSERVED, THE ENGINEER OF RECORD SHALL BE INFORMED IMMEDIATELY, AND THE ENGINEER OF RECORD SHALL REQUIRE CORRECTIVE ACTION.
- NO CONSTRUCTION EQUIPMENT SHALL BE PARKED OR MATERIAL STORED ON CONCRETE OR ASPHALT SURFACES TO BE MAINTAINED BY THE CITY OF SPARKS.
- ALL PAVEMENT MARKINGS SHALL BE 60 MIL. REFLECTIVE THERMOPLASTIC FOR ALL LEGEND MARKINGS AND WATERBORNE PAINT FOR ALL CENTERLINE STRIPING. INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.

**UTILITY NOTES**

- ALL WATER AND SEWER LINES SHALL HAVE A MINIMUM OF A 10' HORIZONTAL SEPARATION OR AN 18" VERTICAL SEPARATION AT CROSSINGS. IN THE EVENT THAT THE WATER MAIN IS TO CROSS BELOW OR WITHIN 18" OF THE SANITARY SEWER MAIN, THE SEWER MAIN SHALL BE DUCTILE IRON OR ENCASED IN CONCRETE FOR A MINIMUM OF 10' ON EITHER SIDE OF THE WATER MAIN.
- ALL EXISTING UTILITIES BEING TIED INTO SHALL BE EXPOSED TO CHECK FOR GRADE CONFORMANCE TO THOSE SHOWN ON THE PLANS. IF A DISCREPANCY OCCURS, CONTACT THE ENGINEER IMMEDIATELY BEFORE PROCEEDING.
- THE CONTRACTOR SHALL HAVE EXISTING UTILITIES LOCATED BY CALLING "USA" TOLL FREE AT 1-800-642-2444.
- THE GAS AND WATER SYSTEMS SHALL BE OWNED AND MAINTAINED BY NV ENERGY AND TMWA. CONSTRUCTION OF THE WATER SYSTEM SHALL BE COORDINATED WITH TMWA.
- ELECTRICAL, TELEPHONE, CABLE TELEVISION AND COMMUNICATION FACILITIES ARE NOT SHOWN ON THESE PLANS. THE DEVELOPER SHALL COORDINATE WITH THE APPROPRIATE UTILITY COMPANY FOR MAKING APPLICATION FOR THE DESIGN OF EACH UTILITY COMPANY'S FACILITIES.
- ALL PVC WATER PIPE SHALL BE PRESSURE TESTED IN ACCORDANCE WITH AWWA C605-05.
- GAS AND WATER SHOWN HEREON ARE SCHEMATIC ONLY. DESIGN SHALL BE BY NV ENERGY AND TMWA.

**GRADING NOTES:**

- ADD 4500' TO ALL FINISHED GRADE ELEVATIONS.
- ALL GRADING SHALL BE PER THE GEOTECHNICAL REPORTS BY WOOD RODGERS, INC. RECOMMENDATIONS. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SAID REPORT PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ENGINEERS ATTENTION IMMEDIATELY IN ORDER FOR A DETERMINATION FOR A DETERMINATION TO BE MADE.
- ELEVATIONS SHOWN ARE TOP OF CURB WHEN LOCATED AT THE CURB LINE, OR FINISH GRADE WHEN LOCATED AT STREET CENTERLINE OR WITHIN A LOT.
- FINISH GRADE REPRESENTS THE ELEVATION OF THE FINISHED SURFACE. IF LOCATED IN A LOT OR COMMON AREA, THE GRADE REPRESENTS THE FINAL SURFACE. IF TOP SOIL IS TO BE PLACED, THE CONTRACTOR SHALL ADJUST THE GRADE SHOWN. IF SHOWN AT CENTERLINE, THE GRADE REPRESENTS THE FINISHED SURFACE GRADE OF THE AC. IF SHOWN AT A HOUSE PAD, THE GRADE REPRESENTS THE FINISHED GRADE AROUND THE EXTERIOR OF THE HOUSE, INCLUDING LANDSCAPING TREATMENTS. FINISH GRADE AT THE RADIUS POINT OF A CUL-DE-SAC OR A STREET WITH AN ISLAND WITH A PLANTER ISLAND IS THE ELEVATION AT WHICH THE ASPHALT WOULD BE PROJECTED TO; IT IS NOT THE ELEVATION OF THE SOIL FOR THE LANDSCAPE ISLAND.
- ALL LOT IMPROVEMENTS (IE WALLS, HOUSES, DRIVEWAYS, LANDSCAPE WALLS, ETC.) SHOWN ARE FOR ILLUSTRATIVE PURPOSES ONLY AND TO HELP IN THE DETERMINATION OF EARTHWORK QUANTITIES. ALL SAID LOT IMPROVEMENTS MAY NOT BE A PART OF THE EXHIBIT "A".
- CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING AROUND EXISTING UTILITIES AND EXISTING ROADS.
- CONTRACTOR SHALL HAVE APPROVED DUST CONTROL, GRADING PERMITS AND STORM WATER POLLUTION PREVENTION PLAN PRIOR TO STARTING CONSTRUCTION.
- CONTRACTOR SHALL USE EXTREME CARE IN WORKING IN AREAS OUTSIDE THE SUBDIVISION BOUNDARY SO AS TO MINIMIZE DISTURBANCE OF EXISTING VEGETATION.
- CONTRACTOR SHALL COMPLY WITH THE APPROVED STORM WATER DISCHARGE PERMIT BY NEVADA STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND COMPLY WITH THE SWPPP.
- CONTRACTOR SHALL PROVIDE THE NECESSARY CONSTRUCTION DE-WATERING TO PROPERLY CONSTRUCT THE IMPROVEMENTS.
- CONTRACTOR SHALL CONSTRUCT BUILDING PADS TO THE PAD ELEVATION SHOWN. THE FINISH GRADE (FG) ELEVATION IS THE PROPOSED GRADE AT HOUSE CONSTRUCTION TIME.
- INDIVIDUAL LOT OWNERS MUST SUBMIT A SITE AND GRADING PLAN, PREPARED BY A REGISTERED CIVIL ENGINEER WHEN APPLYING FOR A BUILDING PERMIT.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF SPARKS ENGINEERING DIVISION AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK AND ONLY AFTER A PRE-CONSTRUCTION MEETING BETWEEN THE CITY OF SPARKS, ENGINEER OF RECORD, MATERIALS TESTING LABORATORY, AND GENERAL CONTRACTOR HAS OCCURRED.
- THE INSPECTION AND TESTING OF SOILS AND ALL OTHER MATERIALS SHALL BE IN CONFORMANCE WITH THE CITY OF SPARKS QUALITY STANDARDS.
- BEDDING MATERIAL: CLASS "A" BACKFILL SHALL BE USED FOR PIPE BEDDING MATERIAL EXCEPT BELOW THE WATER TABLE WHERE CLASS "C" BACKFILL SHALL BE PROVIDED.
- CONCRETE: CONCRETE SHALL DEVELOP A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI. MIN. SLUMP SHALL BE 1" MAX. SHALL BE 4". AIR ENTRAINMENT SHALL BE 6.5% +/- 1.5% AND A WATER-CEMENT RATIO MAXIMUM OF 0.45

**LEGEND**

EXISTING	PROPOSED	DESCRIPTION
		DRAIN MANHOLE
		SEWER MANHOLE
		DRAIN LINE AND SIZE
		SEWER LINE AND SIZE
		CLEAN OUT
		SEWER SERVICE
		WATER LINE AND SIZE
		RECLAIMED WATER LINE AND SIZE
		WATER LINE REDUCER
		WATER SERVICE
		RECLAIMED WATER IRRIGATION SERVICE
		WATER GATE VALVE
		FIRE HYDRANT
		AIR RELEASE VALVE
		FLUSH VALVE ASSEMBLY
		GAS, TELEPHONE OR ELECTRIC
		STREET LIGHT
		30" R1 SIGN (STOP)
		TRAFFIC SIGN AS NOTED
		CHAIN LINK FENCE
		CHAIN LINK GATE
		DRIVEWAY
		SIDEWALK RAMP
		PROPERTY LINE
		MONUMENT
		TREE TO BE REMOVED/RELOCATED
		SPOT ELEVATION
		WALL HEIGHTS TW=TOP OF WALL BW=BOTTOM OF WALL
		CONCRETE SIDEWALK
		TEMPORARY AGGREGATE BASE
		AC PAVING - ACCESS ROADS
		RIPRAP

**SLOPE STABILIZATION NOTES:**

- ALL AREAS DISTURBED BY GRADING OPERATIONS ARE TO BE REVEGETATED PER THE SPECIFICATIONS BELOW. CONTRACTOR IS RESPONSIBLE TO PROTECT THE AREAS OF REVEGETATION DURING THE ESTABLISHMENT PERIOD OF THE PLANT GROWTH.
- SLOPES 3:1 TO 5:1 SLOPE PREPARATION:
- EXCEPT IN AREAS LOCATED WITHIN SINGLE FAMILY LOTS OR ALONG COMMON LOT LINES BETWEEN SINGLE FAMILY RESIDENCES, CUT AND FILL SLOPES BETWEEN 3:1 AND 5:1 SHALL BE STABILIZED BY HYDROSEEDING WITH MULCH AND TACKIFIER AND TEMPORARILY IRRIGATED (IF REQUIRED) UNTIL ESTABLISHED TO THE SATISFACTION OF THE CITY ENGINEER. SATISFACTION OF GROWTH MUST OCCUR WITHIN THE FIRST YEAR OF REVEGETATION. IF NOT ACHIEVED, CONTRACTOR SHALL REHYDROSEED UNACCEPTABLE AREAS AND PROVIDE IRRIGATION UNTIL SATISFACTION OF CITY ENGINEER IS MET.
- SLOPES STEEPER THAN 3:1 SLOPE PREPARATION:
- AFTER THE SLOPE HAS BEEN COMPACTED, THE TOP 3" OF SOIL SHALL BE DISCED AND THEN INSPECTED BY THE CITY ENGINEER. STABILIZE WITH EROSION CONTROL BLANKETS (BON TERRA C52 OR APPROVED EQUAL) AND REVEGETATED PER SPECIFICATIONS BELOW. PLANTING:
  - THE SEED MIXTURE AND APPLICATION RATE FOR THE SLOPE STABILIZATION SHALL BE TO THE APPROVAL OF THE LANDSCAPE FIRM. SEED SHALL BE DRILLED TO THE SOIL TO A DEPTH RECOMMENDED BY THE SEED SUPPLIER AND LANDSCAPE FIRM.
- ROCK RIP-RAP:
- WHEN ROCK RIP-RAP IS USED FOR SLOPE STABILIZATION, IT SHALL CONTAIN A MINIMUM OF FOUR FRACTURED FACES UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER AND SHALL BE PLACED TO A MINIMUM DEPTH OF 12 INCHES. A MINIMUM OF 75% OF THE RIP-RAP SHALL BE 8-INCH DIAMETER ROCK OR GREATER.

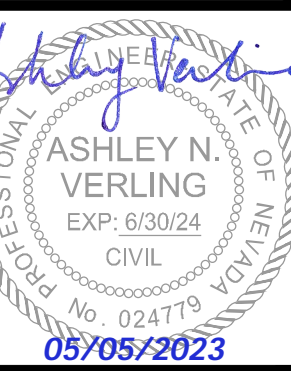
**ABBREVIATIONS**

AB	AGGREGATE BASE
AC	ASPHALT CONCRETE PAVEMENT
AVRV	AIR VACUUM RELIEF VALVE
BC	BEGIN CURVE
BM	BENCH MARK
BVC	BEGIN VERTICAL CURVE
BOW	BACK OF WALK
BW	BOTTOM OF WALL
CB	CATCH BASIN
CL	CENTER LINE
CONST	CONSTRUCT
CR	CURB RETURN
CT	COURT
DIP	DUCTILE IRON PIPE
SDMH	STORM DRAIN MANHOLE
DR	DRIVE
E	EAST
EC	END CURVE
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EX	EXISTING
EXIST	EXISTING
EVC	END OF VERTICAL CURVE
FES	FLARED END SECTION
FG	FINISH GRADE ELEVATION
FH	FIRE HYDRANT
FL	FLOW LINE
FLG	FLANGE
FM	FORCE MAIN
FVA	FLUSH VALVE ASSEMBLY
GR	GRATE
GB	GRADE BREAK
GV	GATE VALVE
HP	HIGH POINT
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
JP	JOINT POLE
L	LEFT
LF	LINEAR FEET
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
MON	MONUMENT
N	NORTH
PCC	POINT OF COMPOUND CURVE
PI	POINT OF INTERSECTION
PINC	POINT OF INTERSECTION VERTICAL CURVE
PL	PROPERTY LINE
PP	POWER POLE
R, R=	RADIUS
RCB	REINFORCED CONCRETE BOX
RCP	REINFORCED CONCRETE PIPE
PRC	POINT OF REVERSE CURVATURE
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
RCW	RECLAIMED WATER
R	RIGHT
RW	RIGHT OF WAY
S	SOUTH
SE	SANITARY SEWER EASEMENT
SHT	SHEET
STA	STATION
SS	SANITARY SEWER SERVICE
SSMH	SANITARY SEWER MANHOLE
SW	SIDEWALK
T	TANGENT
TBC,TC	TOP BACK OF CURB
TP	TYPICAL
TP	TELEPHONE POLE
TW	TOP OF WALL
W	WEST
WM	WATER MAIN

**CITY OF SPARKS APPROVAL**

Jon R. Ericson, PE, PTOE  
City Engineer

DATE: MAY, 2023  
SCALE: NTS  
DRAWN BY: ANV  
DESIGNED BY: ANV  
CHECKED BY: CDC



**WOOD RODGERS**  
DESIGNERS ENGINEERS ARCHITECTS  
1440 Reno Corporate Drive  
Reno, NV 89511  
Tel: 775.853.4086  
Fax: 775.853.4086

NEVADA

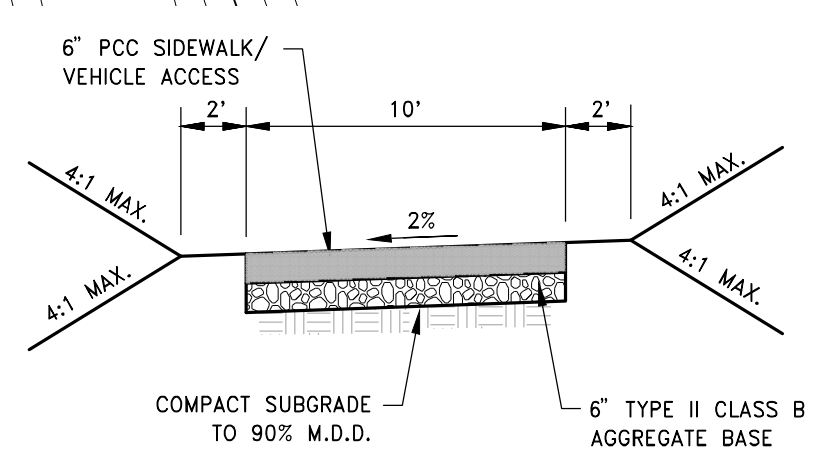
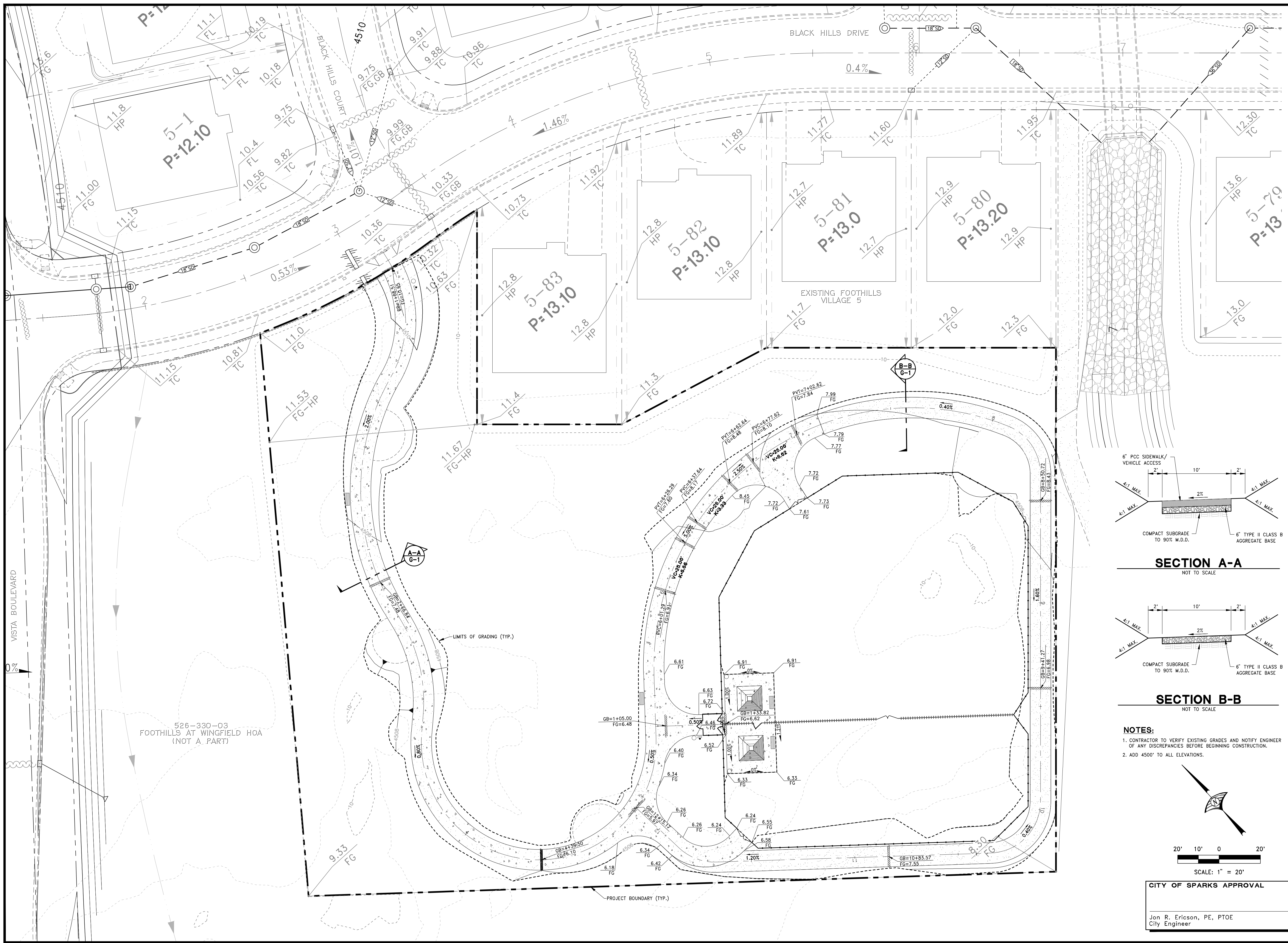
IMPROVEMENT PLANS FOR  
**FOOTHILLS VILLAGE 5  
BLACK HILLS DRIVE PARK**  
GENERAL NOTES AND ABBREVIATIONS

PROJECT NO.  
8523.018

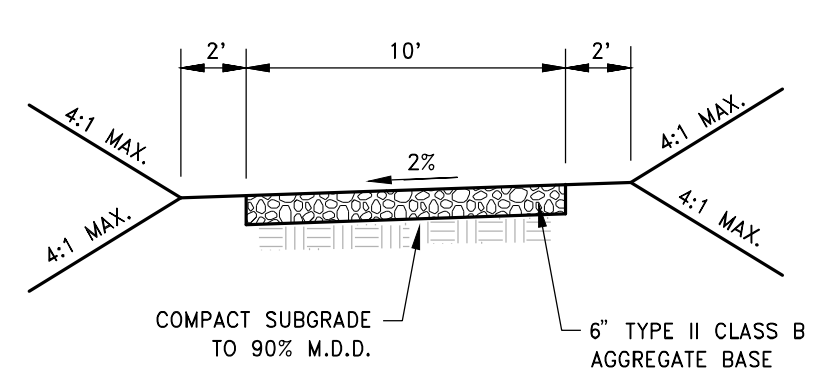
DRAWING  
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SHT 1 OF 4



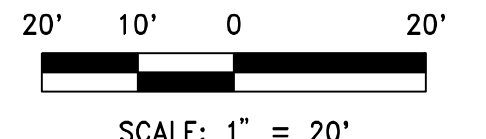
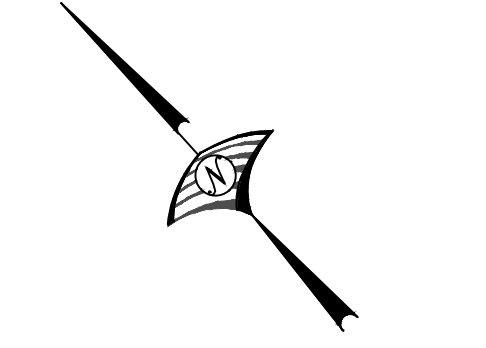


**SECTION A-A**  
NOT TO SCALE



**SECTION B-B**  
NOT TO SCALE

- NOTES:**
- CONTRACTOR TO VERIFY EXISTING GRADES AND NOTIFY ENGINEER OF ANY DISCREPANCIES BEFORE BEGINNING CONSTRUCTION.
  - ADD 4500' TO ALL ELEVATIONS.

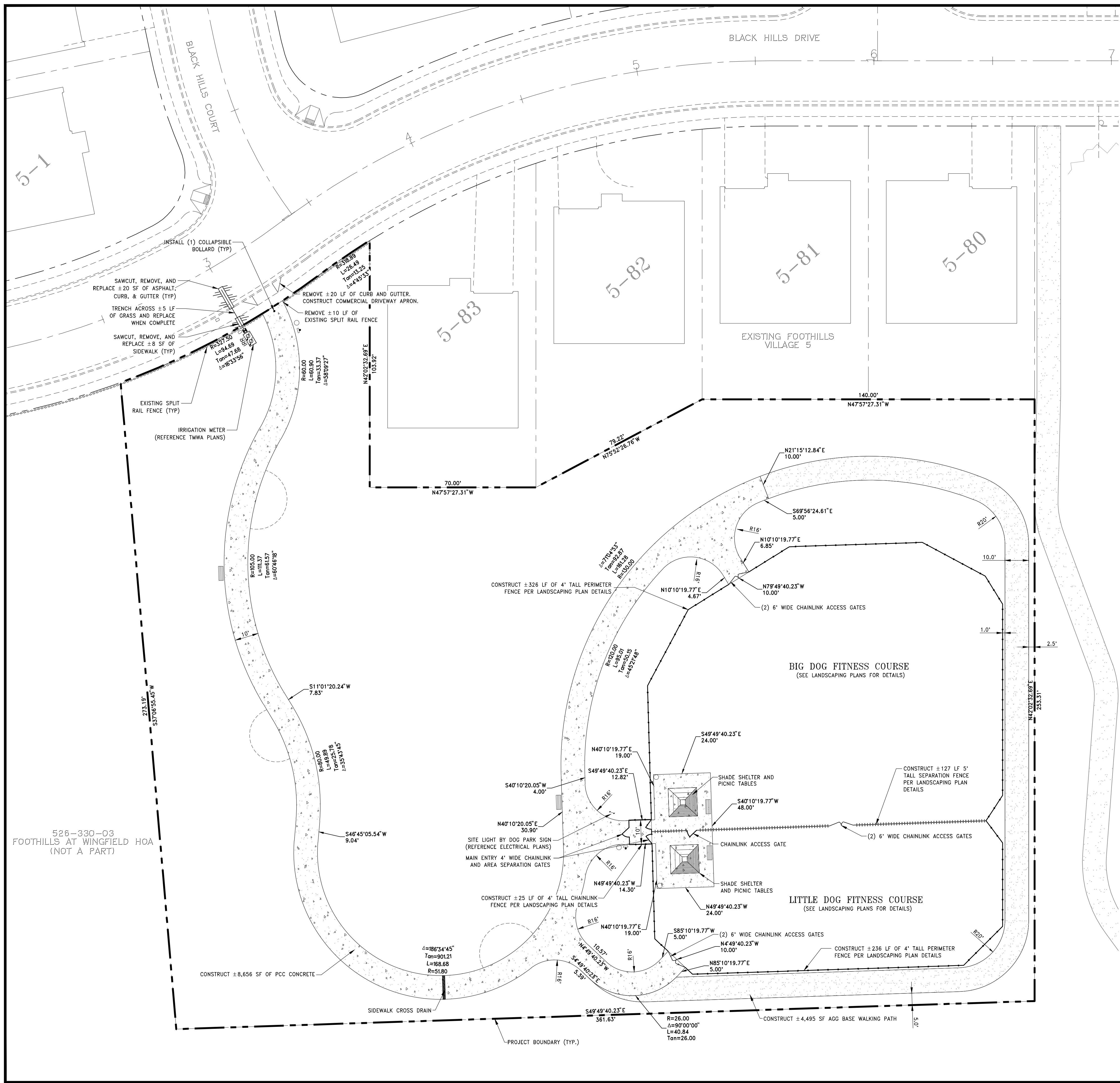


**CITY OF SPARKS APPROVAL**

Jon R. Ericson, PE, PTOE  
City Engineer

DATE: MAY, 2023	SCALE: 1" = 20'	DRAWN BY: ANV	DESIGNED BY: ANV	CHECKED BY: CDC
<b>WOOD RODGERS</b> DEVELOPING INNOVATIVE DESIGN QUALITY 4440 Foothills Corporate Drive   Tel: 775.823.4088 Reno, NV 89511   Fax: 775.823.4086				
<b>IMPROVEMENT PLANS FOR FOOTHILLS VILLAGE 5 BLACK HILLS DRIVE PARK</b>				
<b>GRADING PLAN</b>				
PROJECT NO. 8523.018 DRAWING <b>G-1</b> SHT 2 OF 4				

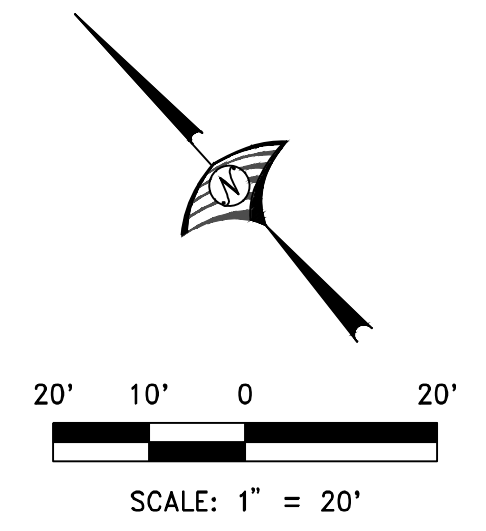




**CONSTRUCTION NOTES:**

1. CONSTRUCTION HOURS. CONSTRUCTION ACTIVITIES AT THE DEVELOPMENT MAY COMMENCE NO EARLIER THAN 5:00 A.M. AND MUST CEASE NO LATER THAN 7:00 P.M. MONDAY THROUGH FRIDAY, AND FROM 9:00 A.M. TO 5:00 P.M. ON SATURDAY. THERE WILL BE NO CONSTRUCTION ACTIVITIES PERMITTED ON SUNDAY. CONSTRUCTION ACTIVITIES INCLUDE ANY START-UP OF MACHINERY WHICH INVOLVES MATERIAL NOISE TO ANY ADJOINING RESIDENCE OR BUSINESS. THE FOREGOING LIMITATIONS SHALL NOT BE APPLICABLE TO ANY ACTIVITIES INVOLVING DUST CONTROL PROCEDURES PURSUANT TO THE DUST CONTROL PLAN, AS HEREINAFTER DEFINED, VEHICLE OR EQUIPMENT MAINTENANCE, DELIVERY OR MATERIAL (EXCLUDING, HOWEVER, HAULING OF FILL OR DIRT), OR IN THE EVENT OF AN ACTIVITY IN RESPONSE TO AN EMERGENCY SITUATION AT THE DEVELOPMENT. NOTWITHSTANDING THE FOREGOING, THE PARTIES ACKNOWLEDGE THAT THE CONTRACTOR MAY SUBMIT A PLAN TO THE CITY ENGINEER FOR APPROVAL FOR TEMPORARY PERIODS OF CONSTRUCTION ACTIVITIES ON A TWENTY-FOUR (24) HOUR, SEVEN (7) DAY A WEEK BASIS IN THE EVENT IT BECOMES NECESSARY IN ORDER TO COMPLETE PAVING ACTIVITIES PRIOR TO THE ONSET OF ADVERSE WEATHER CONDITIONS. SUCH PLAN MAY INCLUDE TEMPORARY CONSTRUCTION LIGHTING, BUT SHALL PROVIDE FOR REASONABLE MITIGATION FROM SUCH LIGHTING AND NOISE FOR SURROUNDING RESIDENCES AND/OR BUSINESSES. THE CONTRACTOR CAN SUBMIT FOR A TEMPORARY USE PERMIT TO REQUEST WORKING OUTSIDE THE ORDINARY WORKING HOURS. THE PERMIT CAN BE DOWNLOADED FROM THE CITY'S WEBSITE OR THE CITY'S BUILDING COUNTER.
2. TRAFFIC CONTROL PLAN. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES AT THE DEVELOPMENT, THE CONTRACTOR SHALL SUBMIT A PLAN FOR THE ORDERLY CONTROL AND REGULATION OF CONSTRUCTION RELATED TRAFFIC AT THE DEVELOPMENT, INCLUDING, WITHOUT LIMITATION, THE PROCEDURES RELATING TO SAFETY OF PUBLIC TRAFFIC. TO THE EXTENT THEREOF, AND EMERGENCY ACCESS THROUGH THE DEVELOPMENT, DURING THE COURSE OF CONSTRUCTION TO THE CITY PUBLIC WORKS DIRECTOR FOR APPROVAL. CONTRACTOR SHALL USE REASONABLE EFFORTS TO MAINTAIN TWO-WAY TRAFFIC THROUGHOUT THE CONSTRUCTION PROCESS WITH A MAXIMUM DELAY OF FIFTEEN (15) MINUTES, EXCEPT TO THE EXTENT THE CITY PUBLIC WORKS DIRECTOR APPROVES THE TEMPORARY CLOSURE OF PORTIONS OF THE ROADWAY DUE TO PUBLIC SAFETY CONSIDERATIONS. THE TRAFFIC CONTROL PLAN SHALL ALSO SET FORTH THE INTENDED HAUL ROUTES FROM TIME TO TIME FOR DIRT MOVING DURING THE COURSE OF CONSTRUCTION IN ORDER TO AVOID EXCESSIVE LOAD ON SEWER AND WATER LINES IN THE DEVELOPMENT AND THE AREAS ADJOINING THE DEVELOPMENT. NO CONSTRUCTION MAY OCCUR PRIOR TO THE APPROVAL OF THE TRAFFIC CONTROL PLAN. AS CONSTRUCTION PROGRESSES THROUGH THE VARIOUS PHASES OF THE DEVELOPMENT, IT IS ANTICIPATED THAT THE TRAFFIC CONTROL PLAN, INCLUDING HAUL ROUTES, WILL REQUIRE CERTAIN CHANGES FROM TIME TO TIME. PRIOR TO DEVIATION FROM THE APPROVED TRAFFIC PLAN OR HAUL ROUTES, CONTRACTOR SHALL SUBMIT A REVISED TRAFFIC PLAN TO THE CITY PUBLIC WORKS DIRECTOR FOR ITS APPROVAL, WHICH SHALL, UPON SUCH APPROVAL, BECOME THE GOVERNING TRAFFIC PLAN FOR THE DEVELOPMENT. THE CONTRACTOR SHALL MAINTAIN THE ROADWAY SURFACE IN A CONDITION SATISFACTORY TO THE CITY PUBLIC WORKS DIRECTOR THROUGHOUT THE COURSE OF THE CONSTRUCTION.
3. DUST CONTROL. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES AT THE DEVELOPMENT, CONTRACTOR SHALL SUBMIT TO THE WASHOE COUNTY DISTRICT HEALTH DEPARTMENT (THE HEALTH DEPARTMENT) A PLAN FOR DUST CONTROL AT THE DEVELOPMENT. THE PLAN SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF NEVADA LAW, INCLUDING, WITHOUT LIMITATION, THE POLLUTION CONTROL AND NPDES REGULATIONS OF THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION. SUCH STORM WATER POLLUTION PREVENTION PLAN, WHEN APPROVED BY THE HEALTH DEPARTMENT, SHALL BE REFERRED TO HEREIN AS THE DUST CONTROL PLAN AND SHALL BE DEEMED A PART OF THIS AGREEMENT. CONTRACTOR SHALL, AND SHALL CAUSE ITS SUBCONTRACTORS TO AGREE TO, COMPLY IN ALL MATERIAL RESPECTS WITH THE DUST CONTROL PLAN AND ANY MODIFICATIONS, THERETO REQUIRED DURING THE COURSE OF CONSTRUCTION OF THE DEVELOPMENT SHALL BE SUBMITTED TO THE HEALTH DEPARTMENT FOR APPROVAL.
4. CONSTRUCTION YARD. CONTRACTOR SHALL BE ENTITLED TO MAINTAIN A CONSTRUCTION STORAGE YARD OR YARDS (THE CONSTRUCTION YARD) AT THE LOCATION AT THE DEVELOPMENT APPROVED FROM TIME TO TIME IN ACCORDANCE WITH THE PROVISIONS OF THIS AGREEMENT. PRIOR TO THE ESTABLISHMENT OF ANY CONSTRUCTION YARD AT THE DEVELOPMENT, CONTRACTOR SHALL SUBMIT TO THE CITY PUBLIC WORKS DIRECTOR AND THE COMMUNITY DEVELOPMENT DIRECTOR A PLAN FOR EACH CONSTRUCTION YARD AT THE DEVELOPMENT, WHICH PLAN SHALL DESCRIBE THE LOCATION OF THE CONSTRUCTION YARD(S), THE FENCING AND SCREENING TO BE INSTALLED, AND THE ASPHALT APRON TO BE CONSTRUCTED AT THE JUNCTION OF THE PAVED ROAD ADJOINING THE CONSTRUCTION YARD. THE HOURS OF OPERATION OF THE CONSTRUCTION YARD SHALL BE NO EARLIER THAN 7:00 A.M. AND NO LATER THAN 7:00 P.M., MONDAY THROUGH FRIDAY; & NO EARLIER THAN 9:00 A.M. AND NO LATER THAN 5:00 P.M. ON SATURDAY. THE FOREGOING LIMITATIONS ON HOURS AND DAYS OF OPERATION SHALL NOT APPLY TO OPERATIONS RELATED TO DUST CONTROL.

526-330-03  
FOOTHILLS AT WINGFIELD HOA  
(NOT A PART)

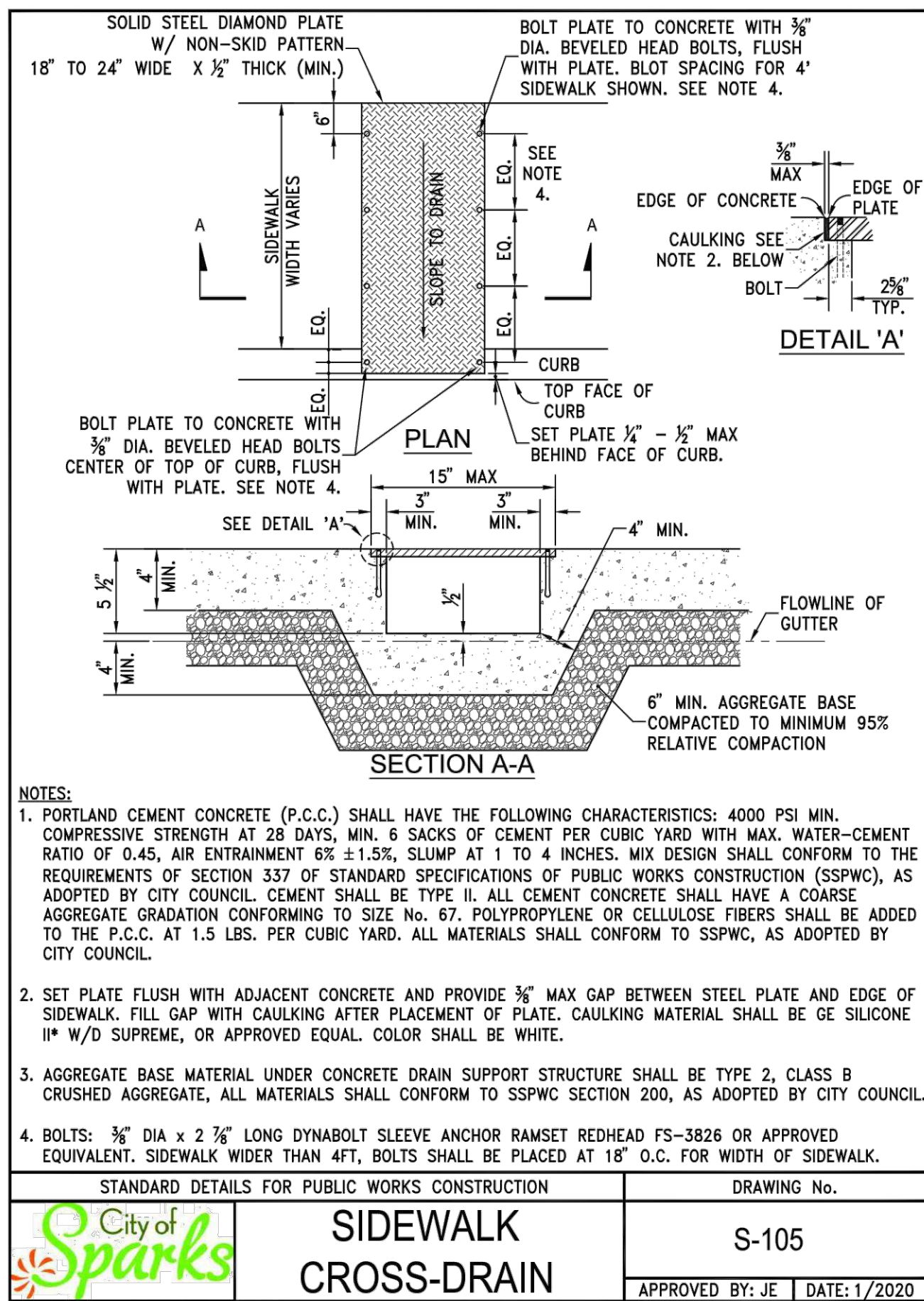


**CITY OF SPARKS APPROVAL**  
  
Jon R. Ericson, PE, PTOE  
City Engineer

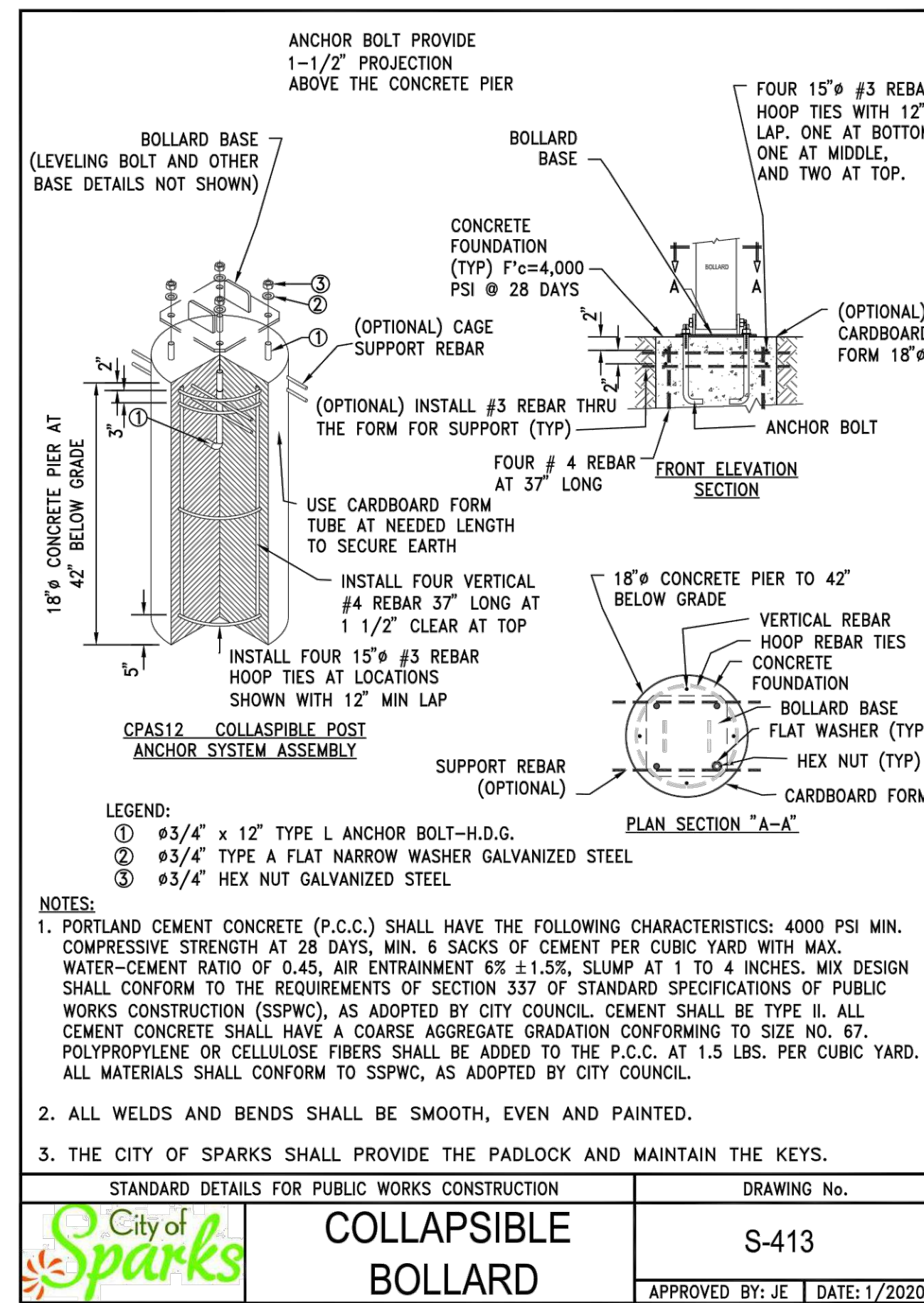
DATE: MAY, 2023	SCALE: 1" = 20'	DRAWN BY: ANV	DESIGNED BY: ANV	CHECKED BY: CDC
<b>WOOD RODGERS</b> DEVELOPMENT DESIGN & CONSTRUCTION 4440 Fwyo Corporate Drive Reno, NV 89511 Tel: 775.823.4088 Fax: 775.823.4086				
<b>IMPROVEMENT PLANS FOR</b> <b>FOOTHILLS VILLAGE 5</b> <b>BLACK HILLS DRIVE PARK</b> <b>SITE PLAN</b>				
PROJECT NO. 8523.018 DRAWING 9-1 SHT 3 OF 4				

J:\Jobs\1309-Foothills\Foothills-005\Civil\DWG\Park Plans 2015\C\_05\_FHW\_VSPARK-301.dwg 5/5/2023 1:41 PM Ashley Verling

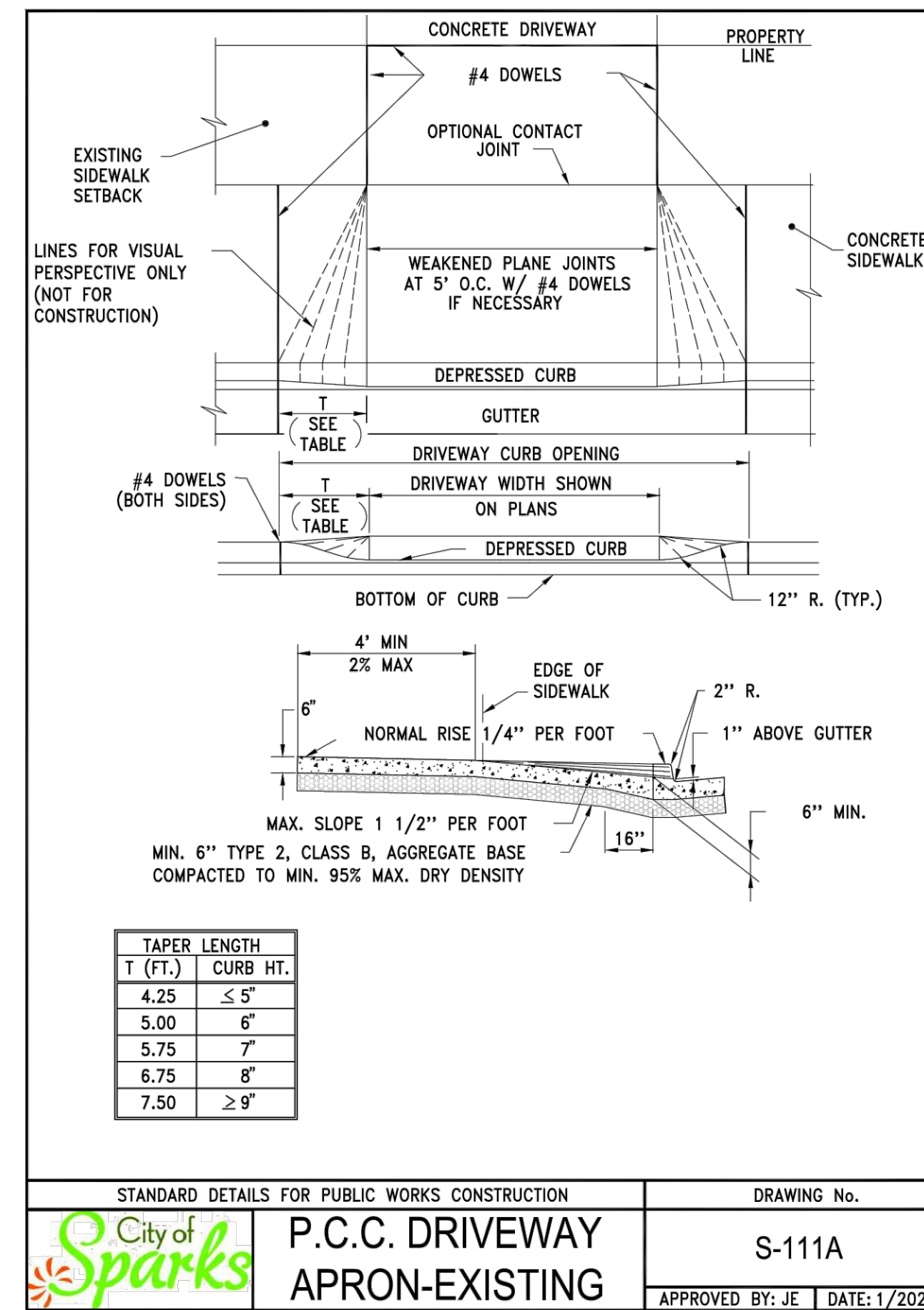




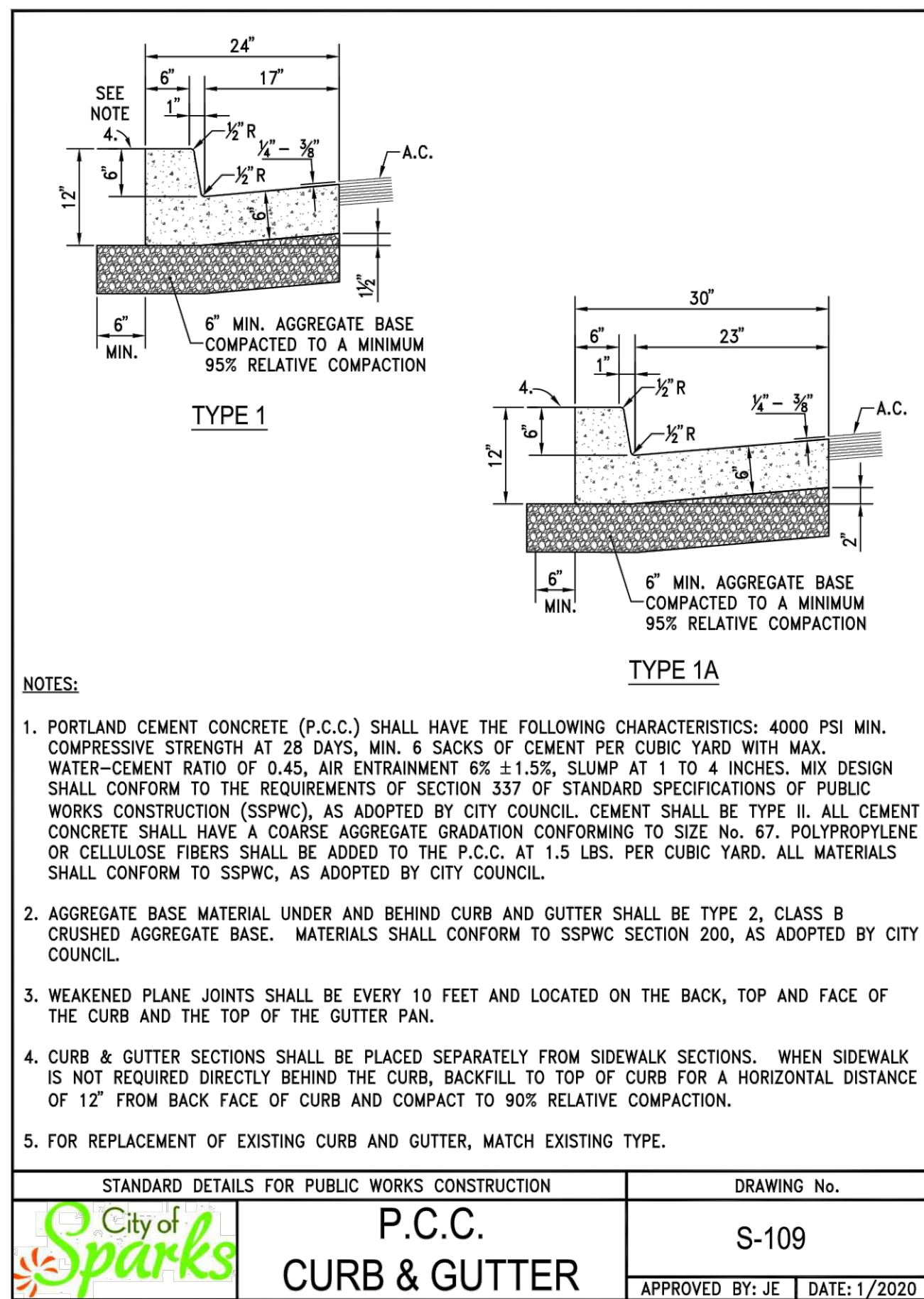
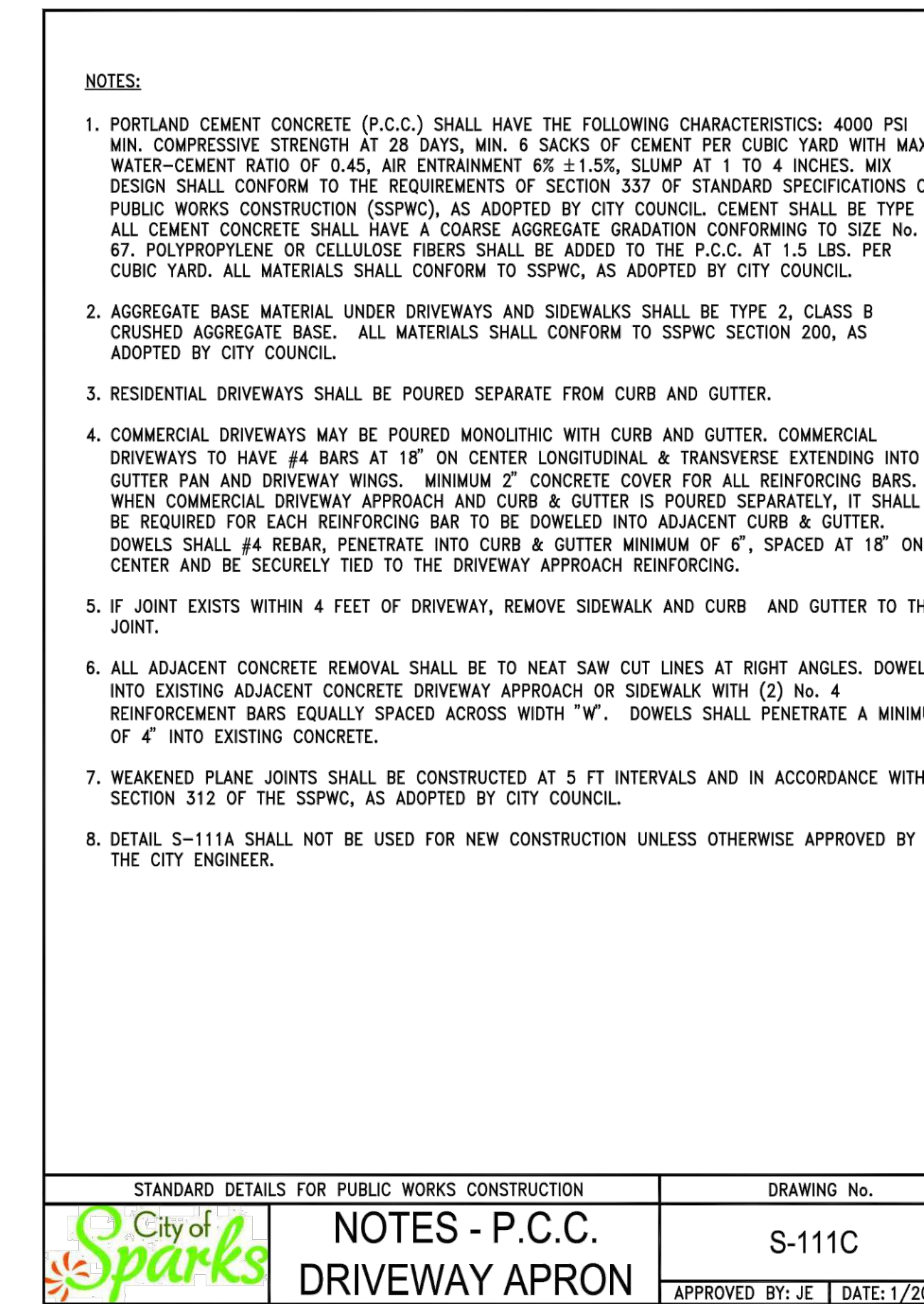
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>SIDWALK CROSS-DRAIN</b>	<b>S-105</b>
APPROVED BY: JE	DATE: 1/2020



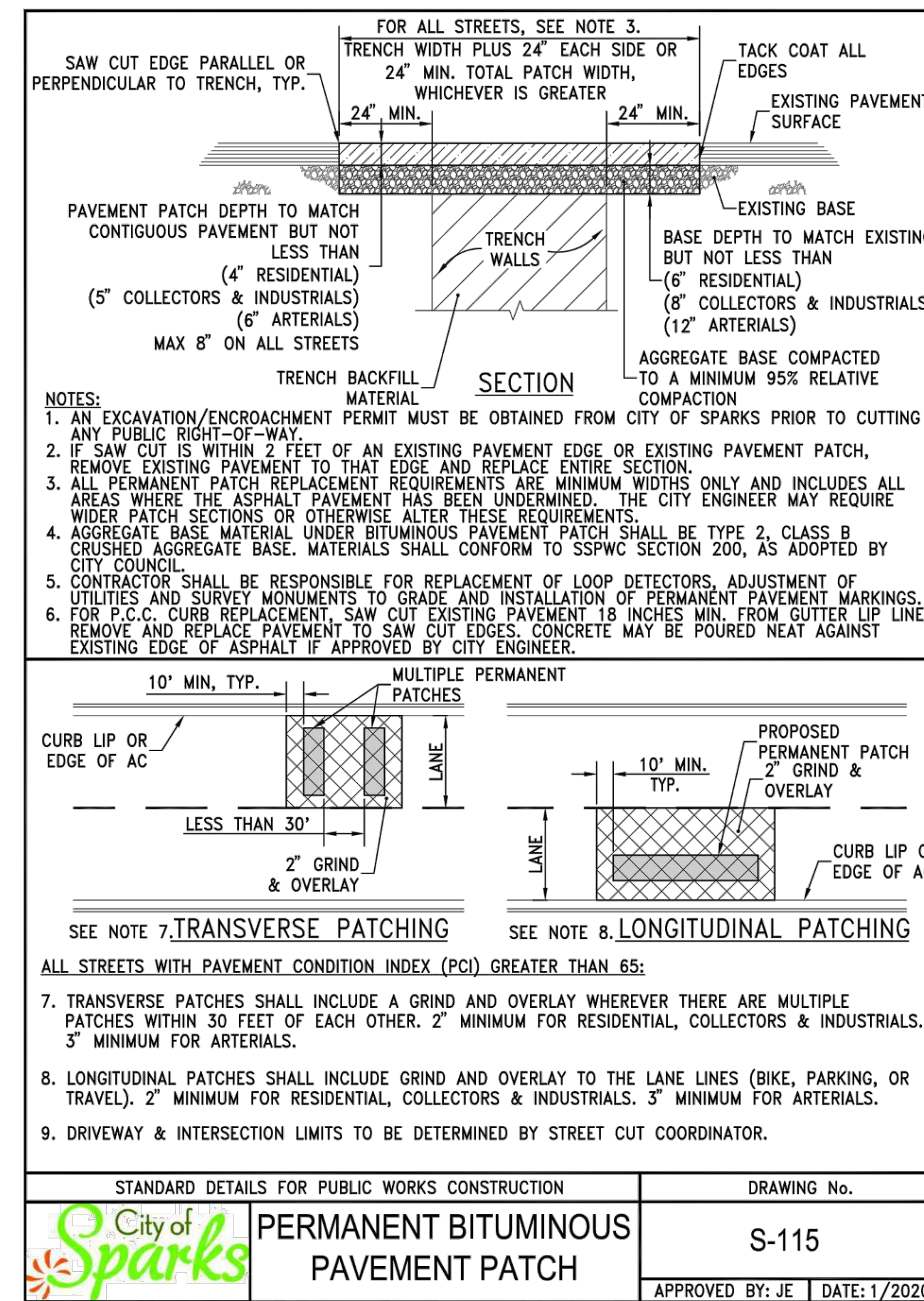
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>COLLAPSIBLE BOLLARD</b>	<b>S-413</b>
APPROVED BY: JE	DATE: 1/2020



STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>P.C.C. DRIVEWAY APRON-EXISTING</b>	<b>S-111A</b>
APPROVED BY: JE	DATE: 1/2020



STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>P.C.C. CURB &amp; GUTTER</b>	<b>S-109</b>
APPROVED BY: JE	DATE: 1/2020



STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	DRAWING No.
<b>PERMANENT BITUMINOUS PAVEMENT PATCH</b>	<b>S-115</b>
APPROVED BY: JE	DATE: 1/2020

**CITY OF SPARKS APPROVAL**

Jon R. Ericson, PE, PTOE  
City Engineer

DATE: MAY, 2023  
SCALE: NTS  
DRAWN BY: ANV  
DESIGNED BY: ANV  
CHECKED BY: CDC

ASHLEY N. VERLING  
EXP. 6/30/24  
CIVIL  
NO. 024779  
05/05/2023

**WOOD RODGERS**  
DESIGNERS, ENGINEERS, ARCHITECTS  
4440 Reno Corporate Drive  
Reno, NV 89511  
Tel: 775.853.4088  
Fax: 775.853.4088

NEVADA

IMPROVEMENT PLANS FOR  
**FOOTHILLS VILLAGE 5  
BLACK HILLS DRIVE PARK**

WASHOE COUNTY  
**DETAIL SHEET**

PROJECT NO. 8523.018  
DRAWING **D-1**  
SHT 4 OF 4



**TRUCKEE MEADOWS WATER AUTHORITY:**

**APPLICANT TO FURNISH AND/OR INSTALL:**

ALL TRENCHING AND EXCAVATION PER TWMA ENGINEERING & CONSTRUCTION STANDARDS SECTIONS 4 AND 5.  
 ALL SURVEY STAKING NECESSARY TO CLARIFY RIGHT-OF-WAY, EASEMENTS, PROPERTY LINES, ELEVATIONS, ETC.  
 ALL NECESSARY PERMITS, PAVEMENT CUTTING, PAVEMENT REMOVAL, AND PAVEMENT REPLACEMENT.

APPLICANT TO INSTALL WATER METER SETTER AND ENCLOSURE.  
 WATER METER INSTALLED BY TWMA.

ALL REQUIRED LINE PRESSURE TESTS AND WELDING/FUSION QUALITY TESTS SHALL BE PERFORMED IN ACCORDANCE WITH AWWA C600, C605 AND TWMA ENGINEERING & CONSTRUCTION STANDARDS. MOST STRINGENT STANDARD SHALL APPLY. ALL PRESSURE TESTS SHALL BE PERFORMED BEFORE THE PIPING IS FLUSHED, DISINFECTED OR SAMPLED FOR AN ANALYSIS OF WATER QUALITY.

ADDRESSES OR BUILDING DESIGNATION.

LETTER TO VERIFY THAT ELEVATIONS ARE AT ENGINEERED SUB-GRADES PRIOR TO UTILITY CONSTRUCTION.

ALL PRIVATE DOMESTIC AND IRRIGATION LINES BEYOND THE POINT OF CONNECTION AT TWMA'S METER PROVISION AND ALL NECESSARY WATER PRESSURE REGULATION EQUIPMENT (REFER TO THE MOST CURRENT EDITION OF THE UNIFORM PLUMBING CODE WHICH HAS BEEN ADOPTED BY THE GOVERNMENTAL ENTITY HAVING JURISDICTION OVER THE PROJECT).

WATER MAINS SHALL NOT BE PLACED IN SERVICE UNTIL DISINFECTED PER AWWA STANDARD C651 AND AN ANALYSIS WHICH INDICATES IT MEETS PRIMARY STANDARDS FOR COLIFORM BACTERIA HAS BEEN OBTAINED. FINAL WATER QUALITY TESTS WILL BE FORWARDED TO THE REVIEWING AGENCY UPON COMPLETION OF ANALYSIS.

CONTRACTOR TO COORDINATE WITH TWMA INSPECTOR REGARDING DISCHARGE OF SPENT CHLORINATED WATER.

ALL RESTRAINED JOINT PIPING SHALL BE DUCTILE IRON PIPE (RJ-DIP). BELL AND SPIGOT PUSH-ON JOINTS SHALL BE RESTRAINED USING RUBBER GASKETS WITH STAINLESS STEEL LOCKING SEGMENTS VULCANIZED INTO THE RUBBER GASKET. RESTRAINED JOINT FITTINGS SHALL BE MECHANICAL JOINT (MJ) DUCTILE IRON RESTRAINED WITH MECHANICAL JOINT WEDGE ACTION RESTRAINT GLANDS.

ALL CONCRETE FOR THRUST BLOCKS PER TWMA ENGINEERING & CONSTRUCTION STANDARDS AND DRAWING NUMBER 10L-2.

APPROX. 25' OF 1 1/2" AWWA C901 CTS HDPE TUBING WITH ALL FITTINGS AND APPURTENANCES. (INCLUDING ALL HOT TAPS 2" AND UNDER), IRRIGATION

**SEPARATION BETWEEN WATER SERVICE TAPS:**

**C900 PVC PIPE, IN-SITE (AC) PIPE** - SERVICE TAPS ON THE SAME SIDE OF PIPE SHALL HAVE A MINIMUM 36" SEPARATION. SERVICES STAGGERED SIDE TO SIDE OF PIPE SHALL HAVE A MINIMUM 18" SEPARATION. NO SERVICES ALLOWED WITHIN 24" OF CUT END OR PIPE TO BELL TRANSITION.

**DUCTILE IRON PIPE, CAST IRON PIPE, STEEL PIPE** - SERVICE TAPS ON THE SAME SIDE OF PIPE SHALL HAVE A MINIMUM 18" SEPARATION. SERVICES STAGGERED SIDE TO SIDE OF PIPE SHALL HAVE A MINIMUM 9" SEPARATION. NO SERVICES ALLOWED WITHIN 24" OF CUT END OR PIPE TO BELL TRANSITION.

TRAFFIC RATED (TR) ENCLOSURES SHALL BE USED WHEN LOCATED IN TRAFFIC AREAS OR WITHIN 3' OF DRIVEWAYS.

1 - 17" x 30" SINGLE WATER METER PROVISION ASSEMBLY(IES).

**TWMA TO FURNISH AND/OR INSTALL:**

FIELD INSPECTOR TO INSPECT MAINS AND SERVICES

HOT TAP LABOR (GREATER THAN 2" ONLY)

1 - 1 1/2" IPERL - SENSUS WATER METER(S) FOR IRRIGATION

**GENERAL COMMENTS:**

CONTRACTOR TO CALL PROJECT COORDINATOR AT (775) 834-4800 48-HOURS PRIOR TO START OF CONSTRUCTION TO SCHEDULE ON-SITE INSPECTION. (INCLUDE WORK ORDER NUMBER)

APPLICANT TO NOTIFY TWMA OF ANY DESIGN AND/OR ADDRESS CHANGES.

ALL MATERIALS, INCLUDING BACKFILL, SHALL BE AT THE JOB SITE PRIOR TO START OF CONSTRUCTION AND SHALL COMPLY WITH TWMA ENGINEERING & CONSTRUCTION STANDARDS.

MAINTAIN POTABLE WATER AND SS/SD/NON-POTABLE HORIZONTAL AND VERTICAL CLEARANCES AS SPECIFIED IN NEVADA ADMINISTRATIVE CODE (NAC) SECTION 445A AND TWMA ENGINEERING & CONSTRUCTION STANDARDS SECTION 1.1.

AT ALL CROSSINGS, UNDERGROUND ELECTRIC FACILITIES SHALL BE LOCATED BELOW WATER MAINS AND/OR WATER SERVICES WITH A MINIMUM OF 2- FEET VERTICAL CLEARANCE.

ALL WORK SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH THE SPECIFICATIONS SET FORTH IN THE TWMA ENGINEERING & CONSTRUCTION STANDARDS. THE CONTRACTOR SHALL SECURE COPIES OF THE AFOREMENTIONED CONSTRUCTION SPECIFICATIONS ON HIS/HER OWN BEHALF. THE ENGINEERING & CONSTRUCTION STANDARDS MAY BE DOWNLOADED FROM: [www.twma.com/standards](http://www.twma.com/standards)

SYMBOLS ARE NOT TO SCALE AND DO NOT NECESSARILY REPRESENT ACTUAL LOCATIONS OF FACILITIES.

THESE DRAWINGS ARE BASED ON CIVIL PLANS DATED: FEBRUARY 2022

THIS MAP ILLUSTRATES DATA COLLECTED FROM VARIOUS SOURCES AND MAY NOT REPRESENT A SURVEY OF THE PREMISES. NO RESPONSIBILITY IS ASSUMED AS TO THE SUFFICIENCY OR ACCURACY OF THE DATA DISPLAYED HEREON.

CAUTION: CONTRACTOR IS RESPONSIBLE FOR LOCATING AND COORDINATING WORK AROUND ALL EXISTING UTILITIES. PRIOR TO EXCAVATION, CHECK TO ENSURE ADDITIONAL DEPTH IS NOT REQUIRED TO ACCOMMODATE INSTALLATION OF GAS FACILITIES.

SOILS RETENTION MAY BE REQUIRED AROUND WATER METER BOXES, FIRE HYDRANTS, AND OTHER FACILITIES IF SLOPES EXCEED 15%.

WATER METERS SHALL BE LOCATED WITHIN A PUBLIC UTILITY EASEMENT (PUE).

TOP OF WATER METER ENCLOSURE SHALL BE SET 0.2 FEET ABOVE HIGHEST FINISHED GRADE SURROUNDING ENCLOSURE WITHIN LANDSCAPED AREAS. FOR INSTALLATIONS IN CONCRETE OR OTHER PAVED AREAS, SET TOP OF LID FLUSH WITH SURROUNDING SURFACE.

APPLICANT TO ADVISE PLUMBING CONTRACTOR OF HIS/HER RESPONSIBILITY TO VERIFY WATER PRESSURE DURING STATIC CONDITIONS AT ALL SERVICE LOCATIONS. THE PLUMBING CONTRACTOR IS REQUIRED TO CONFORM TO THE MOST CURRENT EDITION OF THE UNIFORM PLUMBING CODE WHICH HAS BEEN ADOPTED BY THE GOVERNMENTAL ENTITY HAVING JURISDICTION OVER THE PROJECT. SPECIAL ATTENTION SHOULD BE GIVEN TO THE SECTION OF THE CODE CONCERNING STATIC WATER PRESSURE IN EXCESS OF 80 PSI.

UNUSED SERVICE LATERALS SHALL BE RETIRED BACK TO TWMA'S WATER MAIN.

WATER MAINS TO EXTEND A MINIMUM OF 10- FEET BEYOND END OF PAVING. MAINS ARE NOT TO BE INSTALLED UNDER SIDEWALK AND/OR CURB & GUTTER.

DURING CONSTRUCTION ALL OPEN ENDS OF PIPES OR FITTINGS SHALL BE SEALED AT THE END OF EACH WORKING DAY TO PREVENT THE ENTRY OF FOREIGN OBJECTS.

ALL PIPE AND APPURTENANCES SHALL BE NSF 61 CERTIFIED.

**BACKFLOW PREVENTION:**

BACKFLOW PREVENTION IS REQUIRED BY NEVADA ADMINISTRATIVE CODE (NAC) SECTION 445A.67185.  
 1. DOMESTIC AND IRRIGATION BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IMMEDIATELY DOWNSTREAM OF THE METER.  
 2. FOR FIRE SERVICE BACKFLOW ASSEMBLY(IES): CONTACT BACKFLOW PREVENTION GROUP FOR TYPE AND REQUIRED LOCATION.

BACKFLOW PREVENTION GROUP WILL APPROVE WATER METER SET AND PERMANENT WATER SERVICE AFTER:

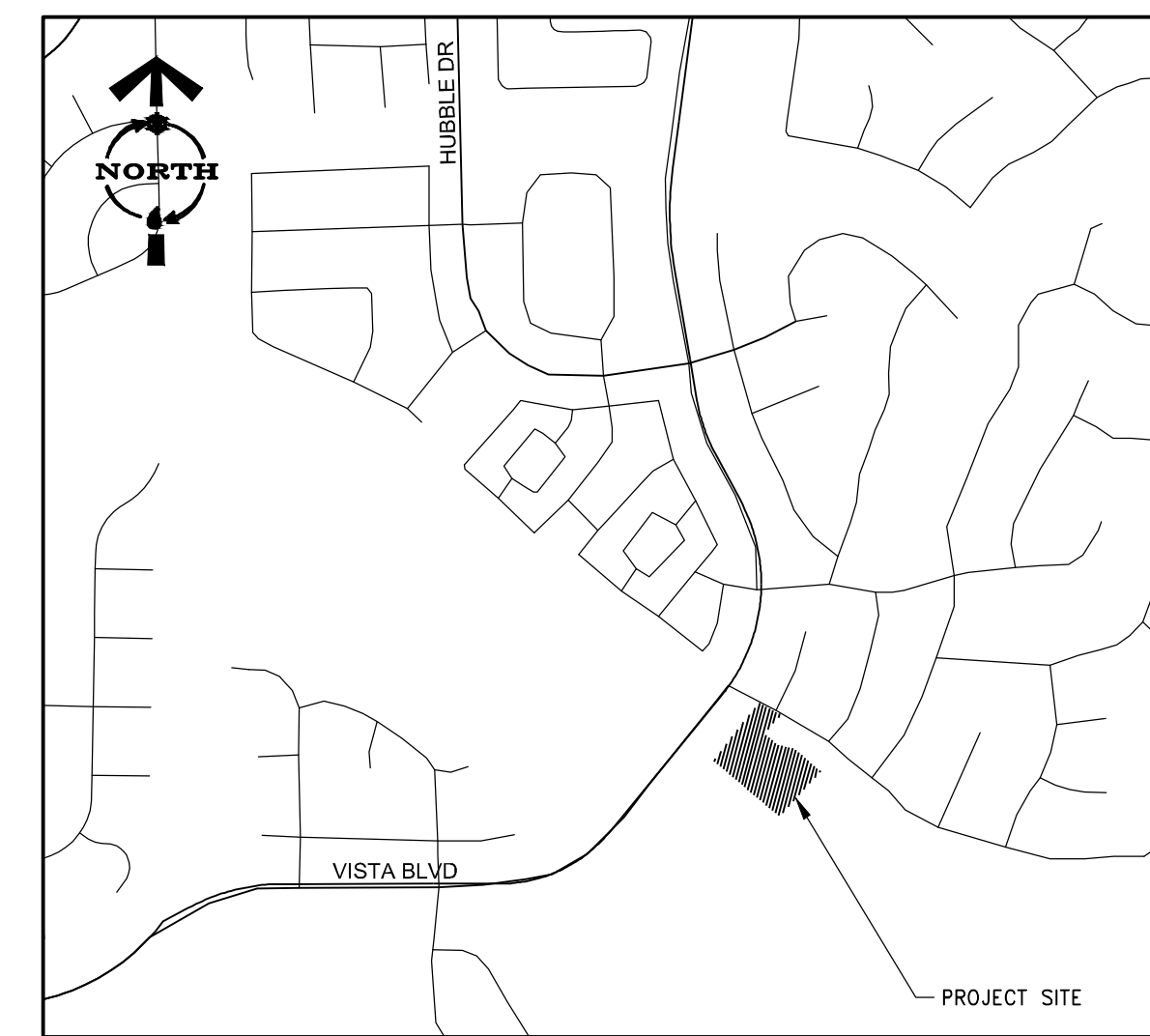
1. THE ASSEMBLY IS INSTALLED PER TWMA INSTALLATION STANDARDS AND INSPECTED BY THE BACKFLOW PREVENTION GROUP.
2. OPEN TRENCH, DITCH, AND/OR SLURRY INSPECTIONS COMPLETED BY THE BACKFLOW PREVENTION GROUP.
3. FINAL INSTALLATION AND FREEZE PROTECTION INSPECTED BY THE BACKFLOW PREVENTION GROUP.
4. CALL (775) 834-8288 FOR INSPECTIONS OR QUESTIONS.

THE OWNER/DEVELOPER IS RESPONSIBLE TO CONTACT TWMA BACKFLOW PREVENTION GROUP FOR CURRENT BACKFLOW INSTALLATION STANDARDS.

**IRRIGATION SERVICES**

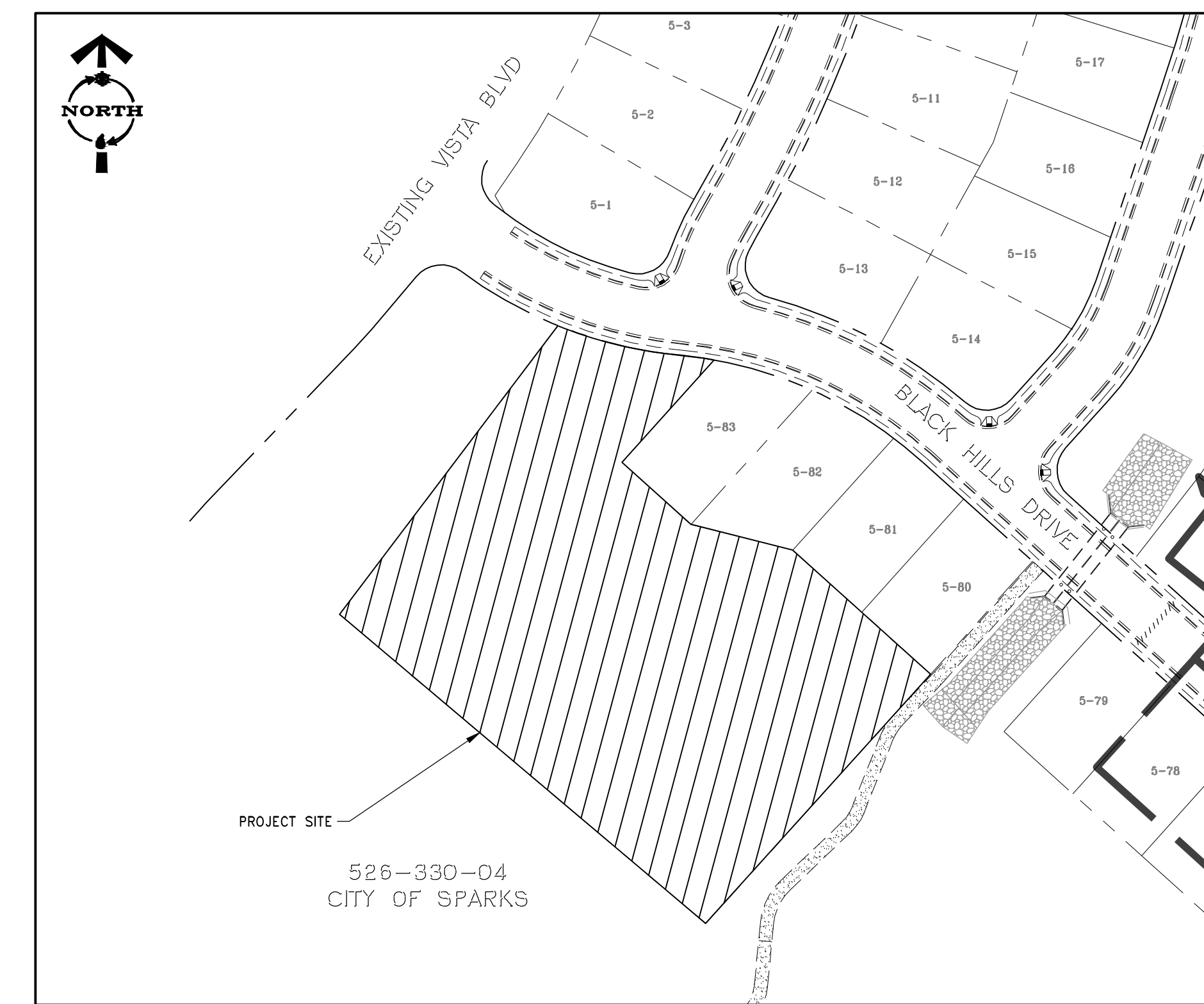
USC APPROVED RP (REDUCED PRESSURE PRINCIPLE ASSEMBLY)

IF INITIAL TEST DONE BY TWMA FIELD PERSONNEL FAILS, RE-TESTING OF BACKFLOW PREVENTION ASSEMBLY IS REQUIRED WITHIN 7-10 DAYS AFTER METER IS SET OR SERVICE ACTIVATION. A COPY OF TEST RESULTS ARE TO BE FORWARDED TO TWMA WATER QUALITY/BACKFLOW PREVENTION PERSONNEL BY A CERTIFIED ASSEMBLY TESTER.



**VICINITY MAP**

NOT TO SCALE



**SITE PLAN**

NOT TO SCALE

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WOOD RODGERS IS NOT RESPONSIBLE FOR PUBLIC WATER SYSTEM ANALYSIS, INCLUDING PIPE SIZING & SYSTEM PRESSURES.

**CHLORINE DOSAGE**

PIPE DIAMETER INCHES	LENGTH OF PIPE SECTION FEET	
	13 OR LESS	18 20
6	1	1
8	1	2
10	2	3
12	3	4



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 BUILDING RELATIONSHIPS ONE PROJECT AT A TIME  
 1361 Corporate Boulevard Reno, NV 89502 Tel 775.823.4068 Fax 775.823.4066

**WOOD RODGERS**  
 ASHLEY N. VERLING  
 EXP: 6/30/24  
 CIVIL  
 No. 024179 NV State Board of Professional Engineers

DATE: 05/05/2023

WORK ORDER NO. TWMA#  
 DESIGNED BY: \_\_\_\_\_  
 DRAWN BY: \_\_\_\_\_  
 DATE: FEBRUARY 2022  
 CHECKED BY: \_\_\_\_\_  
 SUBMITTED: \_\_\_\_\_  
 RECOMMENDED: \_\_\_\_\_  
 APPROVED: \_\_\_\_\_

**TRUCKEE MEADOWS WATER**  
 R U T H O R I T Y  
 1355 CAPITAL BLVD.  
 RENO, NEVADA 89502  
 PH 775-834-8000 / FX 775-834-8003

**BLACK HILLS DOG PARK**  
**WATER IRRIGATION METER**  
**TITLE SHEET**

SHEET NUMBER

**W-1**

1 OF 2

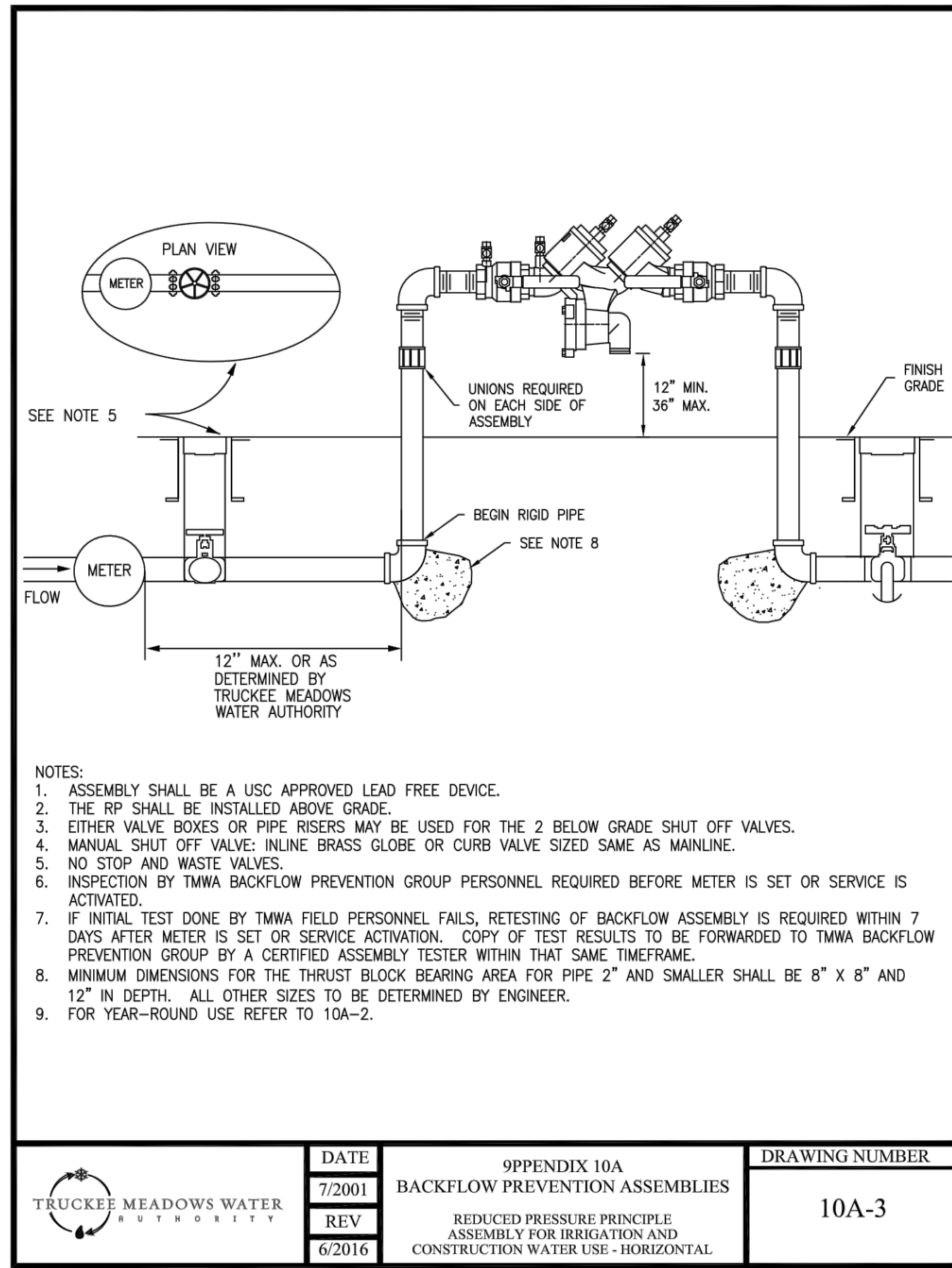
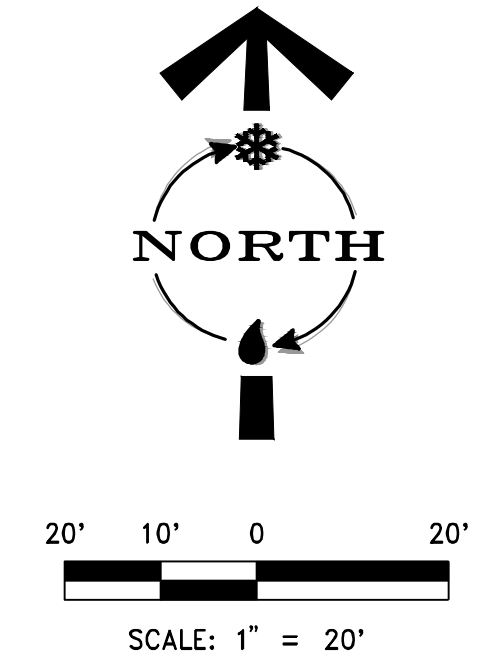


WORK ORDER NO. TWMA#  
 DESIGNED BY: ANV  
 DRAWN BY: SLL  
 DATE: FEBRUARY 2022  
 CHECKED BY: ANV  
 SUBMITTED: FEBRUARY 2022  
 RECOMMENDED NAME:  
 APPROVED NAME:

**TRUCKEE MEADOWS WATER**  
 R U T H O R I T Y  
 1355 CAPITAL BLVD.  
 RENO, NEVADA 89502  
 PH 775-834-8000 / FX 775-834-0003

**BLACK HILLS DOG PARK**  
**WATER IRRIGATION METER**  
**WATER PLAN**

SHEET NUMBER  
**W-2**  
 2 OF 2



- NOTES:
1. ASSEMBLY SHALL BE A USC APPROVED LEAD FREE DEVICE.
  2. THE RP SHALL BE INSTALLED ABOVE GRADE.
  3. EITHER VALVE BOXES OR PIPE RISERS MAY BE USED FOR THE 2 BELOW GRADE SHUT OFF VALVES.
  4. MANUAL SHUT OFF VALVE: INLINE BRASS GLOBE OR CURB VALVE SIZED SAME AS MAINLINE.
  5. NO STOP AND WASTE VALVES.
  6. INSPECTION BY TWMA BACKFLOW PREVENTION GROUP PERSONNEL REQUIRED BEFORE METER IS SET OR SERVICE IS ACTIVATED.
  7. IF INITIAL TEST DONE BY TWMA FIELD PERSONNEL FAILS, RETESTING OF BACKFLOW ASSEMBLY IS REQUIRED WITHIN 7 DAYS AFTER METER IS SET OR SERVICE ACTIVATION. COPY OF TEST RESULTS TO BE FORWARDED TO TWMA BACKFLOW PREVENTION GROUP BY A CERTIFIED ASSEMBLY TESTER WITHIN THAT SAME TIMEFRAME.
  8. MINIMUM DIMENSIONS FOR THE THRUST BLOCK BEARING AREA FOR PIPE 2" AND SMALLER SHALL BE 8" X 8" AND 12" IN DEPTH. ALL OTHER SIZES TO BE DETERMINED BY ENGINEER.
  9. FOR YEAR-ROUND USE REFER TO 10A-2.

TRUCKEE MEADOWS WATER AUTHORITY	DATE	9PPENDIX 10A	DRAWING NUMBER
	7/2001	BACKFLOW PREVENTION ASSEMBLIES	10A-3
	REV	REDUCED PRESSURE PRINCIPLE ASSEMBLY FOR IRRIGATION AND CONSTRUCTION WATER USE - HORIZONTAL	
	6/2016		

- NOTES:
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  2. WOOD RODGERS IS NOT RESPONSIBLE FOR PUBLIC WATER SYSTEM ANALYSIS, INCLUDING PIPE SIZING & SYSTEM PRESSURES.
  3. TRACER WIRE TO BE INSTALLED WITH ALL SERVICE LATERALS THAT DO NOT REMAIN PERPENDICULAR TO MAIN OR ARE MORE THAN 50' IN LENGTH. A 1 POUND ANODE IS TO BE INSTALLED AT THE MAIN AND THE TRACER WIRE SHALL BE BROUGHT UP INTO THE METER BOX AND SHALL BE LONG ENOUGH TO EXTEND A MINIMUM OF 12 INCHES ABOVE FINISH GRADE.
  4. TWMA WILL NOT ACCEPT JM PIPE, OR ANY PIPE WITH JM EAGLE, PW PIPE, PW EAGLE MARKINGS, OR ANY PIPE MANUFACTURED BY ANY SUBSIDIARY OF JM PIPE.

THIS MAP ILLUSTRATES DATA COLLECTED FROM VARIOUS SOURCES AND MAY NOT REPRESENT A SURVEY OF THE PREMISES. NO RESPONSIBILITY IS ASSUMED AS TO THE SUFFICIENCY OR ACCURACY OF THE DATA DISPLAYED HEREON.

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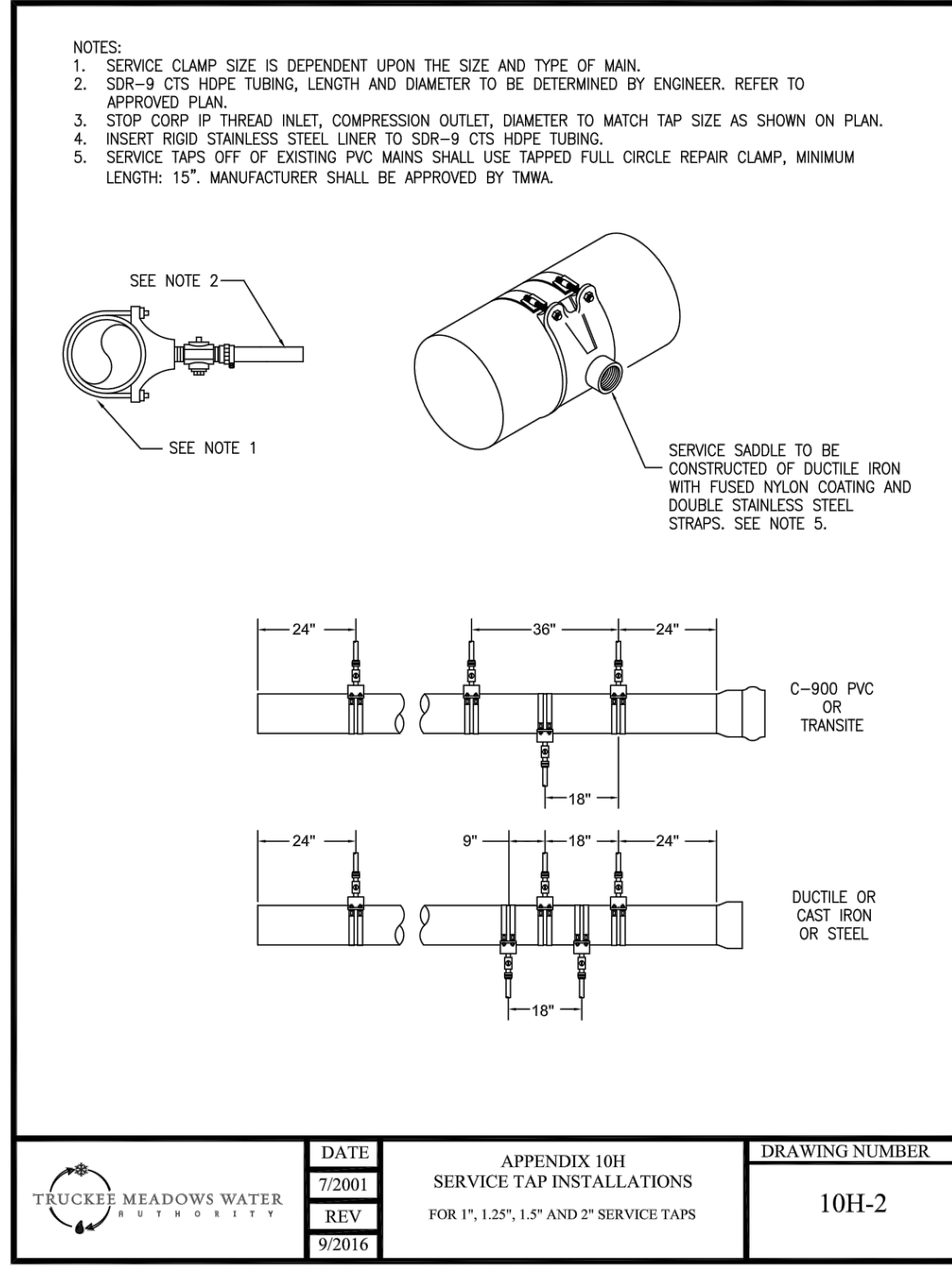


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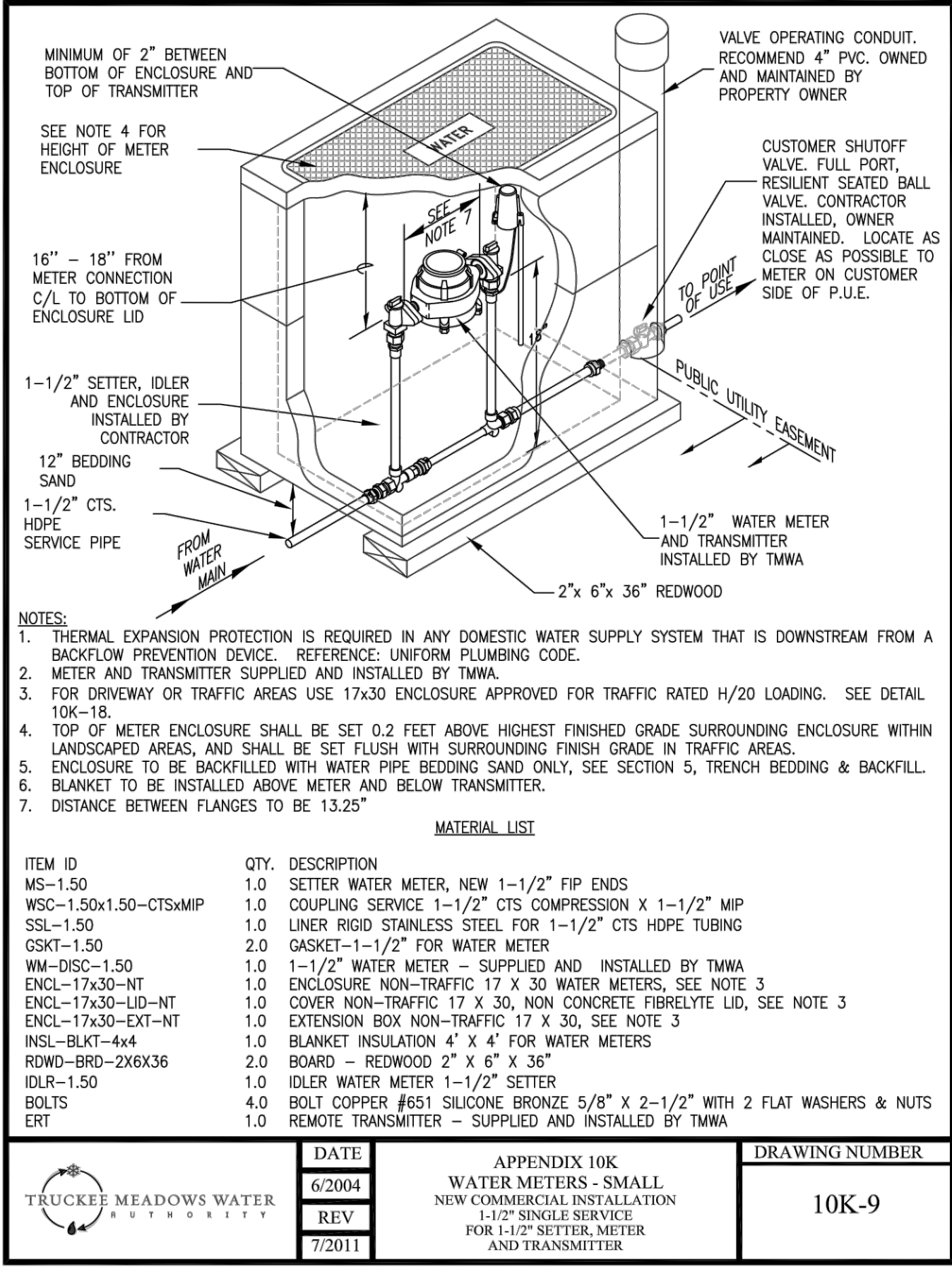


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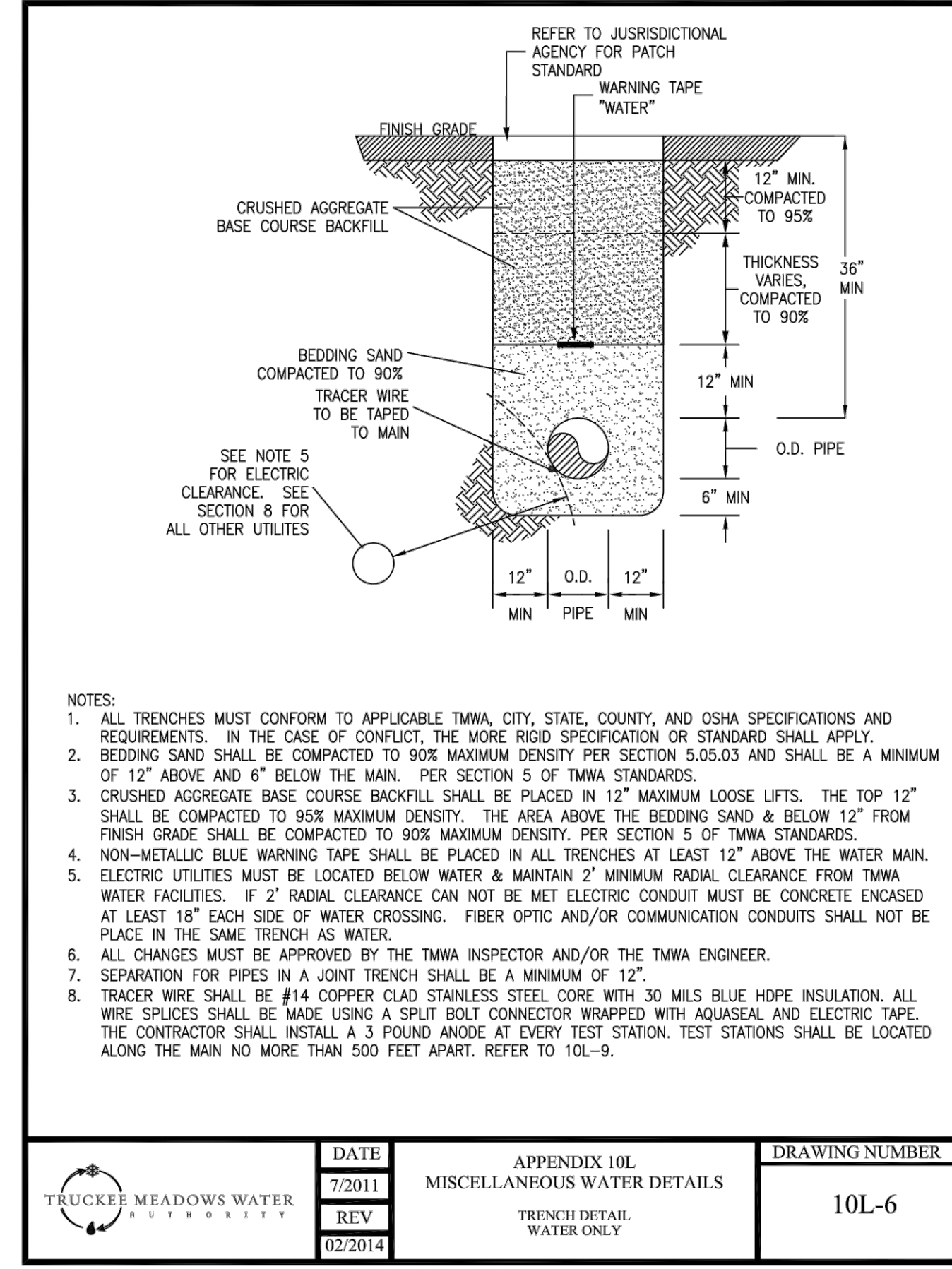
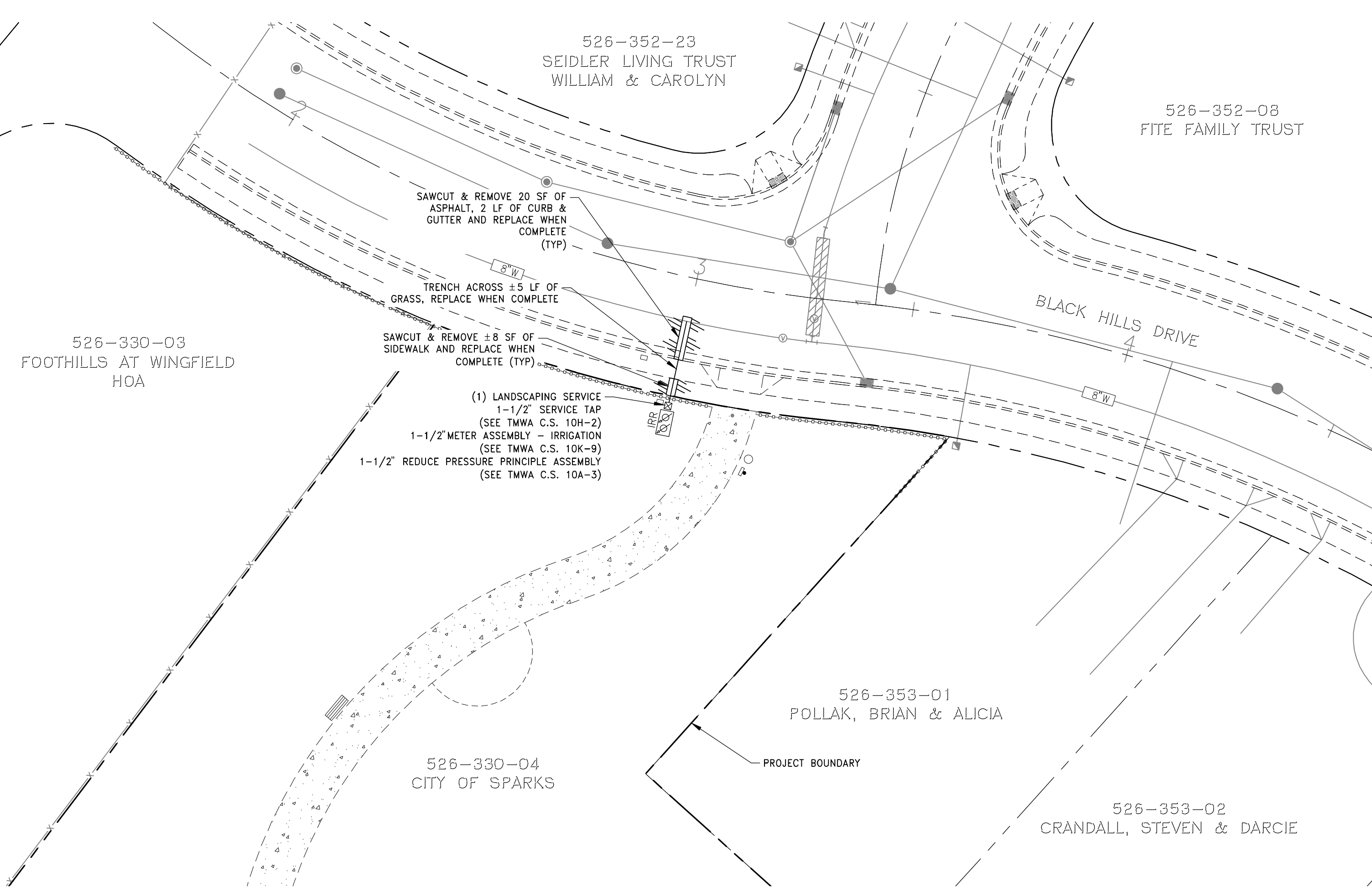
**WOOD RODGERS**  
 Ashley N. Verling  
 PROFESSIONAL ENGINEER  
 ASHLEY N. VERLING  
 EXP. 6/30/22  
 CIVIL  
 NO. 024179 NV-PE  
 DATE: 05/05/2023



TRUCKEE MEADOWS WATER AUTHORITY	DATE	APPENDIX 10H	DRAWING NUMBER
	7/2001	SERVICE TAP INSTALLATIONS	10H-2
	REV	FOR 1", 1.25", 1.5" AND 2" SERVICE TAPS	
	9/2016		

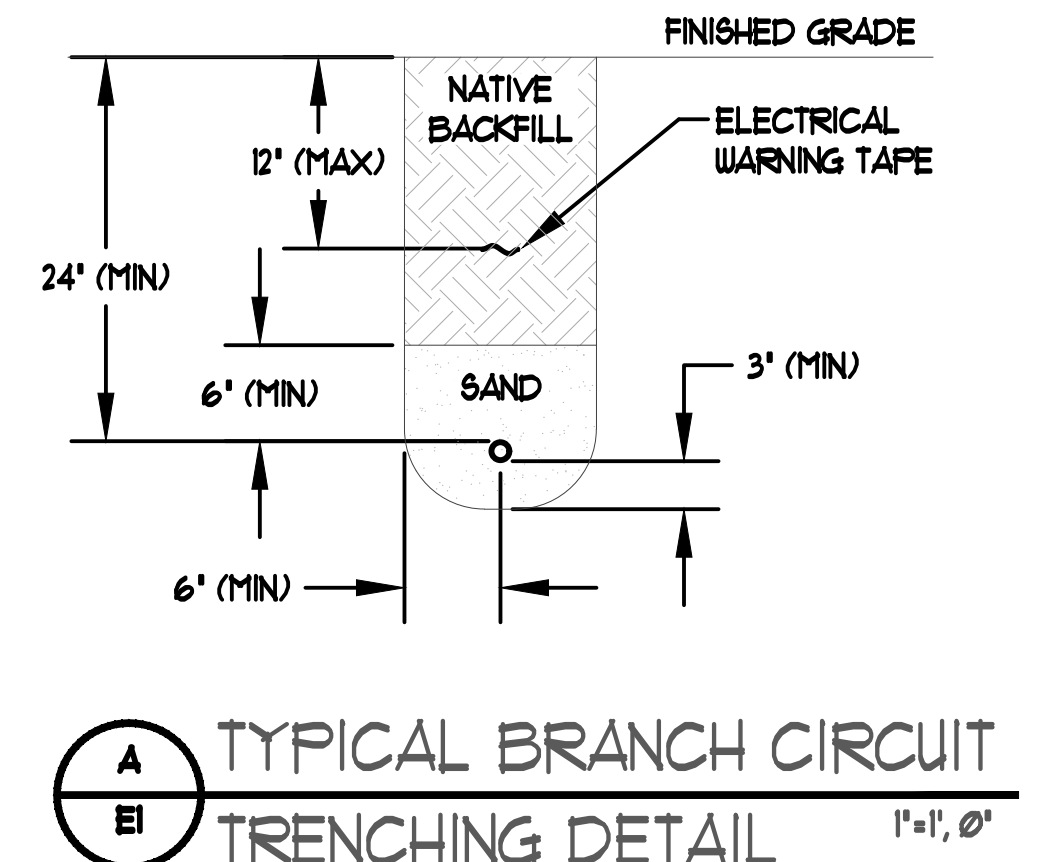


TRUCKEE MEADOWS WATER AUTHORITY	DATE	APPENDIX 10K	DRAWING NUMBER
	6/2004	WATER METERS - SMALL NEW COMMERCIAL INSTALLATION	10K-9
	REV	1-1/2" SINGLE SERVICE FOR 1-1/2" SETTER, METER AND TRANSMITTER	
	7/2011		

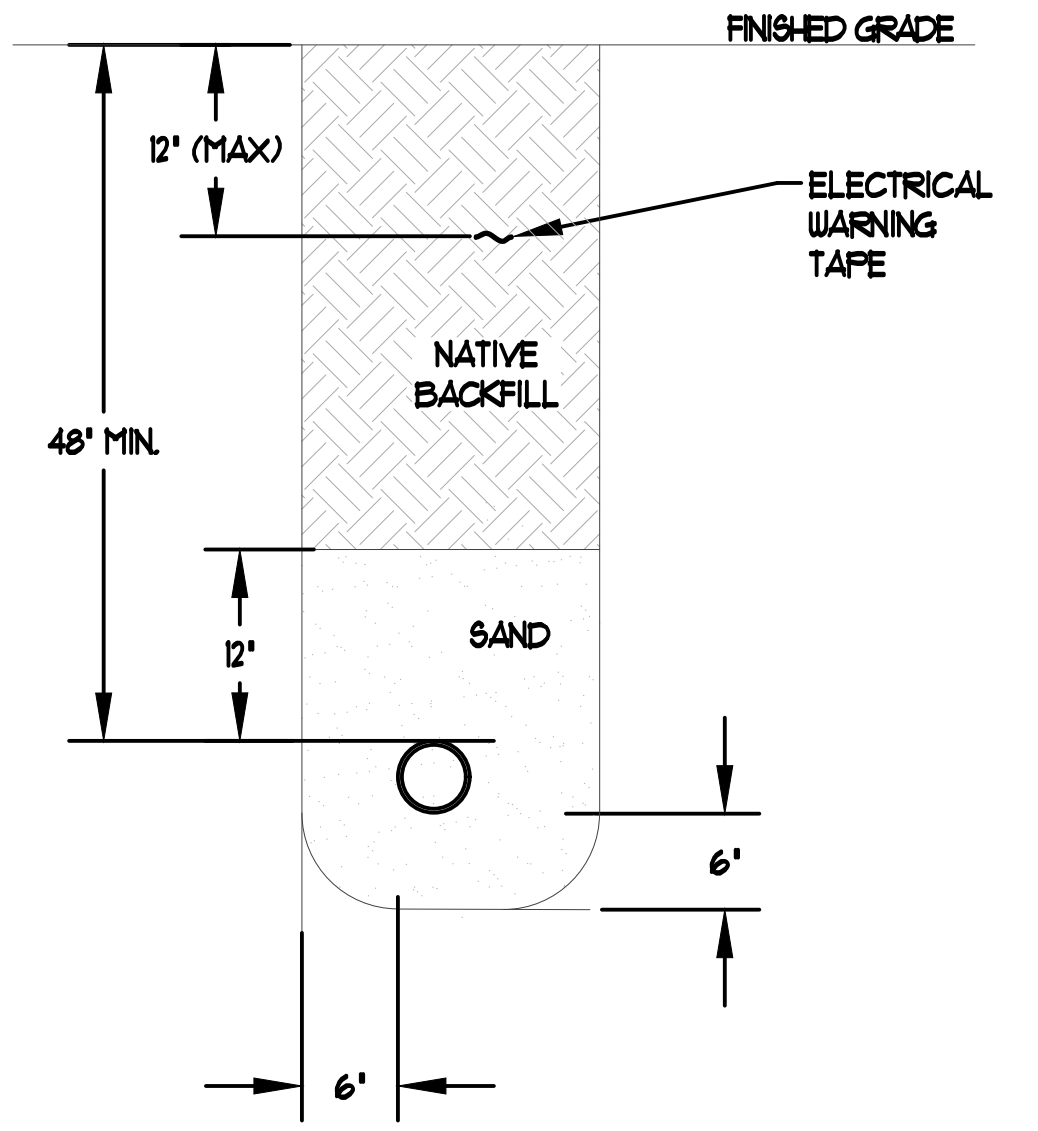


TRUCKEE MEADOWS WATER AUTHORITY	DATE	APPENDIX 10L	DRAWING NUMBER
	7/2001	MISCELLANEOUS WATER DETAILS	10L-6
	REV	TRENCH DETAIL WATER ONLY	
	02/2014		

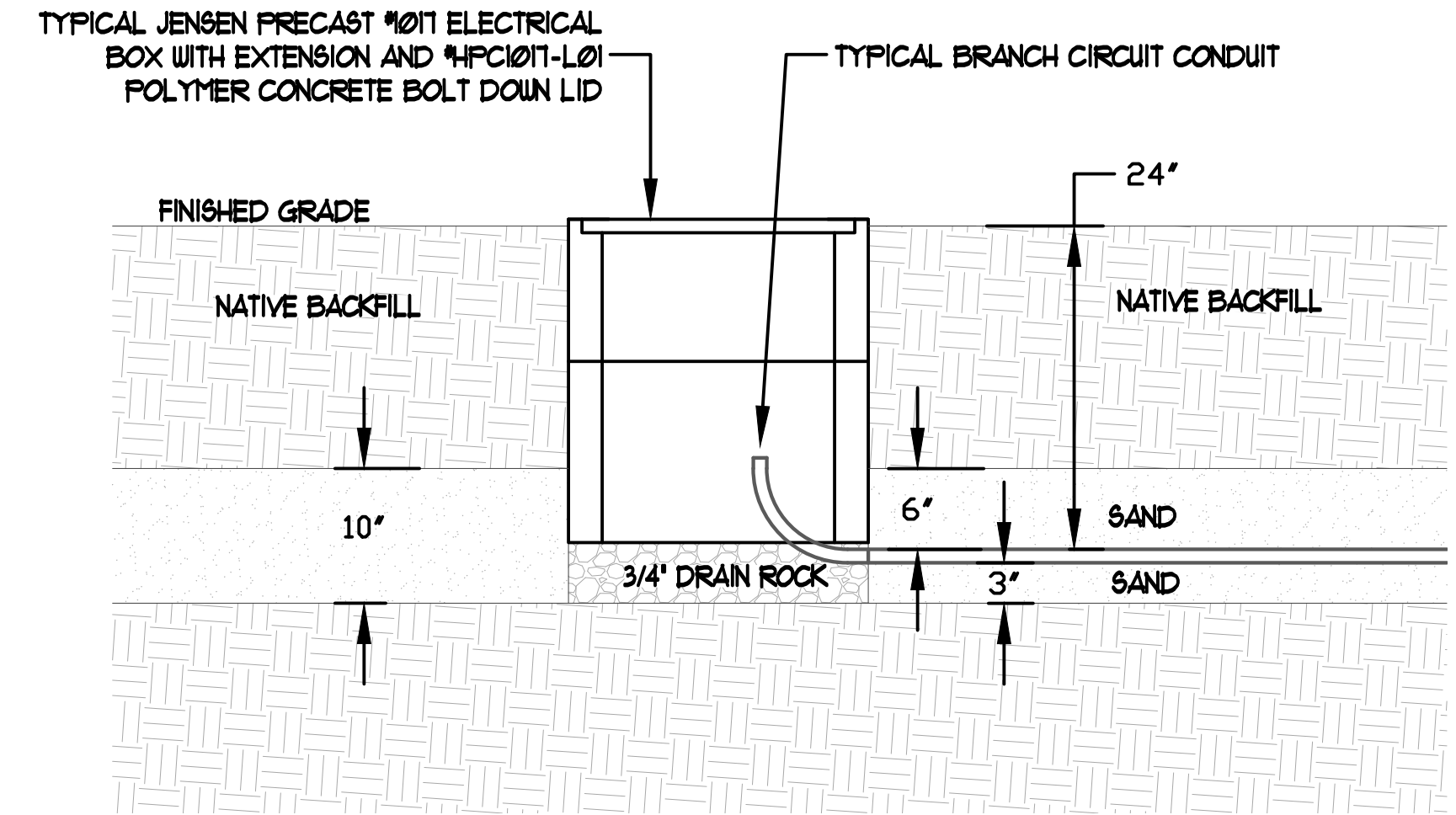




**A** TYPICAL BRANCH CIRCUIT TRENCHING DETAIL 1" = 1'-0"



**B** UTILITY SECONDARY TRENCH DETAIL 1" = 1'-0"  
\*TRENCHING MUST COMPLY WITH UTILITY COMPANY WORK ORDER DRAWINGS.



**C** BRANCH CIRCUIT HANDHOLE DETAIL 1" = 1'-0"

LABEL AND BOND FULL-BOX COVER ACCORDING TO NEC ARTICLE 314.30(D).

**SECTION 16000 - ELECTRICAL SPECIFICATIONS**

- 1.0 GENERAL PROVISIONS**  
CONSIDER THE GENERAL AND SPECIFIC CONDITIONS OF THE CONTRACT AS WELL AS ALL DRAWINGS AND SPECIFICATIONS AS A PART OF THE SCOPE OF WORK WHERE REQUIREMENTS OF THIS DIVISION DO NOT COINCIDE WITH GENERAL AND SPECIAL CONDITIONS OF THE CONTRACT, THE STRICTER REQUIREMENTS WILL GOVERN.
- 2.0 WORK INCLUDED**  
PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, APPARATUS, ETC., INCLUDING ALL ITEMS REASONABLY INFERRED, AS REQUIRED FOR A COMPLETE INSTALLATION OF ANY ELECTRICAL WORK SHOWN WITHIN THESE ELECTRICAL CONSTRUCTION DOCUMENTS, OR DETAILED IN THE ELECTRICAL SPECIFICATIONS. ALL ELECTRICAL WORK SHALL BE PERFORMED BY LICENSED ELECTRICIANS AND TECHNICIANS. REPAIRS AND REPLACEMENTS FOR DEFECTIVE EQUIPMENT OR MATERIALS AS COVERED BY WARRANTY/GUARANTEES SHALL BE CONSIDERED WITHIN THE SCOPE OF WORK AND SHALL BE PERFORMED AT NO ADDITIONAL COST (EXCEPTION: LIGHTING LAMPS).
- 3.0 RELATED WORK SPECIFIED ELSEWHERE**  
ELECTRICAL CONSTRUCTION DOCUMENTS AND ELECTRICAL SPECIFICATION SECTION SHALL BE CONSIDERED AS A WHOLE. ALL ELECTRICAL WORK SHALL ACCOMMODATE THE REQUIREMENTS OF THIS DIVISION AND OTHER DIVISIONS, AND SHALL ENSURE PROPER PERFORMANCE OF ELECTRICAL WORK REQUIRED BY OTHER DIVISIONS.
- 4.0 SITE INVESTIGATION**  
ELECTRICAL CONTRACTOR SHALL THOROUGHLY INVESTIGATE ALL EXISTING CONDITIONS AT THE PROJECT SITE PRIOR TO SUBMITTING A BID.
- 5.0 REGULATIONS AND STANDARDS**  
ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST ADOPTED EDITIONS OF: THE NATIONAL ELECTRICAL CODE (NEC, NFPA-70), THE INTERNATIONAL BUILDING CODE (IBC), AND UTILITY WORK ORDER DRAWINGS. CONTRACTOR SHALL NOT OMIT ANY COMPONENT OR PORTION OF THESE ELECTRICAL CONSTRUCTION DOCUMENTS WHICH MAY EXCEED THE LISTED STANDARDS. NO ELECTRICAL WORK DETAILED IN THE ELECTRICAL CONSTRUCTION DOCUMENTS OR ELECTRICAL SPECIFICATION SECTION SHALL BE INTERPRETED TO PERMIT WORK WHICH FAILS TO CONFORM TO CODE REQUIREMENTS. WHERE CONFLICTS OCCUR, HIGHER STANDARDS SHALL GOVERN. RULINGS AND INTERPRETATIONS BY GOVERNING AGENCIES SHALL BE CONSIDERED A PART OF THIS DIVISION IF COMMONLY IMPOSED UPON THE TRADE PRIOR TO SUBMISSION OF BID.
- 6.0 DRAWINGS AND SPECIFICATIONS**
  - 6.1** ELECTRICAL CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS, ELEVATIONS, AND INSTALLATION REQUIREMENTS OF ALL ELECTRICAL EQUIPMENT PRIOR TO 'ROUGH-IN' (INCLUDING RECEPTACLES, SWITCHES, CONDUITS, SWITCHBOARDS, PANELBOARD, ETC.). LOCATIONS SHALL BE VERIFIED FOR APPROPRIATE SPACE (LENGTH, WIDTH, AND HEIGHT) AND CLEARANCE PRIOR TO FABRICATING OR ORDERING ANY EQUIPMENT OR MATERIALS. ALL DISCREPANCIES SHALL BE REPORTED TO THIS ENGINEER IMMEDIATELY. FINAL CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH MANUFACTURER'S APPROVED WIRING DIAGRAMS, DETAILS AND INSTRUCTIONS.
  - 6.2** ELECTRICAL CONTRACTOR SHALL SUBMIT WRITTEN REQUEST-FOR-INFO (RFI) DOCUMENTS TO THIS ENGINEER PRIOR TO PERFORMING ANY WORK WHERE AMBIGUITY ARISES. ELECTRICAL CONTRACTOR SHALL NOT PERFORM ANY FIELD MODIFICATIONS OR DEVIATIONS FROM THE ELECTRICAL CONSTRUCTION DOCUMENTS AND/OR SPECIFICATIONS WITHOUT APPROVED WRITTEN RESPONSE FROM THIS ENGINEER THROUGH AN APPROPRIATELY SUBMITTED RFI.
  - 6.3** ELECTRICAL CONTRACTOR SHALL PERFORM ELECTRICAL WORK PER MANUFACTURER'S DIRECTIONS WHERE SAID DETAILS ARE NOT SPECIFICALLY COVERED OR INDICATED BY THESE ELECTRICAL CONSTRUCTION DOCUMENTS AND ELECTRICAL SPECIFICATIONS. WHEN CONFLICT ARISES, SECTION 12 OF THIS SPECIFICATION SHALL DICTATE PERFORMANCE.
  - 6.4** ALL SERVICES RENDERED BY THIS ENGINEER ARE PROFESSIONAL OPINIONS AND RECOMMENDATIONS, ONLY. UNDER NO CIRCUMSTANCE IS IT THE INTENT OF THIS ENGINEER TO DIRECTLY CONTROL THE PHYSICAL ACTIVITIES OF THE CONTRACTOR OR HIS EMPLOYEES.
- 7.0 MATERIALS**
  - 7.1** APPEARANCE AND FINISH OF MATERIALS SHALL BE OF THE HIGHEST STANDARDS. ALL MATERIALS AND EQUIPMENT SHALL BE NEW, OPERATING NORMALLY, AND OF HIGHEST AVAILABLE QUALITY. ANY DEFECTIVE MATERIALS SHALL BE IDENTIFIED AND REMOVED FROM SITE, IMMEDIATELY.
  - 7.2** PROVIDE UNDERWRITER'S LABORATORY (UL) LISTED MATERIALS AND EQUIPMENT WHEREVER STANDARDS FOR SAID ITEMS HAVE BEEN ESTABLISHED. UNLISTED DEVICES SHALL BE INSTALLED IN EQUIPMENT NORMALLY LISTED OR LABELED, AND SHALL CONFORM TO UL STANDARDS AS FAR AS POSSIBLE.
  - 7.3** ALL CATALOG NUMBERS ARE GIVEN TO ASSIST IN IDENTIFYING THE BASIC REQUIREMENTS OF THIS PROJECT AND INDICATE THE MINIMUM LEVEL OF QUALITY. CATALOG NUMBERS WILL, GENERALLY, NOT SPECIFY COLOR AND ACCESSORIES. CONSULT OWNER AND ARCHITECT FOR COLOR AND ACCESSORY DETAILS.
- 8.0 CLEAN WORK**  
REGULARLY REMOVE DEBRIS FROM THE PROJECT SITE, AS REQUIRED, DURING CONSTRUCTION. CLEAN ALL RACEWAYS, FIXTURES, AND OTHER EQUIPMENT PRIOR TO FINAL ACCEPTANCE BY OWNER.
- 9.0 CLOSING IN OF UNINSPECTED WORK**  
ELECTRICAL CONTRACTOR SHALL NOT CLOSE IN OR CONCEAL ANY ELECTRICAL WORK PERFORMED PRIOR TO INSPECTION AND APPROVAL.
- 10.0 IDENTIFICATION**  
ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL PERMANENT PRINTED WEATHER-PROOF LABELS AT ALL NEW ELECTRICAL EQUIPMENT LABELS SHALL INDICATE VOLTAGE, FEEDING PANEL NAME, AND CIRCUIT NUMBER(S). PROVIDE ALL AFFECTED PANELBOARDS WITH NEW ACCURATE TYPED DIRECTORY, INSTALLED UNDER CLEAR PLASTIC COVER.

- 11.0 SUPPORTS AND FASTENINGS**  
ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL SUPPORTS AND ANCHORS FOR CABINETS, BOXES, CONDUITS AND OTHER EQUIPMENT. SUPPORTS AND ANCHORS SHALL BE SECURELY ATTACHED TO MOUNTING SUBSTRATE USING: CONCRETE PRESET INSERTS, EXPANSION BOLTS, FOLDER ACTUATED FASTENERS, BEAM CLAMPS, OR BOLTS. ALL SUPPORTS AND HANGARS SHALL BE RATED FOR FIVE (5) TIMES THE ACTUAL LOAD.
- 12.0 TRADE COORDINATION**  
ELECTRICAL CONTRACTOR SHALL COORDINATE THE ELECTRICAL INSTALLATION WORK WITH ALL OTHER TRADES. REFER TO PLANS AND SPECIFICATIONS OF OTHER TRADES FOR COORDINATION. ELECTRICAL CONTRACTOR SHALL CONSULT OTHER CONTRACTORS TO ENSURE TIMELY AND APPROPRIATE CONNECTIONS TO EQUIPMENT.
- 13.0 RECORD DRAWINGS**  
ELECTRICAL CONTRACTOR SHALL PROVIDE THE OWNER WITH A NEAT AND COMPLETE SET OF 'AS-BUILT' RECORD DRAWINGS WITHIN TEN (10) DAYS OF FINAL ACCEPTANCE OF WORK. RECORD DRAWINGS SHALL INDICATE ALL DEVIATIONS FROM THE ELECTRICAL CONSTRUCTION DOCUMENTS, LOCATIONS OF STUB-OUTS AND CONCEALED ITEMS (PER FIELD DIMENSIONS). RECORD DRAWINGS SHALL BE OF EQUAL QUALITY AS THESE ELECTRICAL CONSTRUCTION DOCUMENTS (INCLUDING SIZE, CLARITY AND MEDIUM). ALL MAINTENANCE AND OPERATING MANUALS AS WELL AS ANY ADDITIONAL INSTRUCTIONS, SHALL BE CONSIDERED A PART OF THE RECORD DRAWINGS.

- 14.0 ELECTRICAL SUBMITTALS**  
ELECTRICAL CONTRACTOR SHALL SUBMIT ELECTRONIC (pdf) COPIES OF FACTORY SHOP-DRAWINGS FOR ALL ELECTRICAL COMPONENTS PROPOSED FOR THIS PROJECT TO THE OWNER. ELECTRICAL CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE OWNER OF ALL PROVIDED MANUFACTURER'S DATA SHEETS ELECTRICAL EQUIPMENT AND LIGHTING FIXTURES. ANY PROPOSED SUBSTITUTIONS OF SPECIFIED EQUIPMENT SHALL MEET THE PROJECT REQUIREMENTS EXACTLY, AND SHALL BE OF EQUAL OR GREATER QUALITY IN ALL RESPECTS, AND REQUIRE THIS ENGINEER'S APPROVAL.

- 15.0 OWNERSHIP OF DOCUMENTS**  
THESE ELECTRICAL CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, CONSTITUTE THE INTELLECTUAL PROPERTY OF JENSEN ENGINEERING, INC. ALL RIGHTS RESERVED.

- 16.0 CONDUCTORS**  
ALL CONDUCTORS SHALL CONFORM TO THE REQUIREMENTS STATED UNDER SECTION 5.0 OF THIS ELECTRICAL SPECIFICATION, AND UL LISTING STANDARDS. ALL CONDUCTORS SHALL BE COPPER, STANDARD AMERICAN WIRE GAUGE, SOFT-DRAIN, CONCEALED IN CONDUIT. CONDUCTORS SIZED #10 AWG AND SMALLER SHALL BE SOLID OR STRANDED. CONDUCTORS SIZED #8 AWG AND LARGER SHALL BE STRANDED. MINIMUM WIRE SIZE SHALL BE #2 AWG, UNLESS OTHERWISE NOTED. CONDUCTOR INSULATION SHALL BE 600 VOLT, 90° C. RATED TYPE THHN/THWN-2. CONDUCTORS SHALL BE CONTINUOUS FROM ORIGIN TO EQUIPMENT WITHOUT SPLICES, PER NEC. WHERE REQUIRED, SPLICES SHALL OCCUR IN SPLICE BOXES PER THIS SPECIFICATION. WIRE/CABLE SHALL BE HANDLED TO AVOID DAMAGE TO BOTH CONDUCTOR AND INSULATION. WIRE/CABLE SHALL BE DELIVERED IN STANDARD COILS OR REELS WITH SUITABLE PROTECTION FROM WEATHER AND DAMAGE DURING STORAGE, HANDLING, AND INSTALLATION. ELECTRICAL CONTRACTOR SHALL COLOR CODE CONDUCTORS CONSISTENTLY THROUGHOUT THE PROJECT ACCORDING TO THE FOLLOWING OUTLINE:

VOLTAGE	PHASE A	PHASE B	PHASE C	NEUTRAL	GROUND
120/208V	BLACK	RED	BLUE	WHITE	GREEN
277/480V	BROWN	ORANGE	YELLOW	WHITE	GREEN

- 17.0 CONDUIT SYSTEMS**
  - 17.1** CONDUIT AND CONDUCTOR ROUTES SHALL BE DETERMINED BY THE ELECTRICAL CONTRACTOR AT THE TIME OF INSTALLATION AND ARE SHOWN ON THESE PLANS FOR EXPLANATIVE PURPOSES. PROVIDE AND INSTALL GREEN INSULATED GROUNDING WIRE IN ALL CONDUITS.
  - 17.2** TYPE RMC AND IMC (RIGID METALLIC CONDUIT & INTERMEDIATE METALLIC CONDUIT): ALL LOCATIONS EXPOSED TO PHYSICAL DAMAGE OR EXTERIOR ELEMENTS, INCLUDING EXPOSED ON ROOF, SHALL BE RIGID GALVANIZED STEEL (OR INTERMEDIATE METALLIC CONDUIT).
  - 17.3** TYPE RNC (RIGID NON-METALLIC CONDUIT/PVC SCHEDULE 40) SHALL BE PERMITTED FOR ALL UNDERGROUND LOCATIONS. TYPE EMT CONDUIT SHALL BE PERMITTED FOR ALL INTERIOR LOCATIONS WHERE NOT SUBJECT TO PHYSICAL DAMAGE. ALL INTERIOR HOMERUNS SHALL BE TYPE EMT. ALL FITTINGS SHALL BE STEEL.
  - 17.4** TYPE FMC (INCLUDING TYPE MC CABLE) CONDUIT MAY ONLY BE USED IN INDOOR CONCEALED LOCATIONS AND SHALL NOT OPERATE MORE THAN ONE CIRCUIT.
  - 17.5** TYPE LPMC SHALL BE USED FOR SHORT CONNECTIONS TO MOTORS AND EQUIPMENT IN WET OR OUTDOOR LOCATIONS.

- 18.0 TERMINATIONS AND SPLICES**  
CONNECTORS SHALL BE SCOTCHLOK OR APPROVED EQUAL FOR WIRE SIZES #14 AWG THROUGH #8 AWG. USE MECHANICAL SCREW TYPE CONNECTIONS FOR ALL OTHERS.

- 19.0 SWITCHGEAR AND DISTRIBUTION EQUIPMENT**  
ELECTRICAL EQUIPMENT SHALL BE AS MANUFACTURED BY EATON, GE, SIEMENS, OR SQUARE-D. SERVICE EQUIPMENT SHALL BE FULLY ENCLOSED, FACTORY ASSEMBLED.

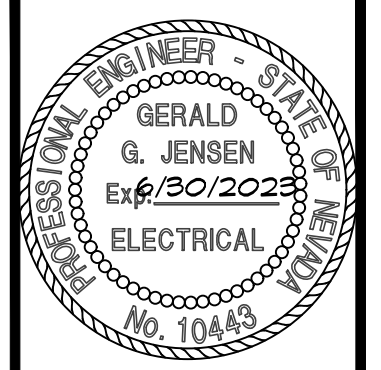
- 20.0 GROUNDING AND BONDING**  
PROVIDE AND INSTALL GROUNDING FOR ALL EQUIPMENT AND SYSTEM NEUTRAL IN ACCORDANCE WITH NEC ARTICLE 250.

- 21.0 FINAL OBSERVATION**  
UPON ACCEPTANCE OF OPERATION AND MAINTENANCE INSTRUCTIONS AND RECORD DRAWINGS, THIS ENGINEER SHALL MAKE A FINAL OBSERVATION OF THE PROJECT AND GENERATE A LIST OF UNACCEPTABLE ITEMS. FINAL PROJECT ACCEPTANCE SHALL NOT BE CONSIDERED COMPLETE UNTIL ALL ITEMS IN THIS LIST HAVE BEEN CORRECTED.

- 22.0 WARRANTY/GUARANTEES**  
ELECTRICAL CONTRACTOR SHALL WARRANT AND GUARANTEE THE ELECTRICAL WORK TO BE FREE FROM DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. LIGHTING LAMPS ARE EXEMPT FROM THIS REQUIREMENT, HOWEVER, LAMPS SHALL BE NEW AND IN PERFECT OPERATING CONDITION AT THE TIME OF FINAL ACCEPTANCE.

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Electrical Plan

**BLACK HILLS DRIVE PARK**  
Foothills Village 5  
City of Sparks, Parks and Recreation

Nevada

No.	Revision Date

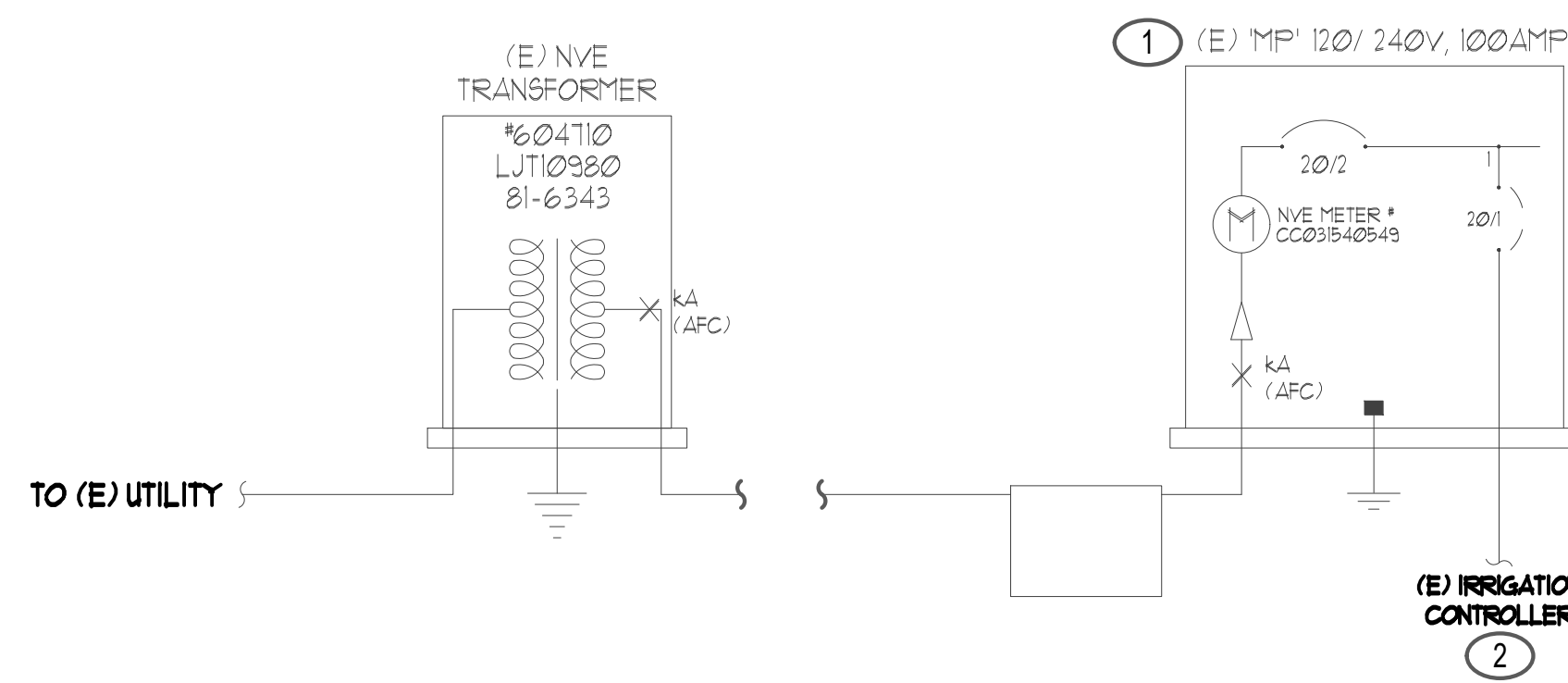
LA No: GR046522  
Designed: SSJ  
Drawn: ACJ  
Checked: SSJ  
CAD File:  
Date: 05/09/2023

**JENSEN ENGINEERING INC.**  
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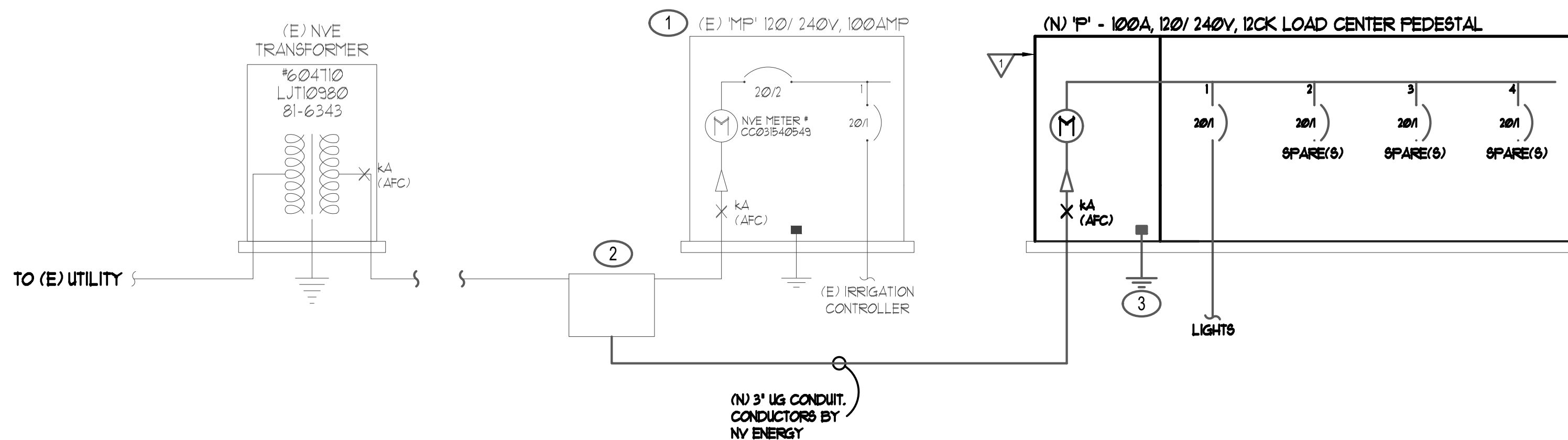


# ELECTRICAL SYMBOLS AND NOMENCLATURE

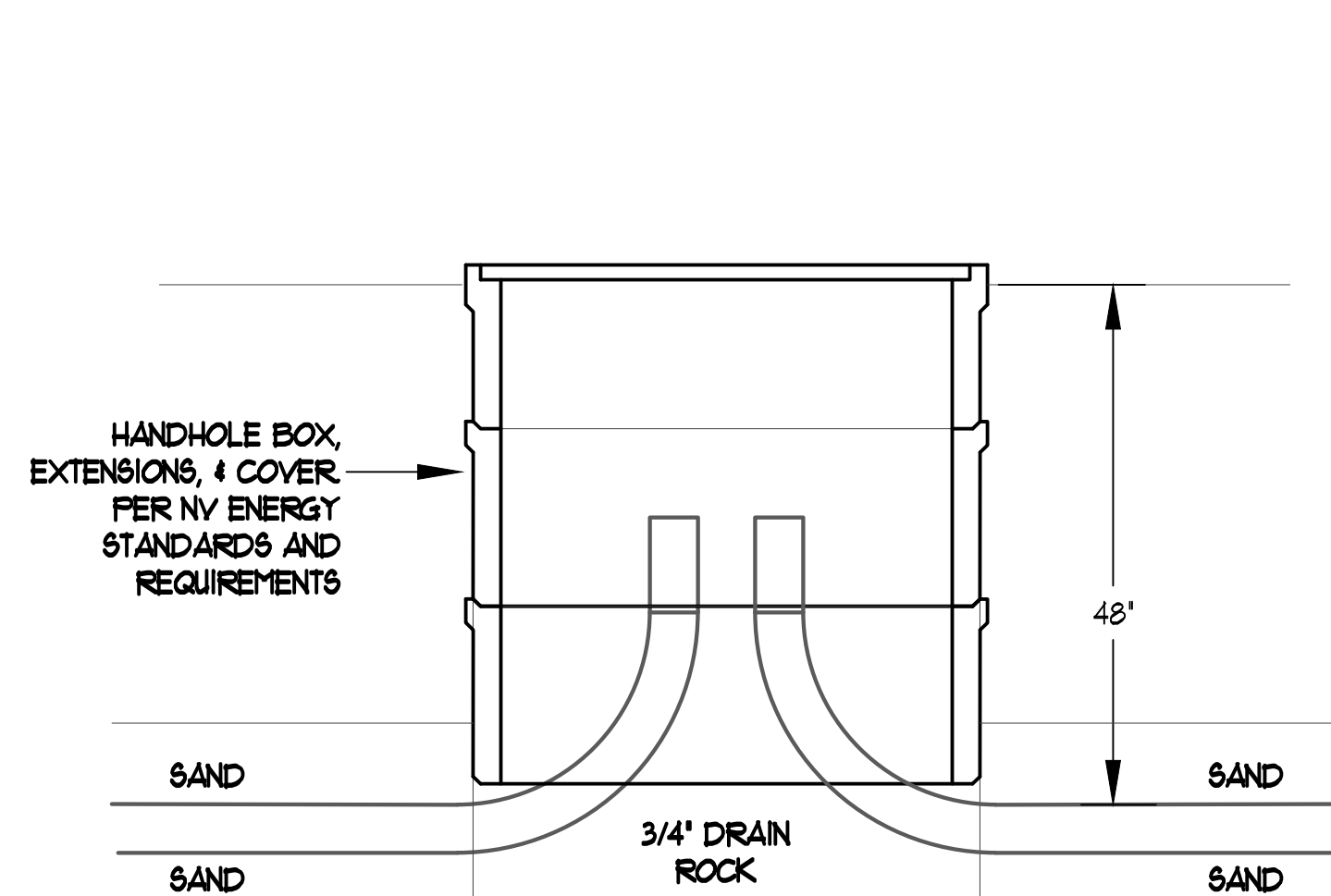
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
⊕	SINGLE-OUTLET RECEPTACLE	—	1-Φ, 1-POLE CIRCUIT PATH (1/2" CONDUIT, (2) - #12 CU, UON) ABOVE FLOOR
⊕	DOUBLE-OUTLET 'DUPLEX' RECEPTACLE (48" AFF UON)	—	1-Φ, 2-POLE CIRCUIT PATH (1/2" CONDUIT, (3) - #12 CU, UON) ABOVE FLOOR
⊕	DOUBLE-OUTLET 'DUPLEX' RECEPTACLE + USB (48" AFF UON)	—	3-Φ, 3-POLE CIRCUIT PATH (1/2" CONDUIT, (4) - #12 CU, UON) ABOVE FLOOR
⊕	THREE-PHASE (3Φ) RECEPTACLE (CONFIGURATION AS NOTED)	—	RETURN CIRCUIT TO PANEL 'HOMERUN' (CIRCUIT AS NOTED) ABOVE FLOOR
⊕	QUADRUPLE-OUTLET 'QUAD' RECEPTACLE	—	1-Φ, 1-POLE CIRCUIT PATH (1/2" CONDUIT, (2) - #12 CU, UON) BELOW FLOOR
⊕	SPECIAL RECEPTACLE (VOLTAGE/CONFIGURATION AS NOTED)	—	1-Φ, 2-POLE CIRCUIT PATH (1/2" CONDUIT, (3) - #12 CU, UON) BELOW FLOOR
⊕	JUNCTION BOX	—	3-Φ, 3-POLE CIRCUIT PATH (1/2" CONDUIT, (4) - #12 CU, UON) BELOW FLOOR
⊕	THERMOSTAT	—	RETURN CIRCUIT TO PANEL 'HOMERUN' (CIRCUIT AS NOTED) BELOW FLOOR
⊕	FLOOR MOUNT RECEPTACLE	—	CIRCUIT BREAKER (AMPS/POLES AS NOTED)
⊕	SAFETY DISCONNECT SWITCH (SIZE/VOLTAGE/CONFIGURATION AS NOTED)	⊙	FUSE (AMPS/POLES AS NOTED)
⊕	COMBINATION SAFETY SWITCH/MAGNETIC STARTER	⊙	SHEET NOTE INDICATOR
⊕	TELEPHONE/DATA JUNCTION BACKBOX WITH 3/4" EMPTY CONDUIT ONLY INTO ACCESSIBLE SPACE	⊙	SHEET/EQUIPMENT NOTE INDICATOR
⊕	SINGLE-POLE TOGGLE SWITCH (VOLTAGE AS REQUIRED)	⊙	EQUIPMENT NOTE INDICATOR
⊕	MULTI-STATION 'THREE-WAY' TOGGLE SWITCH (VOLTAGE AS REQUIRED)	⊙	REVISION 'DELTA' NOTE INDICATOR
⊕	SOLID STATE DIMMING SWITCH (VOLTAGE AS REQUIRED)	⊙	FEEDER NOTE INDICATOR
⊕	MOTOR-RATED TOGGLE SWITCH (VOLTAGE AS REQUIRED)	⊙	DETAIL/SHEET NOTE INDICATOR
⊕	KEYED TOGGLE SWITCH (VOLTAGE AS REQUIRED)	48"	48" MOUNTING HEIGHT AFF. (ACTUAL HEIGHT AS NOTED)
⊕	OCCUPANCY SENSING (MOTION SENSOR) SWITCH	AFF.	ABOVE FINISHED FLOOR
⊕	CABLE TELEVISION JUNCTION BACKBOX WITH 3/4" EMPTY CONDUIT ONLY INTO ACCESSIBLE SPACE	A.F.G.	ABOVE FINISHED GRADE
⊕	PANELBOARD (NAME/AMP/PHASE/VOLTAGE/CONFIGURATION AS NOTED)	A.T.S.	AUTOMATIC TRANSFER SWITCH
⊕	AUXILIARY SYSTEM EQUIPMENT (KEYPAD/FOB)	B.O.C.	BOTTOM OF CYLINDER
⊕	MULTI-OUTLET ASSEMBLY (PLUG MOLD)	C	CONDUIT
⊕	TRANSFORMER (NAME/KVA RATING/PHASE/VOLTAGE AS NOTED)	CB	CIRCUIT BREAKER
⊕	MECHANICAL EQUIPMENT INDICATOR	CLG	CEILING
⊕	PHOTO ELECTRIC CELL	(N)	NEW
⊕	TIME CLOCK	(E)	EXISTING
⊕	DUCT DETECTOR FIRE ALARM SYSTEM COMPONENT	(F)	FUTURE
⊕	SMOKE DETECTOR FIRE ALARM SYSTEM COMPONENT	(R)	RELOCATE
⊕	HEAT DETECTOR FIRE ALARM SYSTEM COMPONENT	FACP	FIRE ALARM CONTROL PANEL
⊕	CONTACTOR	F.B.O.	FURNISHED BY OTHERS
⊕	FLOW SWITCH FIRE ALARM SYSTEM COMPONENT	GFI	GROUND FAULT INTERRUPTING TYPE
⊕	TAMPER SWITCH FIRE ALARM SYSTEM COMPONENT	HID	HIGH INTENSITY DISCHARGE
⊕	HORN/STROBE COMBINATION FIRE ALARM SYSTEM COMPONENT	LTG	LIGHTING
⊕	MANUAL FULL STATION	LV	LOW VOLTAGE
⊕	SHUNT TRIP STATION	MCB	MAIN CIRCUIT BREAKER
⊕	MOTOR (HORSEPOWER AS NOTED)	M.S.B.	MAIN SWITCH BOARD
⊕	CARD READER: 4/8 BACKBOX WITH 3/4" C, UP TO ATTIC SPACE.	NL	NIGHT LIGHT
⊕	SECURITY CAMERA: 4/8 BACKBOX WITH 3/4" C, UP TO ATTIC SPACE.	TYP	TYPICAL
⊕	CEILING SPEAKER: 4/8 BACKBOX WITH 3/4" C, UP TO ATTIC SPACE.	UG	UNDER GROUND
		UON	UNLESS OTHERWISE NOTED
		WP	WEATHER PROOF
		TRANS	TRANSFORMER



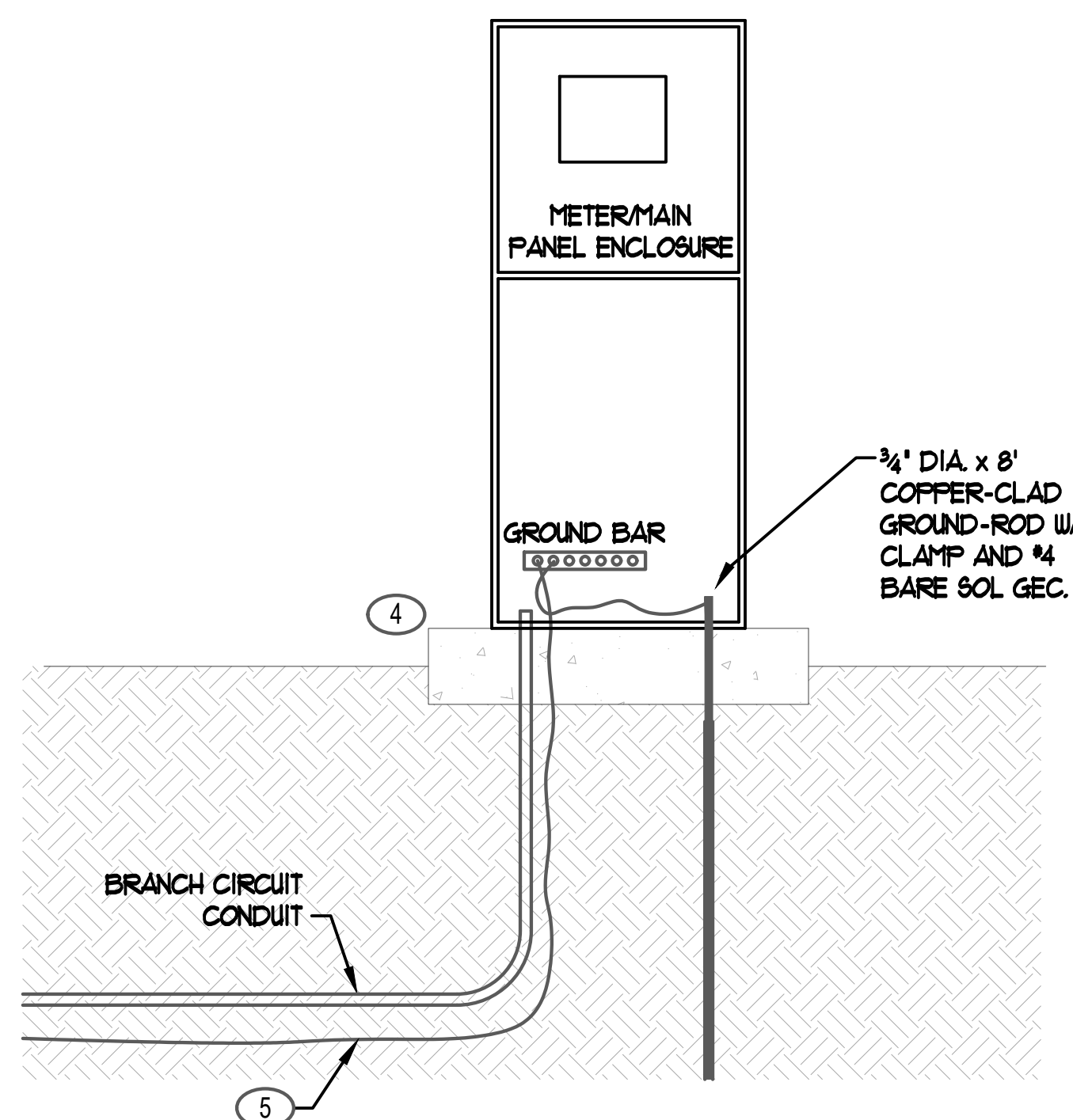
**A** EXISTING SINGLE-LINE DIAGRAM  
NOT TO SCALE



**B** PROPOSED SINGLE-LINE DIAGRAM  
NOT TO SCALE



**D** NVE INTERCEPT BOX DETAIL  
SCALE: 1" = 1'-0"



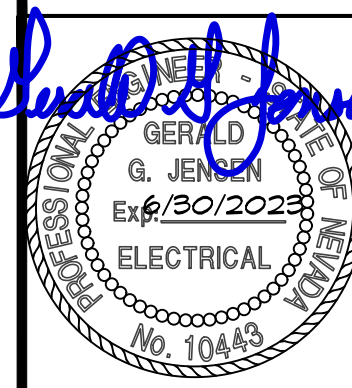
**C** SERVICE PEDESTAL DETAIL  
SCALE: 1" = 1'-0"

POSITION NO.	LOAD DESCRIPTION	BREAKER SIZE	LOAD KVA
SP - 1	NEW SITE LIGHTING	20/1	1.00
SP - 2	SPARE	20/1	0.00
SP - 3	SPARE	20/1	0.00
SP - 6	IRRIGATION CONT.	20/1	0.25
TOTAL KVA			= 1.25
@ 240V 1Φ			= 5.2 AMPERES

### SHEET NOTES

- INSPECT EXISTING ELECTRICAL METER EQUIPMENT (NVE METER #CC031540549) LOCATED AT 4091 BLACK HILLS DRIVE AND IDENTIFY EXISTING SITE CONDITIONS.
- CONTRACTOR SHALL DISCOVER EXISTING NVE N-36 BOX APPROXIMATELY 15' SOUTH OF CURB LINE AND SHALL PROVIDE AND INSTALL NEW 3" UG CONDUIT FROM (E) N-36 BOX TO NEW METER-MAN FEDESTAL. NEW CONDUIT SHALL COMPLY WITH ALL NVE REQUIREMENTS PER NVE WORK ORDER DRAWINGS (SEE A/E3).
- (1) - 3/4" X 8' COPPER CLAD DRIVEN GROUND ROD AND #8 CU GROUNDING ELECTRODE CONDUCTOR.
- PROVIDE AND INSTALL PROVIDE 42" X 42" X 6" 2500 PSI CONCRETE MOUNTING PAD FOR NEW METER FEDESTAL. PAD TO BE 3" PROUD OF FINISHED GRADE
- 30" - #4 SOL BARE CU (SUPPLEMENTARY TO PRIMARY GROUNDING ELECTRODE) BURIED IN BOTTOM OF BRANCH CIRCUIT CONDUIT TRENCH AND CONNECTED TO GROUND BUS IN METER FEDESTAL.

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No.	Revision Date

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Designed	GSJ
Drawn	ACJ
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CAD File	
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