SALEM & IRBY

ROUNDABOUT CONSTRUCTION CONWAY, ARKANSAS CONSTRUCTION PACKAGE

VICINITY MAP



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IRRIGATION NOTES & DETAILS

IRRIGATION DETAILS

DATE: MARCH 16, 2020 JOB#: 18-150

CONWAY TRANSPORTATION DEPARTMENT 100 E. ROBINS STREET STREET CONWAY, ARKANSAS FAX: 501.513.3566 PH: 501.450.6165

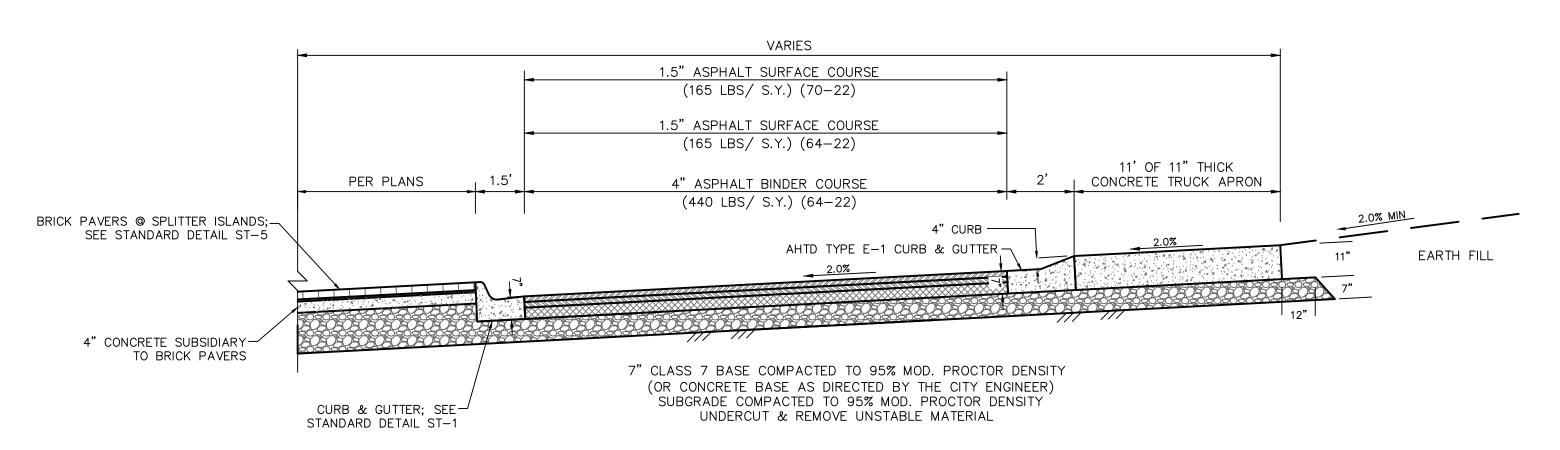


REVISIONS

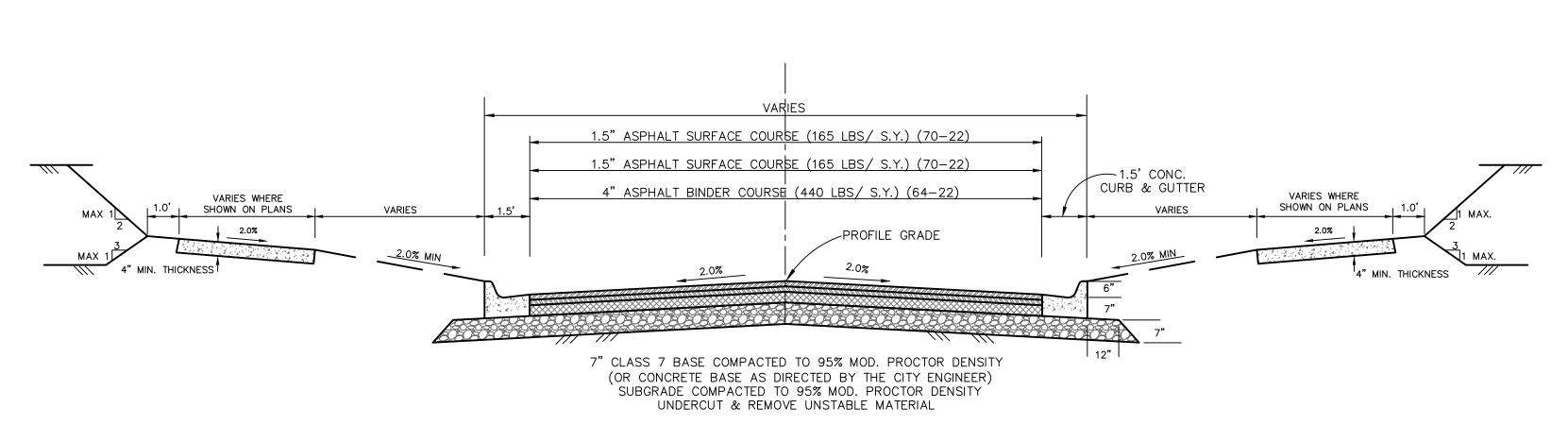
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SCALE:

COVER



TYPICAL ROUNDABOUT SECTION



TYPICAL STREET SECTION

NOTES:

- . CITY OF CONWAY STANDARD DETAILS FOR ROADWAY AND DRAINAGE CONSTRUCTION ARE LOCATED ON THE STREET & ENGINEERING DEPARTMENT WEB PAGE.
- 2. ALL CONSTRUCTION & MATERIALS SHALL COMPLY WITH THE ARKANSAS HIGHWAY & TRANSPORTATION DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2014 EDITION. UNLESS OTHERWISE NOTED.
- 3. IRRIGATION SLEEVING SHALL BE INSTALLED PRIOR TO THE PLACEMENT OF ROADWAY BASE COURSE. IRRIGATION DESIGN AND LOCATION INFORMATION SHOULD BE OBTAINED FROM IRRIGATION PLANS, BY OTHERS.
- 4. PAVEMENT SECTION THICKNESS SUBJECT TO CHANGE AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER AND APPROVAL BY THE CITY ENGINEER.
- CONSTRUCT MODULAR BLOCK WALLS IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.

SHARED USE PATH REQUIREMENTS:

- ALL WORK SHALL COMPLY WITH SECTION 633 OF THE AHTD STANDARD SPECIFICATIONS.

 1. EXPANSION MATERIAL SHALL BE REQUIRED AT 50 FT. MAXIMUM SPACING.
- 2. SHARED USE PATH SHALL HAVE SAW CUT TRANSVERSE JOINTS AT INTERVALS EQUAL TO THE WIDTH OF THE SIDEWALK. TOOLED JOINTS WILL NOT BE PERMITTED.
- 3. EXPANSION JOINT MATERIAL SHALL BE PRE—FORMED ASPHALT IMPREGNATED FIBERBOARD CONFORMING TO AASHTO M—213. EXPANSION JOINT MATERIAL SHALL BE LEFT 1/2" LOWER AND FILLED WITH SILICONE SEALER TO FINISH GRADE.
- 4. ALL COLD JOINTS AND SAW CUT JOINTS SHALL BE FILLED TO FINISH GRADE WITH JOINT SEALANT.
- 5. ALL SIDEWALKS SHALL HAVE 1/2" ROLLED EDGES AND BROOM FINISH.
- 6. SHARED USE PATHS SHALL BE PLACED ON 4" CLASS 7 BASE COMPACTED TO 95% MODIFIED PROCTOR DENSITY UNLESS OTHERWISE NOTED.
- ALL SHARED USE PATHS REQUIRE INSPECTION BEFORE AND AFTER CONCRETE PLACEMENT. SIDEWALKS WILL BE INSPECTED FOR ADA REQUIREMENTS & WORKMANSHIP.

GENERAL CONSTRUCTION REQUIREMENTS:

- 1. THE STREET DEPARTMENT SHALL BE NOTIFIED 24 HOURS PRIOR TO PLACEMENT OF ANY FILL MATERIAL, INSTALLATION OF STORM DRAINAGE PIPE OR DRAINAGE STRUCTURES, CONCRETE CURB & GUTTER, PLACEMENT OF CRUSHED STONE OR ASPHALT. THE SUBGRADE SHALL BE APPROVED BY THE CONWAY STREET DEPARTMENT PRIOR TO PLACEMENT OF CURB AND GUTTER OR CRUSHED STONE
- 2. EARTHWORK EQUIPMENT SHALL INCLUDE AN APPROPRIATE SIZE VIBRATORY SHEEP'S FOOT COMPACTOR, WATER TRUCK AND MOTOR PATROL.
- 3. ALL FILL MATERIAL PLACED WITHIN THE LIMITS OF THE STREET (BACK OF CURB TO BACK OF CURB) SHALL BE PLACED IN LIFTS NOT EXCEEDING 8" AND EACH LIFT COMPACTED WITH A SHEEP'S FOOT ROLLER (COMPACTION WITH TRACK EQUIPMENT OR OTHER EQUIPMENT NOT SPECIFICALLY DESIGNED FOR EARTHWORK COMPACTION IS NOT SUITABLE) TO 95% MODIFIED PROCTOR DENSITY. FILL MATERIAL SHALL BE APPROVED BY THE CONWAY STREET DEPARTMENT PRIOR TO USE IN STREET FILLS (NO TOP SOIL OR ORGANIC MATERIAL SHALL BE INCLUDED IN THE FILL MATERIAL). THE MOISTURE CONTENT OF THE FILL MATERIAL SHALL BE PLUS OR MINUS 3% OF OPTIMUM. ALL EARTHWORK SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 210 AND 212 OF ARKANSAS STATE HIGHWAY DEPARTMENT'S "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION".
- 4. THE SUBGRADE (BACK OF CURB TO BACK OF CURB) SHALL BE PREPARED IN ACCORDANCE WITH SECTION 212 OF THE ARKANSAS STATE HIGHWAY DEPARTMENT'S "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION". PRIOR TO PLACEMENT OF THE CRUSHED STONE BASE COURSE THE SUBGRADE MUST BE VERIFIED TO CONFORM TO THE PROPER SHAPE AND GRADE AND MUST FIELD DEMONSTRATE THAT IT IS FIRM AND UNYIELDING TO THE PASSAGE OF EQUIPMENT OVER THE SUBGRADE.
- 5. ALL STORM DRAINAGE PIPE SHALL BE RCP CLASS III UNLESS SPECIFICALLY APPROVED OTHERWISE.
- 6. CRUSHED STONE BASE COURSE SHALL CONFORM TO THE REQUIREMENT FOR CLASS 7 AGGREGATE BASE COURSE AS DESCRIBED IN SECTION 303—AGREGATE BASE COURSE OF THE ARKANSAS HIGHWAY DEPARTMENT'S "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION". THE CRUSHED STONE BASE COURSE GRADATION SHALL CONFORM TO THE ABOVE REFERENCED SPECIFICATION FOR THIS MATERIAL AFTER THE MATERIAL HAS BEEN PLACED AND COMPACTED. SAMPLES OF THE IN—PLACE MATERIAL MAY BE OBTAINED AND TESTED BY THE OWNER TO ASSURE CONFORMANCE TO THE SPECIFICATION. MATERIAL NOT CONFORMING TO THE SPECIFICATIONS SHALL BE REMOVED AND REPLACED. IN ADDITION, THE CRUSHED STONE BASE COURSE MATERIAL SHALL HAVE A MINIMUM CBR (CALIFORNIA BEARING RATIO) OF 75 AS DESCRIBED IN THE PROJECT SPECIFICATIONS.
- ALL MUD, SOIL AND LOOSE GRAVEL SHALL BE REMOVED FROM THE CRUSHED STONE BASE AND CONCRETE CURB AND GUTTER PRIOR TO PLACEMENT OF
- STORM DRAINAGE PIPES, DITCHES AND DRAINAGE STRUCTURES MUST BE FREE OF SEDIMENTS, TRASH, DEBRIS AND PONDING WATER PRIOR TO FINAL APPROVAL OF THE STREETS.
- PRIOR TO THE PLACEMENT OF CONCRETE FOR CURB INLETS, BOX CULVERTS OR OTHER CONCRETE STRUCTURES, THE CONTRACTOR SHALL PROVIDE 24 HOUR NOTICE OF THE INTENT TO PLACE CONCRETE AND REQUEST THAT THE CITY INSPECT THE REINFORCING STEEL AND FORMING TO VERIFY CONFORMANCE WITH THE PLANS. CONCRETE PLACED WITHOUT CITY INSPECTION TO VERIFY REINFORCING STEEL PLACEMENT AND CONCRETE THICKNESS WILL NOT BE ACCEPTED AND SHALL BE TORN OUT AND RECONSTRUCTED WITH APPROPRIATE CITY APPROVAL.
- 10. CONSTRUCTION SHALL NOT COMMENCE ON THIS PROJECT UNTIL A STORM WATER POLLUTION PREVENTION PLAN HAS BEEN PROPERLY IMPLEMENTED
- 11. THE CONTRACTOR SHALL PROVIDE APPROPRIATE ADVANCED WARNING DEVICES, BARRICADES, BARRELS AND OTHER MEASURES AS NEEDED TO PROPERLY CONTROL AND ADVISE TRAFFIC.
- 12. ALL WHEEL CHAIR RAMPS TO BY TYPE 3 UNLESS OTHERWISE NOTED
- 13. ALL WORK SHALL CONFORM TO THE CITY OF CONWAY STANDARD DETAILS

QUALITY CONTROL REQUIREMENTS:

THE CITY WILL SECURE THE SERVICES OF AN INDEPENDENT TESTING CONSULTANT AND PROVIDE TEST AND CERTIFICATIONS IN ACCORDANCE WITH THE FOLLOWING:

STREET SUBGRADE: 1. REQUIRED MINI

- . REQUIRED MINIMUM DENSITY 95% MODIFIED PROCTOR DENSITY. FIELD DENSITY TEST SHALL BE PERFORMED ON EACH LIFT OF FILL PLACED IN THE STREET SUBGRADE
- AND ON UTILITY AND STORM DRAINAGE PIPE TRENCHES.
 2. STREET SUBGRADE DENSITY TESTS ARE REQUIRED FOR EVERY 800 FEET OF

THE CITY ENGINEER OR HIS DESIGNATED REPRESENTATIVE. THE FIELD DENSITY

- STREET SUBGRADE DENSITY TESTS ARE REQUIRED FOR EVERY 800 FEET OF
 STREET SUBGRADE FOR EACH LIFT (8" MAXIMUM) OF EMBANKMENT OR FILL
 MATERIAL PLACED.
 THE LOCATION OF THE TESTING WILL BE RANDOMLY IDENTIFIED IN THE FIELD BY
- TEST SHALL BE PERFORMED IN THE PRESENCE OF THE CITY'S DESIGNATED REPRESENTATIVE.

 4. IF A SUBGRADE DENSITY TEST IS LESS THAN THE MINIMUM REQUIRED A TEST IS REQUIRED ON THE RECOMPACTED AREA AS WELL AS AN ADDITIONAL TEST AT A LOCATION DESIGNATED BY THE CITY ENGINEER WITHIN 300 FEET OF THE
- SUBSTANDARD AREA.

 5. THE CONTRACTOR SHALL PAY FOR THE RETESTING ALONG WITH ADDITIONAL TEST REQUIRED DUE TO THE FAILURE.

CRUSHED STONE BASE COURSE

- FIELD DENSITY TEST (95% MINIMUM) ARE REQUIRED ON THE COMPACTED CRUSHED STONE BASE COURSE FOR EVERY 1,500 FEET OF BASE COURSE (TEST LOCATION DETERMINED BY CITY).
- 2. PLANT CERTIFICATION AND TEST RESULTS SHALL BE SUBMITTED VERIFYING THE MATERIAL CONFORMS TO THE GRADATION AND AHTD SPECIFICATION FOR THE MATERIAL SPECIFIED. IN ADDITION, THE SUPPLIER OF CRUSHED STONE BASE COURSE SHALL PROVIDE A CURRENT CBR TEST CONFIRMING A MINIMUM CBR OF 75. THE CITY MAY ELECT TO OBTAIN FIELD SAMPLES TO VERIFY THE CBR AND GRADATION TEST.
- 3. MATERIAL NOT MEETING THE SPECIFICATION SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL.

STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTIONS.

THE THICKNESS OF THE MATERIAL SHALL BE FIELD VERIFIED FOR EVERY 1,500 FEET OF STREET CONSTRUCTED.

THE COMPACTED INPLACE GRADATION OF THE MATERIAL SHALL CONFORM TO THE GRADATION AS SPECIFIED FOR CLASS 7 AGGREGATE BASE COURSE IN THE AHTD

FOR NOTIFICATION OF NEEDED INSPECTION CONTACT: CITY OF CONWAY

STREET AND ENGINEERING DEPARTMENT 100 EAST ROBINS CONWAY, ARKANSAS 72032

PHONE 501-450-6165 FAX 501-513-3566

COORDINATION OF THE WORK

THE CONTRACTOR SHALL PROVIDE COMPETENT AND EXPERIENCED FIELD PERSONNEL TO COORDINATE THE WORK AND VERIFY THAT THE CONTRACTOR IS CONFORMING TO THE PLANS AND SPECIFICATIONS.

THE CITY IS NOT RESPONSIBLE FOR COORDINATION OF THE PROJECT WORK.



REVISIONS

NO. DESCRIPTION

SALEM & IKBY
OUNDABOUT CONSTRUCTION
CONWAY, ARKANSAS

JOB NUMBER: <u>18-150</u>

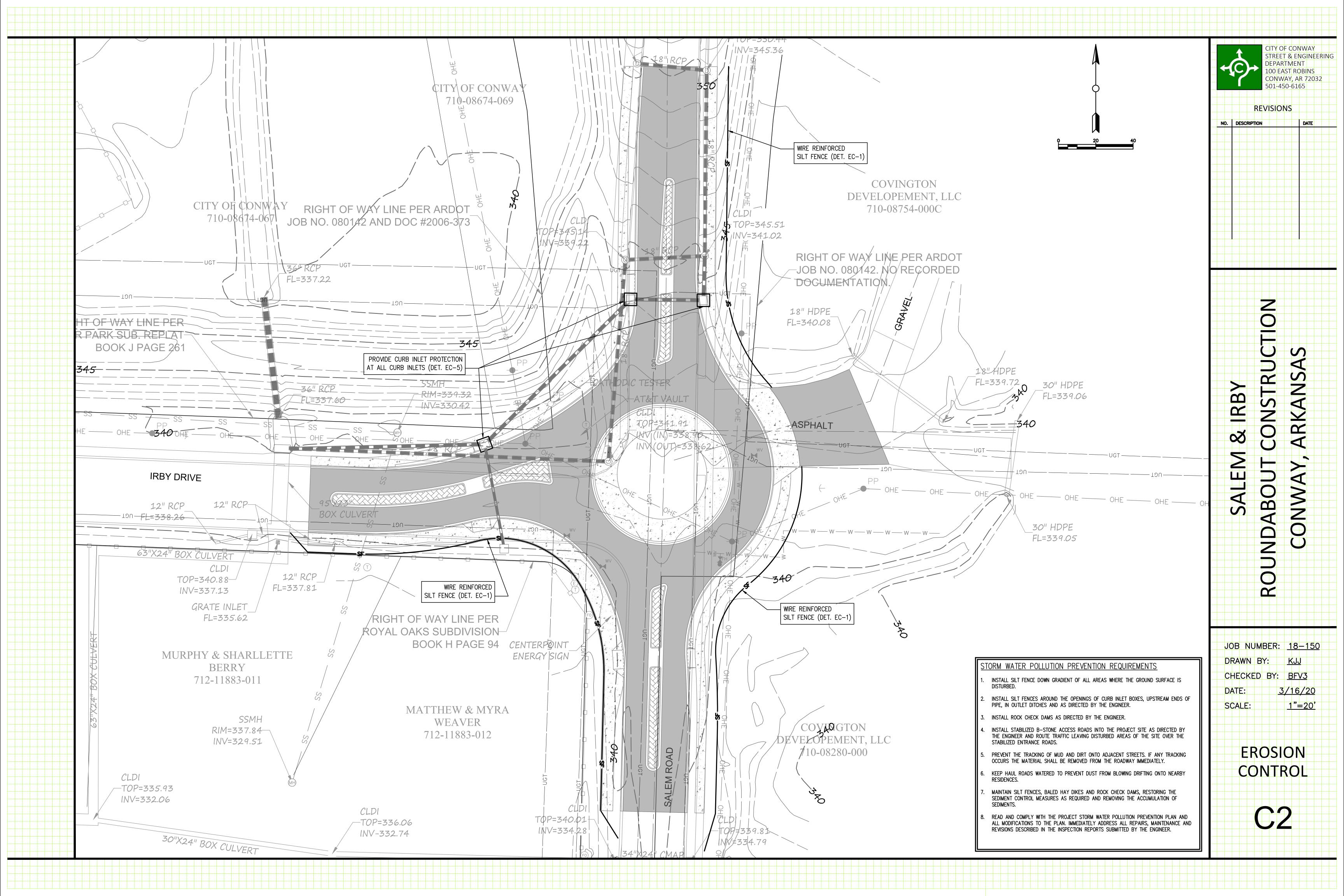
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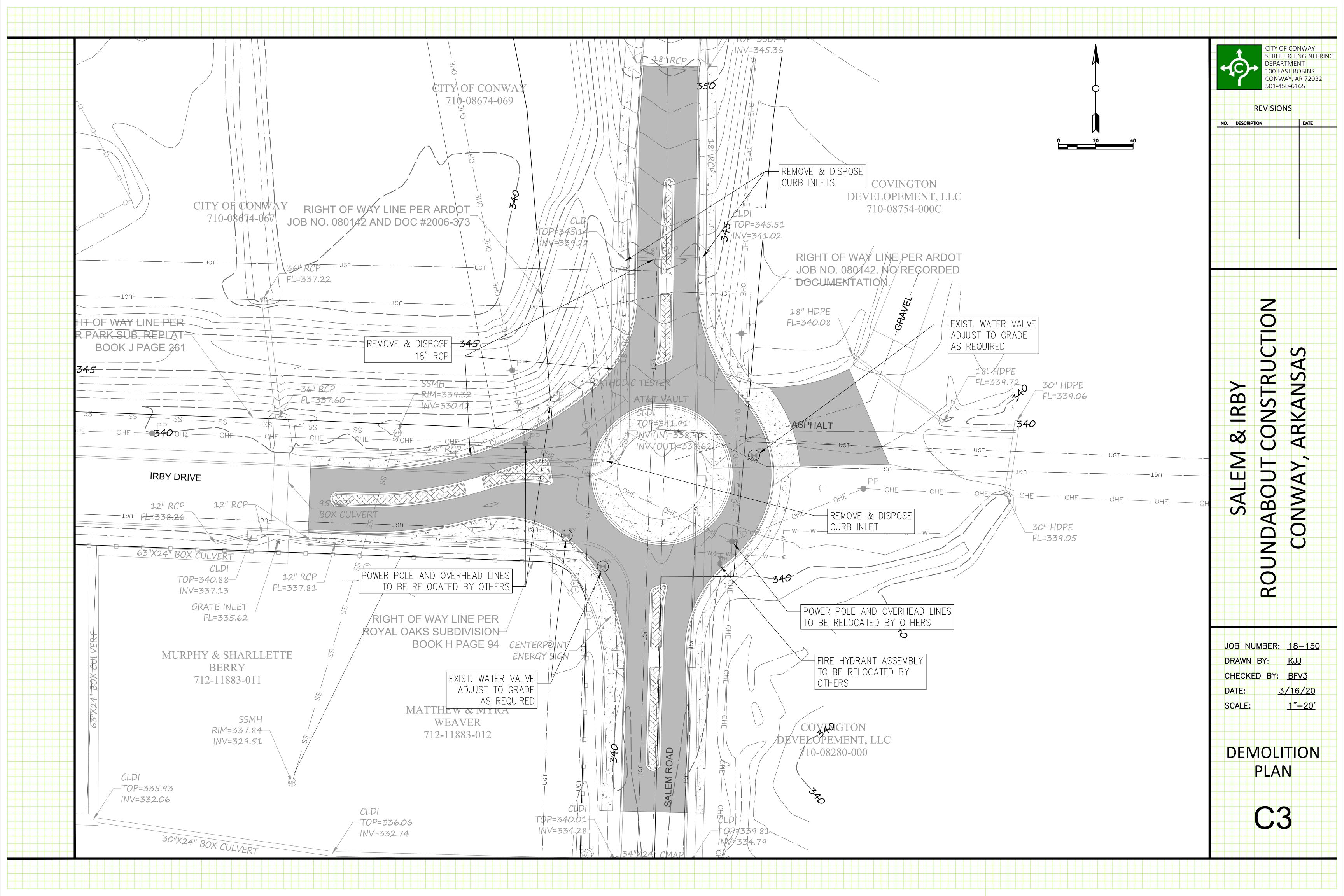
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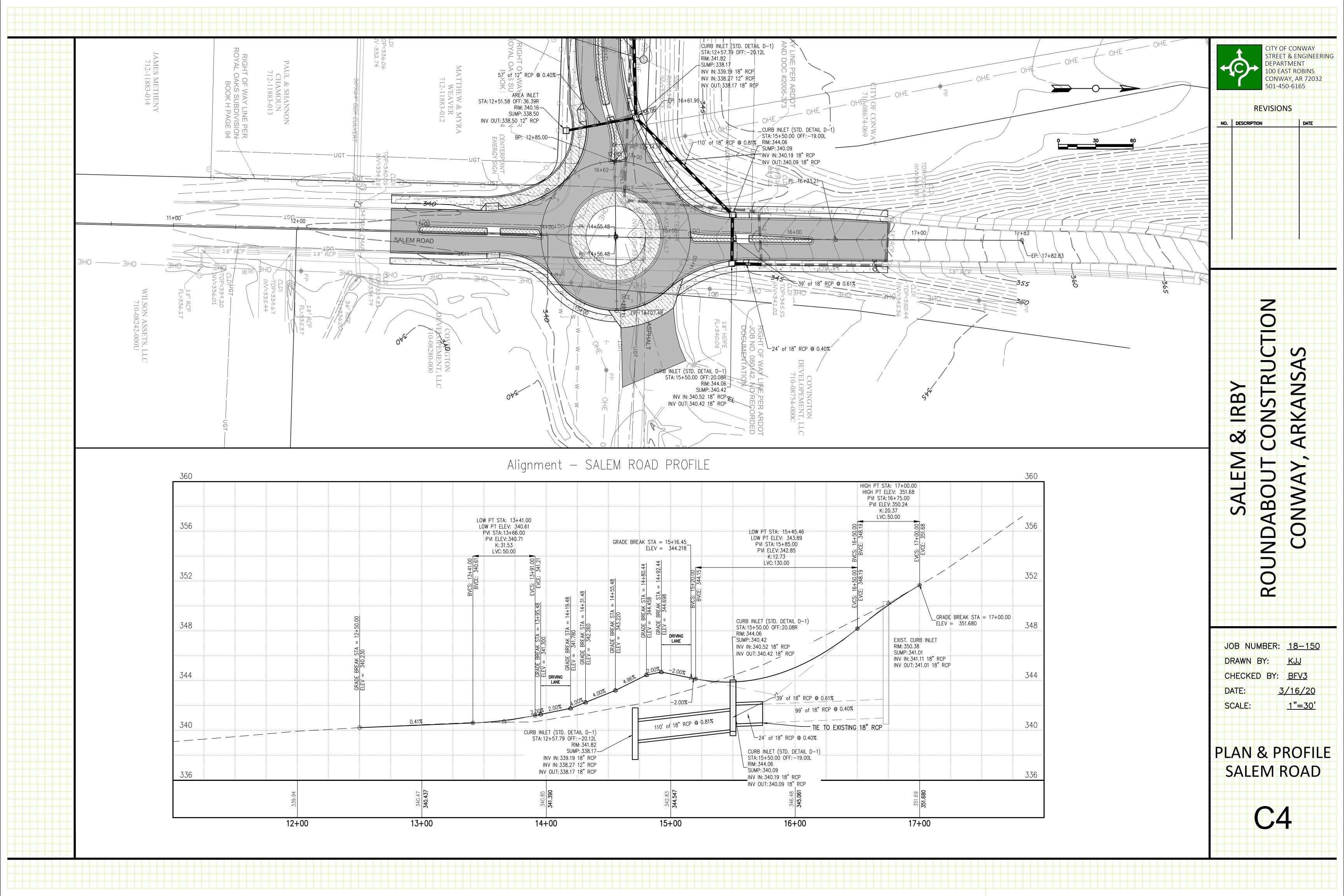
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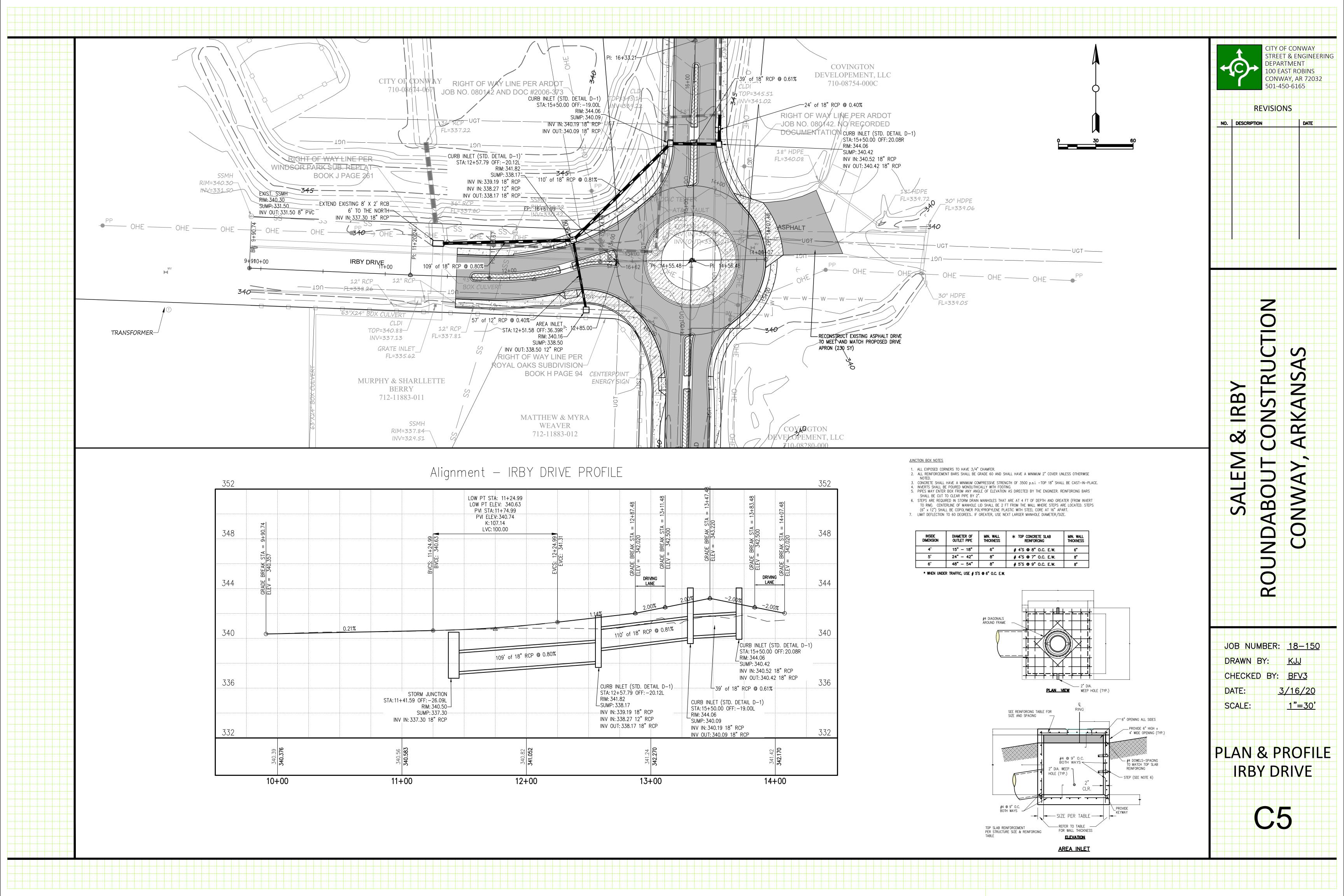
TYP. SECTION & GENERAL NOTES

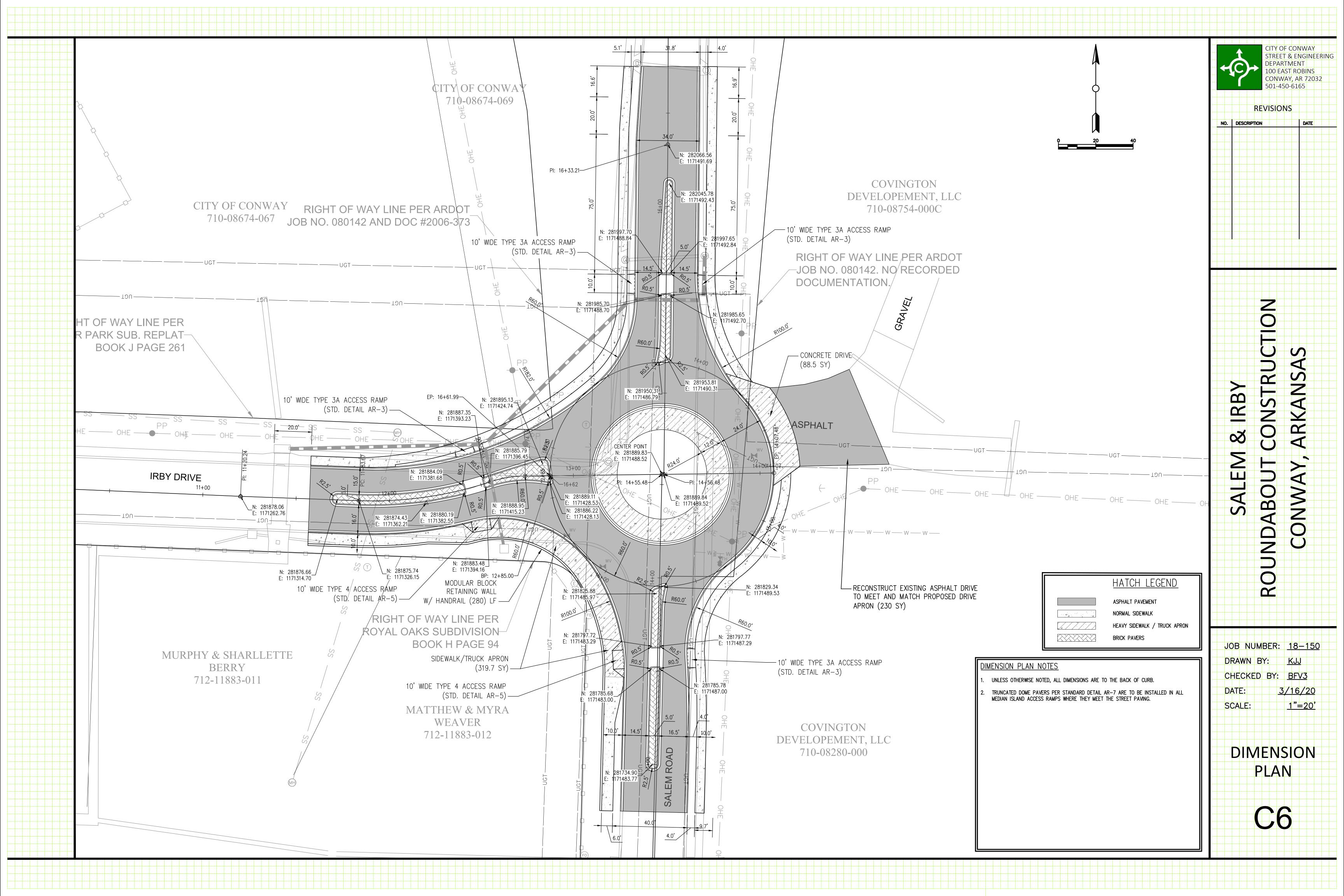
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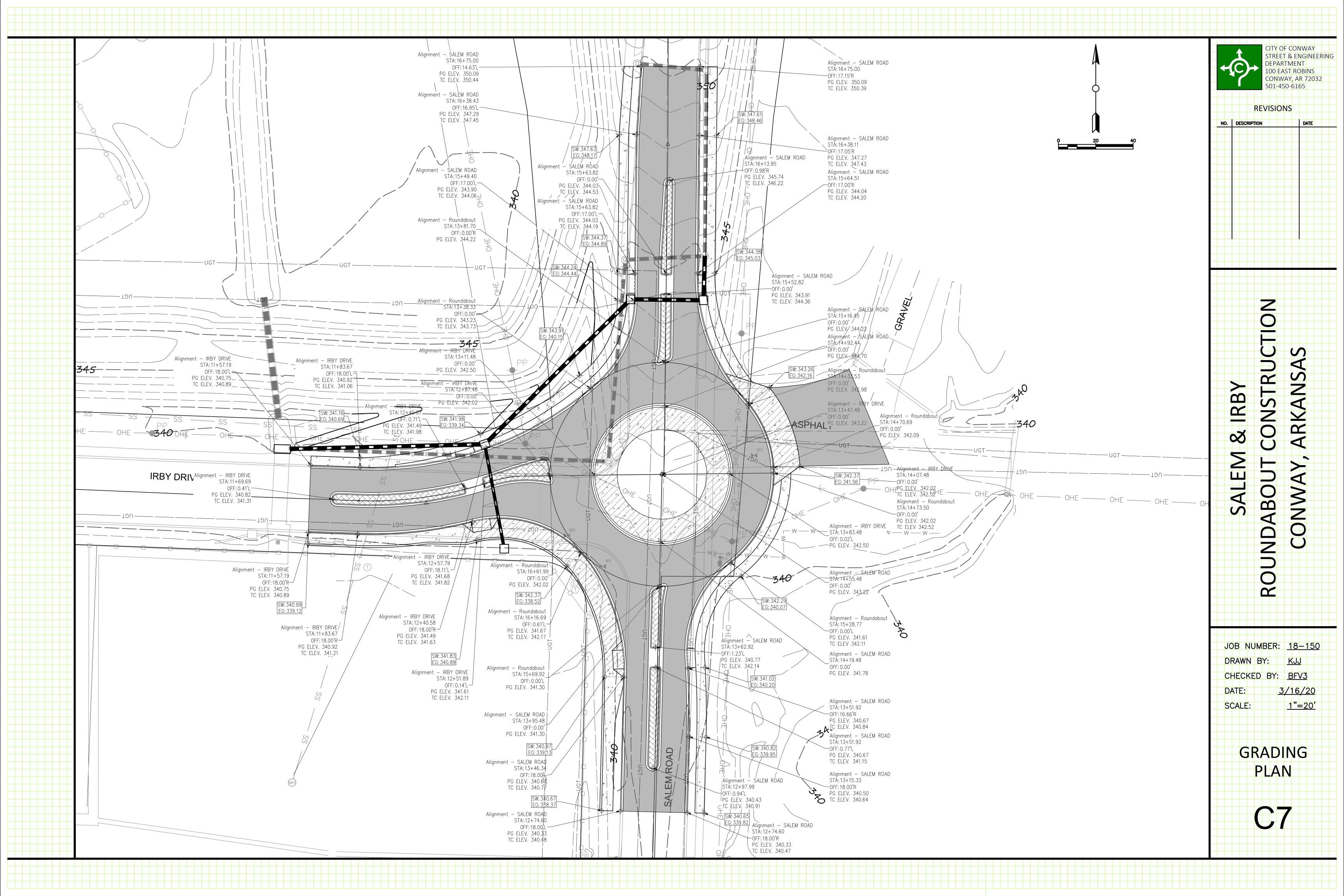


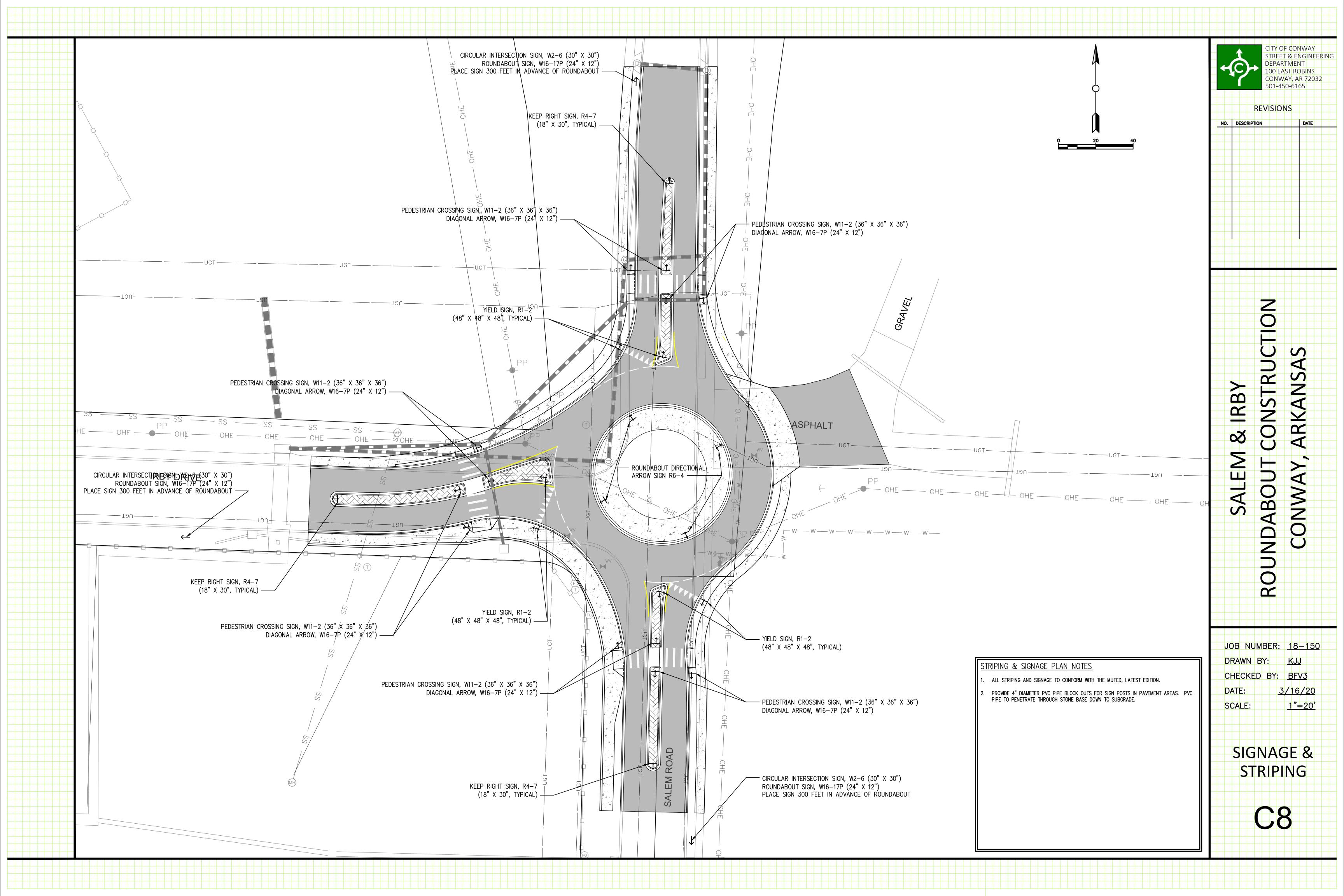


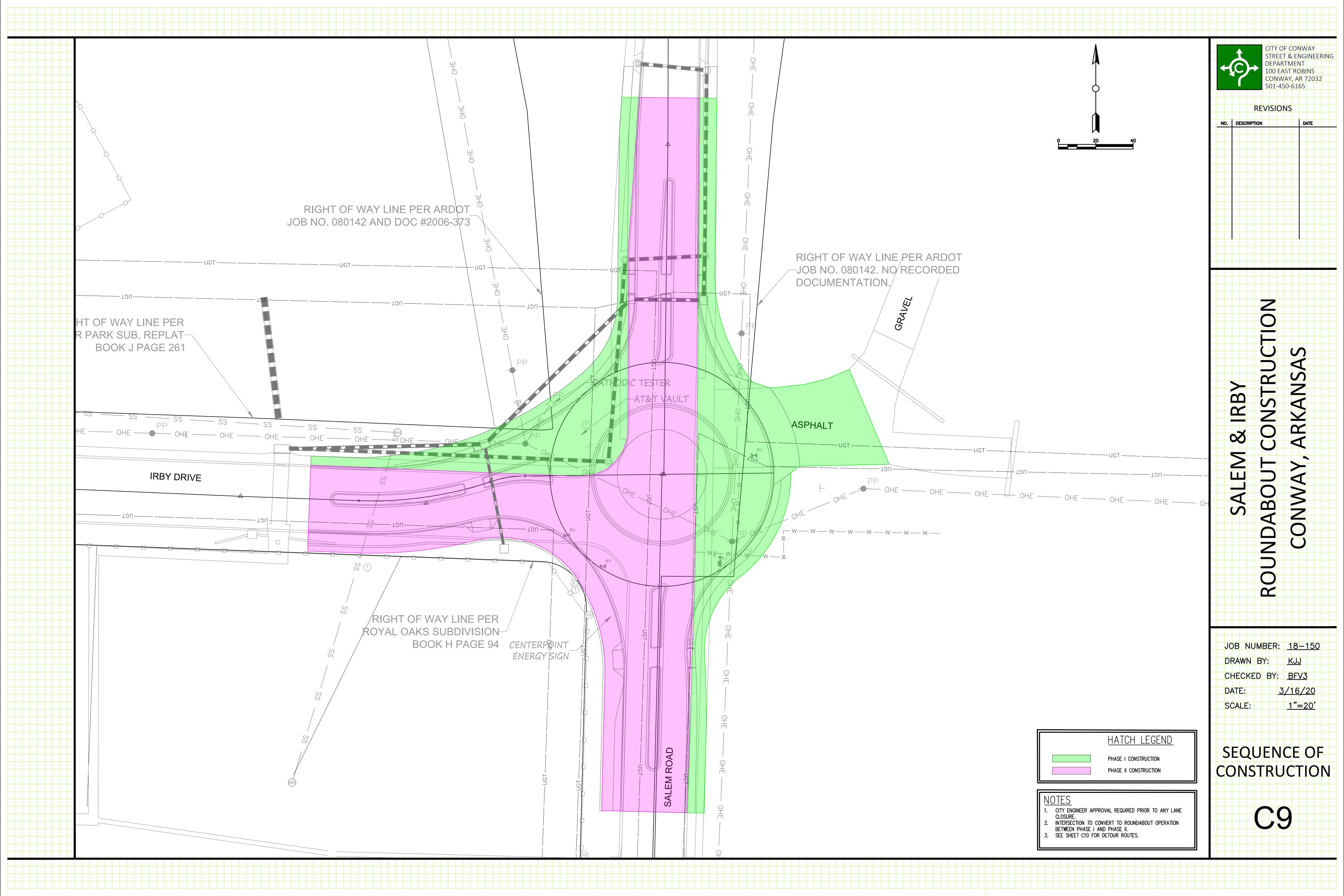


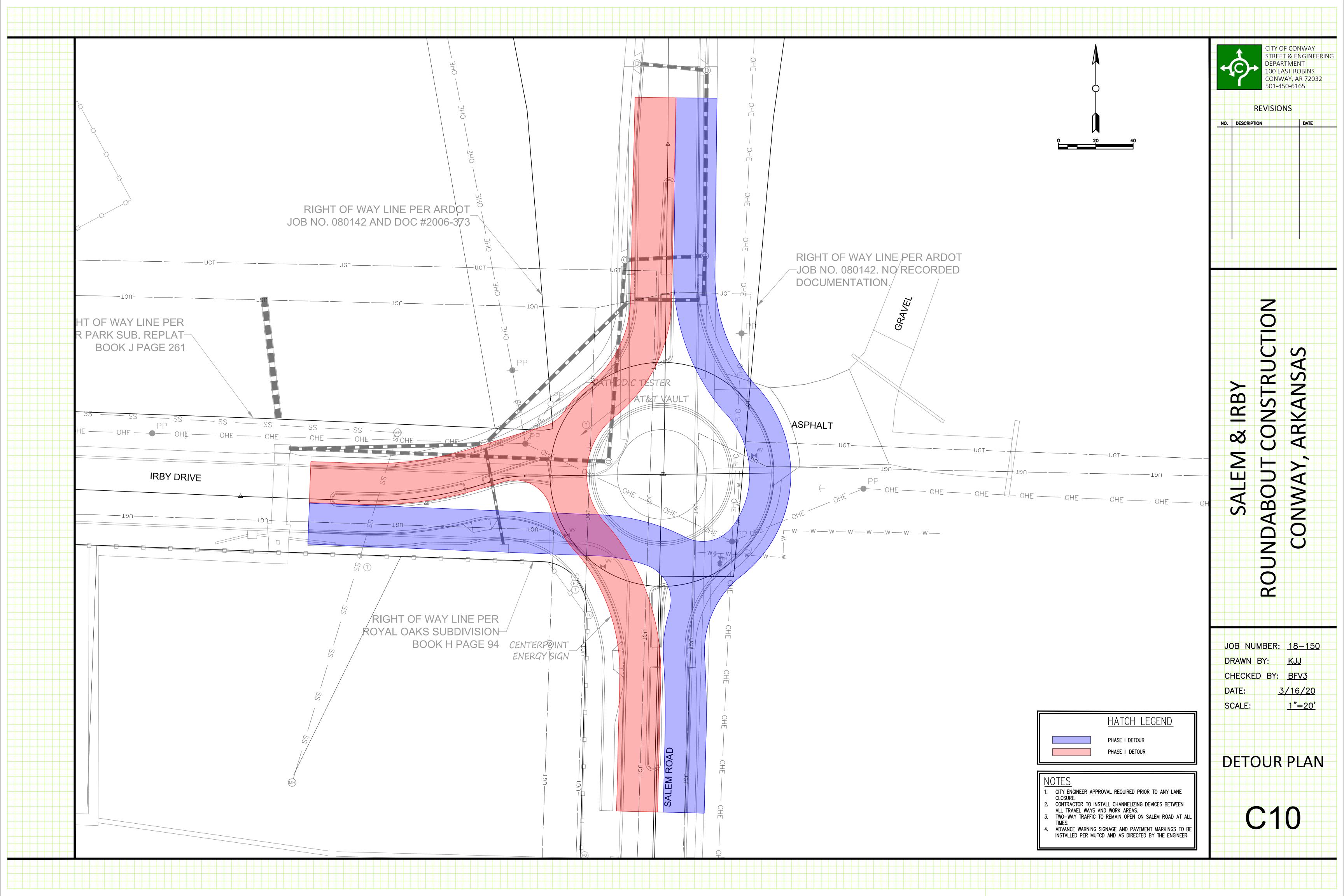


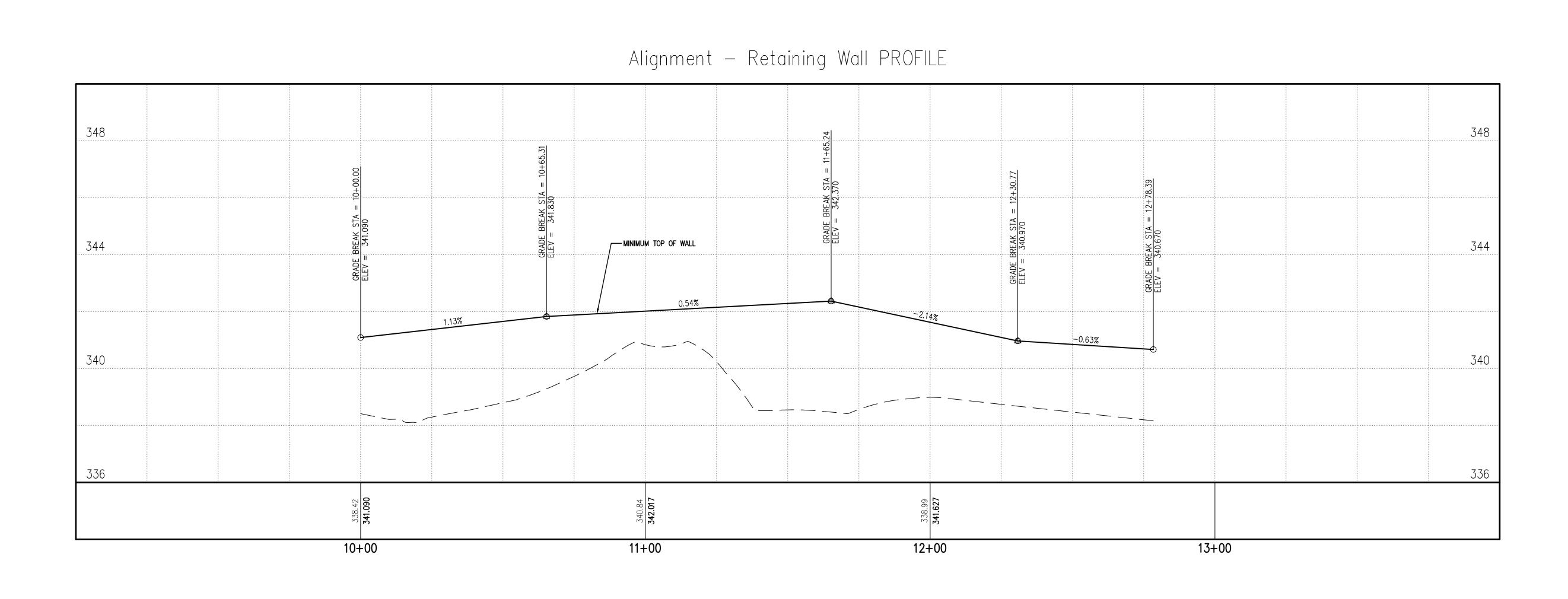














REVISIONS

NO. DESCRIPTION DATE

ROUNDABOUT CONSTRUCTION CONWAY, ARKANSAS

JOB NUMBER: 18-150

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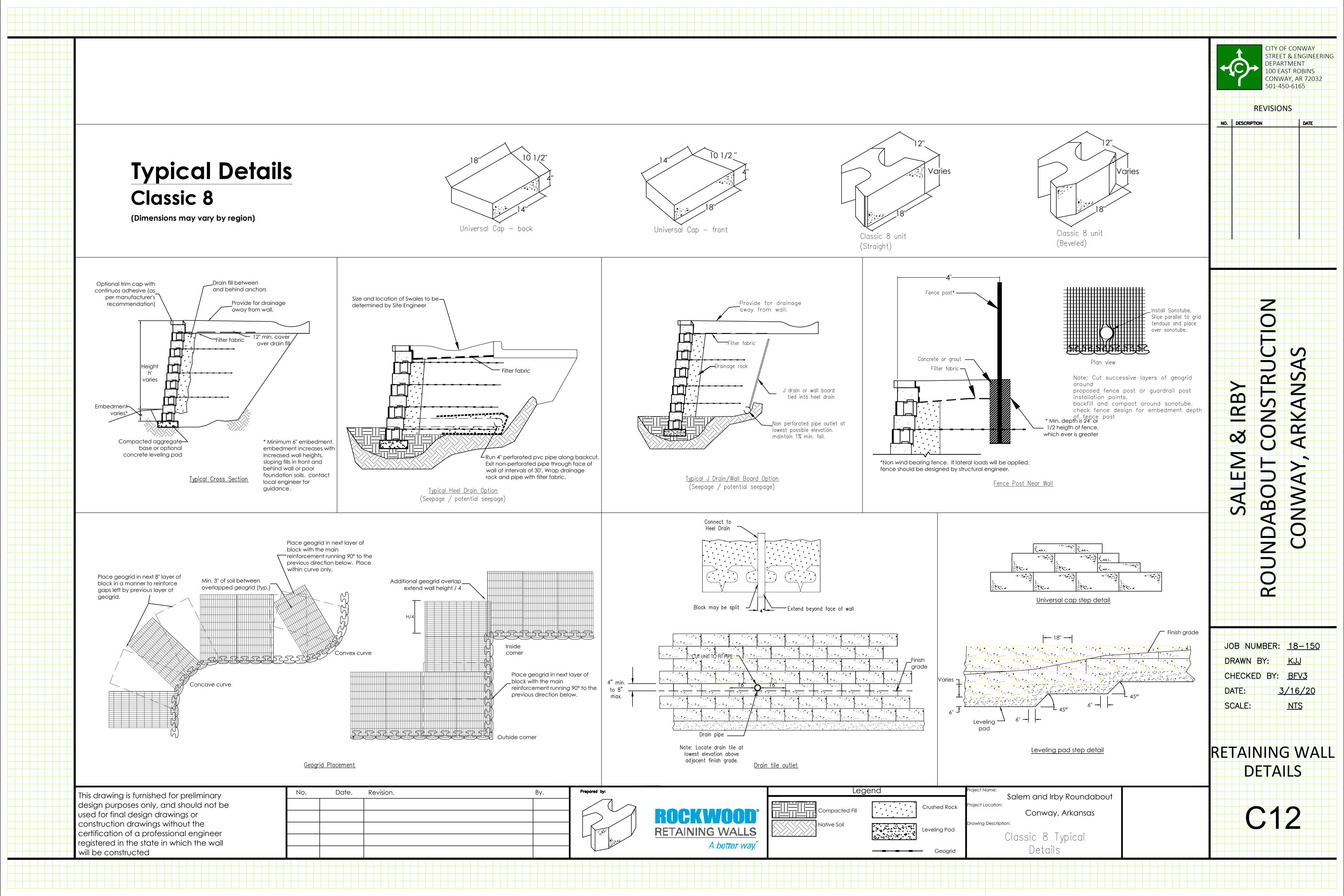
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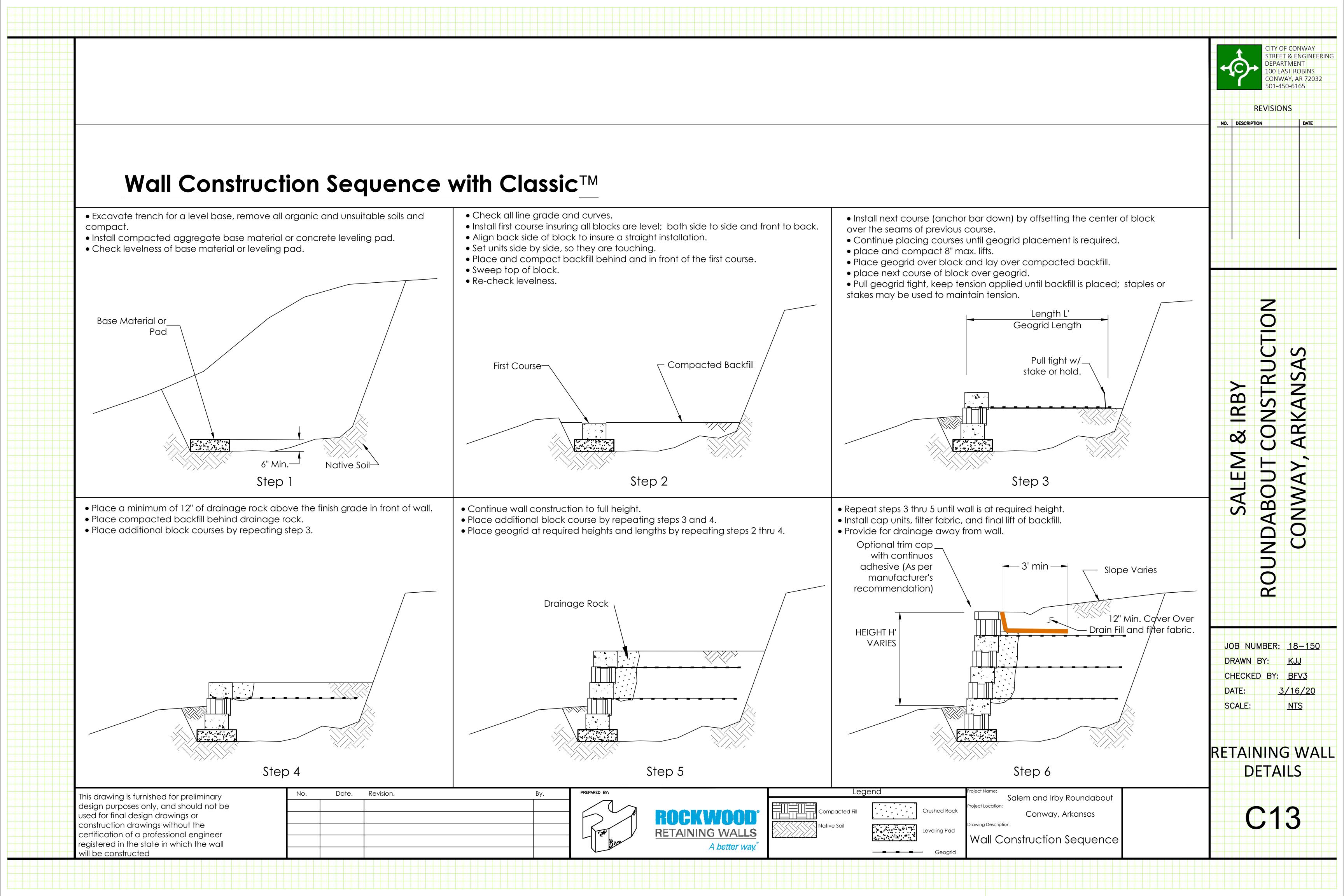
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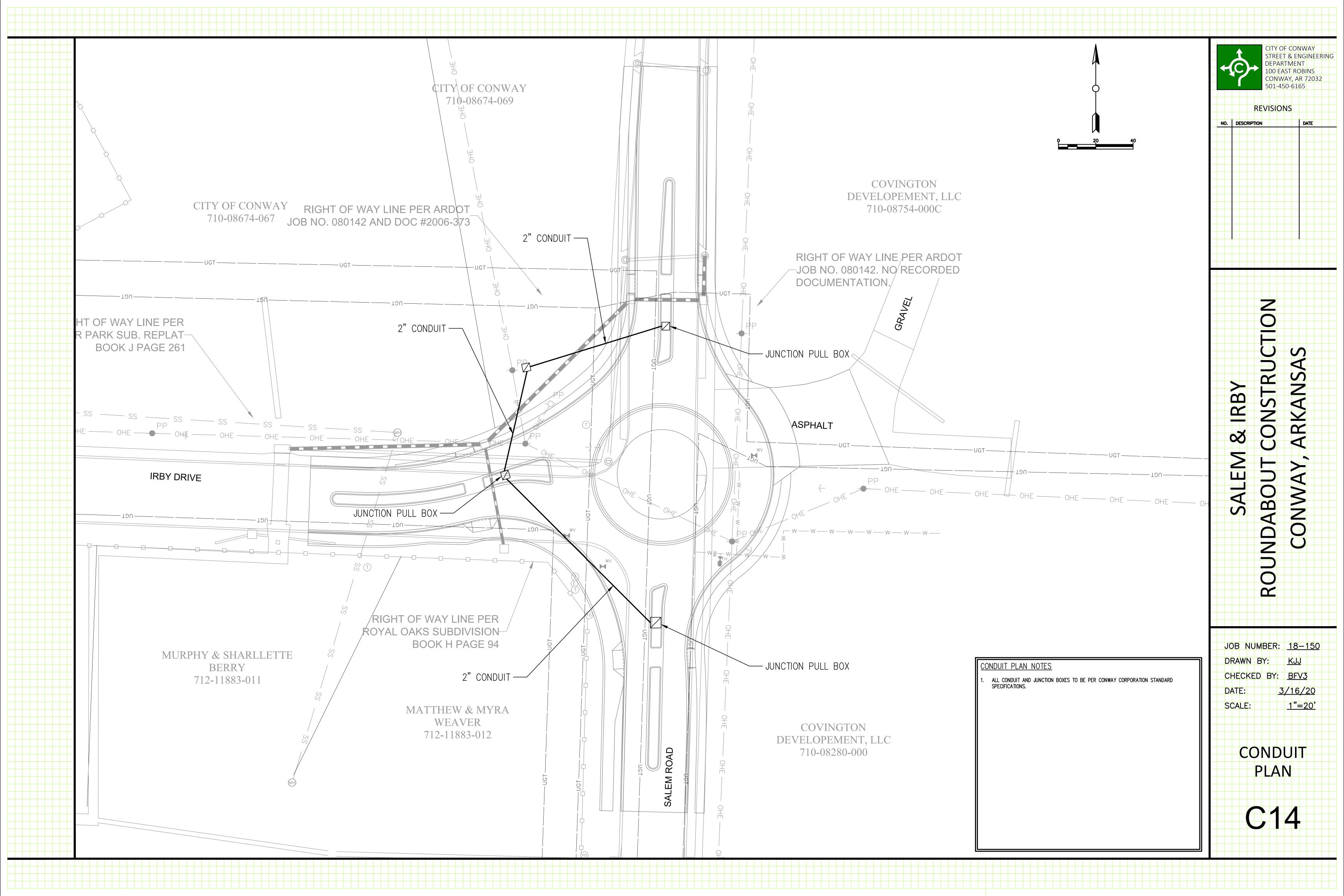
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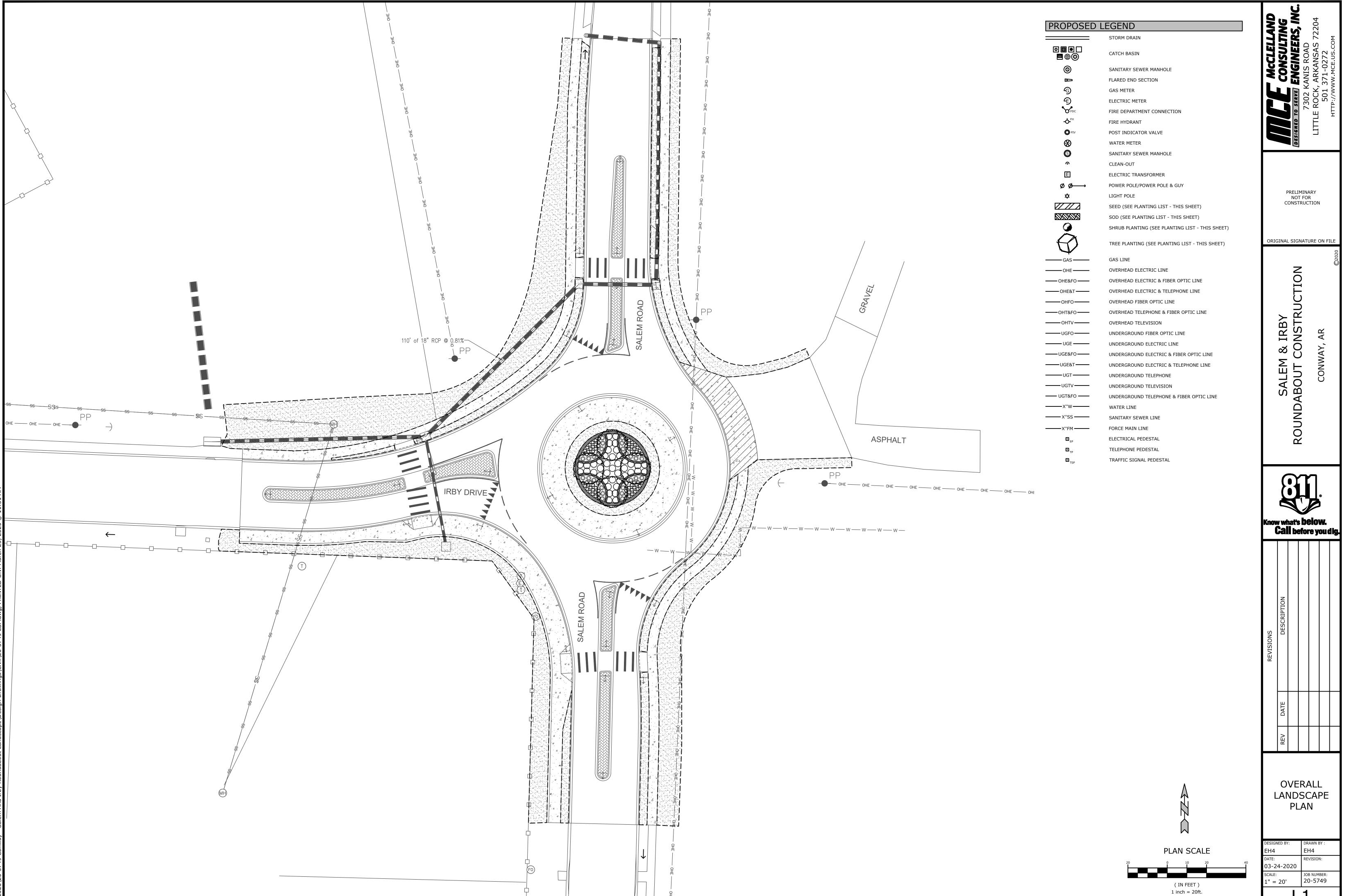
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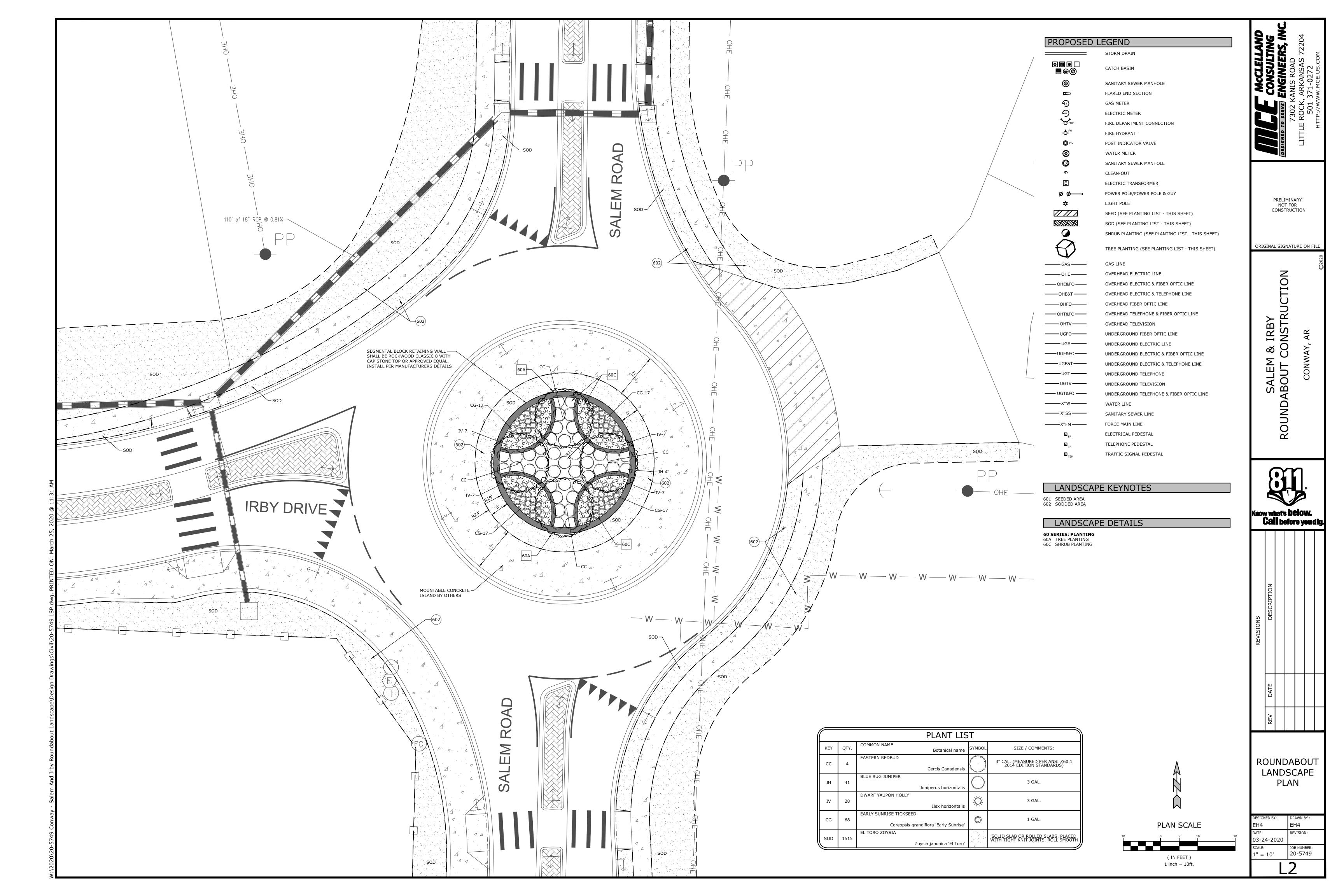
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- 1. CONTRACTOR IS RESPONSIBLE FOR INSURING THAT ALL PROPOSED LANDSCAPING IS INSTALLED IN ACCORDANCE WITH PLANS, DETAILS, SPECIFICATIONS (IF APPLICABLE), AND ALL LOCAL CODES AND REQUIREMENTS.
- 2. CONTRACTOR TO INSPECT SITE AND VERIFY CONDITIONS AND DIMENSIONING PRIOR TO PROCEEDING WITH WORK DESCRIBED HERE IN. NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO BEGINNING ANY CONSTRUCTION.
- 3. CONTRACTOR IS RESPONSIBLE FOR WORK IN ACCORDANCE WITH PLANS, DETAILS, SPECIFICATIONS, AND LOCAL CODES AND REQUIREMENTS.
- 4. QUANTITIES PROVIDED IN THE PLANT LIST ARE FOR GENERAL USE ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL PLANT AND LANDSCAPE MATERIAL QUANTITIES. SYMBOL COUNT ON PLAN TAKES PRECEDENCE OVER TABLE
- 5. IMMEDIATELY AFTER AWARD OF CONTRACT, CONTRACTOR IS TO NOTIFY THE OWNER'S REPRESENTATIVE AND / OR THE LANDSCAPE ARCHITECT OF ANY UNAVAILABILITY OF SPECIFIED PLANT MATERIAL FROM COMMERCIAL NURSERIES. THE OWNER'S REPRESENTATIVE AND / OR LANDSCAPE ARCHITECT WILL PROVIDE ALTERNATE PLANT MATERIAL SELECTIONS IF UNAVAILABILITY OCCURS. SUCH CHANGES SHALL NOT ALTER THE ORIGINAL BID PRICE UNLESS A CREDIT IS DUE
- 6. ALL PLANT MATERIALS TO CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.1.
- 7. CONTAINER GROWN STOCK SHOULD HAVE GROWN IN A CONTAINER LONG ENOUGH FOR THE ROOT SYSTEM TO HAVE DEVELOPED SUFFICIENTLY TO HOLD ITS SOIL
- 8. ANY PLANT SUBSTITUTIONS, RELOCATION, OR REQUIRED CHANGES SHALL REQUIRE THE WRITTEN APPROVAL OF THE LANDSCAPE ARCHITECT AND / OR
- 9. THE OWNER'S REPRESENTATIVE AND / OR LANDSCAPE ARCHITECT RESERVE THE RIGHT TO REFUSE ANY MATERIAL THEY DEEM UNACCEPTABLE.
- 10. CONTRACTOR TO COORDINATE WITH PROJECT REPRESENTATIVE FOR DISTURBED SITE TREATMENTS OUTSIDE LANDSCAPE IMPROVEMENTS. SEE CIVIL PLANS FOR SOIL STABILIZATION FOR EROSION CONTROL.
- 11. IF REQUIRED, CONTRACTOR TO ENSURE THAT AN AUTOMATED IRRIGATION SYSTEM THAT PROVIDES COMPLETE COVERAGE OF THE SITE IS INSTALLED PRIOR TO INSTALLING TREES / PALMS (SEE IRRIGATION PLAN SHEET IF PROVIDED). IF NO PLAN IS PROVIDED, THE CONTRACTOR SHALL SUBMIT A PROPOSED DESIGN TO THE LANDSCAPE ARCHITECT AND / OR ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. THE PROPOSED DESIGN MUST HAVE AN APPROVED BACKFLOW DEVICE, PROVIDE 100% HEAD-TO-HEAD COVERAGE, AND A RAIN SENSOR INSTALLED TO STOP IRRIGATION DURING RAIN EVENTS. CONTRACTOR SHALL ENSURE THAT THERE IS POSITIVE DRAINAGE AND NO PONDING OF WATER AT
- 12. ALL HARDSCAPE MATERIALS SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- 13. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED SMOOTH AND FOUR INCHES OF TOPSOIL APPLIED. IF ADEQUATE TOPSOIL IS NOT AVAILABLE ON SITE, THE CONTRACTOR SHALL PROVIDE TOPSOIL (APPROVED BY THE OWNER) AS NEEDED. THE AREA SHALL THEN BE SEEDED / SODDED, FERTILIZED, MULCHED, WATERED, AND MAINTAINED UNTIL HARDY GRASS GROWTH IS ESTABLISHED IN ALL AREAS. ANY RELOCATED TREES SHALL BE MAINTAINED UNTIL SUCH POINT AS TREE IS RE-ESTABLISHED. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE PROJECT SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 14. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES AND ADJACENT TO THE WORK AREA, 2) TO PROTECT OF ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD, AND 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION AT NO COST TO THE OWNER.
- 15. WEED MAT IS REQUIRED IN LANDSCAPED ISLANDS AS SPECIFIED.
- 16. ALL PLANT MATERIAL QUANTITIES SHOWN ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETE COVERAGE OF ALL PLANTING BEDS AT SPACING
- 17. IF A SWPPP PLAN IS PROVIDED, THIS PLAN IS TO BE IMPLEMENTED COOPERATIVELY WITH SWPPP PLAN (AS NEEDED), TO MAXIMIZE THE EFFECTIVENESS OF THE SWPPP PLAN FOR THIS SITE.
- 18. THE CONTRACTOR IS ENCOURAGED TO COMPLETE TEMPORARY OR PERMANENT SEEDING OR SODDING IN STAGES FOR SOIL STABILIZATION AS AREAS ARE COMPLETED AFTER GRADING.

19. ALL DISTURBED AREAS AS DESIGNATED ON THE GRADING PLAN SHALL BE SOWN WITH GRASS SEED MIX OF:

TEMPORARY SEEDING SCHEDULE							
ANNUAL RYE GRASS	5LB / 1000 SF						
PERMANENT SEEDING SCHEDULE							
MARCH 1 - AUGUST 31							
BERMUDA GRASS "YUKON" (UNHULLED)	1LB / 1000 SF						
SEPTEMBER 1 - FEBRUARY 28 / 29							
BERMUDA GRASS "YUKON" (UNHULLED)	1LB / 1000 SF						
ANNUAL RYE GRASS	5LB / 1000 SF						

- 20. SEEDING ON SLOPES: HYDROSEED WITH GRASS SEED AS INDICATED ON PLANS (SEE LEGEND FOR SPECIFIC GRASS SEED TYPE). SEEDING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER BED PREPARATION. HYDROSEED MIXTURE SHALL CONTAIN CELLULOSE MULCH APPLIED AT A RATE OF 2,000 LBS. / ACRE, WITH A MAXIMUM OF 50 LBS. / 100 GAL. OF WATER. IF SEEDING IS DELAYED AFTER MIXING 1/2 - 2 HOURS, ADD AN ADDITIONAL 50% OF SEED MIX. IF DELAY IS LONGER THAN 2 HOURS, BEGIN WITH NEW MIXTURE. ALL SLOPES 2:1 OR GREATER SHALL BE COVERED WITH EROSION CONTROL BLANKET AS SHOWN IN THE EROSION CONTROL BLANKET DETAIL. SEE SPECIFICATIONS FOR SEED ESTABLISHMENT REQUIREMENTS.
- 21. ALL PLANT MATERIAL IN TREE HOLDING AREAS SHALL BE MANUALLY WATERED/IRRIGATED TO KEEP MOIST UNTIL PLANTED.
- 22. CONTRACTOR SHALL PROVIDE EXPANSION AND CONTROL JOINTS ON ALL LANDSCAPE SPECIFIC CONCRETE PROJECTS (SEE HARDSCAPE PLAN FOR DETAILS).

GENERAL SOLID SOD NOTES

- ADJUST FINE GRADE TO ACHIEVE POSITIVE DRAINAGE AWAY FROM BUILDINGS. PROVIDE UNIFORM ROUNDING AT TOP AND BOTTOM OF SLOPES AND OTHER BREAKS IN GRADE. CORRECT ANY IRREGULARITIES AND / OR AREAS WHERE
- ALL LAWN AREAS TO RECEIVE SOLID SOD SHALL BE LEFT IN A MAXIMUM OF 1 1/2" BELOW FINAL FINISH GRADE. CONTRACTOR TO COORDINATE OPERATIONS WITH ON-SITE CONSTRUCTION MANAGER.
- CONTRACTOR TO COORDINATE WITH ON-SITE CONSTRUCTION MANAGER FOR AVAILABILITY OF EXISTING TOPSOIL.
- 4. IMPORTED TOPSOIL SHALL BE NATURAL, FRIABLE SOIL FROM THE REGION KNOWN AS BOTTOM LAND SOIL: FREE FROM LUMPS, CLAY TOXIC SUBSTANCES, ROOTS, DEBRIS, VEGETATION, STONES; CONTAINING NO SALT AND BE BLACK TO BROWN
- ALL LAWN AREAS TO BE FINE GRADED, SETTLED, AND FINISH GRADE APPROVED BY THE OWNER'S REPRESENTATIVE OR LANDSCAPE ARCHITECT PRIOR TO SOD
- ALL ROCKS 3/4" DIAMETER AND LARGER, DIRT CLODS, STICKS, CONCRETE SPOILS, CONSTRUCTION WASTE, ETC. SHALL BE REMOVED PRIOR TO PLACING TOPSOIL
- 7. PLANT SOD BY HAND TO COVER INDICATED AREA COMPLETELY. INSURE EDGES OF SOD ARE TOUCHING. TOP DRESS JOINTS BY HAND WITH TOPSOIL TO FILL VOIDS.
- 8. ROLL GRASS AREAS TO ACHIEVE A SMOOTH, EVEN SURFACE FREE FROM
- FERTILIZE ALL SOD AT THE TIME OF PLANTING WITH A TIME RELEASE FERTILIZER
- PER BRAND'S SPECIFIED APPLICATION RATES.
- 10. WATER SOD THOROUGHLY AS SOD OPERATION PROGRESSES.

AND ANY LAWN INSTALLATION.

- 11. IF SOD IS INSTALLED ON SLOPES OF 3:1 OR GREATER, SOD SHALL BE STAKED TO AVOID SLIPPING OR SLIDING APART. STAKING OR STAPLES SHALL BE INSTALLED FLUSH AS TO NOT CREATE A MAINTENANCE ISSUE WITH CARE EQUIPMENT.
- 12. CONTRACTOR SHALL MAINTAIN ALL LAWN AREAS UNTIL FINAL ACCEPTANCE. THIS SHALL INCLUDE, BUT NOT LIMITED TO: MOWING, WATERING, WEEDING CULTIVATING, CLEANING AND REPLACING DEAD OR BARE AREAS TO KEEP PLANTS IN VIGOROUS, HEALTHY CONDITIONS.
- 13. CONTRACTOR SHALL GUARANTEE ESTABLISHMENT OF AN ACCEPTABLE TURF AREA AND SHALL PROVIDE REPLACEMENT FROM LOCAL SUPPLY IF NECESSARY.
- 14. IF INSTALLATION OCCURS BETWEEN SEPTEMBER 1ST AND MARCH 1ST, ALL SOD AREAS TO BE OVER-SEEDED WITH ANNUAL RYE GRASS SEED AT 5LBS / 1000 SF.

GENERAL PLANTING NOTES

- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING ALL PLANTED AREAS. ALL DELETERIOUS MATERIALS SUCH AS ROCK, TRASH, CONSTRUCTION DEBRIS, AGGREGATE BASE MATERIAL, ASPHALT, ETC. SHALL BE REMOVED PRIOR TO ANY FILL OPERATIONS. FILL ALL PLANTING AREAS WITH CLEAN EARTHEN FILL. SOIL SHALL BE FREE OF HEAVY, STIFF CLAY AND ANY DELETERIOUS MATERIAL OVER ONE INCH IN SIZE. THE TOP SIX INCHES OF FILL MATERIAL STRIPPED FROM SITE MAY BE UTILIZED FOR PLANTER OR TOPSOIL FILL IF PRIOR APPROVAL HAS BEEN OBTAINED FROM THE OWNER'S REPRESENTATIVE AND / OR LANDSCAPE
- 2. FINISH GRADE OF LANDSCAPE AREAS (TOP OF TURF AND MULCH) MUST BE GRADED TO 1 1/2" BELOW ADJACENT PAVEMENT SURFACES.
- 3. LOCATE SHRUBS A DISTANCE OF HALF OF THEIR AVERAGE MATURE SPREAD AWAY FROM WALKS, STRUCTURES, CONCRETE PADS, ETC. CONTRACTOR TO LOCATE GROUND COVER PLANTINGS A MINIMUM OF 2' FROM WALKS, STRUCTURES, CONCRETE PADS, ETC.
- 4. ALL LAWN AREAS NOT OTHERWISE BORDERED BY WALKS, OR OTHER STRUCTURES, SHALL HAVE MANUFACTURED EDGING AS REQUIRED.
- TREES PLANTED ADJACENT TO PUBLIC ROADS AND PEDESTRIAN SIDEWALKS SHALL BE PRUNED SUFFICIENTLY TO AVOID VISUAL BLOCKS TO INTERSECTING VEHICULAR ACCESS OR INTERFERENCE WITH PEDESTRIAN WALKWAYS. TREES WITH A 4" OR LARGER CALIPER SHALL BE PRUNED UP TO 6'-0" ABOVE PAVEMENTS.
- ALL TREES WITHIN 4' OF PAVED SURFACES (CURBS, WALLS, BUILDINGS, SIDEWALKS, ETC.) SHALL BE PROVIDED WITH A DEEP ROOT BARRIER CONTROL DEVICE OR EQUAL. INSTALL PER MANUFACTURER'S SPECIFICATIONS.
- TOPSOIL DEPTH SHALL BE AS FOLLOWS: PLANTER BEDS - 12" MINIMUM
- GRASS / SOD AREAS 4" MINIMUM (AFTER COMPACTION) 8. BACKFILL ALL TREES, SHRUBS, GROUNDCOVER WITH A MIXTURE OF 2 PARTS

NATIVE SOIL AND 1 PART SOIL CONDITIONING WITH WOOD MULCH.

- THE LANDSCAPE CONTRACTOR SHALL WATER TEST ALL PLANTING HOLES PRIOR TO PLANTING. IF HOLES DO NOT DRAIN PROPERLY, EXCAVATE FURTHER UNTIL IMPERMEABLE LAYER IS BREACHED. EXCAVATED PLANT PITS SHALL HAVE POSITIVE DRAINAGE. PLANT PITS (WHEN FULLY FLOODED WITH WATER) SHALL DRAIN WITHIN 1 HOUR OF FILLING. ENSURE THAT ALL PLANT PITS HAVE POSITIVE DRAINAGE.
- 10. ALL PLANTING BEDS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE. PRE-EMERGENT HERBICIDE SHALL BE APPLIED PER MANUFACTURE'S RECOMMENDATIONS AND SHALL OCCUR AFTER TOPSOIL PLACEMENT, BUT PRIOR
- TO INSTALLATION OF PLANT MATERIALS AND MULCH.
- 11. FERTILIZE ALL PLANTS AT THE TIME OF PLANTING WITH A TIME RELEASE FERTILIZER PER BRAND'S SPECIFIED APPLICATION RATES.
- 12. ALL PLANTING BED SOILS SHALL BE AMENDED WITH 2" OF ORGANIC COMPOST.
- 13. ALL TREES AND SHRUBS SHALL BE PLANTED IN SUCH A MANNER AS TO ENSURE THEIR SURVIVAL
- 14. ANY ROPE OR WIRE BINDING THE BALL SHALL BE CUT PRIOR TO PREVENT GIRDLING OF THE TREE. REMOVE WIRE, TWINE, AND BURLAP FROM THE TOP HALF OF ALL B&B PLANT MATERIAL.
- 15. IF A NON-BIODEGRADABLE MATERIAL IS USED AROUND THE BALL, IT SHALL BE COMPLETELY REMOVED PRIOR TO BACKFILLING.
- 16. PRIOR TO INSTALLATION, THE ROOTS OF CONTAINER GROWN STOCK SHALL BE SEPARATED OR SPLIT TO ENSURE PROPER ROOT DEVELOPMENT.
- 17. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAINTAIN HEALTHY PLANT CONDITIONS.
- 18. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE MEETING ALL PLANT LIST SPECIFICATIONS. TREES & SHRUBS SHALL BE PLANTED AS SOON AS POSSIBLE AFTER DELIVERY.
- 19. ALL TREES MUST BE STRAIGHT-TRUNKED, FULL-HEADED, AND MEET ALL REOUIREMENTS SPECIFIED.
- 20. ALL TREES MUST BE STAKED AS SHOWN IN THE DETAILS.
- 21. NO SUBSTITUTIONS OR ALTERNATIVES WILL BE ALLOWED FOR GROUND SURFACE MATERIALS UNLESS APPROVED IN WRITING BY THE OWNER'S REPRESENTATIVE AND / OR LANDSCAPE ARCHITECT.
- 22. MAINTAIN 5' MINIMUM HORIZONTAL SEPARATION BETWEEN TREE PLANTINGS AND ALL UTILITIES UNLESS OTHERWISE SPECIFIED.
- 23. TOP DRESSING SHALL BE PLACED IN ALL PLANT BEDS AND AROUND ALL TREES. SINGLE TREES OR SHRUBS SHALL HAVE TOP DRESSING TO THE OUTSIDE EDGE OF THE MANUFACTURED EDGING OR LANDSCAPE ISLAND. TOP DRESSING CAN BE WOOD MULCH, ROCK, OR ANY OTHER DECORATIVE MATERIAL SPECIFIED ON PLANS (SEE LANDSCAPE PLAN / DETAIL FOR TYPE).
- 24. THE FOLLOWING PLANTING SEASONS ARE RECOMMENDED: EVERGREEN SHRUBBERY: SPRING, SUMMER, FALL DECIDUOUS SHRUBBERY & TREES: FALL EVERGREEN TREES: SPRING, SUMMER, FALL

PLANT GUARANTEE, REPLACEMENT, & MAINTENANCE

ACCEPTANCE OF GRADING AND SEEDING SHALL BE BY LANDSCAPE ARCHITECT AND / OR OWNER. THE CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITIES UNTIL FINAL ACCEPTANCE. MAINTENANCE SHALL INCLUDE, BUT NOT LIMITED TO: : WATERING, WEEDING, RE-SEEDING, AND OTHER OPERATIONS NECESSARY TO KEEP ALL LAWN AREAS IN A THRIVING CONDITION. UPON FINAL ACCEPTANCE, OWNER SHALL ASSUME ALL MAINTENANCE RESPONSIBILITIES. AFTER LAWN AREAS HAVE GERMINATED, AREAS WHICH FAIL TO SHOW A UNIFORM STAND OF GRASS FOR ANY REASON WHATSOEVER SHALL BE RE-SEEDED REPEATEDLY UNTIL ALL AREAS ARE COVERED WITH A SATISFACTORY STAND OF GRASS. MINIMUM ACCEPTANCE OF SEEDED LAWN AREAS MAY INCLUDE SCATTERED BARE SPOTS, NONE OF WHICH ARE LARGER THAN 1 SQUARE FOOT, AND WHEN COMBINED DO NOT EXCEED 2% OF TOTAL SEEDED LAWN AREA.

REPLACEMENT: ANY PLANT UNDER THIS SPEC WHICH IS DEAD, MISSING, UNHEALTHY, OR OTHERWISE NOT ACCEPTABLE AND NOT IN SATISFACTORY GROWING CONDITION DURING CONSTRUCTION MAINTENANCE PERIOD, OR AT THE END OF THE GUARANTEE PERIOD, SHALL BE REMOVED FROM SITE AND REPLACED WITH SUITABLE, ACCEPTABLE PLANT AS SPECIFIED, WITHIN FIVE (5) DAYS.

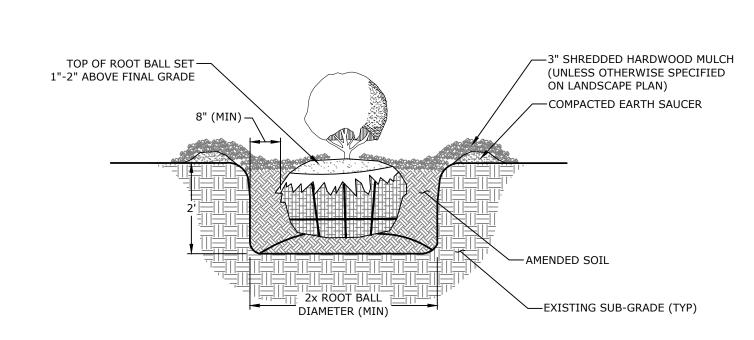
THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF TWO (2) YEARS BEGINNING ON THE DATE OF TOTAL ACCEPTANCE. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE OR AT THE END OF THE GUARANTEE PERIOD.

GENERAL CONTRACTOR SHALL PROVIDE ONE YEAR OF LANDSCAPE MAINTENANCE, FROM THE TIME THE PROJECT RECEIVES THE CERTIFICATE OF OCCUPANCY AND THERE AFTER, FOR ALL NEW LANDSCAPE. IF EXISTING LANDSCAPE EXISTS ON-SITE, GENERAL CONTRACTOR IS TO PROVIDE THE OPTION OF MAINTENANCE FOR THE OWNER'S REVIEW.

GENERAL HERBICIDES NOTES

- APPLICATION OF HERBICIDES SHALL BE IN COMPLIANCE WITH STATE PESTICIDES REGULATIONS. IT IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO CONSULT WITH THE REGULATORY AGENCIES FOR LOCAL HERBICIDES APPLICATION
- 2. IF THERE IS A DISCREPANCY BETWEEN STATE REGULATIONS AND ADDITIONAL REQUIREMENTS BELOW, MOST STRINGENT SHALL RULE
- 3. NO AERIAL APPLICATION OF HERBICIDES IS PERMITTED ON SITE.
- 4. CARCINOGENS AND EPA TOXIC CATEGORY I AND II ARE PROHIBITED TO USE ON

DO NOT PRUNE TERMINAL LEADER. PRUNE CO-DOMINANT LEADERS, RUBBING OR CROSSED BRANCHES, OR EXCESSIVELY NARROW CROTCHED BRANCHES. 3/4" RUBBER HOSE (LOOSELY FIT AROUND TRUNK FOR FLEXIBILITY) -2 STRANDS, #12 PLIABLE GALVANIZED STEEL WIRE AND TURNBUCKLE -METAL RIBBED-BACKED STAKES (TYP) -TRUNK FLARE, SET 1"-2" ABOVE FINISHED GRADE (TYP) —FINISHED GRADE (TYP) 3" SHREDDED HARDWOOD MULCH-(UNLESS OTHERWISE SPECIFIED ON LANDSCAPE PLAN) -PULL BACK BURLAP FROM TOP ⅓ OF ROOT BALL AND REMOVE ALL TWINE, WIRE BASKET, AND ROPE USED TO SECURE DEPTH OF ROOT BURLAP AND TO TREE ROOT BALL (TYP) BALL (MIN) —PLANTING SOIL MIX (TYP) -UNDISTURBED SOIL UNDER ROOT BALL (TYP) 2x ROOT BALL DIAMETER (MIN) EXISTING SUB-GRADE (TYP)-TREE PLANTING



SHRUB PLANTING

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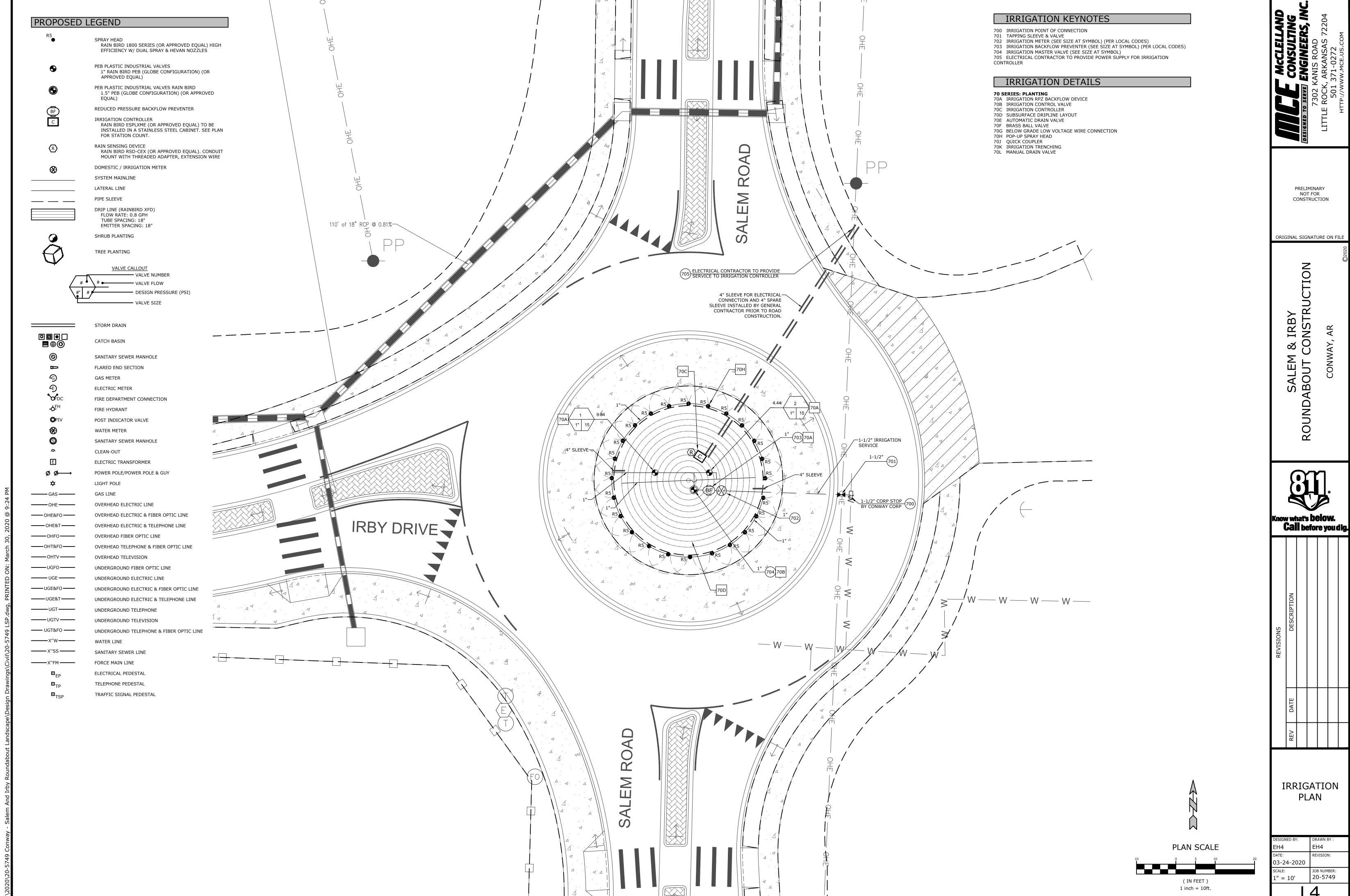
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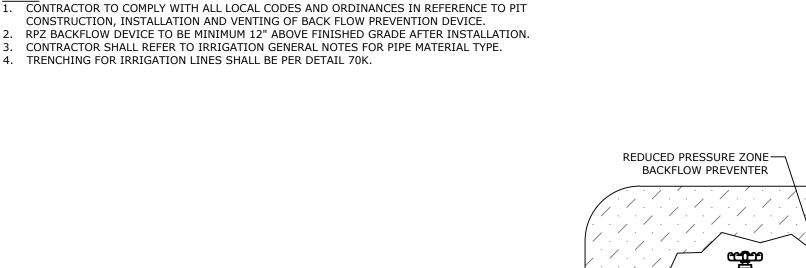
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LANDSCAPE NOTES & DETAILS

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—INSULATED FIBERGLASS **ENCLOSURE** COPPER NIPPLE COPPER ELL PLASTIC VALVE— BOX w/ LID FINISHED GRADE--COPPER UNION BRASS ISOLATION— GATE VALVE -WASHED GRAVEL (3" MIN DEPTH) SYSTEM MAINLINE ---→ TO WATER METER -THRUST BLOCKING —THRUST BLOCKING (DETAIL 40A) (DETAIL 40A) ⁻¾" GATE VALVE DRAIN WASHED GRAVEL-WITH 1 CU. FT. GRAVEL (3" MIN DEPTH)

GENERAL IRRIGATION NOTES

OR CONTINUING WORK.

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A COPY OF THE PROJECT SPECIFICATIONS PRIOR TO BIDDING. THE PROJECT SPECIFICATIONS ARE A PART OF THESE PLANS AND SHALL BE CONSULTED BY THE IRRIGATION CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING WORK AS SPECIFIED IN THE PROJECT SPECIFICATIONS AND ON THE PLANS.
- 2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, EQUIPMENT QUANTITIES, AND UTILITY LOCATIONS PRIOR TO BEGINNING WORK.
- 3. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OR LICENSED IRRIGATOR OF ANY DISCREPANCIES IN PLANS OR SPECIFICATIONS PRIOR TO BEGINNING
- 4. THE CONTRACTOR SHALL MAKE NO SUBSTITUTIONS, DELETIONS, OR ADDITIONS TO THIS PLAN WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT AND / OR LICENSED IRRIGATOR.
- 5. ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION EQUIPMENT MEETS GOVERNMENT REGULATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS OR APPROVALS.
- 6. CONTRACTOR IS TO VERIFY ACTUAL AVAILABLE WATER PRESSURE PRIOR TO BEGINNING INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT AND / OR LICENSED IRRIGATOR IF AVAILABLE WATER PRESSURE EXCEEDS 5 PSI HIGHER OR LOWER THAN THE DESIGN WATER PRESSURE OF
- 7. IRRIGATION SYSTEMS CONNECTED TO POTABLE WATER SUPPLY SHALL HAVE A BACKFLOW PREVENTER INSTALLED PER LOCAL REQUIREMENTS (SEE CIVIL PLANS FOR LOCATION) (SEE DETAIL 70A).
- 8. ANY EXISTING TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE. IRRIGATION CONTRACTOR SHALL NOT TRENCH OR EXCAVATE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
- 9. SUPPLY LINE AND METER TO BE PROVIDED BY GENERAL CONTRACTOR. BACKFLOW PREVENTER TO BE PROVIDED BY IRRIGATION CONTRACTOR. IRRIGATION CONTRACTOR'S POINT OF CONNECTION TO BEGIN AFTER THE IRRIGATION WATER METER
- 10. IRRIGATION CONTRACTOR SHALL REVIEW WINTERIZATION PROCEDURES FOR IRRIGATION SYSTEM WITH OWNER'S REPRESENTATIVE.
- 11. IRRIGATION CONTRACTOR SHALL INSTALL MANUAL DRAIN VALVES AT LOWEST POSSIBLE ELEVATION ON IRRIGATION MAIN SO AS TO PROVIDE POSITIVE DRAINAGE OF IRRIGATION MAIN DURING WINTER MONTHS, OR PROVIDE BLOWOUT ASSEMBLY (SEE DETAIL 70L)
- 12. IRRIGATION CONTRACTOR SHALL INSTALL AUTOMATIC DRAIN VALVES AT

∠—6" CHANNEL ELECTRICAL CONNECTION

CONTROLLER LIGHTNING PROTECTION

CONDUIT TO EXTEND

6" (MIN) BEYOND FACE OF WALL

-FINISHER

-UL DIRECT BURIAL WIRES

(TO REMOTE CONTROL

VALVES & SENSORS)

BOX w/ TERMINAL BLOCK TO INTERFACE FIELD WIRING &

-COMMON WIRE

—CONTROL &

—CONDUIT

SENSOR WIRES

SLEEVING / WIRING NOTES

IN ADDITION TO PROVIDING SLEEVES FOR ALL PIPING UNDER ROADWAYS AND THIS DESIGN IS DIAGRAMMATIC. ALL PIPING, VALVES, AND OTHER EQUIPMENT WALKWAYS, THE IRRIGATION CONTRACTOR SHALL PROVIDE AND INSTALL SCH.40 PVC SLEEVES FOR ALL CONTROLLER WIRES OCCURRING UNDER ALL ROADWAYS AND WALKWAYS. SLEEVES FOR CONTROLLER WIRES SHALL BE 2" IN DIAMETER AND CONTAIN NO MORE THAN 25 WIRES.

- LOWEST POSSIBLE ELEVATION ON IRRIGATION LATERALS SO AS TO PROVIDE POSITIVE DRAINAGE OF IRRIGATION MAIN DURING WINTER MONTHS (SEE DETAIL 70E).
- 13. IRRIGATION CONTRACTOR SHALL COORDINATE CONTROLLER LOCATION WITH GENERAL CONTRACTOR. GENERAL CONTRACTOR SHALL PROVIDE (2) 1" ELECTRICAL CONDUITS FOR IRRIGATION CONTRACTOR'S POWER / DATA CONNECTION TO CONTROLLER (SEE ARCHITECTURAL ELECTRICAL PLAN FOR ELECTRICAL CONNECTION TO THE IRRIGATION CONTROLLER). IRRIGATION CONTRACTOR SHALL COORDINATE CONSTRUCTION OF IRRIGATION SYSTEM WITH GENERAL CONTRACTOR AND LANDSCAPE CONTRACTOR PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- 14. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS (SEE DETAIL 70C).
- 15. ALL BELOW GRADE LOW VOLTAGE WIRING CONNECTIONS SHALL BE INSTALLED PER DETAIL 70G.
- 16. IRRIGATION CONTRACTOR SHALL NOT INSTALL IRRIGATION AT PYLON / MONUMENT SIGN LOCATION UNTIL AFTER SIGN HAS BEEN INSTALLED.
- 17. LOCATION FOR IRRIGATION SYSTEM AS SHOWN IS FOR DRAWING PURPOSES ONLY. UN-SLEEVED PIPES MAY BE SHOWN IN PAVEMENT AREAS FOR CLARITY ONLY. INSTALL THESE PIPES IN ADJACENT LANDSCAPE AREAS WHERE NECESSARY. CONTRACTOR SHALL VERIFY THE EXACT LOCATION IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF PROPOSED IRRIGATION SYSTEM. ALL PROPOSED IRRIGATION LINES AND EQUIPMENT SHALL BE INSTALLED WITHIN THE BOUNDARIES OF THE PROJECT SITE. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT AND / OR LICENSED IRRIGATOR IF THE DESIGN AS SHOWN IS NOT ACHIEVABLE.
- 18. MINIMUM COVER FROM TOP OF PIPING TO FINISHED GRADE SHALL BE AS PER
- 19. IRRIGATION CONTRACTOR SHALL COORDINATE IRRIGATION INSTALLATION WITH LANDSCAPE PLAN AND SITE CONDITIONS TO PROVIDE COMPLETE COVERAGE WITH MINIMUM OVERSPRAY. THE IRRIGATION CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS TO ENSURE PROPER COVERAGE AT NO ADDITIONAL COST TO THE OWNER.
- 20. VALVE BOXES SHALL BE INSTALLED FLUSH WITH GRADE, SUPPORTED BY BRICKS (IF NEEDED) (SEE DETAIL 70F).
- 21. ALL MAIN LINE PIPING, NON-PRESSURE PIPING, AND CONTROL WIRE SLEEVING SHALL BE INSTALLED IN SEPARATE SLEEVES. ALL MAIN LINE AND LATERAL LINE

CONTROLLER NOTE

ACHIEVE APPROPRIATE RADII.

THRUST BLOCKING).

LOCATE CONTROLLER AT LOCATION SHOWN ON PLAN. VERIFY LOCATION IN FIELD WITH OWNER'S REPRESENTATIVE.

PIPING, SUPPLY AND EXHAUST LINE HEADERS SHALL BE PVC SCH.40 AND SHALL

BE INSTALLED PRIOR TO ANY PAVING AND / OR HARDSCAPE MATERIAL.

IRRIGATION CONTRACTOR SHALL PROVIDE SLEEVES BETWEEN 12" AND 15"

BELOW GRADE AT ALL DRIVE ENTRANCES AND SIDEWALKS. MAINLINE SLEEVE

SIZE SHALL BE A MINIMUM OF TWICE (2X) THE DIAMETER OF THE PIPE TO BE

SLEEVED. CONTROL WIRE SLEEVES SHALL BE OF SUFFICIENT SIZE FOR THE

22. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE

HIMSELF WITH ALL GRADE DIFFERENCES, LOCATION OF FENCES, RETAINING

WALLS, AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL REPAIR OR

REPLACE ALL ITEMS DAMAGED BY HIS WORK. HE SHALL COORDINATE HIS

WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF

PIPE SLEEVES AND LATERALS THROUGH WALLS, UNDER ROADWAYS, PAVING,

TIMING, ETC... CONTRACTOR SHALL REFER TO CIVIL ENGINEERING PLANS FOR

 $\dot{\text{GRADING}}$, METHODS OF DRAINAGE, IRRIGATION METERS, AND BACKFLOW

THESE PLANS SHALL BE INSTALLED AS PER MANUFACTURER'S

RECOMMENDATIONS, DETAILS, AND SPECIFICATIONS. ACCEPTABLE

MANUFACTURERS INCLUDE RAINBIRD, HUNTER, TORO, OR NETAFIM (OR

CAN ROUTE PIPING IN A FREE-FORM MANNER (AVOIDING OBJECTS SUCH AS

LIGHT POLES, TRANSFORMERS PADS, EQUIPMENT VAULTS, SUBSURFACE ROCK

TOO LARGE TO REMOVE, ETC...) AS LONG AS ALL PLANT MATERIAL RECEIVES

THE PROPER NUMBER OF EMITTERS PER SCHEDULE, AND THE VINYL

DISTRIBUTION TUBING DOES NOT EXCEED THE MAXIMUM DESIGN LENGTHS

BLOCKING. THRUST BLOCKING SHALL BE A MINIMUM OF 1 CUBIC FOOT OF

CONCRETE. PIPE SHALL NOT BE ENCASED IN CONCRETE (SEE DETAIL 40A FOR

COMPLETE AND REPRODUCIBLE DRAWING OR IRRIGATION SYSTEM LAYOUT AS

IT WAS INSTALLED. DRAWING SHOULD INCLUDE, BUT NOT BE LIMITED TO,

LOCATIONS OF ZONES VALVES, MAIN, LATERAL, AND DISTRIBUTION LINES, SLEEVES, WATER METER, BACKFLOW PREVENTION DEVICE, SENSORS, AND

25. ALL JOINTS AND BENDS 2" OR LARGER SHALL HAVE CONCRETE THRUST

26. CONTRACTOR SHALL PROVIDE OWNER (OR THEIR REPRESENTATIVE) WITH A

28. CONTRACTOR SHALL USE PC SCREENS ON FIXED SPRAY HEADS AS NEEDED TO

29. CONTRACTOR SHALL USE VARIABLE-ARC ROTARY NOZZLES WHERE NECESSARY.

27. ALL LATERAL LINE SIZING SHALL REFER TO PIPE SCHEDULE ON THIS PLAN.

23. ALL IRRIGATION EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED IN

24. ANY DRIP SYSTEM PIPING IN PLANTING BEDS IS DIAGRAMMATIC. CONTRACTOR

LANDSCAPE ARCHITECT / LICENSED IRRIGATOR APPROVED EQUAL).

REQUIRED NUMBER OF WIRES.

PREVENTION DEVICE LOCATION.

PER MANUFACTURER'S RECOMMENDATIONS.

120 VAC POWER TO CONTROLLER LOCATION IS NOT WITHIN THE IRRIGATION CONTRACTOR'S SCOPE OF WORK, AND SHALL BE PROVIDED BY OTHERS. HOOK-UP OF CONTROLLER TO 120 VAC SHALL BE PERFORMED BY THE LANDSCAPE CONTRACTOR. IRRIGATION CONTRACTOR SHALL COORDINATE LOCATION OF WIRE SLEEVE PENETRATIONS THROUGH BUILDING WITH OWNER AND GENERAL CONTRACTOR. STATION RUN ORDER SHALL MATCH PLANS.

FINISHED GRADE

—LATERAL LINE

IRRIGATION DISCLAIMER

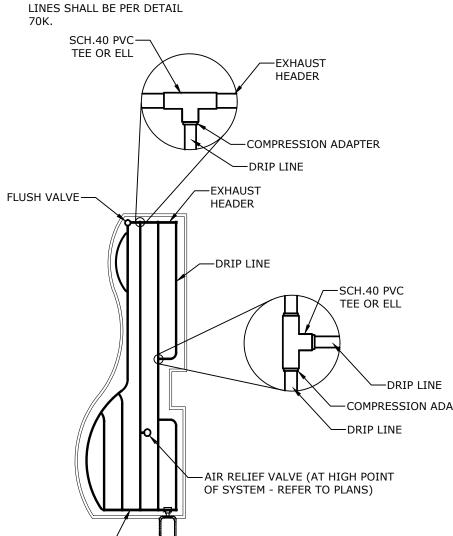
SHOWN WITHIN PAVED AREAS OR OUT OF PROPERTY BOUNDARIES ARE FOR DESIGN CLARIFICATION ONLY, AND SHALL BE INSTALLED IN PLANTING AREAS WITHIN THE PROPERTY LINES OR LIMITS INDICATED ON PLAN. THE IRRIGATION CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE-GRADE IRRIGATION EQUIPMENT WITH THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION, OR IRRIGATION CONTRACTOR MAY BE REQUIRED TO MOVE SUCH ITEMS AT HIS OWN COST.

IRRIGATION CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL FINAL QUANTITIES PER DRAWINGS AND SPECIFICATIONS. ANY QUANTITIES PROVIDED ARE PROVIDED AS A CONVENIENCE TO THE CONTRACTOR ONLY AND SHALL NOT BE CONSIDERED ABSOLUTE.

> DRIPLINE MAXIMUM LATERAL LENGTHS NOTES:
>
> 1. CONTRACTOR SHALL REFER TO MATERIAL TYPE. 12" SPACING 18" SPACING TRENCHING FOR IRRIGATION LINES SHALL BE PER DETAIL 70K. INLET PRESSURE NOMINAL FLOW (GPH) (GPH) 0.6 0.9 0.6 0.9 192 136 254 289 205 402 350 248 498 416 40 397 281 573 477 436 309 637 NOTE: SET DRIP LINES A MINIMUM OF 3.5' AWAY FROM

NOTES:

1. CONTRACTOR SHALL REFER TO IRRIGATION GENERAL NOTES FOR PIPE MATERIAL TYPE.



MATERIAI TYPE 4. TRENCHING FOR IRRIGATION LINES —9" ROUND VALVE SHALL BE PER DETAIL 70K. FINÍSHED GRADE/ PVC MALE BRÁSS BÁLL VÁLVE ADAPTER (SIZED TO MATCH) MAINLINE

WASHED GRAVEL (3" MIN DEPTH)

HARDSCAPE 2. TRENCHING FOR IRRIGATION

-COMPRESSION ADAPTER

-CONTROL VALVE (DETAIL 70B)

HEADER

16AFDV DRAIN VALVE (NOT SHOWN ON PLANS - INSTALL IN LOW AREAS AS NECESSARY

VALVE BOX LID IN TURF AREAS TO BE AT 1" ABOVE FINISHED GRADE. VALVE BOX LID IN LANDSCAPE AREAS TO BE AT 2" ABOVE HARDSCAPE, SHRUB, GROUNDCOVER. CONTRACTOR SHALL REFER TO

IRRIGATION GENERAL NOTES FOR PIPE BOX W/ LOCKABLE

-WASHED GRAVE

(3" MIN DEPTH)

AUTOMATIC DRAIN

NTS

—CONTRACTOR SHALL BRAND FINISHED GRADE-ZONE IDENTIFICATION ON TOP OF LID —RAINBÏŔĎ ŔBY (OR APPROVED RAIN BIRD PED ELECTRIC— EQUAL) IN-LINE FILTER REMOVE CONTROL VALVE -AMETEK JUMBO VALVE BOX (OR APPROVED EQUAL) REC. w/ COVER (OR APPROVED EQUAL) -RAINBÌRD (OR APPROVED EQUAL) IN-LINE PRESSURE REGULATOR CH.40 UNION SCH.40 NIPPLE-T.O.E. -CORRUGATED PIPE ENCLOSURE → SYSTEM MAINLINE

(MIN.) SCH.40 ELL-

. ALL WIRING TO BE INSTALLED PER LOCAL CODES.

SEE CONTROLLER MANUAL FOR MOUNTING INSTRUCTIONS.

TRENCHING FOR CONDUIT LINES SHALL BE PER DETAIL 70K.

INSTALL ALL MANUFACTURER'S RECOMMENDED LIGHTNING PROTECTION & GROUND ROD GRID.

CONTRACTOR SHALL REFER TO IRRIGATION GENERAL NOTES FOR CONDUIT MATERIAL TYPE.

CONTROLLER MY BE INSTALLED IN AN INDOOR CONTROL ROOM OR OUTSIDE ON A BUILDING WALL.

RAIN BIRD CONTROLLER -

(OR APPROVED EQUAL)

CONDUIT —

120 VOLT POWER —

& GROUND WIRES

IRRIGATION CONTROL

RAINBIRD

VALVE BOX LID IN TURF AREAS TO BE AT 1" ABOVE FINISHED GRADE.

REGULATOR. CONTRACTOR SHALL CONFIRM AVAILABLE PSI PRIOR TO SIZING.

TRENCHING FOR IRRIGATION LINES SHALL BE PER DETAIL 70K.

PRESSURE CALCULATIONS PROVIDED HEREIN.

VALVE BOX LID IN LANDSCAPE AREAS TO BE AT 2" ABOVE HARDSCAPE, SHRUB, GROUNDCOVER.

CONTRACTOR SHALL REFER TO IRRIGATION GENERAL NOTES FOR LATERAL / MAINLINE PIPE MATERIAL TYPE.

A COMBINATION FILTER & PRESSURE REGULATOR MAY BE USED IN LIEU OF SEPARATE FILTERS AND PRESSURE

PRESSURE REGULATOR TO BE SIZED BASED ON AVAILABLE PRESSURE TO MAIN LINE. CONTRACTOR SHALL REFER TO

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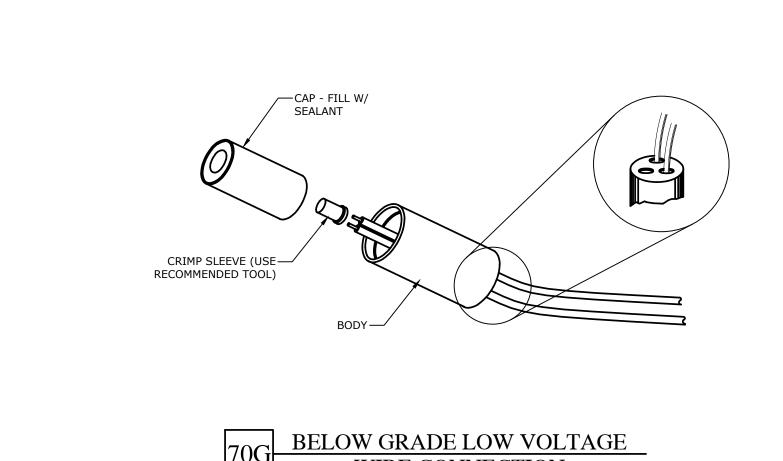
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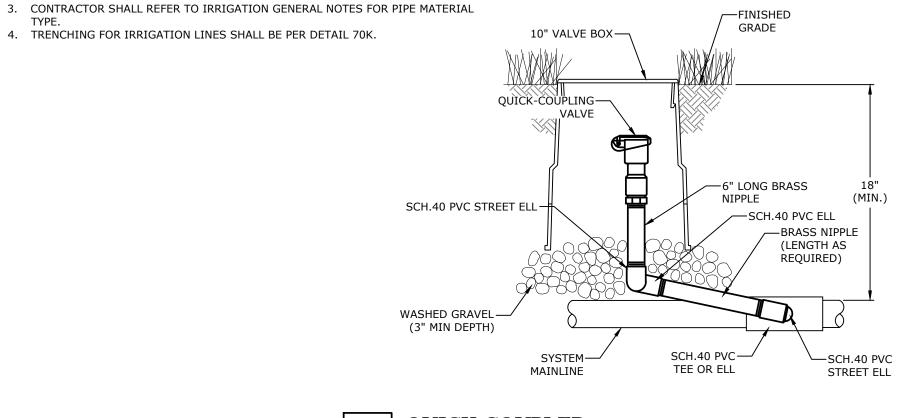
IRRIGATION NOTES & DETAILS

03-24-2020 20-5749 N.T.S.



WIRE CONNECTION

1. CONTRACTOR SHALL REFER TO IRRIGATION GENERAL NOTES FOR PIPE MATERIAL TYPE. 2. TRENCHING FOR IRRIGATION LINES SHALL BE PER DETAIL 70K.



QUICK COUPLER

<u>NOTES</u>: 1. VALVE BOX LID IN TURF AREAS TO BE AT 1" ABOVE FINISHED GRADE. 2. VALVE BOX LID IN LANDSCAPE AREAS TO BE AT 2" ABOVE HARDSCAPE, SHRUB, GROUNDCOVER. 3. CONTRACTOR SHALL REFER TO IRRIGATION GENERAL NOTES FOR PIPE 6" VALVE BOX— MATERIAL TYPE. 4. TRENCHING FOR IRRIGATION LINES SHALL BE PER DETAIL 70K. WASHED GRAVEL— (3" MIN DEPTH) SYSTEM MAINLINE— 4" CL.200 PVC PIPE-PRE-MANUFACTURED-SWING JOINT ASSEMBLY -WASHED GRAVEL SUMP MANUAL DRAIN -BRONZE STOP VALVE

TIE A LOOSE 20" LOOP IN WIRING AT ALL CHANGES OF DIRECTION GREATER THAN 30°. UNTIE ALL PROVIDE SUFFICIENT—

LOOPS AFTER ALL CONNECTIONS HAVE BEEN COMPLETED. COVER OVER TRENCH TO ALLOW FOR SETTLING (NON-PAVED AREAS)

ELEVATION ELEVATION ELEVATION 120 VOLT LOW-VOLTAGE WIRING WIRING

IRRIGATION TRENCHING

NOTES:

1. CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES AND ORDINANCES IN REFERENCE TO THE

INSTALLATION OF PVC PIPING AND LOW VOLTAGE WIRING. 2. FOR AREAS WHERE PIPE IS LOCATED UNDER NON-PAVED AREAS, BACKFILL SHALL BE COMPACTED SUITABLE NATIVE MATERIAL (DO NOT INCORPORATE FROZEN MATERIAL OR SOFT, MUCK, OR HIGHLY COMPRESSIBLE MATERIALS INTO FILL). FOR AREAS WHERE PIPE IS LOCATED UNDER PAVED AREAS, BACKFILL SHALL BE SELECT FILL COMPACTED PER THE GEOTECHNICAL REPORT PROJECT NO. [PROJECT #] PREPARED BY [GEOTECH COMPANY NAME] DATED [REPORT DATE].

> INSTALLATION SPECIFICATIONS TAPE & BUNDLE— TUBING OR WIRING AT 20' INTERVALS —PROVIDE SUFFICIENT—— COVER OVER TRENCH TO ALLOW FOR SETTLING (NON-PAVED AREAS)

— ALL MAIN SYSTEM MAINLINES TO—

BE INSTALLED IN ACCORDANCE W/ MANUFACTURER'S

TUBING OR — WIRING MAINLINE **ELEVATION ELEVATION**

MAIN SUPPLY MAIN SUPPLY, LATERAL, & LOW-VOLTAGE WIRING

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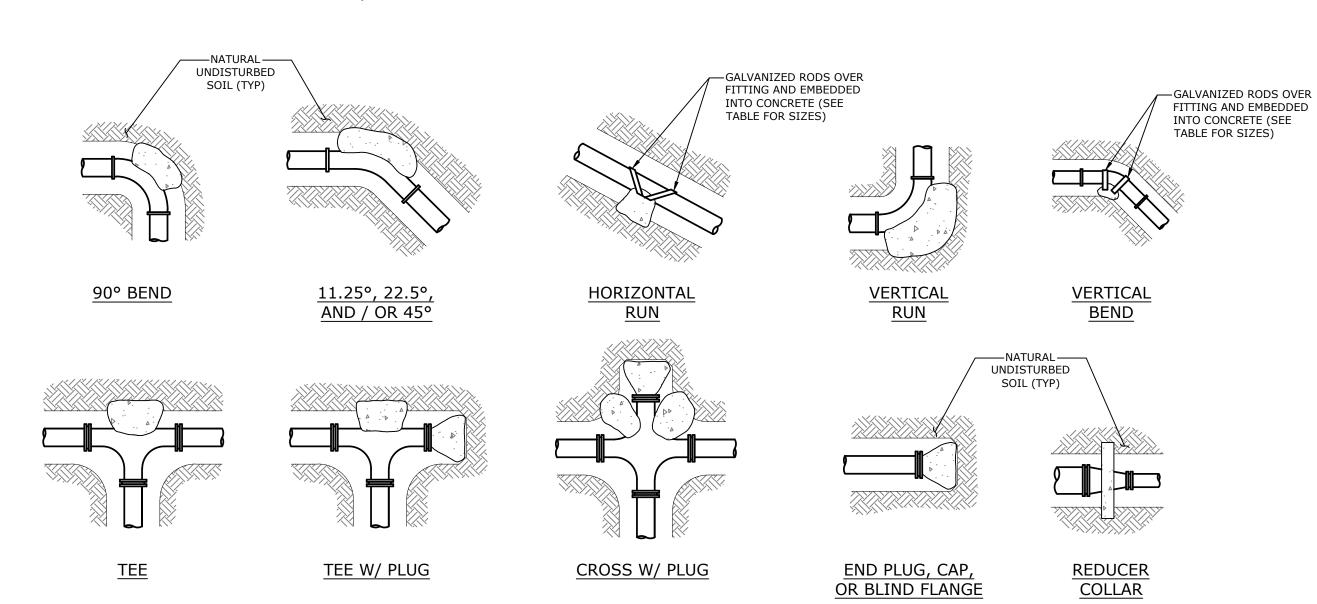
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BOUT ROUND,

- NOTES:

 1. CONCRETE FOR THRUST BLOCKS SHALL DEVELOP NOT LESS THAN 2500 P.S.I. COMPRESSIVE STRENGTH AT 28 DAYS AND BE
- 2. ALL BENDS, BOTH HORIZONTAL AND VERTICAL, SHALL BE BACKED WITH CONCRETE. VERTICAL BENDS SHALL BE PLACED ON CONCRETE PADS WHERE BENDS TURN UP, OR LOADED WHERE BENDS TURN DOWN.
- 3. WRAP PIPE JOINTS IN 8 MIL POLYETHYLENE BEFORE PLACING CONCRETE. USE LONG-RADIUS FITTINGS WHEREVER POSSIBLE. 4. BEARING AREA SHOWN IN TABLE, IS BASED UPON A 2000 LB/SF. SOIL BEARING, AND UPON A PIPELINE PRESSURE OF 250 psi

PLUS WATER HAMMER. AREAS SHOWN SHALL BE ADJUSTED, SHOULD FIELD CONDITIONS VARY. 5. UTILIZE MEGALUG THRUST RESTRAINTS ON MECHANICAL JOINT FITTINGS AND VALVES, IN ADDITION TO THESE THRUST BLOCKS.



						THRUST I	BLOCKING	SCHEDULE									
BEARING AREA OF THRUST BLOCKING (SQ. FT.) (HORIZONTAL BENDS)								VOLUME OF THRUST BLOCKING (CU. FT.) (VERTICAL BENDS)									
FITTING SIZE	TEE, WYE, PLUG, OR CAP						TEE PLUGGED	TEE PLUGGED	BEND ANGLES			FITTING CIZE	BEND ANGLES		ROD SIZE	EMBEDMENT	CUBIC YARDS
			ON RUN (A1)	ON RUN (A2)	45°	22.5°	11.25°	FITTING SIZE	45°	22.5°	11.25°						
2", 3", & 4"	1.30	1.80	1.30	1.80	1.00	1.0	-	2", 3", & 4"	1.50	0.5	0.3	#6	30"	-			
6"	2.80	4.00	2.80	4.00	2.20	1.1	1.0	6"	3.60	1.3	0.5	#6	30"	-			
8"	5.00	7.10	5.00	7.10	3.80	2.0	1.0	8"	5.30	2.0	0.8	#6	30"	0.6			
10"	7.90	11.10	7.90	11.10	6.00	3.0	1.6	10"	8.00	3.1	1.2	#6	30"	-			
12"	11.30	16.00	11.30	16.00	8.70	4.4	2.3	12"	11.30	4.3	1.7	#6	30"	1.3			

THRUST BLOCKING
NTS

Call before youdig.

IRRIGATION **DETAILS**

03-24-2020 20-5749 N.T.S. L6

-POP-UP SPRAY —SCH.40 NIPPLE (LENGTH AS REQUIRED) SCH.40 PVC— STREET ELL TEE OR ELL

HEAD

CONTRACTOR SHALL REFER TO IRRIGATION GENERAL NOTES

FOR PIPE MATERIAL TYPE.

VALVE BOX LID IN TURF AREAS TO BE AT 1" ABOVE FINISHED GRADE.

4. TRENCHING FOR IRRIGATION LINES SHALL BE PER DETAIL 70K.

GROUNDCOVER.

VALVE BOX LID IN LANDSCAPE AREAS TO BE AT 2" ABOVE HARDSCAPE, SHRUB,

SCH.40 PVC— STREET ELL 70H POP-UP SPRAY HEAD
NTS

SCH.40 PVC

(MIN.)