



**BOLTON
& MENK**

Real People. Real Solutions.

418 S Dawson Street
Raleigh, NC 27596

Ph: (919) 719-1800
Bolton-Menk.com

December 4, 2024

TO ALL PROSPECTIVE BIDDERS

Mill Bridge Amphitheater

Bid Date: December 10th, 2024
Time 10:00 AM

Bid Submittal: Town of Rolesville
Town Hall
502 Southtown Circle
Rolesville, NC 27571

ADDENDUM #5:

This Addendum, issued prior to receipt of bids, shall and does hereby become part of the Contract Documents for the referenced Project. All Prime Contractors shall be responsible for ensuring that their Subcontractors are properly apprised of the contents of this Addendum. All information contained in this Addendum shall take precedence over any conflicting information in the original Drawings and Specifications, dated September 3, 2024.

PLAN & SPECIFICATION REVISIONS:

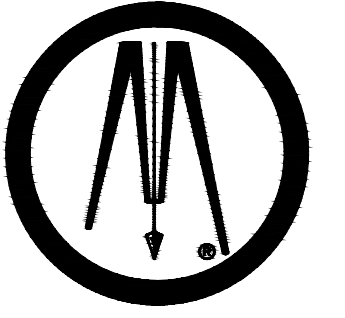
1. Sheet C5.02
 - a. Note 3 on Detail 1, Sheet C5.02 has been updated from "See 2/C4.01 for Handrail Detail" to "See Detail 2/C5.02 for Handrail Detail."

ATTACHMENTS:

1. Sheet C5.02

Best regards,
BOLTON & MENK, INC.,

Jacqueline Thompson, PE
Project Engineer
Jacqueline.Thompson@bolton-menk.com



BOLTON & MENK

418 SOUTH DAWSON STREET
RALEIGH, NC 27601
Phone: (919) 719-1800
Email: Raleigh@bolton-menk.com
www.bolton-menk.com

TOWN OF ROLESVILLE

502 SOUTHTOWN CIR
ROLESVILLE, NC 27571

**MILL BRIDGE
AMPHITHEATRE
RENOVATION**

425 NATURE PARK DR
WAKE FOREST, NC 27587

SITE DETAILS

PROJECT NO:
50501.92

REVISIONS:
1 11.25.2024 SITE WALL REVISION
2 12.04.2024 DETAIL REF. REVISION

PLANTING SPECIFICATIONS

TOPSOIL: ASTM D 5288, PH RANGE OF 5.5 TO 7, A MINIMUM OF 4 PERCENT ORGANIC MATERIAL CONTENT; FREE OF STONES 1 INCH OR LARGER IN ANY DIMENSION AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.

- 1. MATERIAL CONTENT BY MASS:
a. SAND CONTENT: MINIMUM 20 PERCENT / MAXIMUM 50 PERCENT
b. SILT CONTENT: MINIMUM 20 PERCENT / MAXIMUM 50 PERCENT
c. CLAY CONTENT: MINIMUM 10 PERCENT / MAXIMUM 40 PERCENT
d. DELETERIOUS MATERIALS (ROCK, GRAVEL, SLAG, CINDER, ROOTS, SOIL): 5 PERCENT MAX.
2. UNACCEPTABLE MATERIALS: CONCRETE SLURRY, CONCRETE LAYERS OR CHUNKS, CEMENT, PLASTER, BUILDING DEBRIS, OILS, GASOLINE, DIESEL FUEL, PAINT THINNER, TURPENTINE, TAR, ROOFING COMPOUND, ACID, AND OTHER EXTRANEOUS MATERIALS THAT ARE HARMFUL TO PLANT GROWTH.
3. TOPSOIL SHALL HAVE NORMAL CONTENTS OF NITROGEN, PHOSPHORUS, POTASSIUM, CALCIUM, MAGNESIUM, SULFUR, AND PROPER MICRONUTRIENT LEVELS. NUTRIENT LEVELS MUST SATISFY GROWING NEEDS (AS RECOMMENDED BY LAB REPORT REQUIRED IN ARTICLE 1.4.C) OF THE EXISTING OR PLANNED PLANT MATERIAL.

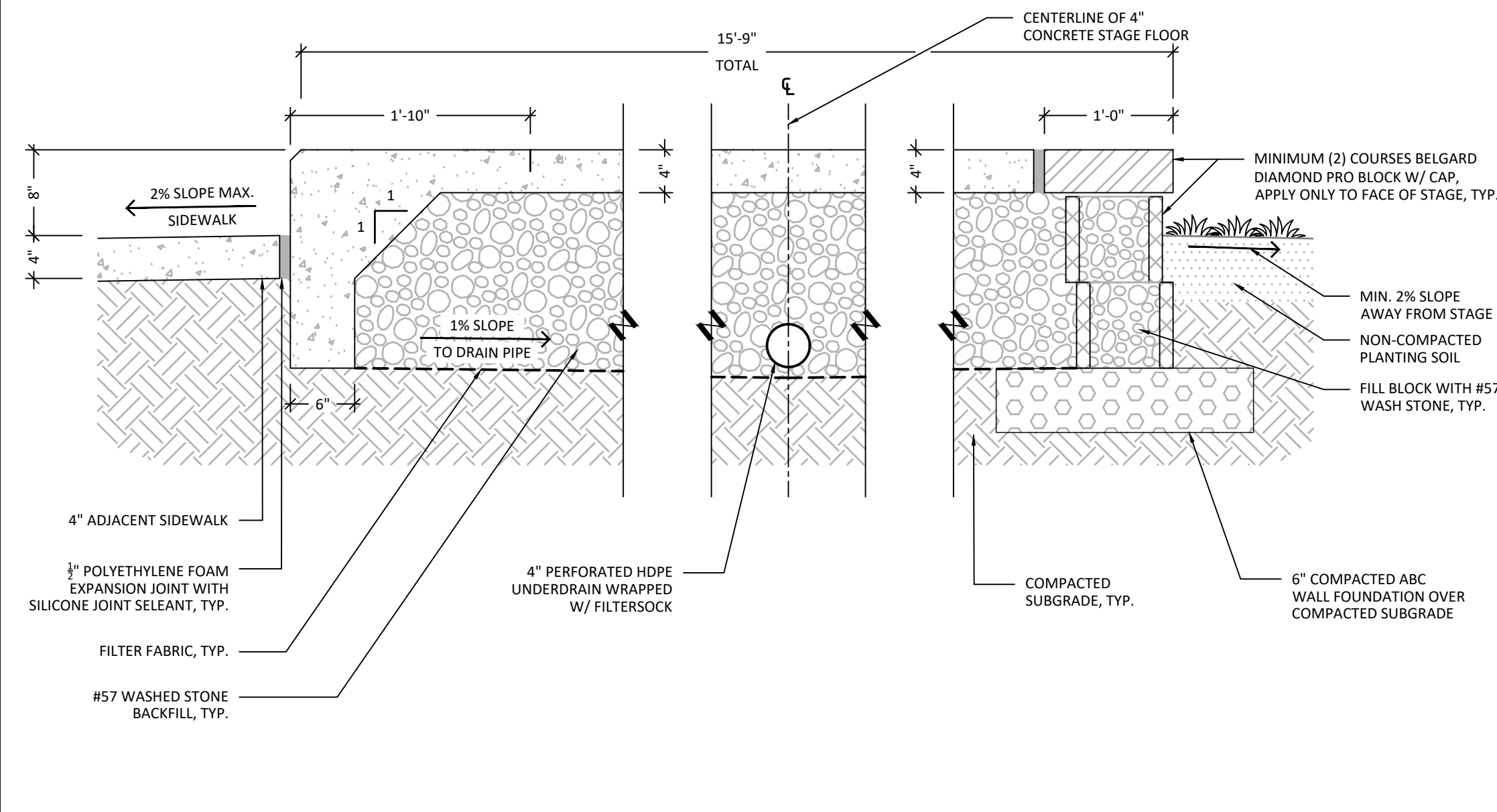
- TOPSOIL SOURCE:
1. IMPORT TOPSOIL OR MANUFACTURED TOPSOIL FROM OFF-SITE SOURCES. OBTAIN TOPSOIL DISPLACED FROM NATURALLY WELL-DRAINED CONSTRUCTION OR MINING SITES WHERE TOPSOIL OCCURS AT LEAST 4 INCHES DEEP; DO NOT OBTAIN FROM AGRICULTURAL LAND, BOGS OR MARSHES.
2. TOPSOIL SOURCE: AMEND EXISTING IN-PLACE SURFACE SOIL TO PRODUCE TOPSOIL. VERIFY SUITABILITY OF SURFACE SOIL TO PRODUCE TOPSOIL. CLEAN SURFACE SOIL OF ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, AND OTHER EXTRANEOUS MATERIALS HARMFUL TO PLANT GROWTH.
1.1.1. SURFACE SOIL MAY BE SUPPLEMENTED WITH IMPORTED OR MANUFACTURED TOPSOIL FROM OFF-SITE SOURCES.

LAWN PREPARATION

- 1.1 SUB GRADE PREP
A. NEWLY GRADED SUBGRADES: LOOSEN SUBGRADE TO A MINIMUM DEPTH OF 4 INCHES. REMOVE STONES LARGER THAN 1 INCH IN ANY DIMENSION AND STICKS, ROOTS, RUBBISH, AND OTHER EXTRANEOUS MATTER AND LEGALLY DISPOSE OF THEM OFF OWNER'S PROPERTY.
• SPREAD PLANTING SOIL MIX TO A DEPTH OF 4 INCHES BUT NOT LESS THAN REQUIRED TO MEET FINISH GRADES AFTER LIGHT ROLLING AND NATURAL SETTLEMENT. DO NOT SPREAD IF PLANTING SOIL OR SUBGRADE IS FROZEN, MUDDY, OR EXCESSIVELY WET. REDUCE ELEVATION OF PLANTING SOIL TO ALLOW FOR SOIL THICKNESS OF SOD.
B. UNCHANGED SUBGRADES: IF LAWNS ARE TO BE PLANTED IN AREAS UNALTERED OR UNDISTURBED BY EXCAVATING, GRADING, OR SURFACE SOIL STRIPPING OPERATIONS, PREPARE SURFACE SOIL AS FOLLOWS:
• REMOVE EXISTING GRASS, VEGETATION, AND TURF. DO NOT MIX INTO SURFACE SOIL.
• LOOSEN SURFACE SOIL TO A DEPTH OF AT LEAST 6". APPLY SOIL AMENDMENTS AND FERTILIZERS ACCORDING TO PLANTING SOIL MIX PROPORTIONS AND MIX THOROUGHLY INTO TOP 4" OF SOIL. TILL SOIL TO A HOMOGENEOUS MIXTURE OF FINE TEXTURE.
C. FINISH GRADING GRADE PLANTING AREAS TO A SMOOTH, UNIFORM SURFACE PLANE WITH LOOSE, UNIFORMLY FINE TEXTURE. GRADE TO WITHIN PLUS OR MINUS 1/8" OF FINISH ELEVATION. ROLL AND RAKE, REMOVE RIDGES, AND FILL DEPRESSIONS TO MEET FINISH GRADES. LIMIT FINISH GRADING TO AREAS THAT CAN BE PLANTED IN THE IMMEDIATE FUTURE.
D. MOISTEN PREPARED LAWN AREAS BEFORE PLANTING IF SOIL IS DRY. WATER THOROUGHLY AND ALLOW SURFACE TO DRY BEFORE PLANTING. DO NOT CREATE MUDDY SOIL.
E. BEFORE PLANTING, RESTORE AREAS IF ERODED OR OTHERWISE DISTURBED AFTER FINISH GRADING.
1.2 SEEDING
A. DO NOT BROADCAST OR DROP SEED WHEN WIND VELOCITY EXCEEDS 5 MPH. EVENLY DISTRIBUTE SEED BY SOWING EQUAL QUANTITIES IN TWO DIRECTIONS AT RIGHT ANGLES TO EACH OTHER.
B. SOW SEED AT A TOTAL RATE OF 5 TO 8 LB/1000 SQ. FT.
C. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.
D. PROTECT SEEDED AREAS WITH SLOPES NOT EXCEEDING 1:6 BY SPREADING STRAW MULCH. SPREAD UNIFORMLY AT A MINIMUM RATE OF 2 TONS/ACRE TO FORM A CONTINUOUS BLANKET 1/2" IN LOOSE DEPTH OVER SEEDED AREAS. ANCHOR STRAW MULCH BY CRIMPING INTO SOIL WITH SUITABLE MECHANICAL EQUIPMENT.
1.3 SODDING
A. LAY SOD WITHIN 24 HOURS OF HARVESTING. DO NOT LAY SOD IF DORMANT OR IF GROUND IS FROZEN OR MUDDY.
B. LAY SOD TO FORM A SOLID MASS WITH TIGHTLY FITTED JOINTS. BUTT ENDS AND SIDES OF SOD; DO NOT STRETCH OR OVERLAP. STAGGER SOD STRIPS OR PADS TO OFFSET JOINTS IN ADJACENT COURSES. AVOID DAMAGE TO SUBGRADE OR SOD DURING INSTALLATION. TAMP AND ROLL LIGHTLY TO ENSURE CONTACT WITH SUBGRADE, ELIMINATE AIRS, AND FORM A SMOOTH SURFACE. WORK SIFTED SOIL OR FINE SAND INTO MINOR CRACKS BETWEEN PIECES OF SOD; REMOVE EXCESS TO AVOID SMOTHERING SOD AND ADJACENT GRASS.
• LAY SOD ACROSS ANGLE OF SLOPES EXCEEDING 1:3
• ANCHOR SOD ON SLOPES EXCEEDING 1:3 WITH OR STEEL STAPLES SPACED AS RECOMMENDED BY SOD MANUFACTURER BUT NOT LESS THAN 2 ANCHORS PER SOD STRIP TO PREVENT SLIPPAGE.
C. SATURATE SOD WITH FINE WATER SPRAY WITHIN TWO HOURS OF PLANTING. DURING FIRST WEEK AFTER PLANTING, WATER DAILY OR MORE FREQUENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A MINIMUM DEPTH OF 1-1/2 INCHES BELOW SOD.
1.4 LAWN MAINTENANCE
A. MAINTAIN AND ESTABLISH LAWN BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, REPLANTING, AND OTHER OPERATIONS UNTIL ACCEPTABLE LAWN IS ESTABLISHED OR UNTIL FINAL BUILDING ACCEPTANCE BY OWNER, WHICHEVER IS LATER. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH LAWN. PROVIDE MATERIALS AND INSTALLATION THE SAME AS THOSE USED IN THE ORIGINAL INSTALLATION.
B. MOW LAWN AS SOON AS TOP GROWTH IS TALL ENOUGH TO CUT. REPEAT MOWING TO MAINTAIN SPECIFIED HEIGHT WITHOUT CUTTING MORE THAN 1/3 OF GRASS HEIGHT. REMOVE NO MORE THAN 1/3 OF GRASS-LEAF GROWTH IN INITIAL OR SUBSEQUENT MOWINGS.
1.5 SATISFACTORY LAWNS
A. SATISFACTORY SEEDED LAWN: AT END OF MAINTENANCE PERIOD, A HEALTHY, UNIFORM, CLOSE STAND OF GRASS HAS BEEN ESTABLISHED, FREE OF WEEDS AND SURFACE IRREGULARITIES, WITH COVERAGE EXCEEDING 90 PERCENT OVER ANY 10 SQ. FT. AND BARE SPOTS NOT EXCEEDING 5 BY 5 INCHES, WITH AT LEAST 85% OF THE TOTAL GRASS COVERAGE CONSISTING OF THE SPECIFIED GRASS SPECIES.
B. SATISFACTORY SODDED LAWN: AT END OF MAINTENANCE PERIOD, A HEALTHY, WELL-ROOTED, EVEN-COLORED, VIABLE LAWN HAS BEEN ESTABLISHED, FREE OF WEEDS, OPEN JOINTS, BARE AREAS, AND SURFACE IRREGULARITIES.
C. USE SPECIFIED MATERIALS TO REESTABLISH LAWNS THAT DO NOT COMPLY WITH REQUIREMENTS AND CONTINUE MAINTENANCE UNTIL LAWNS ARE SATISFACTORY.

1.00 PLANT SUBMITTALS

- A. SOIL ANALYSIS: FURNISH SOIL ANALYSIS BY A QUALIFIED SOIL-TESTING LABORATORY.
1. REPORT SUITABILITY OF TOPSOIL FOR PLANT GROWTH. STATE RECOMMENDED QUANTITIES OF NITROGEN, PHOSPHORUS, AND POTASH NUTRIENTS AND SOIL AMENDMENTS TO BE ADDED TO PRODUCE SATISFACTORY TOPSOIL.



STAGE CROSS SECTION A-A1

SCALE: 1"=1' 9

NOTES:

- 1. GUARDRAIL TO BE SHOP FABRICATED 2" SQ. PIPE RAIL. MATERIAL: ALUMINUM FINISH: POWDER COAT
2. ALL DIMENSIONS SHALL BE FIELD VERIFIED.
3. CONTRACTOR TO VERIFY RAIL DIMENSIONS AND SUBMIT SHOP DRAWINGS TO LANDSCAPE ARCHITECT.
4. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR APPROVAL 30 DAYS MIN. PRIOR TO FABRICATION. DRAWINGS SHALL BE SEALED BY THE NC-LICENSED ENGINEER RESPONSIBLE FOR THEIR PREPARATION.
5. PER NCBG 1013:
6.1. 2" MAX. OPENING AT BOTTOM RAIL.
6.2. 4" MAX. OPENING AT RAILS UP TO 34"

GUARDRAIL IN SIDEWALK

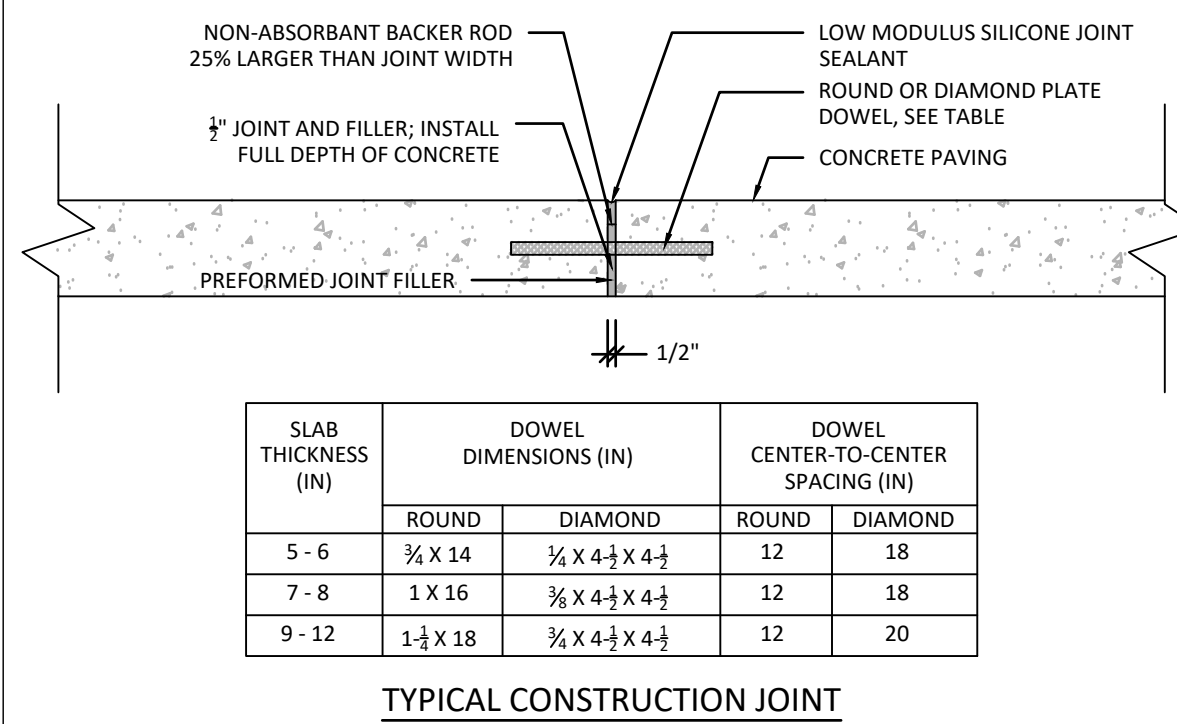
SCALE: 1"=1' 8

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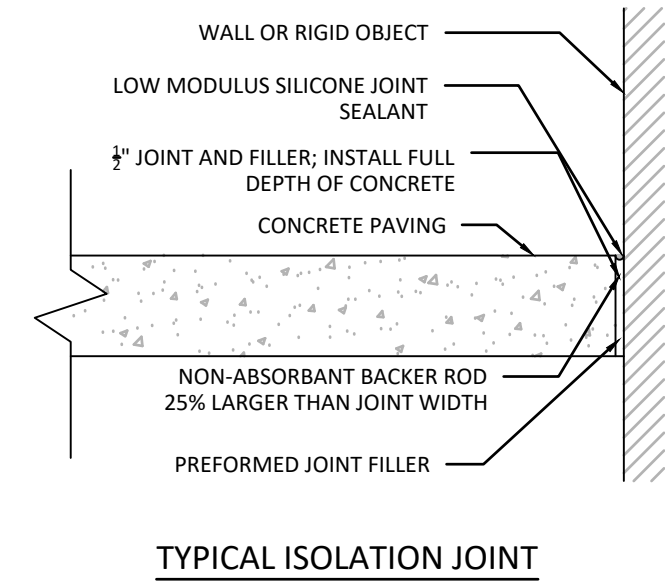
- 1. ALL CONCRETE TO BE 3000 PSI
2. ALL EXPOSED CONCRETE FACES TO RECEIVE A FINE BROOM FINISH.
3. REFER TO DETAIL 3/CS.01 FOR TYPICAL JOINT CONSTRUCTION.
4. A 5' MIN. LANDING SHALL BE PROVIDED AT THE TOP AND BOTTOM OF STEPS. LANDINGS SHALL HAVE 2% MAX. SLOPE IN ANY DIRECTION.
5. SEE SITE PLAN FOR NUMBER OF RISERS/TREADS.
6. SEE GRADING PLAN FOR TOP AND BOTTOM OF STAIR ELEVATIONS.

KEYNOTE	DESCRIPTION
1	4" WIDE GROOVED CONCRETE STAIR NOSING. 1/2" DEEP x 4" WIDE GROOVES. PAINT GROOVES BLACK.
2	1" EXPANSION JOINT WHERE STEPS ARE ADJACENT TO A RIGID OBJECT. EXPANSION JOINTS SHALL BE PRE-MOLDED BITUMINOUS IMPREGNATED FIBER BOARD WITH BACKER ROD AND SEALANT AT THE SURFACE.

STEP ID	R	T	A	B	C
A	6"	15"	#4 @ 12" O.C. EA. WAY	#3 REBAR 2" CLR	#4 HOOK BAR @ 12" O.C. IN TURN DOWN. LAP 16" W/STAIR REINFORCEMENT



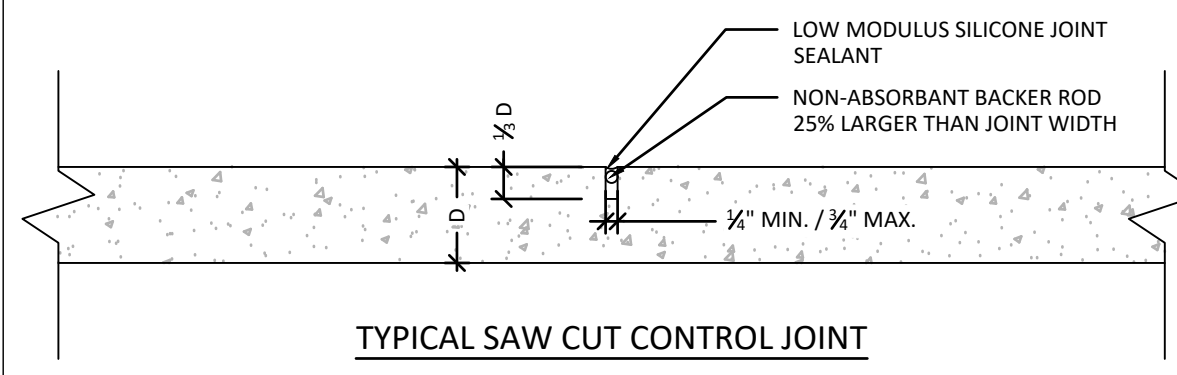
TYPICAL CONSTRUCTION JOINT



TYPICAL ISOLATION JOINT

NOTES:

- 1. THICKNESS OF SEALANT TO BE 1/2 OF JOINT WIDTH.
2. IF JOINTS ARE FORMED OR TOOLED; THE EDGES SHALL BE FINISHED WITH NO MORE THAN A 3/8" RADIUS.
3. JOINT FILLER STRIPS TO BE ASTM 1751 ASPHALT-SATURATED CELLULOSIC FIBER.
4. CONCRETE TO BE CURED 28 DAYS, DRY, AND JOINT BLOWN CLEAN OF ALL DEBRIS WITH HIGH-PRESSURE AIR BEFORE INSTALLATION OF JOINT SEALANT MATERIAL.
5. PROVIDE ISOLATION JOINTS AT INTERSECTION OF PAVEMENT AND ALL STRUCTURES AND RIGID OBJECTS.
6. SAW CUT CONTROL JOINTS SHALL BE SPACED AT MAXIMUM 30 TIMES THE PAVEMENT THICKNESS, D. TYPICAL, NOT TO EXCEED A 15' X 15' GRID. THE GRID PATTERN SHALL BE UNIFORM THROUGHOUT THE PROPOSED PAVEMENT AREA. REFER TO SITE PLAN FOR PROPOSED JOINT PATTERN.



TYPICAL SAW CUT CONTROL JOINT

TYPICAL CONCRETE JOINT DETAILS

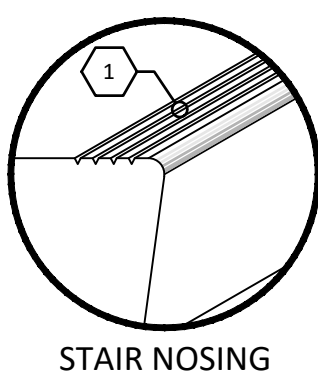
SCALE: 1"=1' 3

NOTES:

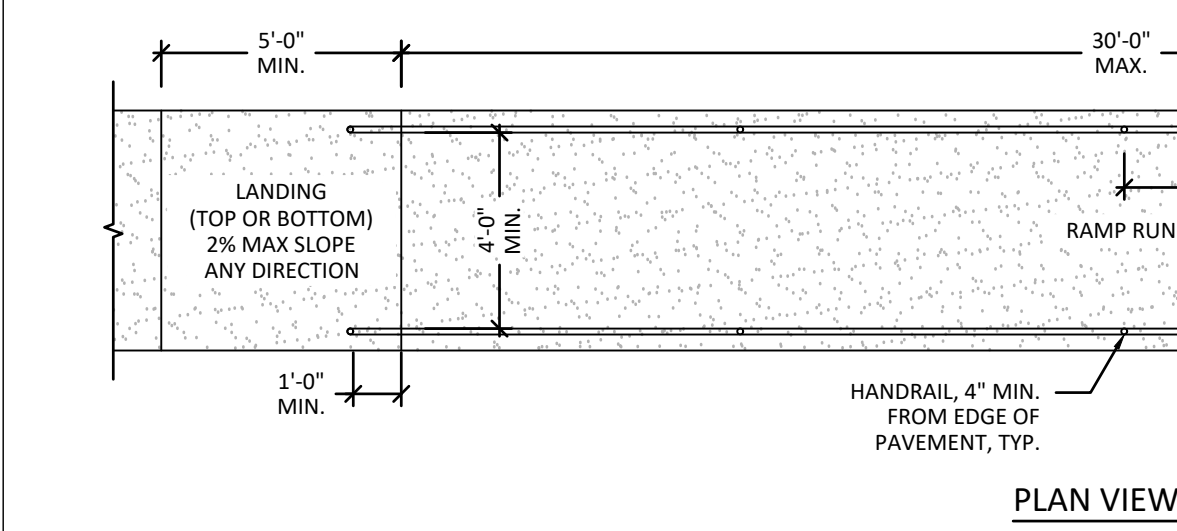
- 1. A GROOVE JOINT 1" DEEP WITH 1/8" RADII SHALL BE REQUIRED AT 5' INTERVALS OR AS INDICATED ON PLANS. A SEALED 1/2" ISOLATION/EXPANSION JOINT WILL BE REQUIRED AT 90' INTERVALS AND WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.
2. CONCRETE COMPRESSIVE STRENGTH SHALL BE 3000 PSI, IN 28 DAYS.
3. CONCRETE THICKNESS SHALL BE INCREASED TO 6" MINIMUM AT DRIVEWAYS, TYPICAL.
4. SIDEWALK WIDTH SHALL BE A MINIMUM OF 5' AND SHALL MATCH SURROUNDING SIDEWALK PATTERNS AND WIDTHS IF GREATER THAN 5'.
5. SIDEWALK CROSS SLOPE (PERPENDICULAR TO DIRECTION OF TRAVEL) SHALL BE 2% MAXIMUM IN ALL AREAS.
6. ZIP STRIPS SHALL BE USED DURING POUR AT EXPANSION JOINTS. AFTER STRIP IS REMOVED A SELF-LEVELING URETHANE CAULK SHALL BE USED TO FILL THE VOID.

CONCRETE SIDEWALK

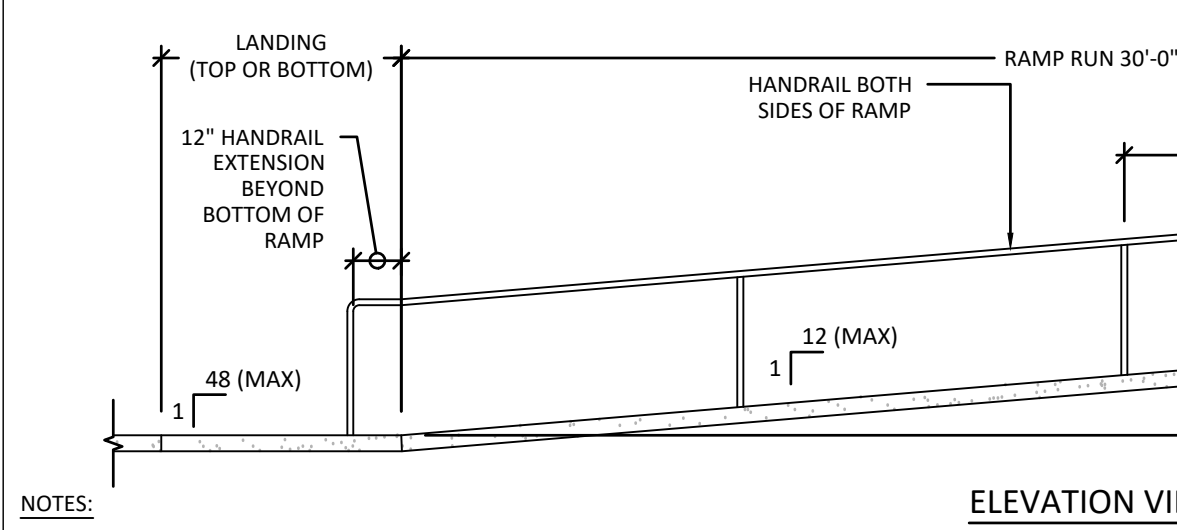
SCALE: 1"=1' 5



STAIR NOSING ISOMETRIC VIEW



PLAN VIEW



ELEVATION VIEW

NOTES:

- 1. SEE SITE PLAN FOR RAMP SIZES AND LOCATIONS.
2. RAMP CROSS-SLOPES SHALL NOT EXCEED 2%.
3. SEE DETAIL 2/CS.02 FOR HANDRAIL DETAIL.

HANDRAIL INSTALLATION

SCALE: 1"=1' 2

PLANTING SPECIFICATIONS

10

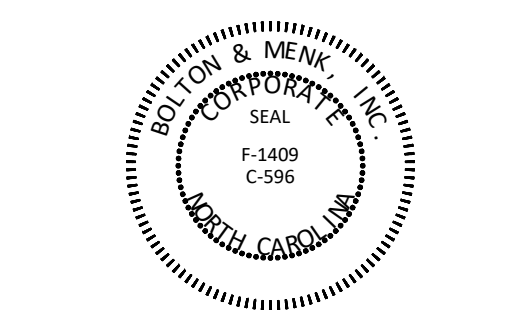
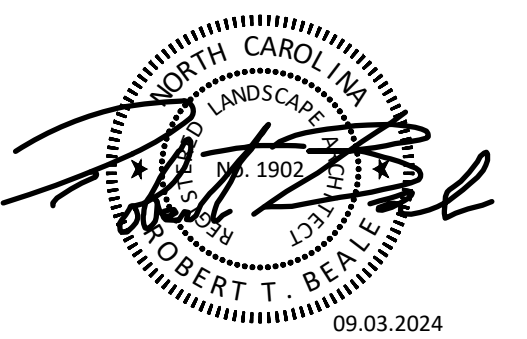
POURED IN PLACE CONCRETE STEPS

N.T.S. 7

SIDEWALK RAMP WITH HANDRAILS

N.T.S. 1

C5.02



DATE: 09.03.2024
DESIGNED BY: JT,DM
DRAWN BY: DM
CHECKED BY: RB, JT