



Title: Big Island Nature Park Update

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Purpose:

To provide the Board of Managers an update on the 80% design plans for Big Island Nature Park Improvements (Attachment A).

Background:

In March 2006, the Board of Managers authorized the purchase of a conservation easement on Big Island in Lake Minnetonka in a joint effort with the City of Orono to preserve the property's biological, physical, and cultural resources in balance with appropriate and responsible recreational use. The conservation easement encompasses the entirety of the City-owned property and serves to protect these resources by restricting activities within the 56-acre area, which is divided into a 45-acre Natural Area and an 11-acre Recreation Area each with specific restrictions on use and potential improvements. In 2011, MCWD and City of Orono staff worked to draft the Big Island Nature Park Management Plan, which provides greater detail on management and use of the easement area and how future improvements are contemplated. The management plan elaborates on uses allowed by the easement, but may not authorize activity that the easement does not allow.

In December 2017, the City of Orono developed the Big Island Concept Master Plan for phased improvements within Big Island Nature Park. District staff was involved in a review of the plan with City of Orono staff and provided initial comments on the Plan's adherence to easement restrictions. The Plan was then presented to the Board of Managers by District staff and again evaluated for consistency with the easement and management plan. Following this preliminary review, District staff also attended the Orono Park Commission on March 13, 2017, and provided MCWD's evaluation and comments to the Commission and Orono staff.

In April 2018, the Board of Managers reviewed a subsequent version of the concept master plan and raised concerns regarding proposed permanent structures in the designated Natural Area (the beach on the southeast portion of the island). Specifically, picnic tables and gates or bollards to prevent vehicle passage were proposed, but permanent structures are not allowed by the easement in the designated Natural Area. District staff relayed the Board of Managers' concerns to City of Orono staff and subsequent versions of the concept master plan have been responsive to the Board of Managers' comments.

In February of 2019, the City of Orono applied to receive up to \$200,000 in match grant monies through the DNR's Outdoor Recreation Grant Program. This grant would fund approximately 50% of the proposed improvements to Big Island Nature Park. The structure of the grant program is such that the City of Orono is responsible for supplying 50% of the park improvements budget. A majority of this match may come from donor sources, however, the City of Orono must contribute no less than 20% of the match. Big Island Legacy, the non-profit organization formed from a previous special City of Orono committee, is fundraising for park improvements, including the match dollars for the Outdoor Recreation Program grant.

On July 8, 2019, Orono City Council approved a Bolton & Menk Design and Bidding Services agreement to take the Big Island Master Plan from the concept stage through construction and bidding documents. MCWD staff provided an update to the Board of Managers at the July 25, 2019 meeting, noting that the most recent version of the master plan is

largely unchanged with the exception of rerouting ADA trails, removing proposed picnic tables from the beach within the Natural Area, and reducing the number of proposed vehicle barriers.

Current Status:

Throughout the fall of 2019, survey and engineering work was undertaken at Big Island Nature Park to determine slopes and grades for ADA accessibility, ADA restroom facilities, and overlook and pavilion area improvements. On December 4, 2019, City of Orono staff provided the District with 60% design plans, seeking input and comments, and invited District staff to a meeting to review 80% plans on December 19, 2019. District staff evaluated 60% and 80% design plans for consistency with the easement and management plan and found design plans to be in conformance (Attachment B).

Next Steps:

Staff intends to present the 95% design of the master plan for Conservation Easement and Management Plan conformance review at the February 13, 2020 Board of Managers meeting.

Supporting documents:

- Attachment A: Big Island Nature Park Master Plan 80% Design Plans
- Attachment B: Conformance Analysis

CITY OF ORONO

CONSTRUCTION PLANS FOR

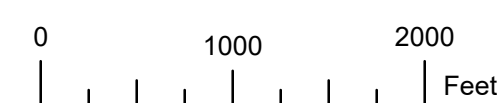
BIG ISLAND NATURE PARK IMPROVEMENTS

DECEMBER, 2019

| SHEET NUMBER | SHEET TITLE |
|-----------------------------|--|
| GENERAL | |
| G0.01 | TITLE SHEET |
| SITE PLANS | |
| L1.01 | EXISTING CONDITIONS |
| L1.02 | SHEET LAYOUT |
| L1.03 | OVERALL SITE PLAN |
| L1.04 - L1.11 | SITE PLAN |
| L1.12 | EROSION CONTROL PLAN |
| LANDSCAPE DETAILS | |
| L2.01 | LANDSCAPE DETAILS |
| L2.02 | SITE DETAILS |
| L2.03 | SHELTER POST DETAILS (NOT IN CONTRACT) |
| TRAIL CROSS SECTIONS | |
| C1.01 - C1.04 | CROSS SECTIONS - WEST TRAIL |
| C1.05 - C1.09 | CROSS SECTIONS - EAST TRAIL |



MAP OF THE CITY OF ORONO HENNEPIN COUNTY, MN



80% PLANS



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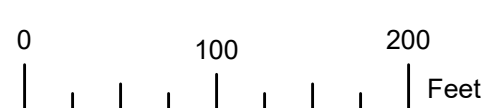
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CITY OF ORONO
 BIG ISLAND NATURE PARK IMPROVEMENTS
 TITLE SHEET

SHEET
G0.01



NOTES:
 1. THE MCWD CONSERVATION EASEMENT ENCOMPASSES ENTIRE BIG ISLAND NATURE PARK.



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CITY OF ORONO
 BIG ISLAND NATURE PARK IMPROVEMENTS
 EXISTING CONDITIONS

SHEET
 L1.01



LAKE MINNETONKA

BIG ISLAND NATURE PARK

SHEET L1.08

SHEET L1.09

SHEET L1.04

SHEET L1.05

SHEET L1.10

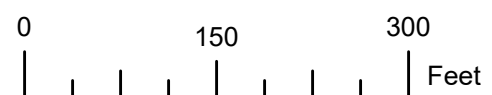
SHEET L1.11

SHEET L1.06

SHEET L1.07

LIMITS OF GRADING

5' CRUSHED STONE TRAIL



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 BIG ISLAND NATURE PARK IMPROVEMENTS
 SHEET LAYOUT

SHEET
 L1.02





LAKE MINNETONKA

RECREATION EASEMENT

VAULT TOILET

CRUSHED LIMESTONE TRAIL

WELCOME CENTER BUILDING

INTERPRETIVE PANEL

CITY DOCKS

BOULDERS & BOLLARD

BIG ISLAND NATURE PARK

SIGNIFICANT TREES TO BE PROTECTED, TYP.

BOULDERS & BOLLARD

INTERPRETIVE PANEL

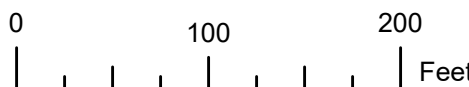
BEACH

VAULT TOILET (ALTERNATE 1)

SHELTER STRUCTURE WITH PICNIC TABLES

RECREATION EASEMENT

EXISTING FENCE



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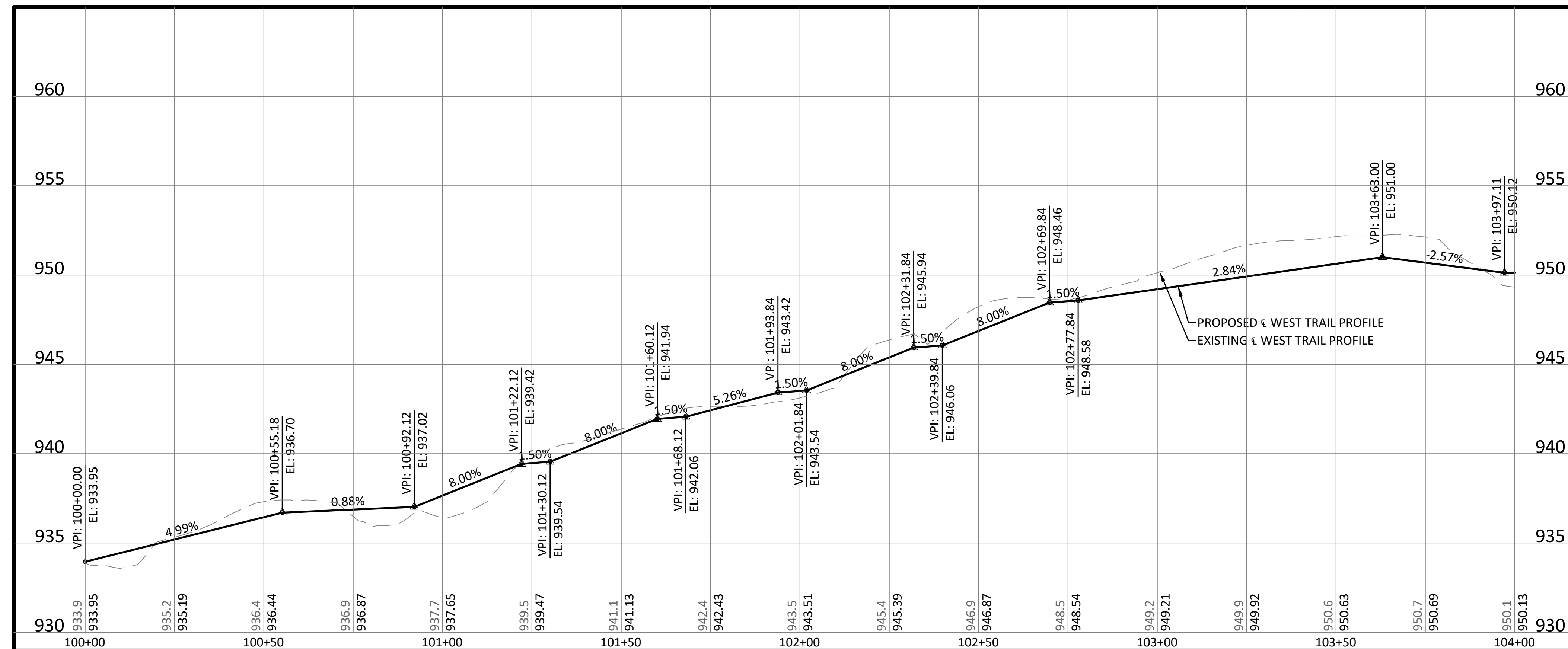
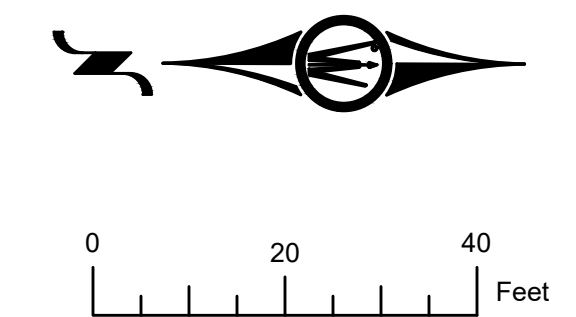
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 OVERALL SITE PLAN

SHEET
 L1.03



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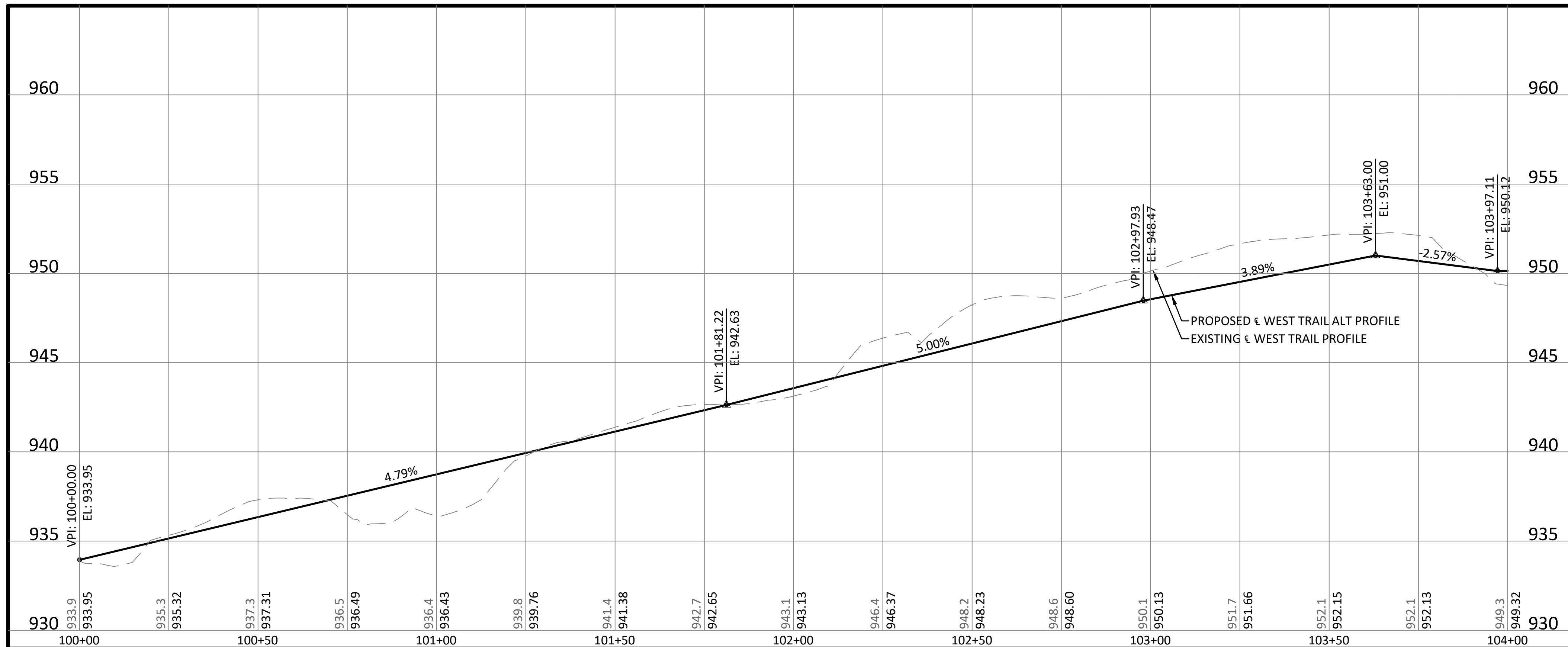
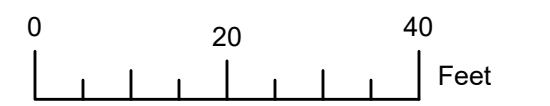
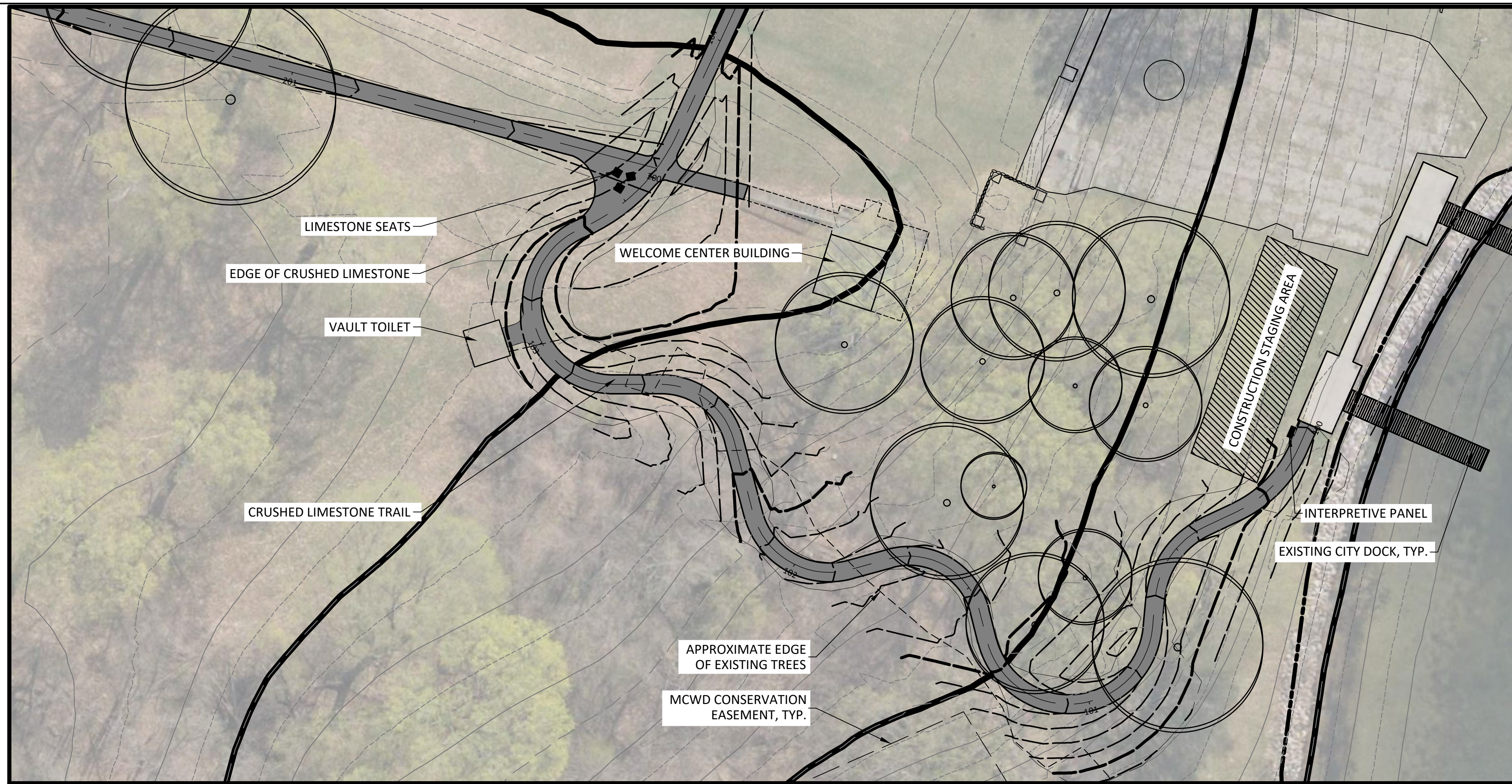
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 SITE PLAN

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ALTERNATE LAYOUT & PROFILE



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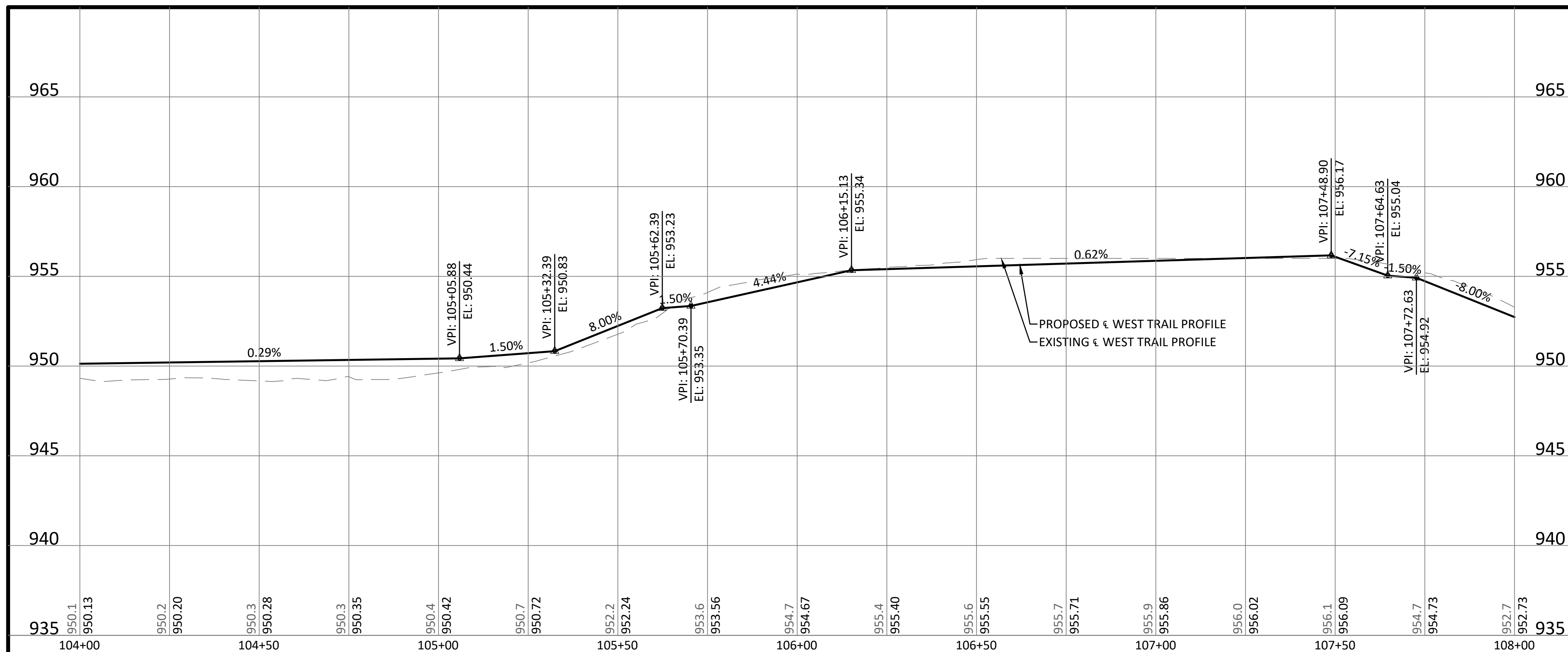
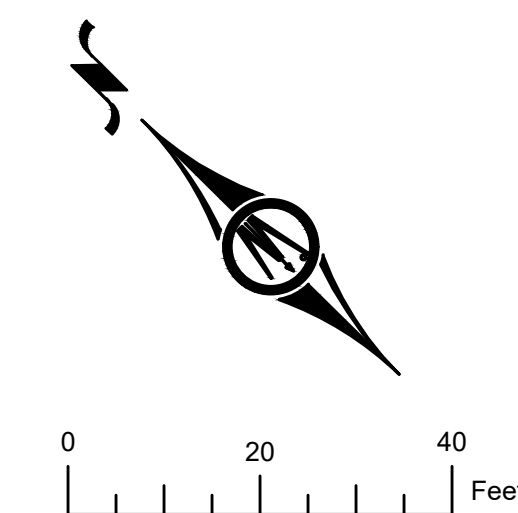
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BIG ISLAND NATURE PARK IMPROVEMENTS
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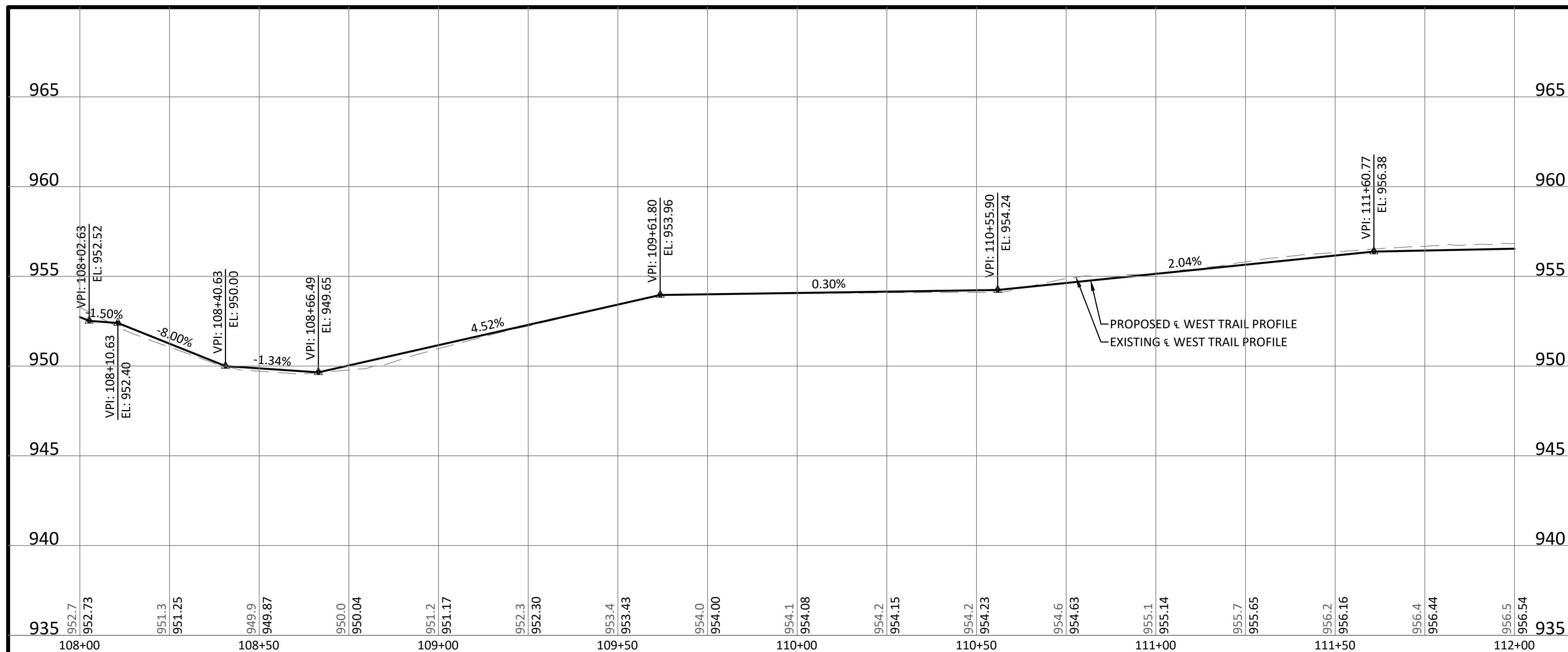
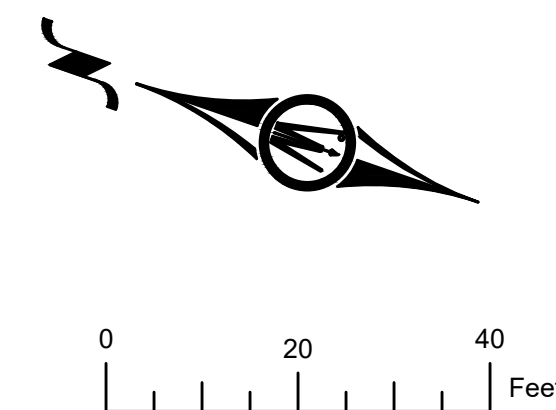
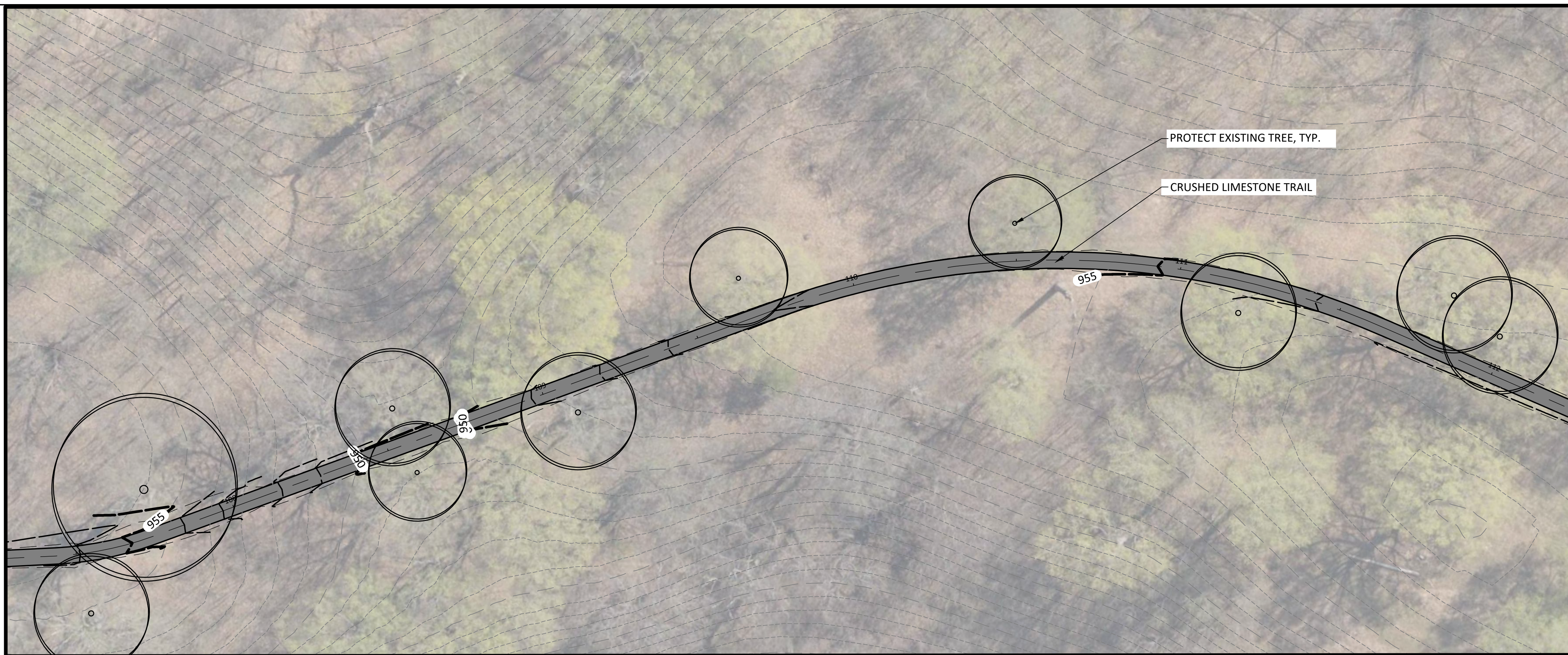
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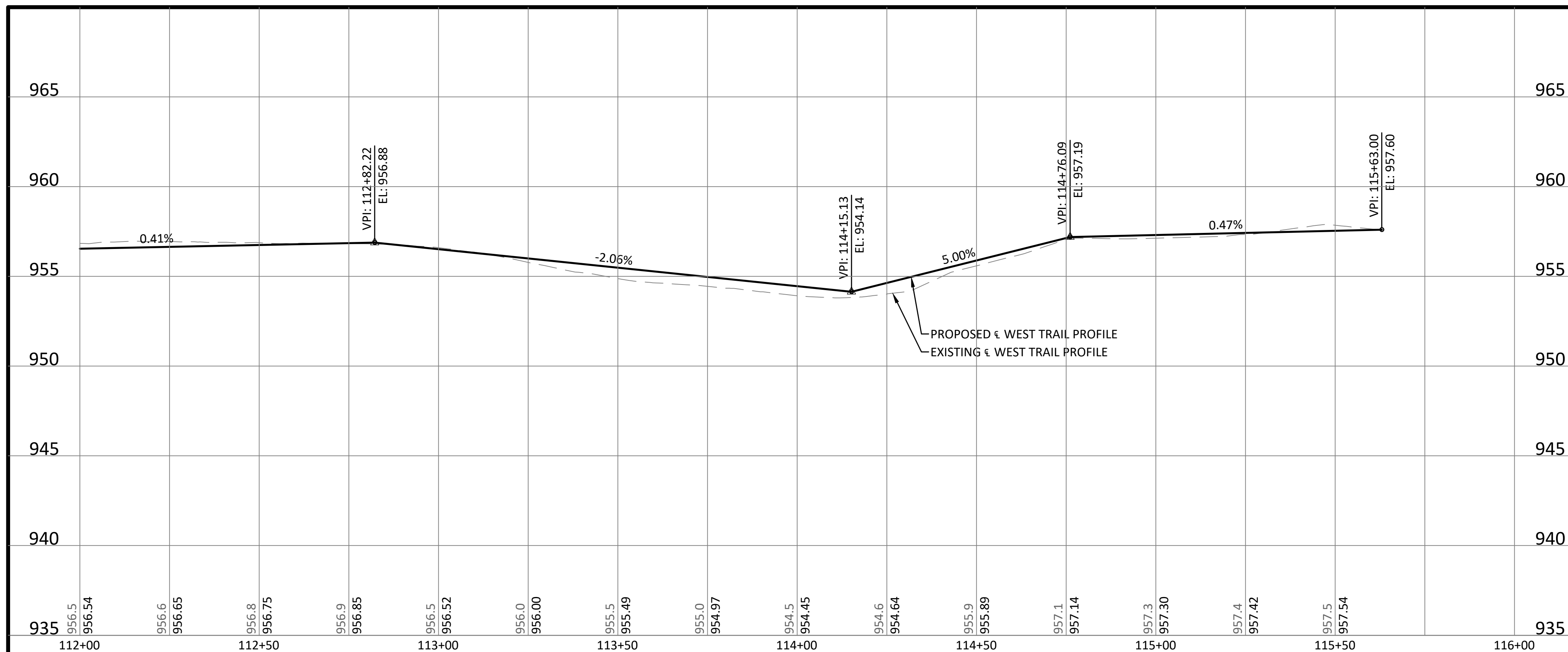
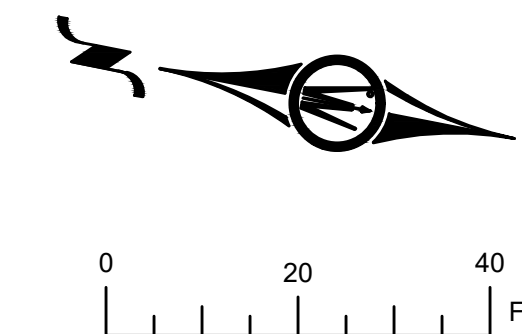
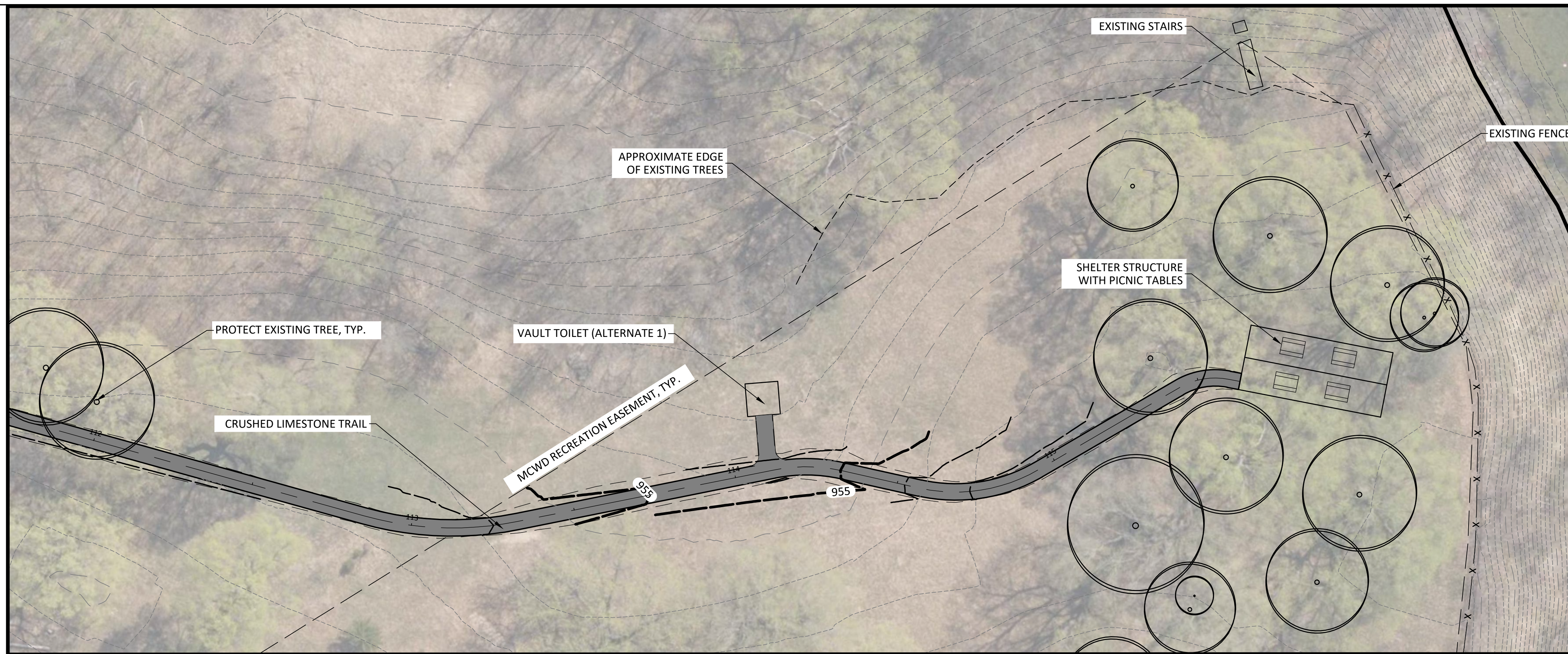
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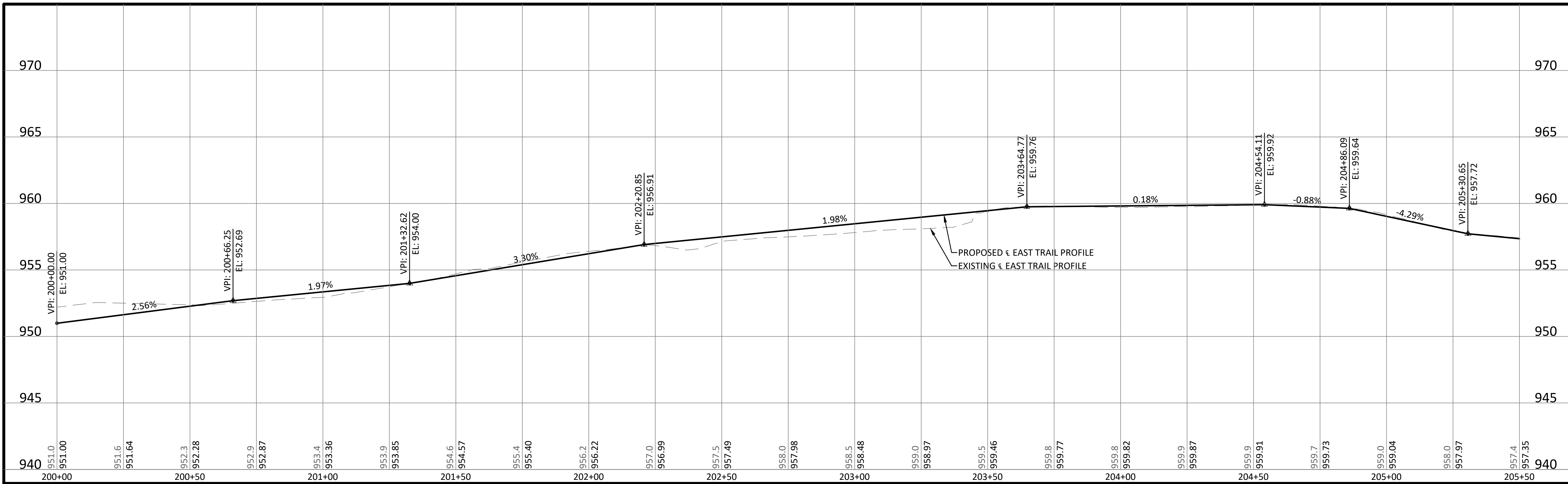
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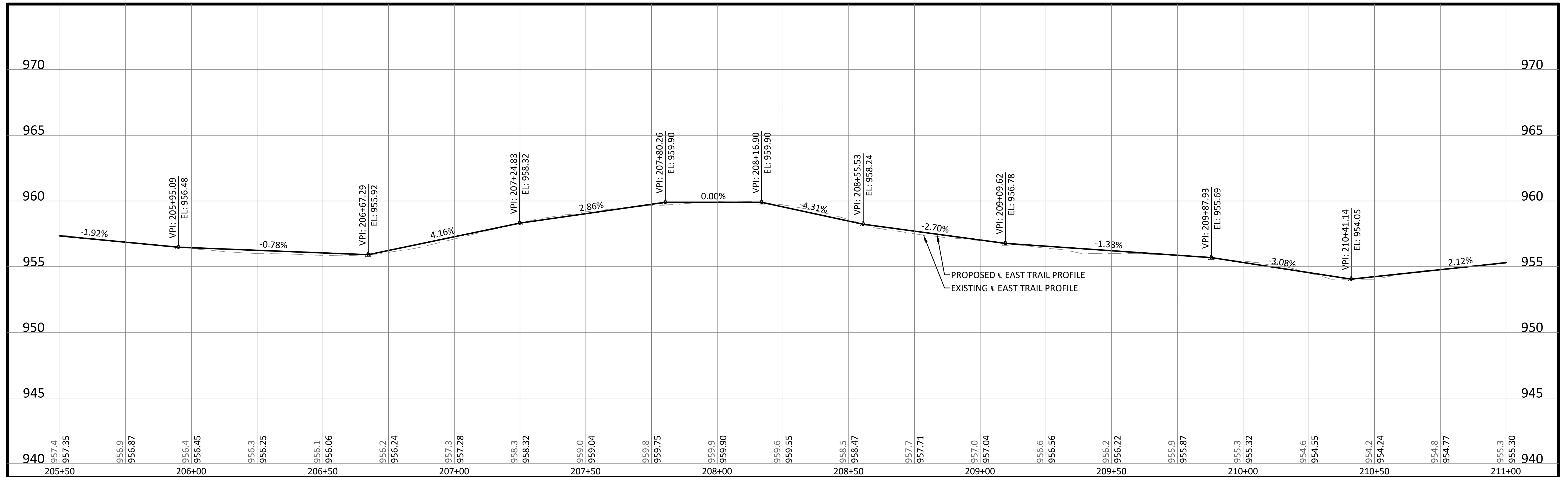
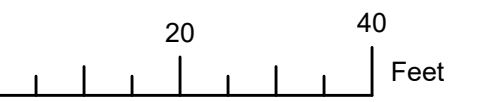
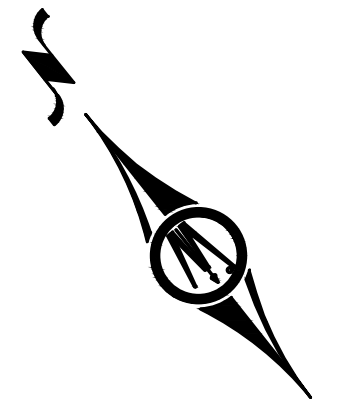
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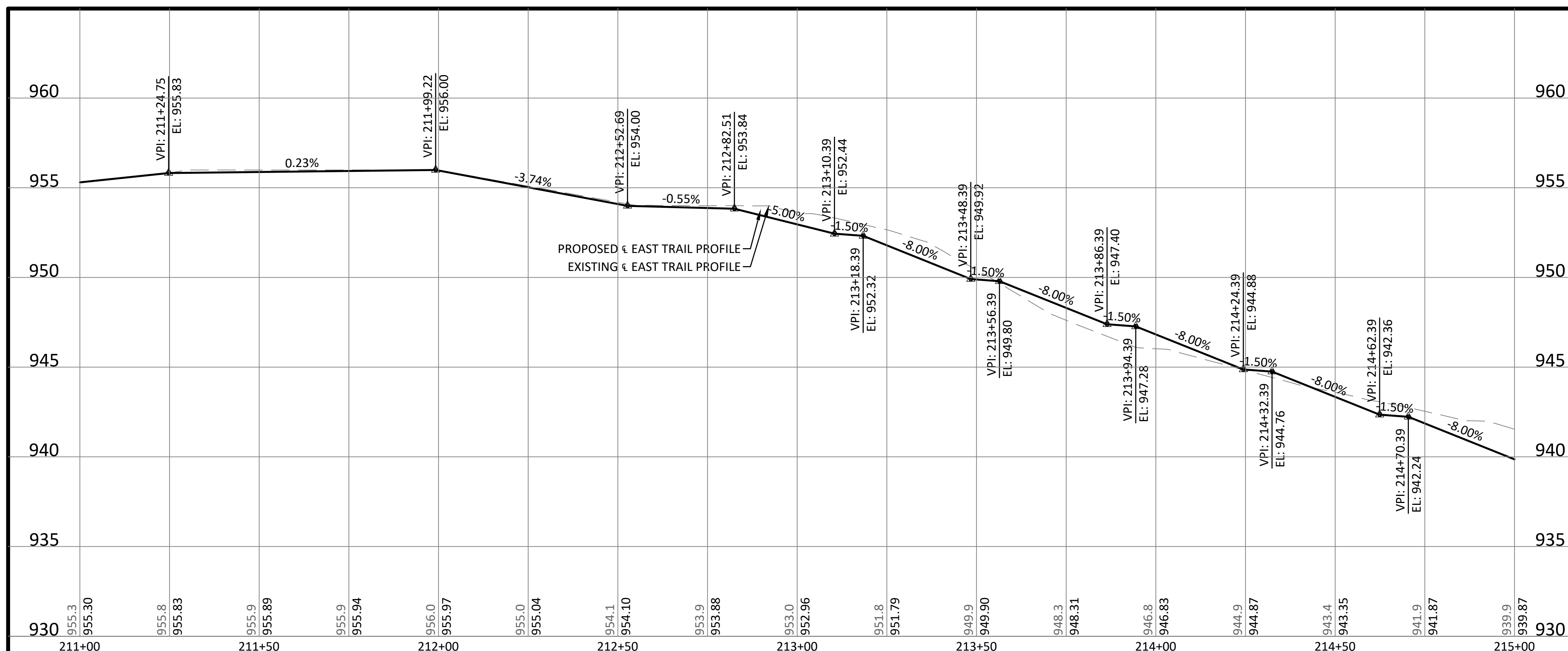
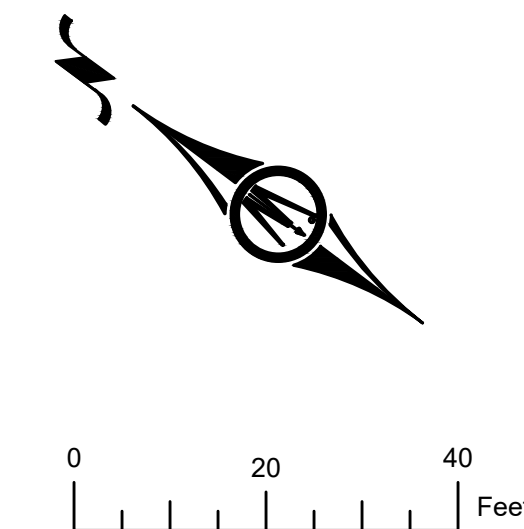
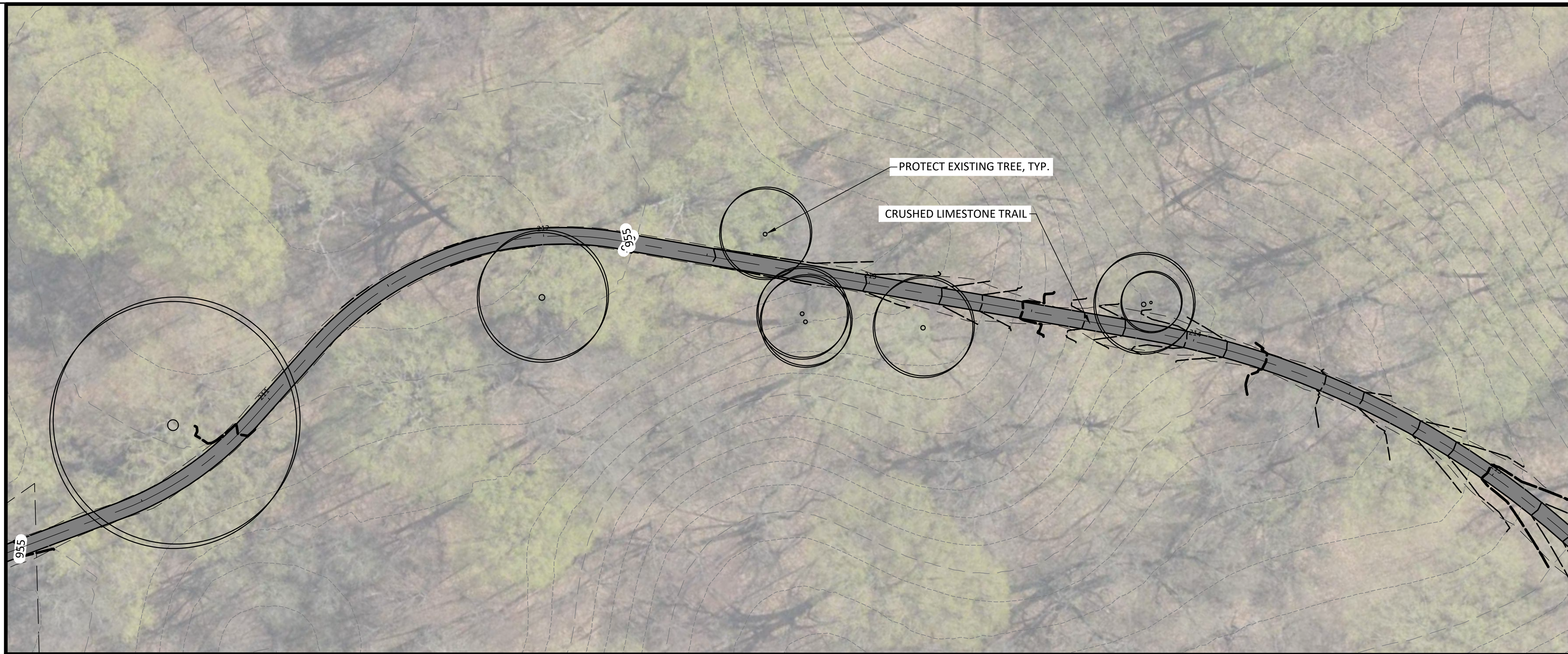
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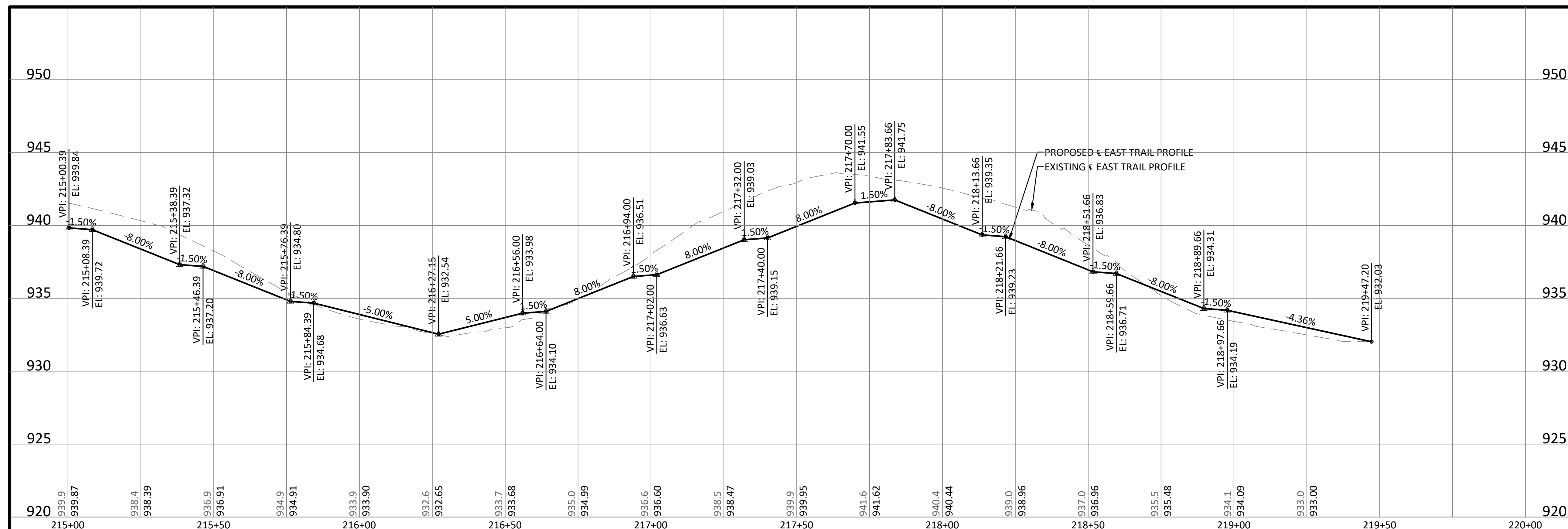
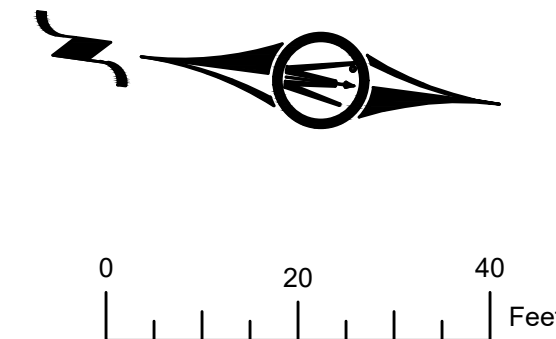
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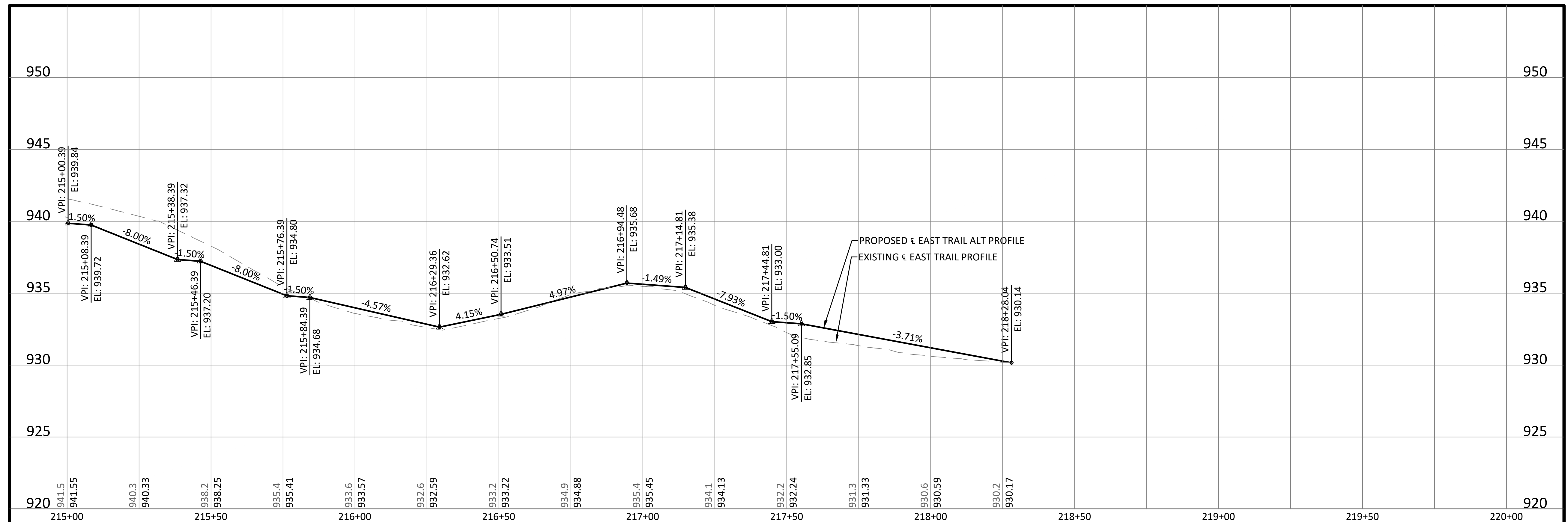
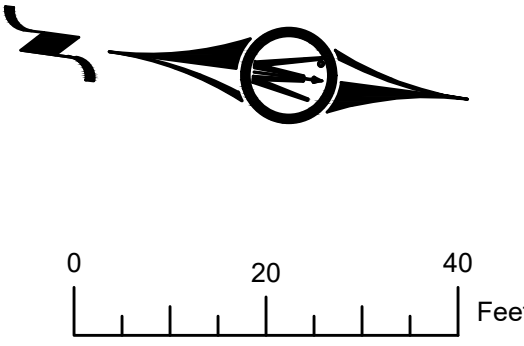
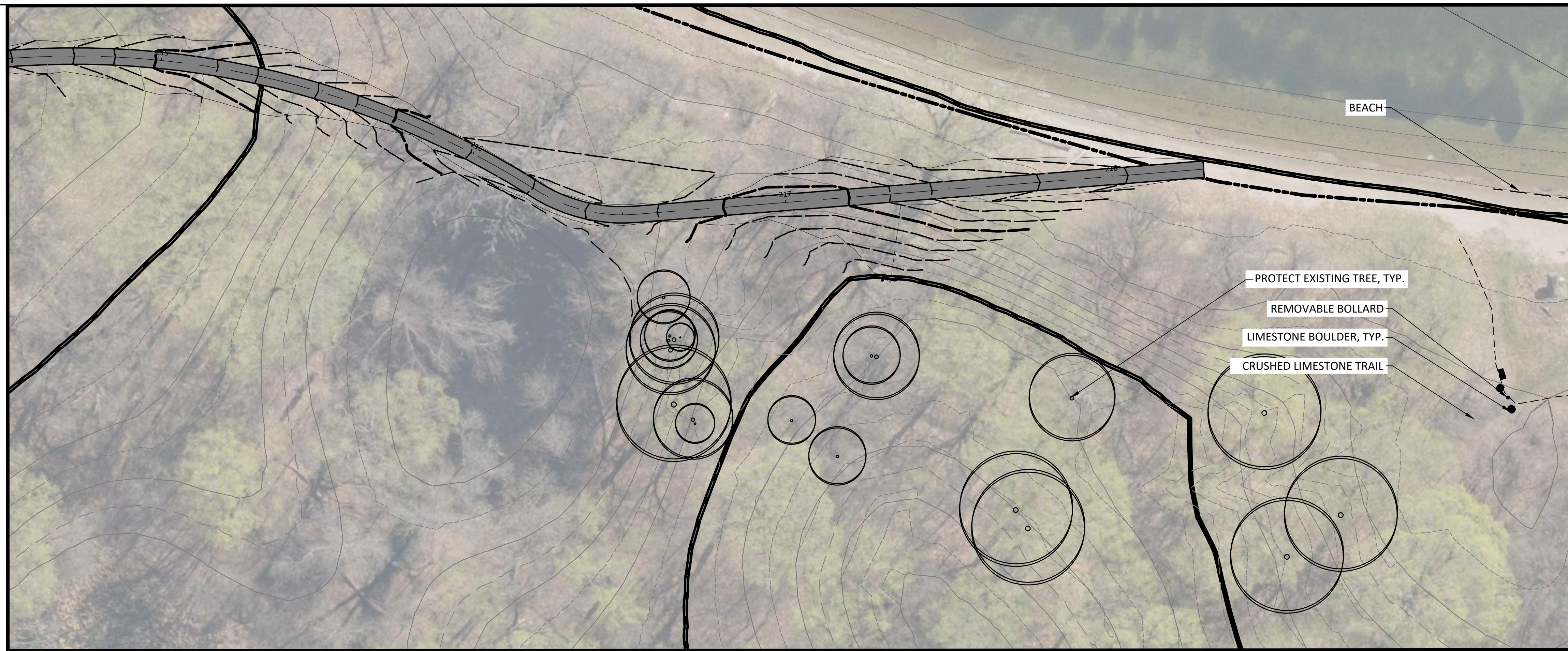
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CITY OF ORONO
 BIG ISLAND NATURE PARK IMPROVEMENTS
 SITE PLAN

SHEET
 L1.11

ALTERNATE LAYOUT & PROFILE



80% PLANS



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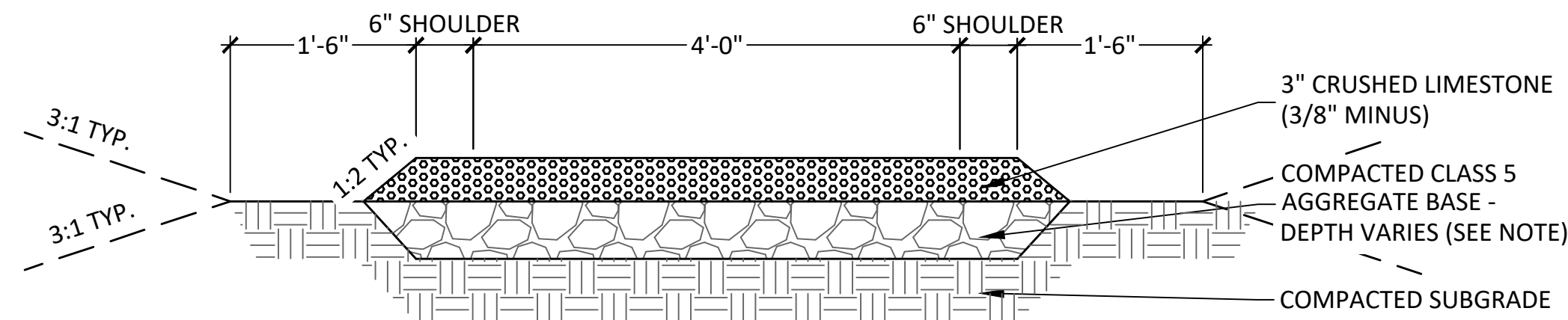
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CITY OF ORONO
BIG ISLAND NATURE PARK IMPROVEMENTS
SITE PLAN

SHEET
L1.11B

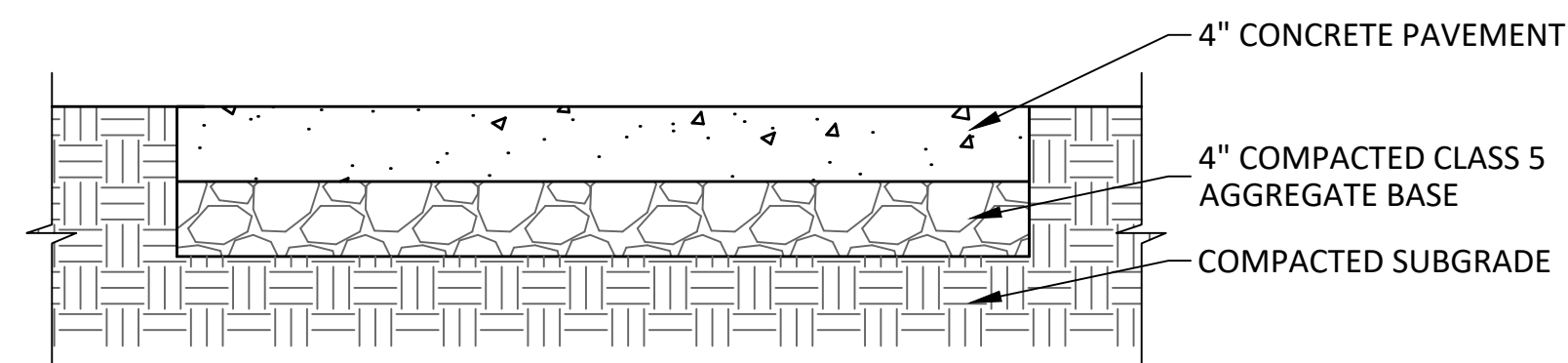
NOTE:

1. THE AMOUNT OF COMPACTED CLASS 5 AGGREGATE NECESSARY TO CONSTRUCT THE PROPOSED WILL VARY. IN AREAS WHERE THE PROPOSED TRAIL FOLLOWS AN EXISTING PATHWAY, LITTLE OR NO CLASS 5 AGGREGATE BASE WILL BE NECESSARY. HALF OF THE TOTAL PROPOSED TRAIL WORK CURRENTLY NOT PART OF THE EXISTING TRAIL SYSTEM SHALL RECEIVE THE FULL 4" COMPACTED CLASS 5 AGGREGATE BASE. IT IS ANTICIPATED SELECT AREAS WITHIN THE ENTIRE PROPOSED TRAIL SYSTEM WILL NEED ADDITIONAL COMPACTED CLASS 5 AGGREGATE. THIS AMOUNT IS ALSO ACCOUNTED FOR IN THE BID QUANTITY FOR CLASS 5 AGGREGATE BASE, AND THE LOCATIONS AND DEPTHS WILL BE COORDINATED ON SITE WITH THE OWNER'S REPRESENTATIVE.



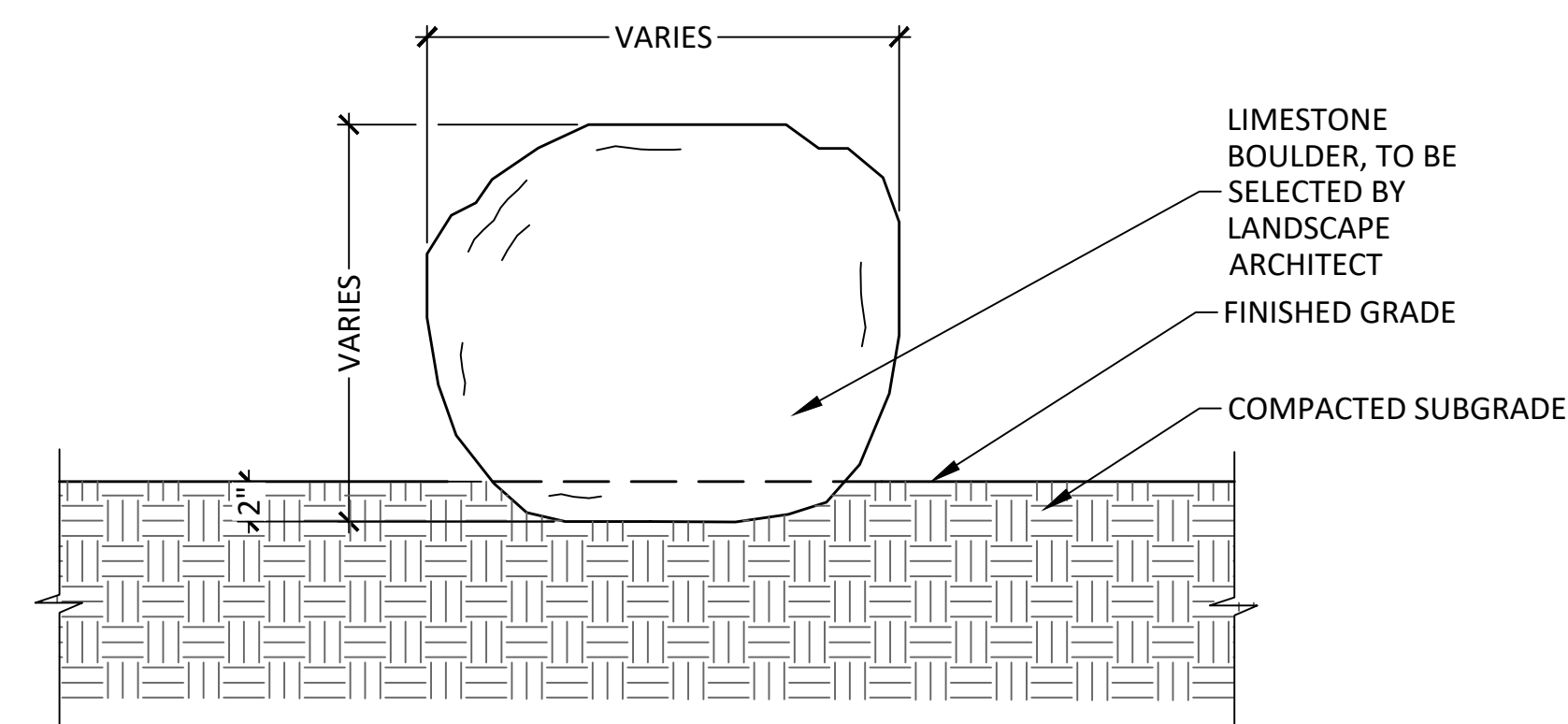
1 CRUSHED LIMESTONE TRAIL, TYP.

SCALE: N.T.S.



2 SHADE STRUCTURE AND PICNIC TABLE FOUNDATION, TYP.

SCALE: N.T.S.



3 SECTION: LIMESTONE BOULDER

SCALE: N.T.S.

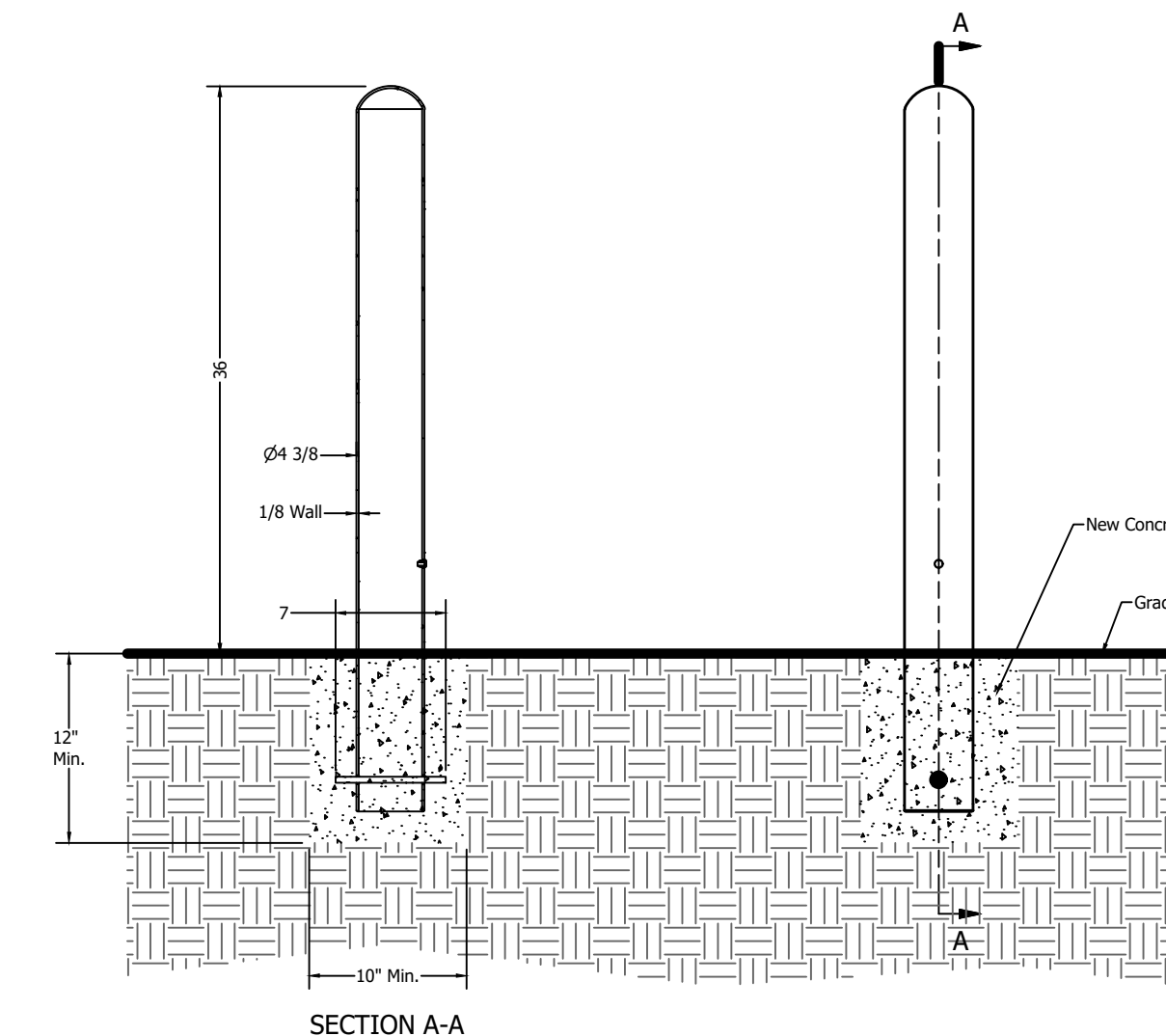
BOLLARD IMAGE



Stainless Steel Embedment Sleeve Included

NOTES:

1. BOLLARDS TO BE RELIANCE FOUNDRY PRODUCT R-7902 REMOVABLE STEEL BOLLARD WITH 4" STAINLESS STEEL REMOVABLE EMBEDDED RECEIVER WITH LID, OR APPROVED EQUAL. ONE SAFETY YELLOW POWDER COATED BOLLARD WITH WHITE REFLECTIVE STRIPE TO BE INSTALLED AT EACH AREA INDICATED TO PROHIBIT MOTORIZED VEHICLE TRAIL USE IN WINTER MONTHS.
2. DRAWINGS SHOWN ARE FOR PRELIMINARY PLANNING AND ESTIMATING ONLY. FOR ADDITIONAL INFORMATION AND ORDERING OF POLYGON STRUCTURES, CONTACT:
LEN CRANMORE
RELIANCE FOUNDRY
6450 148TH STREET, UNIT 207,
SURREY, BC, CANADA V3S 7G7
EMAIL: len@reliance-foundry.com
DIRECT: (604) 547-0463
TOLL-FREE: 1-877-789-3245
3. INSTALL AT TWO LOCATIONS SHOWN ON PLANS, PER MANUFACTURER'S INSTRUCTIONS.



Fixed Installation in New Concrete

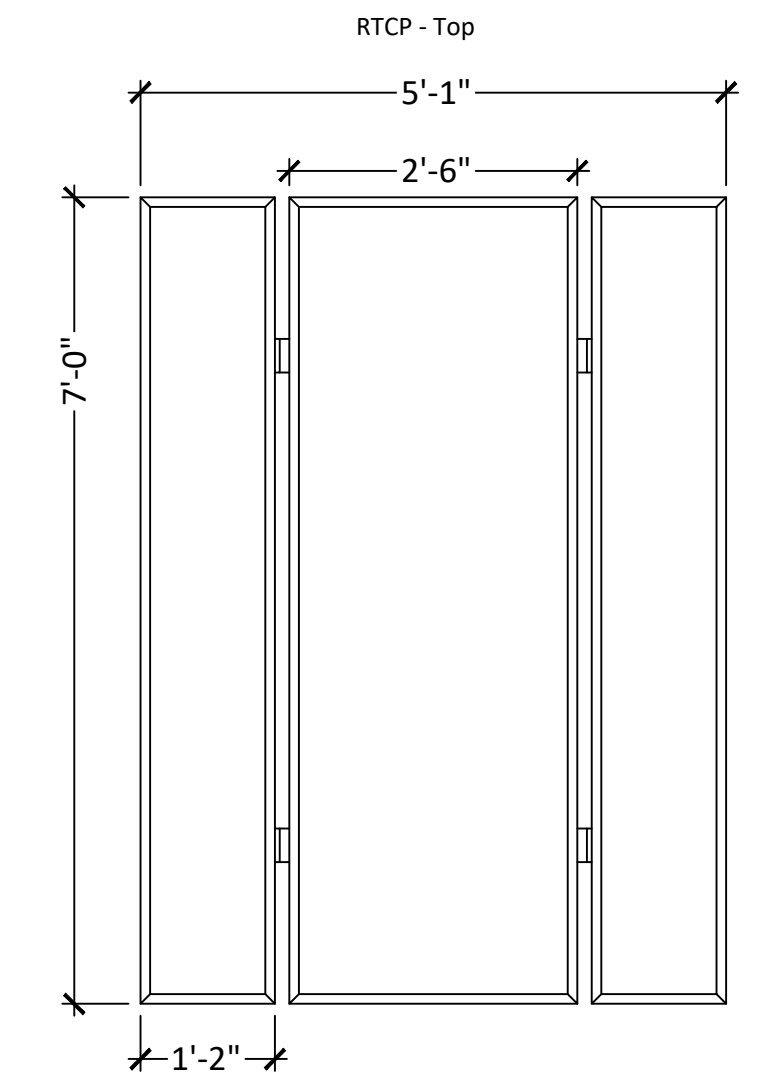
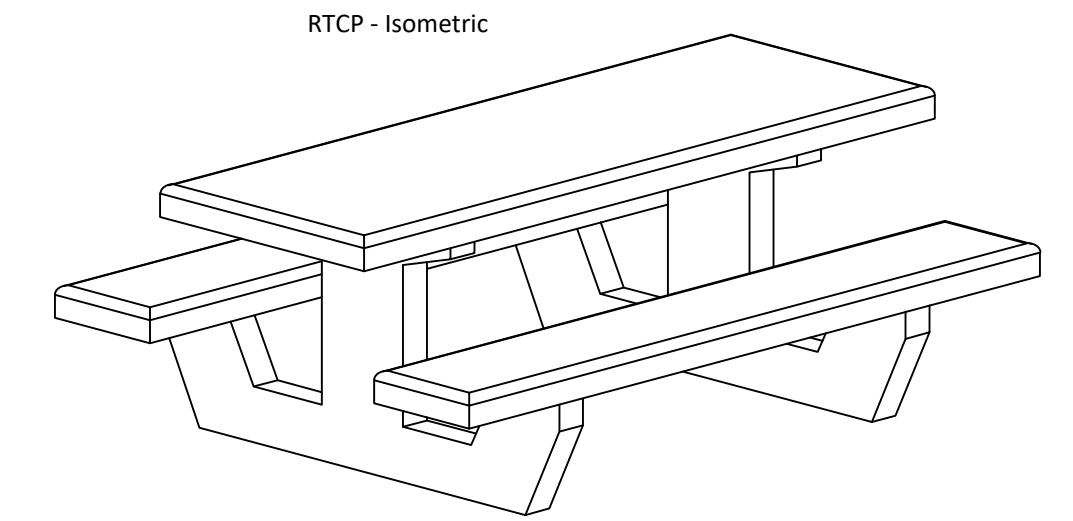
Notes:

- Embedment details are for reference illustration only. Minimum foundation sizes depend on local soil conditions, weather conditions, and engineering requirements.
- Bollard post is provided as shown, with material detailed in legend below. Concrete, foundation and/or installation ordered separately or provided by others.
- This drawing is not drawn to scale. Dimensions provided herein is for reference only. Please consult Reliance Foundry sales professionals if any dimension is critical to your particular installation.
- Reliance Foundry reserves the right to amend design and specifications without prior notice for product improvement.

| PARTS LIST | | | | | |
|------------|-----|------------------------|--------------------------|----------------------|---------|
| ITEM | QTY | PART NUMBER | DESCRIPTION | MATERIAL | WEIGHT |
| 1 | 1 | R7902 Fixed Bollard | R7902 Fixed Bollard Body | Steel Powder Coated | 31 lbs |
| 2 | 1 | Polyethylene Plug 1/2" | Polyethylene Plug 1/2" | Polyethylene Plastic | |
| 3 | 1 | Steel Rebar | Steel Rebar 10 mm x 2' | Steel Epoxy Coated | 3/8 lbs |

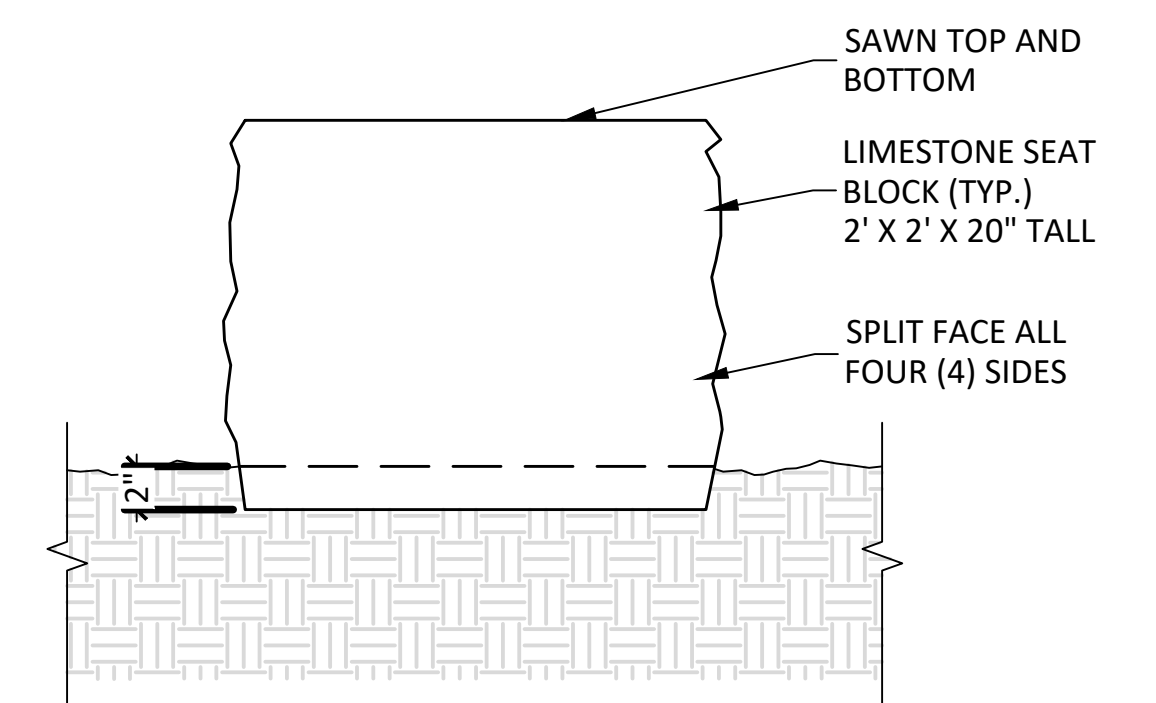
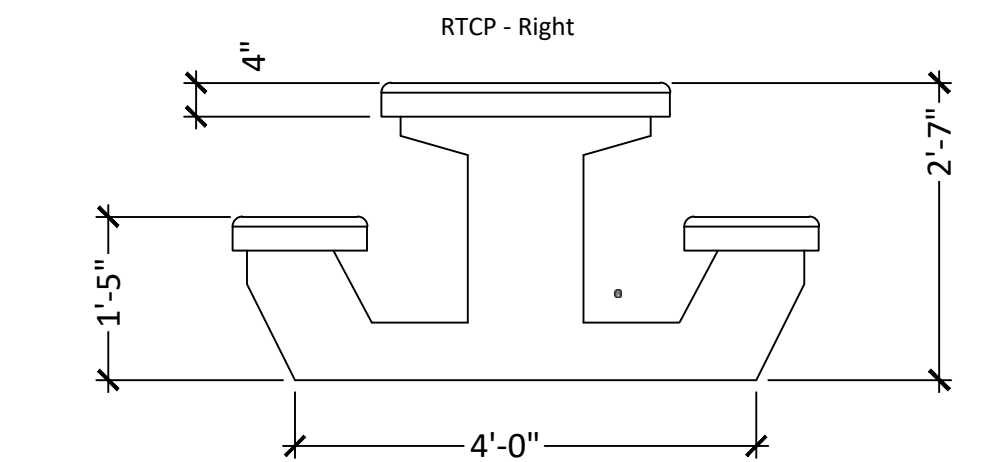
4 SEASONAL USE BOLLARDS

SCALE: N.T.S.



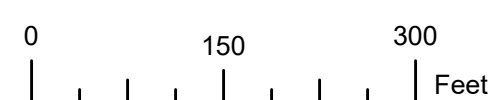
5 PRECAST CONCRETE PICNIC TABLE

SCALE: N.T.S.



6 SECTION: LIMESTONE SEAT BLOCK

SCALE: N.T.S.



80% PLANS



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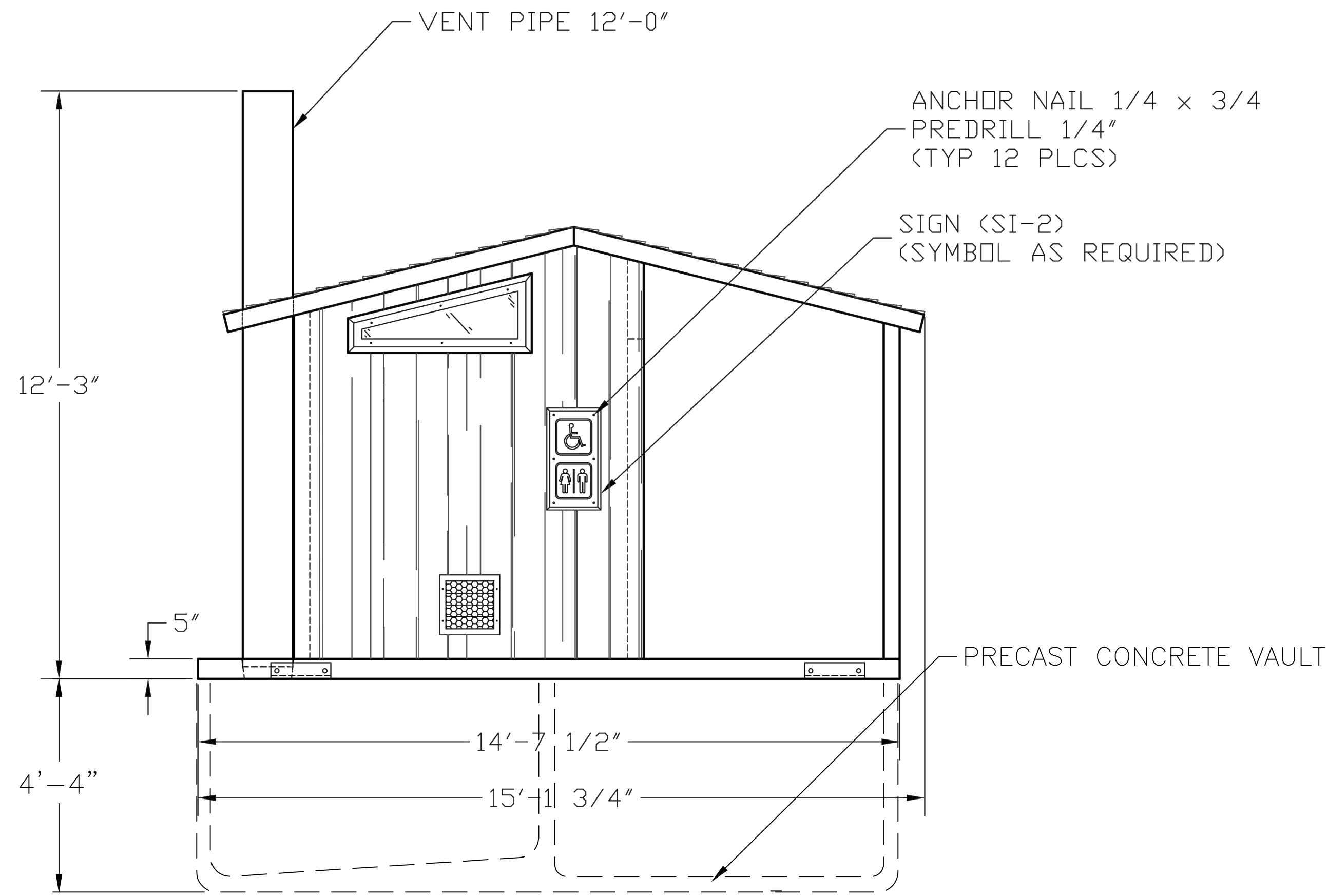
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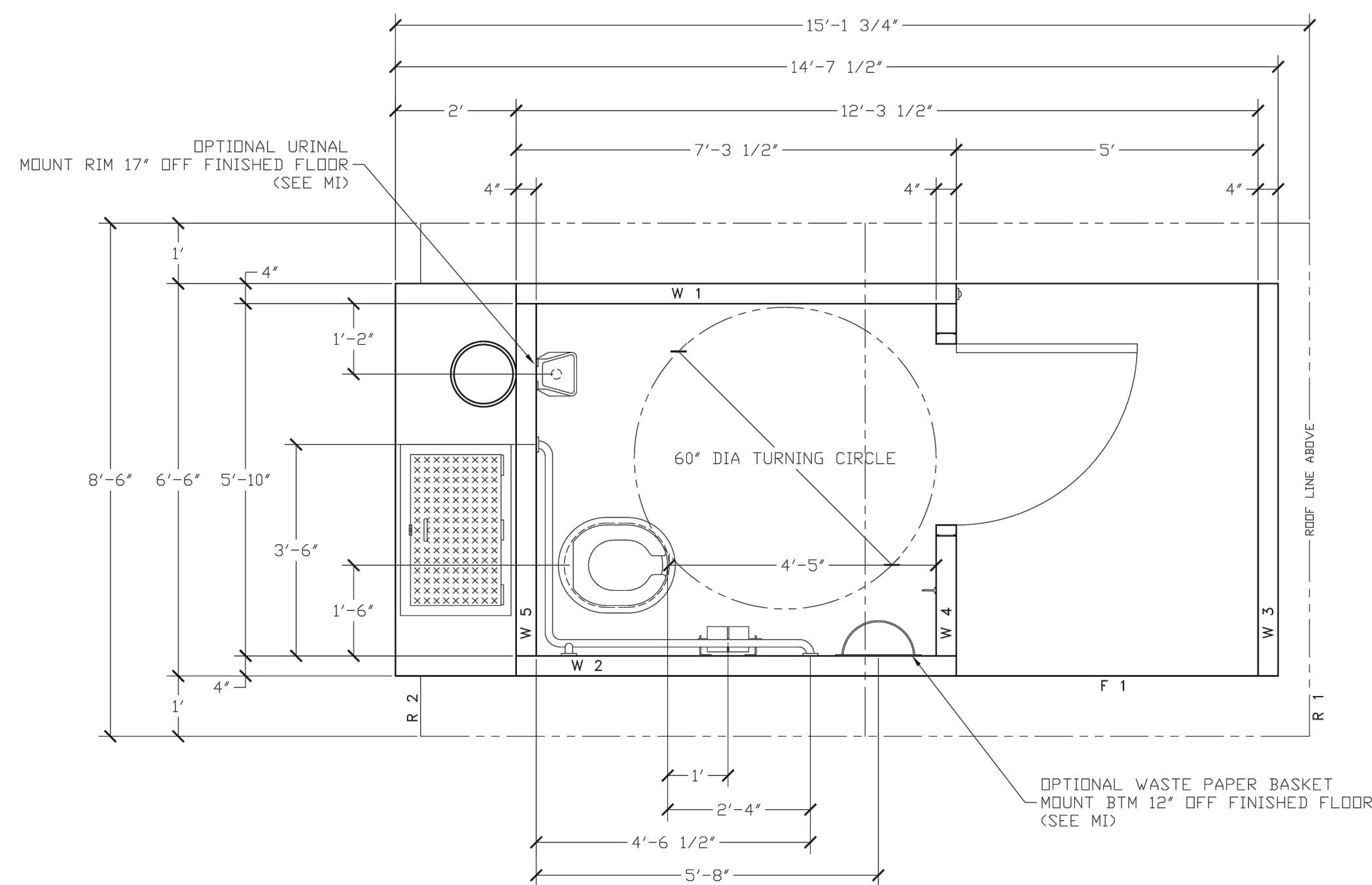
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DRAWN
KAG
CHECKED
JCO

CITY OF ORONO
BIG ISLAND NATURE PARK IMPROVEMENTS
LANDSCAPE DETAILS

SHEET
L2.01



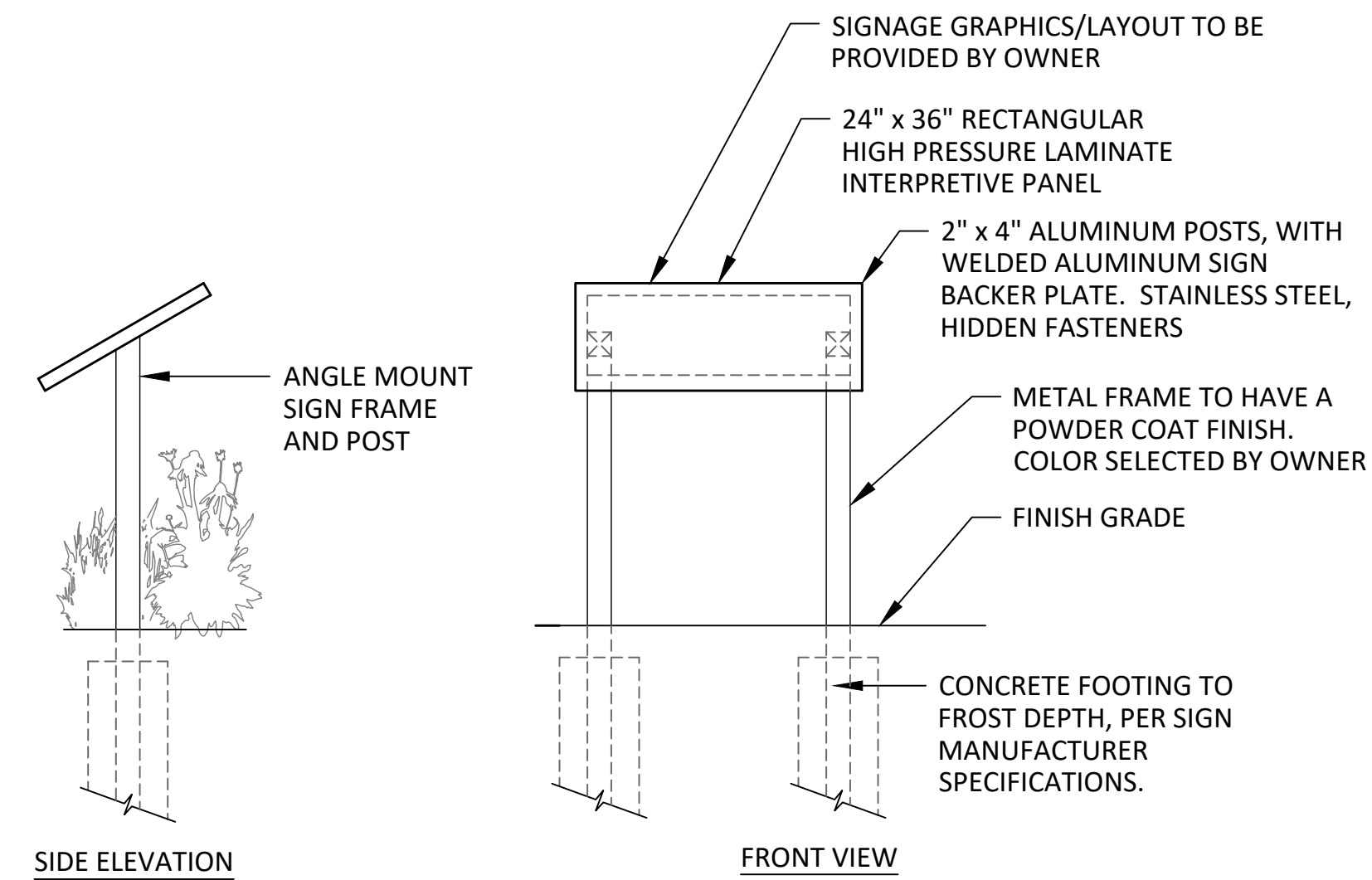
1 SINGLE VAULT TOILET FRONT ELEVATION
SCALE: N.T.S.



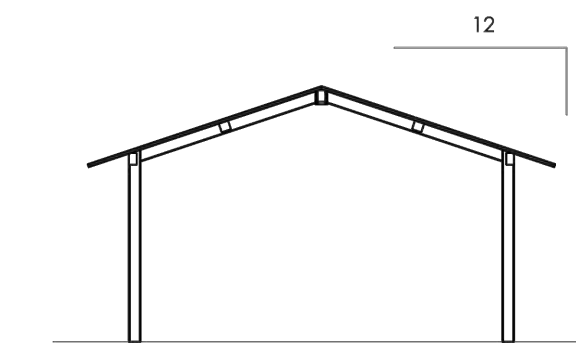
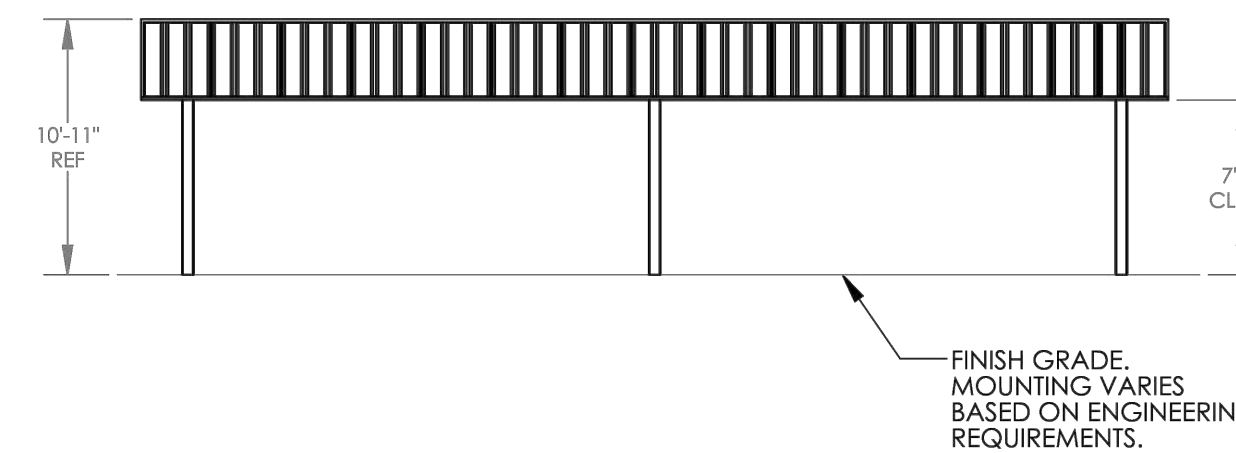
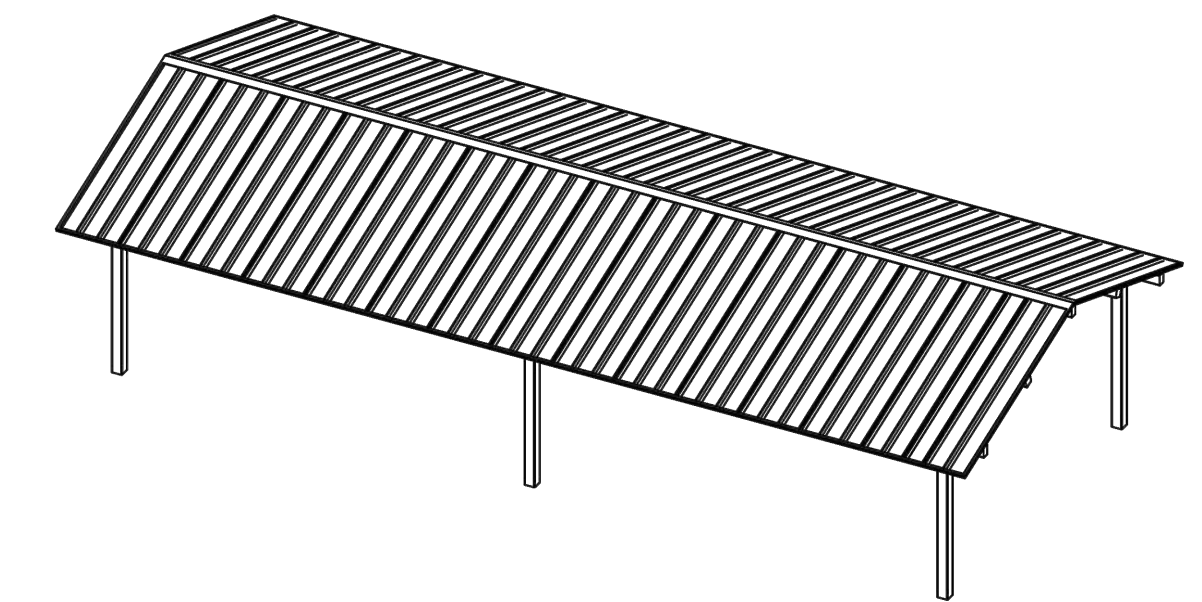
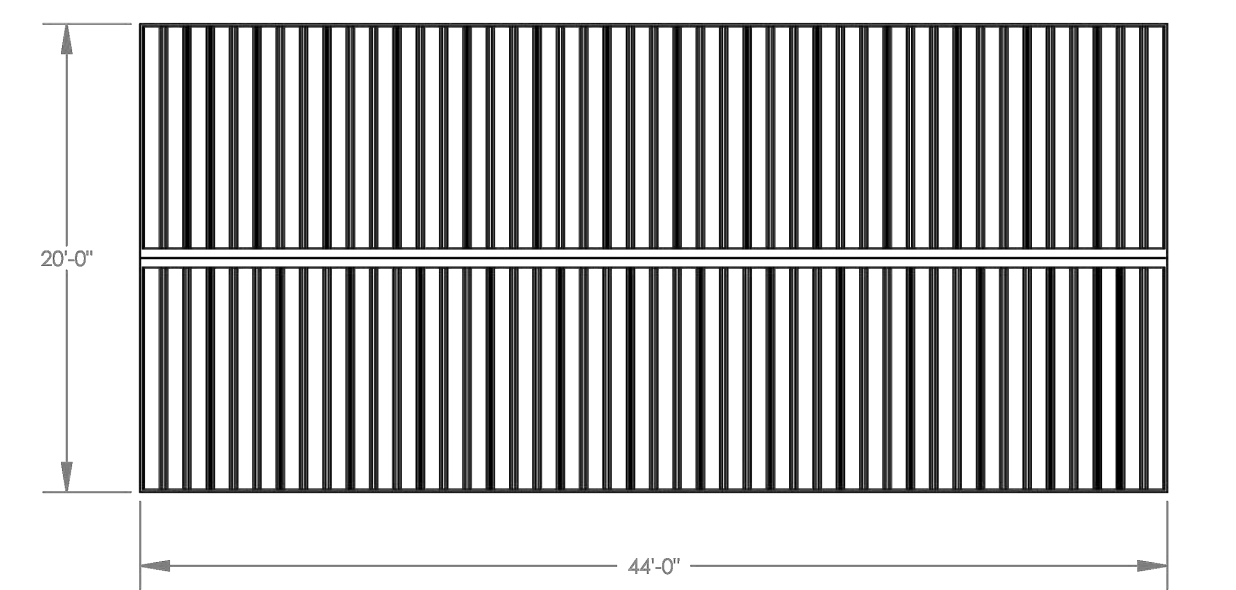
2 SINGLE VAULT TOILET PLAN
SCALE: N.T.S.

NOTES:

- STRUCTURE TO BE CXT PRECAST PRODUCTS SINGLE VAULT TOILET, GUNNISON THRU SCREEN RH.
- DRAWINGS SHOWN ARE FOR PRELIMINARY PLANNING AND ESTIMATING ONLY. FOR ADDITIONAL INFORMATION AND ORDERING OF STRUCTURE(S), CONTACT:
RICH EDWARDS
LBFOSTER CXT PRODUCTS
EMAIL: redwards@lbfoster.com
OFFICE: (800) 696-5766
MOBILE: (262) 321-1421
- ALL HARDWARE AND MATERIAL SELECTIONS TO BE VANDAL-RESISTANT.
- INSTALL PER MANUFACTURER'S INSTRUCTIONS.



4 INTERPRETIVE SIGN
SCALE: N.T.S.



NOTES:

- STRUCTURE TO BE POLIGON PRODUCT REK 20x44 WITH MULTI-RIB ROOF, OR APPROVED EQUAL. FOR FRAME AND ROOF COLOR, SEE SPECS.
- DRAWINGS SHOWN ARE FOR PRELIMINARY PLANNING AND ESTIMATING ONLY. FOR ADDITIONAL INFORMATION AND ORDERING OF POLIGON STRUCTURES, CONTACT:
SUE AYERS
NORTHLAND RECREATION LLC
10085 BRIDGEWATER BAY
WOODBURY, MN 55129
EMAIL: sue@northlandrec.com
OFFICE: (651) 815-4097
- STONE WRAPS FOR POSTS NOT IN CONTRACT. (INTENDED FOR FUTURE CONTRACT.)
- ALL HARDWARE AND MATERIAL SELECTIONS TO BE VANDAL-RESISTANT.
- INSTALL PER MANUFACTURER'S INSTRUCTIONS.

4 OVERLOOK SHELTER
SCALE: N.T.S.

80% PLANS



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| CHECKED JCO |

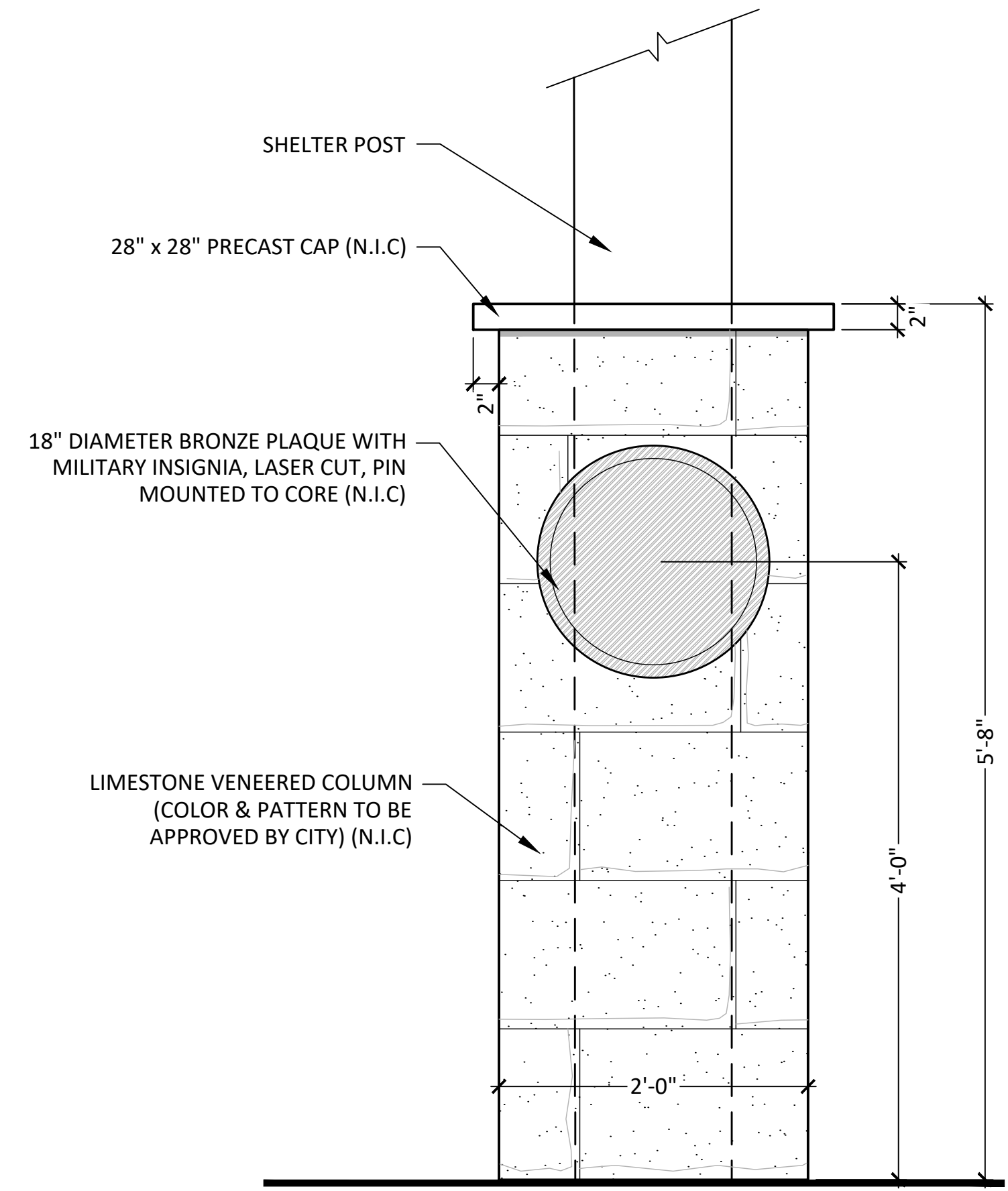
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| CITY OF ORONO |
| BIG ISLAND NATURE PARK IMPROVEMENTS |
| SITE DETAILS |

SHEET
L2.02

MILITARY INSIGNIA NOTES
 MATERIAL: LASER CUT 1/4" ALUMINUM W/ BRONZE FINISH
 HARDWARE: TAMPER PROOF S.S., FLAT HEAD, MIN 3 PER INSIGNIA
 MOUNT: 3/8 MIN GAP FROM COLUMN
 DIGITAL GRAPHIC FOR LASER CUT TO BE PROVIDED BY CITY OF ORONO
 CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL PRIOR TO
 FABRICATION



1 MILITARY INSIGNIA GRAPHICS (N.I.C. - NOT IN CONTRACT)
 SCALE: N.T.S.



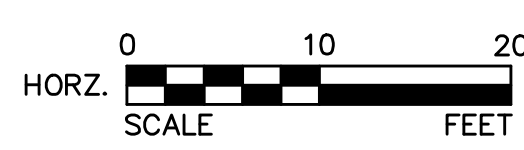
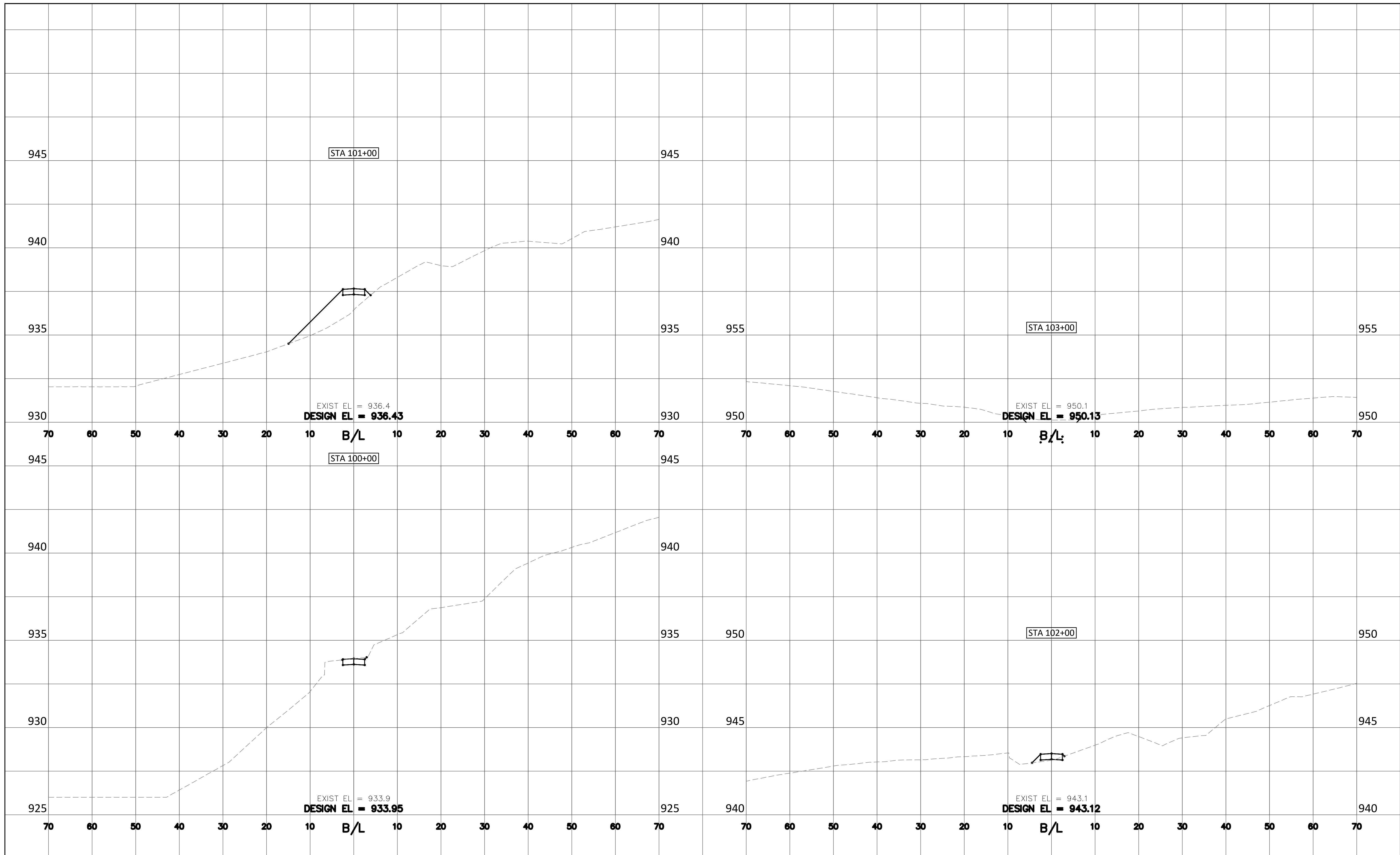
2 SHELTER POST WRAP (N.I.C. - NOT IN CONTRACT)
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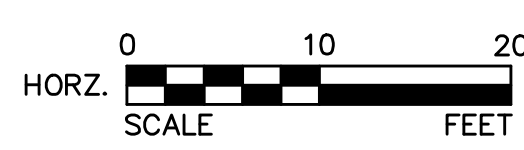
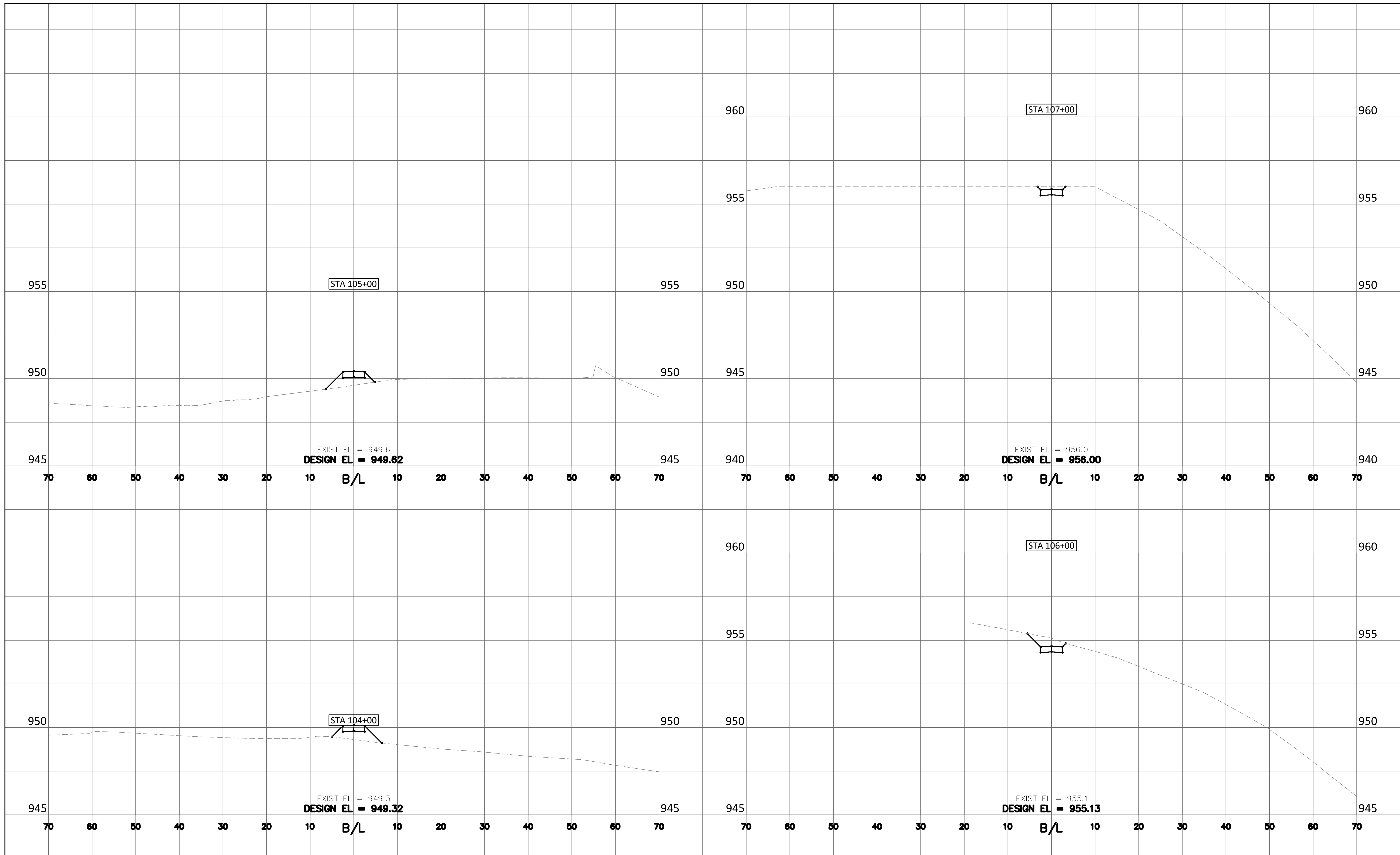
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CITY OF ORONO
 BIG ISLAND NATURE PARK IMPROVEMENTS
 CROSS SECTIONS - WEST TRAIL

SHEET
C1.01



80% PLANS



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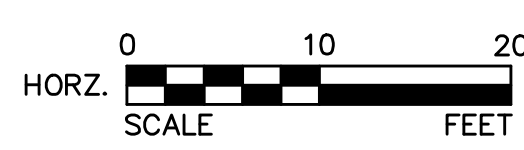
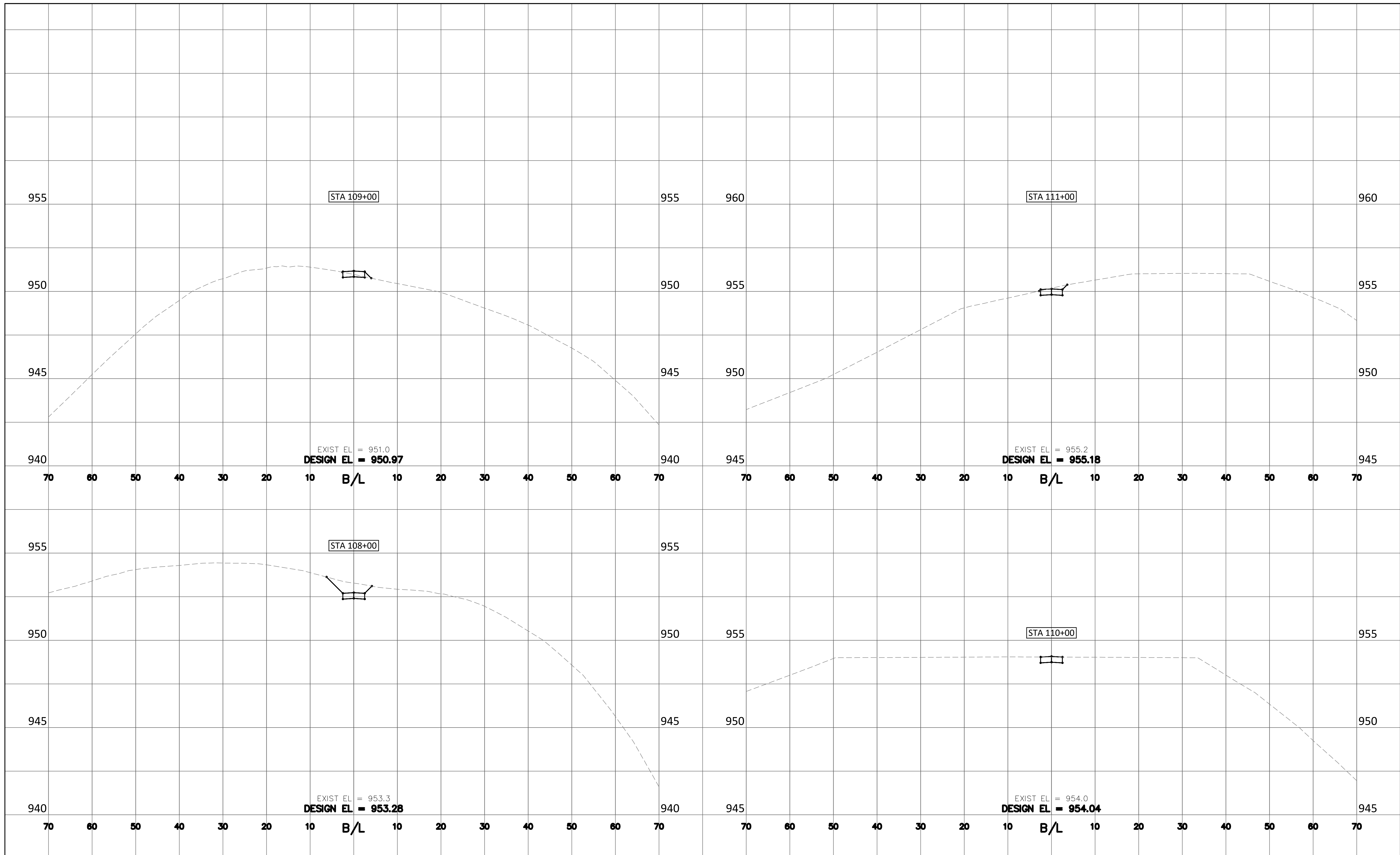
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CITY OF ORONO
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 CROSS SECTIONS - WEST TRAIL

SHEET
C1.02



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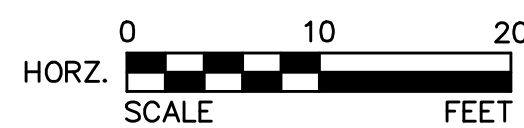
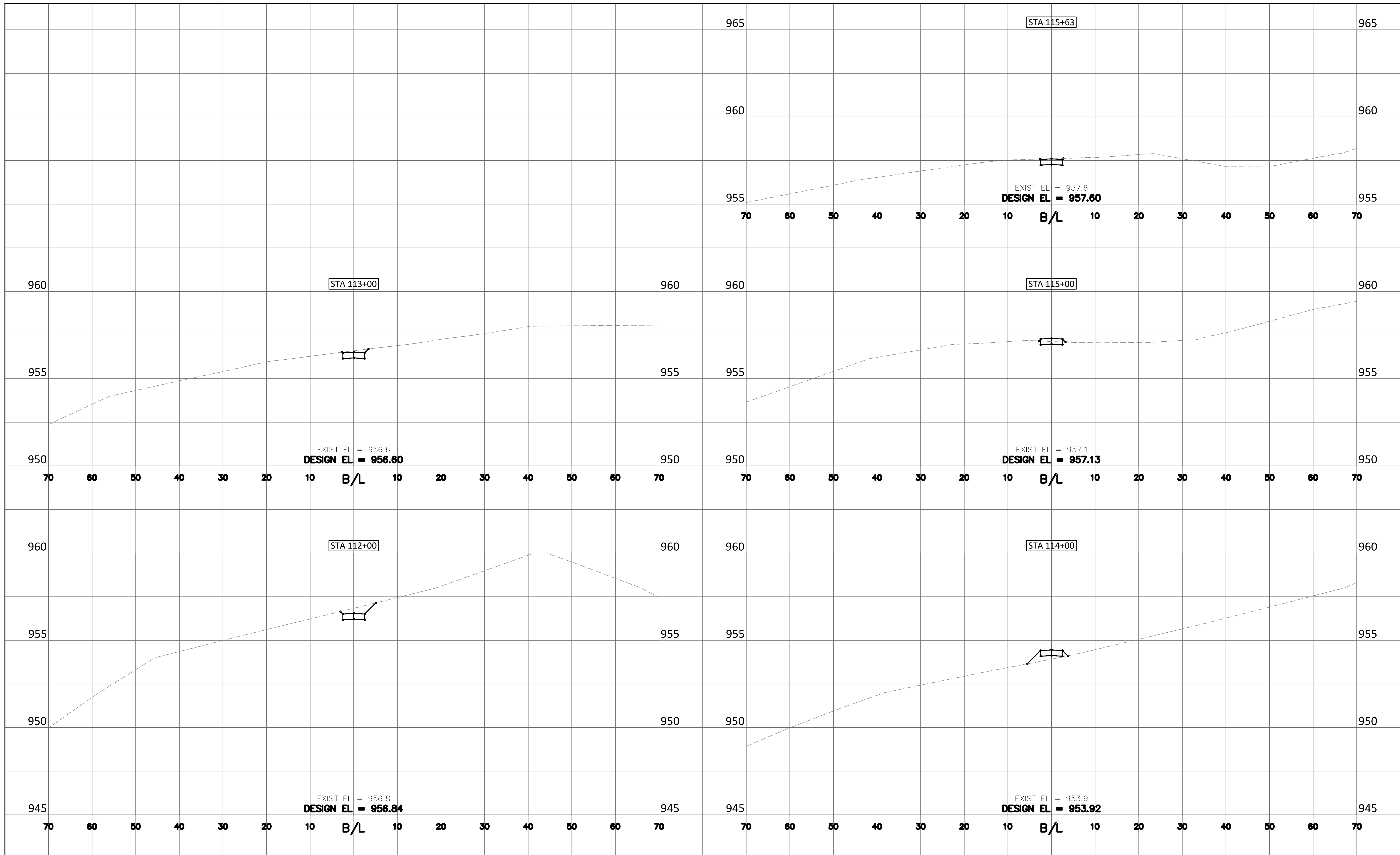
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SHEET
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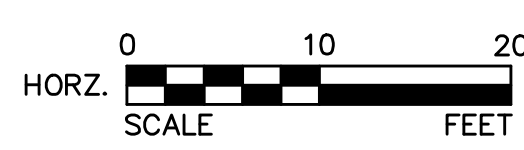
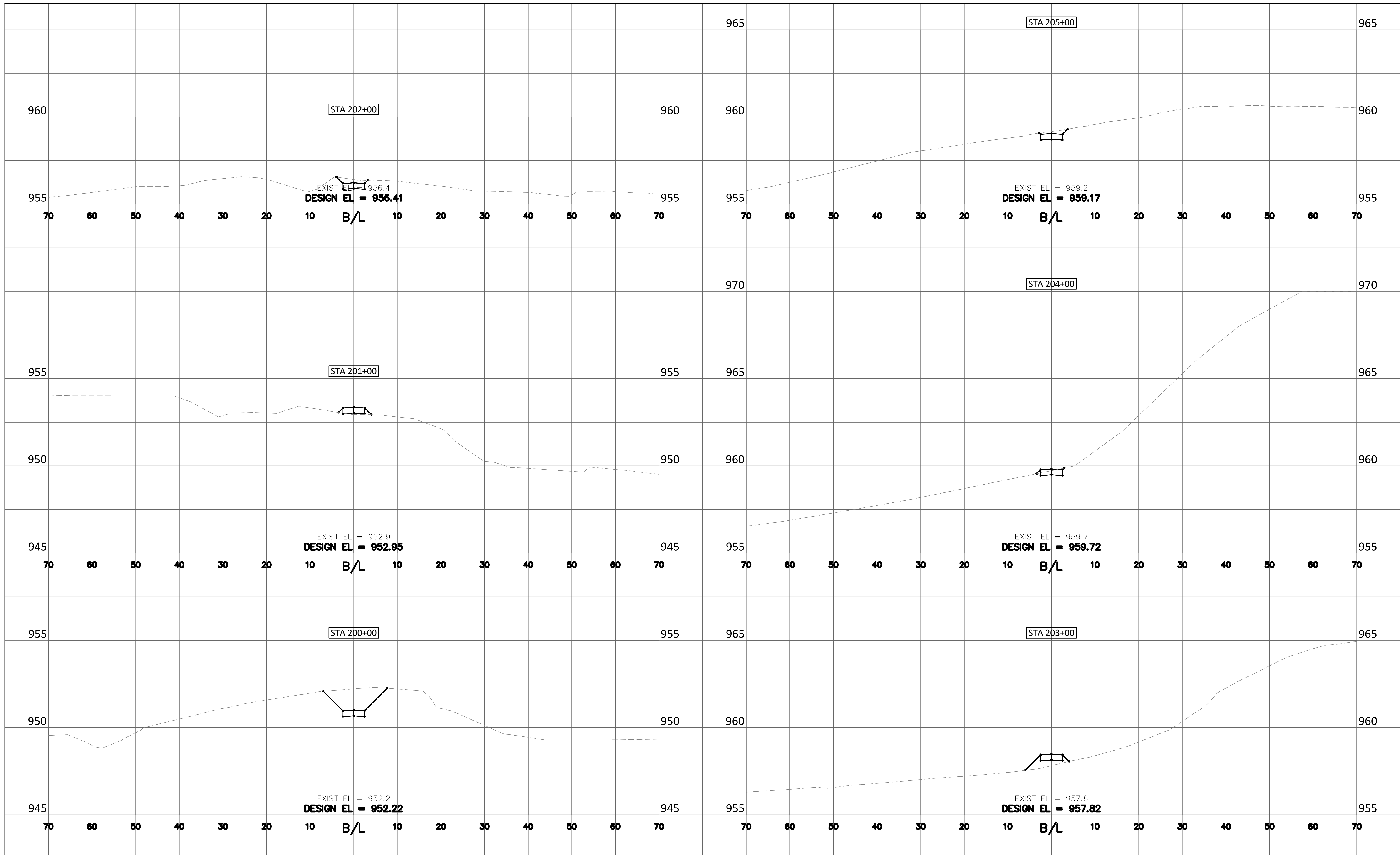
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SHEET
C1.04



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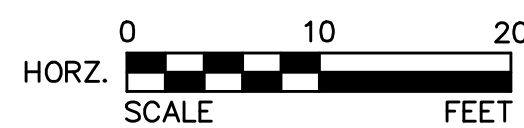
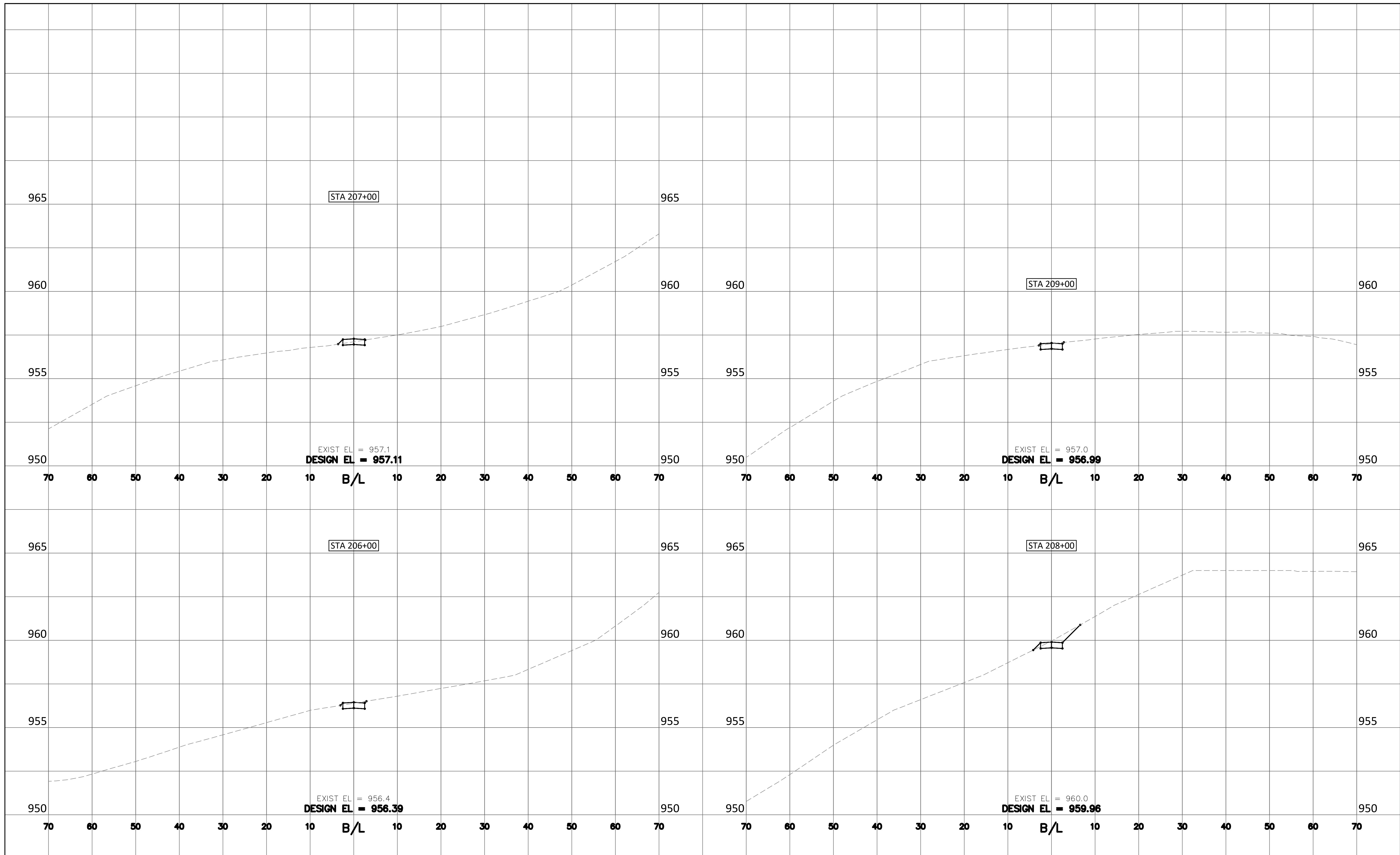
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 CROSS SECTIONS - EAST TRAIL

SHEET
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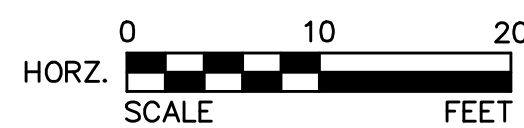
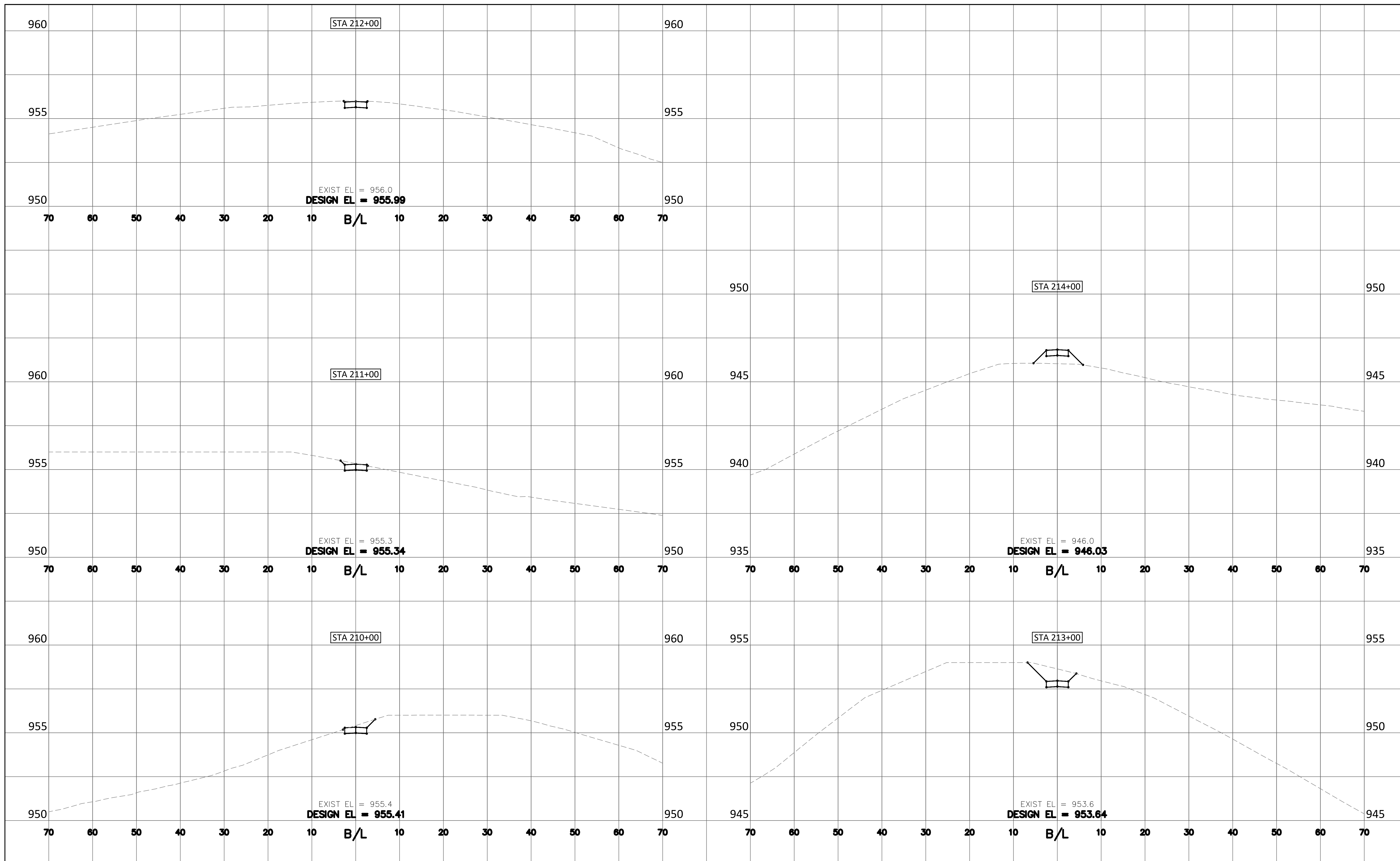
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SHEET
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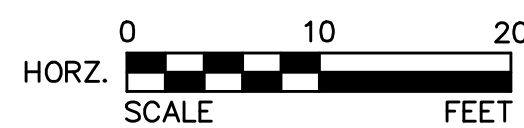
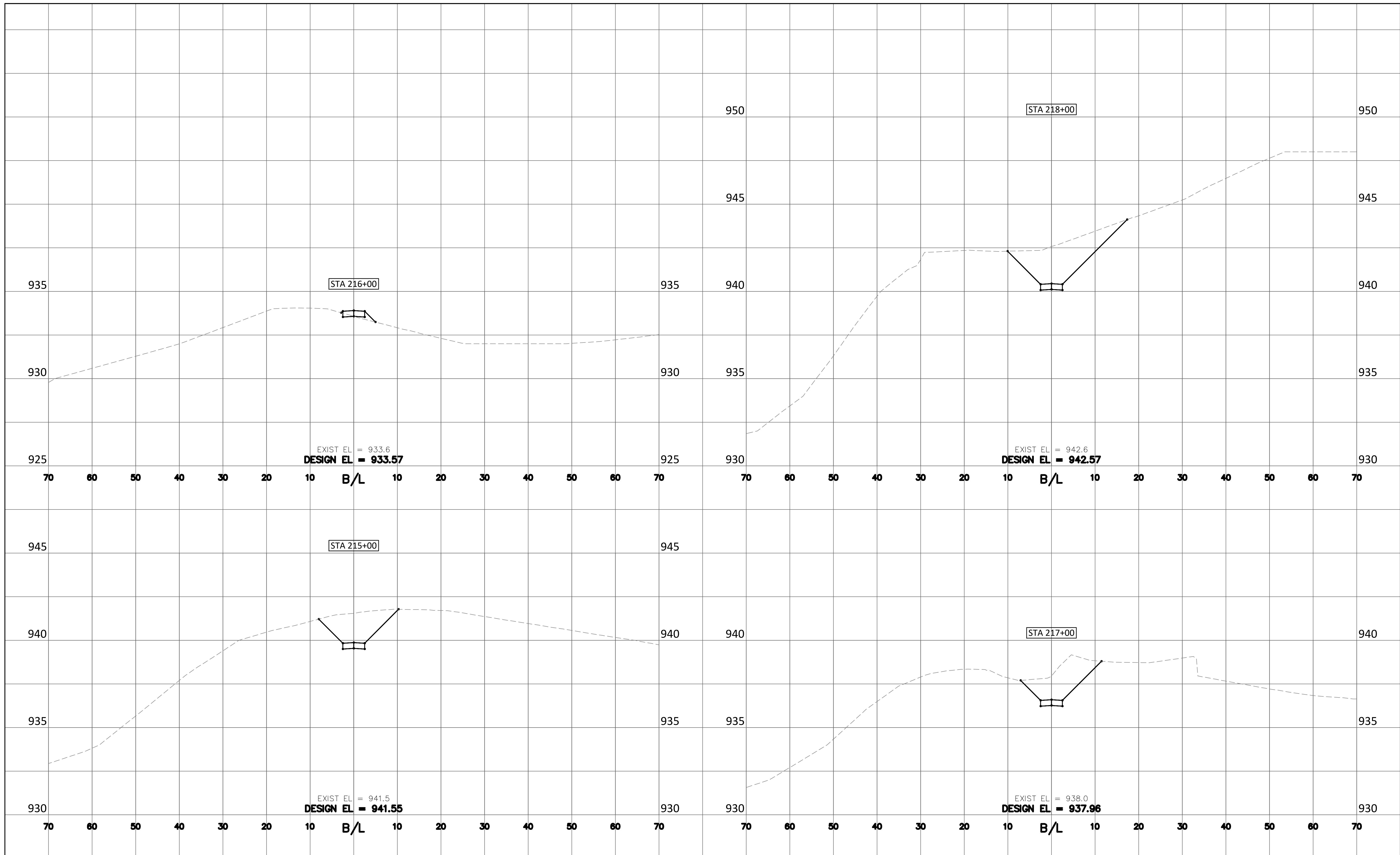
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 DRAWN: KAG
 CHECKED: JCO

CITY OF ORONO
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 CROSS SECTIONS - EAST TRAIL

SHEET
C1.07



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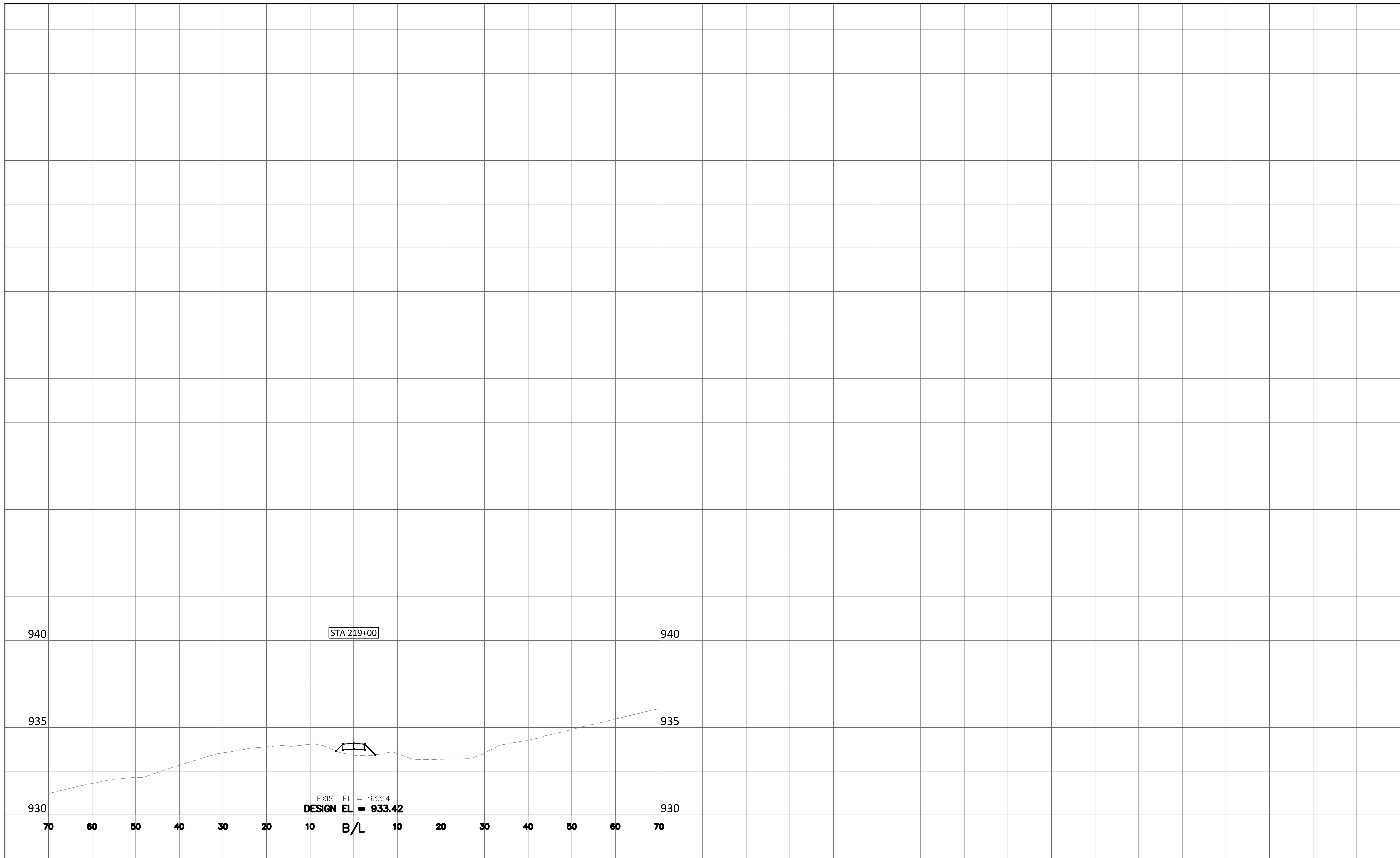
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CITY OF ORONO
 BIG ISLAND NATURE PARK IMPROVEMENTS
 CROSS SECTIONS - EAST TRAIL

SHEET
C1.08



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CITY OF ORONO
BIG ISLAND NATURE PARK IMPROVEMENTS
CROSS SECTIONS - EAST TRAIL

SHEET
C1.09

Attachment B: Conformance Analysis

| PROPOSED ACTION | ACTION IN NATURAL AREA/ RECREATION AREA/ BOTH | EASEMENT RESTRICTIONS | MANAGEMENT PLAN GUIDANCE | 80% DESIGN CONFORMANCE |
|--|---|--|--|---|
| Conversion of existing trails to follow ADA guidelines | Both | <i>Widening, lengthening, relocating allowed with MCWD approval only</i> ; trail from dock to pavilion building may be reconstructed to provide ADA access | Identify areas of park to make ADA accessible; assess feasibility and requirements to improve selected trail segments for ADA accessibility | ADA trails: crushed limestone located on existing trail surfaces. Grading to meet ADA standards. No trails with greater than 5% slopes, if possible. |
| Maintenance or improvement of existing unpaved trails | Natural Area | May be maintained for non-motorized uses that do not negatively impact the Conservation Values | Limited to addition of limestone or crushed gravel in selected areas where necessary to provide stable walking surface | ADA trails: crushed limestone located on existing trail surfaces. |
| Restroom facility construction | Recreation Area | Structures constructed, maintained, or replaced in accordance with Management Plan | Consider if feasible given history of vandalism; existing septic system will require inspection and pumping if used in future; provide only facilities and amenities compatible with level of recreational activities intended | Pre-cast vault toilet(s) utilizing Three Rivers Park District design standards. Vandal proof. Maintenance clean-out (pumping). |
| Provide for park-wide security measures to prevent vandalism | Both | No temporary or permanent structures or other improvements of any kind may be placed or constructed on the Protected Property except as specifically allowed by the Easement and as consistent with the terms of the Management Plan | Needed given history of vandalism; easement references that improvements are not allowed except as consistent with terms of Management Plan | Trail cameras currently installed. |
| Refurbishing existing building near dock area for visitor center | Recreation Area | City may maintain and replace existing improvements without increasing their dimension | Need to assess/determine future use and if it is possible to suitably renovate and secure for "entry point" function | Building improvements completed 2018. Intended to serve as a future "Visitor Center" with educational signage inside the building. |
| Interpretive signage | Recreation Area | No temporary or permanent structures or other improvements of any kind may be placed or constructed on the Protected Property except as specifically allowed by the Easement and as consistent with the terms of the Management Plan | Recommended; assess need and appropriate format; designs should be consistent; easement references that improvements are not allowed except as consistent with terms of Management Plan | Signage plan ongoing. Current direction includes new entrance sign and two wayfinding signs (1:1 replacement of old signs). Any additional signs will be located inside the visitor building. |
| Installing trail bollards to prevent illegal vehicle use | Both | No temporary or permanent structures or other improvements of any kind may be placed or constructed on the Protected Property except as specifically allowed by the Easement | Vandalism prevention needed given history of illegal vehicle use; Management Plan also notes other options to prevent vehicle use: public education, signage, establishment and publication of steep penalties; Easement references that improvements are not allowed except as consistent with terms of Management Plan | A combination approach of natural boulders and temporary, removable bollards will be utilized during the winter months to deter unauthorized motor vehicle access. |
| Construction of overlooks/picnic areas; | Both | Structures constructed in accordance with Management Plan; no structures or other improvements in <i>Natural Area</i> | Consider grassy picnic sites within defined <i>Recreation Area</i> ; no picnic tables or benches unless vandal-proof | Pre-cast concrete picnic tables in recreation area only. |