


DEXTER, MICHIGAN

Owner:

JJR landscape architecture
planning
urban design
civil engineering
environmental science

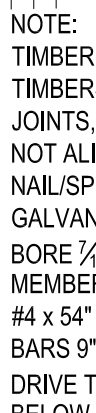
JJR, LLC
110 MILLER AVENUE
ANN ARBOR, MI 48104
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C-11 SCALE: 1"=30' 



C-11 SCALE: 1"=30'



C-11 SCALE: 1"=2'-0'

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1. BOARDWALK TO BE PRESSURE TREATED TIMBER FRAME AND DECKING SUPPORTED ON PILE FOUNDATIONS.
2. BOARDWALK DESIGNED FOR 90 PSF AASHTO PEDESTRIAN LIVE LOAD AND 30 PSF DEAD LOAD.
3. CENTERLINE ALIGNMENT SHOWN IS FOR LAYOUT PURPOSES ONLY. RADI SHOWN ARE EQUIVALENCIES. ACTUAL BOARDWALK TO BE CONSTRUCTED OF STRAIGHT SEGMENTS TO APPROXIMATE THE RADIAL SECTIONS.

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4. PILE PAIRS (BENTS) TO SUPPORT TRIPLE 2x12 TREATED TIMBER BEAMS. MAXIMUM CENTER TO CENTER SPACING BETWEEN PILE BENTS SHALL BE 10'-0". PILE BENTS SHALL BE CONSTRUCTED PERPENDICULAR TO THE BOARDWALK CENTER LINE ALIGNMENT.
5. BOARDWALK FRAMING TO BE 2x10 TREATED TIMBER JOISTS SPACED 16" ON CENTER. JOISTS ARE TO BE SUPPORTED FROM TRIPLE 2x12 BEAMS WITH GALVANIZED STEEL JOIST HANGERS. JOIST HANGERS TO BE RATED FOR FULL DUTY SERVICE. SIMPSON STRONG-TIE HUS SERIES OR APPROVED EQUAL. MAXIMUM SPAN LENGTH OF 2x10 JOIST TO BE 10'-0". EXTERIOR RIM (EDGE) JOISTS TO BE 2x12 TREATED TIMBER. CONNECTED TO OUTER EDGE OF TRIPLE 2x12 BEAM. INSTALL INTERNAL CORNER PLATES AT RIM JOIST TO BEAM CONNECTION. SIMPSON ML26Z OR APPROVED EQUAL
6. BOARDWALK TO HAVE CONTINUOUS 6x6 TREATED TIMBER CURB EXCEPT AT HANDRAIL LOCATIONS AND AT KAYAK LAUNCH ACCESS.
7. TIMBER FOR FRAMING MEMBERS TO BE SOUTHERN YELLOW PINE. No. 1 SELECT STRUCTURAL. PRESSURE TREATED ACCORDING TO AWPA STANDARD U1, RATED FOR GROUND CONTACT.
8. TIMBER FOR DECKING TO BE SOUTHERN YELLOW PINE, No. 1 OR No. 1 PRIME. PRESSURE TREATED FOR ABOVE GROUND APPLICATIONS, AND VISUALLY INSPECTED TO BE FREE OF ALL DEFECTS. DECKING TO BE PLACED WITH ANNUAL RINGS FACING DOWN (BARK SIDE UP).
9. DECKING BOARDS SHALL FIRMLY ABUT ADJACENT DECK BOARDS. DO NOT PLACE GAPS BETWEEN BOARDS.
10. DECKING SHALL BE CONNECTED TO FRAMING WITH #10x3" STAINLESS STEEL DECK SCREWS. DECKING SHALL BE ATTACHED TO FRAMING MEMBERS (JOISTS) WITH A MINIMUM OF TWO SCREWS PER DECK BOARD PER JOIST FOR INTERNAL JOISTS (2x10'S) AND A MINIMUM OF THREE SCREWS PER DECK BOARD PER JOIST FOR EXTERIOR (RIM / EDGE) JOISTS.

THE CONTRACTOR IS PROVIDED THE OPTION TO INSTALL AUGERED STEEL HELICAL PILES OR DRIVEN TIMBER PILES. DIFFERENT CONSTRUCTION REQUIREMENTS APPLY TO EACH OPTION.

1. HELICAL PILES TO HAVE A MINIMUM BEARING (COMPRESSION) OF 10 KIPS.
2. HELICAL BRACE (BATTER) PILES TO HAVE A MINIMUM TENSION/COMPRESSION OF 10 KIPS.
3. HELICAL PILES TO BE GALVANIZED SOLID STEEL SQUARE SHAFT MULTI-HELIX ANCHORS, MACLEAN-DIXIE HFS RCS, OR APPROVED EQUAL.
4. DIAGONAL (BATTERED) HELICAL PILE BRACES TO BE PLACED IN ALTERNATE DIRECTIONS AT ALTERNATE PILE PAIRS, AND AS INDICATED ON THE PLANS.

1. TIMBER PILES SHALL BE SPACED AS SHOWN ABOVE AS HELICAL PILES. LATERAL BRACING OF TIMBER PILES SHALL BE DESIGNED BY THE CONTRACTOR FOR FULL TRANSFER OF ALL VERTICAL AND HORIZONTAL LOADS.
2. DRIVEN PRESSURE TREATED TIMBER PILES, ASTM D25, MINIMUM BEARING CAPACITY OF 10 KIPS, 4 FOOT MINIMUM PENETRATION INTO MEDIUM DENSE SAND
3. PILES TO HAVE A MINIMUM BUTT CIRCUMFERENCE OF 10".

ISSUED FOR	REV	DATE
BIDS	—	04-21-2011
ADDENDUM 1	—	05-09-2011

SEALS AND SIGNATURES

KEY PLAN



DRAWING TITLE

BOARDWALK PLANS

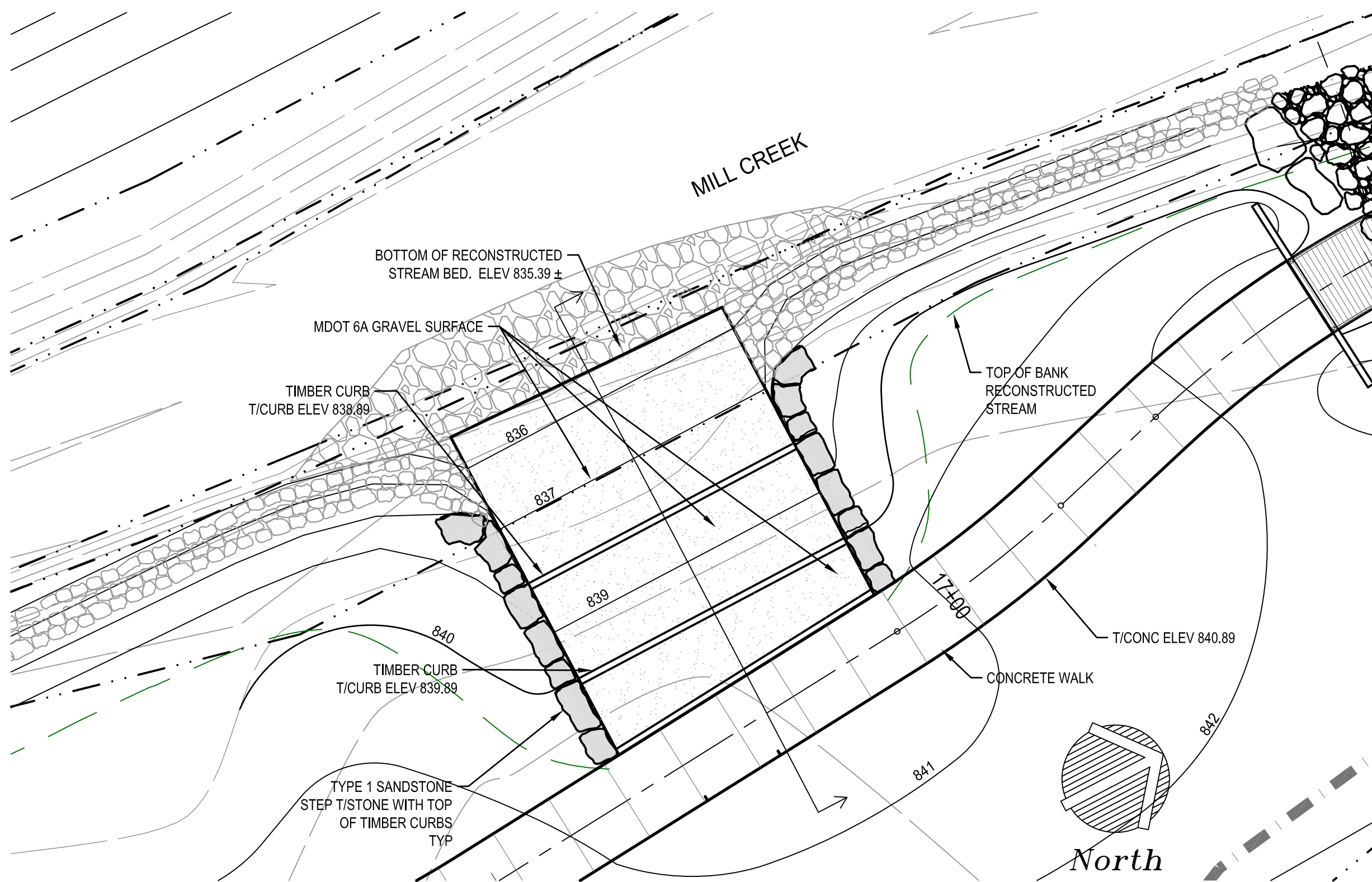
AS NOTED

SCALE 50094.004

PROJECT NUMBER

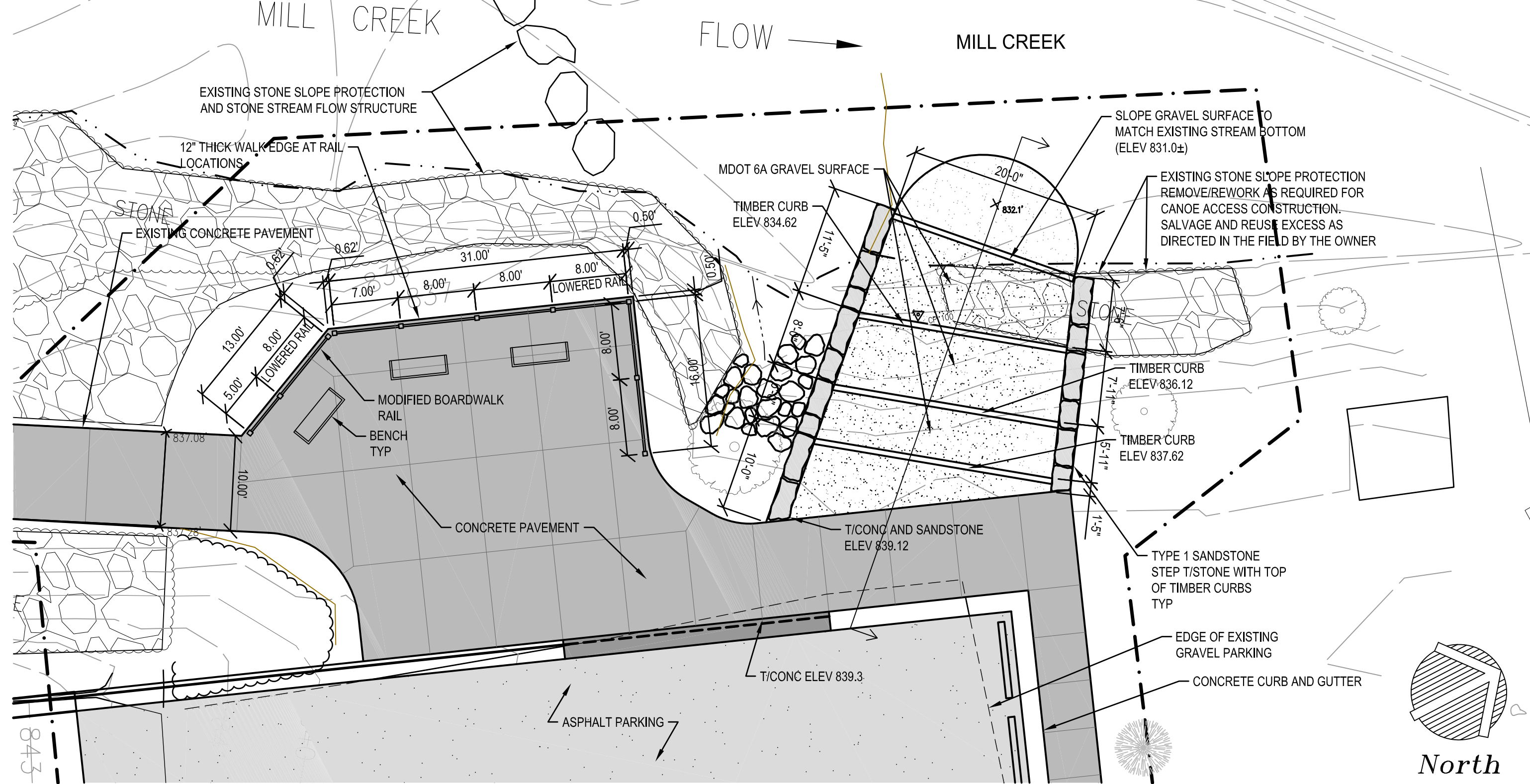
C-11

DRAWING NUMBER



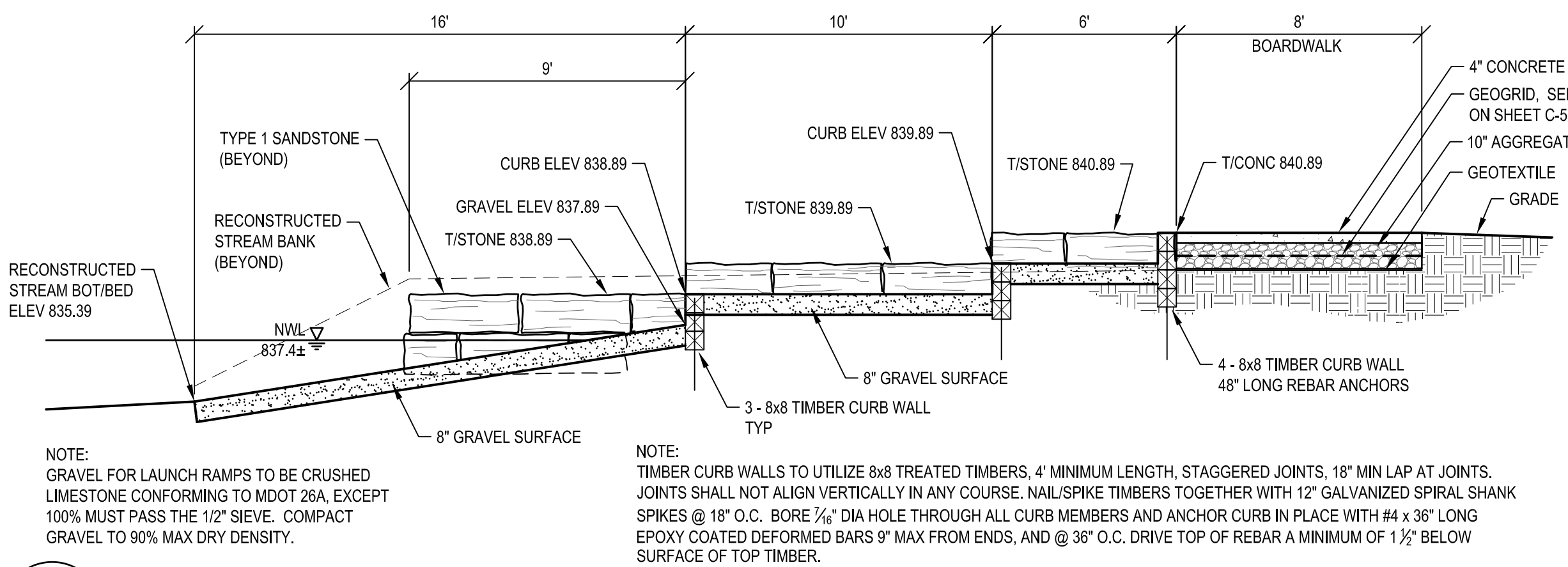
1 MILL CREEK PARK CANOE/KAYAK ACCESS PLAN

C-15 SCALE: 1"=10' 0 5 10



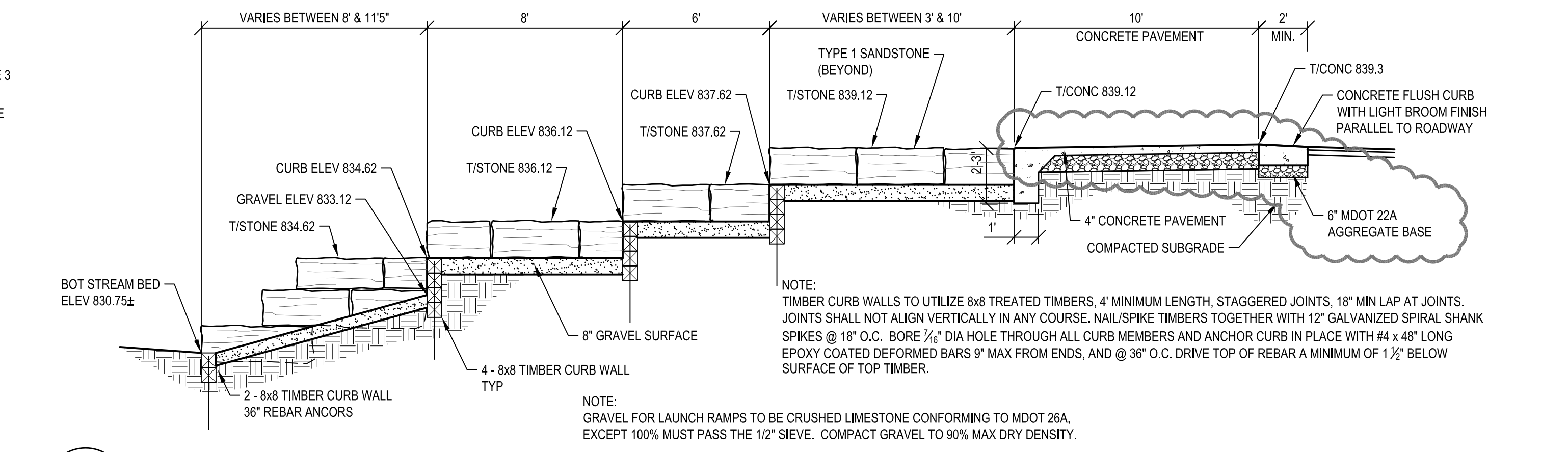
2 WARRIOR CREEK PARK CANOE/KAYAK ACCESS PLAN

C-15 SCALE: 1"=10' 0 5 10



3 MILL CREEK PARK CANOE/KAYAK ACCESS CONSTRUCTION SECTION

C-15 SCALE: 1"=4' 0 5 4



4 WARRIOR CREEK PARK CANOE/KAYAK ACCESS CONSTRUCTION SECTION

C-15 SCALE: 1"=4' 0 2 4

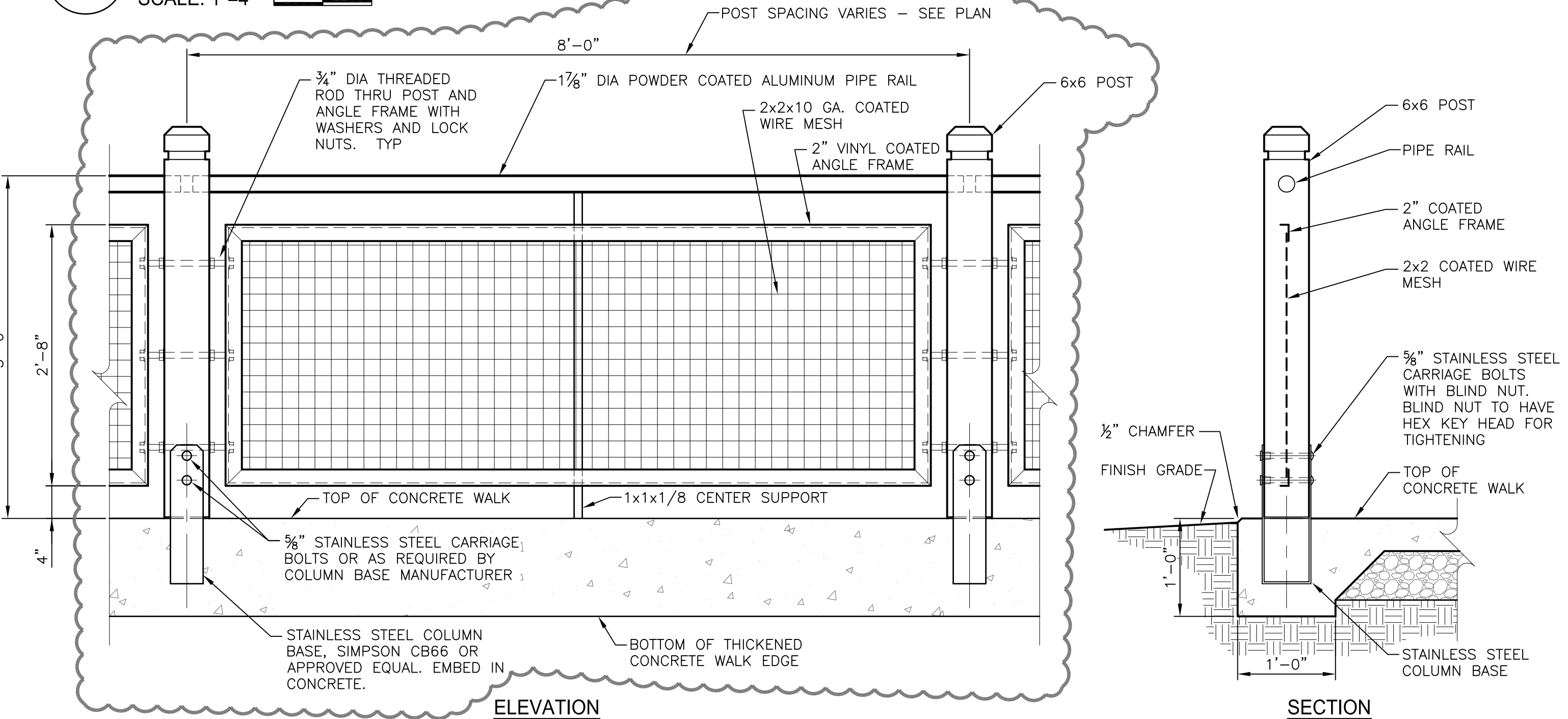
RAILING NOTES:

MATERIALS:

- HANDRAILS - SEE PLANS
- POSTS - SEE PLANS.
- STEEL ANGLES - 2x2x1/8 A36 STEEL.
- 2-INCH x 2-INCH GRID, 10 GAUGE WIRE.
- FINISH FOR ANGLES AND MESH - GALVANIZED AND POWDER COATED

FINISHING:

- THE POLYESTER COATING SHALL BE 1) PHOSPHATE TREATMENT, 2) OVEN DRYING PRIOR TO COATING, 3) ELECTROSTATIC APPLICATION OF POLYESTER POWDER, 4) THERMOHARDENING BY 450 DEGREES FOR 20 MINUTES. THE POLYESTER COATED MATERIAL SHALL BE: HERDNESS TO ASTM D3363, DIRECT IMPACT TO ASTM D2793, WEATHERABILITY TO ASTM D822 AND HUMIDITY RESISTANCE TO ASTM D2247. THE MANUFACTURER SHALL PROVIDE A 10-YEAR LIMITED WARRANTY AGAINST RUST AND CORROSION. POWDER SHALL BE MATTE BLACK POLYESTER RESIN (TGIC) MATERIAL AS PRODUCED BY TIGER DRYLAC, MORTON POWDER COATINGS, SPRAYLAC CORPORATION, OR AN APPROVED EQUAL. THE COLOR OF THE POWDER COATED FENCE COMPONENTS SHALL MATCH AS CLOSELY AS POSSIBLE PITTSBURGH PAINTS COLOR #518-7 (BLACK MAGIC).
- SUBMIT SHOP DRAWINGS OF RAIL SHOWING FABRICATION AND INSTALLATION OF RAILING, INCLUDING PLANS, ELEVATIONS, SECTIONS AND DETAILS OF COMPONENTS AND ATTACHMENTS. THE CONTRACTOR SHALL SUBMIT REPRESENTATIVE SAMPLES OF THE POWDER COATING TO THE DESIGN PROFESSIONAL FOR APPROVAL PRIOR TO THE START OF WORK..
- ASSEMBLE AND INSTALL COMPONENTS PER THE MANUFACTURER'S RECOMMENDATIONS. PREPARATION OF GALVANIZED SURFACES AND POWDER COAT APPLICATION AND CURING SHALL BE IN ACCORDANCE WITH THE POWDER COATING MANUFACTURER'S RECOMMENDATIONS. PROTECT ALL FINISHES FROM DAMAGE DURING INSTALLATION. AVOID UNNECESSARY FIELD CUTTING, DRILLING OR WELDING OF POWDER COATED FENCE COMPONENTS. REPAIR ALL DAMAGED OR FIELD CUT POWDER COATED SURFACES IN ACCORDANCE WITH THE POWDER COATING MANUFACTURER'S RECOMMENDATIONS..



5 WARRIOR CREEK PARK MODIFIED BOARDWALK RAILING

C-15 SCALE: 1"=1'-0" 0 1 2

MILL CREEK PARK
PHASE 1 IMPROVEMENTS

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CANOE/KAYAK ACCESS
PLANS

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SEALS AND SIGNATURES:

KEY PLAN

DRAWING TITLE

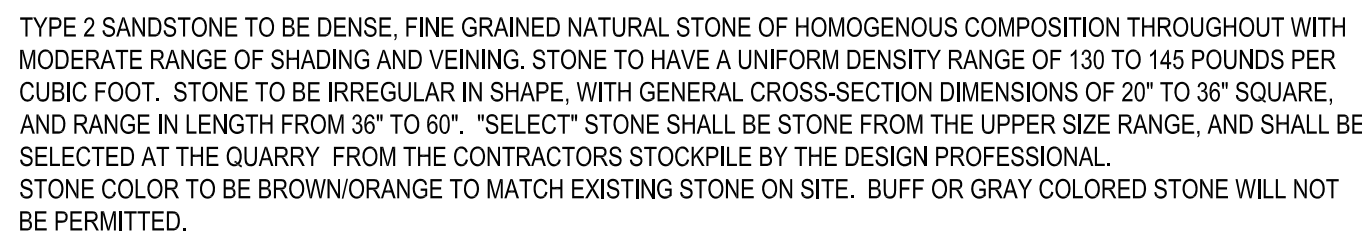
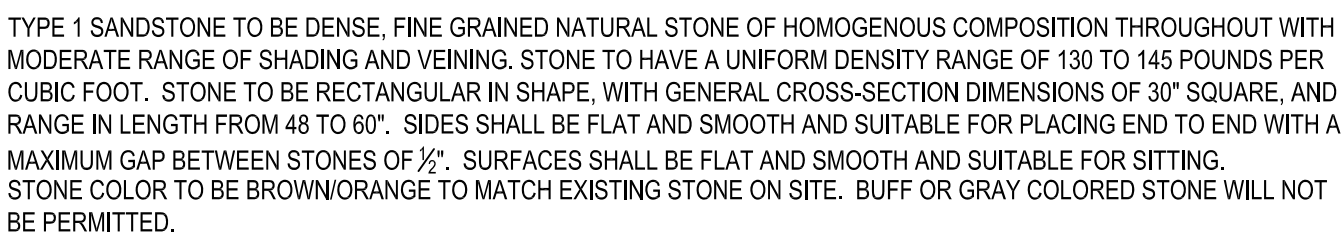
SITE DETAILS

SCALE 50094.004

PROJECT NUMBER

C-16

DRAWING NUMBER

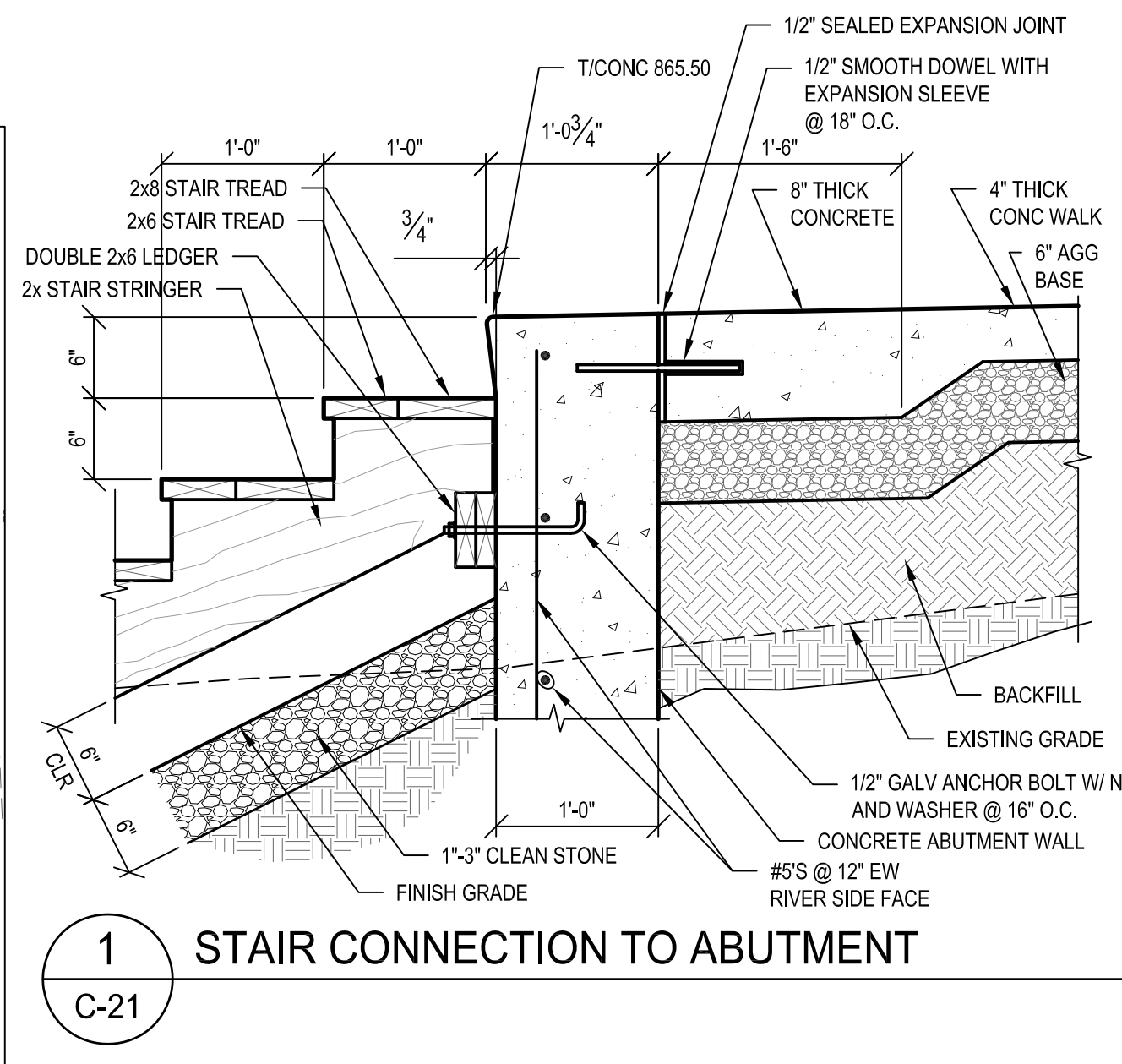
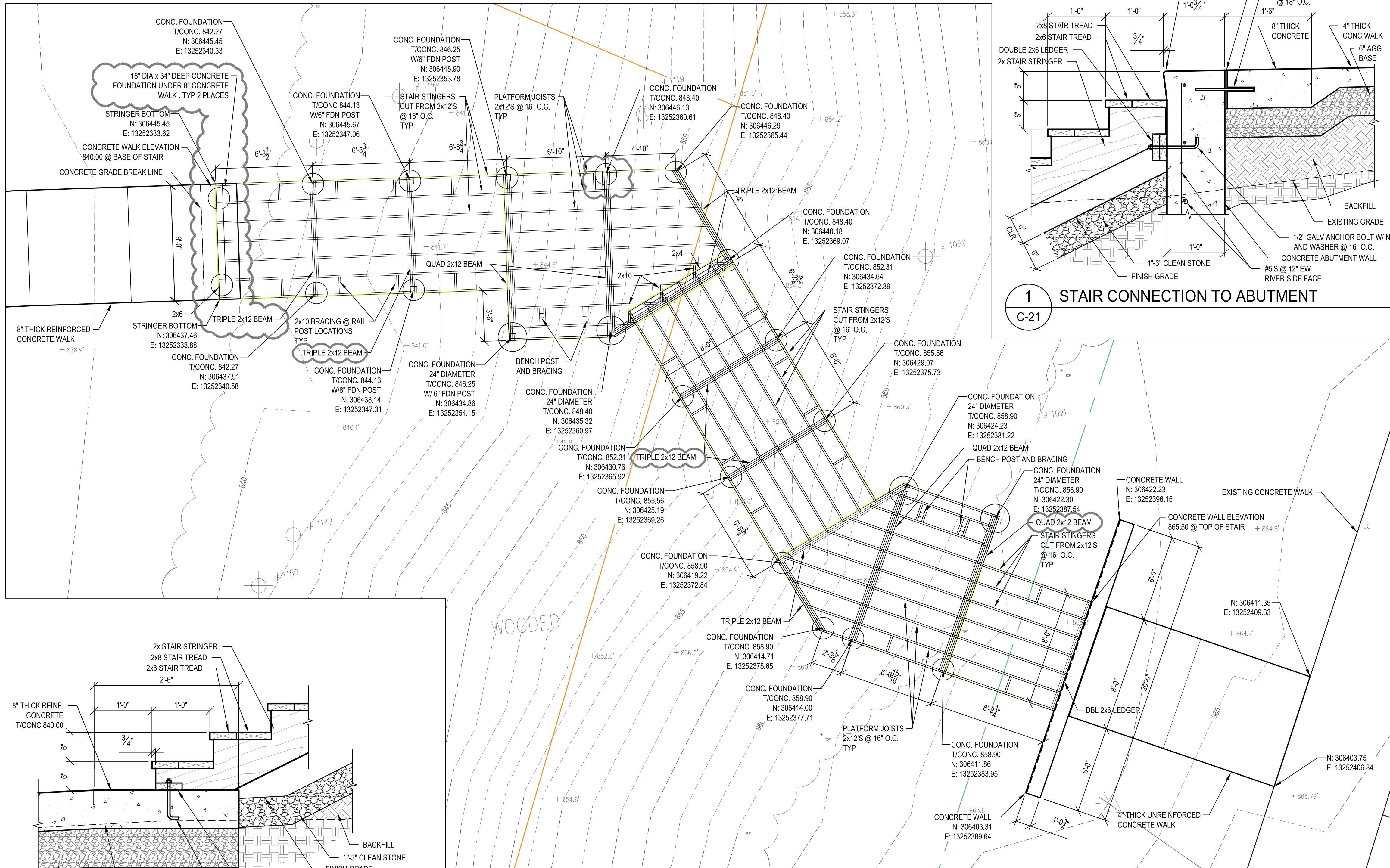


7 ASPHALT PAVEMENT

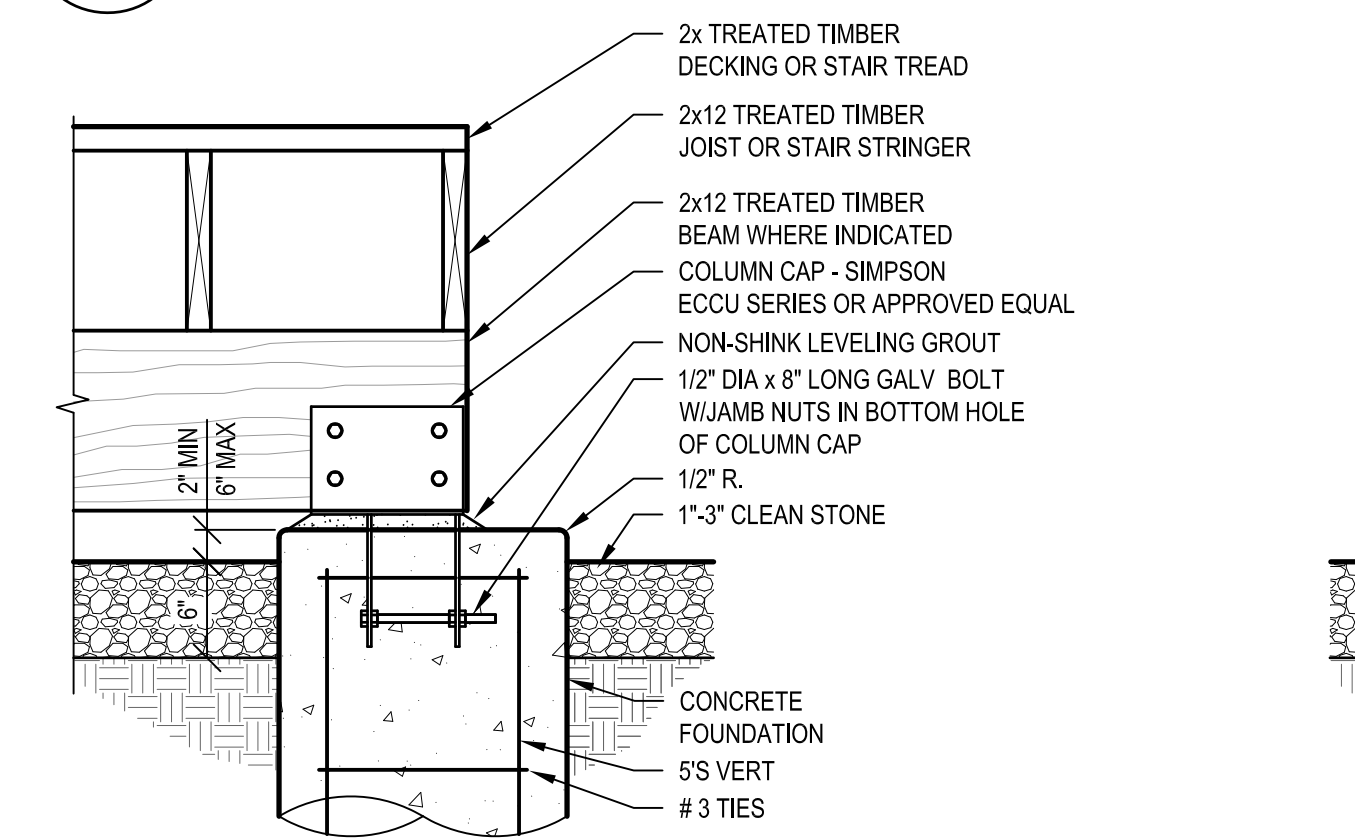
KEYED NOTES:

1. RECTANGULAR STRAIGHT STEEL TUBE 3"6"x24" LONG, 3/16" THICK. PRIME AND PAINT, COLOR TO BE DETERMINED BY OWNER.
2. 1/8" THICK STEEL TOP. PROVIDE CONTINUOUS WELD ALONG PERIMETER OF CAP. PRIME AND PAINT BLACK.
3. DUPLEX WEATHERPROOF WHILE IN USE. OUTLET COVER WITH STAINLESS STEEL LOCKING MECHANISM FLUSH IN HINGED COVER EQUAL TO INTERMATIC #WP1010MC WITH DOUBLE GFCI BASE CONFIGURATION. PAINT COVER TO MATCH STEEL TUBE.
4. WELD 1/4" STEEL NUT ONTO THE INSIDE FACE OF THE STEEL TUBE OPPOSITE THE CONVENIENCE RECEPTACES FOR ATTACHING SYSTEM GROUND WIRING.
5. STUB UNDERGROUND CONDUITS 2" ABOVE FINISHED GRADE INSIDE STEEL TUBE.
6. CLASS 'A' CONCRETE (3000 PSI).
7. TWO 3"x6"x3/16" STEEL PLATES (ONE EACH SIDE) WELDED TO THE BASE OF THE STEEL TUBE.
8. 1" WASHED RIVER STONE.
9. PROVIDE 1/8" THICK BITUMINOUS COATING ON THE INSIDE AND OUTSIDE OF THE STEEL TUBE AS INDICATED. WRAP THE OUTSIDE OF THE TUBE WITH 10 MIL PLASTIC TAPE, HALF LAPPED.
10. OUTLINE OF WEATHERPROOF COVER.
11. OUTLINE OF DUPLEX GFCI CONVENIENCE RECEPTACLE FORM.
12. OUTLINE OF RECTANGULAR HOLE IN THE STEEL TUBE FOR DUPLEX GFCI CONVENIENCE RECEPTACLE.
13. DRILL AND TAP HOLES IN STEEL TUBE FOR MOUNTING RECEPTACES AND WEATHERPROOF COVER.
14. CONTRACTOR TO STAMP CORRECT CIRCUIT NUMBER DIRECTLY ON THE TOP OF EACH RECEPTACLE PEDESTAL WITH 1/2" LETTERS.

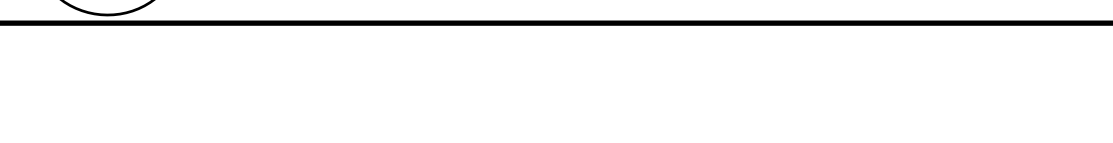
FILE: P:\50094\005\CAD\Sheet\WP-STAIR-FDN.dwg USER: cabraham DATE: May, 09 2011 TIME: 07:47 am



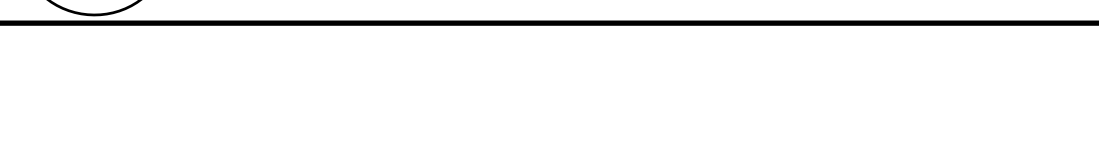
2 STAIR CONNECTION TO CONCRETE PAVEMENT



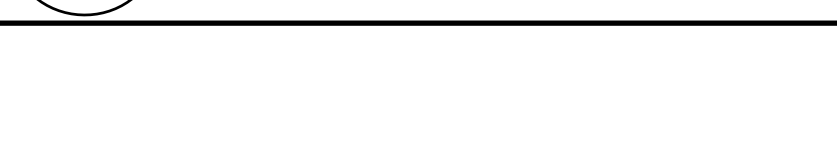
3 BEAM TO FOUNDATION CONNECTION



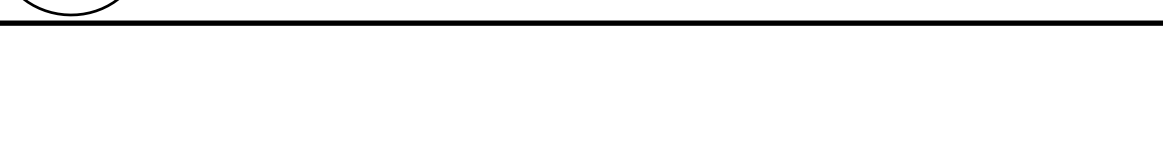
4 POST TO FOUNDATION CONNECTION



5 CONCRETE FOUNDATIONS



6 TYPICAL STAIR / EXCAVATION SECTIONS



EXCAVATION NOTES:

- CLEAR AND GRUB EXISTING SHRUB/WOODY VEGETATION FROM STAIRWAY AREA. TREES WITH A DBH GREATER THAN 6" ARE TO REMAIN.
- EXCAVATE STAIR AREA AS REQUIRED FOR INSTALLATION OF FOUNDATIONS, STAIRWAY AND STONE FILL. FOUNDATIONS SHALL EXTEND A MINIMUM OF 2" ABOVE FINISH GRADE.
- AREA UNDER STAIRWAY TO TOPPED WITH 6" OF PEA STONE.
- CUT/FILL SIDE SLOPES SHALL NOT EXCEED 3:1.
- CUT/FILL SIDE SLOPES TO BE RESTORED WITH 6" OF TOPSOIL, SEED, MULCH AND COVERED WITH EROSION CONTROL BLANKET.

FOUNDATION NOTES:

- FOUNDATIONS TO BE ROUND, FORMED (SONOTUBE), CAST IN PLACE CONCRETE USING MDOT GRADE S2 CONCRETE, 564 LBS OF CEMENT/YARD AND A MAXIMUM WATER CEMENT RATIO OF 0.45.
- REINFORCING SHALL BE 60 KSI DEFORMED BARS CONFORMING TO ASTM A615.
- ALL FOUNDATIONS SHALL BE 18" DIAMETER EXCEPT WHERE SPECIFIED.
- FOR FOUNDATIONS WITHOUT POSTS, TOP OF CONCRETE ELEVATIONS SHOWN ARE 0.10' LOWER THAN CALCULATED BOTTOM OF BEAM ELEVATIONS.
- ALL FOUNDATION BOTTOMS SHALL BE A MINIMUM OF 42" BELOW FINISHED GRADE, INCLUDING AND ACCOUNTING FOR SLOPED GRADES.
- FOUNDATIONS SHALL BEAR ON UNDISTURBED NATURAL MATERIAL AND BEARING SURFACE SHALL BE APPROVED BY THE ENGINEER PRIOR TO PLACING CONCRETE.
- BEAMS TO BE AFFIXED TO FOUNDATIONS WITH HEAVY GALVANIZED BEAM SADDLES OR COLUMN CAPS. SIMPSON STRONG-TIE ECC SERIES OR APPROVED EQUAL.
- POSTS TO BE AFFIXED TO FOUNDATIONS WITH HEAVY GALVANIZED POST ANCHORS, SIMPSON-STRONG-TIE ABU SERIES OR APPROVED EQUAL.
- BEAMS TO BE AFFIXED TO POST TOPS WITH HEAVY GALVANIZED POST CAPS, SIMPSON STRONG-TIE BC SERIES OR APPROVED EQUAL.

STAIRWAY NOTES:

- STAIRWAY TO BE PRESSURE TREATED TIMBER FRAME AND DECKING SUPPORTED ON CONCRETE PILE FOUNDATIONS.
- STAIRWAY DESIGNED FOR 100 PSF PEDESTRIAN LIVE LOAD AND 20 PSF DEAD LOAD.
- STAIRWAY FRAMING TO BE 2x12 TREATED TIMBER JOISTS SPACED 16" ON CENTER. JOISTS ARE TO BE SUPPORTED BY BUILT-UP 2x12 BEAMS.
- TIMBER FOR FRAMING MEMBERS TO BE SOUTHERN YELLOW PINE, No. 1 SELECT STRUCTURAL, PRESSURE TREATED ACCORDING TO AWPA STANDARD U1, RATED FOR GROUND CONTACT.
- STAIR STRINGERS AND PLATFORM JOISTS SHALL HAVE ONE ROW OF 2x10 CROSS BRACING INSTALLED AT MID SPAN (NOT SHOWN ON DRAWINGS).
- PLATFORM JOIST SHALL BE TOE-SCREWED TO BEAMS. INSTALL ADDITIONAL STRAPPING TIES ON ALTERNATE JOIST-TO-BEAM CONNECTIONS. STRAPPING TO BE SIMPSON H8 HURRICANE TIES, OR APPROVED EQUAL.
- RIM (EDGE) JOISTS SHALL BE PLACED ON ENDS OF PLATFORM JOISTS.
- TIMBER FOR DECKING TO BE SOUTHERN YELLOW PINE, No. 1 OR No. 1 PRIME, PRESSURE TREATED FOR ABOVE GROUND APPLICATIONS, AND VISUALLY INSPECTED TO BE FREE OF ALL DEFECTS. DECKING TO BE PLACED WITH ANNULAR RINGS FACING DOWN (BARK SIDE UP).
- DECKING SHALL BE CONNECTED TO FRAMING WITH #10x3" STAINLESS STEEL DECK SCREWS. DECKING SHALL BE ATTACHED TO FRAMING MEMBERS (JOISTS) WITH A MINIMUM OF TWO SCREWS PER DECK BOARD PER JOIST FOR INTERNAL JOISTS AND A MINIMUM OF THREE SCREWS PER DECK BOARD PER JOIST FOR EXTERIOR (RIM / EDGE) JOISTS.



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SEALS AND SIGNATURES

KEY PLAN

DRAWING TITLE

ALTERNATE 4 STAIR FOUNDATION AND FRAMING PLAN

0 2 4

SCALE: 1/4" = 1'0"

SCALE 50094.004

PROJECT NUMBER

C-21

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