Ventura Ranch

Ventura Ranch Submission Flow Chart

Ventura Ranch Submission Checklist

Design Review Fee Schedule

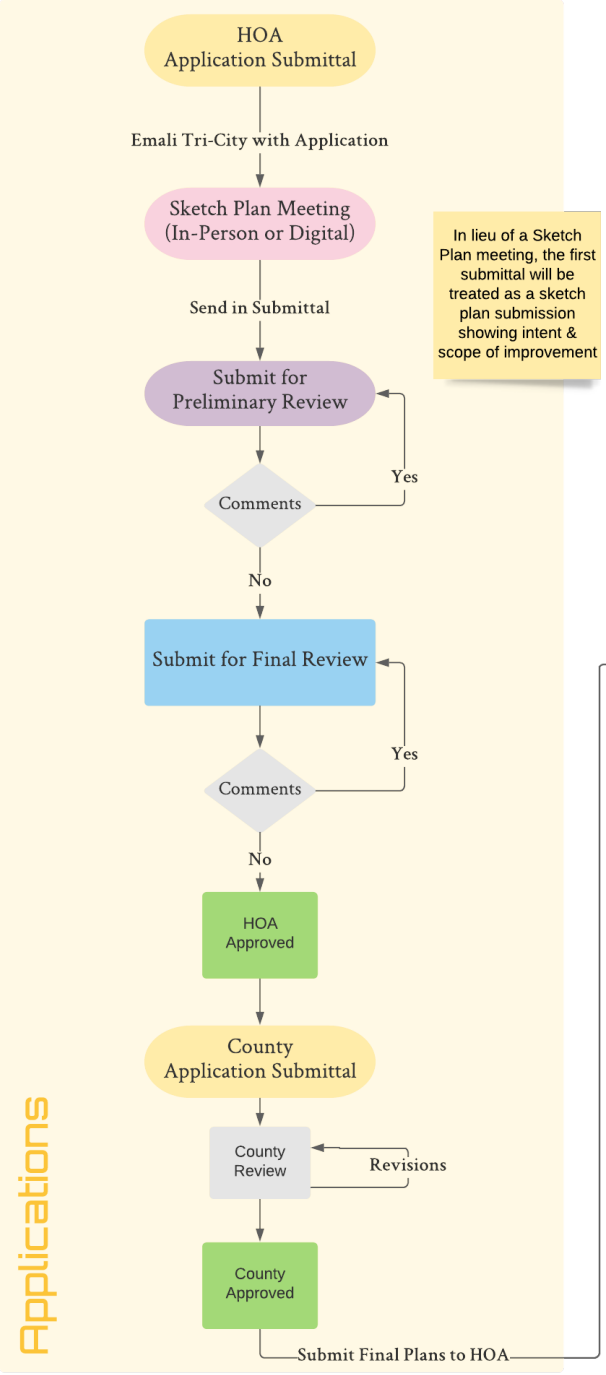
Design Standards v1.3

Master Drainage Plan (Phase 3)

Last Updated – August 6, 2021

VENTURA RANCH
HOMEOWNERS ASSOCIATION

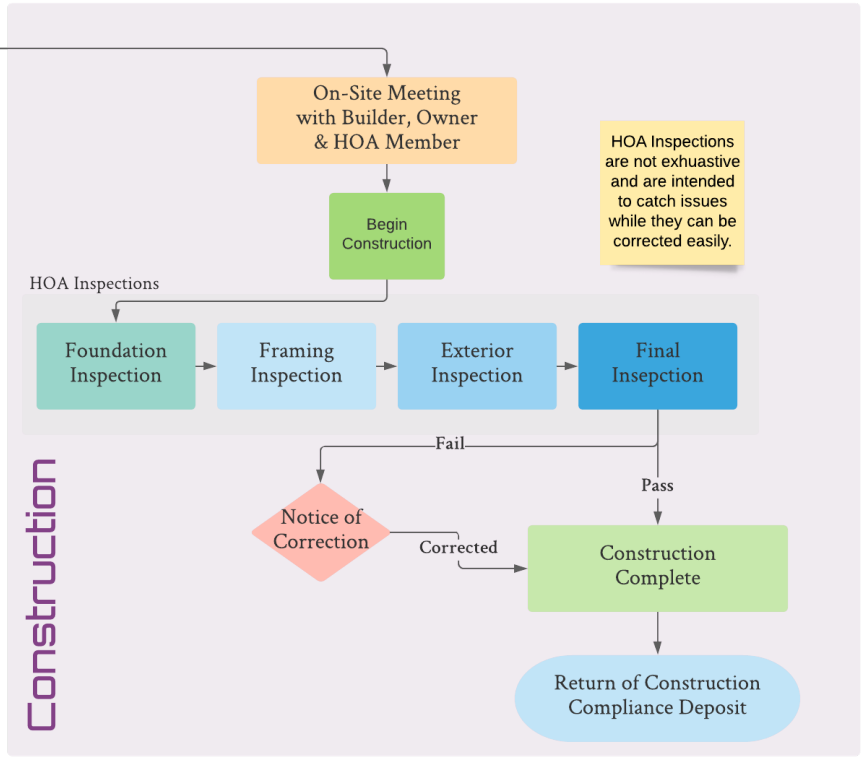
Submission & Construction Summary
for
SINGLE FAMILY HOMES



Building a new Single Family Home within Ventura Ranch is exciting and is usually the beginning of bringing to fruition hopes, wishes and dreams into the creation of a structure that will foster prosperity, memories and enjoyment. We hope to participate in this process by executing a review with speed & precision to get you & your family on your way; one step closer to your new home.

Design and construction for building a single-family home begins after the purchase of a vacant lot with the Sketch Plan Meeting. This can be either virtual or digitally facilitated and is set up upon the initial application to the HOA by Tri-City Property Management.

Please forward any questions or comments regarding the review process to Tri-City. They may not have every answer, but they can direct the question to the correct recipient.



NOTE: This submission flow chart is subject to change and is currently a working document. Some aspects of the submission process may be different. This is designed to be a general framework & not exhuastive of procedures & processes necessary to build a home.

VENTURA RANCH
HOMEOWNERS ASSOCIATION

Submission Checklist
for
SINGLE-FAMILY HOME

After the sketch plan meeting is complete, the following documents are to be submitted for preliminary review. Review will not commence until the application and submittal is complete:

- ☐ Site Plan (scale at 1"=20' or larger), showing the entire Lot, location of the Building Envelope with the Residence and all proposed Ancillary Structures, driveways, parking areas, existing and proposed topography, finished floor elevations, all utility sources and connections, and site walls.
    - ☐ Distances between ancillary buildings should be shown on Site Plan.
- ☐ Floor Plans (scale 1/8" =1'0") showing finished floor elevations, net livable and gross square footage.
- ☐ Roof Plans (scale 1/8" =1'0") showing all roof pitches.
- ☐ Building section (scale 1/8" =1'0"), indicating existing and proposed grade lines.
- ☐ All Exterior Elevations (scale 1/8" =1'0") showing both existing and proposed grade lines, plate heights, various roofline heights, roof type and pitch, and an indication of exterior materials and colors. Preferably a breakout of percentage of each exterior material used as a part of the whole exterior surface.
- ☐ Ancillary Structure Plans (conforming to the same above submittal requirements)
- ☐ Composite Elevations of each side showing the home and all ancillary structures together.
- ☐ Pre-approved palette selection. If not using a pre-approved color palette, include paint numbers and LRV's.
- ☐ Landscape plan with site plan (scale 1"=20') including walls, fences, plants from approved plant list, other design features and relevant distances between each. (may submit later subject to additional fee)
- ☐ Exterior lighting plan showing location and manner of installation for each light, as well as cut sheet for each light to be used.
- ☐ A grading and drainage plan showing existing and proposed topography at two-foot contour intervals.
- ☐ Cutoff wall / driveway drainage structure and copy of stamped engineering report (if required).
- ☐ All building materials for driveway or other site work.
- ☐ Anything else requested by the Architectural Committee to facilitate review of the home.

Note: Submissions cannot be properly reviewed without complete submissions. Checklist document is for convenience only, please refer to the active Ventura Ranch Design Standards document for the most up to date list of requirements.

VENTURA RANCH

DEVELOPMENT STANDARDS

Published By:

Ventura Ranch HOA

Date Updated:

August 5, 2021

Version

v1.3

'IF YOU HAVE BUILT CASTLES IN THE AIR,

YOUR WORK NEED NOT BE LOST;

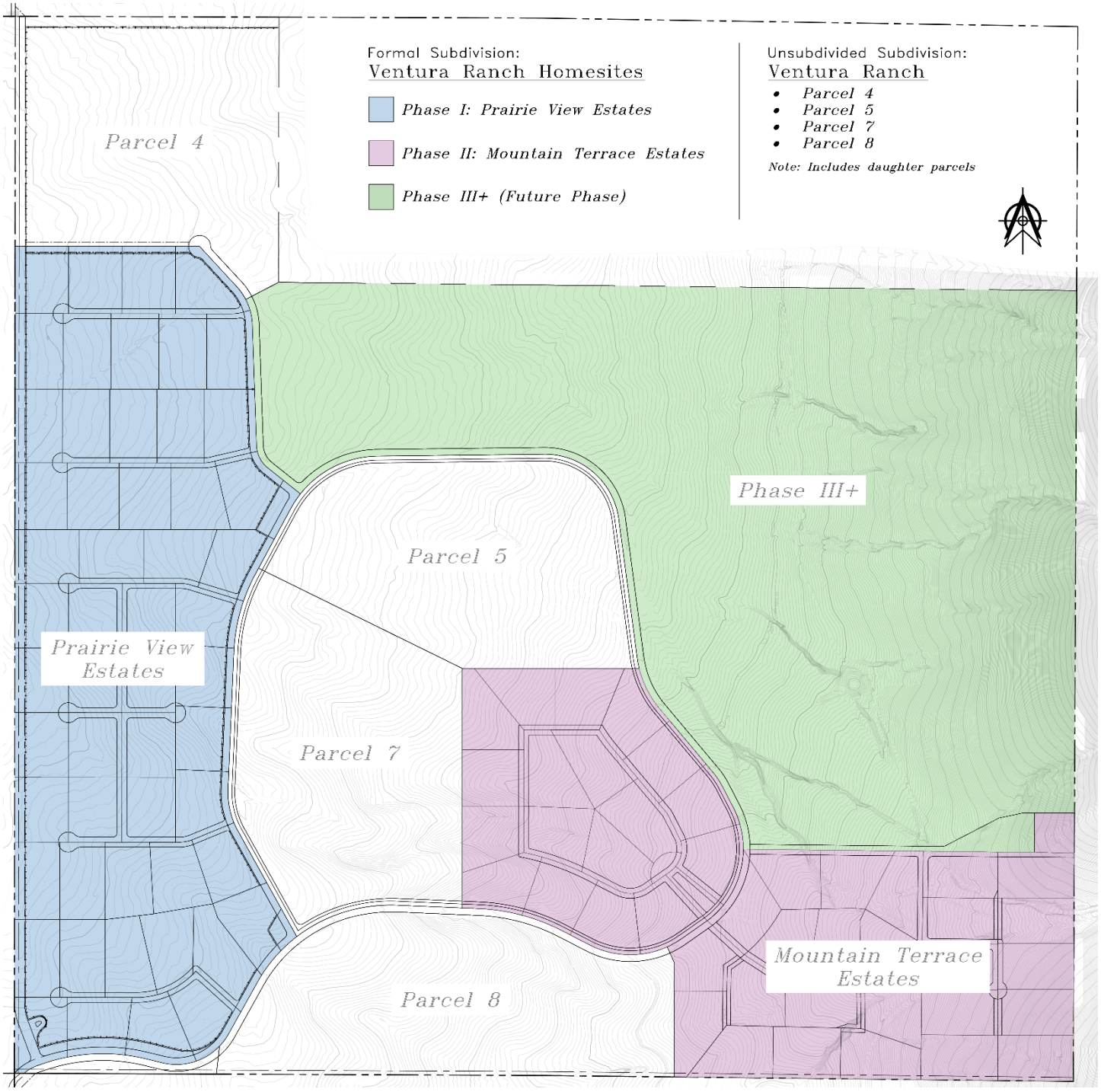
THAT IS WHERE THEY SHOULD BE.

NOW PUT THE FOUNDATIONS UNDER THEM'

-HENRY DAVID THOREAU

WALDEN POND

Community Map



Community Organization

There are two main types of property in Ventura Ranch. The first are part of the Ventura Ranch Homesites subdivision and include master engineered roadways, drainage, a water system and fiber optic internet as well as other components required by the County or voluntarily created by the Developer. These lots were formed or will be formed by Final Plats recorded with Yavapai County. The second are those areas of the Unsubdivided Subdivision within Ventura Ranch which are parcels split through Minor Land Divisions from original parent parcels created by the initial Record of Survey. These lots have slightly different rules, regulations and treatment as necessary given their varying origin, but are unified by many of the provisions found within the CC&R's as well as these Development Standards ('DS'). See Community Map.

Architectural Committee

The Architectural Review Committee's ("ARC") (or simply Architectural Committee) critique will include, but is not limited to, the homes exterior design, roof color and material, patios, driveways, landscaping and exterior lighting. All construction must also comply with these Development Standards, the Covenants, Conditions and Restrictions ("CC&Rs") for Ventura Ranch and the requirements of the Yavapai County Planning and Building Department. Some or more of these specifications and Standards may be changed without warning.

Disclaimer

The Design Standards are subject to change, without notification, by the Declarant or Architectural Committee. Any change to the DS's will go into effect immediately, unless otherwise stated. The Declarant and/or ARC will have the ability to interpret these Design Standards. In the case of a conflict between the Design Standards, the interpretation of the Declarant or ARC will govern, whichever is applicable. Approved variances or deviations to the design Standards for one home will not necessarily be applicable to other homes. The compromise and unique situation which creates a variance will not be duplicated exactly in other home designs, and as such, the variance for permitted for one application is not applicable in for other homes. Existing homes constructed should also not be taken as perfect examples of current rules; each applicant should review the rules and discuss their design with the ARC during a 'Sketch Plan' meeting. Lack of redlines during preliminary review does not indicate a proposed improvement is allowed (omission of redline does not indicate approval). If an application is submitted before the Design Standards are published, or revisions thereto are published, the in-progress applications are still subject to the updated Design Standards.

Non-Waiver

The approval by the Architectural Committee of any plans, drawings, or specifications for any work done or proposed shall not be deemed to constitute a waiver of any right to withhold approval of any similar plan, drawing, or specification subsequently or additionally submitted for approval. Failure to enforce any of the Design Standards shall not constitute a waiver of same.

Right of Waiver

The Architectural Committee reserves the right to waive or vary any of the procedures set forth herein at its discretion, for good cause shown.

Exemptions

Utility and maintenance buildings, structures, and cabinets located on non-residential tracts are exempt from the "Design Standards" potion of this document. However, the Architectural Committee will endeavor to attain as high a level of conformance with these Standards as is practical for these types of facilities.

Severability

If any provision of these Design Standards, or any section, clause, sentence, phrase or word, or application thereof in any circumstance, is held invalid, the validity of the remainder of these Design Standards, and of the application of any such provision, section, sentence, clause, phrase or word in any other circumstance shall not be affected thereby, and the remainder of these Design Standards shall be construed as if such invalid part were never included therein.

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SECTION 1: INTRODUCTION

Ventura Ranch is a place to call home. Whether its sitting by a fire as the wild Antelope gallop across the sun kissed grasses or taking your kids or grandkids for a walk around the loop trail; this place is built to last. The objective of these Standards is to foster a community which beautifies the land, enhances neighborly relations and grows into a lasting high-quality community.

The Design Standards ('DS') should not be construed as intended to restrict creativity for custom homes, and as such, exact specifications and requirements are not established here. Instead, general principles, standards, examples and lists of options are used to channel design such that all homes benefit and the community is strengthened as a whole.

Overall, the goal of these restrictions is to channel development of the community in such a way that views are protected, enjoyment is maintained and long run property values stay as strong as possible.

SECTION 2: DESIGN STANDARDS

2.1 Architectural Style

Ventura Ranch embraces "Ranch" style homes designed in a traditional and/or contemporary design with combinations of stucco, stone, pitched stone tile roof and timbers. Homes should be designed with a horizontal emphasis, keeping the structure relatively low and in relationship to the underlying terrain. The ARC will not approve Victorian, Tudor, A-frame, New England, Geodesic Domes, Chalet, Colonial, ultra-modern or extreme structures. Styles not listed here should not be taken as acceptable and should be brought up in the 'Sketch Plan' meeting including visual examples of such styles.

2.2 General Design Standards

2.2.1 Architecture & the Land

- Architecture is meant to beautify and enhance the land, not directly contrast from it
- The natural terrain dictates the house siting and orientation
- Foliage and/or natural features should be kept when possible
- Landscaping, colors and exterior design should blend in and reflect the natural environment

2.2.2 Four-Sided Architecture

In essence, four-sided architecture is a design which looks appealing from any angle, and given the lack of foliage in the community, this is more important than it might otherwise be. In order to achieve this, Ventura Ranch encourages the use of:

- Articulation
- Variation in materials
- Hierarchy of Space
- Negative Space
- Detail and relief of windows, entrances, and doors
- Color scheme (must adhere to Ventura Ranch Color Palette or make request for different consideration)
- Breaks in the roofline with elevation changes and offsets
- Shade Structures
- Attention to service spaces and orientation/concealment
- Additions of Stone and other relief on all four sides of each structure

Submittals with large, unobstructed faces or roofing will be returned with minimal comments for redesign and considered as incomplete.

2.2.3 Height of Buildings

Residences shall be single story except for "Mountain High Grade lots", specifically lots 89, 90, 91, 92, 93, 94 & 96, as well as lots with similar grade in Phase III to come. These lots will be allowed to build multi-level homes given the steep grade.

Multilevel homes shall be designed to not block or impair the natural view corridors of adjacent lots or of the general lay of the land. Flat or essentially level lots are not be candidates for a half story graded home.

- Single story primary residence buildings will have a maximum height of 21′ measured to the zenith of the roofline to finished grade (FG) (excluding chimney).
- Single story ancillary garages will have a maximum height of 23′ measured from finished grade (FG) to roofline
- Terraced structures on high grade lots will be reviewed on a case-by-case basis. Care should be taken to reflect the landscapes terrain

2.2.4 Building Size

The minimum residence size allowed is 2,000 net livable square feet and shall exclude any garage or RV Structure or ancillary building.

2.2.5 Building Massing

Massing is the arrangement of three-dimensional building forms that form the exterior skin of the home. Each Residence or ancillary structure must be composed of multiple masses with each mass distinguished by a vertical and horizontal offset. Building massing shall be responsive to the architectural style in design and scale. Long ridge rooflines are discouraged so as to create interest in structure massing. Since building massing is somewhat subjective, it will be the intent of the ARC to include the Home Owner and/or Architect on such issues to provide multiple options to meet objectives of all parties during the design review process.

2.2.6 Uninterrupted Walls

Homes should not have an uninterrupted wall greater than 32′ in length. Additional articulation, finishes or other methods may be used to break up long stretches.

2.2.7 Porches, Patios and other Covered Areas

Wrap around porches or other major porch elements should be consistent with the design theme of the home. Elevated porches create more visual obstruction than non-elevated ones and should be used sparingly and designed in such as way as to mitigate visual impact, particularly that of the space beneath the porch. Wrap around porches should included articulation in order to establish a hierarchy of interior & exterior space. Porch railings & decking should be submitted along with the other housing materials.

2.3 Architectural Features

Architectural Feature guidelines are given in order to generally shape submittals, but creativity and innovation is encouraged. If your design demonstrates eloquence, adherence to general design principles and tastefulness; it will be considered.

2.3.1 Building Projections

All projections from a Residence or other Structure including, but not limited to, chimney flues, extended overhangs, vents, gutters, downspouts, utility boxes, porches and pergolas, railings, and exterior stairways shall match the surface from which they project in terms of color, texture and materials. All building projections must be contained within the Building Envelope.

2.3.2 Architectural Columns

Porch or deck columns may be natural stone masonry, full brick, or can be made of wood material such as tooled colonial post or a custom-built column. Any variation in these materials shall require the prior written approval of the Architectural Committee. All deck posts, support columns and front porch columns shall be clearly identified on the plans. Columns should be doubled or otherwise modified around entrances to establish a hierarchy of space. Column spacing shall not very overly crowded such that columns do not exceed a ratio of (column height : column separation) or (1x:1.5x). Column height measured from deck floor to roof height including base and separation from column center to adjacent column center.

2.3.3 Roofs

As is the case with building materials, all roofs shall be of a material compatible to the architectural style used in terms of type, texture, and color. Roofing designs shall add architectural aesthetics to the overall composition of the proposed structures on the site. This may be accomplished by a multitude of roof planes and or a combination of roofing materials used together.

2.3.3.1 Roof Planes

Roofs create architectural interest via multiple planes and articulation. Provide a minimum of six (6) roof planes on the residence as seen from all sides, using varying plate heights and roof spans, dormers, and multiple directions. A porch roof shall constitute a roof plane.

2.3.3.2 Roof Colors

Roof colors shall be harmonious with the natural setting with minimal contrast or reflectance. Overhead screens, shade covers, patio roofs and other similar Structures shall be constructed of materials and colors to match the main roof. Proposed, roof materials and colors shall be reviewed by the Architectural Committee during the submittal review process.

2.3.3.3 Roof Materials

Permitted roof materials consist of:

- Three (3) ply triple laminate high profile asphalt composition shingles, with appropriate ridge cap
- Concrete tile in slate, shake, and split-shake profiles
- Natural or synthetic slate
- Metal roofing in standing seam or corrugated profiles, however Metal roofing can only be an "accent".
- S-Type style tile mottled in appearance of color may be considered on a case-by-case basis.
- Other roof materials may be considered on a case-by-case basis depending on the Architectural Style.
- Two (2) ply double laminate high-definition asphalt composition shingles, with appropriate ridge cap may be considered on a case-by-case basis depending on the Architectural Style. Additional roof lines and/or metal roofing in standing seam or corrugated profiles is required as an additional material when using two (2) ply asphalt composition shingles.
- No Mexican or Santa Barbara Tile shall be allowed. Slate Tile is allowed.

Ridgelines may not extend more than 50 feet in any direction without either a vertical or horizontal change in direction. Pitched roofs and the related massing of elements shall create rooflines compatible with the overall character of the topography. No rolled roofing material will be allowed on pitched roofs All vents and other projections shall be colored to match the finished roof material color. No mechanical equipment of any kind will be permitted on pitched roofs.

2.3.3.4 Roof Pitch

Roof pitch should not exceed 5/12 except in limited areas. 6/12 roof pitches should not extend for more than 20' of roofing. Variations in roof pitch aid in giving architectural variation to a home. Accent roofs of a higher pitch may be granted on a case by case basis such that they comply with he height limitations and the overall design aesthetic.

2.3.3.5 Roof Finials

Roof finials are generally not permitted unless a compelling argument is made with a specific home style.

2.3.4 Chimneys, Chimney Caps & Spark Arrestors

Chimney's, chimney caps &/or spark arrestors should match the style of the home and include secondary or tertiary materials when applicable (such as rock). These structures should not be overly tall or include ornate structures, signage, be highly reflective, distracting in nature or be overly large. An image of the proposed chimney and chimney cap should be included with each submittal. Excessive chimneys will not be allowed. Not bare metal tube chimneys.

2.3.5 Gutters & Rain Collection

Gutters & other rain collection schemes should be included as part of the overall home design in the submission documents. Half-round gutters are not permitted. Bare stainless steel, bare aluminum or other 'bare' metal gutters are not permitted except copper if allowed to oxidize (or 'patina') & is applicable with the color scheme. Gutters should be painted or manufactured to match the trim and/or fascia color, whichever is applicable. Chain type downspouts must be bare steel & allowed to rust, rust in color or black and must be 'link & loop' style, unless otherwise applied for & approved.

2.3.6 Garages & Garage Doors

Garages are an important functional component of a home, but also create substantial impact on the overall visual presentation of the home. As such, particular attention will be paid to the orientation, effort to minimize visual impact and overall size of garage structures.

2.3.6.1 Garages Attached to the Primary Residence

A two-car garage door should have a maximum width of 18' and maximum height of 8'. A single-car garage door should have a maximum width of 9' and maximum height of 8'. The following are general standards for incorporating garage doors into the home. Exceptions will be made for particularly well designed or thoughtfully incorporated garage space, while additional review time and comments will be warranted by designs lacking visually minimizing components into the design.

- Garage doors must be the same height and of the same material.
- Garages with two doors should be offset from one-another or perpendicular to each-other.
- Garage doors should avoid facing the street and cannot face the same direction as Ancillary garages.
- Only (1) two-car door and (1) single-car door will be permitted on each household, unless net livable square footage exceeds 4,100 square feet.
- Ancillary Structure garages will be reviewed with the primary structure garages in mind. A single-car door should be added to the RV garage before being added to the primary residence in order to aid in the visual presentation of the RV garage.
- No drive-through garages will be permitted on the primary residence and will only be considered on the RV sized garage door.
- No carports or covered parking for cars.
- Garage doors should be recessed a minimum of one foot (1').

See *Ancillary Structures* for garage door Standards specific to those structures.

2.3.7 Mechanical and/or Trash Enclosures

Mechanical devices used for the home (such as an ARC unit) and trash bins should be hidden behind a block wall substantially contiguous with the home and as shown on the building plans so as to screen these devices from view.

2.3.8 Propane & Natural Gas Tanks

All propane or natural gas tanks will need to be buried pursuant to applicable Yavapai County regulations and sensible safety precautions.

2.4 Building Materials

Finished building materials must be applied to all exterior sides of Residences and Structures, creating 'four-sided architecture'. Transitions in finished exterior building materials must occur at an inside corner of the Residence or Structure. Care should be taken when selecting the style and application of exterior finishes so as to create an aesthetically pleasing exterior consistent with the design language of the home.

A variety of wall surface materials and finishes are available for use at Ventura Ranch. A minimum of two (2) exterior wall surface materials shall be combined on a Residence or Structure, preferably three (3) but no more than four (4) per building may be used. Materials shall be an accurate expression of the proposed architectural theme.

Permitted materials include:

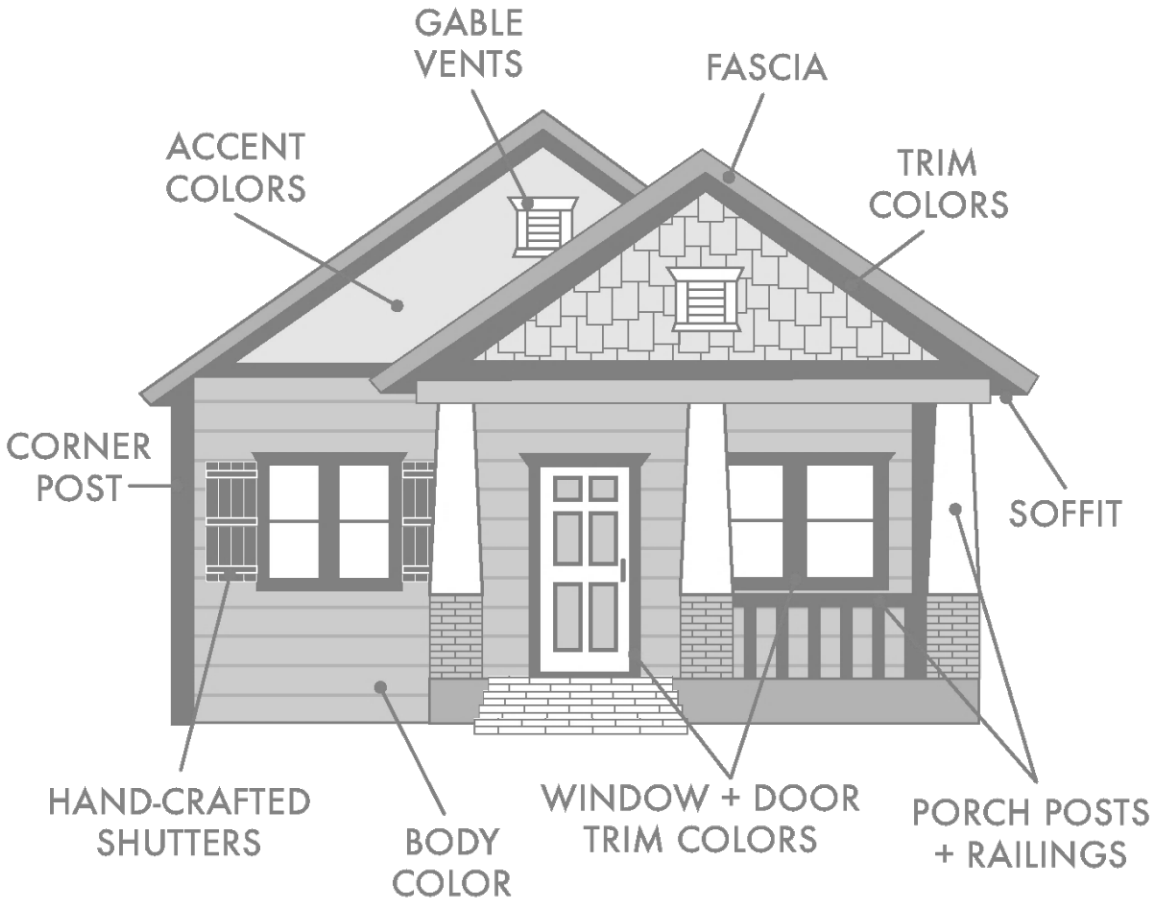
- Smooth, sand or dash finished stucco
- Earthen plaster (if protected by overhangs)
- Rammed earth
- Natural stone
- Mortar washed slump block
- Textured decorative block
- Painted wood or composite clapboard (T1-11 or plywood siding is not permitted)
- Stained wood siding
- Stained wood shingle
- Painted composite shingle/siding
- Rusted corrugated metal, as a vertical surface as an accent and not primary covering
- Other with specific submission for style, finish, color

Stem walls must be mortar washed and painted the same color as used on the wall surface of the Residence or Structure. Stem walls may not exceed 18 inches in height and cannot be left bare, should be painted to match the home, or covered in another material.

Siding applications shall include a minimum 2"x 6" dimensional lumber trim at outside corners. Hardi-board or natural wood materials may be used as trim elements at siding applications of a nominal thickness of 2 inches.

Stucco siding should not exceed 35% of the homes exterior surface.

Please indicate relative exterior finish percentages on the plan sets. See Design Submittal Documents.



2.4.1 Exterior Colors

Exterior colors should be reflective of those found in the natural environment such that the home complements the landscape and does not sit in opposition to it. An easy method for choosing home colors is to select one from the 'Pre-approved Color Palette'.

2.4.1.1 New Color Palette Submission

The following characteristics should be adhered to when submitting a new color palette for review.

- LRV must be equal to or below 42
- LRV must be equal to or above 6
- Primary or overly vibrant colors are not allowed
- Colors reflecting the terrain, natural environment or other aspects of the community are encouraged.

Submission of colors should include the following four color selections, Sherwin-Williams or Hex Triplet codes for colors. These should be submitted and must be reviewed in context of other finish materials.

1. Body Color
2. Accent Color
3. Trim Color
4. Fascia Color

2.4.1.2 Neighborhood Color Variation

Color selections, even if on the pre-approved color palette, may be denied if a nearby home or an over abundance of homes in the broader community, uses a specific color palette.

2.4.1.3 Window Frame Colors:

Colors for painted, stained or aluminum clad window frames shall meet the Ventura Ranch Color Pallet or alternatively approved substitution.

2.4.1.4 Roof Colors and Application

The following criterial shall apply to all roof material use:

- All concrete tile colors shall have integrated flashing or blending to create a modeled roof.
- Factory colored metal roofing shall have an LRV between 15 and 40. Metal roofing with a natural or treated finish may be proposed if it has a low reflectivity and is warm toned. Finishes such as burnished copper, ferrous copper, rusted Corten, etc. may be proposed.
- Metal Roofing can only be used as an accent.
- Natural or simulated slate roofs shall utilize a blending of colors to achieve a mottled effect.
- Flat roofing material contained within parapets shall be finished in a similar tone to the surrounding parapets and have an LRV of 40 or less.
- Three (3) ply triple laminate high profile and two (2) ply double laminate high-definition asphalt composition shingles shall be in warm toned, medium to dark valued shades with blended color granules.
- No red or other vibrant colored roofs.

2.4.1.5 Masonry Colors and Application

The following criteria shall apply to all masonry use:

- Blending of stone colors is encouraged to gain a greater sense of richness and capture the variegation found in natural stone. Stone must be sealed properly to prevent efflorescence and discoloring. Preventative maintenance shall be required per manufacture specifications of the chosen sealer.
- Specific grout thickness & color must be shown in submitted plans under review.

2.4.1.6 Submissions & Changes

Exterior colors & finish materials can be submitted electronically, but physical samples must be provided upon request to facilitate review. Black and White images of finishes is not a complete submission.

Future revisions to any approved exterior surfaces, that will constitute a color or material change, shall require approval by the Architectural Committee.

2.4.2 Windows, Skylights, and Glass Block

- Windows and clerestories of anodized aluminum, baked enamel, or wood are preferred for the natural climate.
- Skylights, Light Tubes and similar devices are not allowed in order to protect the night sky for all residents.
- Glass block should be used sparingly, avoid patterning and be submitted to the ARC for review as an exterior material.

2.5 Ancillary Structures

All Ancillary Structures must be located within the Building Envelope and Structures Envelope. All Ancillary Structures, including, but not limited to guest houses, ramadas, gazebos, detached garages, and detached RV garages, miscellaneous enclosures, and where applicable, stables and/or barns, should be designed in the same architectural style as the primary residence including use of colors, exterior materials, and landscaping.

Special care will be taken when reviewing the design of barns, detached garages, and detached RV garages and their visual impact on neighboring Residences, and adjacent owner(s) property/view corridors.

2.5.1 Maximum Relative Size

Depending on the type of ancillary structure, different size limitations may apply (see Sub-categories). Generally speaking, the size of the primary residence will dictate the size of the other two ancillary structures. For homes under 4,100 net livable square feet, the secondary structure should not exceed 1,800 sq ft and must be styled like the home. For homes of greater size, the secondary structure shall not exceed 55% of the net livable square footage of the home. A tertiary structure shall not exceed 750 square feet.

2.5.2 Number & Character of Structures

No more than three (3) structures will be permitted on any Lot. For example, there may be one single-family residence, one detached guest house and one detached garage, or some combination of other structures which all share design elements, lie within a structure envelope and jointly adhere to the DS's. Duplicate structures such as multiple ancillary garages or multiple guest houses will not be permitted.

2.5.3 Building Envelope vs. Structures Envelope

The Building Envelope is set by Yavapai County code and defines required offsets from various property borders where structures can be built. The Structures Envelope is developed upon the first submission (or at the inception of the ancillary structure submission) and defines the area within the building envelope where the primary and ancillary structures may be built. The purpose of this is to protect views for other residents by grouping buildings into the same general area within a lot. As such, the general design principle to be followed is that various buildings should be placed in relation to one another without gratuitous space between them such as to minimize the visual burden created by the structures.

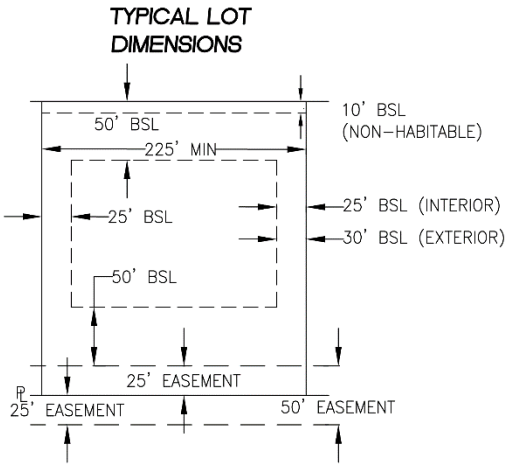
Upon submission to the ARC of an additional structures, the site plan shall show the Structure Envelope. No structures or building of any kind can be located outside the Structure Envelope unless expressly approved by the ARC. The default structures envelope size is 150' x 200'.

2.5.4 Roofs & Eaves

All Barns, RV Garages & Storage sheds shall match the roof pitch and relative eave lengths of the primary residence as well as the same materials and shall contain some architectural relief on the four walls. No traditional barn style structures are allowed including no Gambrel style roofs.

2.5.5 Setbacks

Setbacks must conform to those as recorded on the Plat or as shown below. No Improvements, other than fencing as approved by the ARC, may fall within the minimum setbacks. Exceptions regarding Landscaping are addressed in Landscape Design.



2.5.6 Detached Garages

Detached garages can be used to store additional vehicles, as a workshop or hybrid. Care should be taken to make these structures appear as part of the overall home design. Only one of the two Ancillary Structures can contain a garage door(s).

2.5.6.1 RV Garages

Attached RV garages and RV doors are not allowed on the Primary Residential structure but can be built as a separate ancillary structure. The maximum height shall be 23′ and if a second door is requested for a "drive through", such door shall be disguised so as to not appear as a second exit door (although still recessed by a minimum of 1′). Attempts to minimize height and visual impact are required. Modification of existing topography to lower these structures may be permitted with Architectural Committee approval & proper drainage provisions. The RV garage should include articulation to break-up large walls; rows of windows should be designed with care. Only a single large RV garage door and a single car door (Max 9′ wide) can be included in one structure. Only one RV garage per residence. The roofline and overall height are of particular importance, please minimize. The orientation of the RV garage with the house is an important design element and should be addressed in the design phase. Non-orthogonal angles between the two structures will aid in the visual presentation of the home. The width of the garage should not exceed ~32′ (excluding articulated or feature wall) and not more than ~53′ in length. These general dimensions may be modified at the discretion of the ARC given specific design tradeoffs, but should generally adhere to this size.

2.5.6.2 Garage & Living Quarter Restriction

Larger garages and workspaces including RV garages will not be allowed to include living quarters including (but not limited to) kitchen, bath or sleeping areas. Accommodations will be made for appropriate plumbing fixtures that are in-line with use or periodic use, such as a game room within the garage space. That said, RV garages cannot have residential quarters because the use case of the garage with noisy equipment conflicts with living quarters. Also, casitas cannot have attached garages as this creates the impression of multiple single family residences on the property.

2.5.7 Guest Houses

A guest house which includes a kitchen will only be permitted as outlined in the County ordinances, and subject to Architectural Committee approval and shall meet all the Ancillary Structure Criteria. No guest house or guest suite may be leased or rented separately from the main Residence, nor shall they contain a garage. An RV garage may not include guest quarters.

Detached guest houses shall not exceed 750 square feet of net livable area.

2.5.8 Horse Facilities

Horse facilities associated with a barn or other structure, shall require special review & horse shades must be integrated into one of the two additional allowed structures, not to be combined with the primary home. All horse facilities are considered an ancillary structure. Pre-built horse structures are not permitted. Predominately metallic horse facilities are not permitted.

2.5.9 Storage Shed

Sheds will count as 1 of the 2 potential ancillary buildings. They must be constructed with the same or similar materials as the house and have a similar aesthetic style. Shed must include eaves, roof style, roof pitch and roof materials the same as the main house. Shed doors should remain closed when possible and no materials should be stored on the exterior of the shed. An open overhang is not permitted to be built into the shed or added on later. Shed's should be designed to blend in and disappear with the overall home structure. Shed's cannot be pre-built, unless such pre-built structures substantially meet the aforementioned criteria. Modification of pre-built structures to attempt to conform to the aforementioned criteria is not allowed. Best practice is to include some landscaping near or around the shed to break-up the surface. Shed's must be within the 'structures envelope' as defined when submitting for an ancillary structure or as shown on the original home application.

2.5.10 Greenhouses

Greenhouses may be prebuilt, but cannot have white or bare metallic frames. Frames should be wood, green or black. Only gable roof styles, no geodesic dome greenhouses, curved hangar style, gambrel or other roof styles unless explicitly approved by the ARC. Greenhouses will count as one of the ancillary structures. No growing lights can be left on overnight.

2.5.11 Workshops

Workshops commonly are incorporated into the RV garage structure, but if a separate workshop structure is desired, it will need to conform to the size limitations in the 'Maximum Relative Size' section of this document. If this is the secondary structure, it may contain up to a two-car garage and have various provisions to keep all equipment within the walls of the shop. If a compressor is used for a central air line, it is recommended this be built into an interior space of the shop to mitigate noise. If the workshop is a tertiary structure, it should be styled appropriately and cannot contain a garage. If a workshop is to be converted to a 'Guest House' in the future, the initial exterior styling should reflect this intent. Large workshops may preclude the possibility of a large RV garage in the future, this should be kept in mind when planning.

2.6 Site Work

To maintain the natural appearance of Ventura Ranch, no cut and fill pads will be permitted that raises the building site significantly above the natural grade. However, more creative design and grade cuts shall be allowed for Lots in Phase II or Phase III with steep grade. Height of buildings will be measured from finished grade (FG) and the finished floor shall not be substantially higher than the minimum finished floor elevation (MFFE) as determined by the project engineer.

2.6.1 Driveways

There shall be one driveway entry for each home, and it shall be located so as to not cause hardship on any neighbor. For lots and roadways entering Ventura Way or Aviator Way, special construction and engineering shall be required. Furthermore, entry onto Ventura Way shall be limited and are subject to specific restrictions and design requirements (see CC&R's and Roadway Standards for more info).

Driveway material should reflect the design of the home and be included in the initial submission to the ARC. A parking area outside the garage with a hard surface such as concrete or pavers should be included. The driveway area extending to the street entrance should not be greater than 18' in width. If a material is used outside the garage, such as pavers, the same material should be used in the Driveway Apron area behind the gate or fence-line (or as discussed in the absence of a fence-line).

2.6.1.1 Driveway Apron

Driveways must have an asphalt or similar apron that extends from the gate to the street and 7' behind the gate so as to prevent debris, gravel or other dirt from damaging or discoloring the road surface. If the driveway is paved with concrete or pavers, these may be used as apron materials. Asphalt aprons should be finished such that the apron edge is not prone to substantial cracking or chipping. Apron radius should be minimum 5'.

2.6.2 Landscaping

Landscaping plans should adhere to the 'Approved Plant List' and the Standards contained therein. The landscaping of a home should not obstruct or block other resident's view. Rows of trees or plants which are overly organized aren't best practice and are unlikely to be approved. Illicit planting of trees or plants may require removal. Planting trees too close to a neighboring fence-line or street is prohibited as it creates a contentious maintenance and maintenance access issue.

2.6.3 Weed Control

Driveway surfaces, especially gravel, should be treated so as to remove weeds or other consistent plant growth along the surface. Best practice is to seal driveway from soil with various layers of rock. If uncontrolled, the ARC may request it be controlled.

2.6.4 Playgrounds & Trampolines

Playgrounds & trampolines should be located in the backyard or rear of the dwelling unit and not explicitly visible from the street.

2.6.5 Sport Courts

Sport courts will be limited in extent and must be submitted as part of the landscaping plan or as a separate submission to the ARC. They should not contain vibrant or intense colorways, should be designed with some landscaping to break up the visual impact of the sport court but not have a strict perimeter of landscaping which accentuates the form. Countersunk sport courts with ample drainage considerations are preferred. Lighting for sport courts will be limited in nature and cannot be used past 10 PM and must have a timer not to exceed 30 minutes. Sport courts cannot be fenced with screening material or chain-link fence.

2.6.6 Flagpoles

Flagpoles should be submitted as part of the landscaping plan and should adhere to those restrictions as set forth in the CC&R's including flag type, height, location and number of flagpoles.

2.7 Lighting

The intent of these criteria is to create a safe and effective community lighting aesthetic that does not compete with the dramatic nighttime environment and views of the surrounding mountains. Lighting must be limited to small areas within the Structures Envelope and should not result in excessive light glow. The ARC will exercise substantial regulation of exterior lighting and will evaluate each homeowner's exterior lighting plans on a case-by-case basis.

2.7.1 Interior Lighting

Interior lighting becomes a concern of the Architectural Committee when the light that spills to the exterior causes glare when seen from neighboring properties or Common Areas, please be cognizant of this in the homes design.

2.7.2 Exterior Lighting

All exterior lighting should be preferably 2700K, maximum of 3000K.

The maximum wattage of any single exterior light fixture is 40 Watts incandescent or the LED/CFL equivalent emanating no greater than 450 lumens. Yavapai County Dark-Sky Ordinances shall be observed with the more restrictive between the ordinance or Design Standards herein being enforced.

Exterior lighting as used here shall mean light sources that are located outside the Residence. All exterior fixtures shall be of non-reflective materials which blend with the surrounding environment and strictly cast light downward.

2.7.2.1 Safety Lighting

Low voltage (40 Watt Max incandescent or the LED/CFL equivalent emanating no more than 450 lumens) lighting mounted in a low-profile manner may be used to illuminate vehicular and pedestrian circulation and assist in circulation outdoors.

2.7.2.2 Security Lighting

This lighting is intended to provide bright illumination during emergency situations only, which may include unauthorized trespass, unusual or threatening sounds and/or activities. These lights shall be tuned so as not to excessively trigger during evening hours (such as when placed near a tree that frequently shifts in the wind).

2.7.2.3 Recreational Lighting

Lighting intended to illuminate exterior living areas, such as patios, pool decks, or landscaping behind walls or in Private Areas may also provide for safety lighting around outdoor living areas. Because of differences between lighting, these lighting functions must be circuited and controlled separately.

All lighting design and locations must be approved by the Architectural Committee and may be disallowed or modified in order to maintain the night sky intent.

2.7.2.4 Post-Installation Modification

Lights are difficult to review on paper and some fixtures may be requested to be modified after installation if they are creating undue nuisance, glare or otherwise harming the nighttime environment.

2.8 Solar Panel Applications

Ventura Ranch supports the use of energy conservation methods in home construction, and as such encourages any homeowner contemplating the installation of solar devices to consult with the Architectural Review Committee prior to entering into any contract.

While it is not the intention of the Architectural Committee to restrict the installation, the Architectural Committee reserves the right to reasonably restrict placement and design of such devices as they affect the appearance of each home, in accordance with §33-1816. Ground arrays and ground installation for Solar is not allowed.

2.9 Utility and Service Lines

No gas, electric, power, telephone, water, sewer, cable television or other utility or service lines of any kind may be placed, allowed, or maintained upon or above the ground of any Lot except to the extent, if any, that underground placement may be prohibited by law or would prevent the subject line from being functional. Above ground service pedestals, splice-boxes, switch cabinets and transformers will be permitted where required for public utilities or the landscaping of Common Areas.

2.10 General Residential Maintenance

Homes, yards, pastures, ancillary Structures, and landscape must be maintained to a level consistent with the overall Ventura Ranch property and amenities. The Board of Directors and/or H.O.A. manager(s) may direct homeowners to improve the level of maintenance if determined necessary by the Board of Directors.

2.11 Variances

Certain circumstances may warrant the bending of rules contained herein. Typically, some sort of compromise will be stuck such that the home will be allowed a special provision in exchange for tighter or specific regulations in some other area. Variances should not be construed by other applicants as being generalized exceptions and will only be considered given the following conditions.

- The fundamental use case of a specific improvement, design or ancillary structure is hindered or eliminated by the way in which the rules are written.
- Documentation of such a hinderance is provided on the plans.
- The applicant is in good standing with the HOA having paid all dues and not in violation elsewhere.

The application for a variance meeting the above criteria does not guarantee it will be approved, and in most cases, variances won't be approved. These are important topics worth discussing during the 'Sketch Plan' meeting.

SECTION 3: LANDSCAPING

The objective of landscaping in Ventura Ranch is to create the illusion of lushness and vibrance using plants which are found in or echo the type of plants found in the surrounding environment such that the overall impression is that the home sits amongst a particularly beautiful part of the natural ecosystem. This precludes the use of plants that are in direct controversy with the natural ecosystem such as tall non-native trees, large swaths of grass or other high-water use plants.

3.1 Landscaping Plan

The landscape plan should be submitted with the initial application to the Architectural Committee for the primary residence. Ancillary structures added after should include in their application a small landscaping plan to accommodate the new structure. Homeowners may elect to forego the initial landscaping plan and design it later, but should keep in mind this may require an extra review fee and/or will not be permitted to install plants until the review is completed.

- Landscape plans should draw upon plants on the Approved Plant List.
- Landscaping is permitted outside the Building Envelope if in the opinion of the Architectural Committee it will enhance the overall appearance of the property or if it is necessary to soften features of the Structures or address other visual deficiencies.
- All completed Residences' approved landscaping plans must be installed within three (3) months of occupancy, weather permitting.
- All introduced boulder and rock features within landscape must be of similar color and form of existing onsite rock settings.
- Rocks and boulders, patios, sidewalks, courtyards, and walls, may be used to supplement and create imaginative landscaping design.
- Special paving features are encouraged.
- Artificially colored rock yards are not acceptable at any location. Any Lots having exposed rock surfaces from construction efforts must be stained by an approved product (i.e., Permion or eonite).
- All granite ground cover must be of a similar color and size to the natural granite found within Ventura Ranch.
- Material not included in this palette is not encouraged and use of such material will only be permitted on a case-by-case basis and at the sole discretion of the Architectural Committee.

3.1.1 Landscape Walls and Fences

Residential site walls or fences must appear as a visual extension of the Residence, using similar materials and finishes. It is understood that such walls or fences may define courtyards or terraces in close proximity to the Residence for the purpose of privacy. These plans are subject to approval as part of the Landscaping Application or general home application depending on the circumstances. These are specifically different from 'Property Fencing'.

Prior to the construction of any fence or wall, plans indicating materials to be used and location shall be submitted to the Architectural Committee for approval. Lot lines and Building Envelope shall be verified by the Builder (or Owner) prior to construction and be included on the site plan submitted to the Architectural Committee. All walls and fences must be approved by the Architectural Committee.

Any fences or walls installed by the Developer may not be removed, altered, or painted.

3.2 Fireplaces, Fire Pits & Barbeques

Fireplace chimneys must be surfaced with stone or brick identical to the masonry material used elsewhere on the Residence, with shroud detailing consistent with the Residence character and must be sited to avoid obstructing views from adjacent properties. Also, caution must be exercised to avoid the proximity of smoke to neighboring Residences. Gas and wood burning units will be allowed only as permitted by local and environmental regulations.

Built-in fire pits and barbecue units must be contained within the rear yard patio or courtyard and may not encroach on the minimum setback and/or be located outside the Building Envelope. Any exterior open-flame needs to have a minimum of 15′ radius of non-flammable material such as rock, pavers or concrete.

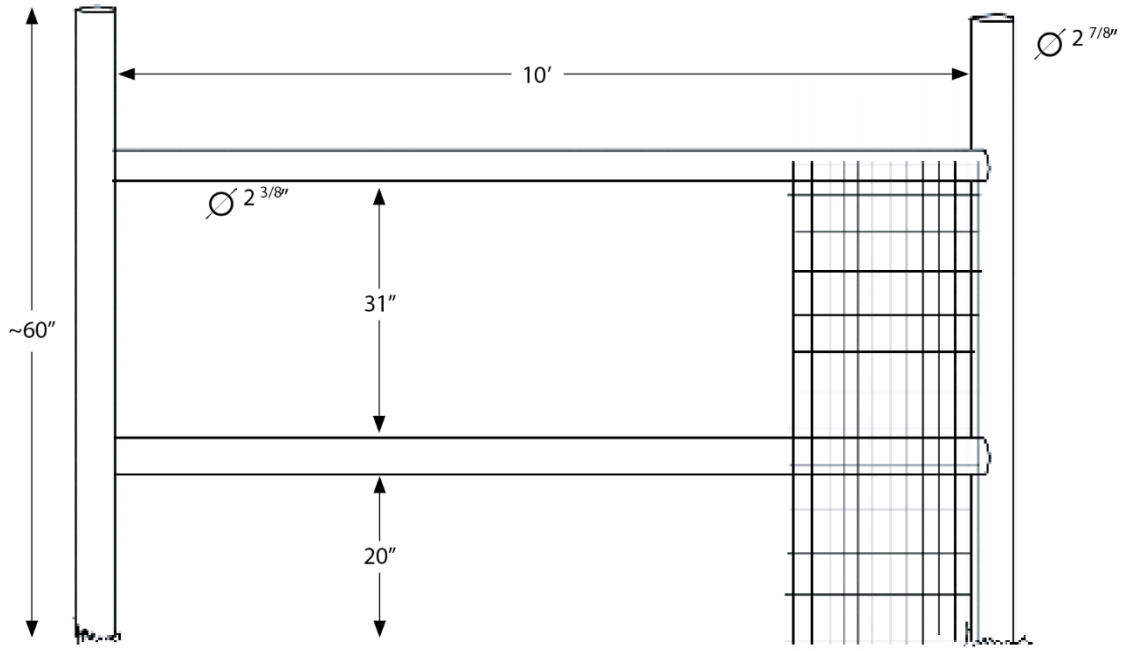
3.3 Property Fencing

See *Architectural Specification 001* for *Property Fencing.*

Property fences are those that extend around the property borders and/or along roadway easements to enclose the lot. These fences much match the approved Fence

In no instance may a fence installed by the Association be altered, removed, or relocated without the expressed written approval of the Architectural Committee.

The fencing shall follow the property line, easement line or any other where applicable.



Please note Fence Construction Wildfire Protections when constructing your fence to prevent fires.

3.3.1 Fence Application

Fence applications should be submitted with the landscaping plan and may have the following details noted on these plans, otherwise a separate submission will be required and will be considered a 'landscaping plan' submission.

1. Simple drawing showing fence path.
2. Fence contractor.
3. Proposed pipe supplier & specification.

4. Any requested deviations, 'tie-in's' to existing structures (excluding standard neighboring fences) and potential conflicts.
5. Location of Gate(s) (Note: Gate application may be combined with fence application.)

3.3.2 Fence Structure

1. Fence should have upright posts with an OD of 2 7/8" and horizontal rails with an OD of 2 3/8".
2. Fence should have minimum 10-gauge vertical and 14-gauge horizontal components.
3. Fence should be welded and match the contours of the land as much as possible. For undulating land, lower rail shall be affixed 20" above ground level at each vertical post.
4. Existing fences shall take presedence along a lot border and where differences occur, the new fence shall tie in gradually and cleanly.
5. Fences can only be placed on property borders unless otherwise specified in the application. One fence structure must be shared between neighboring properties, unless otherwise specified in the application.
6. Fences needed to be capped with a welded metal plate.
7. Fence must be rusted steel pipe.
8. Fence post must be anchored with cement or aggregate mixture and must be countersunk and covered with minimum 2" of dirt.
9. Where fence intersects community structures such as gabions, fences, etc.; architectual committee approval required.

3.3.3 No-Climb Fencing

No-climb fencing is an optional addition, but will significantly reduce the ability or pets to escape and other critters to get in.

1. No-climb must be galvanized. No coating or paint.
2. Cannot extend above or below the upper horizontal pipe segment.
3. Must be affixed to the interior side of the fence.
4. Is to be rectilinear in construction with 2" x 4" vertical rectangular openings (or similar).
5. May be countersunk below ground level or placed at ground level.
6. Where two neighbors share a fence, only one border of no-climb may be placed.

3.3.4 Gates

All gates must be built from identical steel pipe used on the Fence.

All Gates, Walls, and Fences must be approved by the Architectural Committee prior to installation. Gates should not be placed where access to the lot was not expressly granted (AKA no periodic use gates unless otherwise approved by the Architectural Committee or as a DWID Maintenance Gate)

3.3.4.1 DWID Maintenance Gates

Lot owners only: Periodic Maintenance access gates are required where utility easements for the Ventura Ranch DWID are present. These should not be used except by the Ventura Ranch DWID and it's agents for maintenance and/or repair of waterline infrastructure.

Please note these on your building plans. Consult the VR DWID for means of securing the gate.

3.3.5 Corral Fencing

Fencing for horses should be attached to the living structure for the horses or assembled into a horse corral. The use of complex horse fencing is prohibited because of the visual nuisance it creates. No-climb wire is encouraged on exterior fencing if allowing horses to freely graze. All Corral Fencing must be submitted to the ARC prior to installation.

3.3.6 Pet Fences

Pet enclosures shall not exceed 36 inches in height as viewed from the outside of the fencing and shall match the Ventura Ranch Pet Fencing Standard. Fencing shall be limited to the Rear Yard and must not extend beyond the shoulders of the residence as seen from the street. Pet fencing should be black or brown, not constructed with a permanent concrete footing and not constructed using shiny or reflective metallic materials.

3.4 Miscellaneous Landscaping Guidelines

3.4.1 Service Yard

Walls are required as screening for a service yard, if any, to enclose above-ground garbage and trash containers, and other outdoor maintenance, pool and service facilities, which must be of sufficient height so equipment may not be visible from a neighboring Lot or common area.

3.4.2 Awnings

Awnings must be retractable and require Architectural Committee approval. Awning overhang colors must be approved by the Architectural Committee.

3.4.3 Basketball Hoops and Other Recreational Facilities

Basketball hoops and backboards may be used on a residence or installed on the side of the home if not facing the street and when approved by the ARC in advance. Particular attention will be given to the visual and acoustic privacy of adjacent Lots, as well as color and visibility of its location. Lighting of the hoop and backboard, or other recreational facilities, will only be permitted as reviewed and approved by the Architectural Committee on a case-by-case basis. Non-lighted tennis courts will be permitted. See Sport Court provisions for more formal installations.

3.4.4 Ornamental Objects

Exterior ornamental objects such as, but not limited to, metal, ceramic, or wood sculptures, fountains, ponds, statues, and plastic characters require Architectural Committee approval. These objects are not permitted in front or street side yards. Approved fountains may be installed in rear yards and front walled courtyards only and shall be limited in height to five (5) feet above finished grade of the Lot and must be compatible with the architectural character of the Residence.

3.4.5 Antennae/Satellite Dishes

Antennae or satellite dishes of 1 meter or less, in diameter or diagonal measurement, may be installed on or near a Residence only if it is not visible from neighboring properties and is installed as required by local codes.

3.4.6 Fire Protection System

All homes within the Ventura Ranch must include interior fire sprinkler systems.

3.4.7 Storage Tanks

All fuel tanks, water tanks, well sites and pumps or similar storage facilities shall either be enclosed in an ancillary Structure or shall be installed or constructed underground.

3.4.8 Swimming Pools and Spas

Swimming pools and spas should be designed to visually connect to the Residence through walls or courtyards and should be screened or separated from the Natural Area or direct view from the street or from adjacent properties. They must be constructed according to the County regulations. All pools must be sited within the designated Structures Envelope, and be compatible in size and scale to the proposed Residence. All pool equipment must be screened by walls or Structures from direct view of neighboring properties. No above ground pools

3.4.9 Machinery and Equipment

No machinery, fixtures, or equipment of any type, including, but not limited to, heating, cooling, air conditioning and refrigeration equipment, may be placed on any Lot without the prior approval of the Architectural Committee. In addition, no construction equipment of any kind can be parked or stored on Lots in open view. Ground mounted air conditioning unites shall be concealed by a solid enclosure on all sides visible from a neighboring property or the street.

Wind turbines, including mock or real windmills, are not allowed. All pool equipment shall be screened from public view.

3.4.10 Garbage

No garbage, horse manure, or trash may be placed on any Lot except in covered containers meeting the specifications of the local jurisdiction and the Architectural Committee and shall be completely screened to the adjacent Residence or community open space. All rubbish, debris, horse manure, and garbage shall not accumulate or be stored near to or allowed to be visible from any adjacent property or Common Area.

3.4.10.1 Garbage Collection Days

Trash containers should be placed on the street only the evening before or on the day of collection. Persistent trash receptacle presence may elicit a warning or violation from the HOA.

3.5 Site Drainage and Grading

All sites will be responsible for receiving and conveying flow in a similar manner, velocity and volume as was naturally present and must retain the county required runoff volumes on their property. Drainage stilling basins must be concealed to the extent possible and should be included in the Landscaping Plan.

Lots and Parcels will require different drainage plans as much of the runoff for the Lots in the formal subdivision was dealt with in a Phase III Master Drainage Report while Parcel owners will need to manage and maintain historic flows as is necessary by Yavapai County regulations.

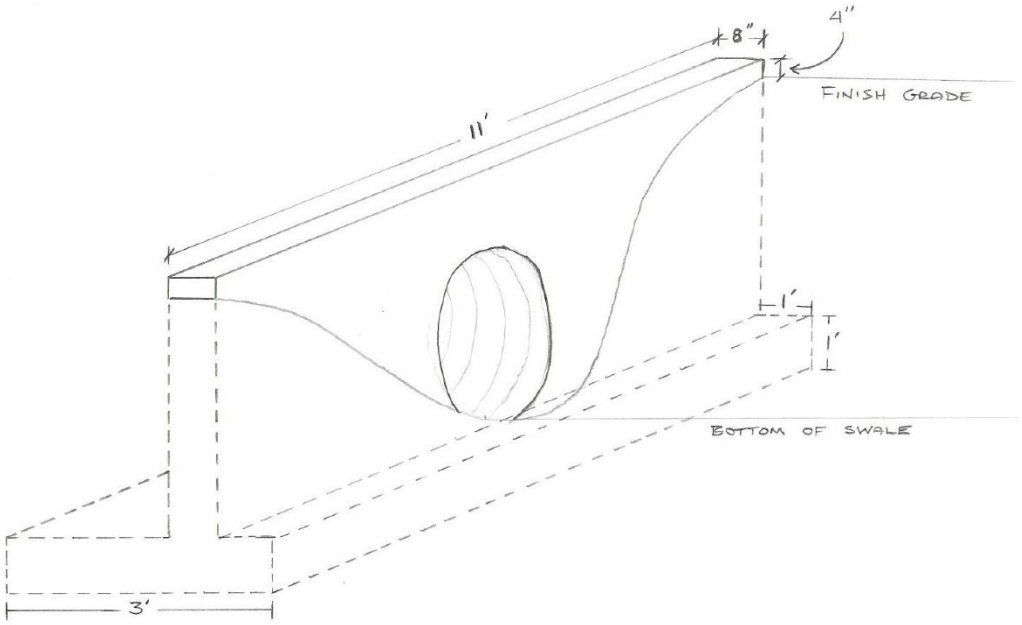
3.5.1 Drainage Restrictions

See CC&R's with respect to drainage restrictions and the impact to existing subdivision infrastructure, downstream neighbors or the overall environment.

3.5.2 Cutoff Wall & Street Drainage

All residents will be required to install a culvert and approved cutoff wall to manage drainage flow for their driveway. A formal drainage plan by a Professional Engineer ('P.E.') may be required if reliable flow volume data is not available. Cutoff walls must be maintained, and the HOA may compel homeowners to improve decrepit or damaged cutoff walls.

1. The headwall detail is a suggested standard detail in any applications for driveway access onto the loop road and is strongly suggested with other parcel roadways.
2. The headwall shall not be painted, stained or otherwise altered from its normal concrete appearance unless this is included in an application and approved by the Architectural Committee.
3. Cutoff wall shall not include rock or other rip rap unless deemed necessary for its operation. If rock is used, it should be commensurate with the rock used across the property.
4. Drainage culvert size and number should be sized by a drainage engineer or other professional.
5. Utilization of Class A concrete that will test at 4000 psi after 28 days (or as recommend by P.E.)



SECTION 4: DESIGN REVIEW

The design review process, when conducted properly, should fit in well with the overall design process a homeowner goes through when constructing a new home including the county submittal process. The design review with the HOA should be substantively complete before submission to Yavapai County for code review and home plan acceptance.

4.1 Submittals & Procedures

Final plan approval by Architectural Committee must be received prior to the plans being submitted to Yavapai County for approval.

4.1.1 Forms

The Architectural Committee shall adopt forms upon which all requests for actions or approvals from the Architectural Committee must be submitted. Such forms shall indicate the number of copies of each set of plans, specifications, site plans or other documents, which must accompany the application and set form instructions to be followed in submitting applications.

See Appendix for copies of Applications.

4.1.2 Review & Assurance Fees

The Architectural Committee has adopted the following fee schedule in connection with its review and approval process:

- New Home Fee Base: $3,500
  - $1,500 Design Review Fee (Non-Refundable)
  - $250 per Additional Revision (2 Revisions Included with Base Fee)
  - $2,000 (Refundable Construction Deposit)
- Roadway Connection Supplement
  - $1,000 Road Connection Deposit (Refundable Deposit) (May be Waived)
- Additional Building Supplement
  - FREE Additional Building Review Fee (per Building | Non-Refundable)
  - $0 Standard Additional Building Deposit (per Building | Refundable)
- Other Fee's
  - $200 Landscaping Review Fee (if not done with original application)

- $200 Pre-Closing Sketch Plan Meeting (Applicable towards Design Review Fee)

The fee and deposit amount are due at the time of the building application to the Architectural Committee.

The definition of a revision is the formal resubmittal of a design after receiving feedback. Two revisions indicate three total submissions with the final submission being accepted. Reasons for additional revision fees include, but are not limited to, not fully incorporating or addressing previous comments or seeking to change an already approved plan, regardless of the construction stage.

4.1.3 Decisions

The Architectural Committee shall review all applications submitted to it and shall furnish a written decision to the applicant setting forth the reasons for its decisions. An affirmative vote of a majority of the members of the Architectural Committee shall be necessary for any decision. In the event the Architectural Committee fails to take any action within ninety (90) days after a complete application package has been submitted to it, then the application shall be deemed approved. The Architectural Committee may disapprove any application if there is not sufficient information submitted for the Architectural Committee to exercise the judgement required by these Design Standards. In all cases, the Architectural Committee shall attempt to itemize the nature of its objections. In the event the applicant makes subsequent submissions after an initial disapproval, the application, as resubmitted, shall be deemed approved if the Architectural Committee fails to take any action on the resubmitted application within Forty-five (45) DAYS AFTER THE NEW SUBMISSION.

4.1.4 Variances

Variances should conform to the specifications set forth in the Variance section. Application for a variance should include the following components.

1. Description of scope of variance, purpose of request for variance and intended mitigation steps.
2. Note on the building plans with regards to the variance.

Variances are important topics worth discussing during the 'Sketch Plan' meeting, especially if they constitute a major component of the design or intended end-use.

4.1.5 Written Records

The Architectural Committee shall keep and safeguard complete written records of all applications for approval submitted to it (including one (1) set of all preliminary sketches and all architectural plans), of all actions of approval or disapproval and of all other actions taken by it under the provisions of these Design Standards. All such records shall be maintained in the offices of the Association for a minimum of three (3) years after approval or disapproval.

4.1.6 Nature of Approval

Any approval of plans, specifications or proposed construction given by the Architectural Committee shall be only for the purpose of permitting construction of proposed Improvements within Ventura Ranch and shall not constitute compliance with city, county, and state laws. SUCH APPROVAL SHALL NOT CONSTITUTE ANY APPROVAL, RATIFICAITON OR ENDORSEMENT OF THE QUALITY OR ARCHITECTURAL OR ENGINEERING SOUNDNESS OF THE PROPOSED IMPROVEMENT AND NEITHER THE ARCHITECTURAL COMMITTEE, ITS MEMBERS OR THE DECLARANT, SHALL HAVE ANY LIABILITY IN CONNECTION WITH OR RELATED TO APPROVED PLANS, SPECIFICATIONS OR IMPROVEMENTS.

Any approved construction on a specific Lot or Parcel does not guarantee the approval of similar construction on another Lot/Parcel, as all construction approvals are granted based on specific conditions existing on each specific Lot/Parcel.

4.1.7 Standard Plans

Standard plans may be approved in Ventura Ranch as noted on the original submission. These plans will be held to a higher standard and may require the introduction of mirrored floor plans or different elevations. Restrictions may be placed on homes of the exact same plan immediately adjacent to one another, or several within a neighborhood. The builder should discuss this during the Sketch Plan Meeting with the Architectural Committee.

4.2 Submission Timeline

The best way to navigate the design review process quickly and efficiently is to apply the Design Standards to the initial home design and iterate based on minor changes. Homes which do not incorporate the written Standards will take longer to review and will require more revision time.

4.2.1 Sketch Plan Meeting

Prior to submitting preliminary plans for any proposal, the Builder, Owner, or representative thereof should meet with representatives of the Architectural Committee to discuss the proposed plans and to explore and resolve any questions regarding building requirements in Ventura Ranch.This will typically be held between a one or two members of the ARC as well as the (1) the homeowner (2) the builder and (3) the designer or Architect.

The submission for this plan should include a rough sketch of the home including approximate design square footage, Architectural style, anticipated features (such as ancillary buildings or special landscaping features) and a general siting of the home. If the parcel will require a well, this should also be shown on the plan during this phase. Builders and/or homeowners which attempt to skip this step are likely to spend more time in review and require more changes to drawn plans.

4.2.2 Preliminary Plan Review

This occurs after the Sketch Plan Meeting and is a complete design submittal. The majority of redlines and comments will occur at this phase.

4.2.3 Final Review

After changes have been made, this round of review is largely to confirm the requested changes were made or to review the routes or options chosen by the homeowner in light of the Preliminary Plan Review comments. Final Review may occur several times if the plans are not adequately reflecting the requested changes and it is possible this will incur additional fees as noted in the Application Fee's section.

4.2.4 As-Built Summary

A final As-built summary should be submitted once the home is built which includes minor mark-ups on the plan or other comments in written form summarizing in-situ solutions which were agreed upon by the Architectural Committee based on changes during the construction process or changes made in order to suit various building conditions. The primary purpose of this is to reconcile the final home inspection with the final review plans based on what was actually constructed.

4.2.5 Submission of 'Redline' Changes

The resubmittal of a 'redlined' copy of the plans with qualitative changes annotated is not permitted. This leaves too much room for ambiguity and final plans will need to be furnished regardless. The Architectural Committee will review such plans to the degree they are used to confirm the previous comments prior to editing the plans for resubmittal.

4.3 Design Submittal Documents

After the sketch plan meeting is complete, the following documents are to be submitted for preliminary review. Review will not commence until the application and submittal is complete:

- Site Plan (scale at 1"=20' or larger), showing the entire Lot, location of the Building Envelope with the Residence and all proposed Ancillary Structures, driveways, parking areas, existing and proposed topography, finished floor elevations, all utility sources and connections, and site walls.
    - Distances between ancillary buildings should be shown on Site Plan.
- Floor Plans (scale 1/8" =1'0") showing finished floor elevations, net livable and gross square footage.
- Roof Plans (scale 1/8" =1'0") showing all roof pitches.
- Building section (scale 1/8" =1'0"), indicating existing and proposed grade lines.

- All Exterior Elevations (scale 1/8" =1'0") showing both existing and proposed grade lines, plate heights, various roofline heights, roof type and pitch, and an indication of exterior materials and colors. Preferably a breakout of percentage of each exterior material used as a part of the whole exterior surface.
- Ancillary Structure Plans (conforming to the same above submittal requirements)
- Composite Elevations of each side showing the home and all ancillary structures together.
- Pre-approved palette selection. If not using a pre-approved color palette, include paint numbers and LRV's.
- Landscape plan with site plan (scale 1"=20') including walls, fences, plants from approved plant list, other design features and relevant distances between each. (may submit later subject to additional fee)
- Exterior lighting plan showing location and manner of installation for each light, as well as cut sheet for each light to be used.
- A grading and drainage plan showing existing and proposed topography at two-foot contour intervals.
- Cutoff wall / driveway drainage structure and copy of stamped engineering report (if required).
- All building materials for driveway or other site work.
- Anything else requested by the Architectural Committee to facilitate review of the home.

Electronic copies of plans and other documents are acceptable. Full-color renditions of building materials are acceptable, but physical samples may be requested by the Architectural Committee to facilitate review. An application may be put on hold if physical samples are not received in a timely manner after request.

4.4 Resubmittal of Plans

In the event of any denial by the Architectural Committee of either a preliminary or final submittal, a resubmittal of plans should follow the same procedure as an original submittal. This may happen because the designed home is simply too challenging to properly redline based on substantial and core design conflicts with the Design Standard's principles.

4.5 Site Inspection

As soon as the submission of final plans is complete, a representative of the Architectural Committee will inspect the Lot to determine that the conditions as depicted in the final submittal are accurate and complete. The house perimeter needs to be staked before the site inspection. Engineering certification of foundations and the securing of a building permit is the responsibility of the Owner and/or Builder. Construction documents (working drawings and specifications) are to be in accordance with the final design and plans approved by the Architectural Committee. Construction shall not commence until all the above requirements are satisfied.

4.5.1 Approved Plan Expiration

The Owner shall satisfy conditions and commence the construction of any work pursuant to the approved plans within one year from the date of such approval. If the Owner fails to begin construction within this time period, any approval given shall be deemed revoked unless, upon the written request of the Owner made to the Architectural Committee prior to the expiration of said twelve-month period and upon a finding by the Architectural Committee that there has been no change in circumstances. The time extension for such commencement will be extended in writing by the Architectural Committee.

4.5.2 Construction Completion Timeline

It will be considered that construction has commenced once site grading has commenced. Construction must proceed in a continuous manner through the completion of the Residence. If construction ceases for a period of greater than one (1) month, the Architectural Committee may require that either construction immediately resumes, or the Lot is returned to its natural condition. The Construction Compliance Deposit may be forfeited if either alternative is not achieved within two (2) months of written notice to the Owner by the Architectural Committee.

The Owner shall, in any event, shall complete construction of any Residence or Ancillary Structure on his/her Lot within eighteen (18) months after commencing construction.

4.5.3 Non-Completion

If the Owner fails to comply with this schedule, the Architectural Committee shall have the right (but no obligation) to either have the exterior of the Residence or Ancillary Structure completed in accordance with the approved plans with all expenses incurred to be reimbursed to the Architectural Committee by the Owner.

4.5.4 Inspection of Work in Progress

The Architectural Committee may inspect all work in progress and give notice of noncompliance. Absence of such inspection or notification during the construction period does not constitute an approval by the Architectural Committee of work in process or compliance with these Design Standards. During construction there are three (3) major inspections:

- Pre-foundation inspection that verifies the improvement footprint is per the approved plans. This inspection is requested when footings are complete, prior to pouring of the foundation.
- Framing inspection that verifies the improvement is framed per the approved plan, i.e., all openings, windows, porch, columns, doors, chimneys, etc. This inspection is requested when framing is complete.
- Exterior colors and materials inspection that requires a 3'x3' swatch of the proposed body color(s) shall be displayed under the sample swatch of the fascia. A sample of the proposed stone is required to be on site, along with roofing materials.

The ARC will need to be notified as each phase of construction is nearly complete in order to provide inspection in a timely manner. The purpose of the inspection will be to verify the home is being built in accordance with the approved plans. A written report will be provided for each review, in accordance with current Arizona statutes, specifying any deficiencies, violations or unapproved variations from the approved plans, as amended, that have come to the attention of the Association.

4.5.5 Final Inspection

The final home inspection will be completed prior to occupancy, but after all work is substantially complete and will be used in conjunction with the As-Built Plans to determine if the home was built in accordance with the Approved Plans. The ARC will furnish a written statement of compliance and return the Construction Compliance Deposit or will issue a written summary of items that need to be addressed. The homeowner will have thirty (30) days to address said issues (or may request an extension for reasonable cause), after which, the Construction Compliance Deposit will be forfeit. The CC&R's will govern in cases of buildings being substantially changed without ARC approval.

4.6 Subsequent Changes

Additional construction or other Improvements to a Residence or Lot, or changes during construction or after completion of an approved Structure, must be submitted to the Architectural Committee for approval prior to making changes or additions. For major changes, a redlined document of the initial construction plan or summary of changes should be submitted to the Architectural Committee prior to construction or application of the changes. Installing a change without prior consent from the ARC may result in forfeiture of the Construction Deposit.

4.7 Enforcement

The Architectural Committee may, at any time, inspect a Lot or Improvement and, upon discovering a violation of these Design Standards, provide a written notice of noncompliance to the Owner, including a reasonable time limit within which to correct the violation. The rules within the CC&R's will govern in such instances, but generally the objective is to resolve any disputes in a cost minimizing, agreeable fashion such that the Architectural Committee is satisfied with the actions taken by the homeowner and the homeowner is agreeable to the changes requested. In the event the plans are being built contrary to the Approved Plans, the Architectural Committee may compel the HOA to seek an injunction until such dispute is resolved.

SECTION 5: CONSTRUCTION REGULATIONS

5.1 Construction Compliance Deposit

A refundable Construction Compliance Deposit for new Residence construction, in a base amount of **$2000** in addition to supplementary deposits as required by the Review Fee's section (these fees are subject to change at the discretion of the Architectural Committee), will be required by the **Owner** prior to construction. Architectural Committee will only use this deposit in the case of damage made by the Builder or any of its agents upon any community Improvements and Infrastructure or any violation of the CC&R's or these Design Standards. Upon final Architectural Committee inspection of all improvements including landscaping, (if applicable), 100% or if appropriate, the balance of the Construction Compliance Deposit will be refunded to the **Owner**, in accordance with current Arizona statutes.

An additional refundable Construction Compliance Deposit may be required for major modification projects at the discretion of the Architectural Committee. Deposit amounts are based on the scope of the project.

The chief concern of the Construction Compliance Deposit and inspections is to verify that the exterior make-up of the home, position of buildings or other material components of the Approved Plans are substantially conformed to. The other major purpose of the deposit is to protect the shared roadways or other infrastructure components. Any violation by a Builder shall be deemed to be a violation by the Owner of the Lot.

The required Construction Compliance Deposit Agreement is entered into by the Owner, Contractor, and the Association, and shall be executed before commencement of any Improvement.

5.2 Construction Envelope

The Construction Envelope limits the area of actual above grade Improvements of each Lot within the Building Envelope and is the area within which all activities related to the Improvements to be constructed must occur. In most cases, this will be the lot area not covered by easements or other community facilities.

5.3 Construction Trailers, Portable Field Offices, Etc.

Any Owner or Builder who desires to bring a construction trailer, field office, or the like to Ventura Ranch shall first apply for and obtain written approval from the Architectural Committee at the time of pre-construction conference.

5.3.1 Temporary Construction Residence

At no time may a person(s) occupy a temporary residence (such as an RV or modular home) on a residence during construction.

5.4 Evacuation Materials

Excess materials must be removed from Ventura Ranch or used for site grading but may not be dumped or disposed of on the property even if other large dirt piles exist.

5.5 Construction Entrance & Trackout Prevention

A 'stabilized road entrance' is required for new custom home builds and all construction traffic is expected to use this as the ONLY construction entrance & exit into the site. Non-compliance or repeated use of non-stabilized entrance and exit areas can result in a loss of all or part of the construction deposit for clean-up and repair and may result in additional charges to repair damaged infrastructure such as roadways.

5.5.1 Stabilized Road Entrance Parameters

- Avoid locating on curves or steep slopes.
- Should be located at site of future driveway. Secondary site permitted with description on building plans (Not on Ventura Way or Aviator Way).
- Geotextile fabric underneath stone optional but recommended.

- 2″ to 3″ wash rock or coarse aggregate
- 30′ min length,
- 10′ min. wide (or width of road, whichever is greater. Flare at entrance to support turn movements.
- 6″ min. depth of aggregate
- Small filter fabric fence should be installed downstream to collect runoff sediment.
- Trackout pads may also be used

5.6 General Construction Provisions

5.6.1 Wildfire Protection

Each Lot within Ventura Ranch is encouraged to observe practices which reduce the risk of wildfires. Anytime there is construction of pipe fence using a welder, a water tank of more than 125 gallons with a battery equipped or otherwise powered pump must be present during construction. Any lot Owner who hires or personally welds for a fence installation or repair is financially responsible for all damage that may occur from the start of a fire within the community.

5.6.2 Debris and Trash Removal

Owners and Builders shall clean up all trash and debris on the construction site at the end of each day. Trash and debris shall be removed from each construction site at least once a week to a dumping site located outside of Ventura Ranch. Lightweight material, packaging, and other items, shall be placed in a closed container, covered, or weighted down to prevent wind from blowing such materials off the construction site.

During the construction period, each construction site shall be kept neat and shall be properly policed to prevent it from becoming a public eyesore or affecting other Lots and any Open Space designated on the final plat. Any clean-up cost incurred by the Architectural Committee or the Association in enforcing these requirements will be billed to the Owner.

5.6.3 Heavy Construction Delivery Vehicles, Cement Trucks and Tractors:

No heavy equipment including tractors and back-hoes and delivery trucks, particularly Tractor Trailers delivery dozers, backhoes, etc., shall unload on Ventura Way, Aviator Way, the Private Lot Roads or any other Paved surface. Such activity shall result in the 1st Warning and thereafter a $50 fine as well as all costs for repairs of any damage to the roadway(s).

On each construction site, the Builder must designate a wash out area within the Construction Envelope for contractors and suppliers to clean their equipment. The cleaning of equipment must occur, and cleaning effluent must remain, within that specified area. Equipment cleaned in any area other than the designated area will result in the Architectural Committee imposing a fine and retaining the Builder's Deposit to repair any damages resulting from such equipment cleaning in improper areas.

5.6.4 Sanitary Facilities

Each owner and Builder shall be responsible for providing adequate sanitary facilities for their construction workers. Portable toilets or similar temporary toilet facilities shall be located only on the site itself or in areas approved by the Architectural Committee. Facilities shall be emptied as necessary, and contents removed from site. In no case shall a contractor be permitted to use sanitary facilities other than those it provides.

5.6.5 Vehicles and Parking Areas

Construction crews will not park on, or otherwise use, other Lots or any Open Space. Private and construction vehicles and machinery shall be parked only in areas designated by the Architectural Committee. All vehicles will be parked so as not to inhibit traffic, and within the area designated by the Architectural Committee to avoid damage to the natural landscape and/or roadway.

5.6.6 Blasting

No blasting or impact digging causing seismic vibrations may be undertaken without the approval of the Architectural Committee based on such advice from a qualified consultant. Applicable governmental regulations must also be reviewed

and observed prior to any blasting activities. The Architectural Committee's only responsibility is to require evidence of such a consultant's expertise and assurances and shall have no liability for blasting or impact digging.

5.6.7 Miscellaneous and General Practices

All Owners will be absolutely responsible for the conduct and behavior of their agents, representatives, builders, contractors, and subcontractors on Ventura Ranch during the construction process. The following practices by construction personnel are prohibited at Ventura Ranch, and will be considered a violation of these Design Standards:

- Changing oil on any vehicle or equipment anywhere on Ventura Ranch other than at a location designated for that purpose by the Architectural Committee.
- Allowing concrete suppliers and contractors to clean their equipment on the site itself other than at the locations designated for the purpose by the Architectural Committee.
- Using disposal methods or units other than those approved by the Architectural Committee.
- Failing to use to Sanitary Facilities for relief.
- Careless disposition of cigarettes, contaminated and other flammable material.
- Driving metal tracked tractors on the roadways without adequate protection

5.6.8 Dust and Noise

The Builder shall be responsible for controlling dust and noise from the construction site in compliance with applicable government regulations and Ventura Ranch Site Grading standards. At no time should the dust and noise level be as such to disturb or become a nuisance to the adjacent properties.

5.6.9 Daily Operations, Working Hours

Construction Activity shall start no earlier than 6:00 am in the winter months and 5:00 am in the Summer months. No Cement or Delivery Trucks shall arrive earlier than these hours. Construction activity should finish 30 minutes after sunset or as necessary to facilitate cleanup.

5.7 Restoration or Repair of Other Lot Damages

Damage and scarring to a Lot outside the Construction Envelope, including, but not limited to, Open Space, natural vegetation, other Lots, roads, driveways, and/or other Improvements will not be permitted. If any such damage occurs, the Owner of the Lot will be obligated to ensure that the damaged area is repaired and/or restored promptly at the expense of the person causing the damage or the Owner of the Lot within 60 days. Upon completion of construction, each Owner and Builder shall clean his construction site and repair all of the Lot which was damaged, including, but not limited to restoring grades, planting shrubs and trees as approved or required by the Architectural Committee, and repair streets, concrete curbs and gutters, driveways, pathways, drains, culverts, ditches, signs, lighting and fencing. Failure to comply shall result in fines that are assessed against the Construction Compliance Deposit or directly billed the homeowner after repair by the HOA.

SECTION 6: ROAD STANDARDS

New roadways in Ventura Ranch are taken very seriously as they dramatically influence the long-term value of the land and the general value of the community. Even one poor road can severely undermine the quality of the community as a whole.

6.1 Roadway Design

New roadways should be designed in accordance with Yavapai County Roadway Design Standards & to the Subdivision Regulations for the Unincorporated Areas of Yavapai County (especially Section 5) to the degree practicable and within the limits of Arizona State Law. While the plans will not be reviewed or formally approved by the County, well laid plans will lead to roadways which could feasibly be accepted by Yavapai County for maintenance in the future, should the community elect to pursue this.

The roadways should be designed as Low-Volume Local Streets (or similar) and include a Hybrid Safety Edge or Thickened Edge (otherwise known as a Maricopa Edge). A complete roadway plan should be submitted to the ARC prior to construction for approval.

6.1.1 Submission Materials

A complete roadway plan includes the following components.

1. A roadway plan view
    a. ROW & Easement lines
    b. Stationing
    c. Monuments & Centerlines
    d. Street Dimensions
    e. Cul-de-Sacs
    f. Topography (minimum 30' on either side of proposed ROW)
    g. A typical cross-section (or reference to County specification)
2. A roadway profile view
    a. Proposed street centerline & edges
    b. Grade lines
    c. Existing Ground lines
    d. Culvert or drainage crossings
3. Engineered connection points to Collectors including Drainage Report

6.1.2 Review & Assurance Fees

- New Road Fee Base
    - $500 Design Review Fee (Non-Refundable)
- Engineering Review (Fee's as bid, based on scope)
    - Geotechnical Impact Review
    - Traffic Impact Review
    - Drainage Impact Review
    - Other Engineering Review
- Construction Assurance Deposit
    - $20,000 Roadway Construction Deposit (or as agreed upon)

6.1.3 Construction Report Materials

A Roadway Construction Report should be submitted to the ARC after construction has completed and be kept on file indefinitely. The purpose of the report is to ascertain that the roadways were built to a specification which could be used in the future to corroborate the quality of their construction.

A Roadway Construction Report includes the following components:

1. Sample report for AB depth along roadway at 300' intervals (or one test if less than 300' in length)
2. Packet containing aggregates used (including Sieve Analysis) & Chip Seal compound and thickness used

6.1.4 Cul-De-Sac's

Streets should ideally be designed to loop in order to avoid Cul-De-Sac's, but when necessary such Cul-De-Sac's should be designed in accordance with Central Arizona Fire Districts needs relating to minimum radii such that a Fire Truck could turn around at the end of the street.

6.1.5 Dead-End Length Limit

Terminal streets designated to have one (1) end permanently

6.1.6 Continuity of Roadways

If a roadway has been constructed in a Parcel previously to the provisions set forth, future roadways should meet or exceed the design and materials of the existing roadway. Dirt roadways or simple AB roadways are not permitted.

6.1.7 Shared Driveways

For roads connecting to internal Parcel roads (and therefore not directly connecting to a Community Collector such as Ventura Way or Aviator Way), shared driveways with pavement widths of 12' may be used if they service not more than 3 homes and do not extend more than 700'.

6.1.8 Roadway Material

The roadways may be constructed with a double chip seal. If using water-based emulsifications, the ambient temperature is critical to proper curing and should be closing monitored. The sub-grade should be Aggregate Base of suitable grade & depth to permit long-term roadway stability. Chips should be black or dark grey and no other color.

6.1.9 Construction Regulations

The roadway construction operation should be completed to mitigate damage to the existing roadway including avoiding unloading and operating equipment on the existing roadway (Ventura Way or Aviator Way) especially those with metallic tracks or wheels.

Furthermore, the construction site should utilize 'Trackout Prevention' measures, as stipulated in the Stabilized Road Entrance Parameters', but lengthened to 50'.

6.2 Roadway Connection to Collectors

The roadway connection to one of the community collectors (Ventura Way or Aviator Way) should be done on the plan and constructed with care so as to note weaken the existing roadway by severely undermining the existing edge of pavement. Roadway connections will be inspected by the ARC and damage or improper construction will be the Developer's responsibility to repair or replace.

6.3 Drainage Study

A drainage study should be conducted regarding the roadways connection to the community collector streets so as not to adversely impact the existing drainage system or roadway. It is also recommended that a basic roadway drainage plan be engineered for the roadway such that prevalent drainage conditions do not damage the roadway unnecessarily.

The drainage study may reference the Phase III Master Drainage Plan for Ventura Ranch, but the existing flows, stormwater volumes, ingress and egress points and all other pertinent drainage metrics may not be changed. In other words, the property must retain the change in permeable runoff on the property, manage stormwater to maintain historic flows and install improvements as necessary to prevent excessive First Flush runoff.

Low-water crossings, culverts or other drainage facilities may be used as noted and describe on the plans.

6.4 Maintenance

Building a road properly with good drainage is the best way to ensure longevity of the roadway. The property owners will be required to maintain their roadway to community standards as set from time to time.

6.4.1 Maintenance Standards

The roadways should be predominately intact, maintain its design width and be free from apparent bubbling, major cracking or eroded edges. If the road becomes hazardous to drive, especially for emergency vehicles, repair will be required.

6.4.2 Non-Maintenance by HOA

The Ventura Ranch HOA makes no representations for 'Private Parcel Roads' and cannot maintain them. General roadway maintenance funds are to be used only for specific roads as outlined in the CC&R's.

SECTION 7: MINOR LAND DIVISIONS

The division of larger parcels or land into smaller parcels is governed by the CC&R's with respect to access, future use and community property interaction. A basic Minor Land Division ('MLD') application should be submitted to the ARC prior to submission to Yavapai County in order to facilitate review of the future roadway system, general drainage plan and impact on existing community resources.

7.1 Submission Materials

- County MLD submission documents (or ones with similar information)
- MLD survey depicting lot splits
- Proposed access & roadway connection points (see 'Road Standards')
- List Total Future Potential Home Sites on the plan

The design of the MLD should be tuned to minimize the number of connections to existing Residential Collectors and maximize future parcel appeal.

SECTION 8: DEFINITIONS

Unless the context otherwise specifies or requires, the following words or phrases when used in these DS, shall have these specific meanings. Terms defined in the CC&R's shall have the meaning specified therein.

"Ancillary Structure" means any structure including, but not limited to, ramadas, gazebos, detached garages and detached RV garages, detached guest houses, miscellaneous enclosures, miscellaneous free-standing structures, pool pavilions, and where applicable, stables and/or barns.

"Architectural Committee" means and constitutes the reviewing body established pursuant to the CC&R's which reviews and approves or denies all submitted improvement plans.

"Builder" means a person or entity engaged by an Owner for the purpose of constructing any Improvement within the Project. The Builder and Owner may be the same person or entity.

"Construction Compliance Deposit" means the amount, as specified by the Architectural Committee, which an Owner must remit prior to beginning any residential construction.

"Building Envelope" means that portion of a Lot that encompasses the maximum allowable developable area of the Lot as reflected on the recorded master plat by which the Lot was created.

"CC&R's" means the recorded CC&R's of Covenants, Conditions, and Restrictions for Ventura Ranch, as amended, and recorded from time to time.

"Common Area" or "Public Area" means all land and Improvements now or hereafter designated as such on the Plat, the CC&R's, or the Association Rules. This shall include Easements created by the Amended Amended Ventura Ranch Survey as well as the Final Plat for Ventura Homesites Phase I and Phase II as well as in the future Phase III.

"Construction Envelope" is the area specified on a Lot or parcel within which all construction activity of Architectural Committee all approved Structures, decks, walks, and improved recreation facilities must be located.

"Declarant" means Cravath Whole Life Communities LLC, Blue Pacific LLC and Ivory Reef LLC), their successors and any person to whom it may expressly assign any and or all of its rights under recorded instruments.

"Design Standards" means the restrictions, review procedures, and construction regulations adopted and enforced by the Architectural Committee as set forth herein and as amended and supplemented from time to time by the Architectural Committee.

"Development Plan" refers to Amended Amended Record of Survey of Ventura Ranch & Final Plat of Ventura Ranch Homesites Phase I and Phase II, collectively.

"Developer" refers to the entity, person or organization which is dividing one or more lots with the intent of resale, particularly those which must process a Minor Land Division prior to resale.

"Excavation" means any disturbance of the surface of the land (except to the extent reasonably necessary for planting of approved vegetation), including any trenching which results in the removal of earth, rock, or other substance from a depth of more than 4 inches below the natural surface of the land or any grading of the surface.

"Fill" means any addition of earth, rock, or other materials to the surface of the land, which increases the natural elevation of such surface.

"Four-sided Architecture" shall mean all elevations of a Residence being considered as equal, distinct planes in their level of design and articulation, and will be reviewed as such by the Architectural Committee.

"High Definition" or "High Profile" shall mean a triple (3) laminate high profile architectural asphalt shingle with a raised tab type profile.

"Improvement" means any change, alteration, or addition to a Lot, including any excavation, fill, landscaping, residence or buildings, outbuildings, roads, driveways, parking areas, walls, retaining walls, stairs, patios, courtyards, hedges, poles, signs, and any Structure or amenity of any type or kind. Exterior art and sculpture that is visible from a neighboring Lot, street, or Common Area is also considered an Improvement.

"Light Reflective Value" is the reflectivity of a surface measured by a calibrated light meter. The value represents the percentage of light reflected from a space-pure white. White has an LRV value equal to 100% while flat black has an LRV value equal to 0%.

"Lot" shall refer to; one, the Lots created in the Final Plat of Ventura Ranch Phase I and Phase II and of Phase III+ future.

"Lot Survey" means that information obtained through a licensed engineer depicting existing features, inventory, and Lot configuration.

"Mountain High Grade Lots" Lots located in high grade sections of Phase II and Phase III (to come), which are allowed to build multi-level homes given high grade of lot.

"Natural Grade" the existing contour of a home site, prior to the time any alterations, grading, or site work is done to the Lot.

"Neighboring Lot Visibility" shall mean, with respect to any given object or activity, if such object or activity is, or would be, visible without artificial aids by a person standing at ground level from any part of a Ventura Ranch Lot or Common Area.

"Open Space" means all land, Improvements, and Common Areas now or hereafter designated as such on the recorded master plat, or the CC&R's or the Association Rules inclusive of conservation easements, draining easements and landscape easements.

"Owner" means the Owner of a Lot. For the purpose herein, the Owner may act through such Owner's agent, provided that such agent is authorized in writing to act in such a capacity.

"Parcel" refers to tracts of land created through Minor Land Division from the Amended Amended Record of Survey for Parcels 4, 5, 7 & 8.

"Primary Residence" is the single-family home structure on any lot of parcel excluding ancillary structures.

"Private Area" means that part of the Building Envelope that is surrounded by walls and/or is not visible from any adjacent Lot or Common Area. Plants approved for use in this area are listed in Ventura Ranch Recommended Plant Palette.

"Residence" means the building or buildings, including any garage, and other accessory buildings, used for residential purposes on a Lot, and any Improvements constructed in connection therewith. Unless otherwise defined, "Residence" shall mean single-family Residence.

"Site Built" means a Residence and Ancillary Structure primarily built on the Lot in the location it will be inhabited or utilized from raw materials and not pre-fabricated structures.

"Structure" means anything other than a Residence, constructed or erected on a Lot, the use of which requires location on the ground or attachment to something having location on the ground.

"Structure Envelope": This is the area defined after a submittal to the ARC has been approved showing the location of the Ancillary Structures such as Residence, RV Garage, Guest House, Storage Shed. If it is not defined on the initial home submittal, it shall be defined at the subsequent application for an ancillary structure.

"Walkout" shall mean that portion of a Residence that is partially constructed underground, and as such has at least one elevation, which is visible from the downhill side of any Lot. Must have an interior connectivity and an exterior ingress/egress door. This shall only be allowed in high elevation lots of Ventura Ranch Phase II and Phase III (to come).

SECTION 9: APPENDIX

VENTURA RANCH
HOMEOWNERS ASSOCIATION

Submission Checklist
for
SINGLE-FAMILY HOME

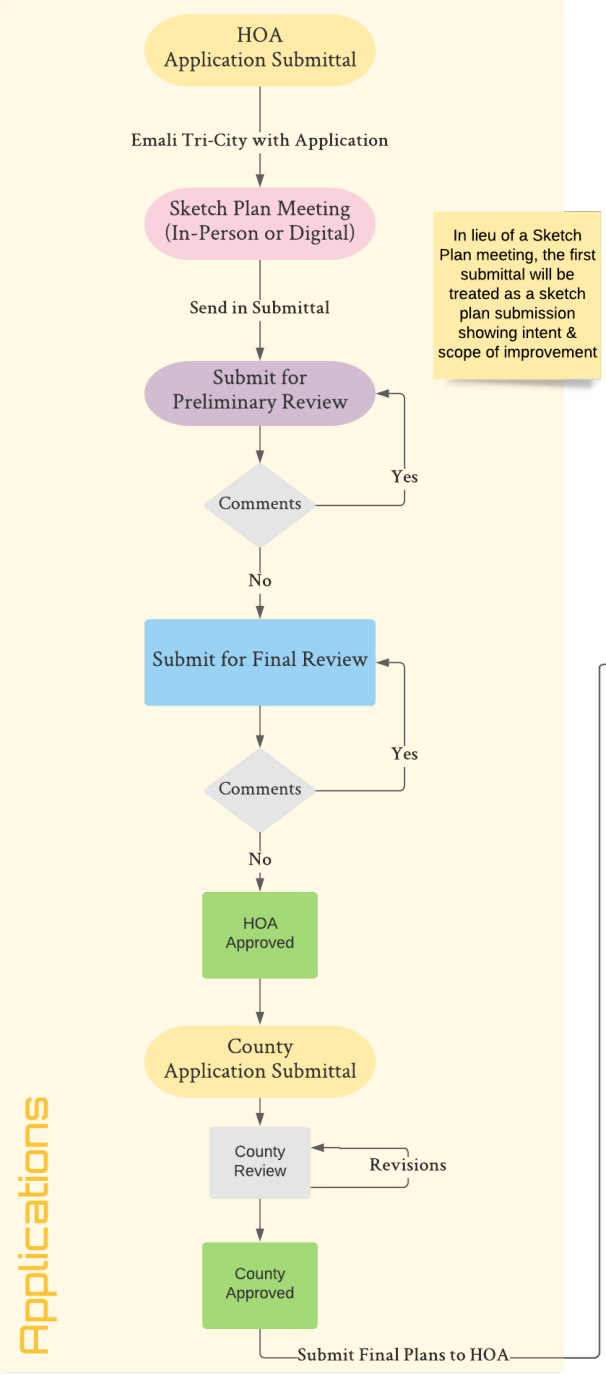
After the sketch plan meeting is complete, the following documents are to be submitted for preliminary review. Review will not commence until the application and submittal is complete:

- ☐ Site Plan (scale at 1"=20' or larger), showing the entire Lot, location of the Building Envelope with the Residence and all proposed Ancillary Structures, driveways, parking areas, existing and proposed topography, finished floor elevations, all utility sources and connections, and site walls.
    - ☐ Distances between ancillary buildings should be shown on Site Plan.
- ☐ Floor Plans (scale 1/8" =1'0") showing finished floor elevations, net livable and gross square footage.
- ☐ Roof Plans (scale 1/8" =1'0") showing all roof pitches.
- ☐ Building section (scale 1/8" =1'0"), indicating existing and proposed grade lines.
- ☐ All Exterior Elevations (scale 1/8" =1'0") showing both existing and proposed grade lines, plate heights, various roofline heights, roof type and pitch, and an indication of exterior materials and colors. Preferably a breakout of percentage of each exterior material used as a part of the whole exterior surface.
- ☐ Ancillary Structure Plans (conforming to the same above submittal requirements)
- ☐ Composite Elevations of each side showing the home and all ancillary structures together.
- ☐ Pre-approved palette selection. If not using a pre-approved color palette, include paint numbers and LRV's.
- ☐ Landscape plan with site plan (scale 1"=20') including walls, fences, plants from approved plant list, other design features and relevant distances between each. (may submit later subject to additional fee)
- ☐ Exterior lighting plan showing location and manner of installation for each light, as well as cut sheet for each light to be used.
- ☐ A grading and drainage plan showing existing and proposed topography at two-foot contour intervals.
- ☐ Cutoff wall / driveway drainage structure and copy of stamped engineering report (if required).
- ☐ All building materials for driveway or other site work.
- ☐ Anything else requested by the Architectural Committee to facilitate review of the home.

Note: Submissions cannot be properly reviewed without complete submissions. Checklist document is for convenience only, please refer to the active Ventura Ranch Design Standards document for the most up to date list of requirements.

VENTURA RANCH
HOMEOWNERS ASSOCIATION

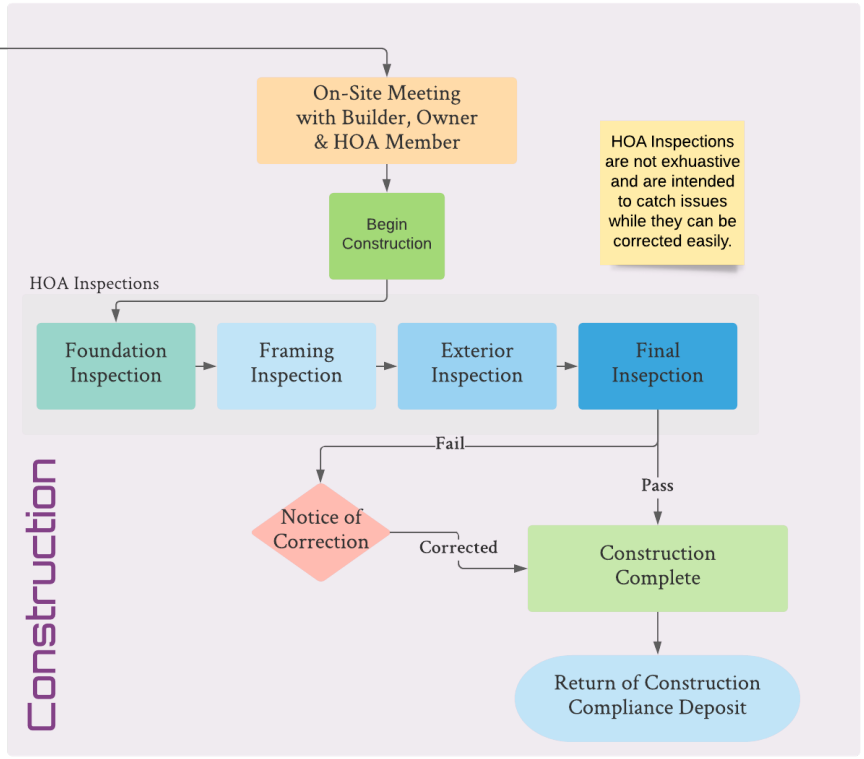
Submission & Construction Summary
for
SINGLE FAMILY HOMES



Building a new Single Family Home within Ventura Ranch is exciting and is usually the beginning of bringing to fruition hopes, wishes and dreams into the creation of a structure that will foster prosperity, memories and enjoyment. We hope to participate in this process by executing a review with speed & precision to get you & your family on your way; one step closer to your new home.

Design and construction for building a single-family home begins after the purchase of a vacant lot with the Sketch Plan Meeting. This can be either virtual or digitally facilitated and is set up upon the initial application to the HOA by Tri-City Property Management.

Please forward any questions or comments regarding the review process to Tri-City. They may not have every answer, but they can direct the question to the correct recipient.



NOTE: This submission flow chart is subject to change and is currently a working document. Some aspects of the submission process may be different. This is designed to be a general framework & not exhuastive of procedures & processes necessary to build a home.

VENTURA RANCH
HOMEOWNERS ASSOCIATION

Architectural Review Application

Owner Info

Name: _____ Lot☐ Parcel☐ Lot/Parcel #: _____ APN:_____

Email: _____ Phone: _____ Phone 2: _____

Mailing Address: _____

Have you completed a sketch plan meeting with the ARC?: Yes☐ No☐ *If no, please schedule & complete prior to submission.*

Project Info

Single Family Home Projects

New SF Home Construction☐ Existing Home Modification☐ Ancillary Structure☐ Landscaping, Fencing & Exterior☐

Development Activities

Minor Land Division (MLD)☐ New Roadway☐ Standard House Plan☐

Start Date: _____ End Date:_____ Has this been submitted before?: Yes☐ No☐

Description of Work: _____

_____

_____

_____

_____

_____

_____

Contractor Info

Name: _____ Company: _____ ROC: _____

Email: _____ Phone: _____ Phone 2: _____

Mailing Address: _____

Has your company worked at Ventura Ranch previously?: Yes☐ No☐

OFFICE USE

Date Recieved: _____

By Whom: _____

Notices & Disclaimers

- Submit complete plans to ARC before & recieve approval before submitting to the county for plan review.
- Refer to Design Standards before designing & submitting to the ARC.
- Items to be included in submission listed in Design Standards.
- Do Not begin work without prior written consent of the ARC.

The Design Standards may be modified at any time without notification or warning, such modification may be applied retroactively to active applications. The Architectrual Review Committee (ARC) makes no warranties to the soundness & quality of engineered design features or to the requirements set forth by Yavapai County. By completing and submitting this document the homeowner expresses they have reviewed & incorporate the Design Standards requirements into the home design to the best of their knowledge.

VENTURA RANCH
HOMEOWNERS ASSOCIATION
Architectural Variance Application

Owner Info

Name: _____ Lot☐ Parcel☐ Lot/Parcel #: _____ APN:_____

Email: _____ Phone: _____ Phone 2: _____

Mailing Address: _____

Project Info

Single Family Home Projects

New SF Home Construction☐ Existing Home Modification☐ Ancillary Structure☐ Landscaping, Fencing & Exterior☐

Development Activities

Minor Land Division (MLD)☐ New Roadway☐ Standard House Plan☐

Variance Description:_____

_____

_____

_____

On a seperate sheet, please describe the (1) scope of variance (2) rationale in favor of a variance and (3) intended mitigation steps.

Has the improvement the subject of this variance already been installed?: Yes ☐ No ☐

Is a plan including this variance currently under review? Yes ☐ No ☐

OFFICE USE

Date Recieved: _____

By Whom: _____

Notices & Disclaimers

- Applicants must be in good standing with the HOA with (1) no oustanding dues (2) no violations within 6 months
- Variance and brief description of rationale behind it shall be noted on the construction plans.
- Application for a variance DOES NOT gaurantee approval of such variance.
- Do Not begin work without prior written consent of the ARC.

The Design Standards may be modified at any time without notification or warning, such modification may be applied retroactively to active applications. The Architectrual Review Committee (ARC) makes no warranties to the soundness & quality of engineered design features or to the requirements set forth by Yavapai County. By completing and submitting this document the homeowner expresses they have reviewed & incorporate the Design Standards requirements into the home design to the best of their knowledge.

Pre-Approved Color Palettes

All paint color codes are Sherwin Williams. *Updated 2/20/20.*

Other combinations of these colors are allowed, however, they must be approved by the Architectual committee. Color placement and use must also be approved by committee. Pre-approved does not remove committee's right to review color choice.

Ventura Ranch Landscape Guidelines

The Following General Guidelines Will Be Enforced

1. Low-Water Use Landscaping Requirements; Turf Limitations.

a. Except as otherwise provided herein, Lots (OR: in areas outside of the building envelope)are to be landscaped with xeriscape (i.e., low-water use) vegetation. Xeriscape vegetation means: (i) vegetation that is native to the Prescott Active Management Area, or (ii) drought tolerant or low-water use plants on lists approved by the Arizona Department of Water Resources, Yavapai County, the University of Arizona's Water Resources Research Center or any similar agency or institution that assists landowners with the conservation of water in a desert environment.

b. No turf of any kind that requires watering shall be allowed in the front or back yard.

c. An Owner of a Lot shall install and thereafter use a drip irrigation system with a timer for shrubs and trees to apply water directly to the roots where and when it is needed. Watering schedules shall be adjusted each month to match seasonal weather conditions and landscape requirements.

d. Owners and occupants shall not water landscaping during periods of measurable rainfall or anytime within 48 hours afterwards.

Design Guidance

1. The goal of a successful landscaping plan is to mix native plants and shrubs in such a way to provide a pleasing aesthetic environment, natural fauna habitat and noise and light protection between neighboring properties. Plans submitted should reflect this intention.
2. Rows of trees or shrubs, especially those designed to block or shield a particular view are not permitted.

Plan Submittal and Review

1. Provide a sketch of the location and type of plants being used from the approved plant list.

Ventura Ranch Individual Lot Approved Plant List

Trees	
Silk Tree Mimosa	*Albizia julibrissin*
Western Hackberry	*Celtis reticulata*
Oklahoma Redbud	*Celtis canadensis 'Oklahoma'*
Eastern Redbud	*Cercis canadensis*
Desert Willow	*Chilopsis Linearis*
Purple Smoke Tree	*Continus coggygria*
Arizona Ash	*Fraxinus Velutina*
Alligator Juniper	*Juniperus deppeana*
One-Seed Juniper	*Juniperus monosperma*
Utah Juniper	*Juniperus Osteosperma*
Goldenrain Tree	*Koelreuteria paniculate*
Flowering Crabapple	*Malus spp.*
Bristlecone Pine	*Pinus Aristata*
Pinyon Pine	*Pinus Edulis*
Chinese Pistache	*Pistacia chinensis*
Velvet Mesquite	*Prosopis velutina*
Purple Leaf Plum	*Prunus cerasifera*
Staghorn Sumac	*Rhus Typhina*

Succulents, Cacti & Agave	
Century Plant	*Agave parryi*
Desert Spoon	*Dasylirion wheeleri*
Red Yucca	*Hesperaloe parviflora*
Beargrass	*Nolina Microcarpa*
Prickly Pear	*Opuntia sp*.
Yucca	Yucca Spp.

Shrubs	
Utah Serviceberry	*Amelanchier utahensis*
False Indigo	*Amorpha fruticosa*
Manzanita	*Arctostaphylos spp.*
Prairie Sage	*Artemisia ludoviciana*
Powis Castle	*Artemisia 'Powis Castle'*
Big Sagebrush	*Artemisia tridentata*
Butterfly Bush	*Buddleia davidii*
Turpentine Bush	*Ericameria laricifolia*
Bird of Paradise	*Caesalpinia gilliesii*
Blue Mist	*Caryopteris x clandonensis*
Deer Brush	*Ceanothus integerrimus*
Flowering Quince	*Chaenomeles speciosa*
Fernbush	*Chamaebatiaria millefolium*

Gray Rabbit Brush	*Ericameria nauseosa*
Mormon Tea	*Ephedra viridis*
Turpentine Bush	*Ericameria laricifolia*
Apache Plume	*Fallugia paradoxa*
Forsythia	*Forsythia x intermedia*
English Lavender	*Lavandula angustifolia*
Winter Honeysuckle	*Lonicera fragrantissima*
Tatarian Honeysuckle	*Lonicera tatarica*
Oregon Grape	*Mahonia aquifolium*
Mountain Ninebark	*Physocarpus monogynus*
Shrubby Cinquefoil	*Potentilla fruticosa*
Cistena Plum	*Prunus x cistena*
Nanking Cherry	*Prunus tomentosa*
Cliffrose	*Purshia mexicana*
Smooth Sumac	Rhus glabra
3-Leaf Sumac	*Rhus Trilobata*
New Mexico Locust	*Robinia neomexicana*
Trailing Rosemary	*Rosmarinus officinalis*
Rugosa Rose	*Rose rugosa*
Autumn Sage	*Salvia greggii*
Lavender Cotton	*Santolina chamaecyparissus*
Spanish Broom	*Spartium junceum*

Cool Season Grasses

Purple Three-awns & Varieties	*Aristida purpurea*
Blue Fescue	Festuca glauca
Mexican Feather Grass	*Nassella tenuissima*

Warm Season Grasses

Little Bluestern	*Andropogon scoparius*
Blue Grama	*Bouteloua gracilis*
Blue Oat Grass	*Helictrotrichon sempervirens*
Wolftail	*Lycurus phleoides*
Regal Mist Deergrass	*Muhlenbergia capillaris*
Bull Grass	*Muhlenbergia emerlysii*

Groundcovers & Vines

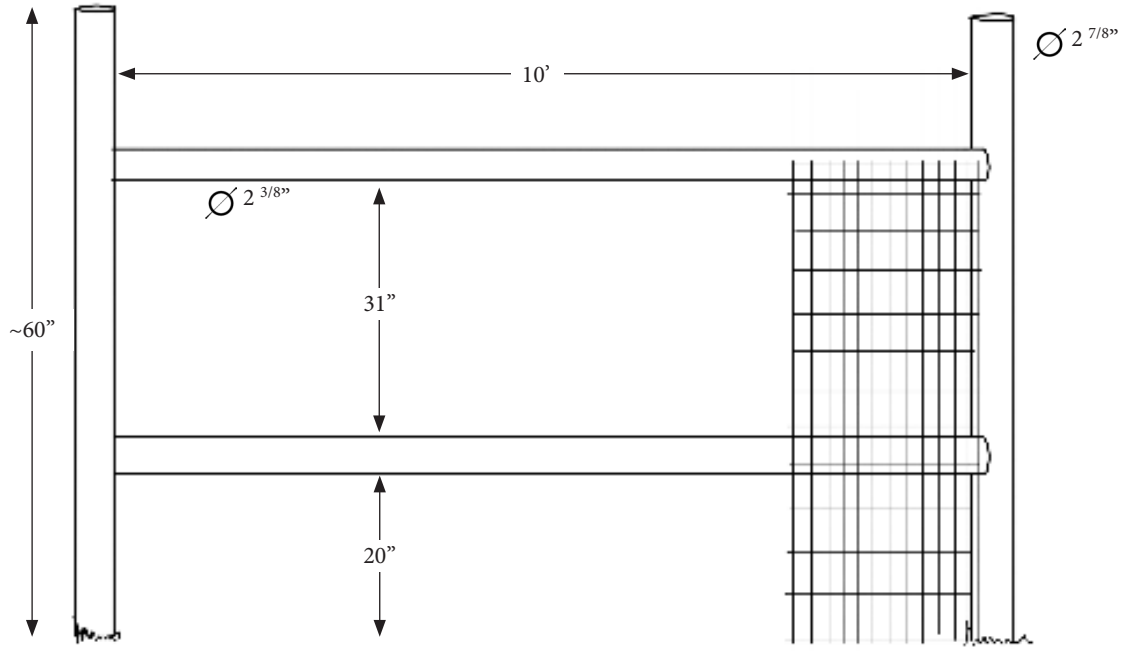
Carolina Jessamine	*Gelsemium sempervirens*
Winter Jasmine	*Jasminum nudiflorum*
Creeping Oregon Grape	*Mahonia repens*
Woodbine	*Parthenocissus inserta*
Virginia Creeper	*Parthenocissus quinquefolia*

Perennials

Texas Hummingbird Mint	*Agastache cana*
Butterfly Weed	*Asclepias tuberosa*
Chocolate Flower	*Berlandiera lyrata*
Spider Flower	*Cleome spinosa*
Coreopsis	*Coreopsis grandiflora*
Golden Coreopsis	*Coreopsis tinctoria*
Buckwheat	*Eriogonum spp.*
California Poppy	*Eschscholzia californica*
Blanker Flower	Gaillardia grandiflora
Snakeweed	*Gutierrezia sarothrae*
Daylilly	*Hemerocallis*
Coral Bells	*Heuchera sanguinea*
Bearded Iris	*Iris germanica*
Red Hot Poker	*Kniphofia uvaria*
Blue Flax	*Linum lewisii*
Mexican Evening Primrose	*Oenothera speciosa*
Firecracker Penstemon	*Penstemon eatoni*
Pineleaf Penstemon	*Penstemon pinifolius*
Rocky Mountain Penstemon	*Penstemon strictus*
Russian Sage	*Perovskia atriplicifolia*
Groundsel	*Senecio spp.*
Germander	*Teucrium chamaedrys*
Verbena	*Verbena rigida*
Dessert Zinnia	*Zinnia grandiflora*

Ventura Ranch Community Guidelines

Architectural Specification 001: Property Fencing



Fence Structure

1. Fence should have upright posts with an OD of 2 7/8” and horizontal rails with an OD of 2 3/8”.
2. Fence should have minimum 10-gauge vertical and 14-gauge horizontal components.
3. Fence should be welded and match the contours of the land as much as possible. For undulating land, lower rail shall be affixed 20” above ground level at each vertical post.
4. Existing fences shall take presedence along a lot border and where differences occur, the new fence shall tie in gradually and cleanly.
5. Fences can only be placed on property borders unless otherwise specified in the application. One fence structure must be shared between neighboring properties, unless otherwise specified in the application.
6. Fences needed to be capped with a welded metal plate.
7. Fence must be rusted steel pipe.
8. Fence post must be anchored with cement or aggregate mixture and must be countersunk and covered with minimum 2” of dirt.
9. Where fence intersects community structures such as gabions, fences, etc.; architectual committee approval required.

No-Climb Fencing (Optional)

1. No-climb must be galvanized. No coating or paint.
2. Cannot extend above or below the upper horizontal pipe segment.
3. Must be affixed to the interior side of the fence.
4. Is to be rectalinear in construction with 2” x 4” vertical rectangular openings (or similar).
5. May be countersunk below ground level or placed at ground level.
6. Where two neighbors share a fence, only one border of no-climb may be placed.

Application

1. Each instance of a new fence must be applied for to the Architectual Committee
2. Must include the following:

- Simple drawing showing fence path.
- Proposed fence contractor.
- Proposed pipe supplier & specification.
- Any requested deviations, ‘tie-in’s’ to existing structures (excluding standard neighboring fences) and potential conflicts.
- Location of Gate(s) (Note: Gate application may be combined with fence application.)

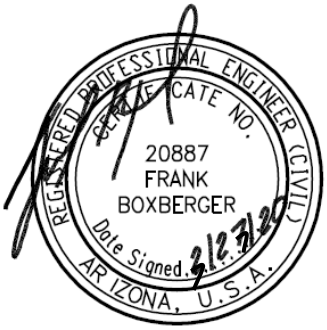
SUMMIT CIVIL GROUP

SCOTTSDALE, AZ 85255
602-725-0372
EMAIL: FRANK@SCGAZ.COM

Ventura Ranch Subdivision

PHASE III
DRAINAGE MASTER PLAN REPORT

FOR
Cravath Whole Life Communities, LLC
Scottsdale, AZ 85255



Yavapai County, AZ
Dated: March 2020

Prepared by:
FRANK BOXBERGER P.E.

WEB SITE: summitcivilgroup.com

Frank Boxberger P.E.
8707 E. Vista Bonita Dr. #145
Scottsdale, AZ 85255
602-725-0372
Email: frank@scgaz.com
Web site: http://www.scgaz.com/

March 23, 2020

Yavapai County Flood Control District
1120 Commerce Drive
Prescott, AZ 86305

RE: Ventura Ranch Phase III Master Plan Certification:

"This report and drainage plan for the Phase III drainage design of (Ventura Ranch Subdivision) was prepared by me (or under my direct supervision) in accordance with the provisions of the "Drainage Planning Submittal Requirements" of Yavapai County and other regulations of Yavapai County. I understand that Yavapai County does not, and will not, assume liability for the drainage facilities designed by others."

SIGNATURE:
Registered Professional Engineer
State of Arizona No 20887.

This report also contains a developer certification as follows:

David Cravath hereby certifies that the drainage facilities for Ventura Ranch Subdivision shall be constructed according to the design presented in this report. I understand that Yavapai County does not, and will not, assume liability for the drainage facilities designed and/or certified by my engineer, and that Yavapai County reviews drainage plans pursuant to the Arizona Revised Statutes, Chapter 21, Article 1, §48-3601 to §48-3628; but cannot, on behalf of (Ventura Ranch Subdivision), guarantee that final drainage design review will absolve David Cravath and/or their successors and/or assigns of future liability for improper design. I further understand that approval of the Final Plat does not imply approval of my engineer's drainage design."

SIGNATURE:
Name of Developer
Signature
David Cravath

Sincerely,
Frank Boxberger , P.E., Summit Civil Group

TABLE OF ONTENTS

APPENDICES

DRAINAGE REPORT

I. GENERAL LOCATION AND DESCRIPTION

A. Location

The property is located in Section 17, T15N R1E. in Yavapai County, Arizona. The Project, also known as Ventura Ranch, is a Master Planned Community which has been owned and developed during the last two decades. Presently, some development activities have occurred and have been completed. More specifically is the construction of the Loop roadway and the construction of several homes within the center of the Project. Construction (Phase 1) is entirely contained in the west half and southeast quarter of the section. (see Appendix A, Vicinity Map). Construction Phase 2 includes the remaining lots as shown.

The most significance works has been the subdividing of the property into parcels and the construction of a loop road through the property to accommodate access for the large parcels previously developed. Some of these master parcels have been sold and at the time of this report the parcel numbers included in the total development are parcel numbers 401-01-228, 229, 230, 233, 236, 237, 238, 239, 240, and 241. These parcels are all within the un-subdivided lands of Ventura Ranch. The parcels most affected by this Phase 1 portion of the project are 401- 01-228, 229, 230, 233, 236 and part of 237.

Currently, there are no publicly maintained roads within the subject property. The nearest public road is Coyote Springs Road approximately 1-1/4 miles to the west of Ventura Ranch. Access to the development is via private roads Pronghorn Lane and Crimson Canyon Road with an emergency access to the adjacent Glideport property.

There are no identified FEMA Special Flood Hazards or existing drainage facilities within the subject property. The entire property is located in FIRM 04025C1725G, effective on 09/03/2010. See Appendix B. Flow existing this site drains to the Lonesome Valley Wash Tributary 360 as shown.

The property is generally bounded by vacant State Trust Lands on all four sides. Existing developments nearby include Coyote Springs to the NW, Lonesome Valley to the SW, Prescott Ridge to the NE, and Coyote Crest to the SE.

The proposed project is intended to subdivide the land into 2 acre residential parcels per the current RCU-2A zoning. Proposed improvements include improved roads and drainage facilities such as culverts or at grade crossings.

This report is completed for the master Plan for the 380 acre master planned community. This 1st phase of the project is comprised of 96 lots located on 194 acres in parcels A, B, C, F and G. These improvements will include water system installation, paving improvements to the existing Pronghorn Lane, Crimson Canyon Road and Ventura Way loop road in the development and extension of the electric facilities to each of the proposed lots, grading and paving of new roads to provide access to the lots.

The Purpose of this Phase III Master Plan Drainage report is to demonstrate the designs presented will protect the roadways within project from major storm events without impacts to adjacent lands. This report presents a detailed drainage analysis of proposed hydraulic structures for the project which are reflected in the Improvement Plans. This includes a hydraulic analysis of the existing and proposed conditions for the project. Flood prone areas have been delineated and proposed roadway structures have been designed to convey the 100 Year event storm. Additionally, this report and plans identify the locations of check dams to be placed throughout the project along the roadways to capture the "First Flush" requirements and mitigate roadway pollutants. The entrance to Ventura Ranch remains via Pronghorn Lane and Crimson Canyon Road from Sheep Springs Road to the entrance of the community. The roads to the entrance are local private roads constructed in easements through adjacent communities and are separate not a part of this Phase III Drainage Master.

B. Description of Project

Currently, the subject property is comprised of 10 parcels of approximately 374 acres. For the purpose of construction, the project is to be phased, Phase 1 construction consists of 112.1 acres and Phase 2 construction includes 87.3 acres. These phases are clearly defined on the improvement plans indicating the construction limits and associated lots.

The existing vegetative cover consists predominantly of native grasses and forbs characteristic of Upland Rangeland, with small scattered brush and a few trees on the slopes of the foothills on the east side of the property. For hydrologic purposes, the natural vegetation is considered to be in "fair" condition. The site generally drains from east to west with slopes in the prairie portion in the 2% to 6% range, and slopes in the foothills ranging up to about 25%-35%. The soils on the property include gravelly loam, gravelly sandy loam, and cobbly sandy loam.

There is one well-defined major drainage way which enters the site which drains westerly into the Lonesome Valley Wash tributary 360. This primary drainageway or "Main Stream" has been analyzed and will remain undisturbed as much as practical. However, the existing loop road currently bifurcates historic flow patterns and thus a series of structures and channels is proposed to convey flow to its natural discharge point. Additionally, there are a series of numerous small drainage paths draining from east to west across the property, which are identified as part of the project. Drainage Easement are placed where drainage structural improvements in proposed.

Currently, there are no existing irrigation facilities on or nearby the subject property. There was a former stock pond near the east side of the property, however it has been compromised and graded to drain.

Historically, the property was undeveloped and used only as cattle rangeland. Currently, Ventura Ranch has developed several home sites on the Loop Road. The central Loop road for the development was constructed using a chip seal method similar to the other proposed roadways. However, following the

construction of drainage facilities, the developer plans to pave the Loop Road to create an improved roadway collector for the development.

II. DRAINAGE BASIN AND SUB-BASIN

A. Major Basin Descriptions

There are two previous studies which have been prepared for the project. These studies consist of the preliminary studies by 6K Consulting LLC and Dubroy Engineering, LLC. These two studies have been evaluated, reviewed and incorporated into this document as applicable to the master plan drainage system and floodplain analysis. Floodplain delineations in this drainage report for the major basins are evaluated for the 100 year event storm. This report presents design of the major roadway crossing structures within the project, this includes both construction Phases 1 and 2. Additional detailed final design calculations will be conducted and provided in supplemental drainage reports for each Phase of the final construction documents as required.

The major tributary drainage basin includes an offsite area of approximately 120 acres that flows onto the subject property at several locations along the eastern boundary. There is one discernible wash near the southeastern entry point, but most off site flow enters the subject property as shallow concentrated flow or in small discontinuous rivulets.

The onsite portion of the major basin has some discernible wash areas, but wherever the onsite flow paths are discontinuous the storm water runoff spreads out into shallow concentrated flow where no channels exist. Storm water runoff generally leaves the site as shallow concentrated flow. All significant flow pathways entering and exiting the site will be evaluated as needed for the proposed subdivision. Hydraulic structures shall be designed to ensure that flows exiting the site shall do so without impacting adjoining land.

The soils within the major basin consist of four different soil types with Hydrologic Soil Group Classifications of B, C, and D. see Appendix C for the soils map and Appendix F for the soils report.

Presently, there are no known irrigation or detention facilities in the watershed which will directly affect or be affected by the proposed project. However, there are dirt roads that cross the property that exhibit signs of long term diversion and erosion that occurs within them. The impacts are relatively small but discernable. The dirt road will be abandoned and not utilized as the property is developed and lots sold for homes.

The rural and low density nature of the property lends itself to having little retention required as an overall master planned community. The lot owners will be required to provide engineered retention basins on each lot to accommodate the volume determined on each lot using a pre. vs post methodology to determine the impact of improvements on drainage. Individual lot grading shall be engineered to ensure no increase in flow rate or impact to the downstream properties.

B. Sub-Basin Description

The sub-basins within the site have the same characteristics as the overall major basin. Site runoff historically flows from east to west across the property as shallow concentrated flow and in small discontinuous washes (see Appendix C). Existing flow paths may be braided or split in multiple directions during larger storm events due to lack of well-defined channels for much of the property. The proposed condition will have graded roads with adjacent ditches to capture and direct the runoff. These roads are generally located and designed to minimize the impact to the existing drainage patterns. There will be some impact where structures are provided under roads. First flush volumes have been provided in by a series stone check dams placed along the roadways to capture pollutants. Check dam spacing is a function the roadway slope and spaced within a 2 wide ditch placed on the low side of the roadway. See spacing criteria in Appendix D.

Offsite flows entering the site and discharge points at the downstream end will remain the same. The offsite drainage area is relatively small compared to the onsite drainage area. To mitigate hydraulic impacts to adjacent lands Stilling Basins are proposed to dissipate energy and reduce velocities to existing conditions at the downstream property line.

Storm water quality during the construction phase will be handled in conformance with the current Arizona Department of Environmental Quality Construction General Permit (AZPDES).

III. DRAINAGE DESIGN CRITERIA

A. General Concept and Compliance

The proposed master planned drainage facilities are shown in the Appendix and indicate the approximate location, size, length and flow rate for each culvert crossing. The structures shown consist of pipes and box culverts necessary to convey the 100 Yr. flows without inundating or over-topping the roadways. Riprap channels of various dimensions are designed to convey flows between culverts, only as needed. Existing areas of concentrated flow in natural channel and ditches shall remain undisturbed as much as practical. These existing natural drainages shall remain undisturbed and within easements which have been placed accordingly. Any modification to these natural drainageways not indicated on this Master Plan shall be engineered accordingly and approved in conjunction a separate development plan. been .

The intent the design to not disturb the existing drainage patterns, and if so as little as possible while still providing adequate roadway access to the proposed lots. The drainage design and improvements will be in accordance with the Drainage Design Manual for Yavapai County with the variance that most roadway drainage crossings will be surface crossings without culverts. Culverts will be required for driveways where ditches prevent access to a lot.

Access roads (Pronghorn Lane and Crimson Canyon Road) leading into the development are already improved and completed with all-weather surfaces. Significant improvements are also completed along the majority of Pronghorn Lane from Coyote Springs to Covered Wagon in April and May 2019.

B. Hydrologic Criteria and Results

The rainfall for the area was generated from NOAA Atlas 14 and is included in Appendix D. The analysis of the existing conditions with the loop road has been analyzed and the runoff for the various storms have been calculated. The rational Method is used for all drainage areas totaling less than 160 acres. The County recommended method for calculating storm water flows for large areas is utilized for the larger basin calculations.

Detention and storage calculations will be quantified using V=PCA
Where: V=Volume (ac-ft)

P= Precipitation for 100 yr, 2 hr storm (ft)

C= Runoff Coefficient (from Drainage Design Manual) A= Area (ac)

Individual lot retention is required and thus mitigating downstream impacts from increased runoff. Sizing calculations for roadside ditches, culverts and related components are included in the Appendix for the proposed significant structures. The structure designs shown herein shall be refined in conjunction with Final Improvements Plans for construction phases 1 and 2. Individual Lot Grading Plans and Drainage Reports shall be responsible to size any small structures within defined easements shown. The easements shown indicate where flows are generally concentrated and may be subject to modifications as a function of the approved development. The culverts for the development have been designed to pass a 100 year event storm to minimize flood risk to developed lots. Wet crossings of the streets will be designed to pass the 100 year flows at less than 1 foot deep over the street.

Storm water detention/retention is not anticipated at this time for this development since the minimum lot size will remain at the current zoning level of 2 acres. Lot retention shall be designed to capture a slightly greater runoff volume to offset the roadway surfaces volumes not captured. Thus, it is not currently proposed to capture the roadway runoff individually however, The check dams and ditches shown are designed to capture the "First Flush" from the roadways. Additional storage volume for the roadway runoff volume is provided within the proposed Stilling Basins along the west property line. Details of the Stilling Basins Shall be provided with the Final Improvement Plans for Phase "1". The Hydrologic calculations for the development are located in Appendix D

C. Hydraulic Criteria

The design for the roadside drainage shown in the improvement plans includes a

2 foot wide flat bottom ditch along the low side of a 2% cross slope roadway. This concept allows all pavement "First Flush" drainage to directly into the ditch. The check dams include a 1 foot designed weir depth which is easily maintainable for cleaning. The channel designed to have 3:1 sides with a depth of 24". The check dam spacing is based on a 20 foot wide impervious surface and a 0.5 inch of rainfall. These parameters generated various spacing requirements for various slopes. Finally, the parameters resulted in spacing which has been applied to the many check dam locations. The Table shown below represents values applied to the design.

Roadway Percent slope	Max. Required Check Dam spacing
1%	400
2%	200
3%	150
4%	100
5%	100
6%	75
7%	50
8%	50
9%	40
10%	40

Final improvement plans shall review and refine the locations of all check dams as needed to ensure best management practices are employed and maintained.

The hydraulic analysis of the Master Planned drainage systems for Ventura Ranch was conducted using the Corp of Engineers software HECRAS Version 5.0.7. This program is Approved and capable of interfacing with Cadd programs to develop flood inundation boundaries as required for a project of this nature. In addition, HECRAS has been used to develop the recommended hydraulic structures and the design for this project. The results of the analysis are contained in the Appendix.

IV. DRAINAGE FACILITY DESIGN

A. General Concept

The drainage concept for Ventura Ranch is protect the roadways and lots to the maximum extent practicable from flooding while maintaining the drainage patterns and not impacting adjacent land.
Historically, runoff from the upper drainage patterns flowed across the property mainly as unconcentrated sheet flow. However, in the past the drainage was compromised by the construction of the loop road which has change those historic patterns by concentrating flows in the roadway. As shown by the existing floodplain analysis the current inundation of the Loop roadway does not impact adjoining lands. The drainage concept presented shows a series of structures and

channels which are designed to convey flows from off-site to the natural drainage outlet along the westerly property line. Flow Rates used in this study were calculated using the Rational Method, where possible with smaller drainage areas and using HEC methods for the larger areas (Basin 16). The hydrologic evaluation of the watershed contained in this report was developed by K6 Consulting LLC which has been reviewed and accepted as the best available data to develop the master drainage plan. As shown, the inundation boundaries were developed for flow rates of 50 cfs or greater. Drainage easements are proposed for these inundation areas and the series of hydraulic structures and channels proposed.

B. Specific Details

The proposed alignments of roadways, and the lot locations shown was established during the pre-plat phase of the project. As designed and oriented , the streets have minimal impact on the overall design of proposed hydraulic systems. As required, this drainage master plan presents the significant drainages and proposed structures to convey runoff, as required.

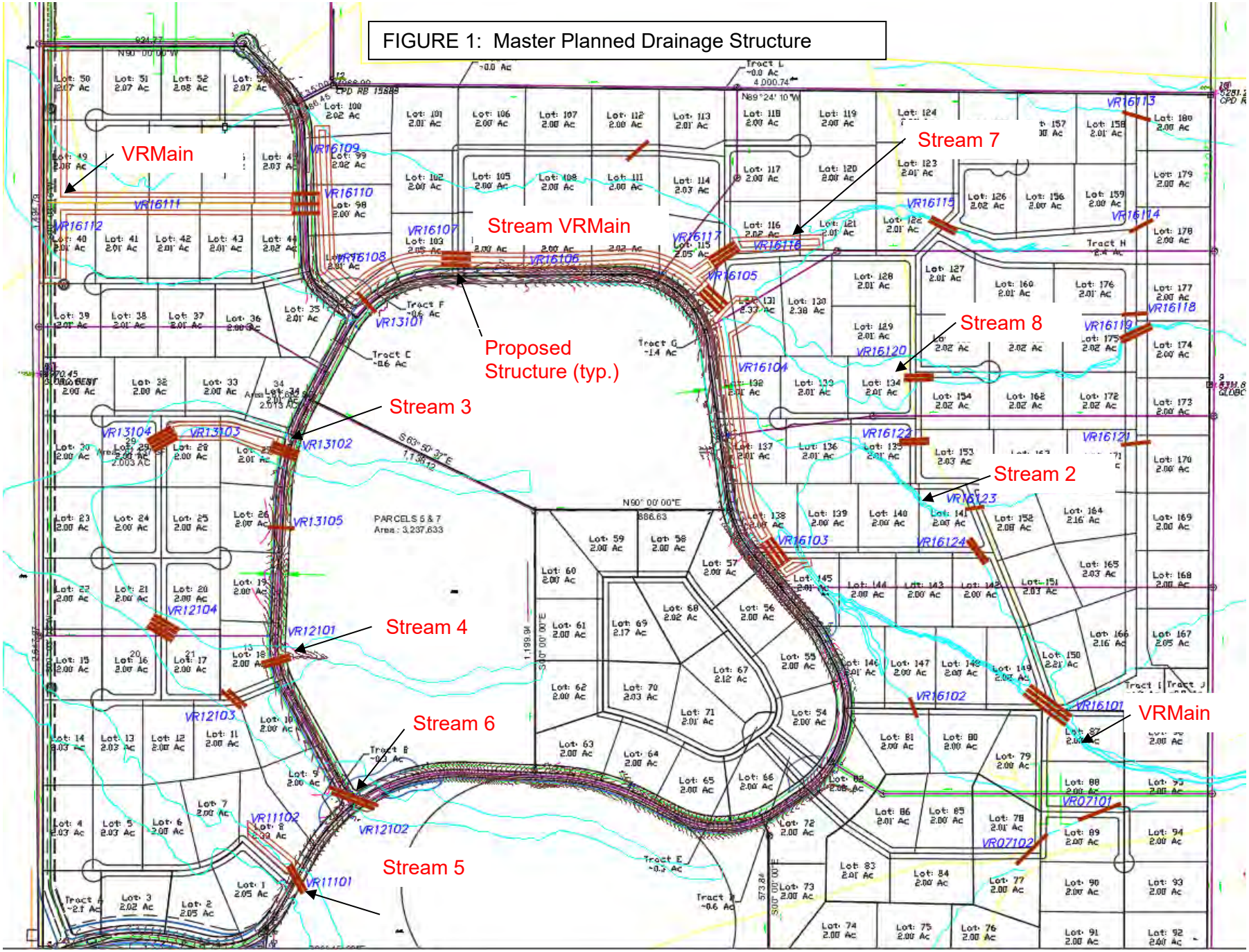
As shown on Figure 1, the major drainages consist of 8 streams which have been evaluated for inundation and design of structures. The Main Stream crossing the site has its origins in the mountain east of the site. This Main drainage also has three other streams which drain into it prior to flows exiting the site. In addition, 4 other drainages were evaluated to determine inundation limits, establish easements and to design structures. The structures sizes, locations final inverts of structures shall be subject to final design changes as required to optimize the design. Structures shown and Coded in Blue demonstrate that the feasibility of this drainage concept is suitable for consideration in final design.

The hydraulic analysis for both the existing and proposed conditions are provided in the Appendix. The designs shown in this analysis account for channel freeboard in super-critical flow and at curved channel sections. Riprap Calculations are provided in the Appendix.

During construction runoff water quality impacts will be mitigated using the AZPDES program administered by ADEQ and temporary best management practices will be employed.

Structures shown on Figure No. 1 are schematic in nature and not to scale, refer to improvement plans for details.

FIGURE 1: Master Planned Drainage Structure



Master Planned Structure Table No. 1

PHASE	Structure Code	Description	Approx Len (ft)	Q100 CFS
Ph1	*VR11101*	3-42" CMP Culvert	40	135
Ph1	*VR11102*	10' bottom, 3:1 ss, Riprap D50 8"	250	135
Ph1	*VR12101*	2-48"" CMP Culvert	40	123
Ph1	*VR12102*	4-30" CMP Culvert	80	115
Ph1	*VR12103*	4-30" CMP Culvert	40	115
Ph1	*VR12104*	2-4'x6' CMP Culvert	40	238
Ph1	*VR13101*	2-30" CMP Culvert	40	50
Ph1	*VR13102*	3-42" CMP Culvert	40	135
Ph1	*VR13103*	10' bottom, 3:1 ss, Riprap D50 8"	460	135
Ph1	*VR13104*	3-42" CMP Culvert	40	135
Ph1	*VR13105*	1-30" CMP Culvert	40	17
Ph1	*VR16101*	2- 4' x 6' reinforcred box culverts	80	288
Ph1	*VR16102*	1-24" CMP Culvert	40	12
Ph1	*VR16103*	2- 4' x 6' reinforcred box culverts	50	339
Ph1	*VR16104*	20' bottom, 3:1 ss, Riprap D50 8"	1060	453
Ph1	*VR16105*	2- 4' x 10' reinforcred box culverts	50	567
Ph1	*VR16106*	20' bottom, 3:1 ss, Riprap D50 8"	1080	663
Ph1	*VR16107*	3- 4' x 8' reinforcred box culverts	50	663
Ph1	*VR16108*	20' bottom, 3:1 ss, Riprap D50 8"	1080	778
Ph1	*VR16109*	6' bottom, 3:1 ss, Riprap D50 6"	200	113
Ph1	*VR16110*	3- 5' x 8' reinforcred box culverts	50	845
Ph1	*VR16111*	30' bottom, 3:1 ss, Riprap D50 8"	1080	845
Ph1	*VR16112*	Energy Disipator	500	947
Ph1	*VR07101*	1-24" CMP Culvert	60	18
Ph1	*VR07102*	1-24" CMP Culvert	60	18
Ph2	*VR16113*	1-24" CMP Culvert	40	20
Ph2	*VR16114*	1-24" CMP Culvert	40	15
Ph2	*VR16115*	1-36" CMP Culvert	60	54
Ph2	*VR16116*	10' bottom, 3:1 ss, Riprap D50 8"	340	96
Ph2	*VR16117*	3-42" CMP Culvert	60	96
Ph2	*VR16118*	1-24" CMP Culvert	40	15
Ph2	*VR16119*	2-30" CMP Culvert	50	46
Ph2	*VR16120*	2-48" CMP Culvert	40	90
Ph2	*VR16121*	1-24" CMP Culvert	40	18
Ph2	*VR16122*	2-24" CMP Culvert	40	38
Ph2	*VR16123*	1-24" CMP Culvert	40	15
Ph2	*VR16124*	2-48" CMP Culvert	50	114

Codes shown on the above table and flow rates relate to Figure No. 1 along with the structure sizes and approximate lengths. Refer to Improvement plans for length and for details of location

Roadway drainage and future lot drainage shall be designed to drain to natural outlets and or structures provided. Residential structures shall be designed to be free from inundation from the 100 Year event and a minimum of 1 foot above the adjacent base flood elevation or retention pond elevation.

V. CONCLUSIONS

A. Compliance With Standards

The proposed roads are intended to follow the guidelines in the Drainage Design Manual for Yavapai County. The future construction of homes will require more engineering for each lot as the homes are anticipated to be semi-custom or custom homes. If constructed in accordance with the concepts and plans presented in this report, the project should provide infrastructure that meets the intent, goals and guidelines presented in the Yavapai County design materials.

B. Drainage Plan

The storm water runoff in this low density development will be concentrated in areas by virtue of adding streets and development. These points of concentrated flow shall be perpetuated to the maximum extent practicable and returned to shallow unconcentrated flow. The FIRM for the area shows the swales located downstream of the property about ½ mile having flow depths of 1' and 1.25' for the 100 year conditions. As shown herein flow depths are approximately similar with an average1 depth of 1 foot in the existing condition at the west property line. These design conditions will allow for development that will not have detrimental impact to the onsite or downstream properties.

VI. REFERENCES

Yavapai County Flood Control District, Drainage Design Manual for Yavapai County, July 2015

Natural Resources Conservation Service, Soil Survey of Yavapai County, Arizona, Western Part, Version 9, September 2017

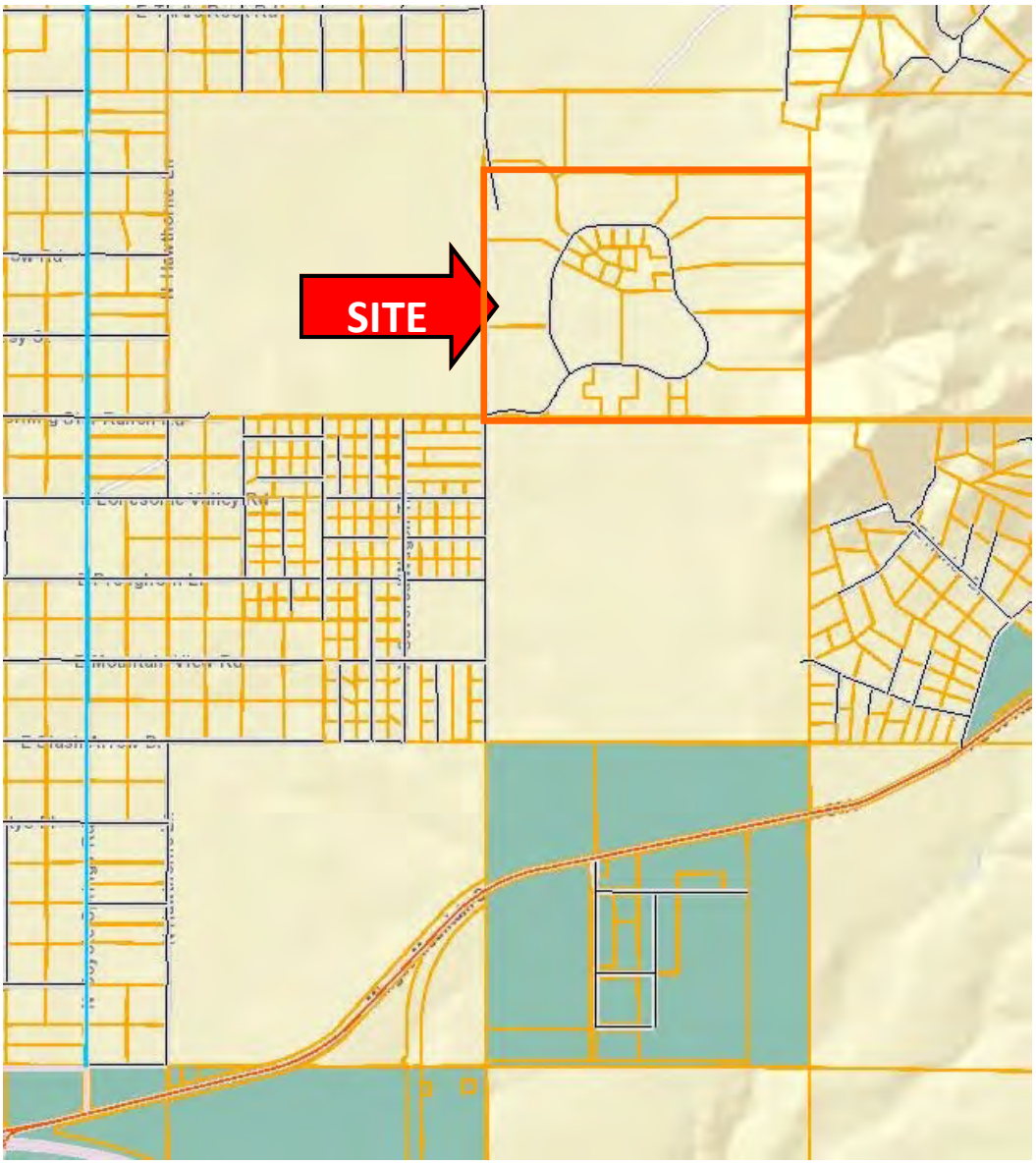
APPENDIX A

STATE MAP

Ventura Ranch		
PROJ: #180701	Cravath Whole Life Communities, LLC	**CITY: None**
DRAFTED: CB		**COUNTY: Yavapai**
DATE: Feb 2019		**STATE: AZ**

VICINITY MAP

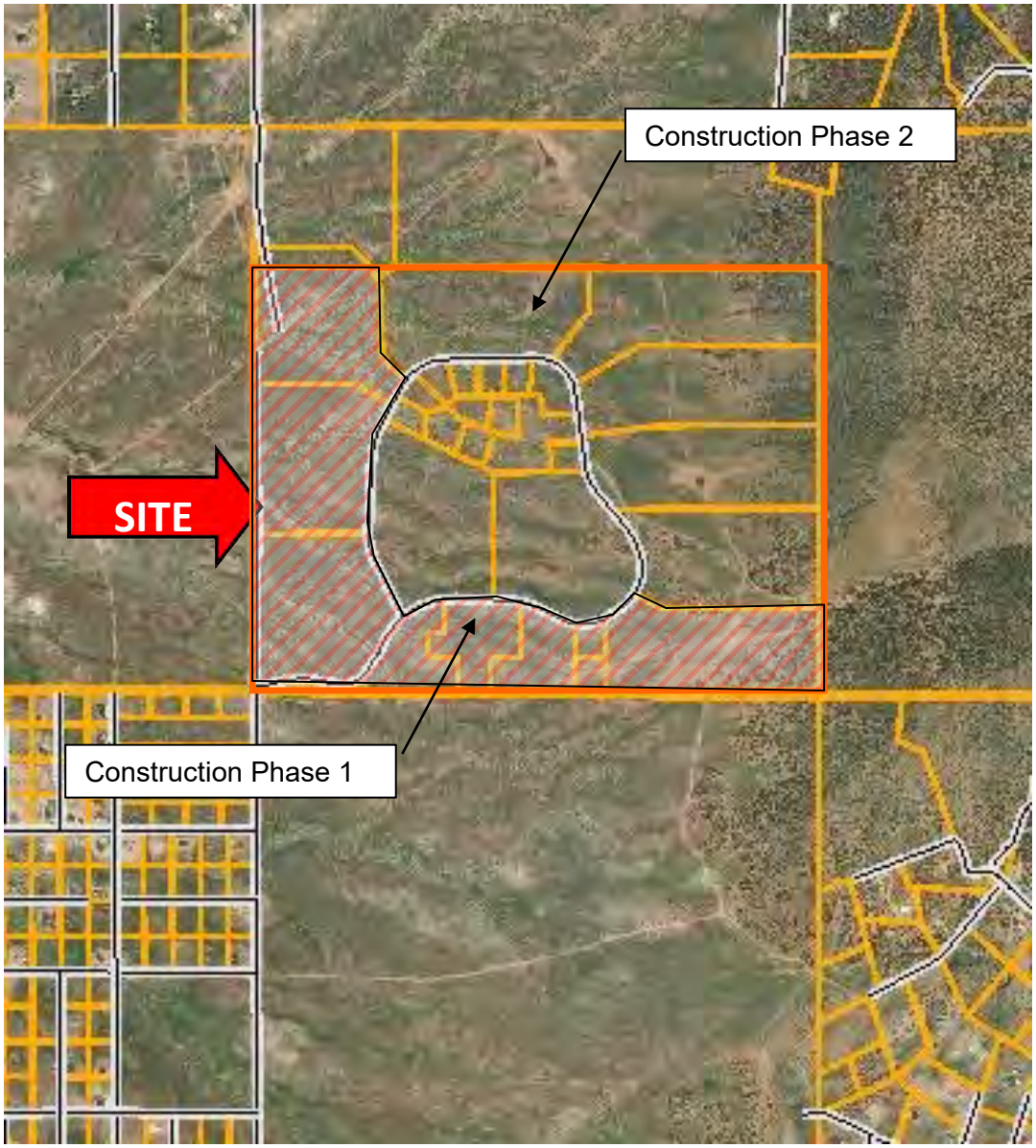
STREET MAP



Ventura Ranch		
PROJ: #180701	Cravath Whole Life Communities, LLC	**CITY: None**
DRAFTED: CB		**COUNTY: Yavapai**
DATE: Feb 2019		**STATE: AZ**

VICINITY MAP

AERIAL MAP



Ventura Ranch		
PROJ: #180701	Cravath Whole Life Communities, LLC	**CITY: None**
DRAFTED: CB		**COUNTY: Yavapai**
DATE: Feb 2019		**STATE: AZ**

APPENDIX B

Flood Insurance Rate Map

NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations shown on this map apply only landward of 0.0 North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 12. The **horizontal datum** was NAD 83, GRS80 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, NINGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242**, or visit its website at http://www.ngs.noaa.gov.

Base map information shown on this FIRM was provided by Yavapai County. This data, produced in 2003, was provided in digital format at a scale of 1:12,000.

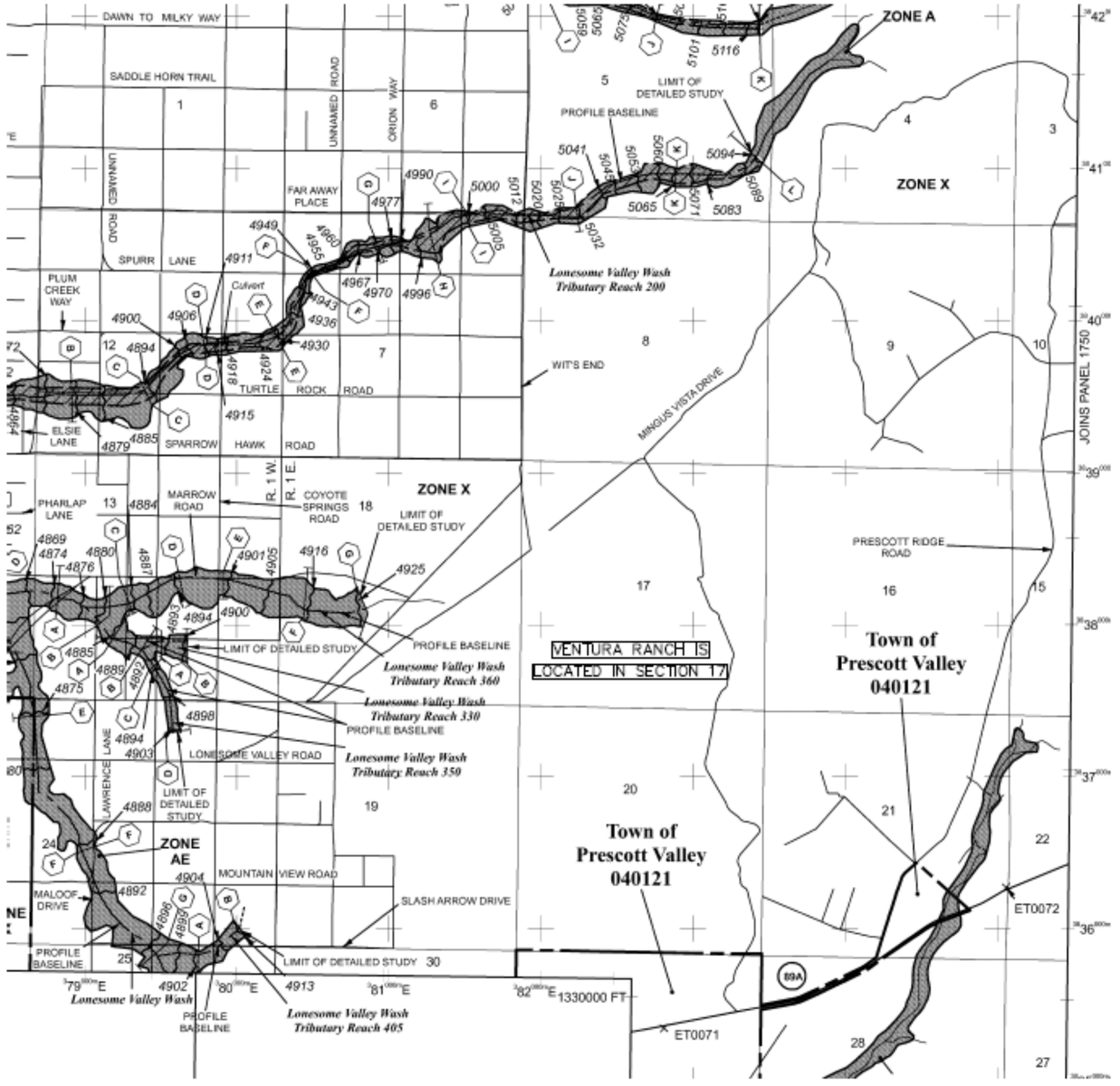
This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://www.fema.gov/msc.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- **ZONE A** No Base Flood Elevations determined.
- **ZONE AE** Base Flood Elevations determined.
- **ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- **ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- **ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- **ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- **ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- **ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

- **ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

- **ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- **ZONE D** Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

- Floodplain boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Limit of Moderate Wave Action
- 513 — Base Flood Elevation line and value; elevation in feet*
- (EL. 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

- A — A — Cross section Line
- 23 — 23 — Transect line
- 87°07'45", 32°32'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
- 4276000mN — 1000-meter Universal Transverse Mercator grid values, zone 12N
- 600000 FT — 5000-foot grid values: Arizona State Plane coordinate system, Central zone (FIPSZONE 0202), Transverse Mercator projection
- DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
June 6, 2001

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
September 3, 2010 - to update corporate limits, to change Special Flood Hazard Areas, to update roads and road names, and to incorporate previously issued Letters of Map Revision.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1725G

FIRM
FLOOD INSURANCE RATE MAP

YAVAPAI COUNTY, ARIZONA
AND INCORPORATED AREAS

PANEL 1725 OF 3900

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CHINO VALLEY, TOWN OF	040884	1725	G
PRESCOTT VALLEY, TOWN OF	040121	1725	G
YAVAPAI COUNTY	040093	1725	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
04025C1725G

MAP REVISED
SEPTEMBER 3, 2010

Federal Emergency Management Agency

VENTURA RANCH
VENTURA WAY
YAVAPAI COUNTY, AZ

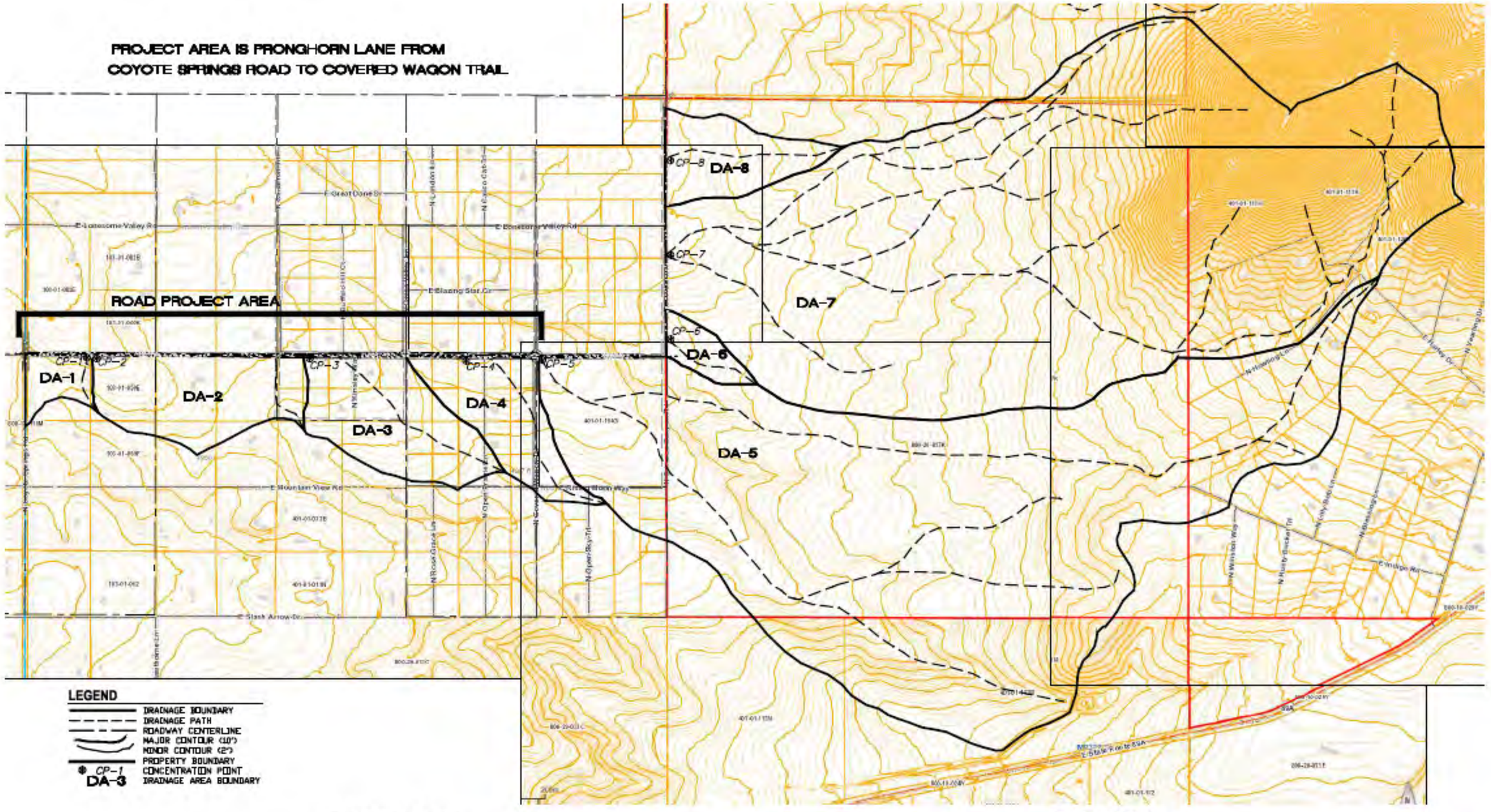
FEMA FIRM

PROJ. No.:	150B2	6K CONSULTING L.L.C.	
DATE:	MAY 2015		
SCALE:	NTS		
DESIGNED:	BK	DRAWN:	KK
APPROVED:	CHB		
REV:		DRAWING NO.	
		FIRM	
		SHT. 1 OF 1	

APPENDIX C

DRAINAGE STUDY EXHIBITS

- Entry Road Existing Condition Drainage Map
- Onsite Existing Condition Drainage Map
- Proposed Condition Drainage Map
- Soils Map with Lot Layout



LEGEND

- DRAINAGE BOUNDARY
- DRAINAGE PATH
- ROADWAY CENTERLINE
- MAJOR CONTOUR (10')
- MINOR CONTOUR (2')
- PROPERTY BOUNDARY
- ⊕ CP-1 CONCENTRATION POINT
- DA-3 DRAINAGE AREA BOUNDARY

VENTURA RANCHES DRAINAGE INFORMATION
PRONGHORN LANE IMPROVEMENTS

AREA ID	AREA (ac)	LENGTH (ft)	ELEVATIONS UP	ELEVATIONS DOWN	SLOPE (%)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
1	8.84	699	4,945	4,880	2.3%	16	22	34
2	38.41	2,777	4,967	4,890	1.4%	68	95	146
3	39.88	2,415	4,891	4,855	1.5%	72	100	151
4	29.49	2,290	4,945	4,861	1.5%	53	74	112
5	408.04	8,938	5,230	4,967	2.9%	448	1,018	1,555

ENGINEER'S NOTES

1- THE FOCUS OF THIS EFFORT IS TO DEFINE THE DRAINAGE IMPACTS ON THE EXISTING PRONGHORN LANE.
2- THE GOAL IS TO IDENTIFY AND REDESIGN THE DRAINAGE INFRASTRUCTURE FOR THE ROADWAY IMPROVEMENTS.
3- DRAINAGE AREAS 6-8 DO NOT IMPACT THE PROJECT AREA AND ARE NOT DETAILED HERE, ONLY SHOWN FOR REFERENCE.
4- THE ROADWAY IS PRIVATE AND WILL REMAIN AS SUCH.
5- THE ROAD SHOULD HAVE 20' OF PAVEMENT WIDTH WITH AT LEAST 2 FEET (4' PREFERRED) OF SHOULDER WIDTH WHEN THE IMPROVEMENTS ARE COMPLETED.
6- SIDE DITCHES SHOULD BE CUT 2' DEEP WITH 2:1 SIDES WHERE POSITIVE DRAINAGE AWAY FROM THE ROAD DOES NOT OCCUR.
7- THE SHOWN CONCENTRATION POINTS ARE LOCATIONS WHERE CULVERTS UNDER THE ROAD ARE OR SHOULD BE LOCATED.
8- THE SHOWN CONTOURS ARE FROM THE YAVAPAI COUNTY GIS WEBSITE AND ARE 2' CONTOUR INTERVALS. THEY COINCIDE WITH THE INFORMATION OBTAINED BY THE SURVEYOR WITHIN 2-3 FEET WHICH IS SUFFICIENTLY CLOSE TO BE USED FOR THE DRAINAGE ANALYSIS.

SHEET INDEX

500 250 0 500 1000
SCALE FEET

ENGINEER:
6K CONSULTING, LLC
4858 E BASELINE RD
SUITE 101
MESA, AZ 85206
(480) 664-8592
CONTACT: CARL BLOOMFIELD

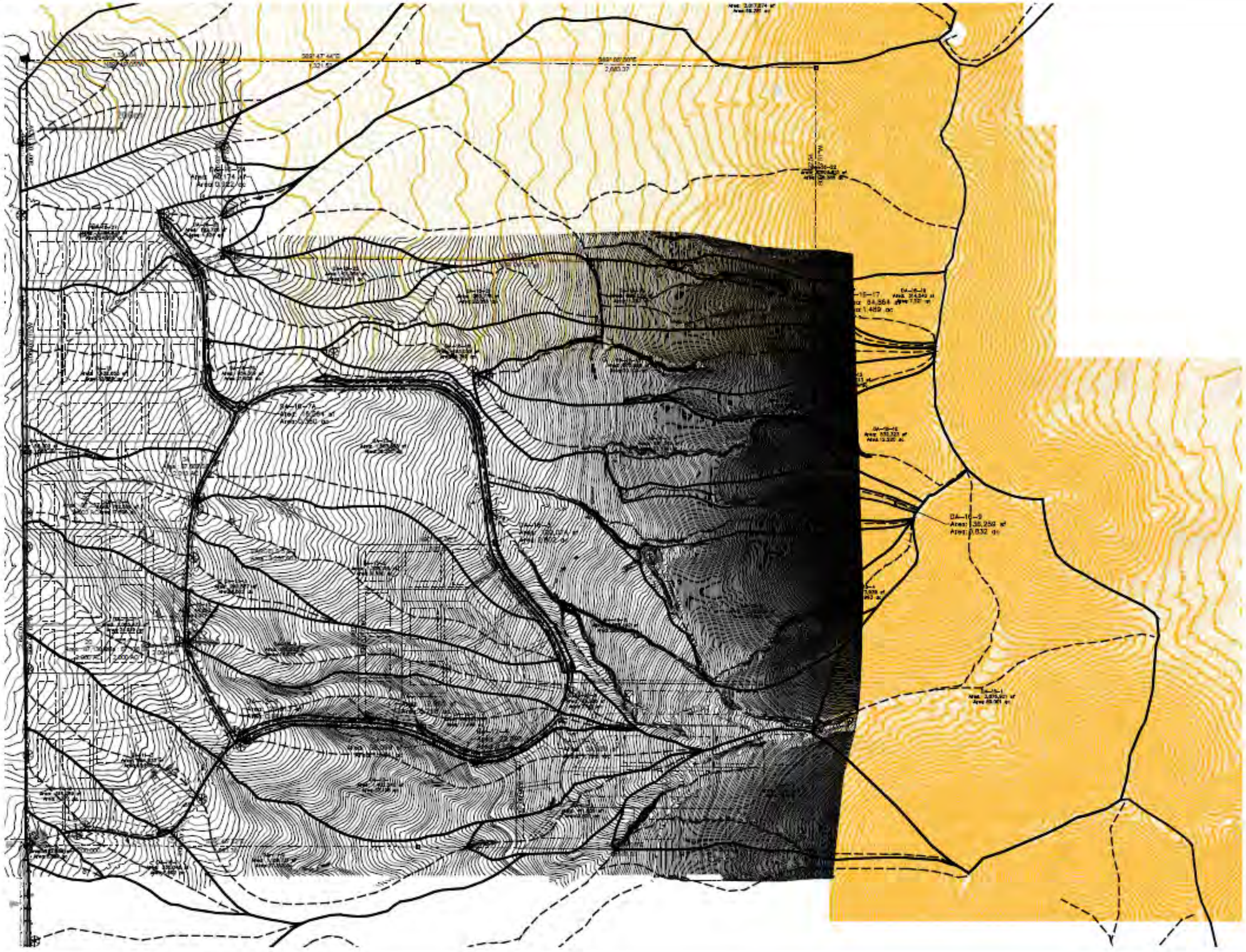
30627 CARL H. BLOOMFIELD ARIZONA U.S.A.
EXPIRES 9/30/2019

VENTURA RANCHES ACCESS ROAD

PRONGHORN LANE
YAVAPAI COUNTY, AZ

DRAINAGE AREA EXHIBIT

PROJ. No.: 18082		6K CONSULTING L.L.C.
DATE: SEPT 2018		
SCALE: 1"=500'		
DESIGNED: 6K	DRAWN: 6K	APPROVED: CHB
REV.		DRAWING NO. DR-01
		SHT. 1 OF 4



300 150 0 300 600
SCALE FEET

VENTURA RANCH

VENTURA WAY
YAVAPAI COUNTY, AZ

DRAINAGE MAP - EXISTING CONDITIONS

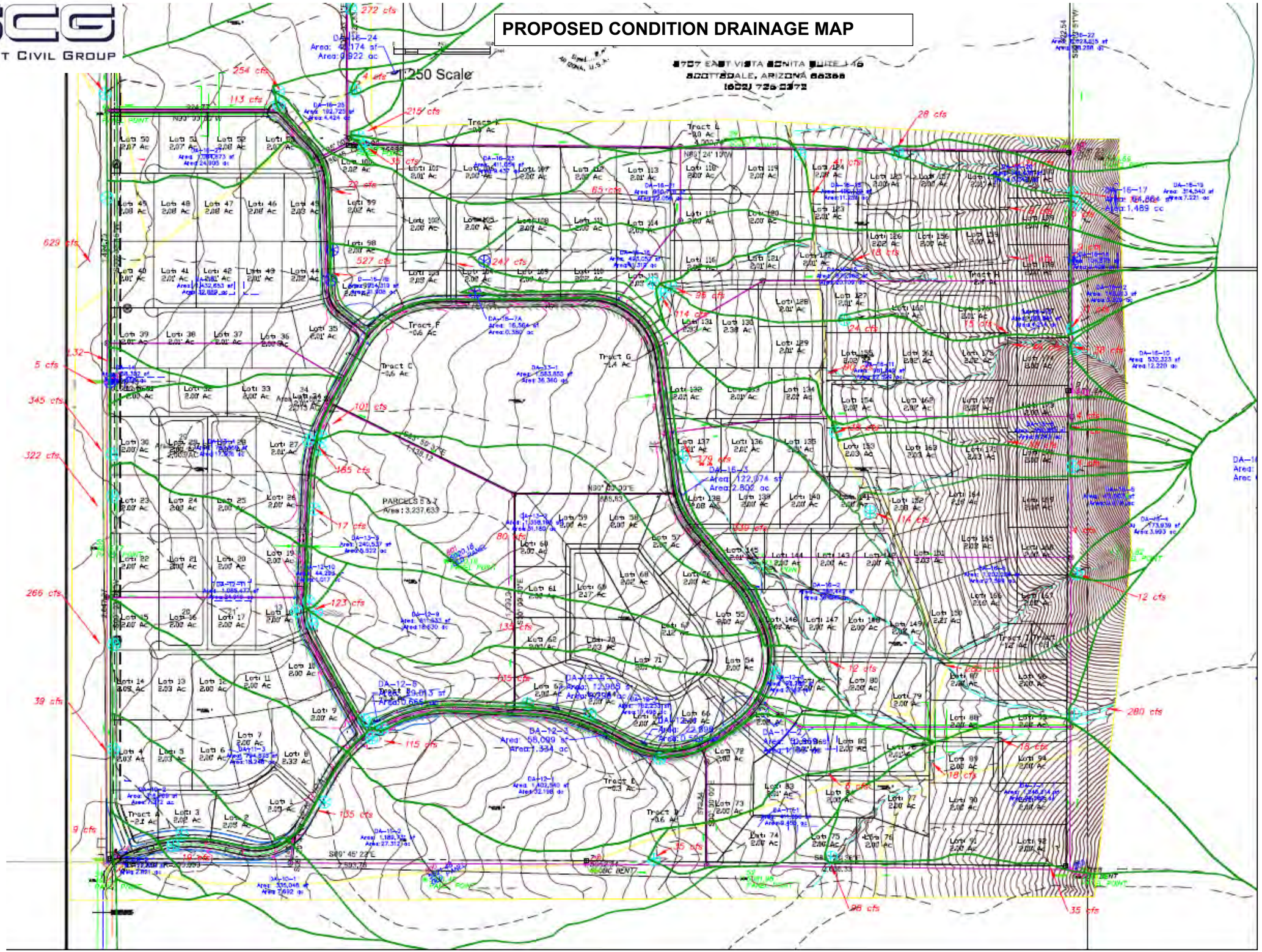
PROJ. No.		6K CONSULTING LLC.
DATE:	APRIL 2019	
SCALE:	1"=300'	
DESIGNED: 6K	DRAWN: 6K	APPROVED: CHB
REV.		DRAWING NO. DM-1
		SHT. 1 OF 2

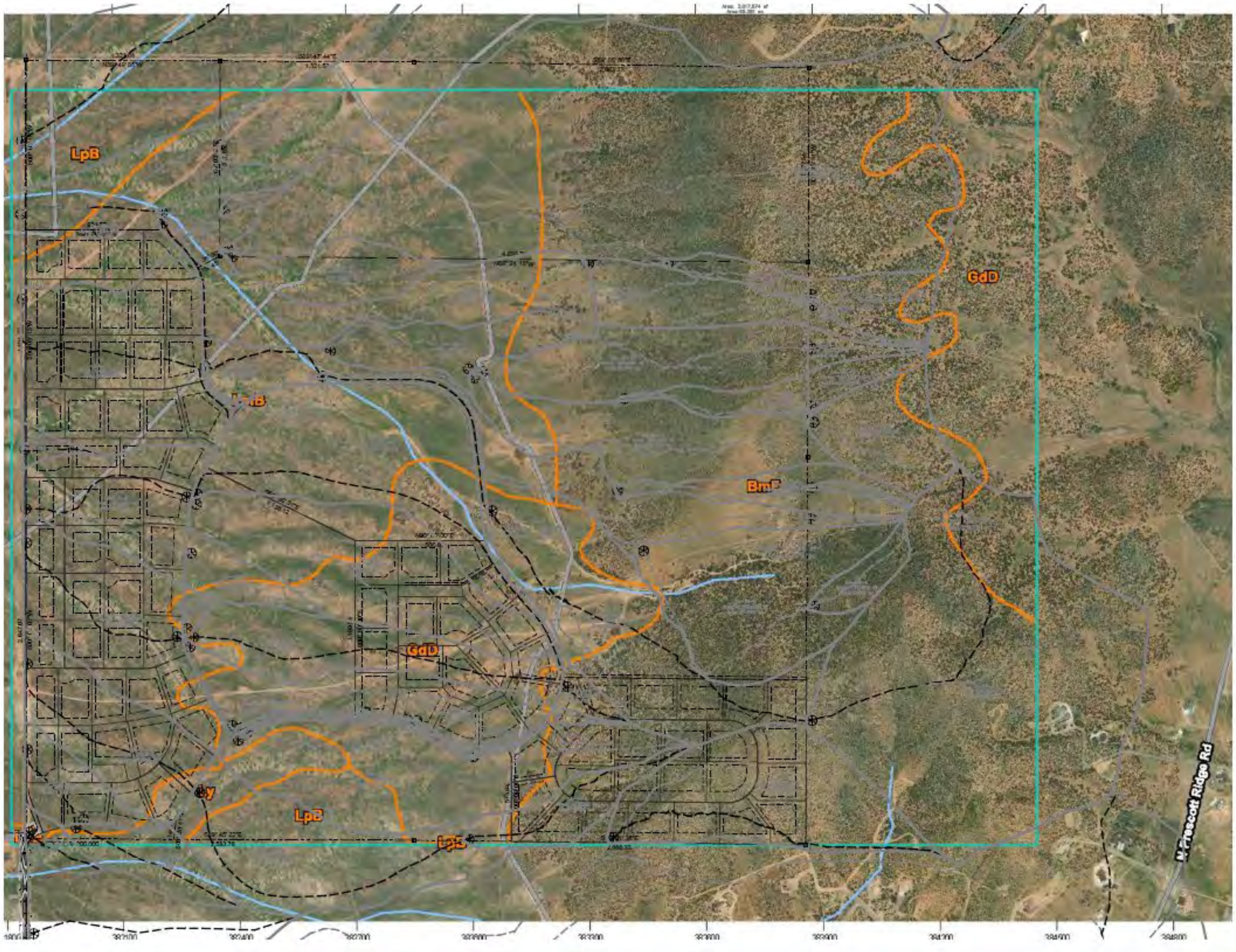
SCG
SUMMIT CIVIL GROUP

PROPOSED CONDITION DRAINAGE MAP

1"=250 Scale

8707 EAST VISTA BONITA SUITE 116
SCOTTSDALE, ARIZONA 85255
(602) 726-2572





300 150 0 300 600
SCALE FEET

VENTURA RANCH

VENTURA WAY
YAVAPAI COUNTY, AZ

SOILS MAP

PROJ. No.: 18082	6K CONSULTING L.L.C.	
DATE: MAY 2019		
SCALE: 1"=300'		
DESIGNED: 6K	DRAWN: 6K	APPROVED: CHB
REV.		DRAWING NO. SOILS
		SHT. 1 OF 1

APPENDIX D

HYDROLOGIC REFERENCES AND COMPUTATIONS

- NOAA Atlas 14, Volume 1, Precipitation Frequency Data
- Runoff Results Table for Existing Conditions
- Rational Method Calculations for Existing Conditions
- Table of Runoff Coefficients

VENTURA RANCH

EXISTING CONDITIONS DRAINAGE SUMMARY

ID		Area (sf)	Area (Ac)	Length (ft)	Upper Elev	Lower Elev	Avg Slope (ft/ft)	Q10 (cfs)	Q25 (cfs)	Q100 (cfs)
1	0	357,046	8.197	1,265	4945	4933	0.0095	16	22	34
2	0	1,701,278	39.056	2,602	4967	4930	0.0142	69	96	146
3	0	1,737,356	39.884	2,413	4991	4955	0.0149	72	100	151
4	0	1,284,620	29.491	2,290	4995	4961	0.0148	53	74	112
5	0	17,774,201	408.040	9,858	5230	4967	0.0267	448	1,018	1,555
6	0	352,859	8.101	1,016	5013	4995	0.0177	10	14	22
7	0	20,807,430	477.673	10,098	5656	4987	0.0663	72	154	214
7	1	1,246,214	28.609	2,440	5656	5091	0.2316	43	62	97
7	2	19,561,216	449.064	10,098	5659	4987	0.0665	70	146	197
8	0	1,057,230	24.271	1,837	5029	4987	0.0229	41	54	80
9	0	122,869	2.821	556	4994	4983	0.0198	5	6	9
10	0	651,816	14.964	1,867	4994	4974	0.0107	18	25	39
10	1	335,048	7.692	1,231	4994	4986	0.0065	9	12	19
10	2	316,768	7.272	1,867	4994	4974	0.0107	9	13	20
11	0	2,396,455	55.015	5,611	5137	4970	0.0298	112	168	265
11	1	411,850	9.455	1,750	5137	5057	0.0457	16	23	35
11	2	1,189,731	27.312	4,092	5137	4996	0.0345	45	65	100
11	3	794,874	18.248	5,611	5137	4970	0.0298	58	84	131
12	0	4,374,294	100.420	4,583	5137	4964	0.0377	125	179	277
12	1	1,402,540	32.198	3,172	5137	4998	0.0438	49	71	105
12	2	51,958	1.193	1,125	5114	5066	0.0427	2	4	5
12	3	58,099	1.334	1,620	5071	4998	0.0451	2	3	5
12	4	22,898	0.526	700	5080	5045	0.0500	1	2	2
12	5	12,965	0.298	320	5050	5034	0.0500	1	1	1
12	6	29,013	0.666	867	5038	4996	0.0484	1	2	3
12	7	762,233	17.498	2,858	5092	4987	0.0367	26	37	56
12	8	93,286	2.142	525	5117	5092	0.0476	4	6	9
12	9	811,533	18.630	3,183	5117	4987	0.0408	28	39	60
12	10	44,292	1.017	336	4996	4987	0.0268	56	80	123
12	11	1,085,477	24.919	4,583	5137	4964	0.0377	84	119	186
13	0	3,945,145	90.568	4,462	5092	4966	0.0282	105	149	232
13	1	1,583,855	36.360	3,175	5092	4991	0.0318	47	65	101

VENTURA RANCH

EXISTING CONDITIONS DRAINAGE

SUMMARY

13	2	1,358,195	31.180	2,772	5090	4991	0.0357	85	122	185
13	3	240,536	5.522	1,084	5029	4991	0.0351	9	12	17
13	4	762,559	17.506	4,462	5092	4966	0.0282	19	28	42
14	0	68,302	1.568	533	4983	4969	0.0263	3	3	5
15	0	1,432,653	32.889	1,932	4996	4965	0.0160	52	70	102
16	0	24,410,781	560.394	10,133	5609	4967	0.0634	465	1250	1889
16	1	3,876,901	89.001	2,624	5609	5172	0.1665	122	183	280
16	2	1,568,442	36.006	5,372	5609	5046	0.1048	46	63	99
16	3	122,074	2.802	7,147	5609	5004	0.0847	4	6	9
16	4	173,939	3.993	987	5588	5230	0.3627	6	8	12
16	5	1,202,206	27.599	2,801	5588	5088	0.1785	44	63	98
16	6	42,602	0.978	645	5588	5307	0.4357	2	3	4
16	8	359,050	8.243	2,156	5588	5084	0.2338	16	22	34
16	9	36,259	0.832	709	5588	5300	0.4062	2	3	4
16	10	532,323	12.220	1,180	5609	5251	0.3034	17	24	38
16	11	981,349	22.529	3,916	5609	5030	0.1479	35	48	76
16	12	145,012	3.329	895	5665	5268	0.4436	5	7	11
16	13	183,540	4.213	2,240	5665	5087	0.2580	7	9	13
16	14	104,875	2.408	802	5665	5310	0.4426	4	6	9
16	15	875,967	20.109	3,253	5665	5030	0.1952	30	41	63
16	16	493,052	11.319	5,124	5665	5002	0.1294	16	23	37
16	17	64,864	1.489	886	5665	5287	0.4266	3	3	5
16	18	490,179	11.253	2,698	5665	5066	0.2220	16	23	36
16	19	314,539	7.221	900	5665	5281	0.4267	9	13	18
16	20	141,434	3.247	1,995	5665	5111	0.2777	5	6	10
16	21	960,776	22.056	3,692	5073	4980	0.0252	33	44	72
16	22	6,023,815	138.288	5,682	5638	4988	0.1144	85	138	215
16	23	411,054	9.437	1,571	5029	4988	0.0261	16	23	35
16	24	40,174	0.922	612	5001	4988	0.0212	2	3	4
16	25	192,725	4.424	6,191	5665	4980	0.1106	7	10	14
16	26	3,017,874	69.281	5,443	5550	4991	0.1027	115	175	272
16	27	1,084,873	24.905	10,133	5609	4967	0.0634	42	58	89
16	7A	16,564	0.380	422	4998	4988	0.0237	1	1	1
16	7B	954,319	21.908	8,210	5588	4988	0.0731	32	43	66
17	0	9,425,340	216.376	9,458	5551	4968	0.0616	55	115	182

Type / ID	Conveyance Length (ft)	Conveyance Velocity (ft/sec)	Conveyance Tpipe (min)	Combine		Return Period (Years) 2	5	10	25	50	100
Major Basin ID: 01											
Sub Basin	-	-	-	-	Q (cfs)	32.5	44.0	53.3	73.6	93.6	112.4
DA-4					CA (ac)	11.80	11.80	11.80	12.98	14.16	14.75
					Tc (min)	10.0	10.0	10.0	10.0	10.0	10.0
					i (in/hr)	2.75	3.73	4.52	5.67	6.61	7.62
Sub Basin	-	-	-	-	Q (cfs)	43.9	59.5	72.1	99.5	126.5	151.9
DA-3					CA (ac)	15.95	15.95	15.95	17.55	19.14	19.94
					Tc (min)	10.0	10.0	10.0	10.0	10.0	10.0
					i (in/hr)	2.75	3.73	4.52	5.67	6.61	7.62
Sub Basin	-	-	-	-	Q (cfs)	28.6	42.1	69.4	95.8	121.9	146.4
DA-2					CA (ac)	15.36	15.36	15.36	16.90	18.44	19.21
					Tc (min)	22.6	19.5	10.0	10.0	10.0	10.0
					i (in/hr)	1.86	2.74	4.52	5.67	6.61	7.62
Sub Basin	-	-	-	-	Q (cfs)	-	13.2	16.0	22.1	28.0	33.7
DA-1					CA (ac)	3.54	3.54	3.54	3.89	4.24	4.42
					Tc (min)	-	10.0	10.0	10.0	10.0	10.0
					i (in/hr)	2.75	3.73	4.52	5.67	6.61	7.62

ID	Length (ft)	Velocity (ft/sec)	Tpipe (min)			2	5	10	25	50	100
Major Basin ID: 02											
Sub Basin	-	-	-	-	Q (cfs)	5.4	8.0	10.0	14.4	18.2	21.8
DA-6					CA (ac)	3.32	3.32	3.32	3.73	4.05	4.21
					Tc (min)	23.0	19.8	18.2	16.6	15.6	14.8
					i (in/hr)	1.63	2.41	3.01	3.85	4.50	5.18
Sub Basin	-	-	-	-	Q (cfs)	24.2	33.7	40.5	54.1	67.1	80.0
DA-8					CA (ac)	10.19	10.19	10.19	11.16	12.14	12.86
					Tc (min)	10.8	10.0	10.0	10.0	10.0	10.0
					i (in/hr)	2.37	3.31	3.97	4.85	5.53	6.22
Sub Basin	-	-	-	-	Q (cfs)	2.9	3.9	4.7	6.3	7.8	9.3
DA-9					CA (ac)	1.18	1.18	1.18	1.30	1.41	1.49
					Tc (min)	10.0	10.0	10.0	10.0	10.0	10.0
					i (in/hr)	2.44	3.31	3.97	4.85	5.53	6.22

* First Pipe

Type		Conveyance		Combine			Return Period (Years)					
ID	Length (ft)	Velocity (ft/sec)	Tpipe (min)				2	5	10	25	50	100
Major Basin ID: 10												
Sub Basin	-	-	-	-	Q (cfs)		9.7	14.4	18.0	25.3	32.3	38.7
DA10-0					CA (ac)		5.98	5.98	5.98	6.58	7.18	7.48
					Tc (min)		23.0	19.8	18.2	16.6	15.6	14.8
					i (in/hr)		1.63	2.41	3.01	3.85	4.50	5.18
Sub Basin	-	-	-	-	Q (cfs)		4.6	6.8	8.6	12.1	15.4	18.5
DA10-1					CA (ac)		2.91	2.91	2.91	3.20	3.49	3.64
					Tc (min)		24.1	20.7	19.0	17.3	16.3	15.4
					i (in/hr)		1.59	2.35	2.95	3.78	4.41	5.09
Sub Basin	-	-	-	-	Q (cfs)		5.1	7.5	9.4	13.1	16.8	20.3
DA10-2					CA (ac)		3.08	3.08	3.08	3.38	3.69	3.85
					Tc (min)		22.4	19.3	17.7	16.2	15.2	14.4
					i (in/hr)		1.66	2.44	3.05	3.89	4.54	5.26
Combine	-	-	-	2	Q (cfs)		9.4	13.8	17.7	24.7	31.5	37.9
DA10-2					CA (ac)		5.99	5.99	5.99	6.58	7.18	7.49
					Tc (min)		-	-	-	-	-	-
					i (in/hr)		-	-	-	-	-	-

ID	Length (ft)	Velocity (ft/sec)	Tpipe (min)			2	5	10	25	50	100
Major Basin ID: 11											
Sub Basin	-	-	-	-	Q (cfs)	8.5	12.5	15.9	22.8	28.6	34.6
DA11-1					CA (ac)	4.73	4.82	4.92	5.49	5.87	6.15
					Tc (min)	19.5	16.9	15.6	14.1	13.3	12.6
					i (in/hr)	1.79	2.60	3.23	4.15	4.88	5.63
Sub Basin	-	-	-	-	Q (cfs)	22.8	35.5	45.0	64.7	82.1	100.3
DA11-2					CA (ac)	16.55	16.91	16.91	18.75	20.22	21.33
					Tc (min)	29.4	25.1	22.9	20.7	19.5	18.4
					i (in/hr)	1.38	2.10	2.66	3.45	4.06	4.70
Sub Basin	-	-	-	-	Q (cfs)	29.8	44.8	57.6	84.4	108.2	130.7
DA11-3					CA (ac)	23.66	24.21	24.21	26.96	29.16	30.26
					Tc (min)	34.5	29.8	27.1	24.4	22.9	21.6
					i (in/hr)	1.26	1.85	2.38	3.13	3.71	4.32

* First Pipe

ID	Type	Length (ft)	Velocity (ft/sec)	Tpipe (min)	Combine		Return Period (Years) 2	5	10	25	50	100
Major Basin ID: 12												
Sub Basin		-	-	-	-	Q (cfs)	1.2	1.7	2.2	3.1	3.8	4.6
DA12-2						CA (ac)	0.60	0.61	0.62	0.69	0.74	0.77
						Tc (min)	16.9	14.7	13.5	12.3	11.6	11.0
						i (in/hr)	1.92	2.77	3.47	4.45	5.20	5.98
Sub Basin		-	-	-	-	Q (cfs)	1.2	1.7	2.2	3.1	3.9	4.7
DA12-3						CA (ac)	0.67	0.68	0.69	0.77	0.82	0.86
						Tc (min)	20.7	17.9	16.5	15.0	14.1	13.3
						i (in/hr)	1.73	2.53	3.15	4.01	4.73	5.48
Sub Basin		-	-	-	-	Q (cfs)	23.9	36.2	45.5	65.6	82.2	98.0
DA12-1						CA (ac)	15.13	15.46	15.46	17.39	18.68	19.32
						Tc (min)	24.3	20.9	19.1	17.4	16.4	15.5
						i (in/hr)	1.58	2.34	2.94	3.77	4.40	5.07
Combine		-	-	-	3	Q (cfs)	25.9	39.0	49.2	70.8	88.8	105.4
CP12-1						CA (ac)	16.40	16.75	16.77	18.85	20.24	20.95
						Tc (min)	-	-	-	-	-	-
						i (in/hr)	-	-	-	-	-	-
Sub Basin		-	-	-	-	Q (cfs)	0.6	0.9	1.1	1.5	1.8	2.1
DA12-4						CA (ac)	0.27	0.27	0.28	0.31	0.33	0.34
						Tc (min)	12.3	10.7	10.0	10.0	10.0	10.0
						i (in/hr)	2.24	3.22	3.97	4.85	5.53	6.22
Sub Basin		-	-	-	-	Q (cfs)	0.4	0.5	0.6	0.8	1.1	1.2
DA12-5						CA (ac)	0.15	0.15	0.16	0.17	0.19	0.20
						Tc (min)	10.0	10.0	10.0	10.0	10.0	10.0
						i (in/hr)	2.44	3.31	3.97	4.85	5.53	6.22
Sub Basin		-	-	-	-	Q (cfs)	0.7	1.0	1.3	1.9	2.3	2.7
DA12-6						CA (ac)	0.34	0.34	0.35	0.39	0.42	0.44
						Tc (min)	14.1	12.2	11.3	10.3	10.0	10.0
						i (in/hr)	2.09	3.04	3.77	4.80	5.53	6.22
Sub Basin		-	-	-	-	Q (cfs)	12.8	18.8	24.2	34.2	43.0	51.3
DA12-7						CA (ac)	7.88	7.88	8.05	8.93	9.63	9.98
						Tc (min)	23.3	20.1	18.4	16.8	15.8	15.0
						i (in/hr)	1.62	2.39	3.00	3.83	4.47	5.14
Combine		-	-	-	4	Q (cfs)	13.6	20.1	25.9	36.7	46.4	55.5
CP12-7						CA (ac)	8.64	8.64	8.84	9.80	10.57	10.96
						Tc (min)	-	-	-	-	-	-
						i (in/hr)	-	-	-	-	-	-
Sub Basin		-	-	-	-	Q (cfs)	2.6	3.6	4.4	6.0	7.4	8.6
DA12-8						CA (ac)	1.07	1.09	1.11	1.24	1.33	1.39
						Tc (min)	10.0	10.0	10.0	10.0	10.0	10.0
						i (in/hr)	2.44	3.31	3.97	4.85	5.53	6.22
Sub Basin		-	-	-	-	Q (cfs)	13.4	19.8	25.4	35.3	44.5	54.2
DA12-9						CA (ac)	8.20	8.20	8.38	9.13	9.87	10.43
						Tc (min)	22.8	19.6	18.0	16.4	15.5	14.7
						i (in/hr)	1.64	2.42	3.03	3.87	4.51	5.20
Combine		-	-	-	2	Q (cfs)	14.0	21.2	27.7	39.1	49.2	60.2
CP12-9						CA (ac)	9.27	9.29	9.49	10.37	11.20	11.82
						Tc (min)	-	-	-	-	-	-
						i (in/hr)	-	-	-	-	-	-
Sub Basin		-	-	-	-	Q (cfs)	1.0	1.4	1.6	2.2	2.7	3.2
D12-10						CA (ac)	0.41	0.41	0.41	0.45	0.49	0.51
						Tc (min)	10.0	10.0	10.0	10.0	10.0	10.0
						i (in/hr)	2.44	3.31	3.97	4.85	5.53	6.22

* First Pipe

ID	Type	Length (ft)	Velocity (ft/sec)	Tpipe (min)	Conveyance	Combine		Return Period (Years) 2	5	10	25	50	100
Major Basin ID: 12													
Combine		-	-	-		4	Q (cfs)	28.2	43.0	56.2	79.6	100.1	122.6
C12-10							CA (ac)	18.95	18.99	19.39	21.19	22.89	24.15
							Tc (min)	-	-	-	-	-	-
							i (in/hr)	-	-	-	-	-	-
Sub Basin		-	-	-		-	Q (cfs)	15.9	23.4	29.4	41.4	52.7	63.4
D12-11							CA (ac)	9.97	9.97	9.97	10.96	11.96	12.46
							Tc (min)	24.1	20.7	19.0	17.3	16.3	15.4
							i (in/hr)	1.59	2.35	2.95	3.78	4.41	5.09
Combine		-	-	-		2	Q (cfs)	43.4	65.3	84.1	118.6	152.8	186.0
C12-11							CA (ac)	28.92	28.96	29.36	32.15	34.85	36.61
							Tc (min)	-	-	-	-	-	-
							i (in/hr)	-	-	-	-	-	-
Sub Basin		-	-	-		-	Q (cfs)	64.1	99.0	125.2	178.7	227.2	277.0
DA12-0							CA (ac)	44.18	45.19	45.19	50.21	54.23	57.24
							Tc (min)	27.4	23.4	21.4	19.5	18.3	17.3
							i (in/hr)	1.45	2.19	2.77	3.56	4.19	4.84

ID	Type	Length (ft)	Velocity (ft/sec)	Tpipe (min)	Conveyance	Combine		Return Period (Years) 2	5	10	25	50	100
Major Basin ID: 13													
Sub Basin		-	-	-		-	Q (cfs)	25.8	37.6	46.8	65.3	83.9	100.9
DA13-1							CA (ac)	14.91	14.91	14.91	16.36	17.82	18.54
							Tc (min)	20.9	18.1	16.6	15.2	14.2	13.5
							i (in/hr)	1.73	2.52	3.14	3.99	4.71	5.44
Sub Basin		-	-	-		-	Q (cfs)	23.4	33.9	42.0	59.6	76.2	93.4
DA13-2							CA (ac)	12.78	12.78	12.78	14.03	15.28	16.21
							Tc (min)	18.6	16.2	14.9	13.5	12.7	12.0
							i (in/hr)	1.83	2.65	3.29	4.25	4.99	5.76
Combine		-	-	-		2	Q (cfs)	47.7	69.0	85.4	122.4	156.6	185.0
CP13-2							CA (ac)	27.69	27.69	27.69	30.39	33.10	34.75
							Tc (min)	-	-	-	-	-	-
							i (in/hr)	-	-	-	-	-	-
Sub Basin		-	-	-		-	Q (cfs)	5.2	7.3	8.8	11.8	14.7	17.2
DA13-3							CA (ac)	2.21	2.21	2.21	2.43	2.65	2.76
							Tc (min)	11.0	10.0	10.0	10.0	10.0	10.0
							i (in/hr)	2.35	3.31	3.97	4.85	5.53	6.22
Sub Basin		-	-	-		-	Q (cfs)	10.2	15.3	19.4	27.5	35.2	42.4
DA13-4							CA (ac)	7.00	7.00	7.00	7.70	8.40	8.75
							Tc (min)	27.3	23.4	21.4	19.4	18.3	17.3
							i (in/hr)	1.46	2.19	2.77	3.57	4.19	4.84
Combine		-	-	-		3	Q (cfs)	58.0	84.8	106.2	152.4	195.2	233.0
CP13-4							CA (ac)	36.90	36.90	36.90	40.52	44.15	46.26
							Tc (min)	-	-	-	-	-	-
							i (in/hr)	-	-	-	-	-	-
Sub Basin		-	-	-		-	Q (cfs)	56.5	84.1	105.4	148.6	190.0	232.3
DA13-0							CA (ac)	36.23	36.23	36.23	39.85	43.47	46.19
							Tc (min)	24.8	21.3	19.5	17.8	16.7	15.8
							i (in/hr)	1.56	2.32	2.91	3.73	4.37	5.03

* First Pipe

ID	Type	Length (ft)	Velocity (ft/sec)	Tpipe (min)	Conveyance Combine	Conveyance		2	5	10	25	50	100
Major Basin ID: 14													
Sub Basin		-	-	-	-	Q (cfs)		1.5	2.1	2.5	3.3	4.1	4.9
DA 14						CA (ac)		0.63	0.63	0.63	0.69	0.75	0.79
						Tc (min)		10.0	10.0	10.0	10.0	10.0	10.0
						i (in/hr)		2.44	3.31	3.97	4.85	5.53	6.22
Sub Basin		-	-	-	-	Q (cfs)		32.1	43.6	52.2	70.2	87.3	102.3
DA 15						CA (ac)		13.16	13.16	13.16	14.47	15.79	16.45
						Tc (min)		10.0	10.0	10.0	10.0	10.0	10.0
						i (in/hr)		2.44	3.31	3.97	4.85	5.53	6.22

* First Pipe

NOAA Atlas 14, Volume 1, Version 5
Location name: Prescott Valley, Arizona, USA*
Latitude: 34.6794°, Longitude: -112.2854°
Elevation: 5003.91 ft**

* source: ESRI Maps
** source: USGS

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**0.232** (0.196-0.273)	**0.300** (0.253-0.353)	**0.406** (0.342-0.477)	**0.493** (0.414-0.577)	**0.617** (0.513-0.720)	**0.720** (0.593-0.839)	**0.830** (0.675-0.968)	**0.948** (0.763-1.11)	**1.12** (0.883-1.32)	**1.26** (0.979-1.49)
10-min	**0.352** (0.299-0.416)	**0.456** (0.385-0.537)	**0.617** (0.521-0.726)	**0.749** (0.630-0.878)	**0.939** (0.781-1.10)	**1.10** (0.903-1.28)	**1.26** (1.03-1.47)	**1.44** (1.16-1.69)	**1.70** (1.34-2.01)	**1.92** (1.49-2.27)
15-min	**0.437** (0.370-0.515)	**0.565** (0.478-0.665)	**0.765** (0.646-0.900)	**0.929** (0.781-1.09)	**1.16** (0.968-1.36)	**1.36** (1.12-1.58)	**1.57** (1.27-1.83)	**1.79** (1.44-2.09)	**2.11** (1.67-2.49)	**2.38** (1.85-2.82)
30-min	**0.588** (0.499-0.693)	**0.761** (0.643-0.895)	**1.03** (0.870-1.21)	**1.25** (1.05-1.47)	**1.57** (1.30-1.83)	**1.83** (1.51-2.13)	**2.11** (1.72-2.46)	**2.41** (1.94-2.82)	**2.85** (2.24-3.35)	**3.21** (2.49-3.79)
60-min	**0.727** (0.617-0.858)	**0.941** (0.796-1.11)	**1.27** (1.08-1.50)	**1.55** (1.30-1.81)	**1.94** (1.61-2.26)	**2.26** (1.86-2.64)	**2.61** (2.12-3.05)	**2.98** (2.40-3.49)	**3.52** (2.78-4.14)	**3.97** (3.08-4.70)
2-hr	**0.853** (0.735-0.994)	**1.09** (0.933-1.26)	**1.44** (1.23-1.67)	**1.73** (1.47-2.00)	**2.15** (1.82-2.49)	**2.50** (2.09-2.89)	**2.89** (2.38-3.33)	**3.30** (2.69-3.82)	**3.90** (3.11-4.53)	**4.40** (3.45-5.13)
3-hr	**0.916** (0.803-1.06)	**1.16** (1.01-1.35)	**1.50** (1.31-1.74)	**1.78** (1.55-2.06)	**2.19** (1.89-2.53)	**2.54** (2.16-2.92)	**2.91** (2.45-3.36)	**3.33** (2.77-3.84)	**3.93** (3.20-4.56)	**4.43** (3.54-5.16)
6-hr	**1.09** (0.959-1.26)	**1.36** (1.20-1.57)	**1.70** (1.49-1.96)	**1.99** (1.74-2.29)	**2.42** (2.09-2.78)	**2.76** (2.36-3.17)	**3.13** (2.65-3.60)	**3.52** (2.95-4.06)	**4.10** (3.36-4.75)	**4.58** (3.68-5.33)
12-hr	**1.32** (1.16-1.54)	**1.64** (1.44-1.91)	**2.02** (1.76-2.34)	**2.33** (2.03-2.69)	**2.75** (2.37-3.18)	**3.08** (2.64-3.56)	**3.42** (2.91-3.96)	**3.76** (3.18-4.36)	**4.26** (3.55-4.97)	**4.68** (3.85-5.49)
24-hr	**1.56** (1.41-1.74)	**1.96** (1.76-2.19)	**2.46** (2.21-2.74)	**2.86** (2.56-3.18)	**3.40** (3.04-3.78)	**3.83** (3.40-4.24)	**4.27** (3.77-4.73)	**4.71** (4.14-5.23)	**5.32** (4.63-5.92)	**5.79** (5.00-6.46)
2-day	**1.74** (1.56-1.94)	**2.17** (1.96-2.43)	**2.74** (2.46-3.05)	**3.19** (2.86-3.55)	**3.81** (3.40-4.24)	**4.30** (3.81-4.78)	**4.80** (4.23-5.35)	**5.32** (4.66-5.93)	**6.03** (5.23-6.74)	**6.59** (5.67-7.39)
3-day	**1.88** (1.71-2.07)	**2.36** (2.14-2.60)	**2.97** (2.69-3.27)	**3.45** (3.13-3.81)	**4.12** (3.71-4.54)	**4.64** (4.16-5.10)	**5.17** (4.62-5.70)	**5.72** (5.08-6.30)	**6.46** (5.68-7.14)	**7.03** (6.14-7.80)
4-day	**2.02** (1.85-2.20)	**2.54** (2.33-2.77)	**3.20** (2.93-3.50)	**3.72** (3.40-4.06)	**4.42** (4.03-4.83)	**4.97** (4.51-5.42)	**5.53** (5.00-6.05)	**6.11** (5.49-6.68)	**6.88** (6.13-7.54)	**7.47** (6.61-8.21)
7-day	**2.38** (2.18-2.61)	**2.99** (2.74-3.28)	**3.76** (3.44-4.12)	**4.36** (3.98-4.78)	**5.17** (4.70-5.66)	**5.79** (5.25-6.34)	**6.42** (5.79-7.04)	**7.06** (6.34-7.75)	**7.91** (7.04-8.70)	**8.56** (7.56-9.43)
10-day	**2.65** (2.42-2.91)	**3.33** (3.05-3.67)	**4.19** (3.83-4.60)	**4.85** (4.43-5.33)	**5.73** (5.21-6.28)	**6.39** (5.79-7.01)	**7.07** (6.38-7.76)	**7.74** (6.95-8.51)	**8.62** (7.69-9.49)	**9.29** (8.24-10.3)
20-day	**3.48** (3.18-3.83)	**4.39** (4.01-4.82)	**5.45** (4.97-5.98)	**6.22** (5.66-6.83)	**7.18** (6.52-7.89)	**7.87** (7.13-8.64)	**8.54** (7.71-9.38)	**9.16** (8.26-10.1)	**9.94** (8.92-10.9)	**10.5** (9.39-11.6)
30-day	**4.14** (3.78-4.54)	**5.22** (4.77-5.72)	**6.53** (5.97-7.15)	**7.49** (6.84-8.20)	**8.72** (7.95-9.54)	**9.61** (8.75-10.5)	**10.5** (9.52-11.5)	**11.3** (10.2-12.4)	**12.4** (11.2-13.6)	**13.2** (11.8-14.5)
45-day	**4.95** (4.55-5.39)	**6.25** (5.74-6.81)	**7.87** (7.21-8.55)	**9.07** (8.30-9.84)	**10.6** (9.69-11.5)	**11.8** (10.7-12.8)	**12.9** (11.7-14.0)	**14.0** (12.6-15.2)	**15.4** (13.8-16.8)	**16.4** (14.7-18.0)
60-day	**5.58** (5.14-6.05)	**7.06** (6.50-7.65)	**8.87** (8.16-9.60)	**10.2** (9.37-11.0)	**11.9** (10.9-12.8)	**13.1** (12.0-14.1)	**14.3** (13.0-15.4)	**15.4** (14.0-16.7)	**16.9** (15.2-18.3)	**17.9** (16.1-19.5)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

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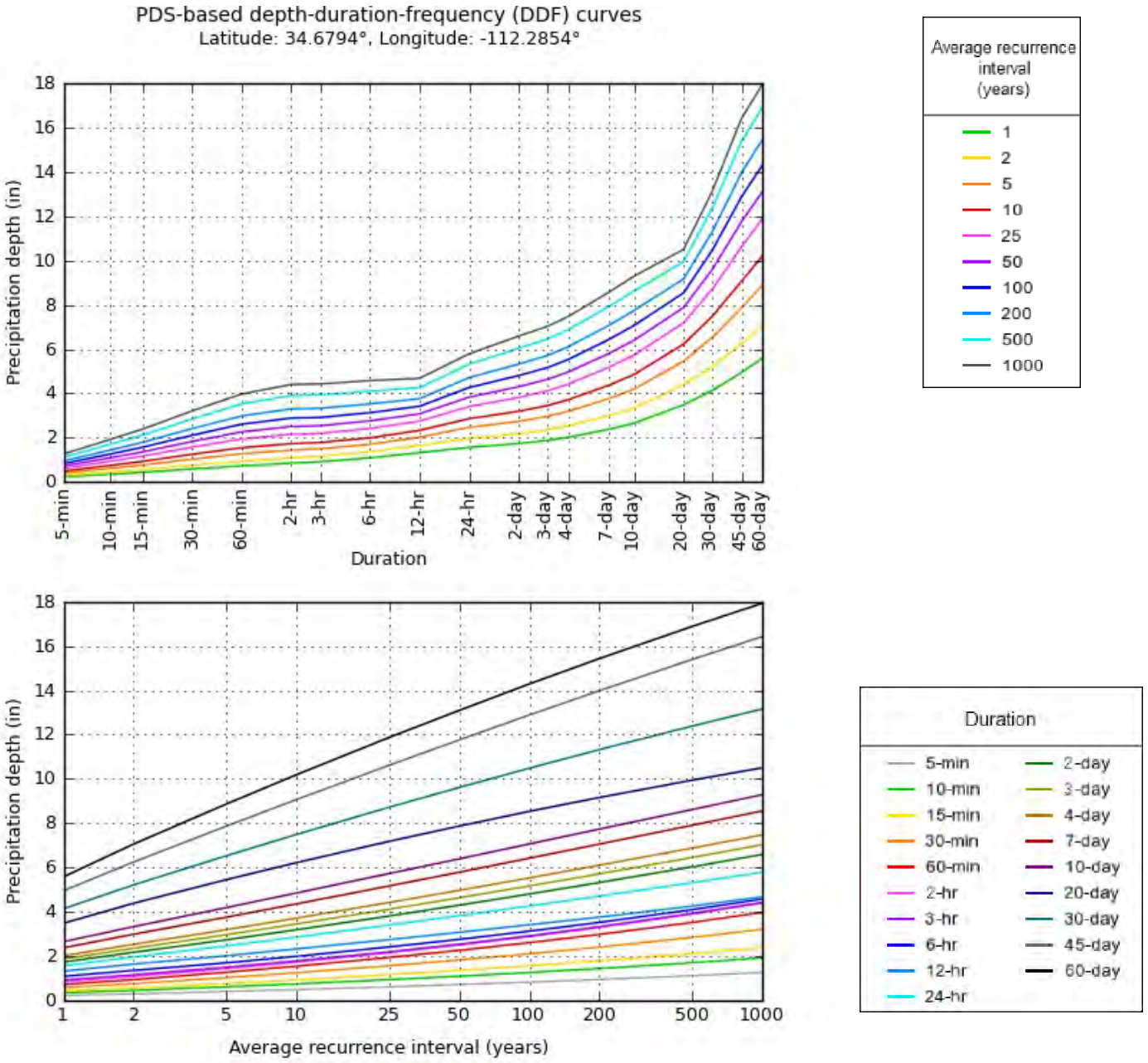
PF graphical



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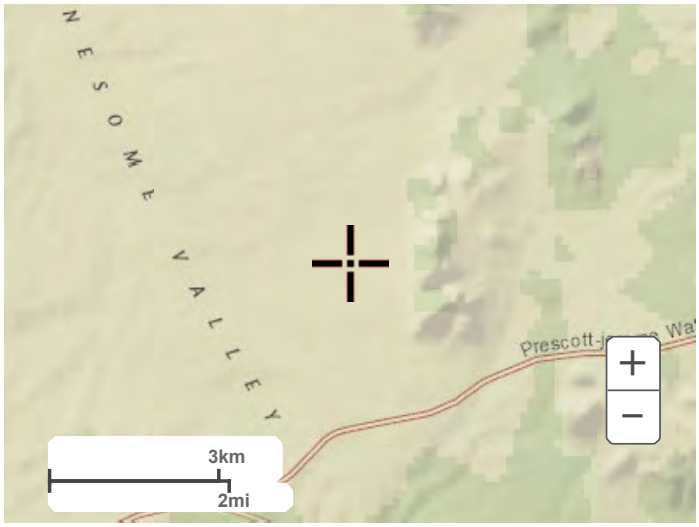
Maps & aerials

Small scale terrain



Large scale terrain

Large scale map

Large scale aerial

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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

$$C_{comp} = \sum_{i=1}^{n} C_i A_i \; / A_t \qquad 7.6$$

where:

C_{comp} = the area-averaged value of (C),

n = the number of different land use polygons within the sub-basin,

C_i = the value of (C) corresponding to each land use in the sub-basin,

A_i = the area in acres of the corresponding land use within the sub-basin, and

A_T = the total area of the sub-basin in acres.

Table 7.5 General Land Use Category Descriptions for Yavapai County

Land Use Code	Land Use Category Description
VLDR	Residential: 40,000 square feet and greater lot size
LDR	Residential: 12,000 - 40,000 square feet lot size
MDR	Residential: 6,000 - 12,000 square feet lot size
MFR	Residential: 1,000 - 6,000 square feet lot size
C1	Commercial: Light, Neighborhood, Residential
C2	Commercial: Central, General, Office, Intermediate
I1	Industrial: Light to General
I2	Industrial: General to Heavy
P	Paved Areas: asphalt and concrete, sloped rooftops
GR	Graded Areas: graded and compacted, treated and untreated
AG	Agricultural: tilled fields, irrigated pastures, slopes < 1%
LP1	Landscaped Park 1: % Impervious = 0-10%, irrigated vegetation = 0-20%
LP2	Landscaped Park 2: % Impervious = 0-10%, irrigated vegetation = 20-80%
LP3	Landscaped Park 3: % Impervious = 0-10%, irrigated vegetation >80%
L1	Landscaping 1: with impervious under treatment
L2	Landscaping 2: without impervious under treatment
NDR	Natural Desert Rangeland: little topographic relief, slopes < 5%
NHS	Natural Hillslope: moderate topographic relief, slopes > 5%
NMT	Natural Mountain: high topographic relief slopes, slopes > 20%

Table 7.6 Rational Method General Runoff Coefficients for Yavapai County

Derived from ADOT (1993) and Maricopa County (2008)

Land Use Code	Land Use Category	Runoff Coefficients by Storm Frequency							
		2-10 Year		25-year		50-year		100-year	
		min	max	min	max	min	max	min	max
VLDR	Very Low Density Residential[1]	0.33	0.45	0.36	0.50	0.40	0.60	0.45	0.65
LDR	Low Density Residential[1]	0.42	0.48	0.46	0.55	0.50	0.64	0.53	0.70
MDR	Medium Density Residential[1]	0.48	0.65	0.53	0.72	0.58	0.78	0.60	0.80
MFR	Multiple Family Residential	0.65	0.75	0.72	0.83	0.78	0.90	0.82	0.94
C1	Commercial 1	0.55	0.65	0.61	0.72	0.66	0.78	0.69	0.81
C2	Commercial 2	0.75	0.85	0.83	0.94	0.90	0.95	0.94	0.95
I1	Industrial 1	0.60	0.70	0.66	0.77	0.72	0.84	0.75	0.88
I2	Industrial 2	0.70	0.80	0.77	0.88	0.84	0.95	0.88	0.95
P	Pavement and Rooftops	0.75	0.85	0.83	0.94	0.90	0.95	0.94	0.95
GR	Gravel Roadways & Shoulders	0.60	0.70	0.66	0.77	0.72	0.84	0.75	0.88
AG	Agricultural	0.10	0.20	0.11	0.22	0.12	0.24	0.13	0.25
LP1	Landscaped Park 1	0.30	0.45	0.35	0.48	0.36	0.50	0.38	0.55
LP2	Landscaped Park 2	0.20	0.35	0.25	0.40	0.30	0.45	0.35	0.50
LP3	Landscaped Park 3	0.10	0.25	0.11	0.28	0.12	0.30	0.15	0.35
L1	Desert Landscaping 1	0.55	0.85	0.61	0.94	0.66	0.95	0.69	0.95
L2	Desert Landscaping 2	0.30	0.40	0.35	0.45	0.36	0.48	0.38	0.50
NDR	Undeveloped Desert Rangeland	0.30	0.40	0.35	0.45	0.36	0.48	0.38	0.50
NHS	Hillslopes, Sonoran Desert	0.40	0.55	0.45	0.60	0.48	0.66	0.50	0.70
NMT	Mountain Terrain	0.50	0.70	0.65	0.80	0.70	0.90	0.75	0.90
[1]	Based on NDR (undeveloped desert rangeland) terrain class. Values should be increased for NHS and NMT terrain classes by the difference between NHS or NMT and the NDR C values, up to a maximum of 0.95. Engineering judgment should be used.								

7.3.2.7 Volume Calculations

Rational method runoff volume estimations should be computed using Equation 7.7. In the case of volume calculations for stormwater storage facility design, P in Equation 7.7 equals the 100-year, 2-hour depth, in inches. Refer to Section 7.2.

APPENDIX E

Existing Flood Inundation

Proposed Drainage Master Plan

Rip Rap Channel Design

Rock Check Calculations

Ventura Ranch Subdivision Existing Flood Inundation

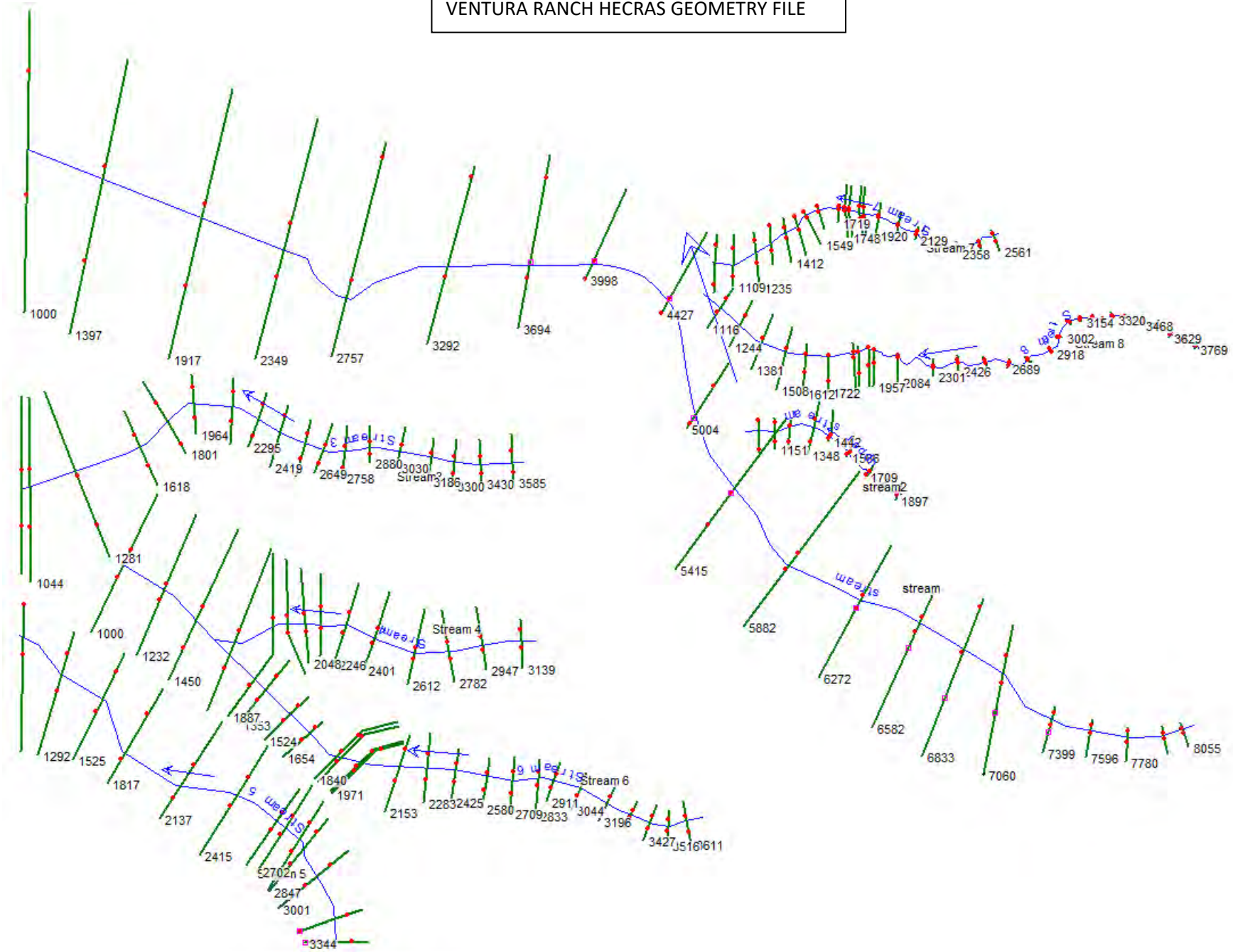
Proposed Structure List

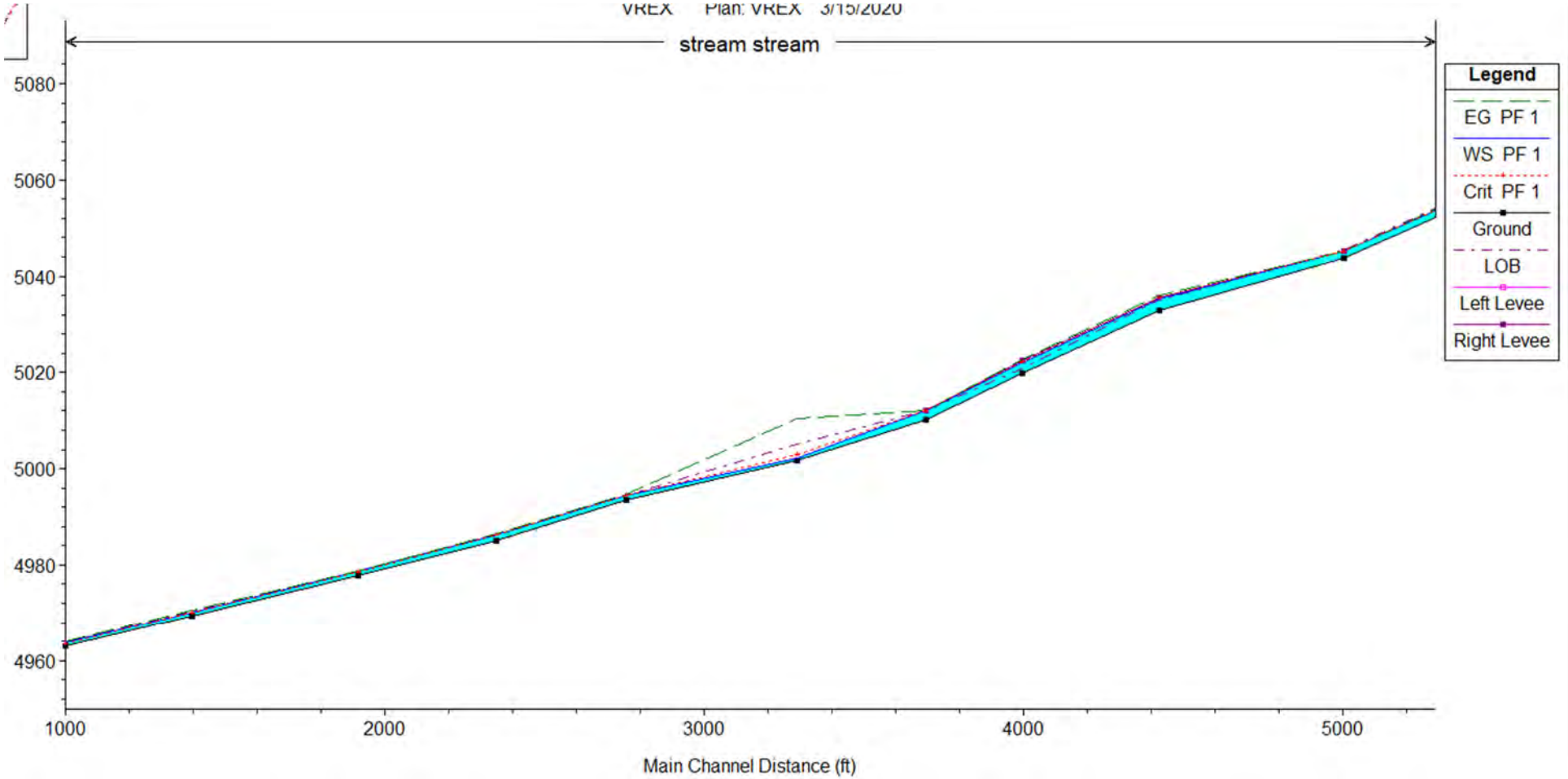
PHASE	Structure Code	Description	Approx Len (ft)	Q100 CFS
Ph1	*VR11101*	3-42" CMP Culvert	40	135
Ph1	*VR11102*	10' bottom, 3:1 ss, Riprap D50 8"	250	135
Ph1	*VR12101*	2-48"" CMP Culvert	40	123
Ph1	*VR12102*	4-30" CMP Culvert	80	115
Ph1	*VR12103*	4-30" CMP Culvert	40	115
Ph1	*VR12104*	2-4'x6' CMP Culvert	40	238
Ph1	*VR13101*	2-30" CMP Culvert	40	50
Ph1	*VR13102*	3-42" CMP Culvert	40	135
Ph1	*VR13103*	10' bottom, 3:1 ss, Riprap D50 8"	460	135
Ph1	*VR13104*	3-42" CMP Culvert	40	135
Ph1	*VR13105*	1-30" CMP Culvert	40	17
Ph1	*VR16101*	2- 4' x 6' reinforcred box culverts	80	288
Ph1	*VR16102*	1-24" CMP Culvert	40	12
Ph1	*VR16103*	2- 4' x 6' reinforcred box culverts	50	339
Ph1	*VR16104*	20' bottom, 3:1 ss, Riprap D50 8"	1060	453
Ph1	*VR16105*	2- 4' x 10' reinforcred box culverts	50	567
Ph1	*VR16106*	20' bottom, 3:1 ss, Riprap D50 8"	1080	663
Ph1	*VR16107*	3- 4' x 8' reinforcred box culverts	50	663
Ph1	*VR16108*	20' bottom, 3:1 ss, Riprap D50 8"	1080	778
Ph1	*VR16109*	6' bottom, 3:1 ss, Riprap D50 6"	200	113
Ph1	*VR16110*	3- 5' x 8' reinforcred box culverts	50	845
Ph1	*VR16111*	30' bottom, 3:1 ss, Riprap D50 8"	1080	845
Ph1	*VR16112*	Energy Disipator	500	947
Ph1	*VR07101*	1-24" CMP Culvert	60	18
Ph1	*VR07102*	1-24" CMP Culvert	60	18
Ph2	*VR16113*	1-24" CMP Culvert	40	20
Ph2	*VR16114*	1-24" CMP Culvert	40	15
Ph2	*VR16115*	1-36" CMP Culvert	60	54
Ph2	*VR16116*	10' bottom, 3:1 ss, Riprap D50 8"	340	96
Ph2	*VR16117*	3-42" CMP Culvert	60	96
Ph2	*VR16118*	1-24" CMP Culvert	40	15
Ph2	*VR16119*	2-30" CMP Culvert	50	46
Ph2	*VR16120*	2-48" CMP Culvert	40	90
Ph2	*VR16121*	1-24" CMP Culvert	40	18
Ph2	*VR16122*	2-24" CMP Culvert	40	38
Ph2	*VR16123*	1-24" CMP Culvert	40	15
Ph2	*VR16124*	2-48" CMP Culvert	50	114

The exact size, location and length of structures shall provide on Improvement Plans

SCG
SUMMIT CIVIL GROUP

VENTURA RANCH HECRAS GEOMETRY FILE

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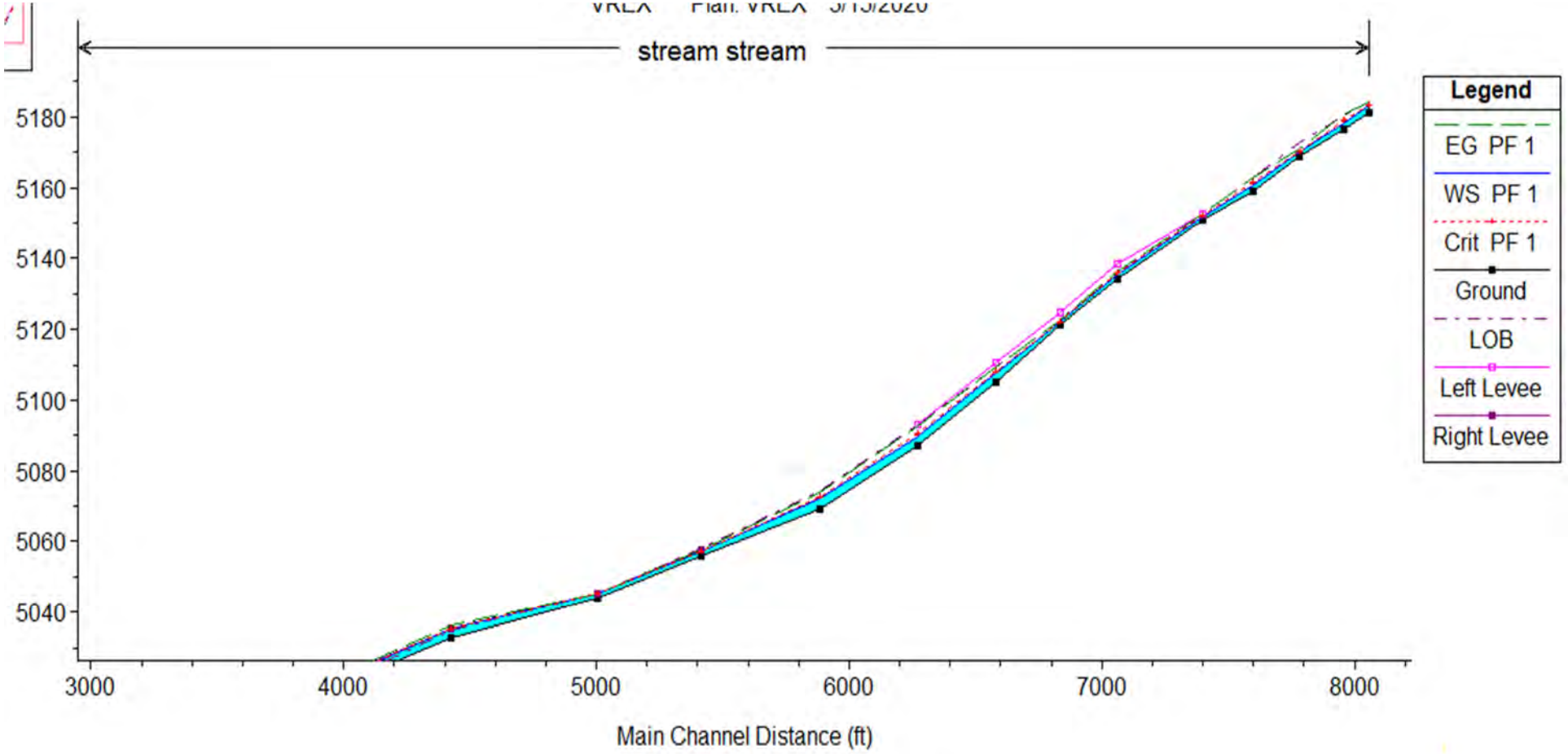
stream stream
5080
5060
5040
5020
5000
4980
4960
1000
2000
3000
4000
5000
Main Channel Distance (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB
Left Levee
Right Levee


stream stream
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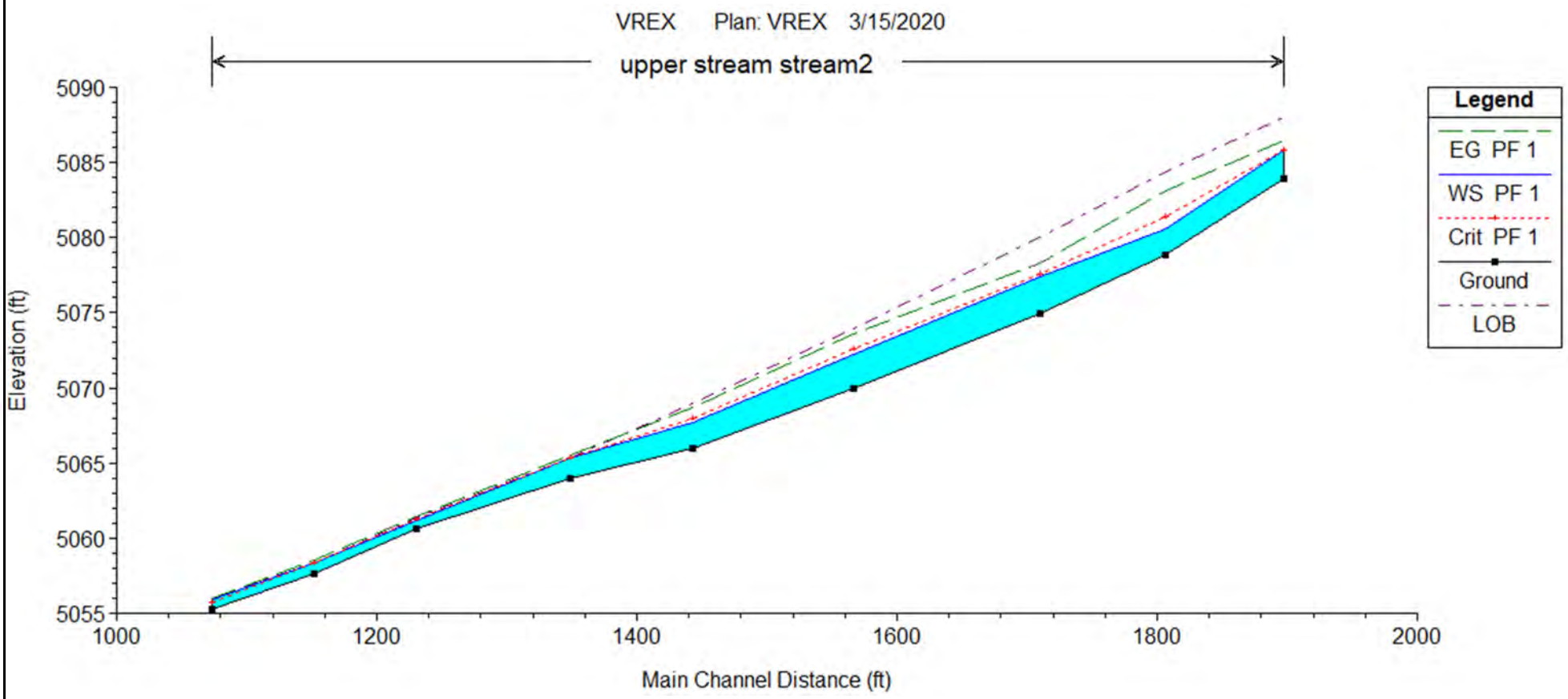
5160
5140
5120
5100
5080
5060
5040
3000
4000
5000
6000
7000
8000
Main Channel Distance (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB
Left Levee
Right Levee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upper stream stream2
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB
Elevation (ft)
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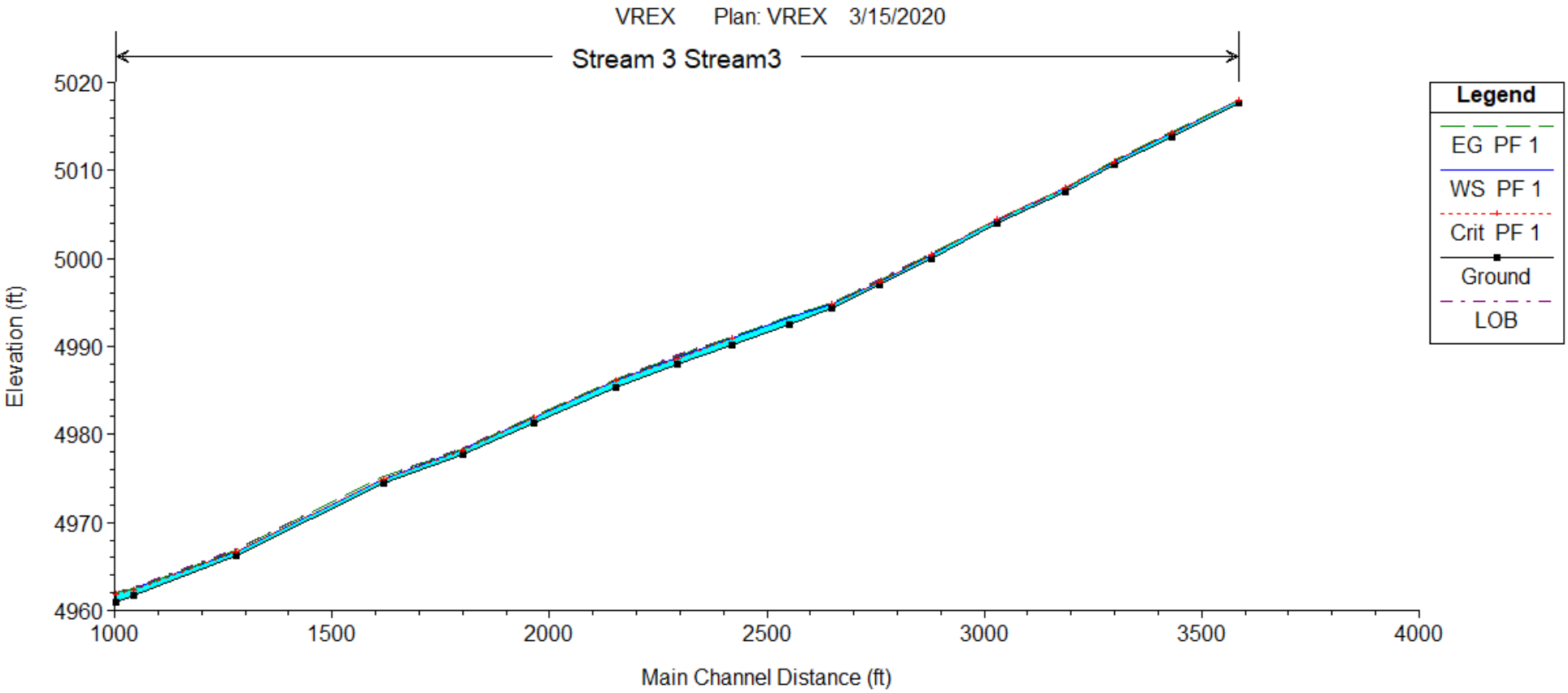
5085
5080
5075
5070
5065
5060
5055
1000
1200
1400
1600
1800
2000
Main Channel Distance (ft)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Stream 3 Stream3
Elevation (ft)
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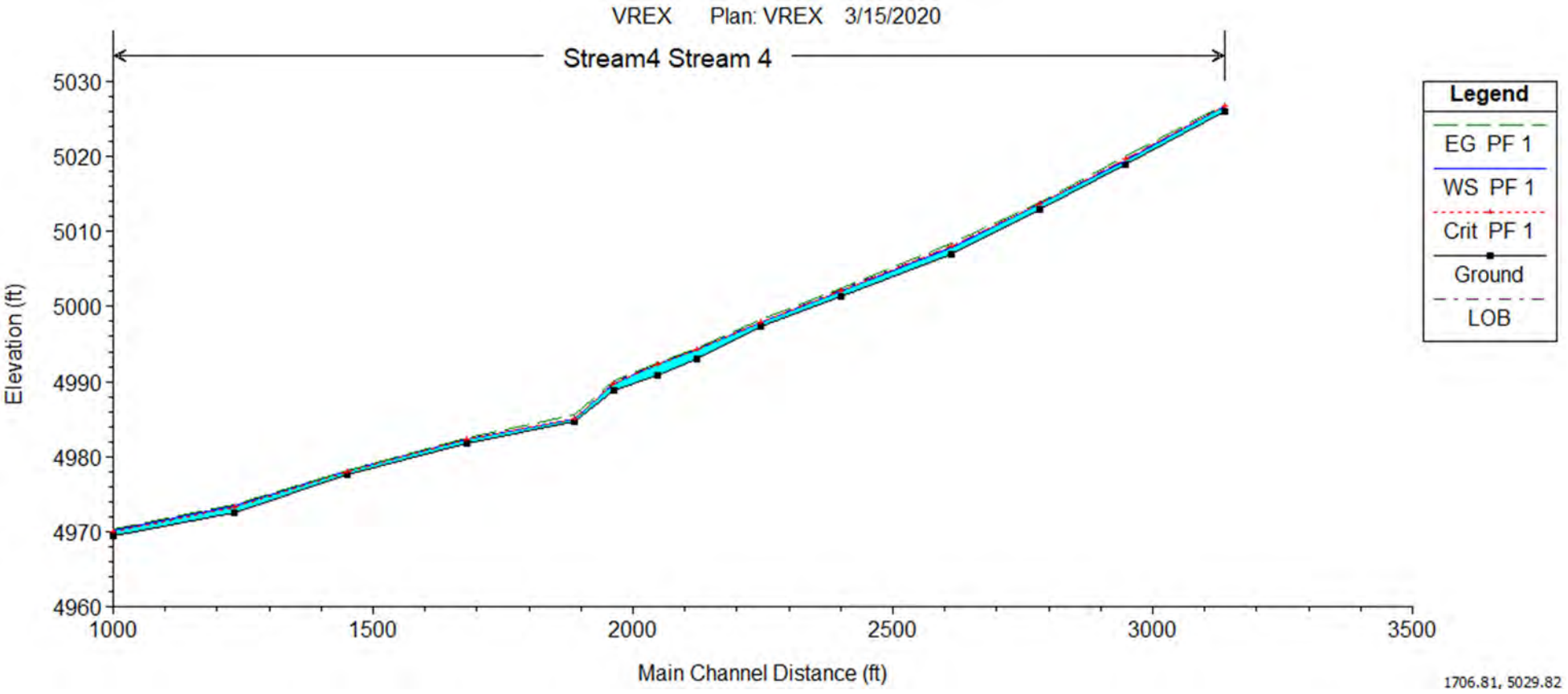
5010
5000
4990
4980
4970
4960
1000
1500
2000
2500
3000
3500
4000
Main Channel Distance (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB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Stream4 Stream 4
Elevation (ft)
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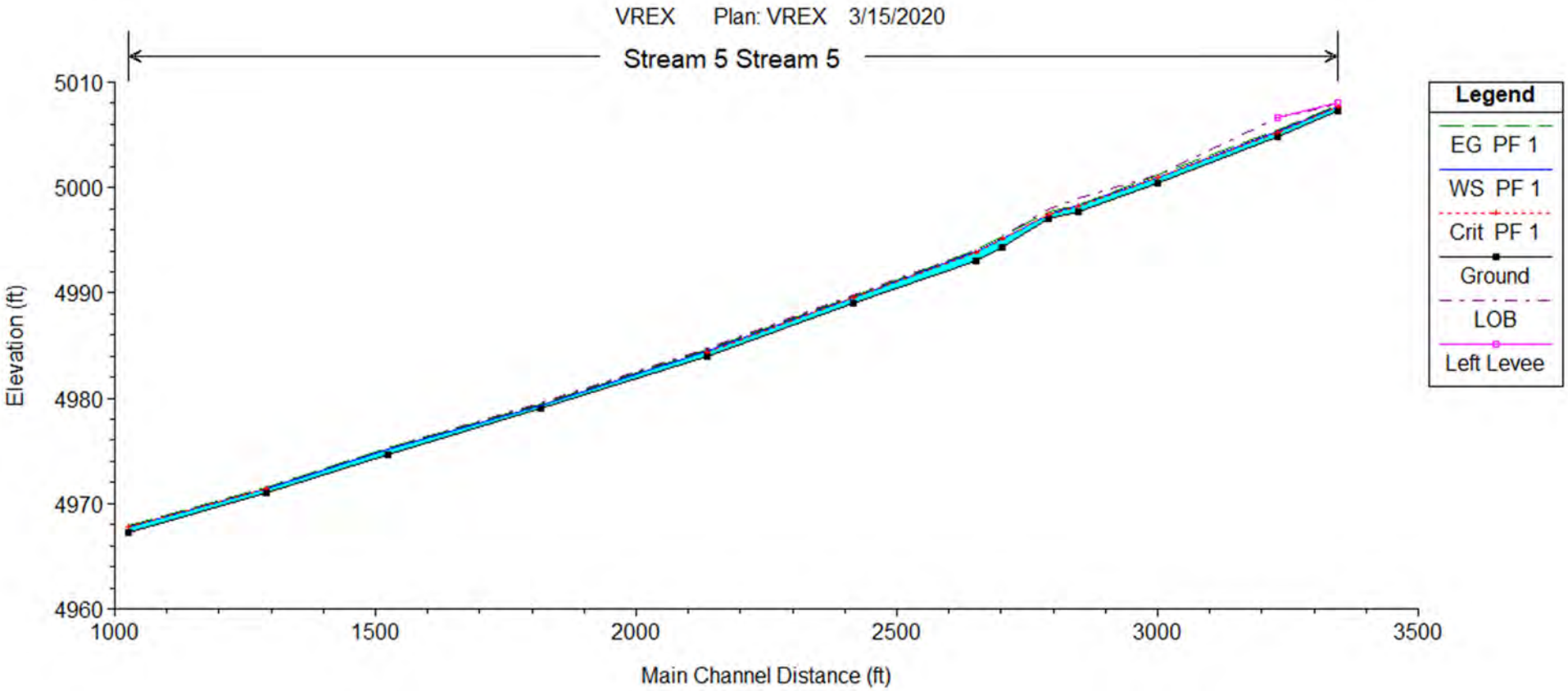
5020
5010
5000
4990
4980
4970
4960
1000
1500
2000
2500
3000
3500
Main Channel Distance (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB
1706.81, 5029.82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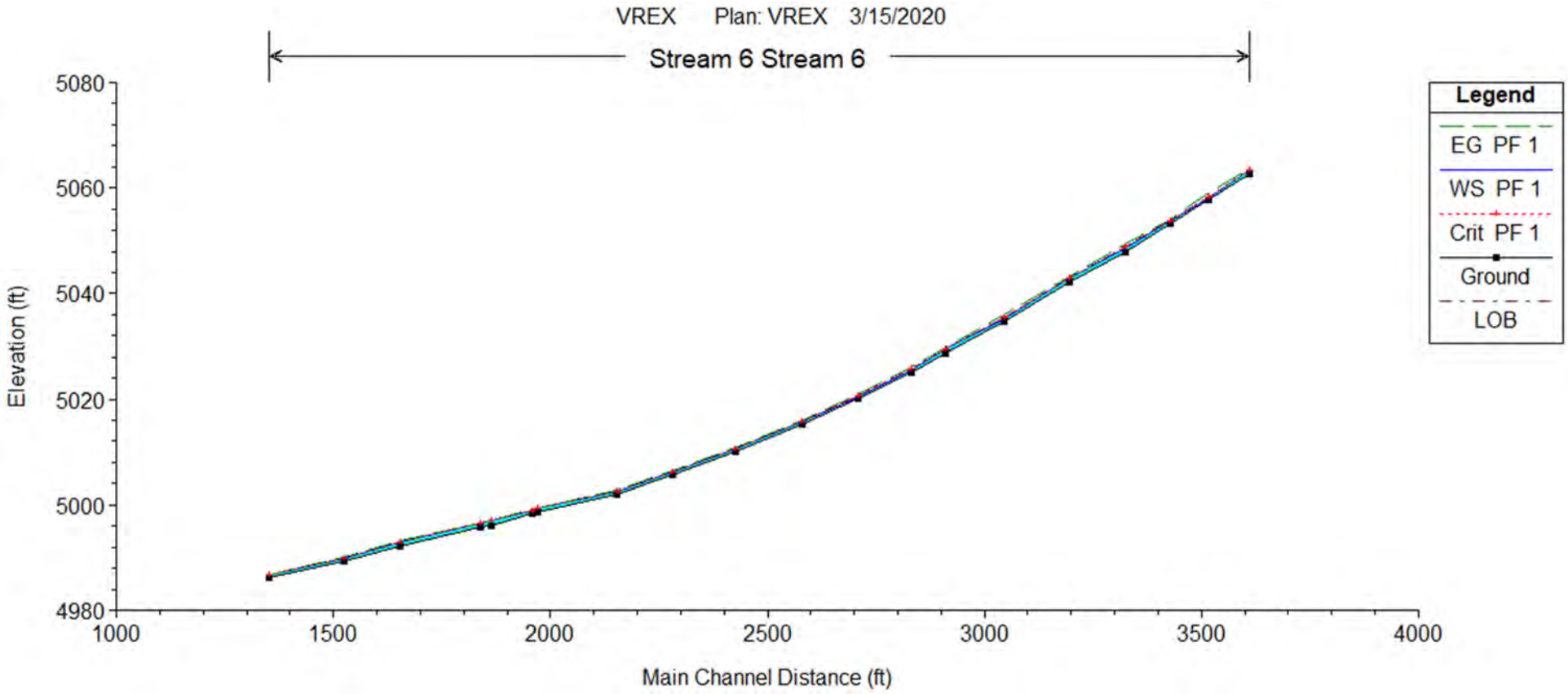
Stream 5 Stream 5
Elevation (ft)
5010
5000
4990
4980
4970
4960
1000
1500
2000
2500
3000
3500
Main Channel Distance (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB
Left Levee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Stream 6 Stream 6
Legend
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WS PF 1
Crit PF 1
Ground
LOB
Elevation (ft)
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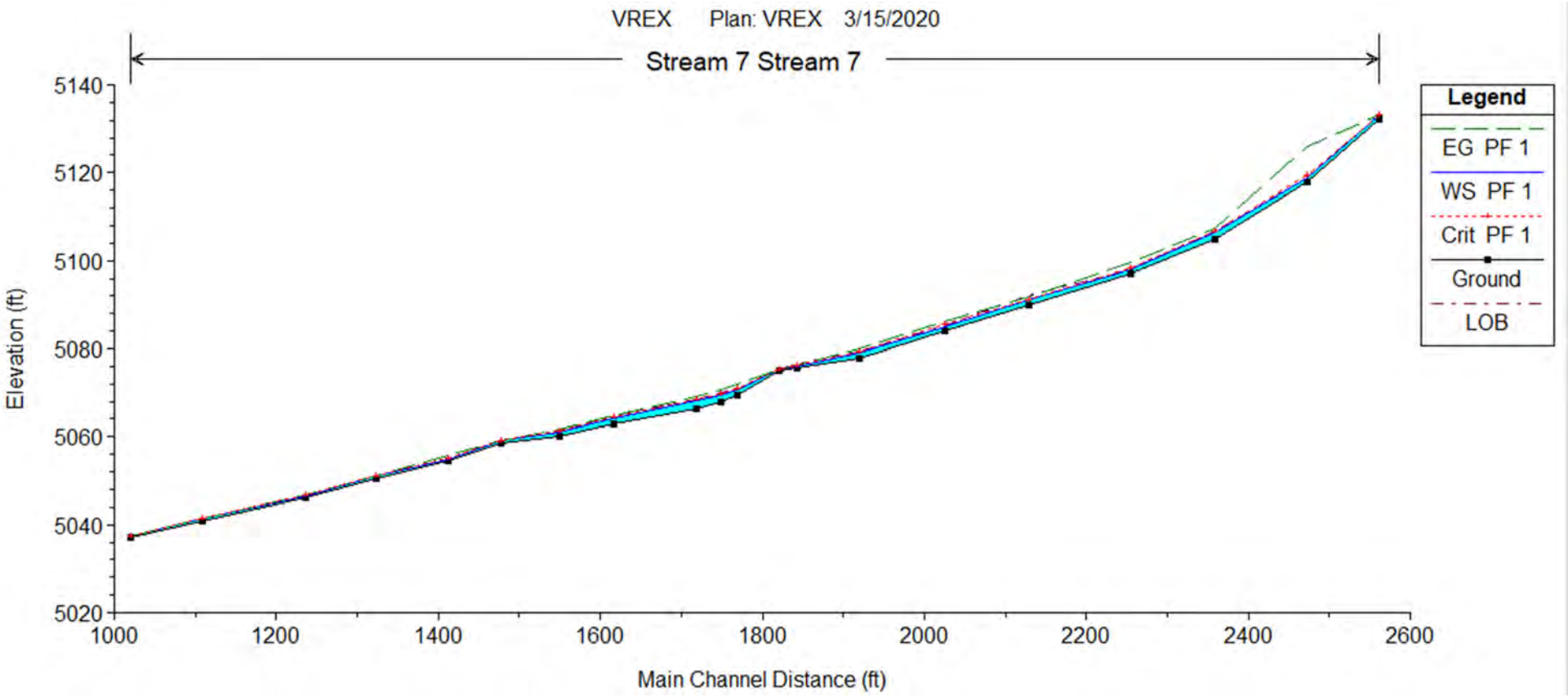
5060
5040
5020
5000
4980
1000
1500
2000
2500
3000
3500
4000
Main Channel Distance (ft)


VREX Plan: VREX 3/15/2020
Stream 7 Stream 7
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB
Elevation (ft)
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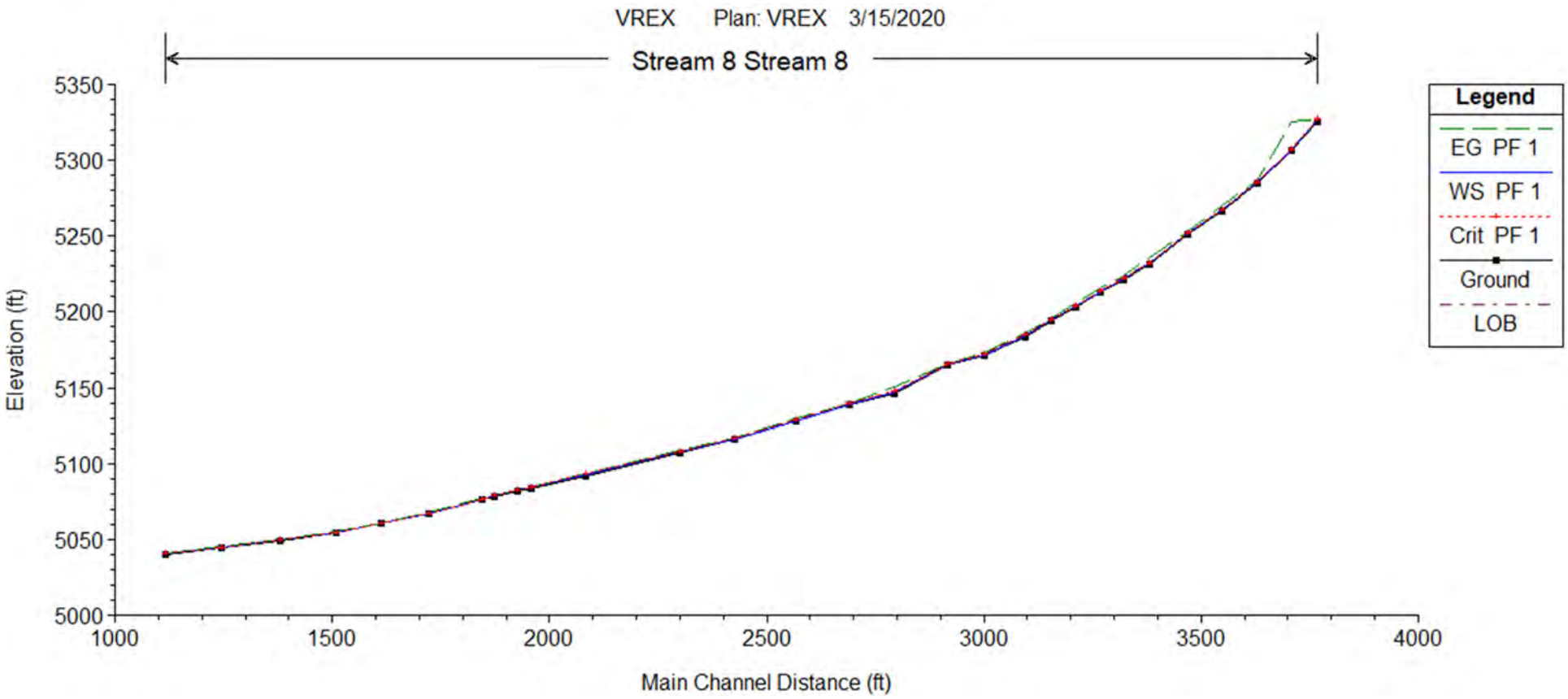
5120
5100
5080
5060
5040
5020
1000
1200
1400
1600
1800
2000
2200
2400
2600
Main Channel Distance (ft)


VREX Plan: VREX 3/15/2020
Stream 8 Stream 8
Elevation (ft)
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5300
5250
5200
5150
5100
5050
5000
1000
1500
2000
2500
3000
3500
4000
Main Channel Distance (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB

Stream Main

HEC-RAS Plan: VREX River: stream Reach: stream Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
stream	8055	PF 1	280.00	5181.27	5183.50	5183.50	5184.27	0.016230	7.07	39.63	25.94	1.01
stream	7958	PF 1	280.00	5176.68	5178.11	5178.93	5180.92	0.094825	13.45	20.81	19.51	2.30
stream	7780	PF 1	280.00	5168.75	5170.02	5170.26	5170.93	0.033660	7.66	36.54	37.17	1.36
stream	7596	PF 1	280.00	5158.91	5160.78	5161.45	5162.89	0.057288	11.64	24.05	19.01	1.82
stream	7399	PF 1	280.00	5150.94	5151.89	5152.15	5152.76	0.042916	7.49	37.38	47.39	1.49
stream	7060	PF 1	288.00	5133.99	5135.56	5135.76	5136.21	0.055614	6.47	44.50	85.38	1.58
stream	6833	PF 1	288.00	5121.16	5122.22	5122.34	5122.66	0.063709	5.32	54.18	154.88	1.58
stream	6582	PF 1	288.00	5104.99	5107.59	5108.24	5109.53	0.042693	11.18	25.76	17.02	1.60
stream	6272	PF 1	288.00	5086.99	5089.78	5090.75	5092.80	0.069349	13.93	20.67	13.63	1.99
stream	5882	PF 1	339.00	5069.36	5072.10	5072.64	5073.87	0.036238	10.65	31.82	20.20	1.50
stream	5415	PF 1	339.00	5055.91	5057.24	5057.35	5057.66	0.031731	5.21	65.01	113.24	1.21
stream	5004	PF 1	379.00	5043.80	5045.13	5045.13	5045.26	0.008303	2.91	130.33	199.91	0.63
stream	4427	PF 1	531.00	5032.97	5035.36	5035.51	5036.08	0.029670	6.83	77.77	85.35	1.26
stream	3998	PF 1	531.00	5019.89	5021.92	5022.13	5022.71	0.032790	7.11	74.94	83.85	1.33
stream	3694	PF 1	531.00	5010.16	5012.11	5012.11	5012.12	0.000409	0.93	582.89	578.73	0.15
stream	3292	PF 1	778.00	5001.82	5002.26	5002.90	5010.36	1.815323	22.83	34.07	135.11	8.02
stream	2757	PF 1	854.00	4993.45	4994.48	4994.44	4994.64	0.018835	3.29	259.39	610.65	0.89
stream	2349	PF 1	854.00	4985.07	4986.24	4986.24	4986.60	0.020586	4.78	178.74	257.29	1.01
stream	1917	PF 1	854.00	4977.68	4978.66	4978.52	4978.85	0.011462	3.48	245.62	367.08	0.75
stream	1397	PF 1	947.00	4969.21	4970.16	4970.16	4970.42	0.023486	4.11	230.18	457.76	1.02
stream	1000	PF 1	947.00	4963.00	4963.77	4963.62	4963.91	0.010008	2.90	326.03	576.47	0.68

Stream 2

HEC-RAS Plan: VREX River: upper stream Reach: stream2 Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
stream2	1897	PF 1	114.00	5083.92	5085.87	5085.87	5086.48	0.018119	6.28	18.14	15.07	1.01
stream2	1806	PF 1	114.00	5078.86	5080.59	5081.35	5083.10	0.092807	12.72	8.96	8.28	2.15
stream2	1709	PF 1	114.00	5074.96	5077.40	5077.57	5078.33	0.026110	7.76	14.70	11.13	1.19
stream2	1566	PF 1	114.00	5069.99	5072.20	5072.62	5073.55	0.043356	9.33	12.22	10.30	1.51
stream2	1442	PF 1	114.00	5065.98	5067.70	5067.97	5068.69	0.034367	7.96	14.32	13.51	1.36
stream2	1348	PF 1	114.00	5063.99	5065.36	5065.36	5065.53	0.027912	3.30	34.56	108.83	1.03
stream2	1229	PF 1	114.00	5060.60	5061.18	5061.25	5061.48	0.042448	4.37	26.09	73.85	1.30
stream2	1151	PF 1	114.00	5057.66	5058.34	5058.38	5058.57	0.031933	3.90	29.22	79.24	1.13
stream2	1073	PF 1	114.00	5055.28	5055.89	5055.77	5055.97	0.010002	2.19	52.07	140.61	0.63

Stream 3

HEC-RAS Plan: VREX River: Stream 3 Reach: Stream3 Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Stream3	3585	PF 1	50.00	5017.65	5017.97	5017.96	5018.06	0.025852	2.40	20.80	99.50	0.93
Stream3	3430	PF 1	50.00	5013.85	5014.28	5014.25	5014.38	0.021906	2.63	19.02	70.26	0.89
Stream3	3300	PF 1	50.00	5010.62	5011.04	5011.04	5011.17	0.028053	2.81	17.81	71.83	0.99
Stream3	3186	PF 1	50.00	5007.64	5008.02	5008.00	5008.09	0.020930	2.00	25.01	134.50	0.82
Stream3	3030	PF 1	50.00	5003.98	5004.41	5004.40	5004.50	0.025489	2.32	21.56	107.57	0.91
Stream3	2880	PF 1	50.00	4999.94	5000.38	5000.38	5000.53	0.027337	3.17	15.77	51.93	1.01
Stream3	2758	PF 1	50.00	4997.03	4997.38	4997.35	4997.46	0.020411	2.32	21.54	90.94	0.84
Stream3	2649	PF 1	50.00	4994.40	4994.79	4994.79	4994.91	0.027193	2.73	18.31	75.17	0.98
Stream3	2553	PF 1	185.00	4992.48	4993.26		4993.42	0.013636	3.18	58.26	113.61	0.78
Stream3	2419	PF 1	185.00	4990.17	4990.98	4990.96	4991.15	0.021927	3.29	56.17	148.10	0.94
Stream3	2295	PF 1	185.00	4987.99	4988.70	4988.64	4988.85	0.015841	3.15	58.82	130.21	0.83
Stream3	2154	PF 1	185.00	4985.29	4986.12	4986.10	4986.32	0.020289	3.52	52.54	118.24	0.93
Stream3	1964	PF 1	185.00	4981.29	4981.93	4981.93	4982.14	0.024138	3.64	50.78	123.67	1.00
Stream3	1801	PF 1	185.00	4977.69	4978.29	4978.19	4978.38	0.013256	2.49	74.30	204.38	0.73
Stream3	1618	PF 1	185.00	4974.46	4974.97	4974.97	4975.16	0.024528	3.47	53.30	141.31	1.00
Stream3	1281	PF 1	185.00	4966.28	4966.73	4966.73	4966.89	0.026154	3.23	57.33	177.94	1.00
Stream3	1044	PF 1	244.00	4961.67	4962.43	4962.29	4962.51	0.009933	2.33	104.58	255.39	0.64
Stream3	1002	PF 1	430.00	4961.00	4961.96	4961.81	4962.09	0.009997	2.89	148.76	264.72	0.68

Stream 4

HEC-RAS Plan: VREX River: Stream4 Reach: Stream 4 Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Stream 4	3139	PF 1	150.00	5025.98	5026.69	5026.69	5026.93	0.023646	3.92	38.23	82.00	1.01
Stream 4	2947	PF 1	150.00	5018.86	5019.57	5019.72	5020.09	0.059225	5.79	25.89	61.61	1.58
Stream 4	2782	PF 1	150.00	5012.88	5013.66	5013.67	5013.91	0.025132	4.06	36.91	78.66	1.05
Stream 4	2612	PF 1	150.00	5006.98	5007.88	5008.02	5008.38	0.043557	5.66	26.50	51.88	1.40
Stream 4	2401	PF 1	150.00	5001.32	5002.16	5002.16	5002.41	0.022350	4.02	37.31	73.97	1.00
Stream 4	2246	PF 1	150.00	4997.31	4997.94	4997.98	4998.18	0.033957	3.99	37.58	103.09	1.17
Stream 4	2124	PF 1	150.00	4992.98	4994.32	4994.32	4994.53	0.026311	3.67	40.83	104.59	1.04
Stream 4	2048	PF 1	150.00	4990.91	4992.29	4992.29	4992.52	0.026875	3.92	38.27	90.46	1.06
Stream 4	1962	PF 1	150.00	4988.89	4989.76	4989.81	4990.06	0.030327	4.41	34.04	73.96	1.15
Stream 4	1887	PF 1	150.00	4984.69	4984.96	4985.11	4985.48	0.178285	5.80	25.86	140.48	2.38
Stream 4	1681	PF 1	150.00	4981.79	4982.35	4982.30	4982.44	0.016414	2.46	61.00	203.32	0.79
Stream 4	1450	PF 1	150.00	4977.63	4978.08	4978.04	4978.18	0.020959	2.57	58.42	216.33	0.87
Stream 4	1232	PF 1	150.00	4972.53	4973.34	4973.33	4973.57	0.021254	3.78	39.68	83.09	0.96
Stream 4	1000	PF 1	150.00	4969.43	4970.17	4970.02	4970.25	0.010003	2.39	62.76	148.59	0.65

Stream 5

HEC-RAS Plan: VREX River: Stream 5 Reach: Stream 5 Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Stream 5	3344	PF 1	135.00	5007.23	5007.69	5007.69	5007.86	0.028077	3.29	40.98	130.07	1.03
Stream 5	3231	PF 1	135.00	5004.83	5005.34	5005.27	5005.43	0.013565	2.48	54.39	152.91	0.73
Stream 5	3001	PF 1	135.00	5000.46	5000.98	5000.98	5001.14	0.026931	3.27	41.34	128.78	1.02
Stream 5	2847	PF 1	135.00	4997.68	4998.33	4998.20	4998.40	0.008377	2.12	63.55	157.24	0.59
Stream 5	2792	PF 1	135.00	4997.06	4997.48	4997.48	4997.63	0.026261	3.19	42.33	134.09	1.00
Stream 5	2702	PF 1	135.00	4994.37	4995.14	4995.14	4995.36	0.024425	3.80	35.56	82.14	1.02
Stream 5	2652	PF 1	135.00	4992.99	4993.93	4993.85	4994.12	0.015729	3.48	38.76	73.25	0.84
Stream 5	2415	PF 1	135.00	4988.99	4989.54	4989.52	4989.69	0.022509	3.10	43.59	128.59	0.94
Stream 5	2137	PF 1	135.00	4983.92	4984.48	4984.41	4984.58	0.015267	2.55	52.94	156.20	0.77
Stream 5	1817	PF 1	135.00	4978.98	4979.36		4979.44	0.016910	2.28	59.17	222.72	0.78
Stream 5	1525	PF 1	135.00	4974.70	4975.15		4975.23	0.012421	2.19	61.65	195.81	0.69
Stream 5	1292	PF 1	135.00	4970.96	4971.45	4971.41	4971.57	0.020501	2.77	48.73	158.38	0.88
Stream 5	1027	PF 1	135.00	4967.22	4967.82	4967.71	4967.88	0.009991	1.99	67.70	210.20	0.62

Stream 6

HEC-RAS Plan: VREX River: Stream 6 Reach: Stream 6 Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
Stream 6	3611	PF 1	115.00	5062.69	5063.34	5063.34	5063.56	0.023851	3.70	31.08	73.32	1.00
Stream 6	3516	PF 1	115.00	5057.63	5058.08	5058.32	5058.92	0.145181	7.36	15.63	50.94	2.34
Stream 6	3427	PF 1	115.00	5053.21	5053.90	5053.92	5054.16	0.026020	4.11	27.98	60.16	1.06
Stream 6	3326	PF 1	115.00	5047.93	5048.55	5048.85	5049.51	0.096895	7.87	14.60	31.70	2.05
Stream 6	3196	PF 1	115.00	5042.28	5042.96	5042.98	5043.20	0.027880	3.90	29.50	72.35	1.08
Stream 6	3044	PF 1	115.00	5034.76	5035.24	5035.42	5035.85	0.101600	6.24	18.43	58.88	1.97
Stream 6	2911	PF 1	115.00	5028.71	5029.44	5029.45	5029.68	0.025666	3.86	29.81	69.75	1.04
Stream 6	2833	PF 1	115.00	5025.17	5025.64	5025.81	5026.18	0.093191	5.90	19.49	63.46	1.88
Stream 6	2709	PF 1	115.00	5020.13	5020.52	5020.62	5020.84	0.064493	4.51	25.51	94.37	1.53
Stream 6	2580	PF 1	115.00	5015.24	5015.74	5015.79	5015.99	0.036351	3.94	29.19	87.65	1.19
Stream 6	2425	PF 1	115.00	5010.00	5010.52	5010.55	5010.75	0.031365	3.81	30.16	83.53	1.12
Stream 6	2283	PF 1	115.00	5005.75	5006.17	5006.19	5006.34	0.030602	3.28	35.10	119.79	1.07
Stream 6	2153	PF 1	115.00	5002.13	5002.64	5002.57	5002.72	0.012652	2.24	51.35	159.86	0.70
Stream 6	1971	PF 1	115.00	4998.77	4999.32	4999.32	4999.47	0.027142	3.12	36.88	123.91	1.01
Stream 6	1959	PF 1	115.00	4998.46	4999.00	4999.04	4999.20	0.036800	3.59	32.01	109.27	1.17
Stream 6	1865	PF 1	115.00	4995.97	4997.06	4997.06	4997.20	0.025655	3.04	37.81	126.30	0.98
Stream 6	1840	PF 1	115.00	4995.69	4996.52	4996.47	4996.65	0.017283	2.81	41.14	122.41	0.83
Stream 6	1654	PF 1	115.00	4992.27	4992.95	4992.92	4993.11	0.020978	3.29	34.96	89.32	0.93
Stream 6	1524	PF 1	115.00	4989.38	4989.92	4989.92	4990.09	0.025832	3.35	34.38	100.15	1.01
Stream 6	1353	PF 1	115.00	4986.24	4986.77	4986.65	4986.84	0.009997	2.16	53.23	146.57	0.63

Stream 7

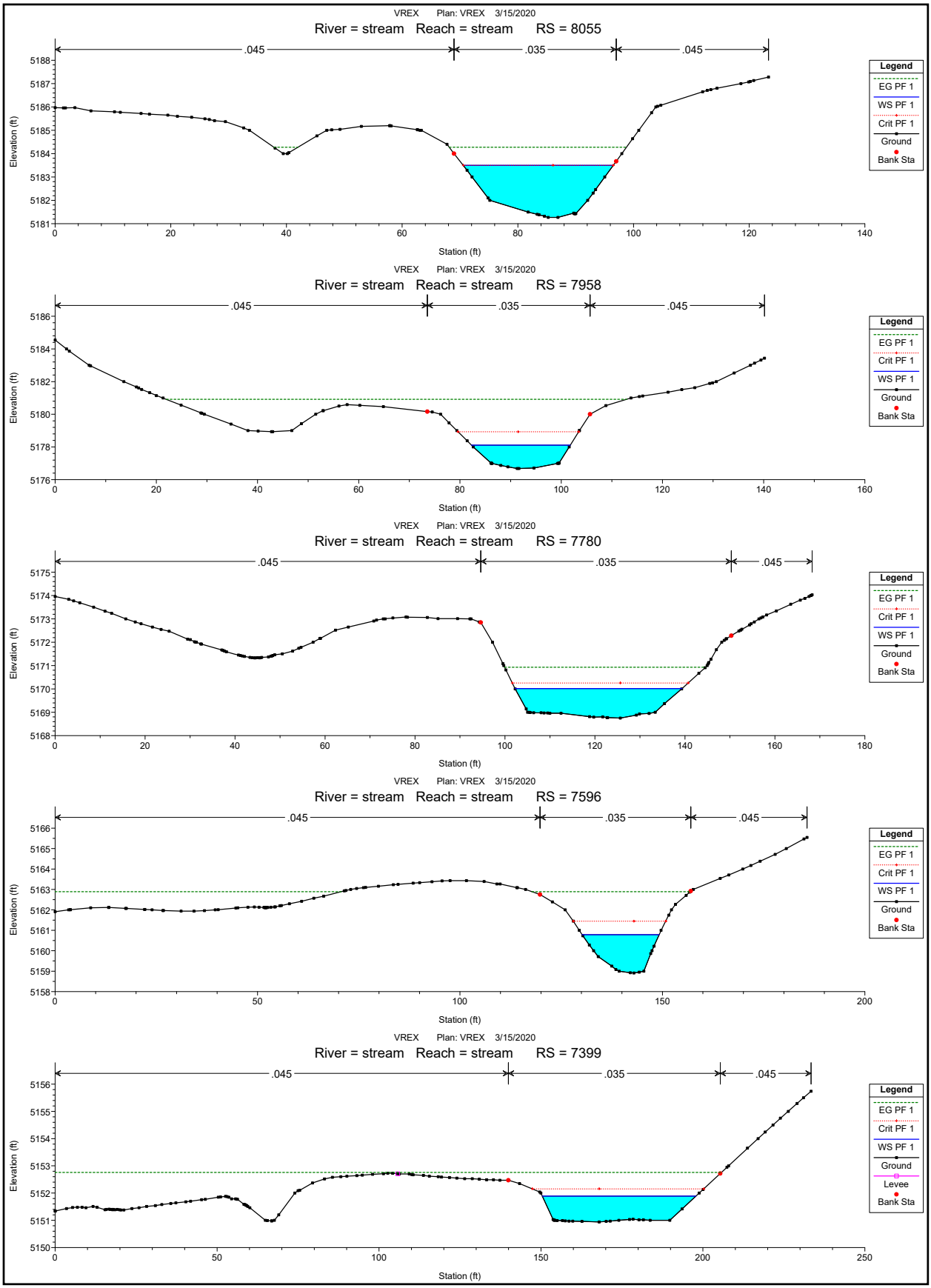
HEC-RAS Plan: VREX River: Stream 7 Reach: Stream 7 Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Stream 7	2561	PF 1	54.00	5132.12	5133.03	5133.03	5133.22	0.025446	3.53	15.32	40.68	1.01
Stream 7	2472	PF 1	54.00	5117.94	5118.77	5119.52	5126.13	0.705139	21.77	2.48	4.74	5.30
Stream 7	2358	PF 1	54.00	5104.96	5106.32	5106.67	5107.41	0.062017	8.38	6.45	8.67	1.71
Stream 7	2255	PF 1	54.00	5096.95	5097.98	5098.43	5099.49	0.095889	9.87	5.47	8.04	2.11
Stream 7	2129	PF 1	54.00	5089.91	5091.16	5091.28	5091.69	0.040617	5.86	9.21	15.86	1.36
Stream 7	2026	PF 1	54.00	5083.93	5085.11	5085.48	5086.32	0.067080	8.81	6.13	8.04	1.78
Stream 7	1920	PF 1	54.00	5077.85	5079.10	5079.37	5080.00	0.051971	7.60	7.11	9.85	1.58
Stream 7	1842	PF 1	54.00	5075.58	5076.08	5076.13	5076.32	0.039153	3.94	13.72	42.71	1.22
Stream 7	1821	PF 1	54.00	5075.00	5075.27	5075.30	5075.46	0.041692	3.49	15.49	60.67	1.22
Stream 7	1769	PF 1	54.00	5069.52	5070.57	5071.01	5072.07	0.102532	9.83	5.49	8.64	2.17
Stream 7	1748	PF 1	96.00	5067.86	5069.41	5069.81	5070.66	0.051249	8.96	10.72	11.41	1.63
Stream 7	1719	PF 1	96.00	5066.30	5068.08	5068.44	5069.24	0.044347	8.63	11.13	11.11	1.52
Stream 7	1616	PF 1	96.00	5062.96	5064.21	5064.35	5064.80	0.038845	6.14	15.63	24.51	1.36
Stream 7	1549	PF 1	96.00	5060.00	5061.06	5061.25	5061.67	0.057853	6.26	15.34	31.87	1.59
Stream 7	1477	PF 1	96.00	5058.43	5059.07	5059.07	5059.26	0.024724	3.55	27.06	69.79	1.00
Stream 7	1412	PF 1	96.00	5054.49	5054.93	5055.16	5055.77	0.180954	7.37	13.02	49.92	2.54
Stream 7	1323	PF 1	96.00	5050.49	5050.96	5050.96	5051.10	0.027319	2.93	32.72	120.97	0.99
Stream 7	1235	PF 1	96.00	5046.21	5046.49	5046.60	5046.82	0.108931	4.60	20.88	111.33	1.87
Stream 7	1109	PF 1	96.00	5040.87	5041.34	5041.34	5041.46	0.026713	2.79	34.41	134.92	0.97
Stream 7	1020	PF 1	96.00	5037.02	5037.45	5037.37	5037.50	0.009996	1.79	53.69	196.37	0.60

Stream 8

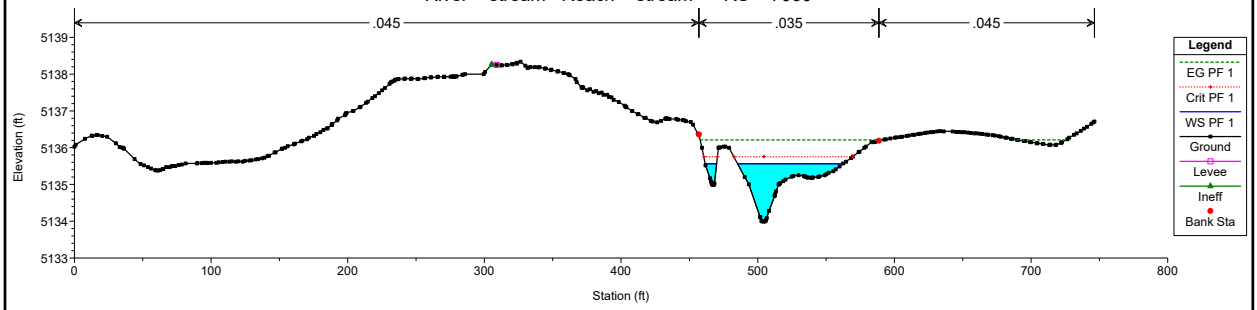
HEC-RAS Plan: VREX River: Stream 8 Reach: Stream 8 Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Stream 8	3769	PF 1	38.00	5325.83	5327.08	5327.08	5327.45	0.021091	4.88	7.79	10.73	1.01
Stream 8	3707	PF 1	38.00	5306.29	5306.66	5307.48	5325.88	5.359612	35.17	1.08	4.98	13.31
Stream 8	3629	PF 1	38.00	5284.51	5285.41	5285.85	5286.93	0.128497	9.89	3.84	7.05	2.36
Stream 8	3547	PF 1	38.00	5266.42	5267.08	5267.65	5270.03	0.371599	13.78	2.76	6.94	3.86
Stream 8	3468	PF 1	38.00	5251.15	5251.93	5252.31	5253.28	0.130782	9.31	4.08	8.45	2.36
Stream 8	3383	PF 1	38.00	5230.97	5231.80	5232.49	5235.46	0.365803	15.36	2.47	5.02	3.86
Stream 8	3320	PF 1	38.00	5220.97	5222.15	5222.57	5223.56	0.106998	9.54	3.98	6.55	2.16
Stream 8	3268	PF 1	38.00	5212.83	5213.49	5213.97	5215.52	0.232428	11.43	3.33	7.74	3.07
Stream 8	3213	PF 1	38.00	5202.88	5203.83	5204.30	5205.56	0.143956	10.55	3.60	6.45	2.49
Stream 8	3154	PF 1	38.00	5193.81	5194.51	5194.96	5196.24	0.174830	10.53	3.61	7.72	2.72
Stream 8	3095	PF 1	38.00	5183.50	5184.28	5184.75	5186.03	0.167986	10.59	3.59	7.36	2.67
Stream 8	3002	PF 1	38.00	5170.96	5171.82	5172.23	5173.26	0.114081	9.65	3.94	6.81	2.24
Stream 8	2918	PF 1	38.00	5165.17	5165.67	5165.77	5166.04	0.061329	5.08	7.84	22.19	1.54
Stream 8	2793	PF 1	38.00	5145.99	5146.74	5147.46	5150.48	0.358376	15.51	2.45	4.80	3.82
Stream 8	2689	PF 1	38.00	5138.37	5139.08	5139.21	5139.56	0.043308	5.54	6.86	13.62	1.38
Stream 8	2567	PF 1	38.00	5127.82	5128.29	5128.63	5129.63	0.196310	9.29	4.09	11.72	2.77
Stream 8	2426	PF 1	38.00	5115.75	5116.42	5116.59	5117.01	0.049943	6.15	6.18	11.65	1.49
Stream 8	2301	PF 1	38.00	5107.09	5108.01	5108.34	5108.91	0.085885	7.62	4.98	10.23	1.92
Stream 8	2084	PF 1	38.00	5091.97	5092.77	5092.96	5093.42	0.059543	6.43	5.91	11.94	1.61
Stream 8	1957	PF 1	38.00	5083.33	5084.04	5084.20	5084.57	0.083159	5.82	6.53	19.76	1.78
Stream 8	1928	PF 1	38.00	5081.48	5082.16	5082.27	5082.46	0.058566	4.36	8.73	33.12	1.46
Stream 8	1874	PF 1	38.00	5078.03	5078.58	5078.64	5078.76	0.080585	3.40	11.17	74.51	1.55
Stream 8	1845	PF 1	38.00	5076.00	5076.40	5076.51	5076.75	0.059471	4.74	8.02	25.85	1.50
Stream 8	1722	PF 1	38.00	5067.11	5067.47	5067.54	5067.69	0.090899	3.72	10.20	64.98	1.66
Stream 8	1612	PF 1	38.00	5060.36	5060.60	5060.61	5060.71	0.046649	2.72	13.96	86.30	1.19
Stream 8	1508	PF 1	38.00	5054.55	5054.80	5054.85	5054.95	0.088459	3.13	12.13	98.17	1.57
Stream 8	1381	PF 1	38.00	5049.09	5049.46	5049.46	5049.57	0.029627	2.66	14.27	64.83	1.00
Stream 8	1244	PF 1	38.00	5044.50	5044.80	5044.82	5044.93	0.039277	2.83	13.45	69.09	1.13
Stream 8	1116	PF 1	38.00	5040.06	5040.63	5040.53	5040.68	0.010004	1.85	20.52	71.25	0.61


VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 8055
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 7958
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 7780
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 7596
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 7399
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Levee
Bank Sta

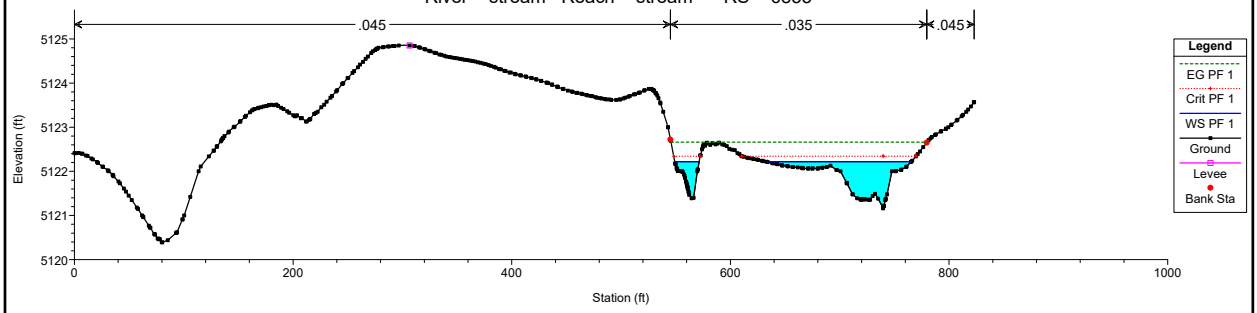
VREX Plan: VREX 3/15/2020

River = stream Reach = stream RS = 7060



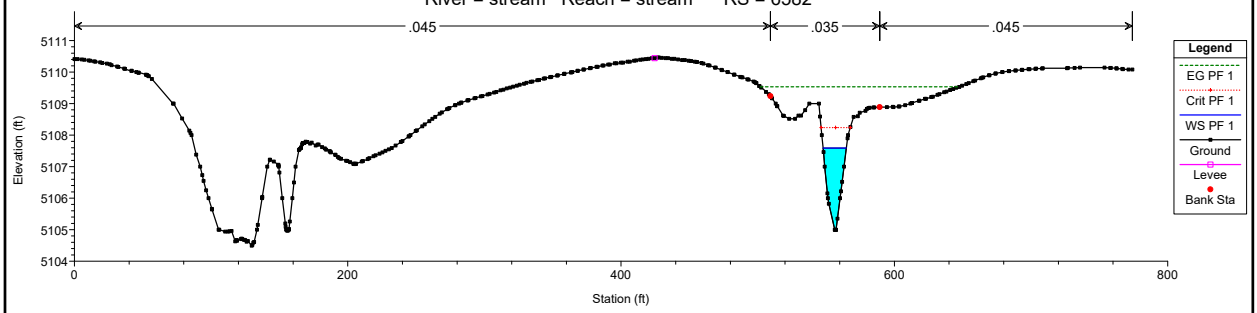
VREX Plan: VREX 3/15/2020

River = stream Reach = stream RS = 6833



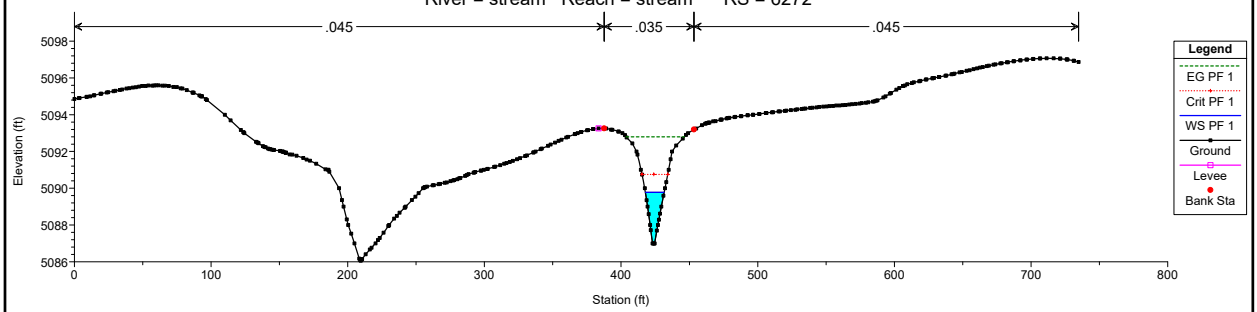
VREX Plan: VREX 3/15/2020

River = stream Reach = stream RS = 6582



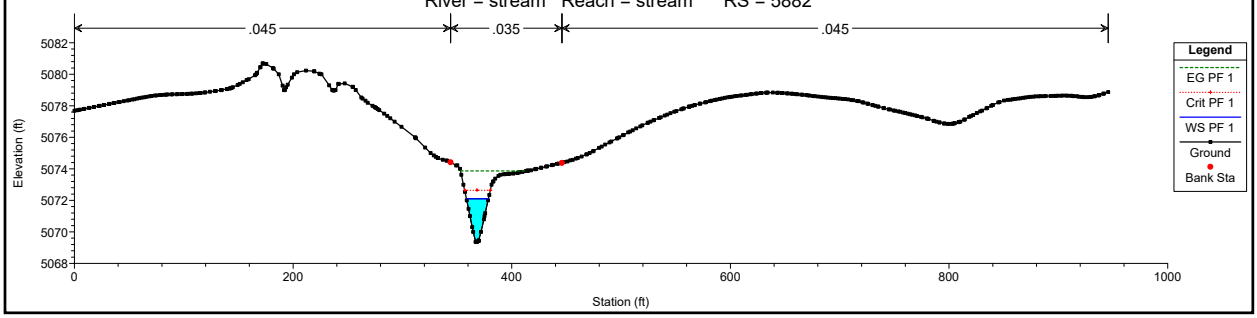
VREX Plan: VREX 3/15/2020

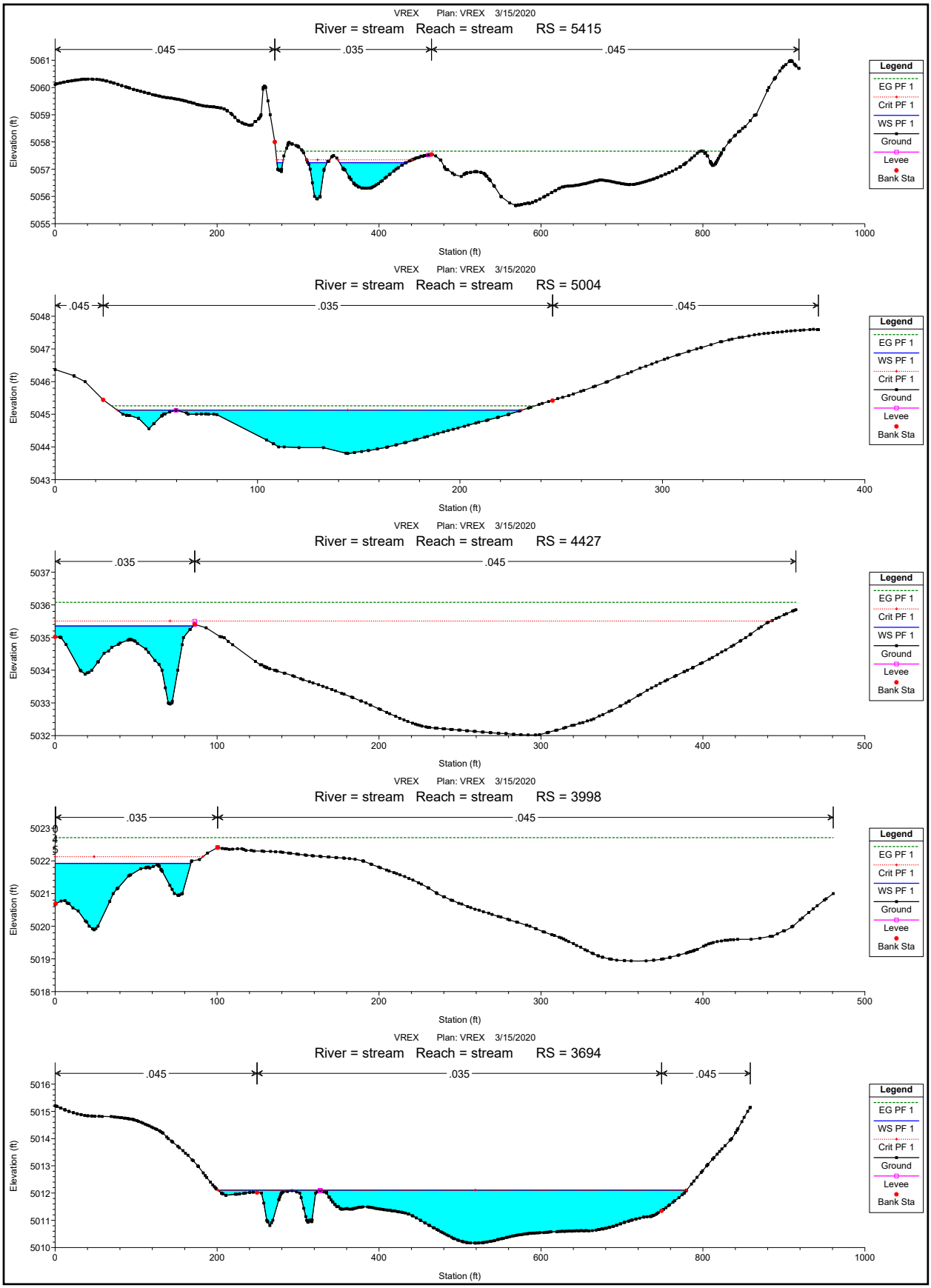
River = stream Reach = stream RS = 6272

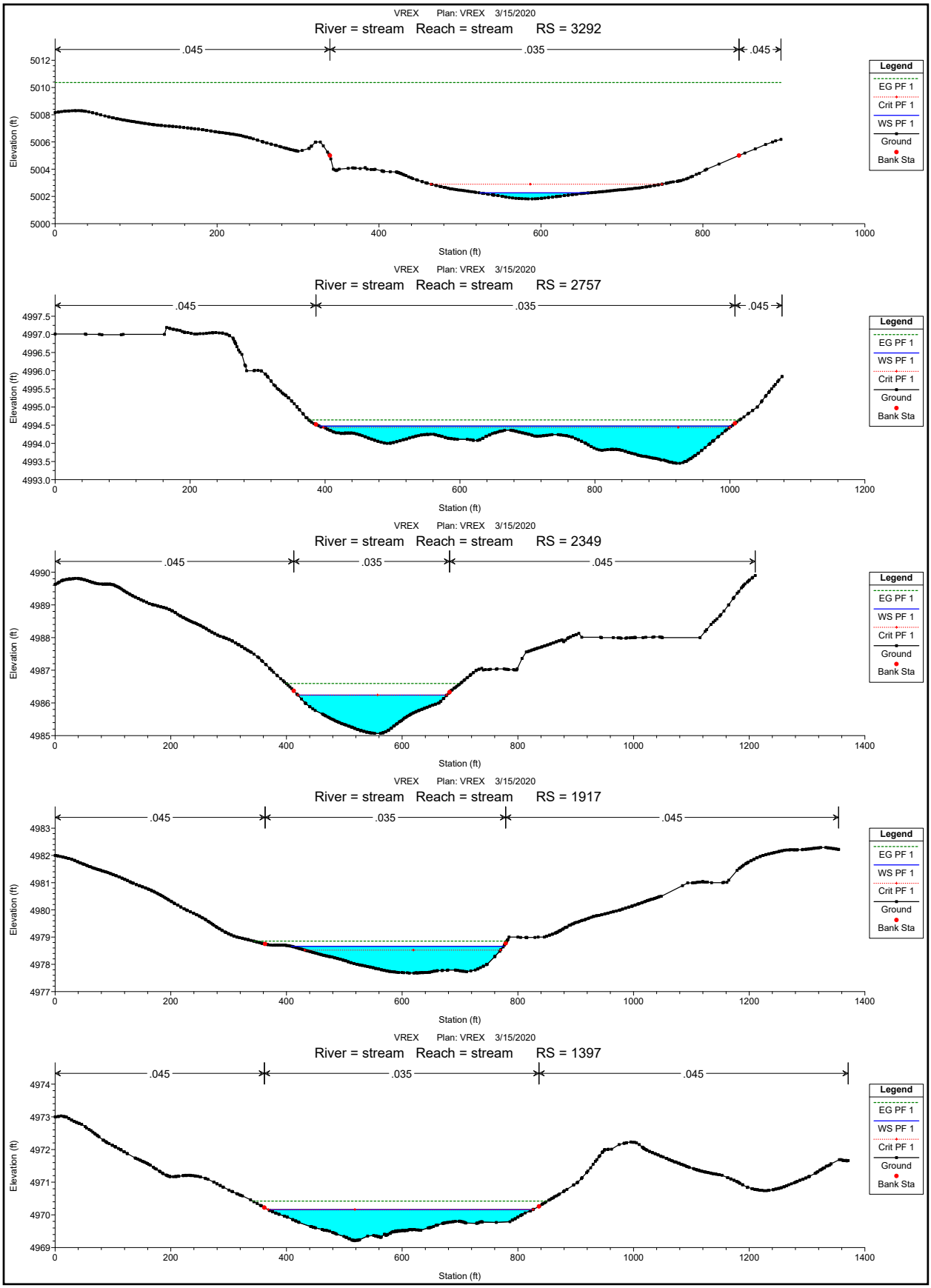


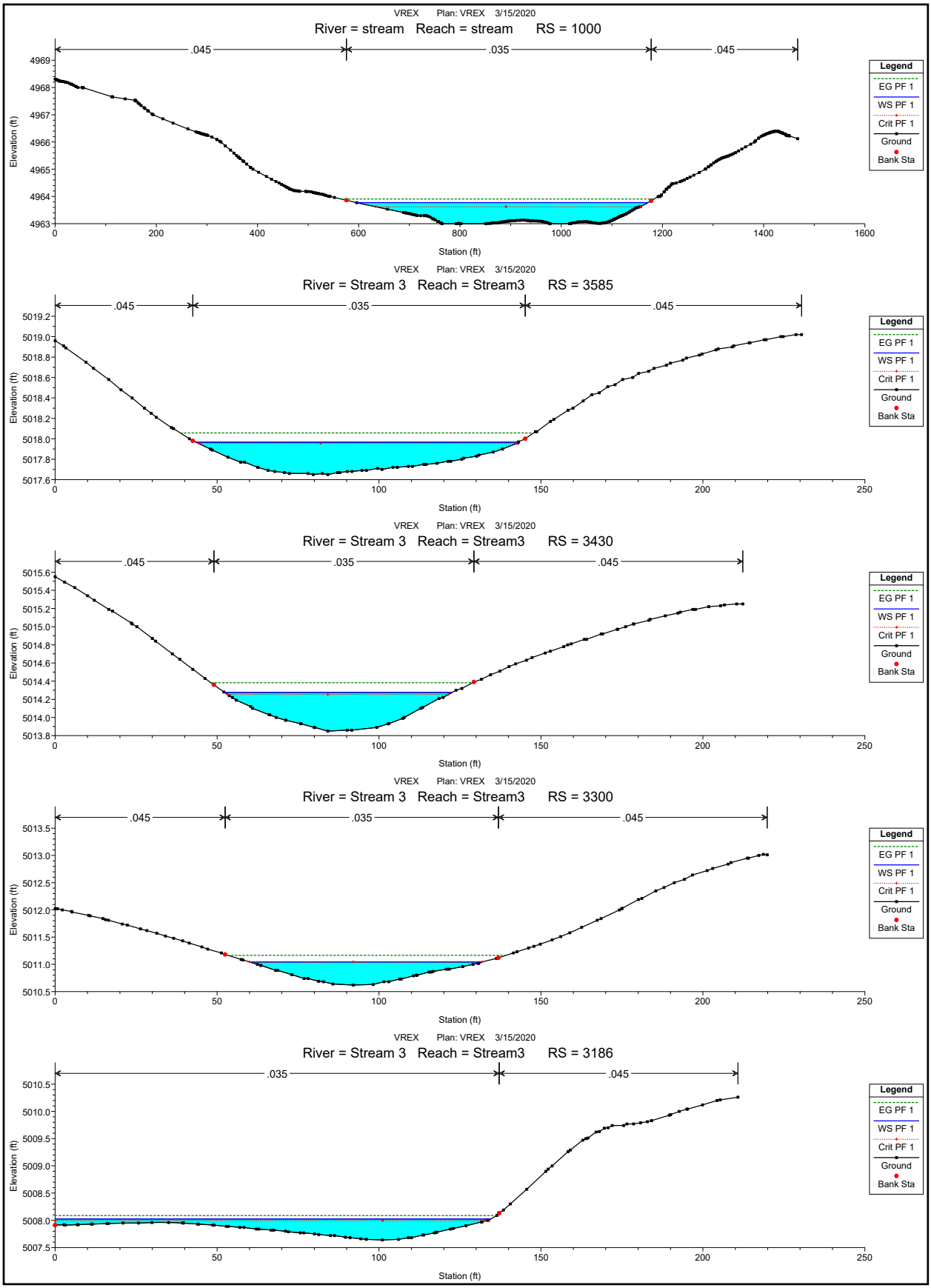
VREX Plan: VREX 3/15/2020

River = stream Reach = stream RS = 5882



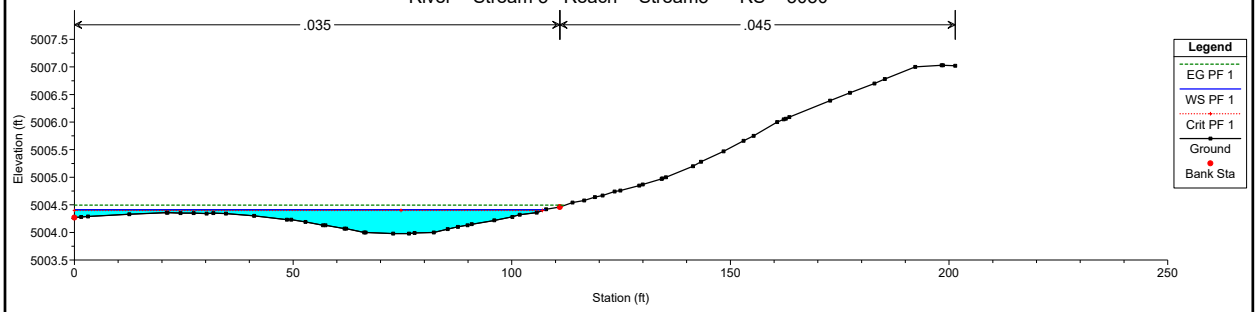

VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 5415
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Levee
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 5004
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 4427
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Levee
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 3998
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Levee
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 3694
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta


VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 3292
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 2757
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 2349
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 1917
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 1397
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta


VREX Plan: VREX 3/15/2020
River = stream Reach = stream RS = 1000
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 3585
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 3430
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 3300
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 3186
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta

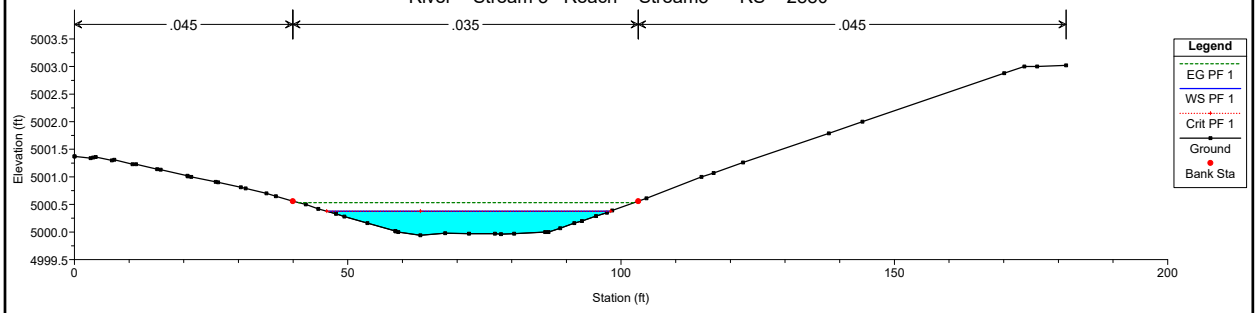
VREX Plan: VREX 3/15/2020

River = Stream 3 Reach = Stream3 RS = 3030



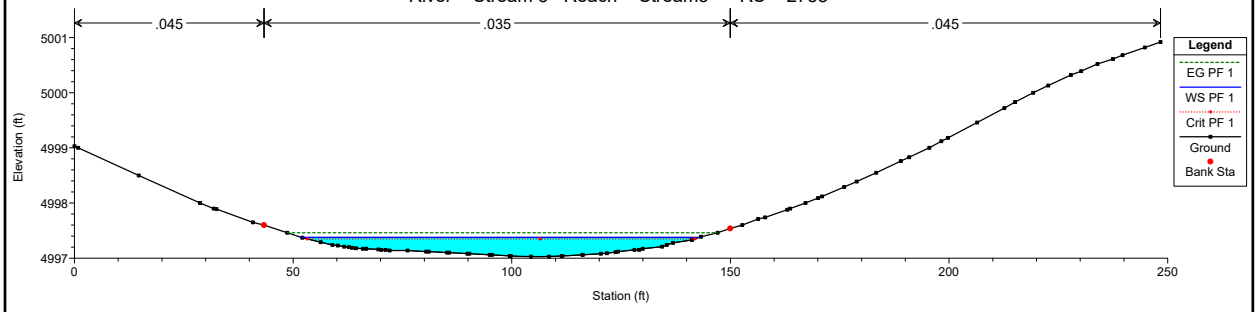
VREX Plan: VREX 3/15/2020

River = Stream 3 Reach = Stream3 RS = 2880



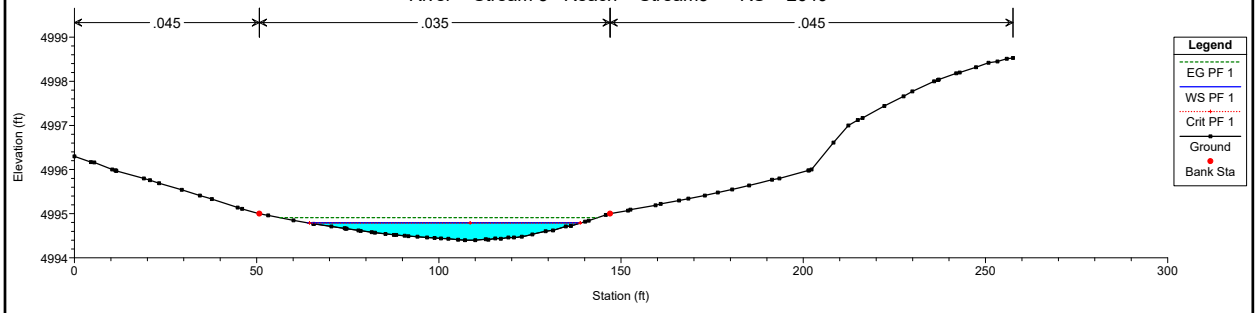
VREX Plan: VREX 3/15/2020

River = Stream 3 Reach = Stream3 RS = 2758



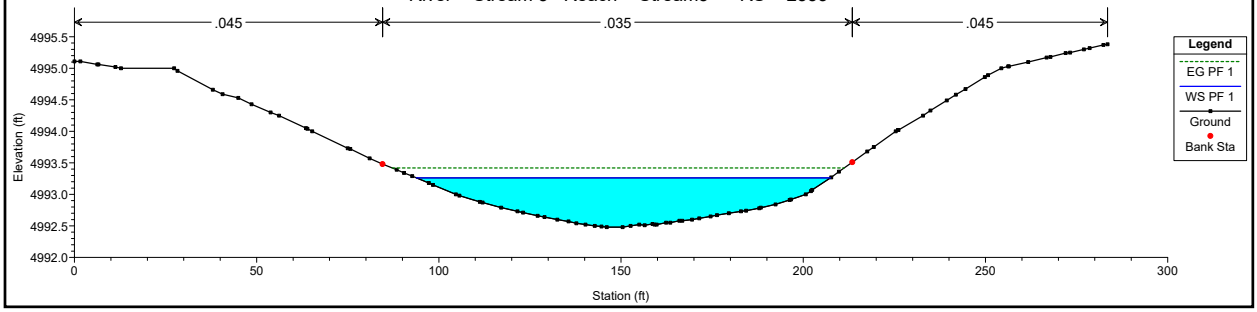
VREX Plan: VREX 3/15/2020

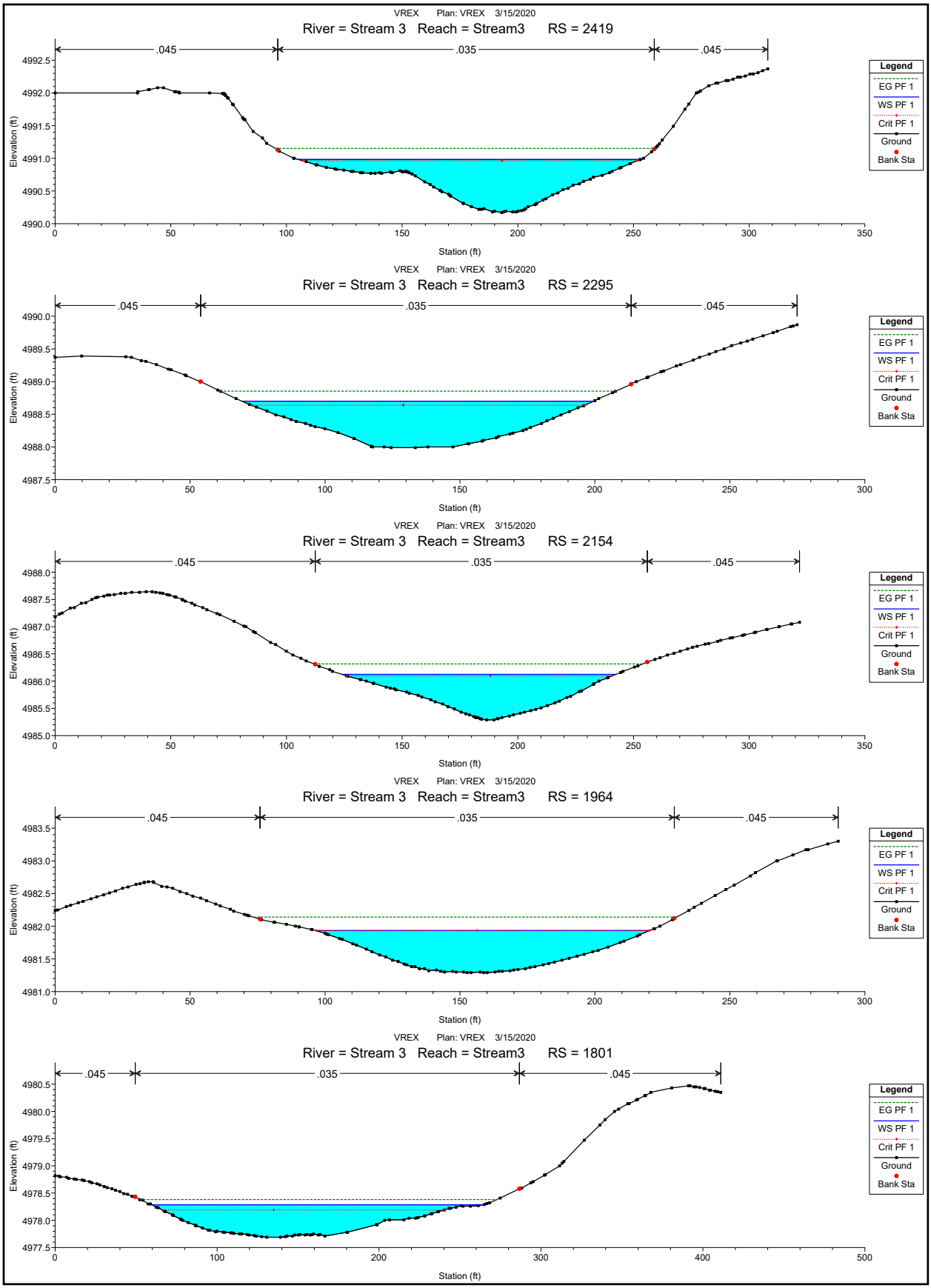
River = Stream 3 Reach = Stream3 RS = 2649

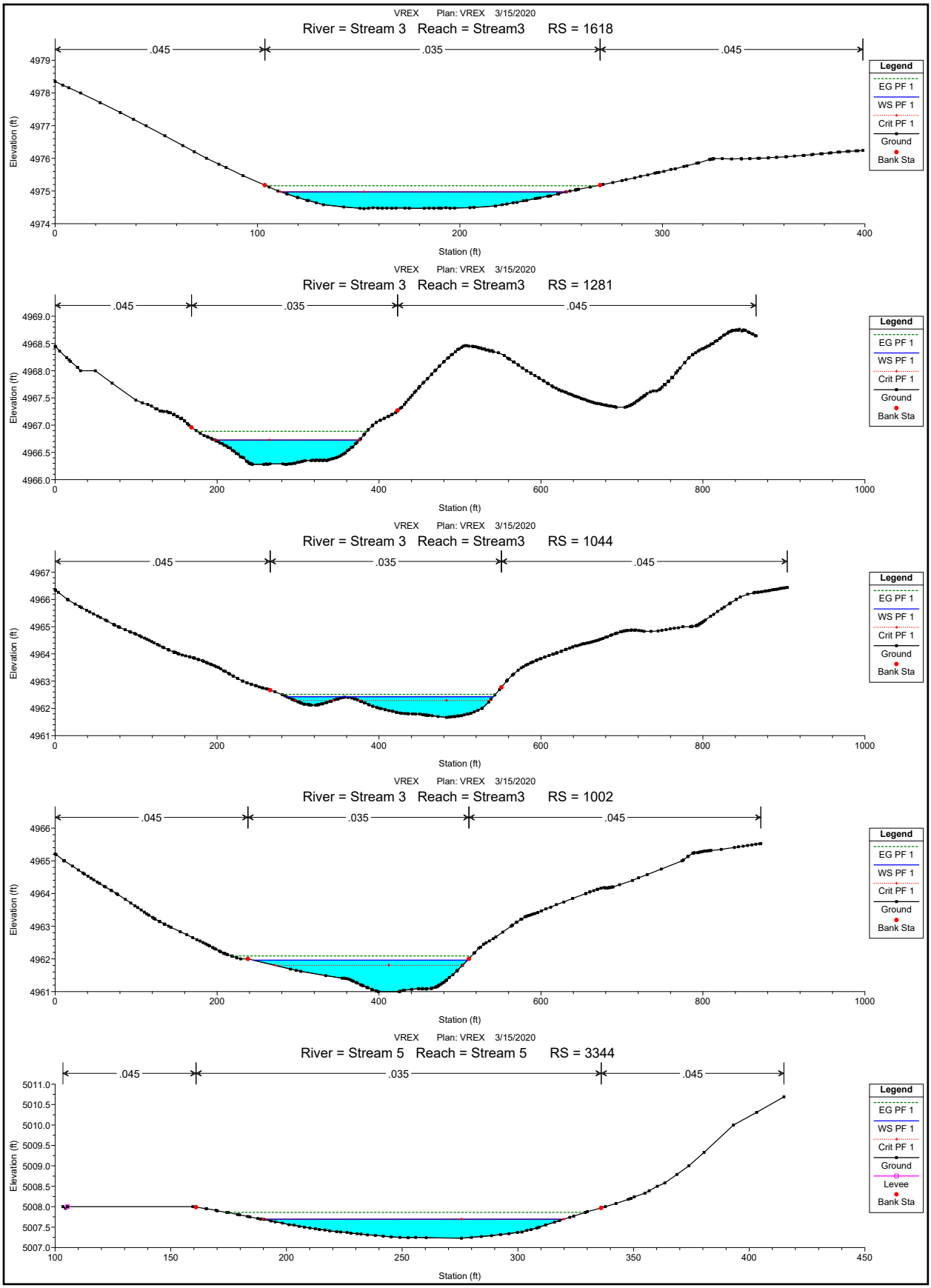


VREX Plan: VREX 3/15/2020

River = Stream 3 Reach = Stream3 RS = 2553

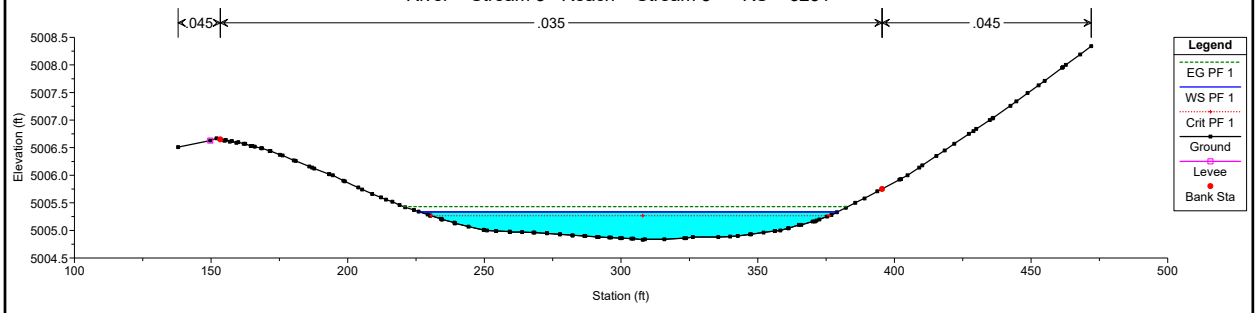



VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 2419
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 2295
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 2154
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 1964
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 1801
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta


VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 1618
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 1281
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 1044
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 3 Reach = Stream3 RS = 1002
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 5 Reach = Stream 5 RS = 3344
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta

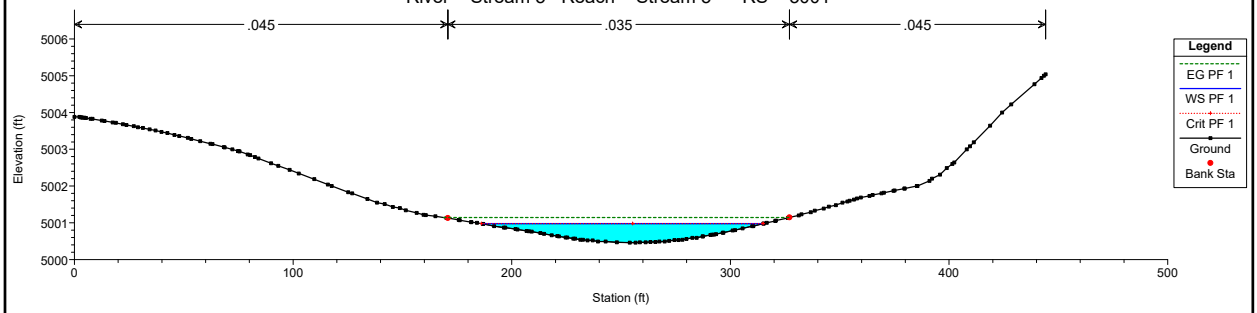
VREX Plan: VREX 3/15/2020

River = Stream 5 Reach = Stream 5 RS = 3231



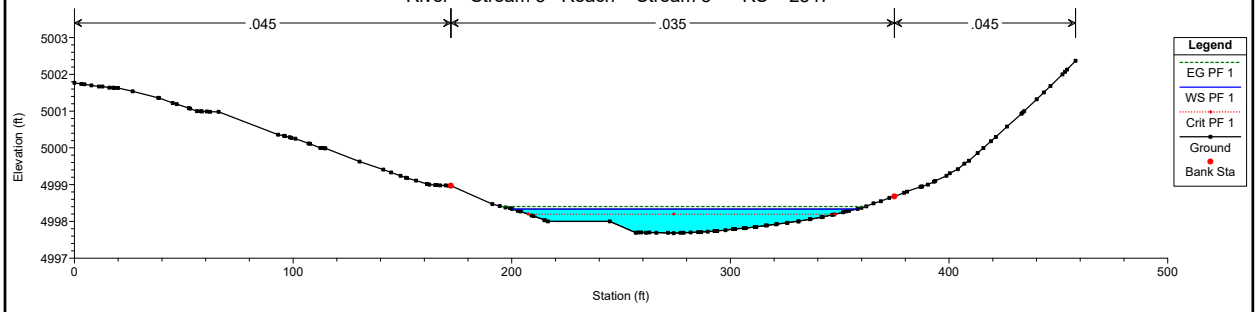
VREX Plan: VREX 3/15/2020

River = Stream 5 Reach = Stream 5 RS = 3001



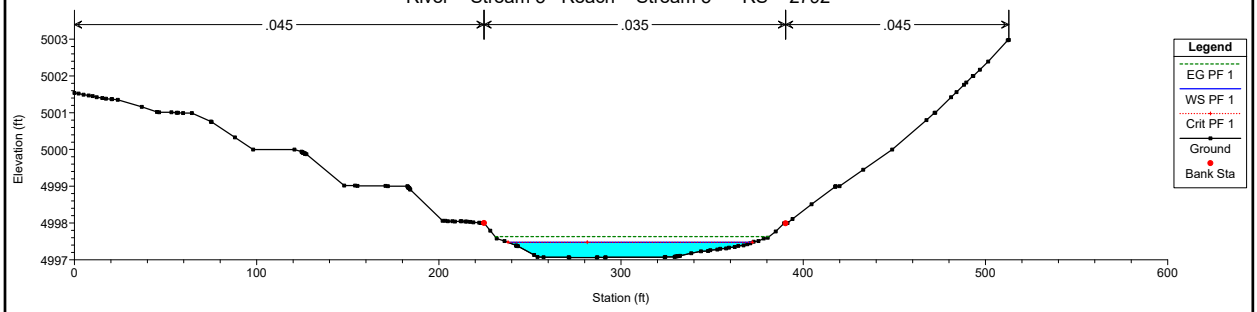
VREX Plan: VREX 3/15/2020

River = Stream 5 Reach = Stream 5 RS = 2847



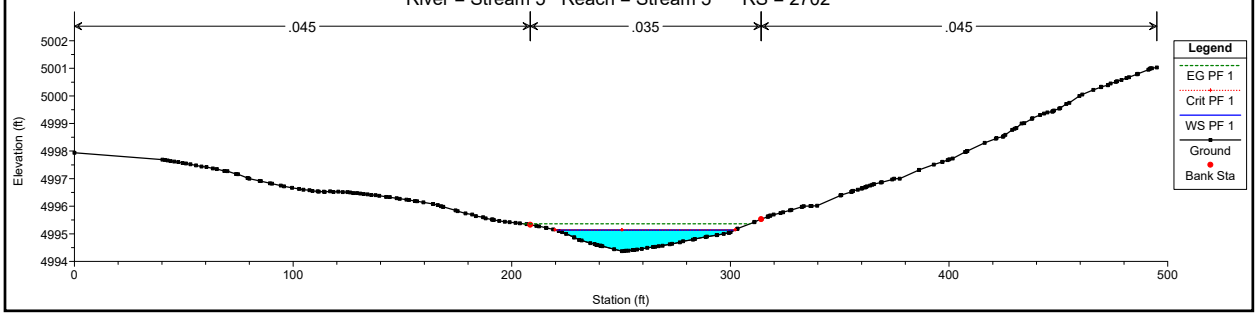
VREX Plan: VREX 3/15/2020

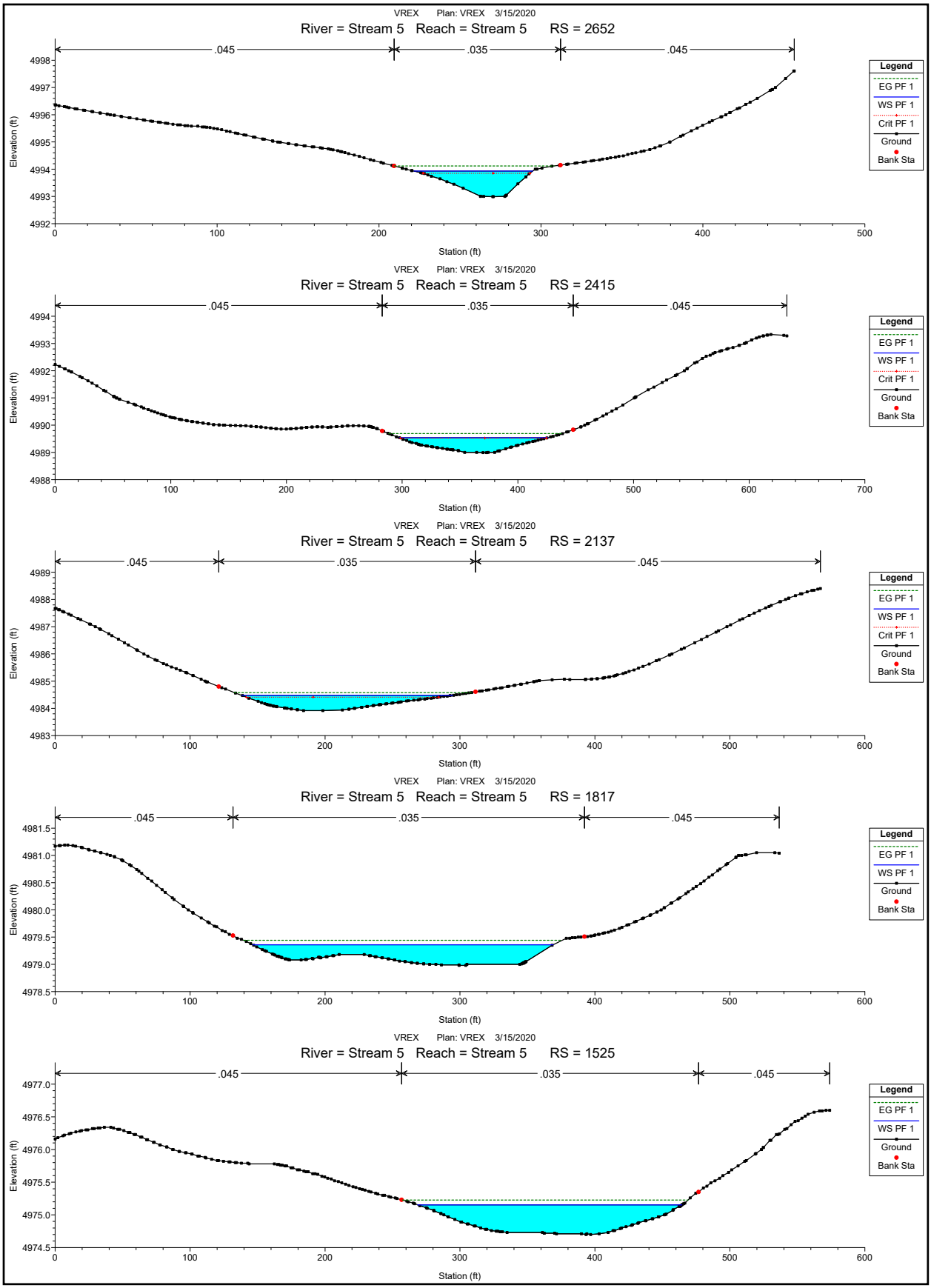
River = Stream 5 Reach = Stream 5 RS = 2792

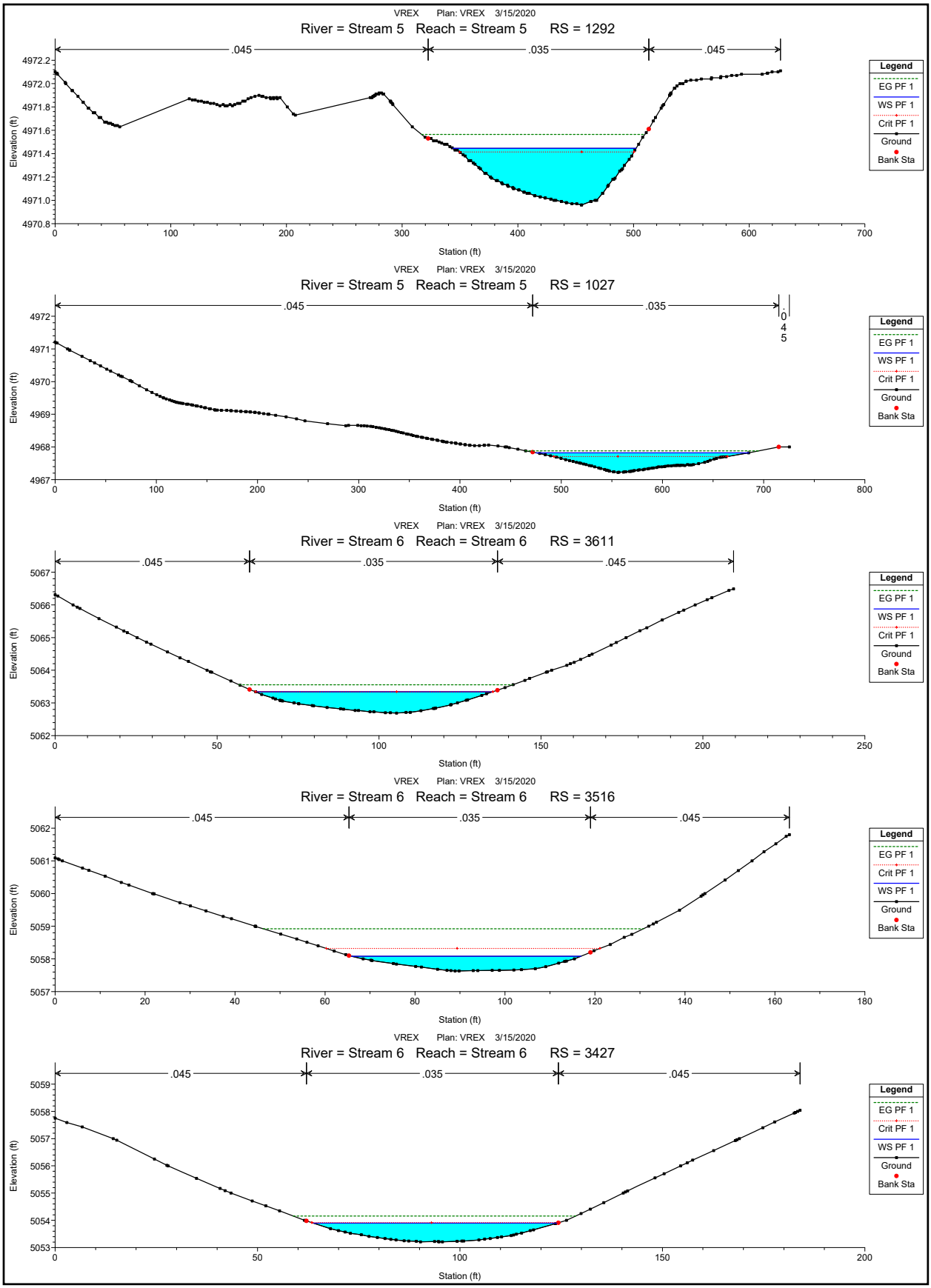


VREX Plan: VREX 3/15/2020

River = Stream 5 Reach = Stream 5 RS = 2702

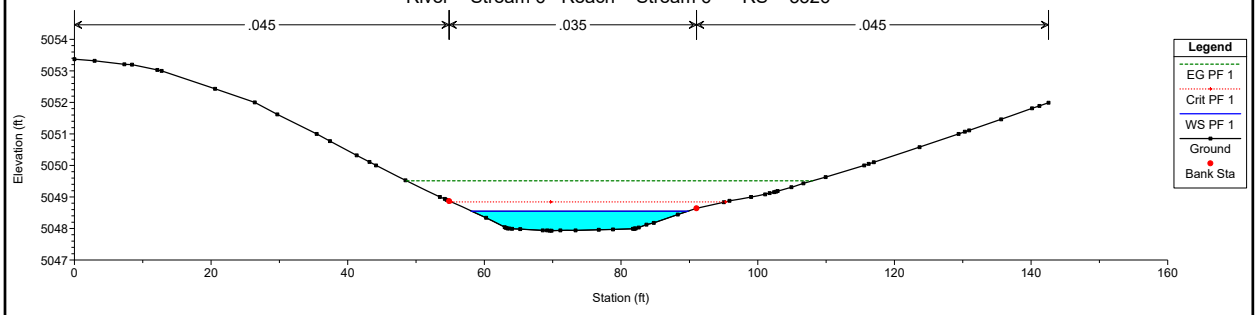



VREX Plan: VREX 3/15/2020
River = Stream 5 Reach = Stream 5 RS = 2652
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 5 Reach = Stream 5 RS = 2415
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 5 Reach = Stream 5 RS = 2137
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 5 Reach = Stream 5 RS = 1817
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 5 Reach = Stream 5 RS = 1525
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta


VREX Plan: VREX 3/15/2020
River = Stream 5 Reach = Stream 5 RS = 1292
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 5 Reach = Stream 5 RS = 1027
.045
.035
0
4
5
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 6 Reach = Stream 6 RS = 3611
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 6 Reach = Stream 6 RS = 3516
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 6 Reach = Stream 6 RS = 3427
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta

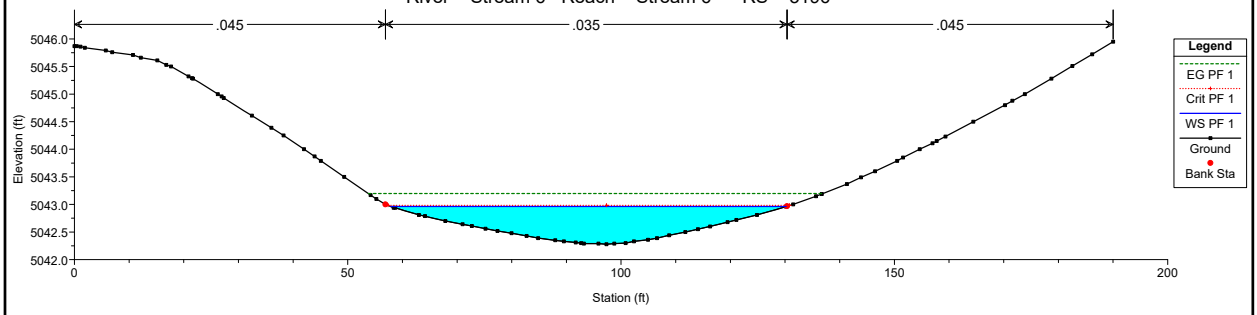
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 3326



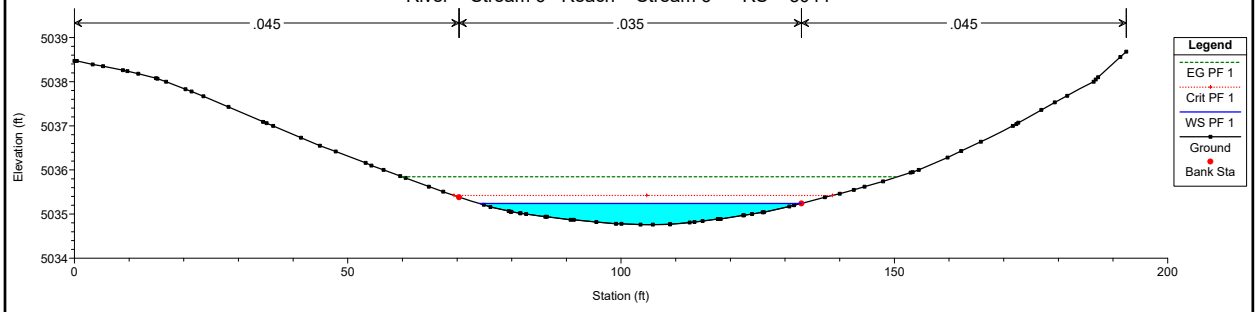
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 3196



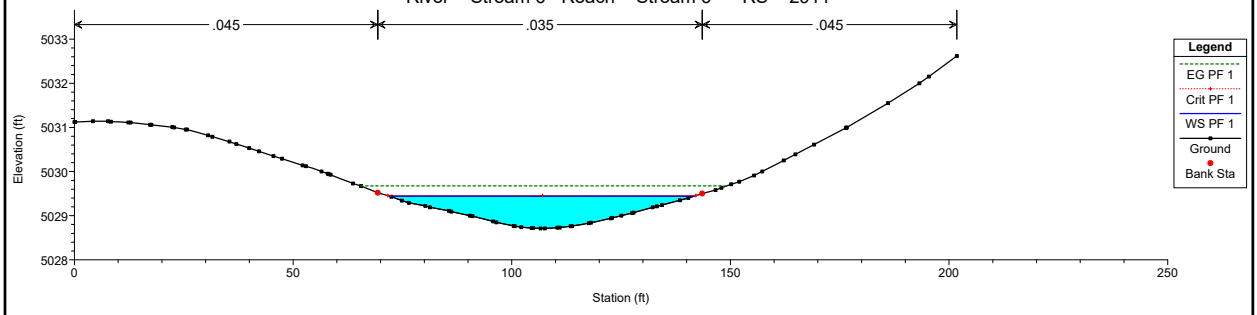
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 3044



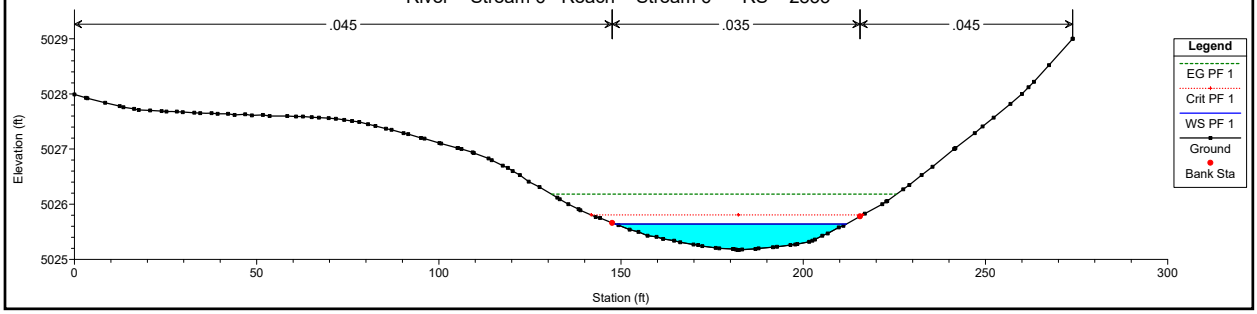
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 2911



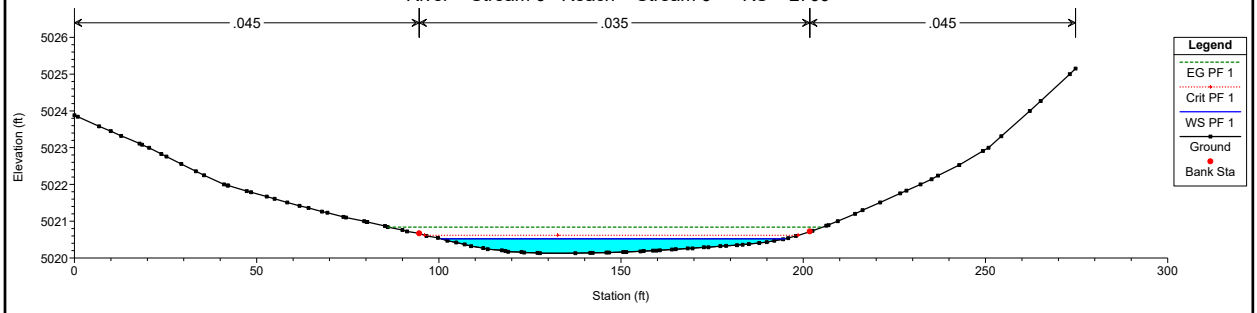
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 2833



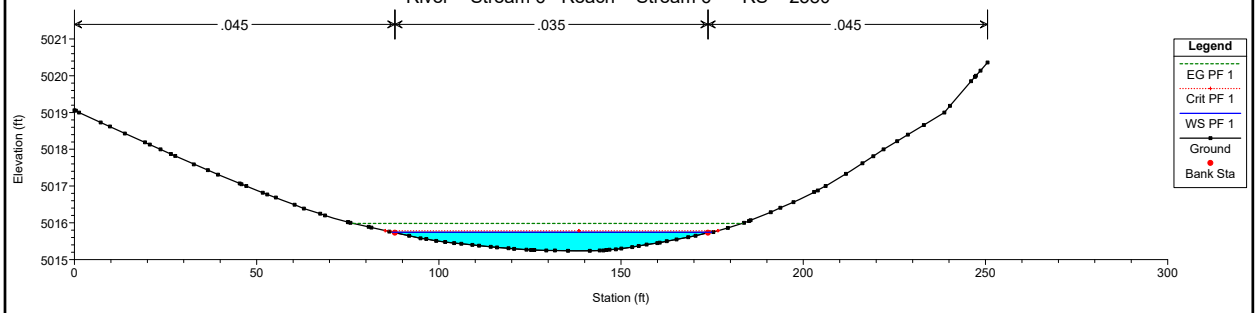
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 2709



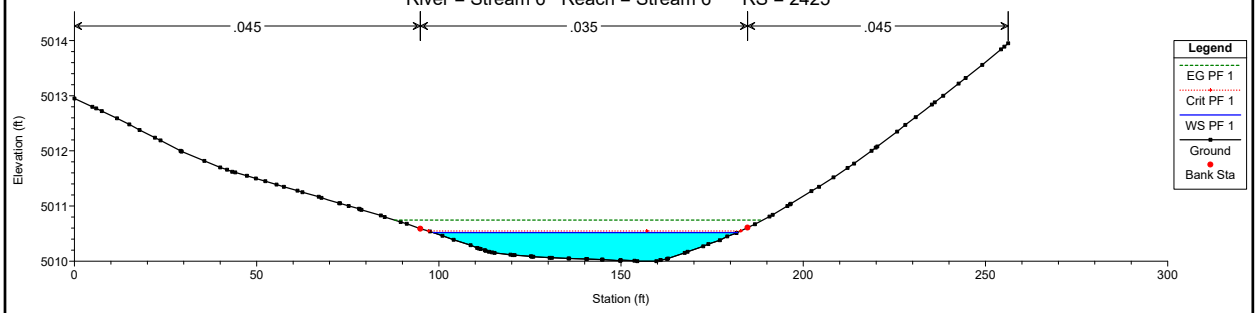
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 2580



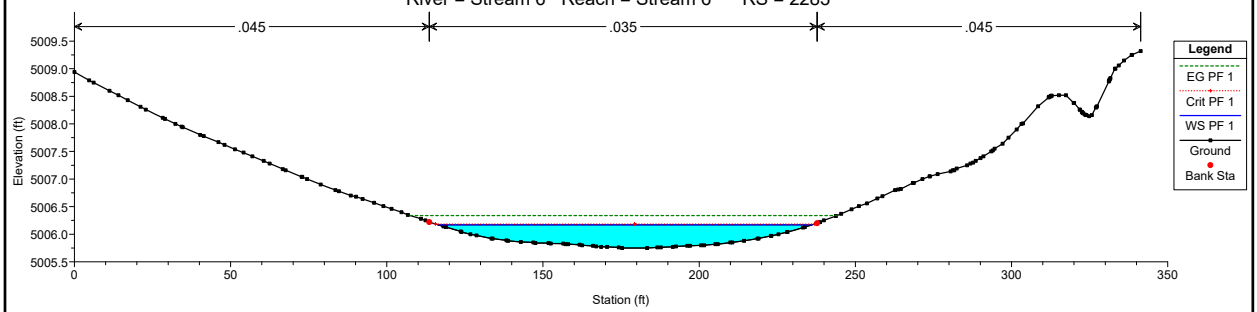
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 2425



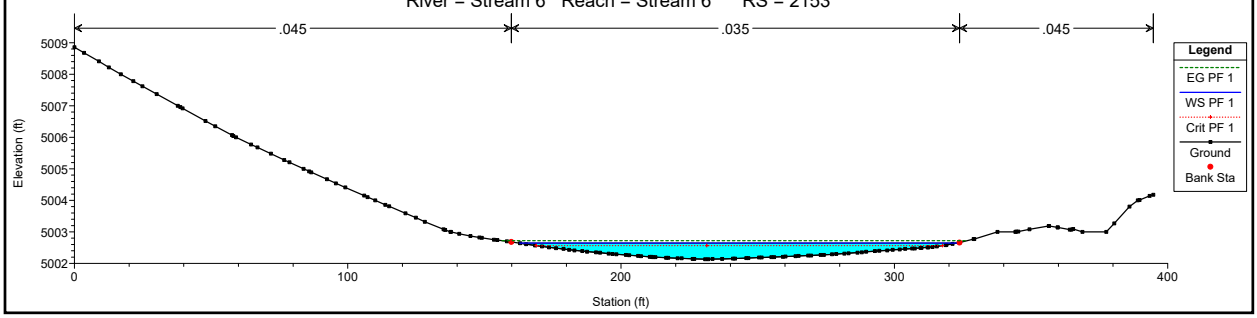
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 2283



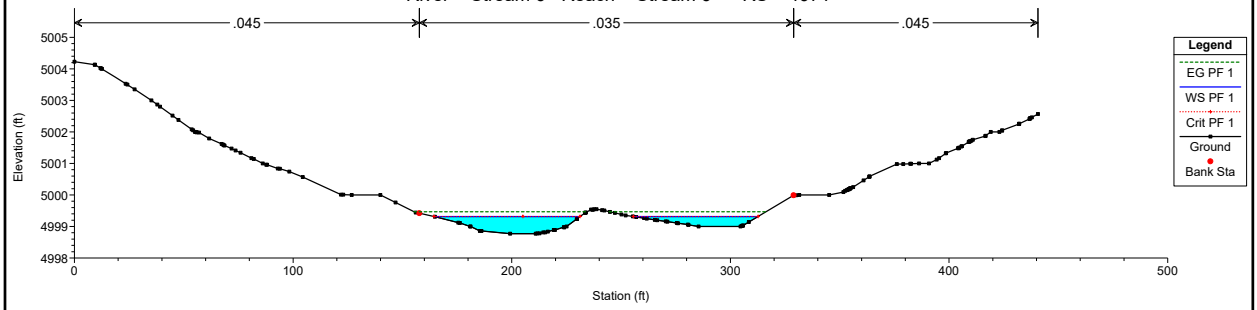
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 2153



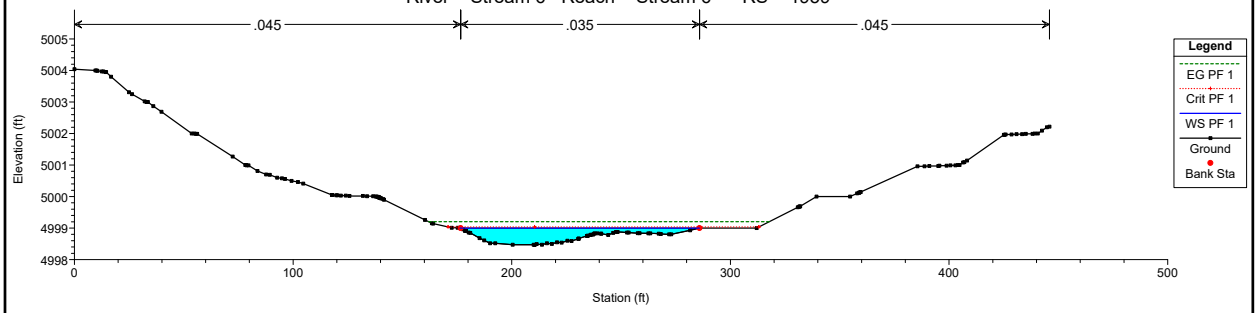
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 1971



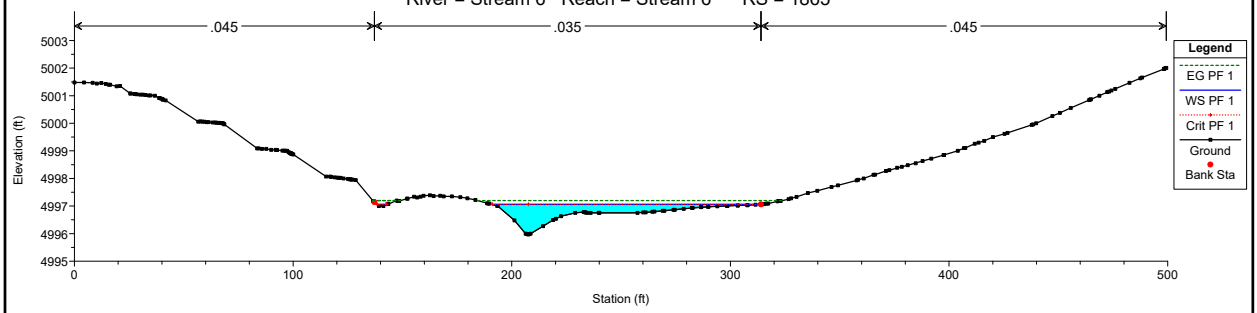
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 1959



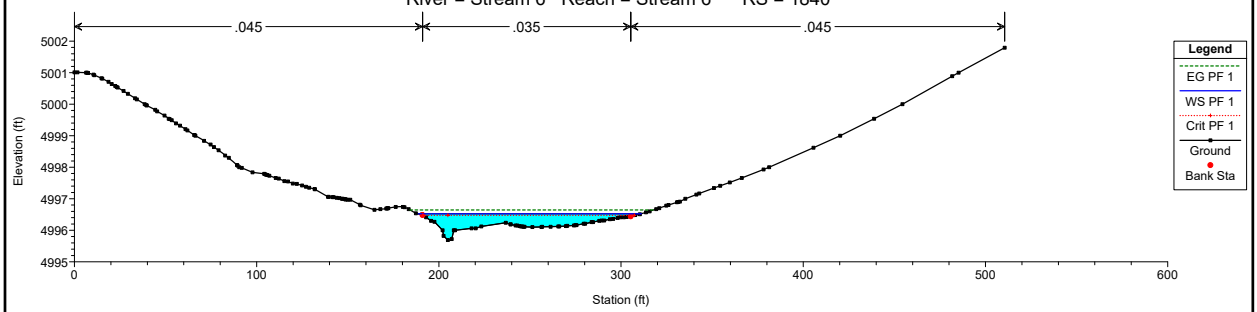
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 1865



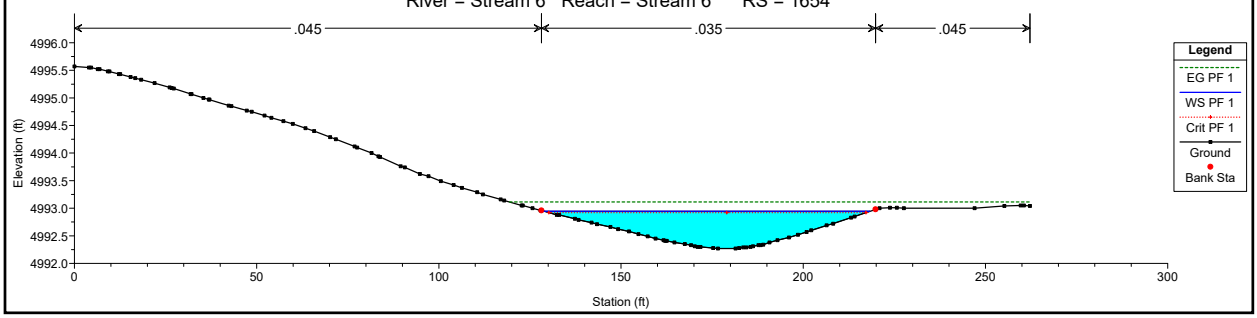
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 1840



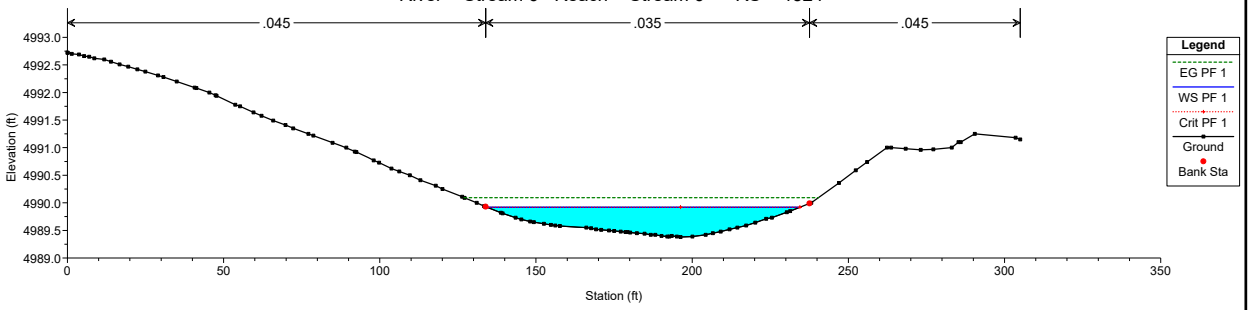
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 1654



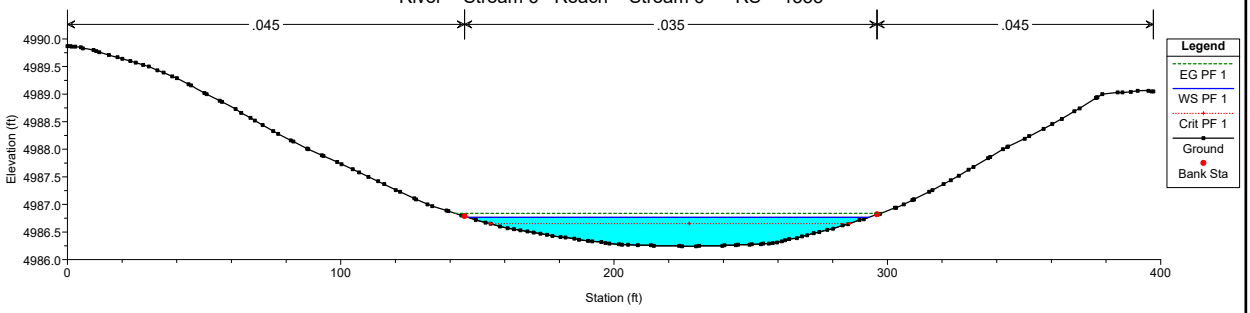
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 1524



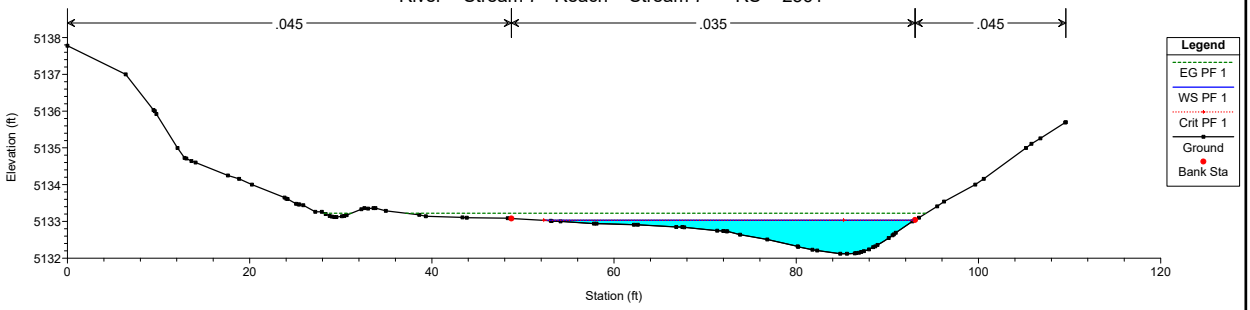
VREX Plan: VREX 3/15/2020

River = Stream 6 Reach = Stream 6 RS = 1353



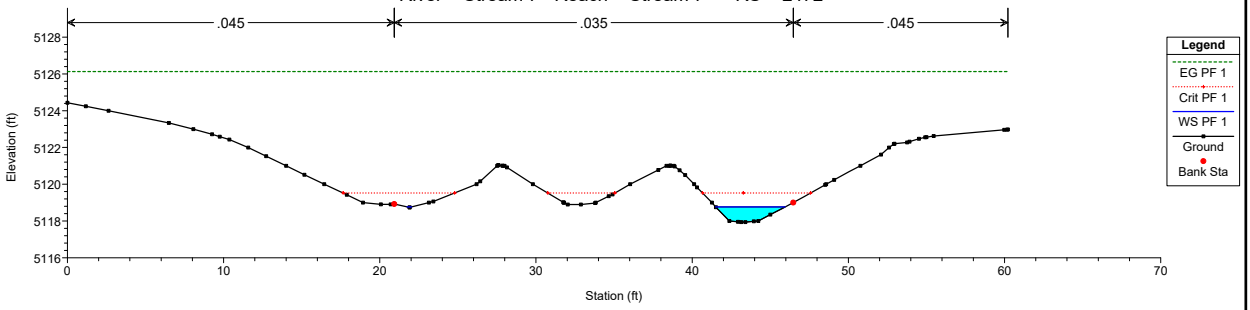
VREX Plan: VREX 3/15/2020

River = Stream 7 Reach = Stream 7 RS = 2561



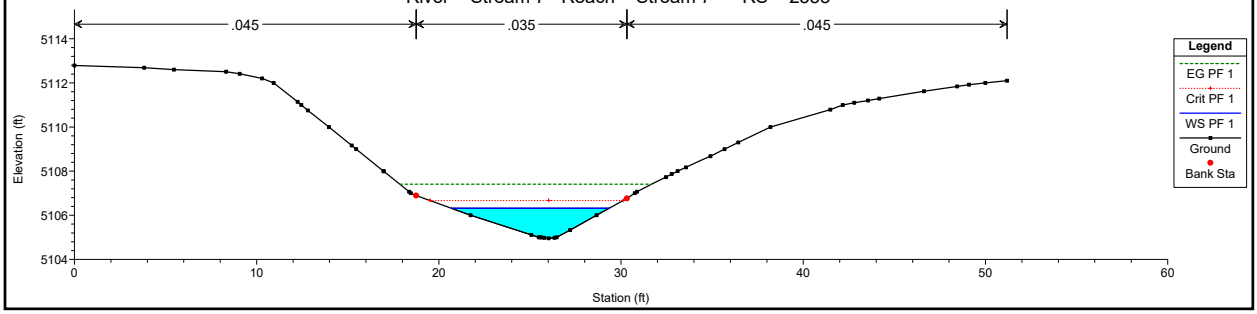
VREX Plan: VREX 3/15/2020

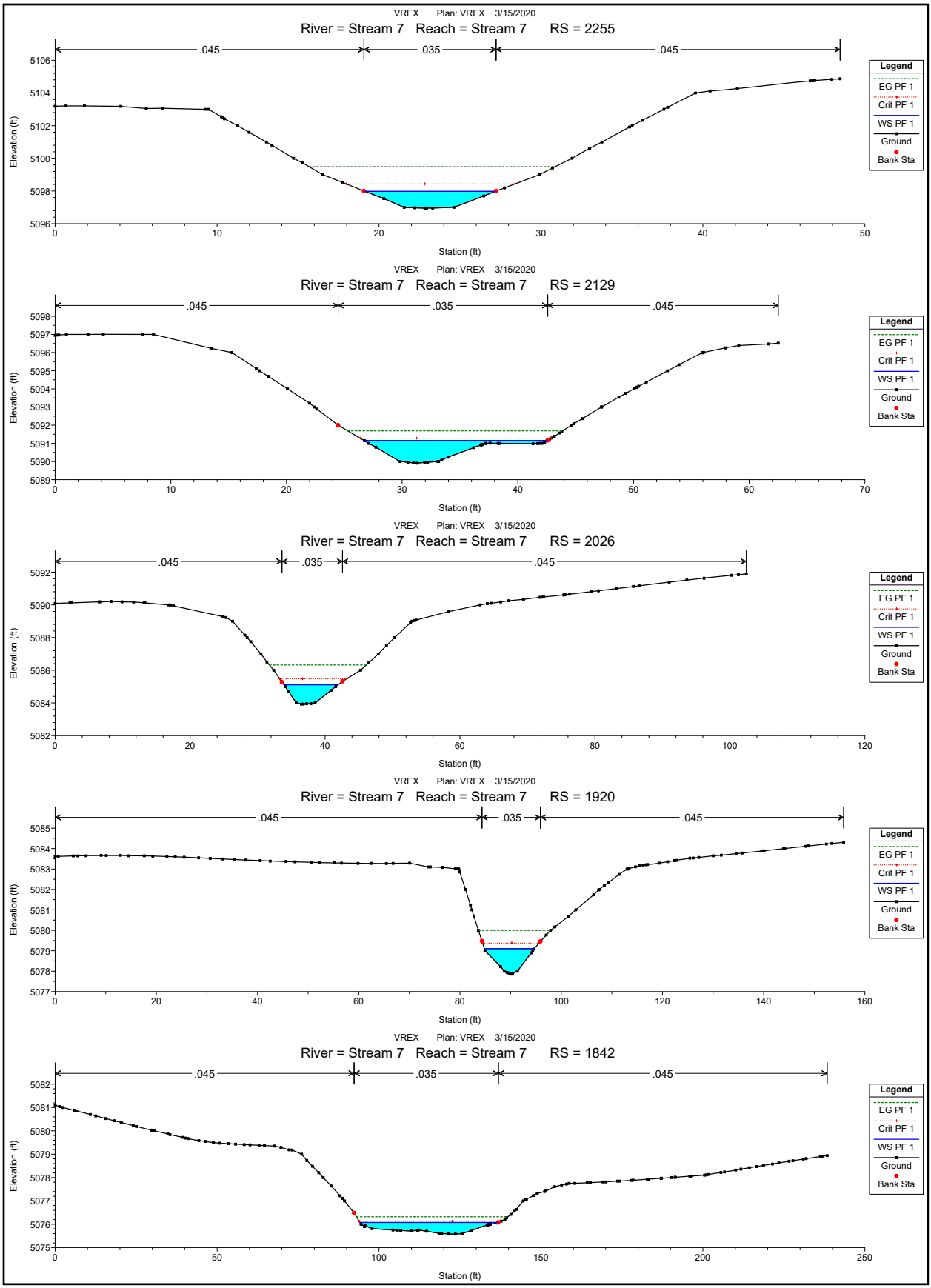
River = Stream 7 Reach = Stream 7 RS = 2472

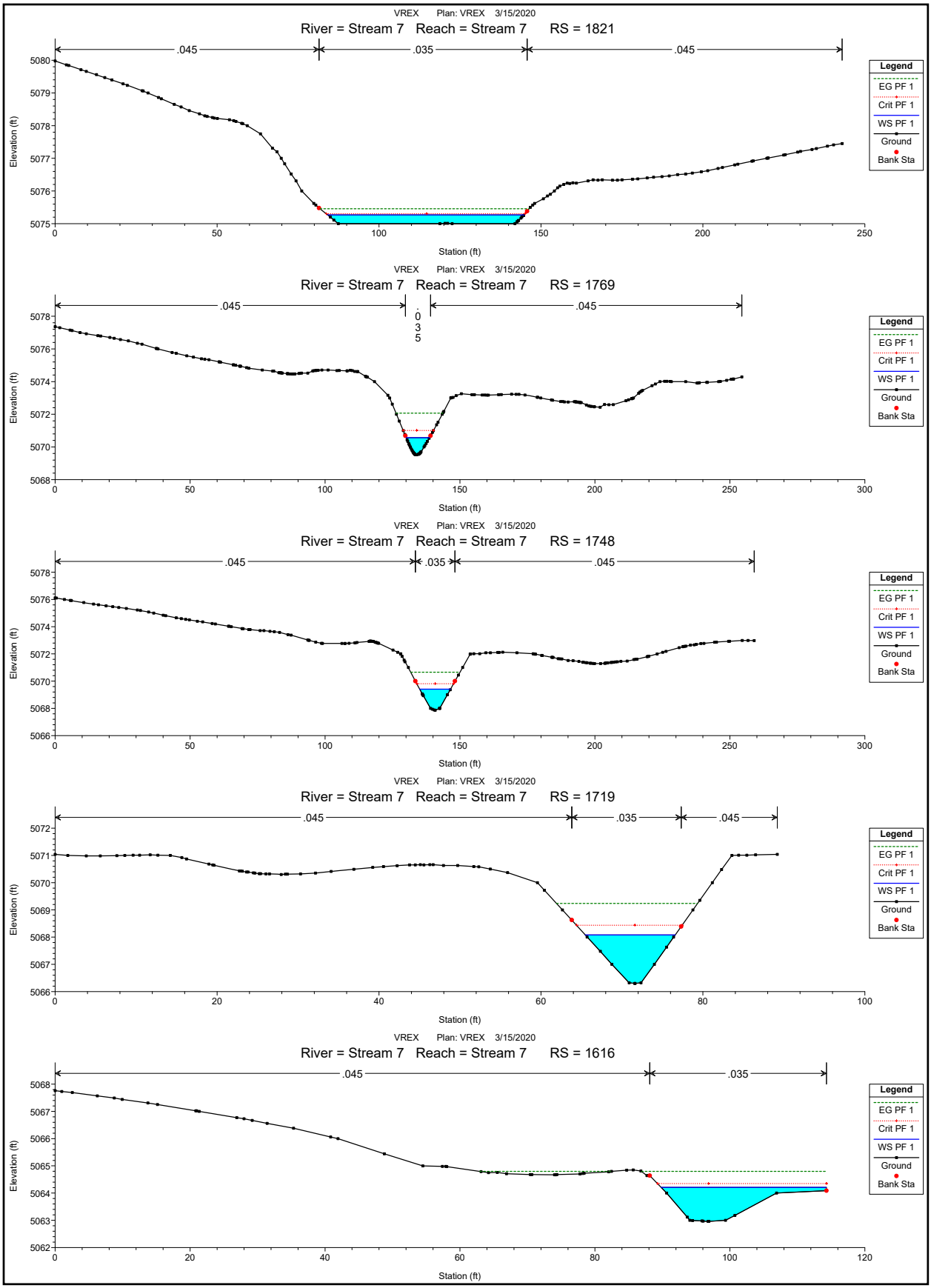


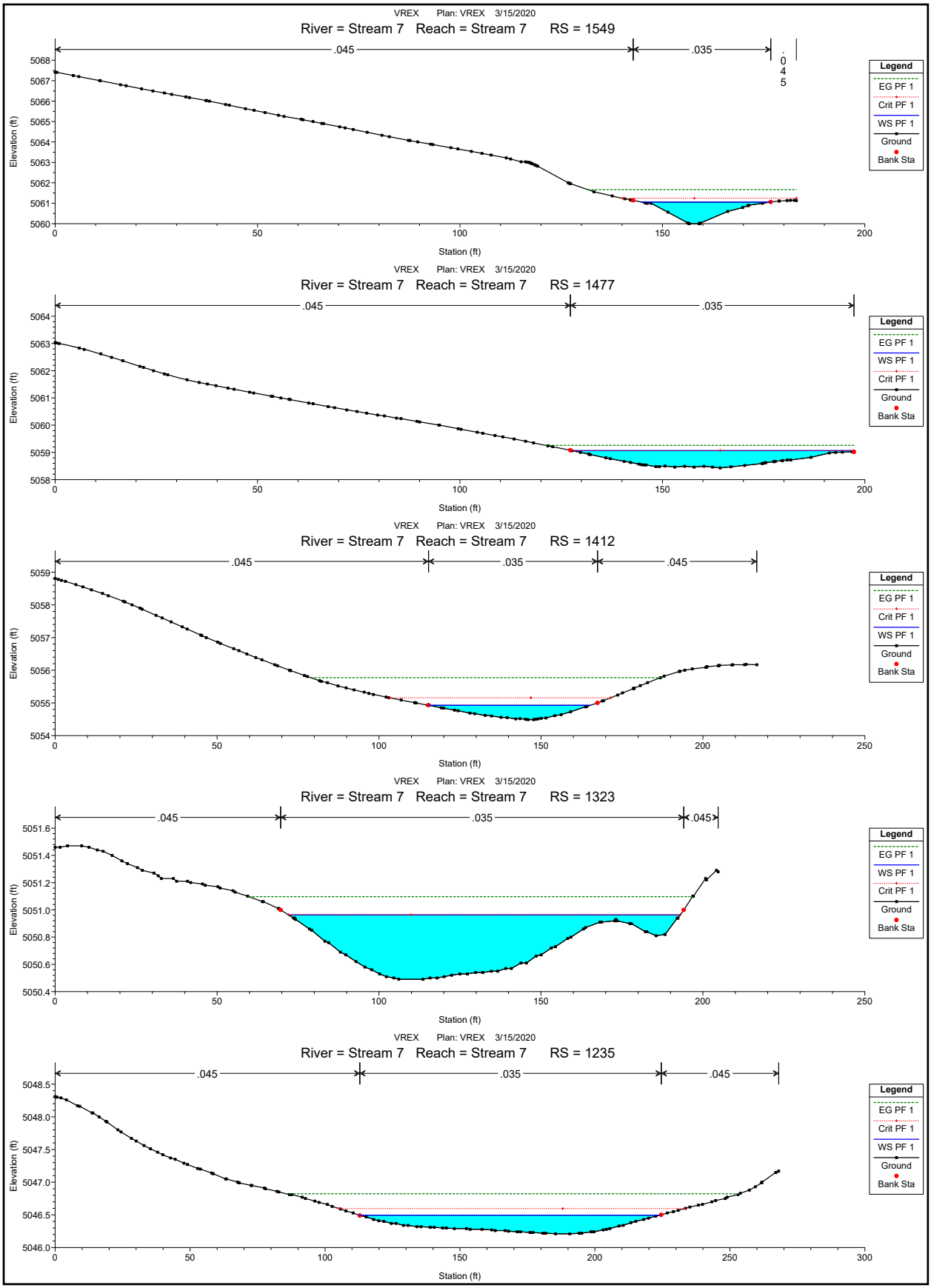
VREX Plan: VREX 3/15/2020

River = Stream 7 Reach = Stream 7 RS = 2358



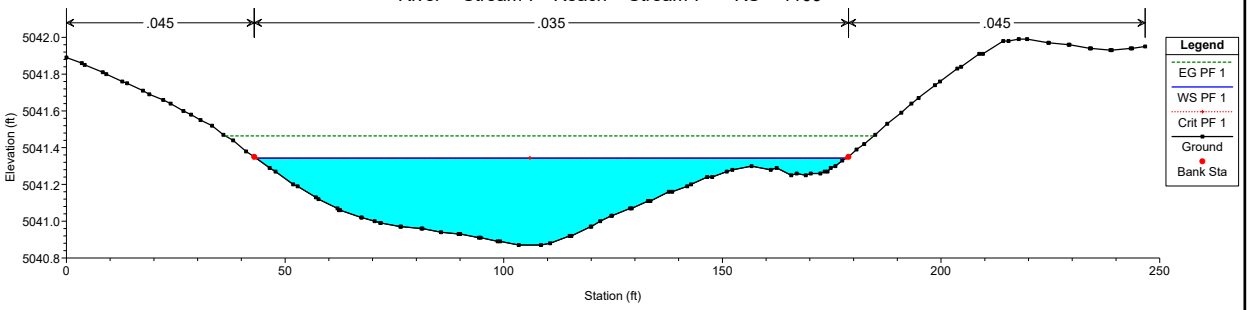

VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 2255
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 2129
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 2026
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1920
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1842
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1821
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1769
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1748
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1719
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1616
.045
.035
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1549
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1477
.045
.035
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1412
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1323
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 7 Reach = Stream 7 RS = 1235
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta

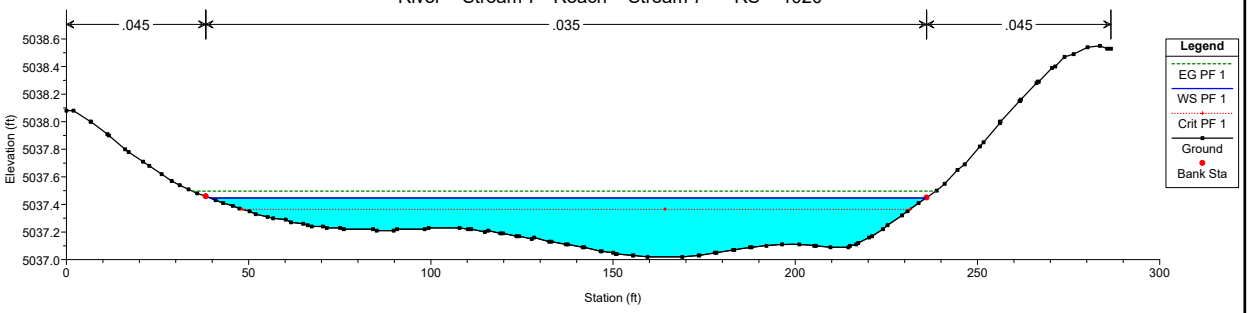
VREX Plan: VREX 3/15/2020

River = Stream 7 Reach = Stream 7 RS = 1109



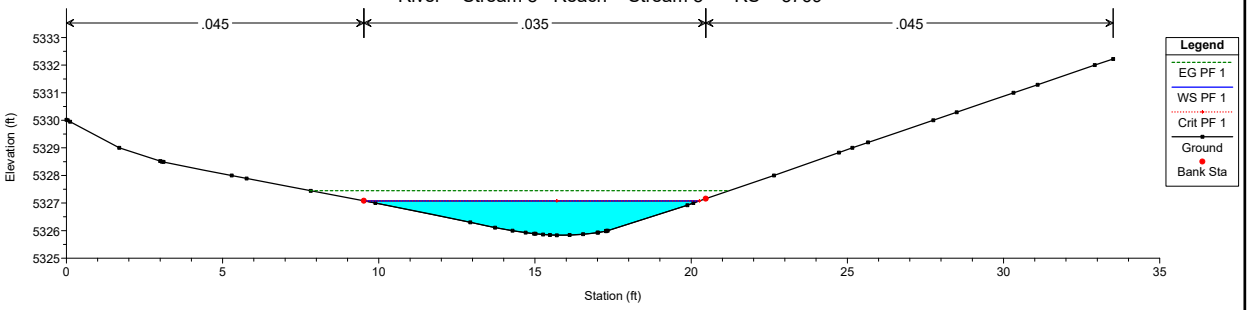
VREX Plan: VREX 3/15/2020

River = Stream 7 Reach = Stream 7 RS = 1020



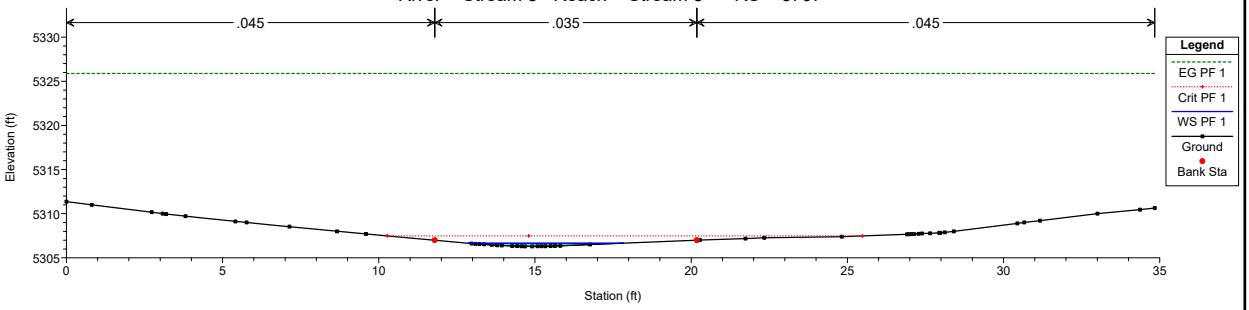
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3769



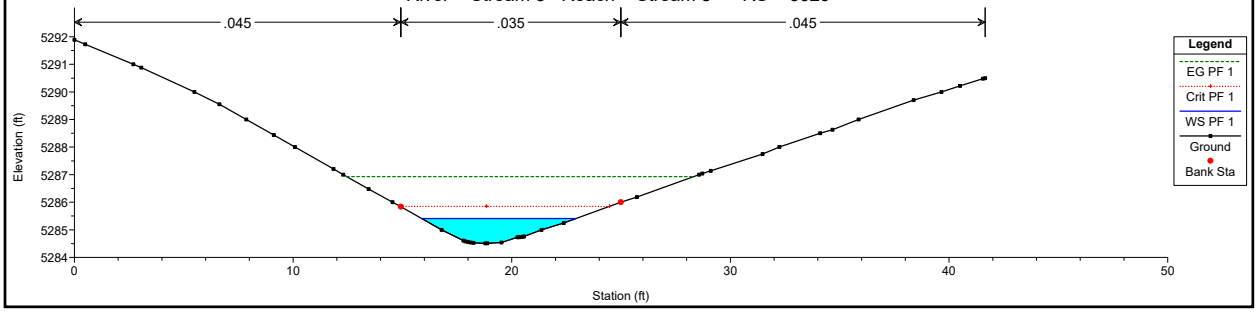
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3707



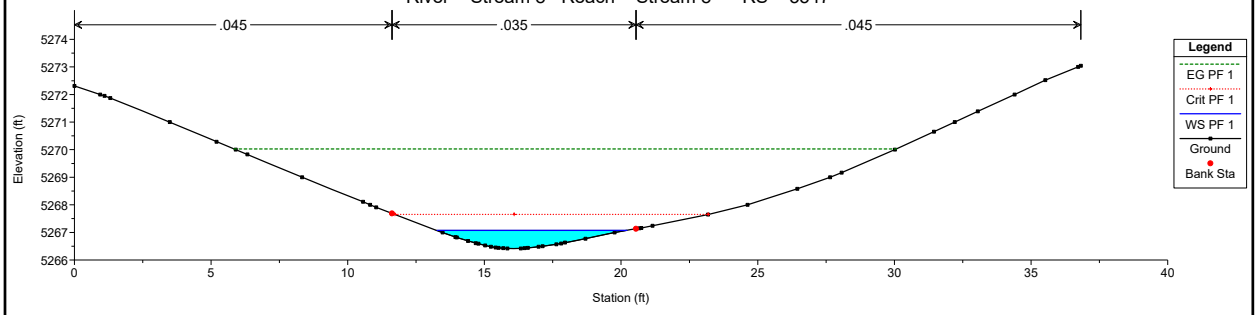
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3629



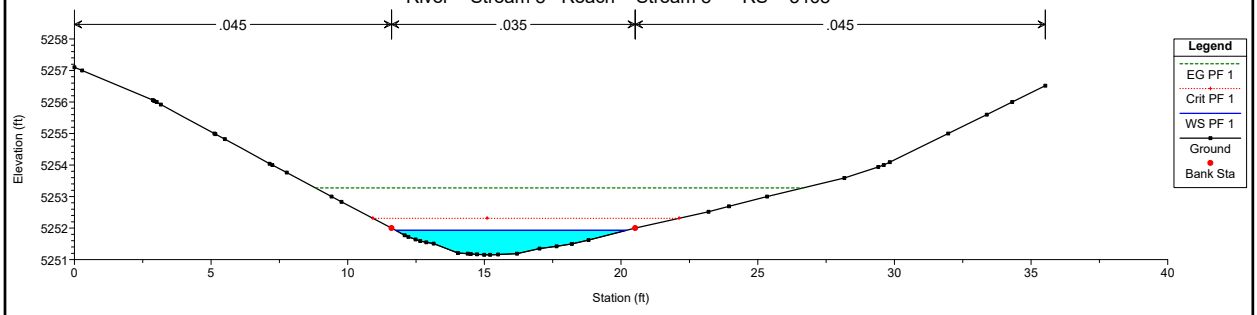
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3547



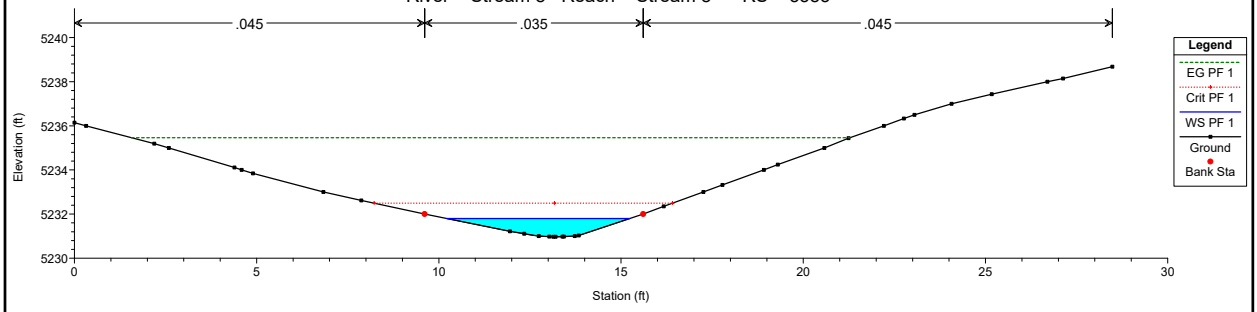
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3468



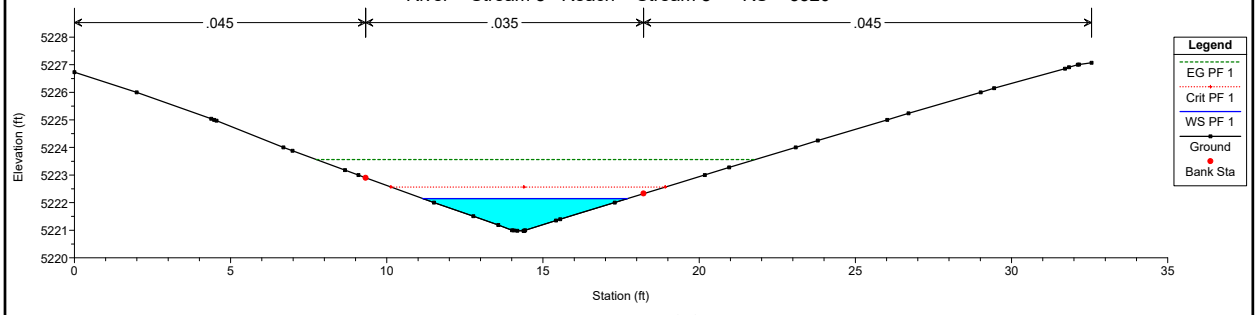
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3383



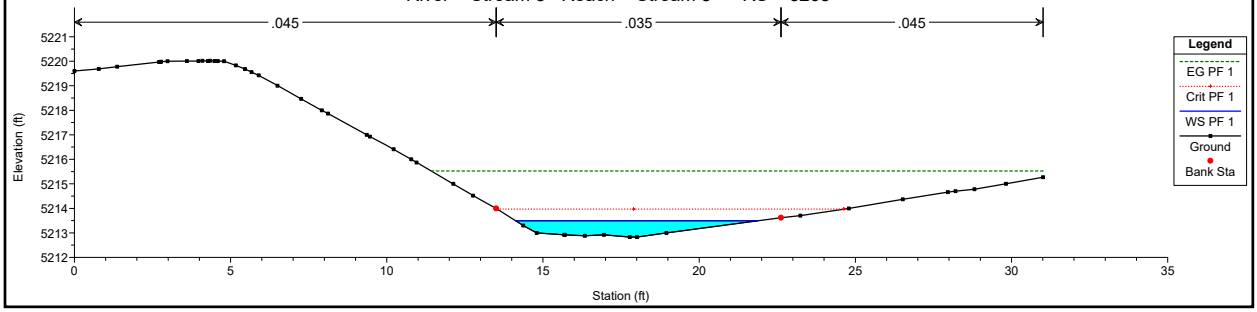
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3320



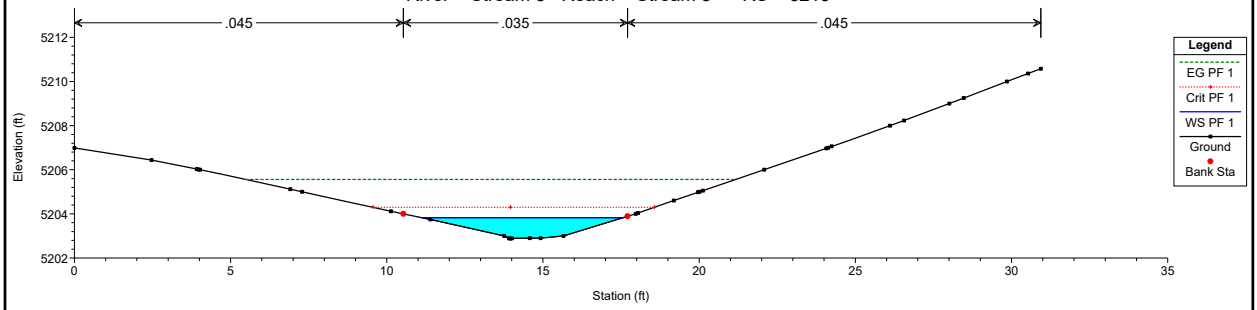
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3268



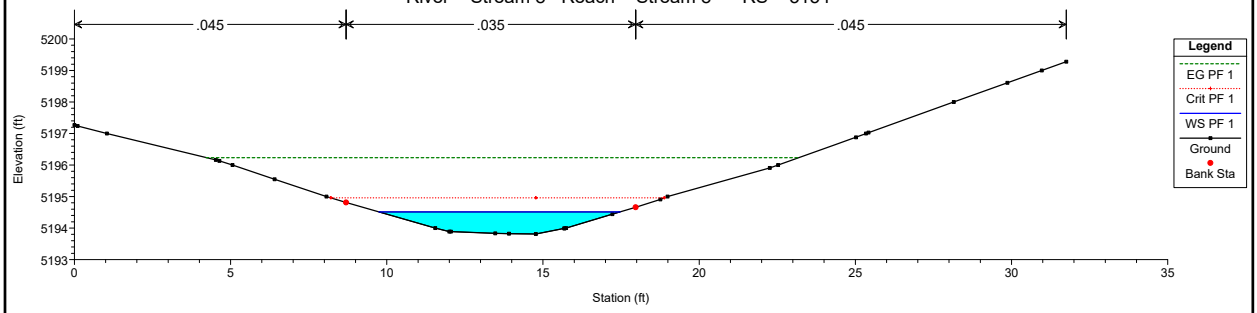
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3213



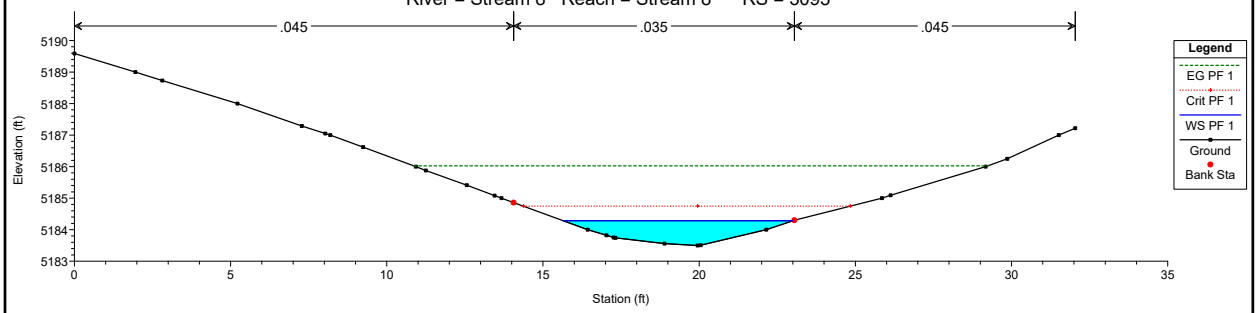
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3154



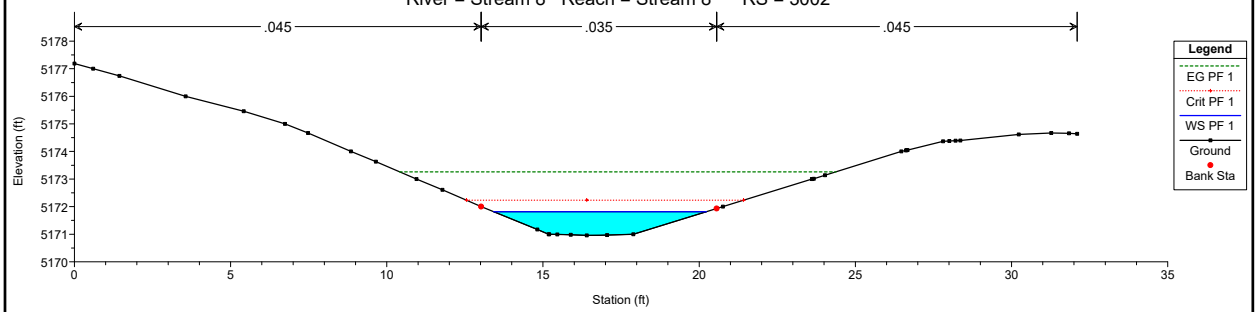
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3095



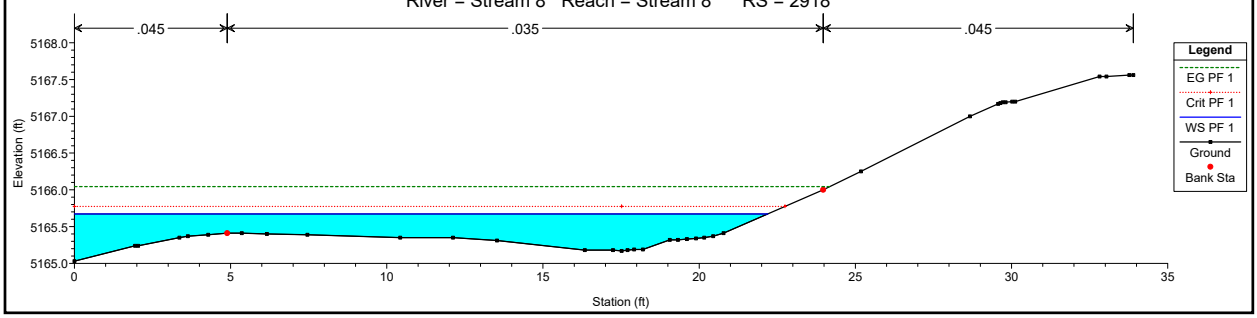
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 3002



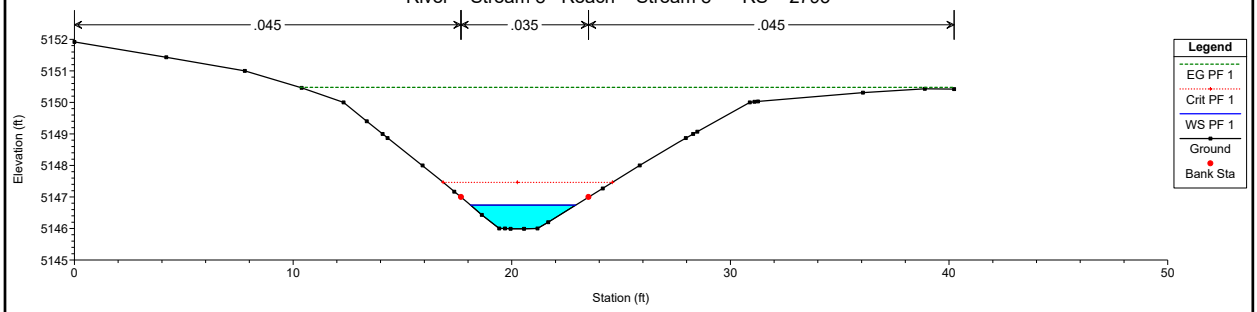
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 2918



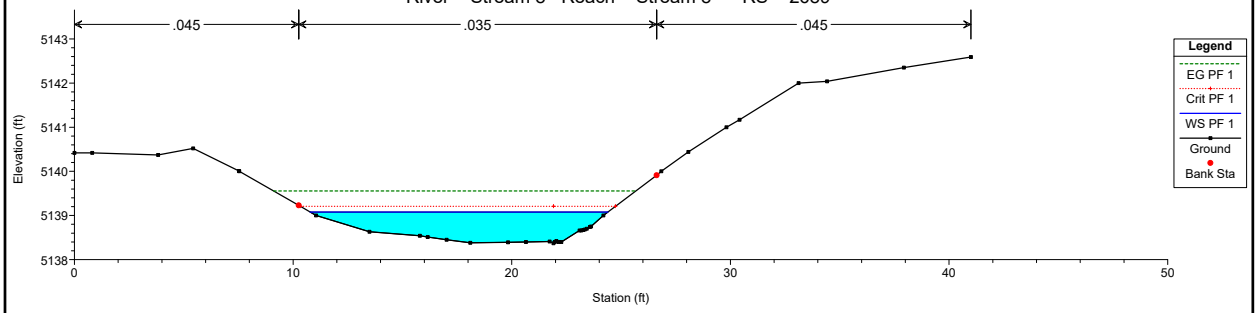
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 2793



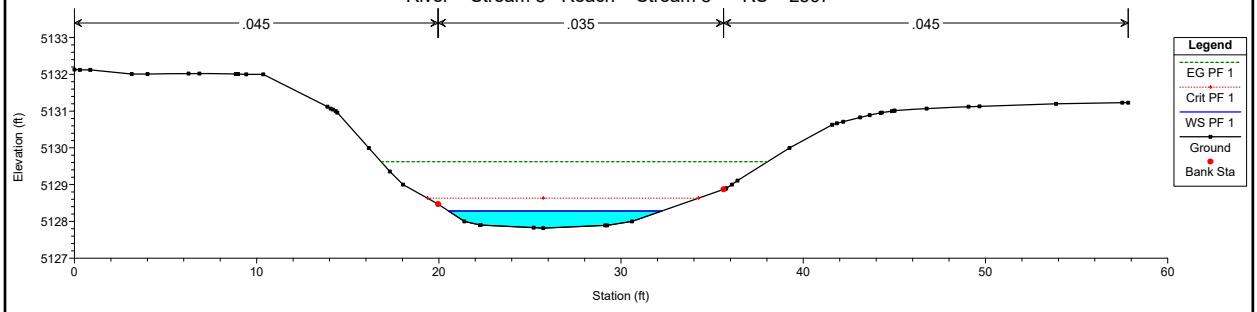
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 2689



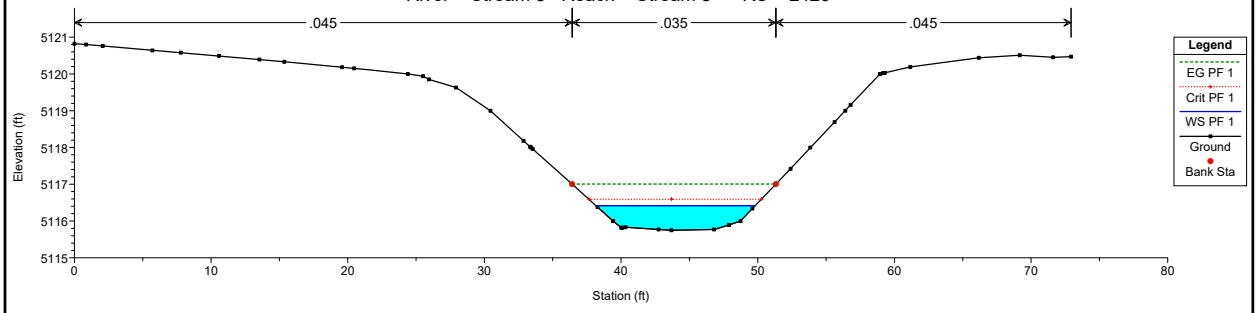
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 2567



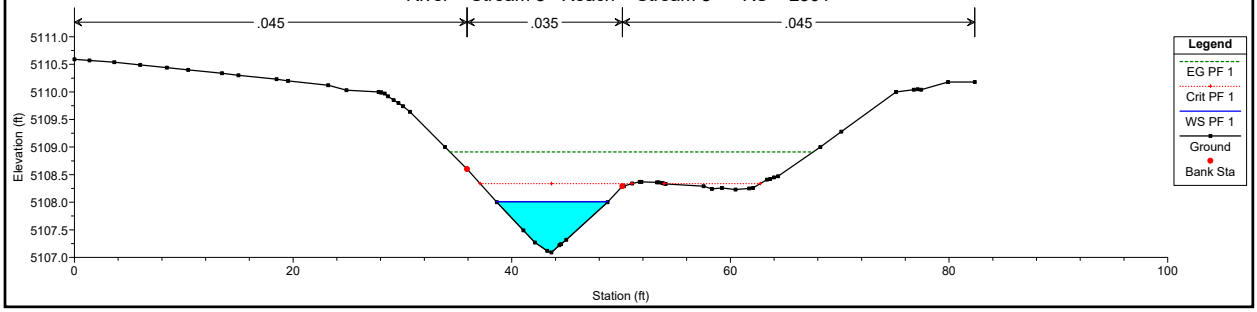
VREX Plan: VREX 3/15/2020

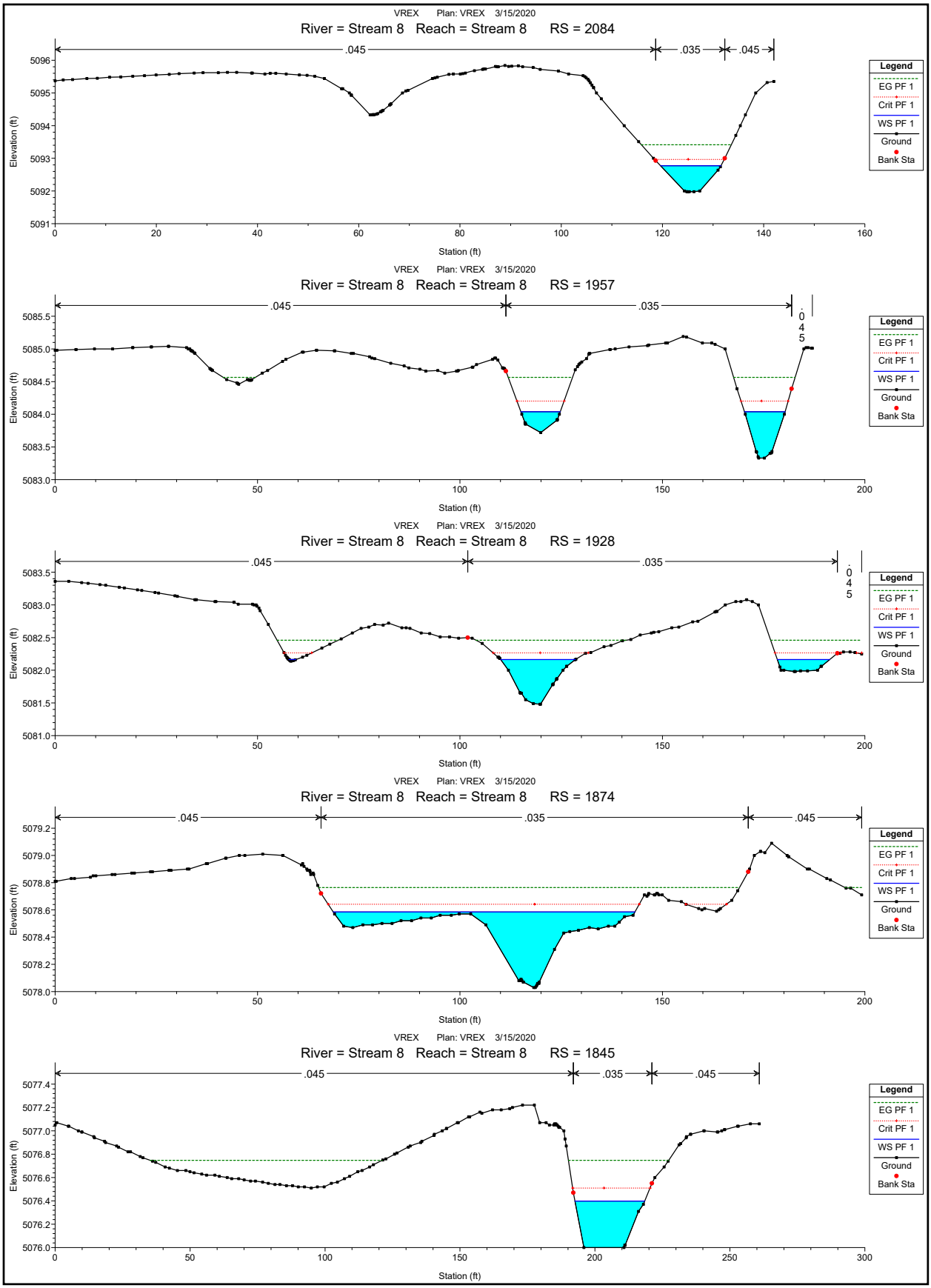
River = Stream 8 Reach = Stream 8 RS = 2426



VREX Plan: VREX 3/15/2020

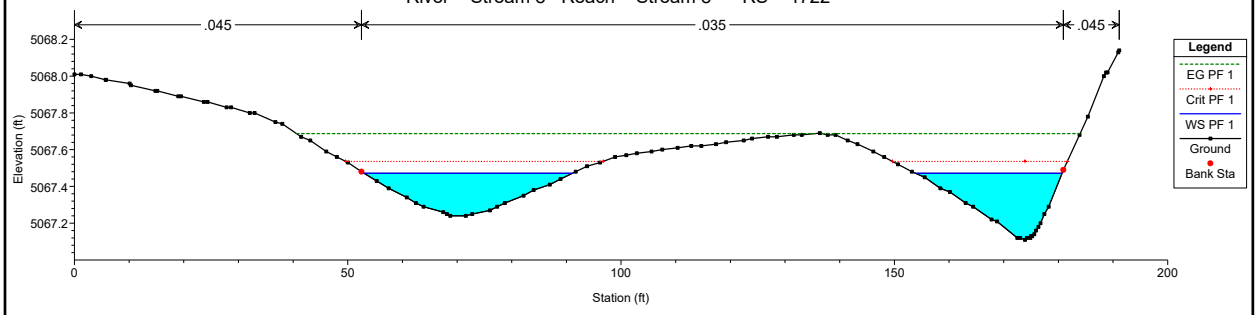
River = Stream 8 Reach = Stream 8 RS = 2301




VREX Plan: VREX 3/15/2020
River = Stream 8 Reach = Stream 8 RS = 2084
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 8 Reach = Stream 8 RS = 1957
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 8 Reach = Stream 8 RS = 1928
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 8 Reach = Stream 8 RS = 1874
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream 8 Reach = Stream 8 RS = 1845
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta

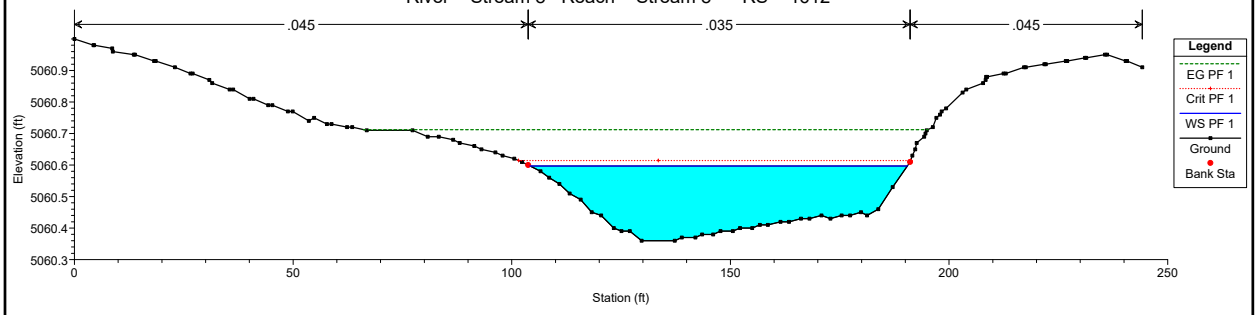
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 1722



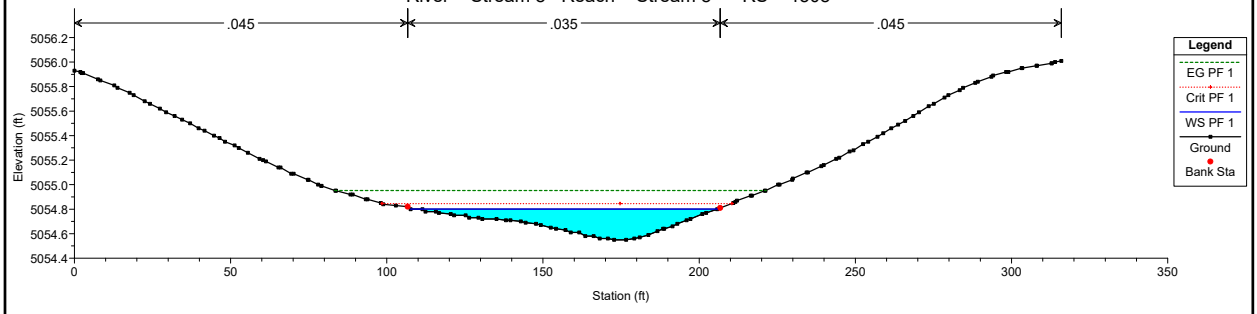
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 1612



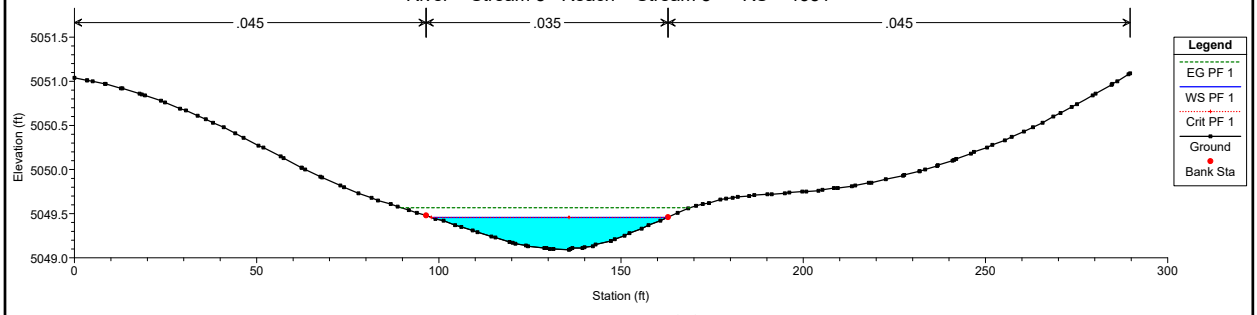
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 1508



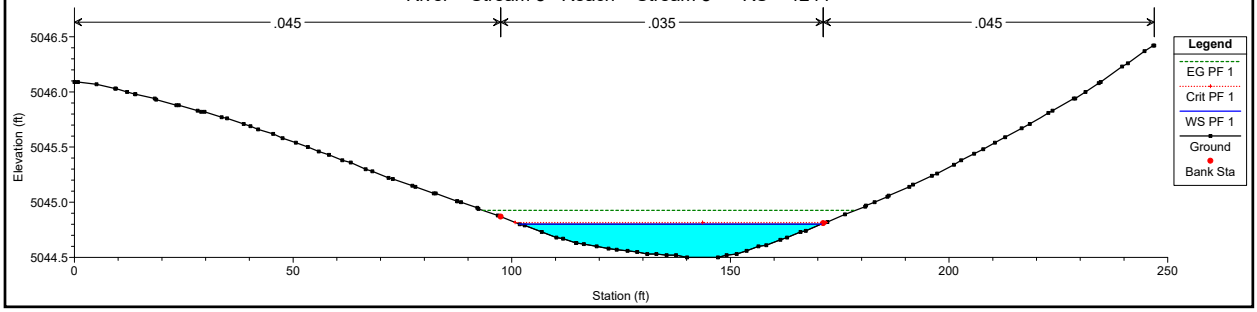
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 1381



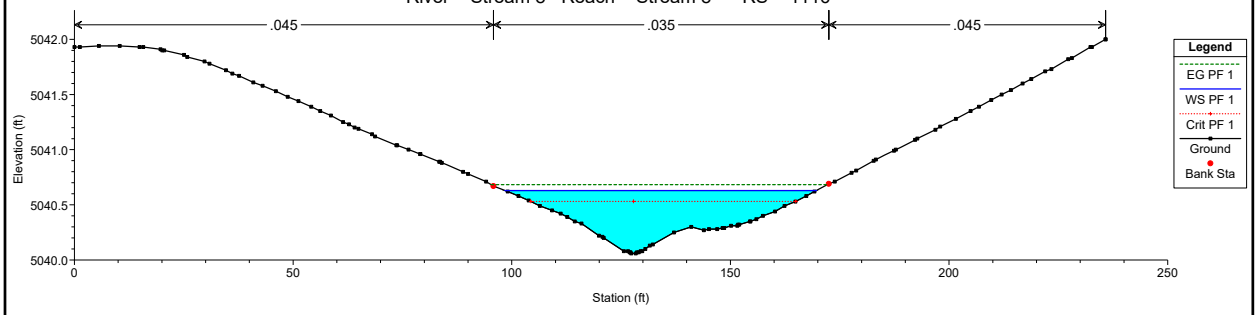
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 1244



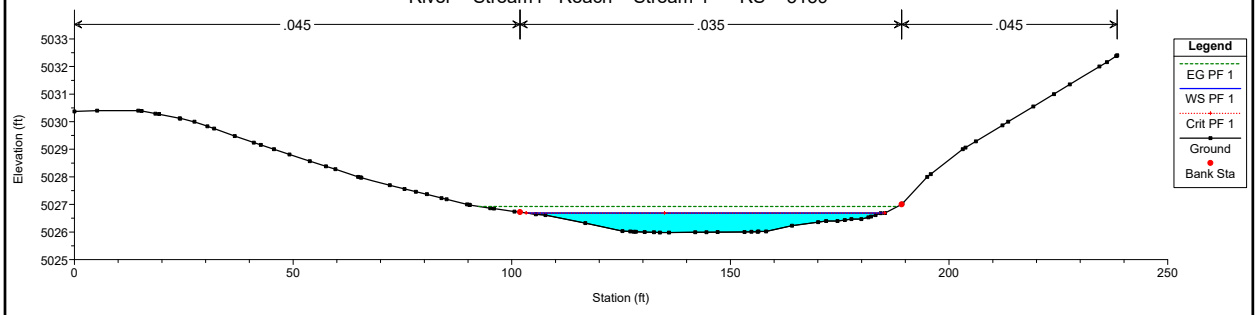
VREX Plan: VREX 3/15/2020

River = Stream 8 Reach = Stream 8 RS = 1116



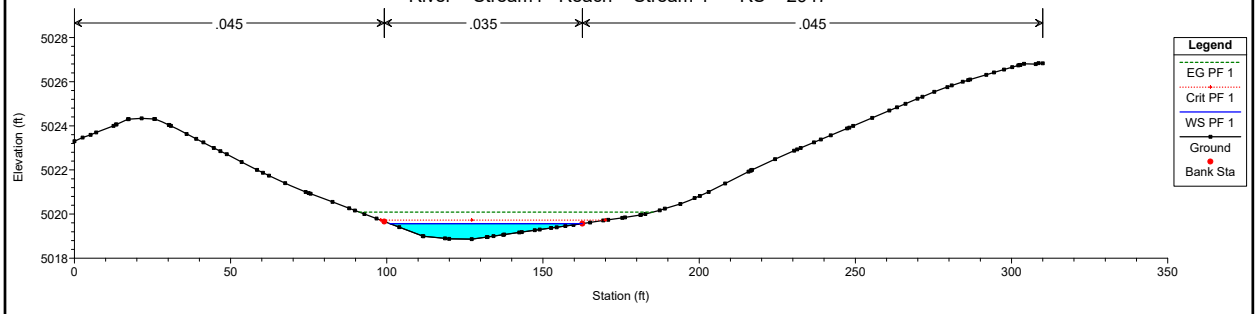
VREX Plan: VREX 3/15/2020

River = Stream4 Reach = Stream 4 RS = 3139



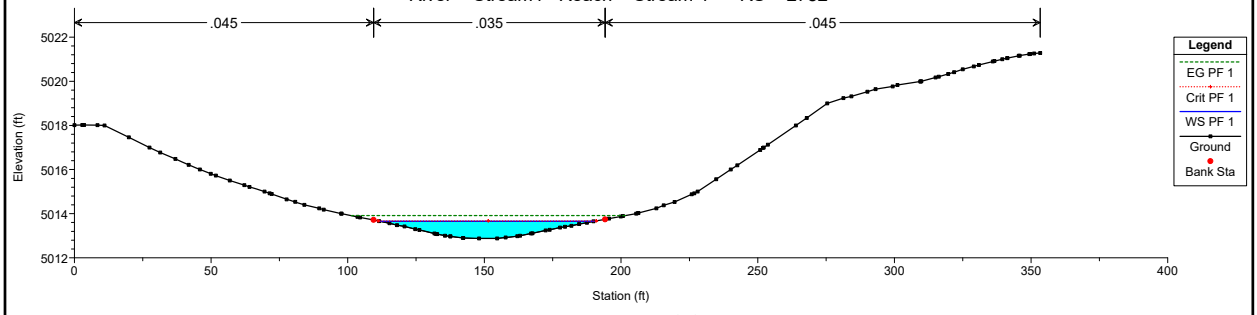
VREX Plan: VREX 3/15/2020

River = Stream4 Reach = Stream 4 RS = 2947



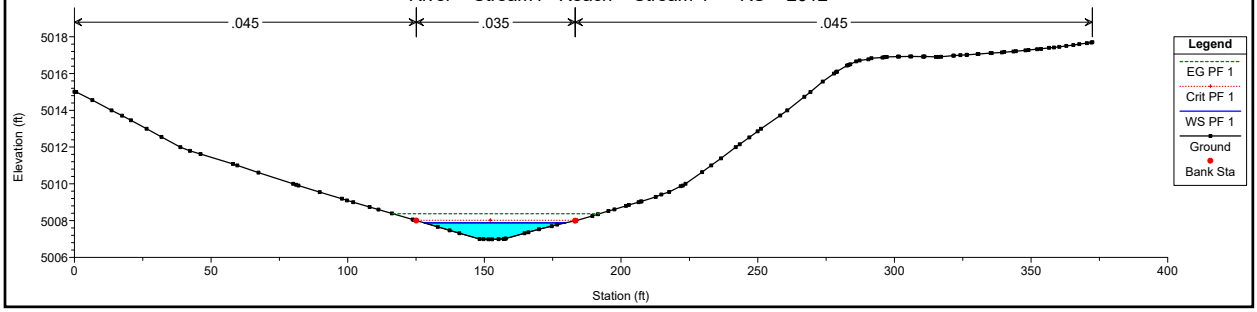
VREX Plan: VREX 3/15/2020

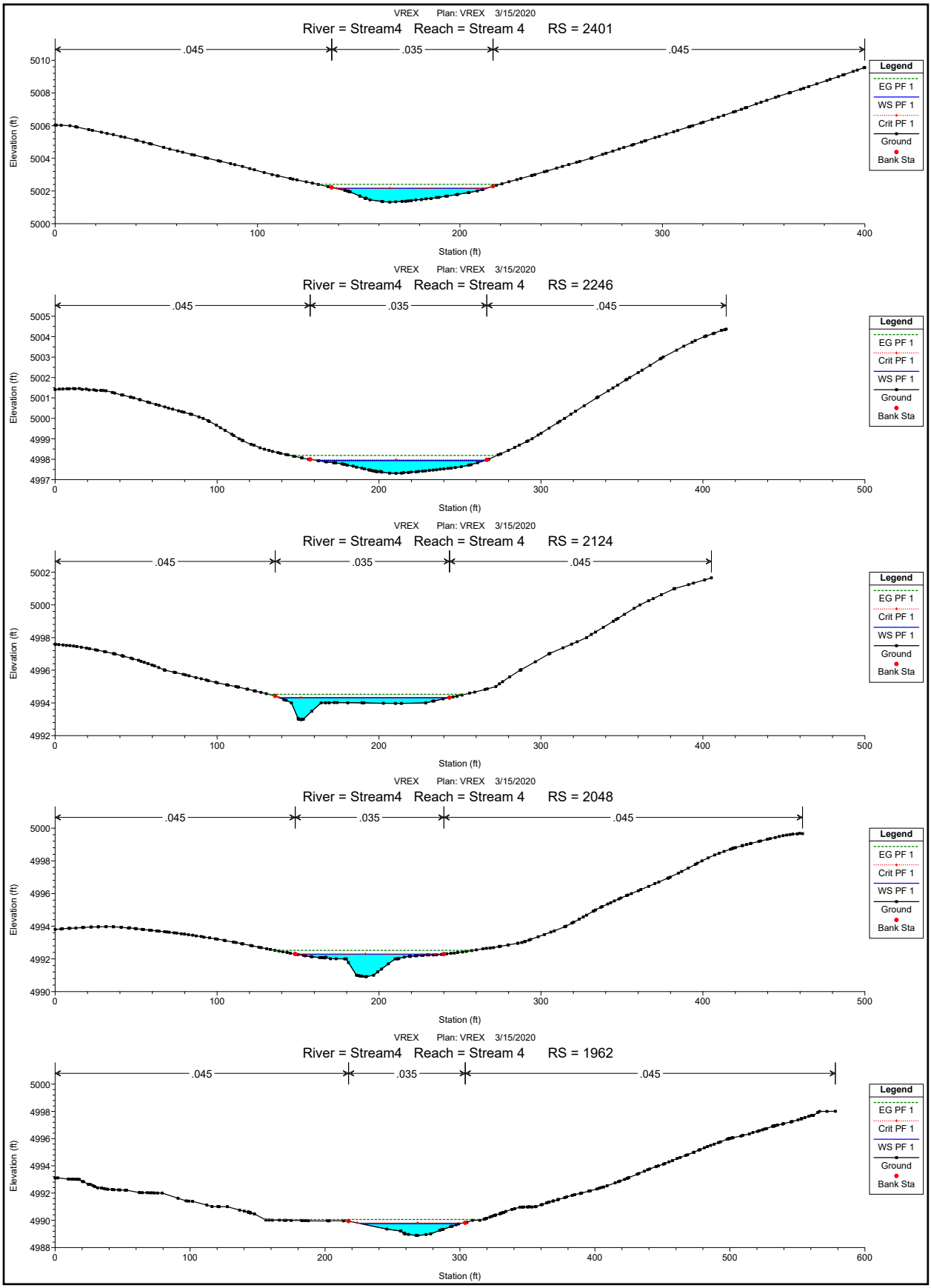
River = Stream4 Reach = Stream 4 RS = 2782

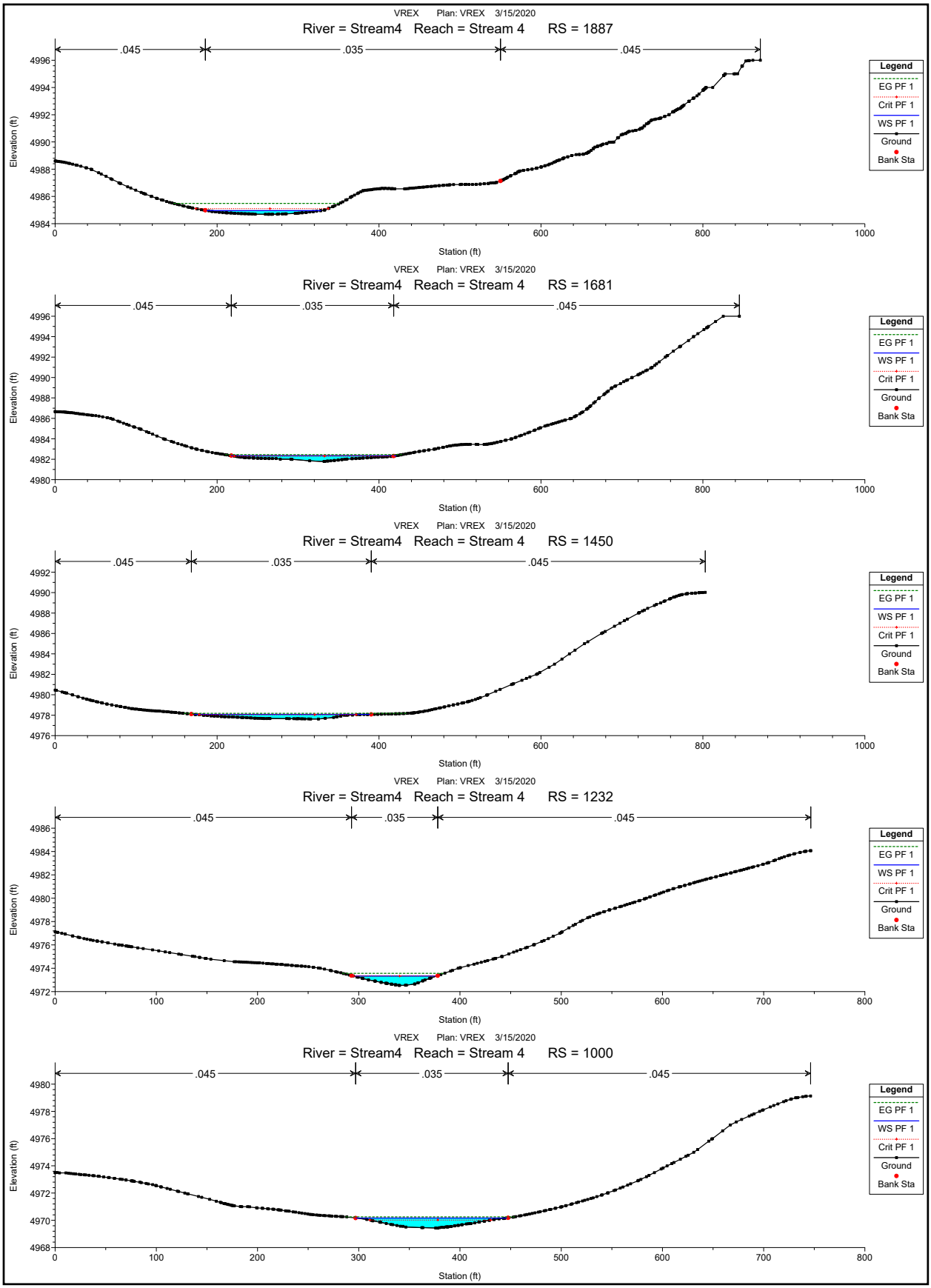


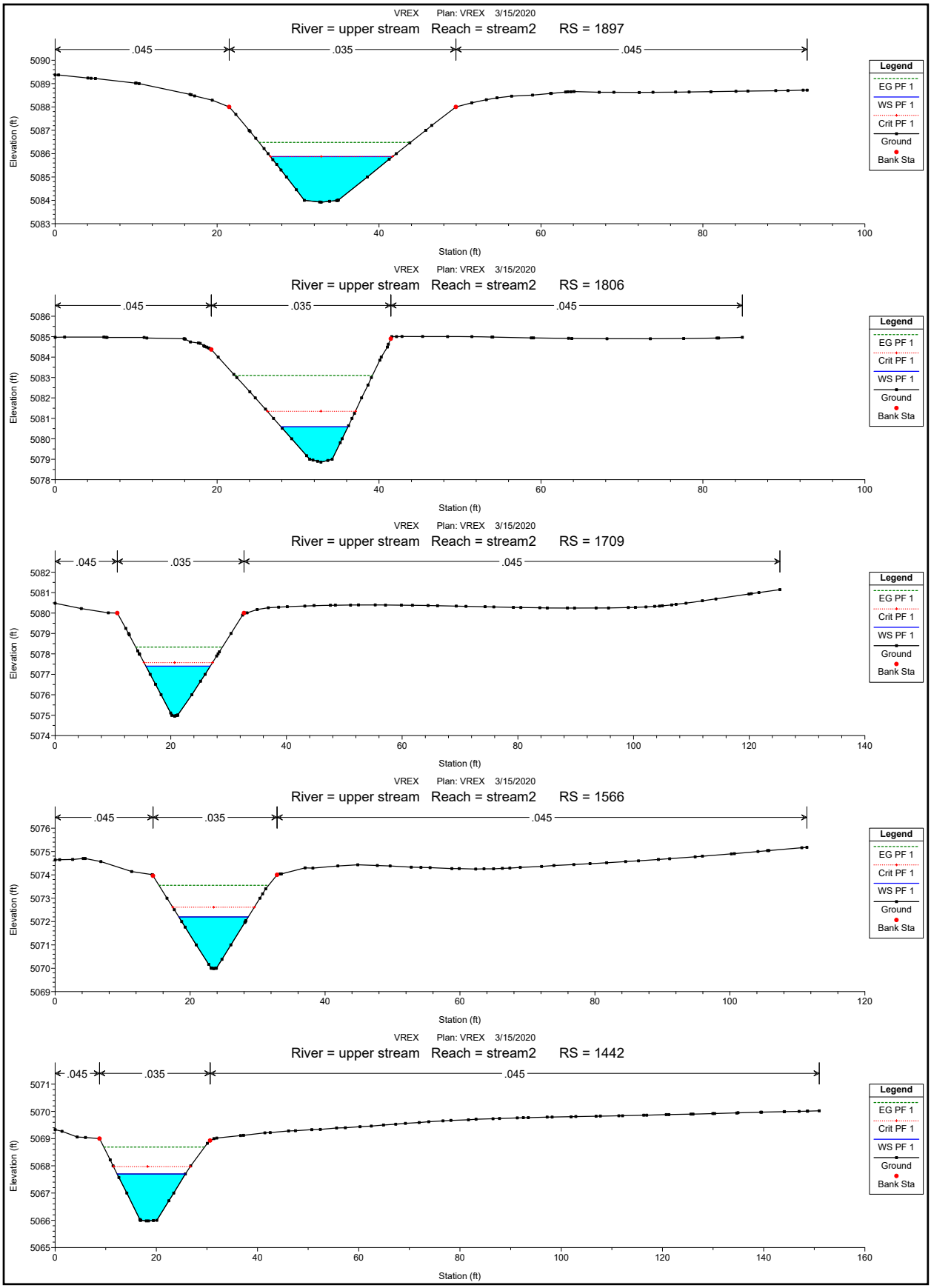
VREX Plan: VREX 3/15/2020

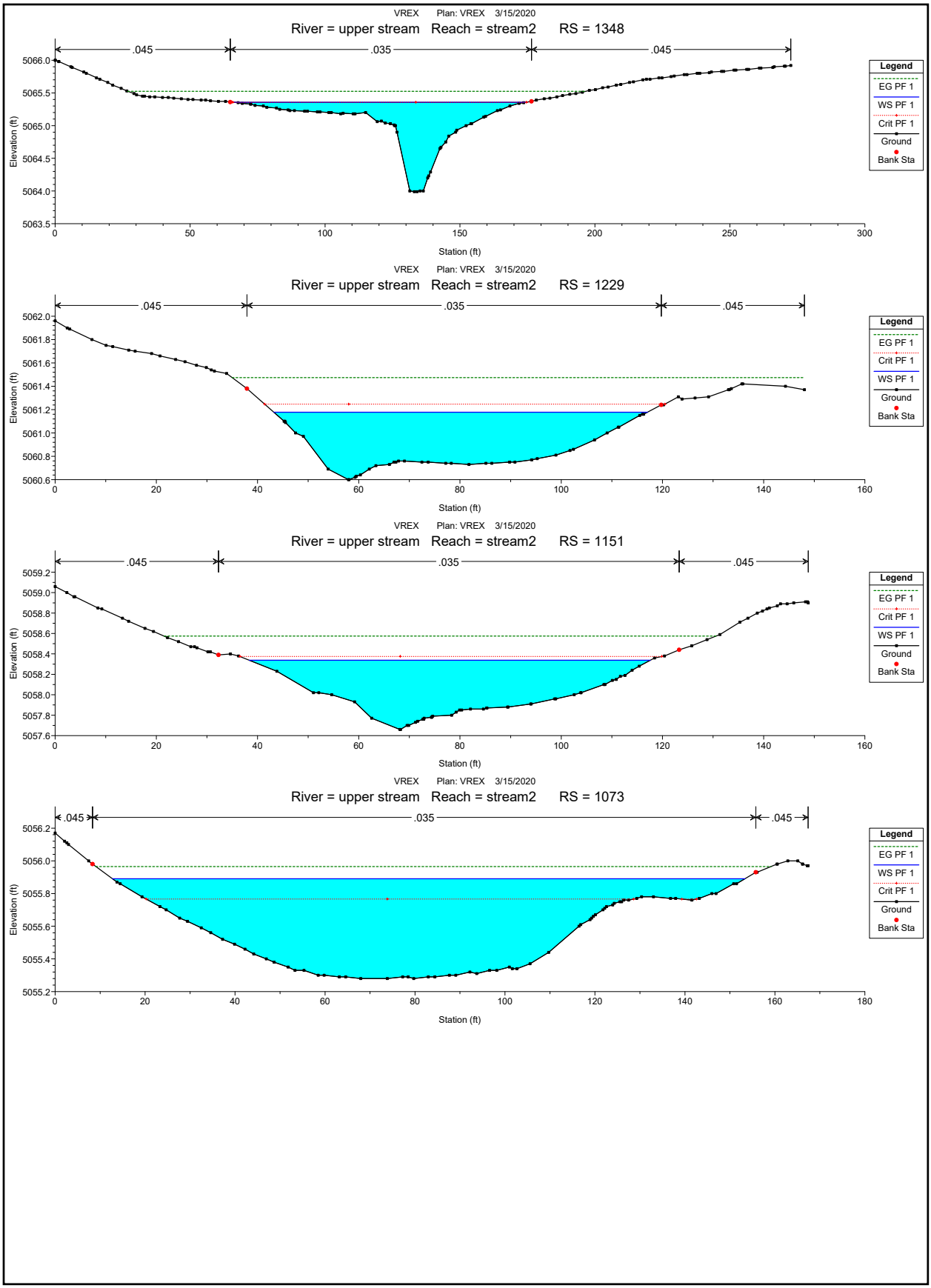
River = Stream4 Reach = Stream 4 RS = 2612



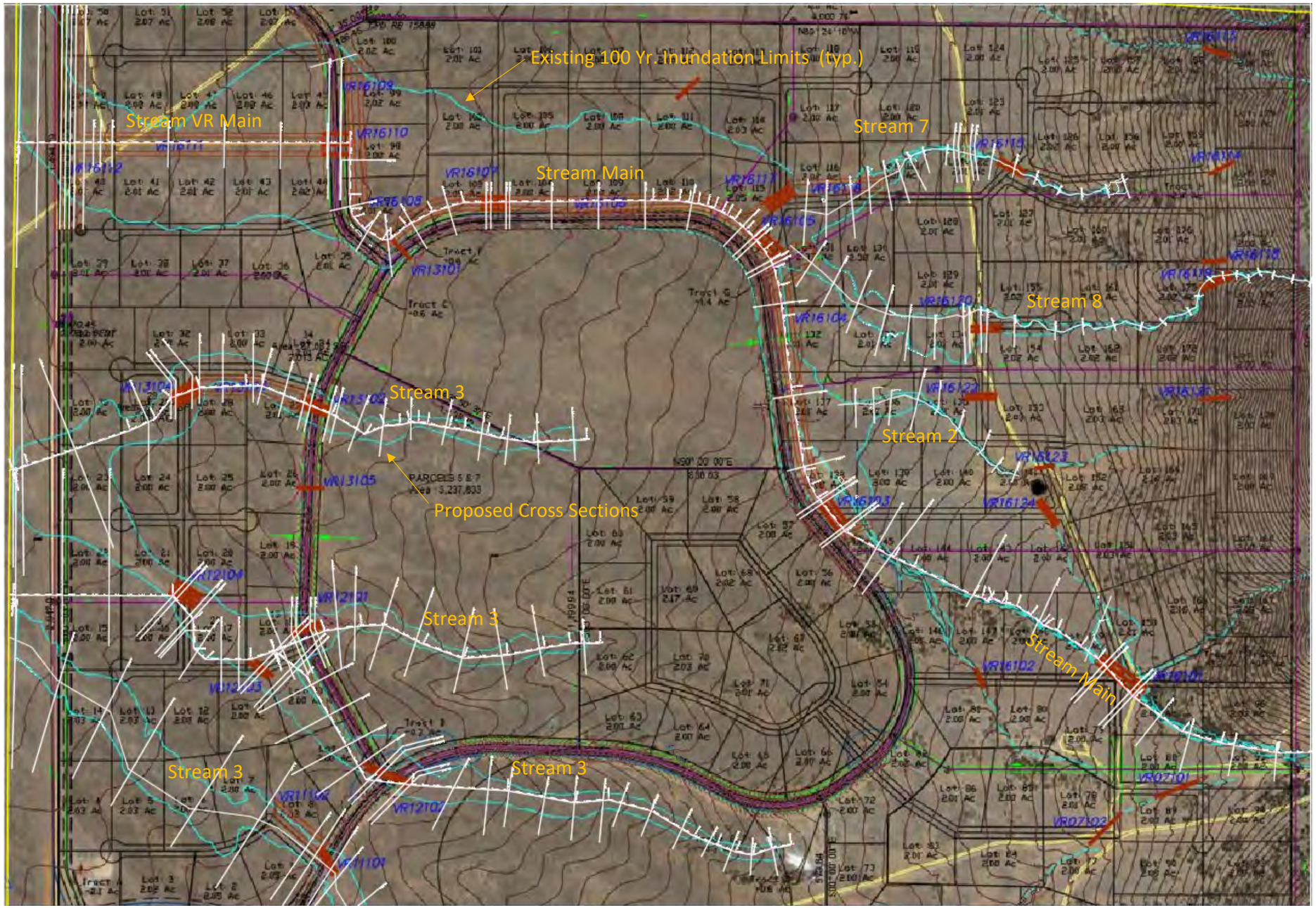

VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 2401
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 2246
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 2124
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 2048
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 1962
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 1887
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 1681
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 1450
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 1232
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = Stream4 Reach = Stream 4 RS = 1000
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta


VREX Plan: VREX 3/15/2020
River = upper stream Reach = stream2 RS = 1897
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = upper stream Reach = stream2 RS = 1806
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = upper stream Reach = stream2 RS = 1709
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = upper stream Reach = stream2 RS = 1566
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = upper stream Reach = stream2 RS = 1442
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VREX Plan: VREX 3/15/2020
River = upper stream Reach = stream2 RS = 1348
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = upper stream Reach = stream2 RS = 1229
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = upper stream Reach = stream2 RS = 1151
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VREX Plan: VREX 3/15/2020
River = upper stream Reach = stream2 RS = 1073
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta

Ventura Ranch Subdivision Drainage Master Plan



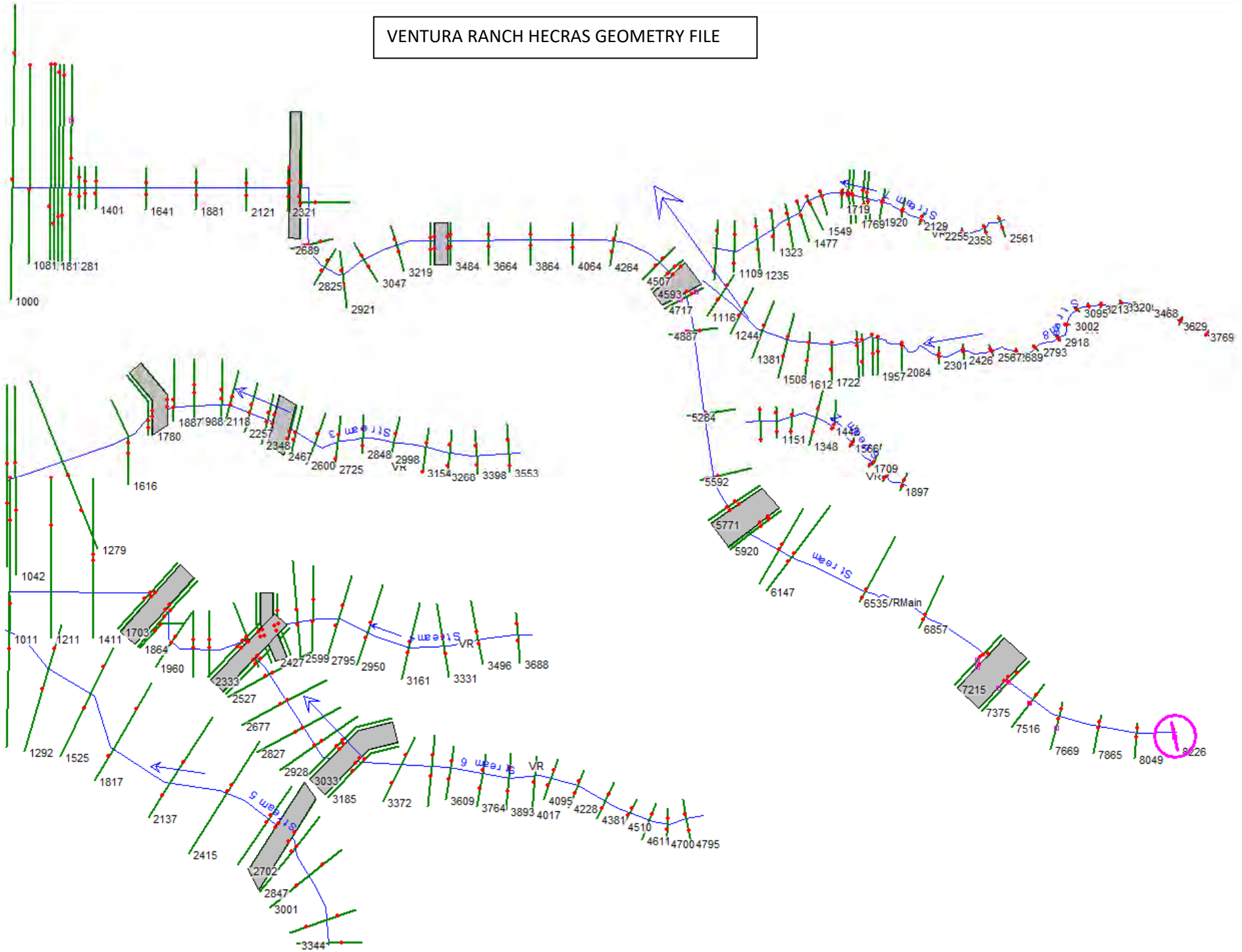
Proposed Structure List

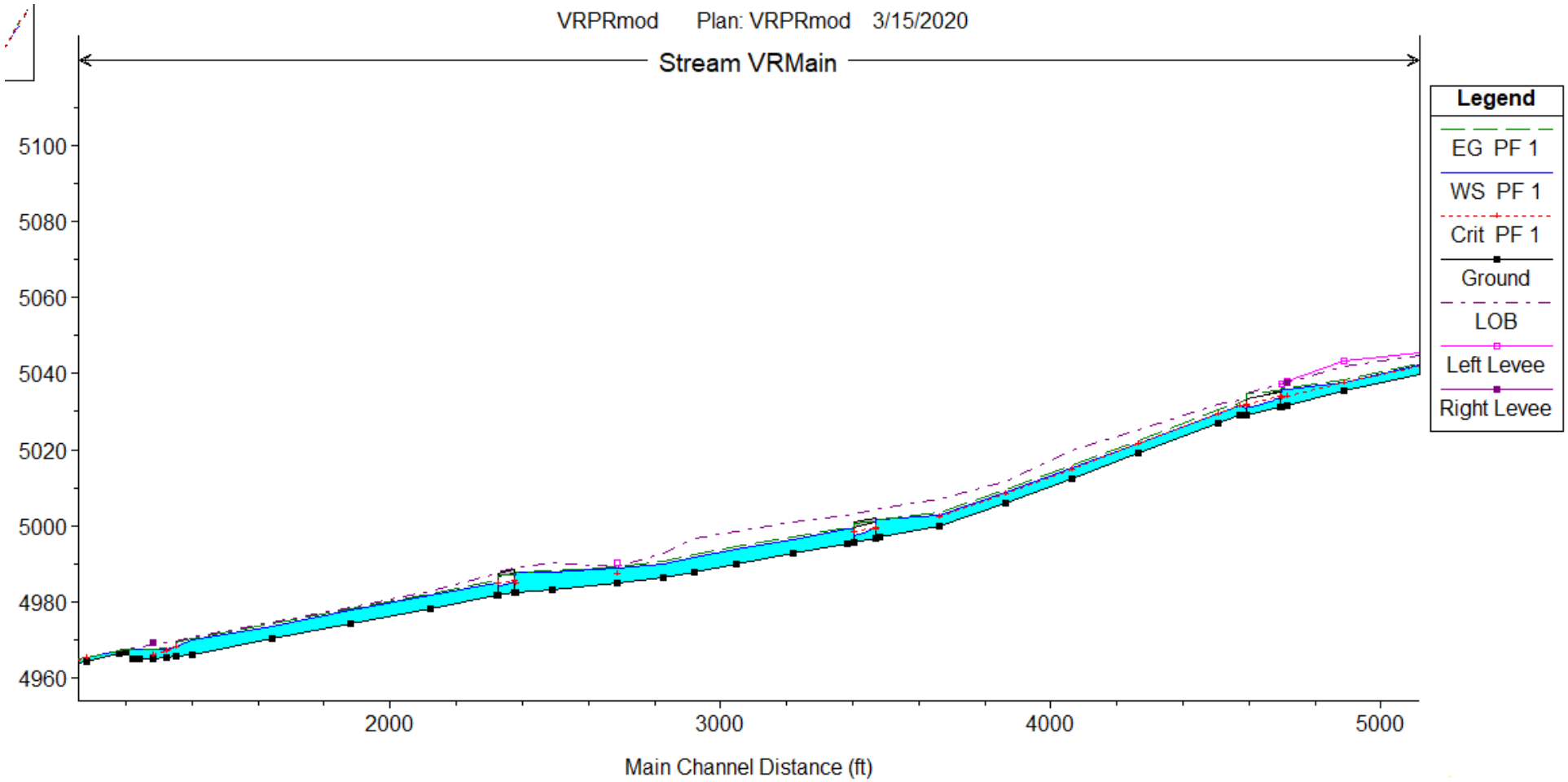
PHASE	Structure Code	Description	Approx Len (ft)	Q100 CFS
Ph1	*VR11101*	3-42" CMP Culvert	40	135
Ph1	*VR11102*	10' bottom, 3:1 ss, Riprap D50 8"	250	135
Ph1	*VR12101*	2-48"" CMP Culvert	40	123
Ph1	*VR12102*	4-30" CMP Culvert	80	115
Ph1	*VR12103*	4-30" CMP Culvert	40	115
Ph1	*VR12104*	2-4'x6' CMP Culvert	40	238
Ph1	*VR13101*	2-30" CMP Culvert	40	50
Ph1	*VR13102*	3-42" CMP Culvert	40	135
Ph1	*VR13103*	10' bottom, 3:1 ss, Riprap D50 8"	460	135
Ph1	*VR13104*	3-42" CMP Culvert	40	135
Ph1	*VR13105*	1-30" CMP Culvert	40	17
Ph1	*VR16101*	2- 4' x 6' reinforcred box culverts	80	288
Ph1	*VR16102*	1-24" CMP Culvert	40	12
Ph1	*VR16103*	2- 4' x 6' reinforcred box culverts	50	339
Ph1	*VR16104*	20' bottom, 3:1 ss, Riprap D50 8"	1060	453
Ph1	*VR16105*	2- 4' x 10' reinforcred box culverts	50	567
Ph1	*VR16106*	20' bottom, 3:1 ss, Riprap D50 8"	1080	663
Ph1	*VR16107*	3- 4' x 8' reinforcred box culverts	50	663
Ph1	*VR16108*	20' bottom, 3:1 ss, Riprap D50 8"	1080	778
Ph1	*VR16109*	6' bottom, 3:1 ss, Riprap D50 6"	200	113
Ph1	*VR16110*	3- 5' x 8' reinforcred box culverts	50	845
Ph1	*VR16111*	30' bottom, 3:1 ss, Riprap D50 8"	1080	845
Ph1	*VR16112*	Energy Disipator	500	947
Ph1	*VR07101*	1-24" CMP Culvert	60	18
Ph1	*VR07102*	1-24" CMP Culvert	60	18
Ph2	*VR16113*	1-24" CMP Culvert	40	20
Ph2	*VR16114*	1-24" CMP Culvert	40	15
Ph2	*VR16115*	1-36" CMP Culvert	60	54
Ph2	*VR16116*	10' bottom, 3:1 ss, Riprap D50 8"	340	96
Ph2	*VR16117*	3-42" CMP Culvert	60	96
Ph2	*VR16118*	1-24" CMP Culvert	40	15
Ph2	*VR16119*	2-30" CMP Culvert	50	46
Ph2	*VR16120*	2-48" CMP Culvert	40	90
Ph2	*VR16121*	1-24" CMP Culvert	40	18
Ph2	*VR16122*	2-24" CMP Culvert	40	38
Ph2	*VR16123*	1-24" CMP Culvert	40	15
Ph2	*VR16124*	2-48" CMP Culvert	50	114

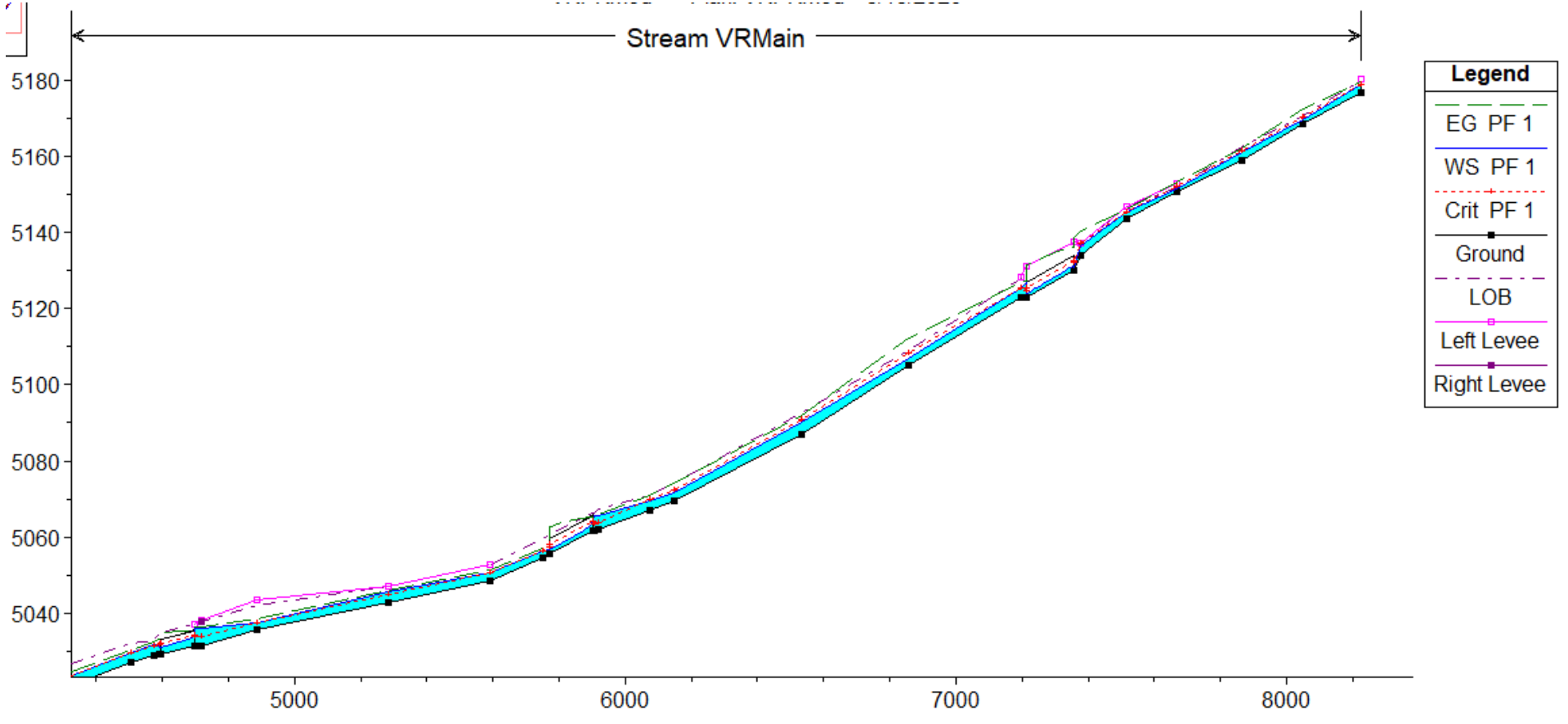
The exact size, location and length of structures shall provide on Improvement Plans

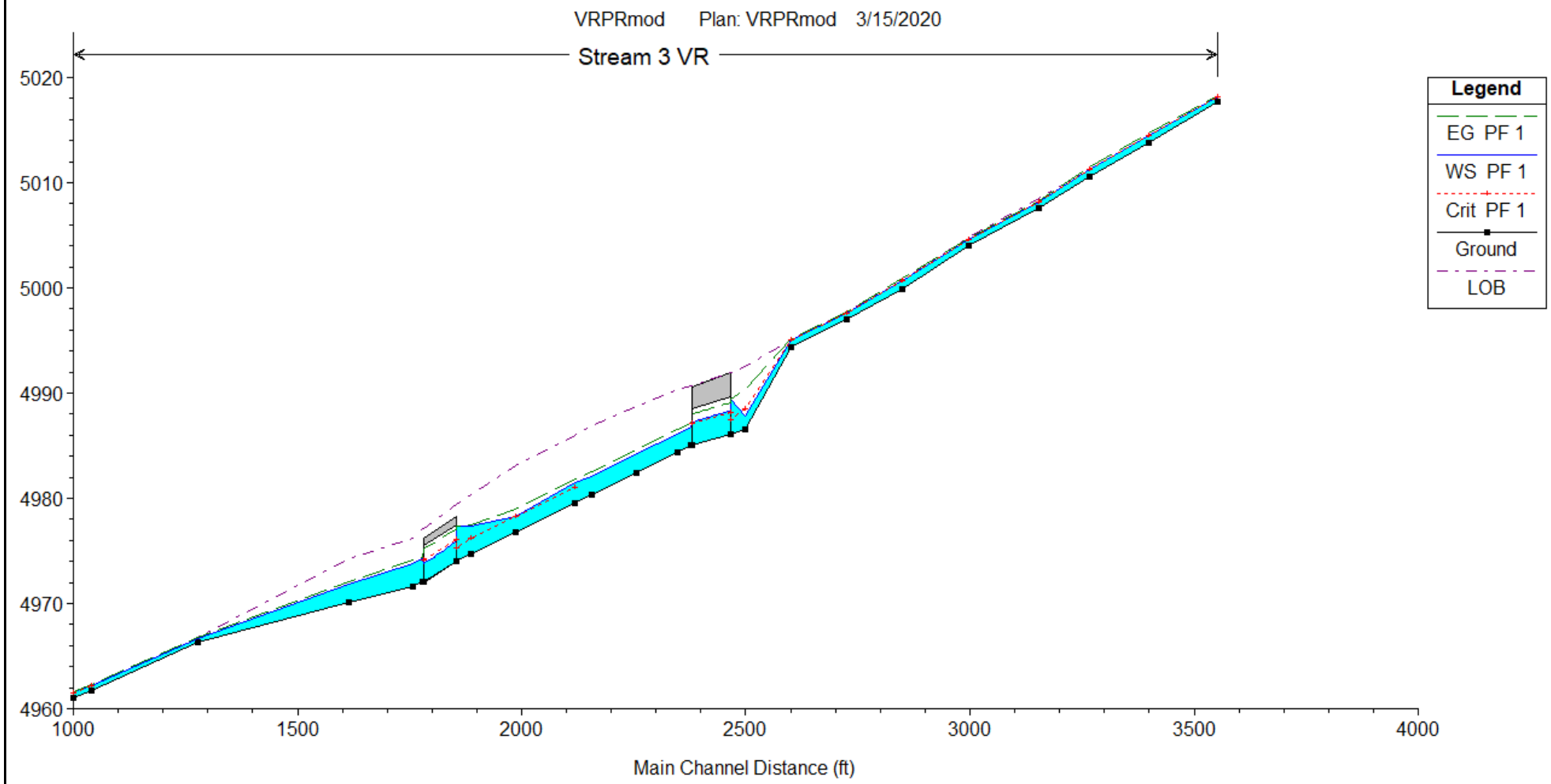
SCG
SUMMIT CIVIL GROUP

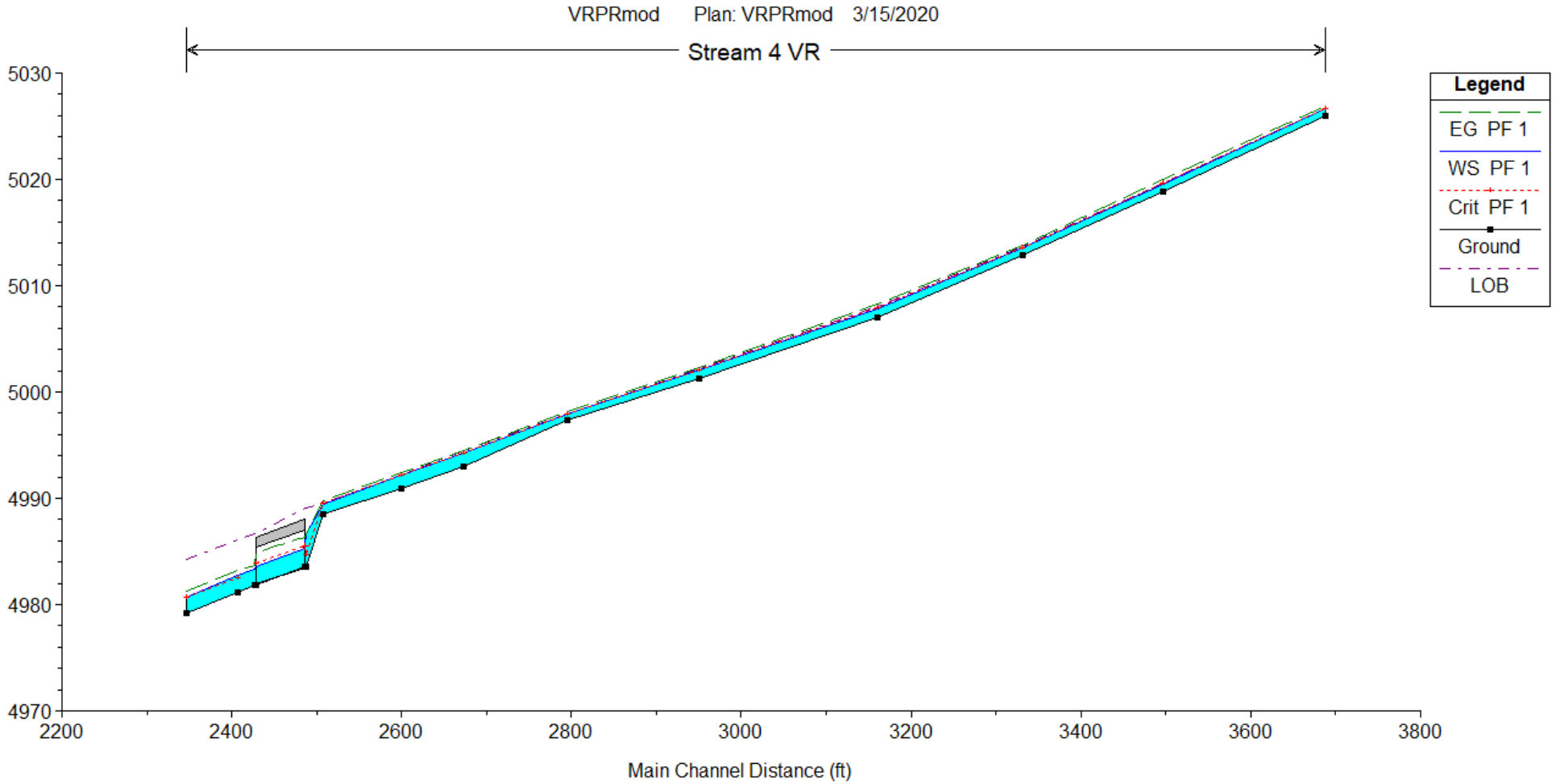
VENTURA RANCH HECRAS GEOMETRY FILE

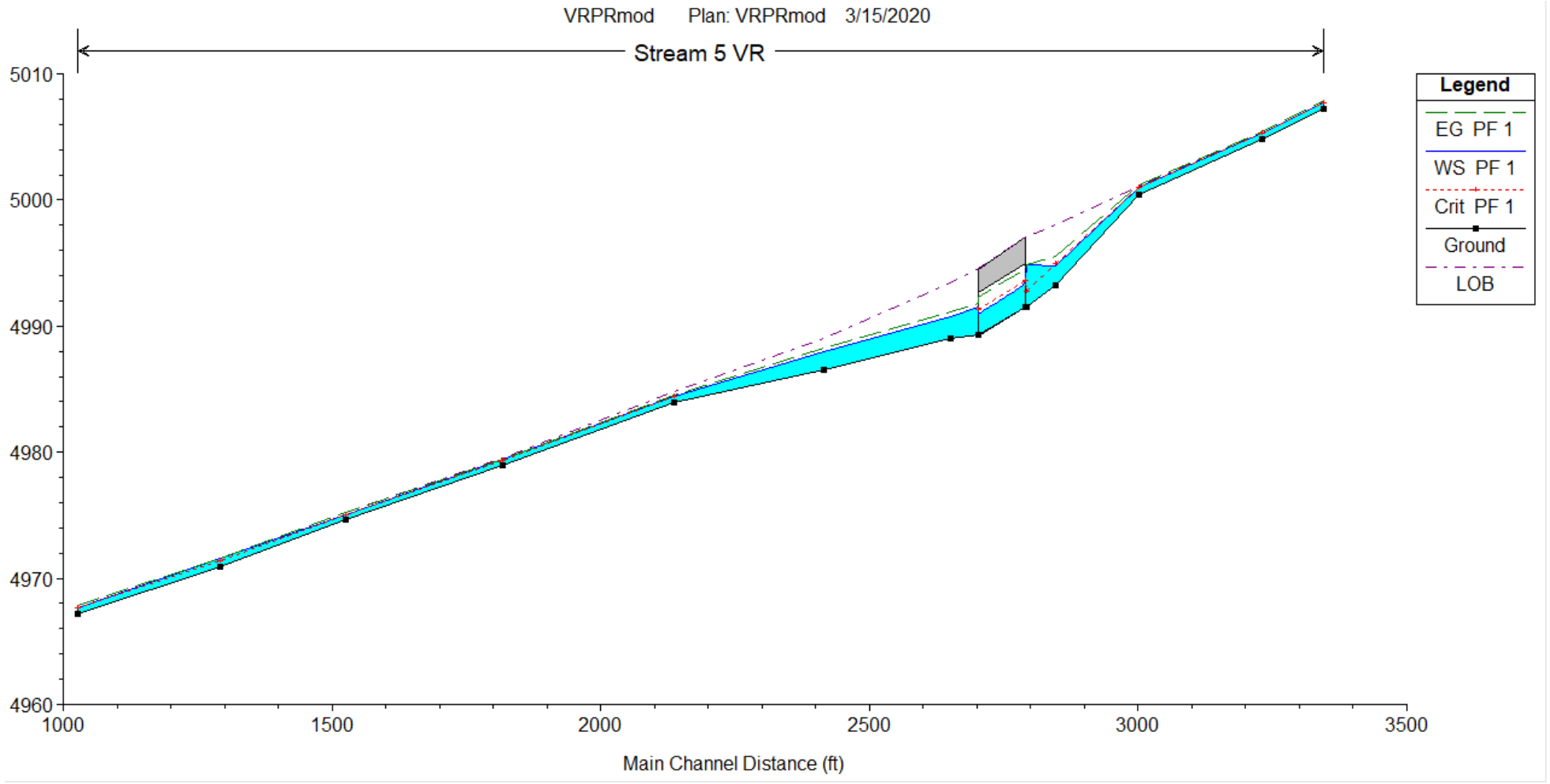


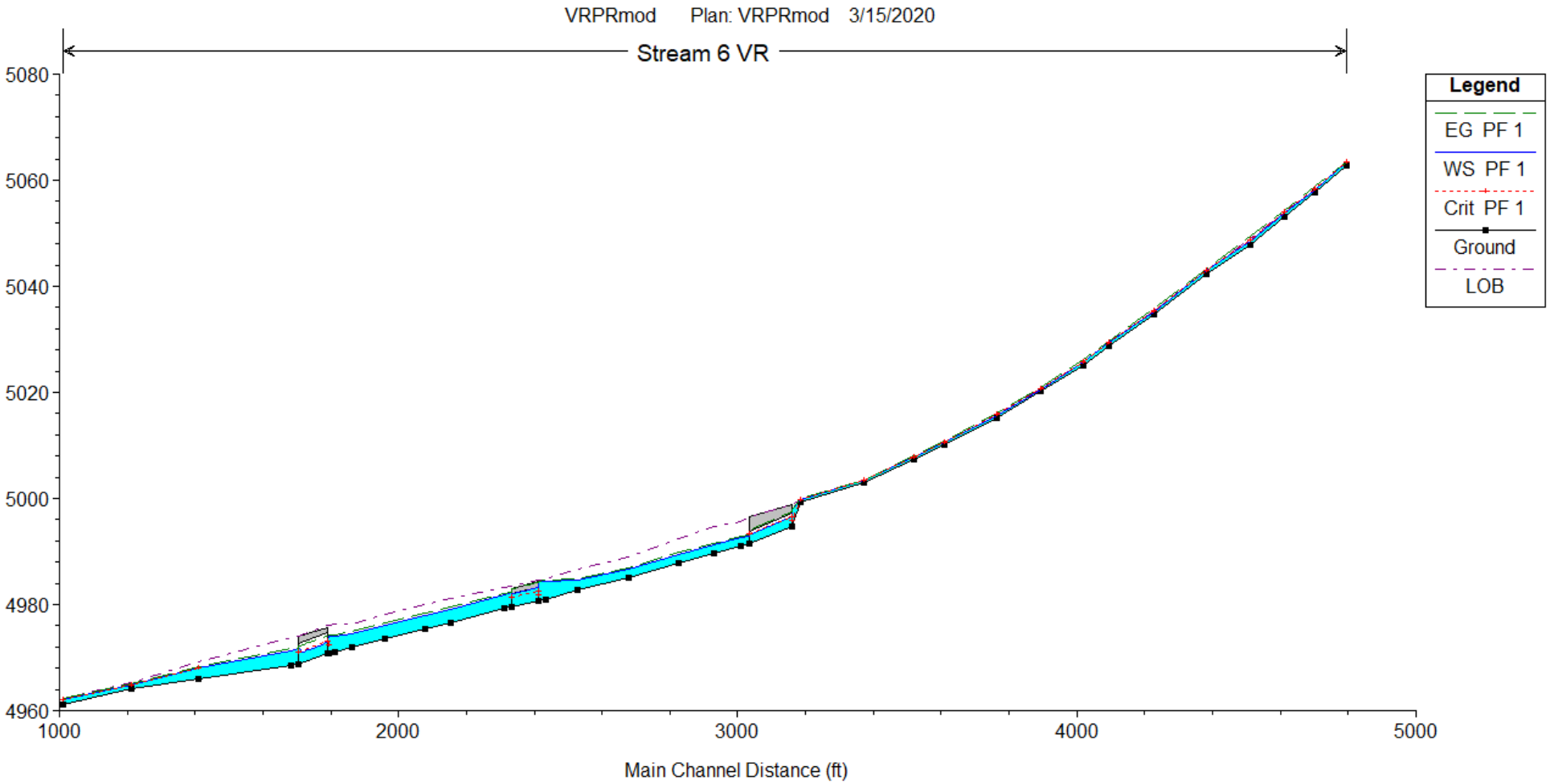

VRPRmod Plan: VRPRmod 3/15/2020
Stream VRMain
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB
Left Levee
Right Levee
5100
5080
5060
5040
5020
5000
4980
4960
2000
3000
4000
5000
Main Channel Distance (ft)


Stream VRMain
5180
5160
5140
5120
5100
5080
5060
5040
5000
6000
7000
8000
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB
Left Levee
Right Levee


VRPRmod Plan: VRPRmod 3/15/2020
Stream 3 VR
5020
5010
5000
4990
4980
4970
4960
1000
1500
2000
2500
3000
3500
4000
Main Channel Distance (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB


VRPRmod Plan: VRPRmod 3/15/2020
Stream 4 VR
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB
5030
5020
5010
5000
4990
4980
4970
2200
2400
2600
2800
3000
3200
3400
3600
3800
Main Channel Distance (ft)


VRPRmod Plan: VRPRmod 3/15/2020
Stream 5 VR
5010
5000
4990
4980
4970
4960
1000
1500
2000
2500
3000
3500
Main Channel Distance (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB


VRPRmod Plan: VRPRmod 3/15/2020
Stream 6 VR
5080
5060
5040
5020
5000
4980
4960
1000
2000
3000
4000
5000
Main Channel Distance (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
LOB

Stream VR main

HEC-RAS Plan: vrmod River: Stream Reach: VRMain Profile: PF 1 Reload Data

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
VRMain	7375	PF 1	288.00	5134.20	5136.68	5137.40	5140.42	0.080717	15.50	18.59	11.24	2.12
VRMain	7356	PF 1	288.00	5130.00	5130.82	5132.20	5138.80	0.049290	22.67	12.70	16.14	4.50
VRMain	7354		Culvert									
VRMain	7215	PF 1	288.00	5123.00	5127.02	5124.71	5127.10	0.000703	2.26	127.32	43.35	0.23
VRMain	7195	PF 1	288.00	5123.00	5125.58	5125.58	5126.74	0.017334	8.62	33.42	14.03	0.98
VRMain	6857	PF 1	288.00	5104.99	5106.94	5108.23	5112.14	0.164751	18.29	15.75	13.78	3.02
VRMain	6535	PF 1	288.00	5086.99	5090.30	5090.75	5091.90	0.030525	10.14	28.39	16.33	1.36
VRMain	6147	PF 1	288.00	5069.40	5071.58	5072.42	5074.30	0.072810	13.24	21.75	16.87	2.06
VRMain	6076	PF 1	288.00	5066.90	5069.45	5069.81	5070.79	0.029685	9.29	31.00	20.94	1.35
VRMain	5920	PF 1	339.00	5062.00	5065.70	5063.87	5065.83	0.001317	2.95	114.92	42.18	0.32
VRMain	5905	PF 1	339.00	5061.60	5065.71	5063.47	5065.81	0.000121	2.55	132.86	44.62	0.26
VRMain	5904		Culvert									
VRMain	5771	PF 1	339.00	5055.50	5056.59	5057.37	5059.38	0.296694	13.40	25.30	26.52	2.42
VRMain	5751	PF 1	339.00	5054.50	5056.37	5056.37	5057.15	0.044471	7.09	47.82	31.21	1.01
VRMain	5592	PF 1	379.00	5048.50	5050.74	5050.52	5051.36	0.029170	6.35	59.68	33.41	0.84
VRMain	5284	PF 1	379.00	5042.80	5045.71	5044.83	5046.03	0.011130	4.54	83.52	37.45	0.54
VRMain	4887	PF 1	379.00	5035.50	5037.53	5037.53	5038.33	0.041159	7.15	53.00	32.19	0.98
VRMain	4717	PF 1	531.00	5031.50	5036.02	5033.97	5036.21	0.004091	3.50	151.69	47.12	0.34
VRMain	4697	PF 1	531.00	5031.30	5036.02	5033.77	5036.19	0.000147	3.29	161.43	48.35	0.32
VRMain	4696		Culvert									
VRMain	4593	PF 1	531.00	5029.20	5030.92	5031.65	5033.27	0.147527	12.31	43.15	30.30	1.82
VRMain	4573	PF 1	531.00	5029.00	5032.05	5031.45	5032.60	0.018342	5.98	88.83	38.29	0.69
VRMain	4507	PF 1	663.00	5027.00	5029.99	5029.79	5030.90	0.030886	7.67	86.44	37.91	0.90
VRMain	4264	PF 1	663.00	5019.00	5021.88	5021.79	5022.88	0.035300	8.04	82.47	37.27	0.95
VRMain	4064	PF 1	663.00	5012.50	5015.52	5015.29	5016.41	0.029552	7.55	87.80	38.13	0.88
VRMain	3864	PF 1	663.00	5006.00	5008.87	5008.79	5009.88	0.035945	8.09	81.95	37.19	0.96
VRMain	3664	PF 1	663.00	5000.00	5003.18		5003.96	0.024301	7.05	94.08	39.10	0.80
VRMain	3484	PF 1	663.00	4997.00	5001.57		5001.86	0.006123	4.31	153.94	47.40	0.42
VRMain	3469	PF 1	663.00	4996.80	5001.58	4999.60	5001.83	0.000218	4.02	164.87	49.03	0.39
VRMain	3468		Culvert									
VRMain	3404	PF 1	663.00	4995.50	4999.43		4999.88	0.011102	5.36	123.69	42.89	0.56
VRMain	3384	PF 1	663.00	4995.30	4999.08		4999.61	0.013648	5.86	113.21	39.97	0.61
VRMain	3219	PF 1	778.00	4992.61	4996.45		4997.09	0.016452	6.42	121.09	43.05	0.68
VRMain	3047	PF 1	778.00	4989.82	4993.71		4994.33	0.015617	6.31	123.37	43.36	0.66
VRMain	2921	PF 1	778.00	4987.76	4991.65		4992.30	0.016398	6.49	119.80	41.65	0.68
VRMain	2825	PF 1	778.00	4986.20	4990.03		4990.70	0.017050	6.55	118.70	41.98	0.69
VRMain	2689	PF 1	778.00	4984.80	4988.82	4987.33	4989.15	0.007294	4.60	169.05	54.12	0.46
VRMain	2491	PF 1	778.00	4983.21	4987.73		4987.97	0.004741	3.96	196.67	57.10	0.38
VRMain	2378	PF 1	778.00	4982.37	4987.73	4984.86	4987.89	0.000105	3.17	245.60	60.41	0.28
VRMain	2377		Culvert									
VRMain	2326	PF 1	778.00	4981.60	4985.15		4985.60	0.000491	5.39	144.37	51.31	0.57
VRMain	2321	PF 1	854.00	4981.50	4984.99		4985.56	0.016226	6.04	141.43	50.96	0.64
VRMain	2121	PF 1	854.00	4978.14	4981.54		4982.15	0.017834	6.24	136.87	50.42	0.67
VRMain	1881	PF 1	854.00	4974.11	4977.68		4978.22	0.014936	5.87	145.55	51.44	0.61
VRMain	1641	PF 1	854.00	4970.08	4973.35		4974.02	0.020618	6.56	130.18	49.62	0.71
VRMain	1401	PF 1	854.00	4966.05	4969.89		4970.34	0.011492	5.36	159.45	53.04	0.54
VRMain	1351	PF 1	854.00	4965.50	4968.16	4968.16	4969.27	0.043133	8.44	101.13	46.03	1.00
VRMain	1321	PF 1	854.00	4965.20	4967.54	4966.90	4967.93	0.015873	5.04	169.55	79.93	0.61
VRMain	1281	PF 1	854.00	4965.00	4967.48	4966.02	4967.56	0.002684	2.21	386.32	165.99	0.26
VRMain	1241	PF 1	947.00	4965.00	4967.48		4967.49	0.000418	0.78	1208.54	612.18	0.10
VRMain	1221	PF 1	947.00	4965.02	4967.48		4967.48	0.000413	0.76	1239.74	646.30	0.10
VRMain	1201	PF 1	947.00	4966.53	4967.39		4967.46	0.011059	2.10	451.43	609.14	0.43
VRMain	1181	PF 1	947.00	4966.23	4967.07		4967.20	0.014357	2.91	326.02	676.78	0.73
VRMain	1081	PF 1	947.00	4964.34	4965.15	4965.15	4965.37	0.023802	3.73	253.70	589.97	1.00
VRMain	1000	PF 1	947.00	4963.00	4963.77	4963.62	4963.91	0.010008	2.90	326.03	576.47	0.68

Stream 3

HEC-RAS Plan: vrmod River: Stream 3 Reach: VR Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
VR	3553	PF 1	135.00	5017.65	5018.16	5018.15	5018.32	0.022390	3.19	42.36	119.22	0.94
VR	3398	PF 1	135.00	5013.85	5014.50	5014.50	5014.70	0.024422	3.61	37.37	93.00	1.00
VR	3268	PF 1	135.00	5010.62	5011.28	5011.28	5011.48	0.025139	3.57	37.82	97.95	1.01
VR	3154	PF 1	135.00	5007.64	5008.19	5008.16	5008.32	0.019904	2.91	46.37	136.82	0.88
VR	2998	PF 1	135.00	5003.98	5004.58	5004.58	5004.76	0.026437	3.39	39.84	115.77	1.02
VR	2848	PF 1	135.00	4999.94	5000.67	5000.68	5000.92	0.024652	4.07	33.21	69.70	1.04
VR	2725	PF 1	135.00	4997.03	4997.61	4997.55	4997.75	0.016831	3.02	44.67	109.92	0.84
VR	2600	PF 1	135.00	4994.40	4995.02	4995.02	4995.22	0.025151	3.56	37.88	98.33	1.01
VR	2498	PF 1	135.00	4986.50	4987.79	4988.53	4990.36	0.109806	12.85	10.50	11.53	2.37
VR	2467	PF 1	135.00	4986.11	4989.40	4987.47	4989.47	0.000379	2.16	62.63	24.27	0.24
VR	2466		Culvert									
VR	2378	PF 1	135.00	4985.00	4986.78		4987.16	0.020611	4.94	27.31	20.68	0.76
VR	2348	PF 1	135.00	4984.37	4986.14		4986.52	0.021288	5.00	27.00	20.59	0.77
VR	2257	PF 1	135.00	4982.46	4984.25		4984.62	0.020356	4.92	27.43	20.72	0.75
VR	2156	PF 1	135.00	4980.34	4982.09		4982.49	0.021970	5.06	26.70	20.50	0.78
VR	2118	PF 1	135.00	4979.54	4981.50	4981.05	4981.79	0.014209	4.33	31.19	21.78	0.64
VR	1988	PF 1	135.00	4976.81	4978.32	4978.32	4978.91	0.038264	6.15	21.94	19.06	1.01
VR	1887	PF 1	135.00	4974.69	4977.32	4976.21	4977.45	0.004532	2.87	47.09	25.79	0.37
VR	1855	PF 1	135.00	4974.03	4977.34	4975.28	4977.40	0.000291	1.95	69.34	25.62	0.21
VR	1854		Culvert									
VR	1780	PF 1	135.00	4972.04	4974.21		4974.40	0.006551	3.41	39.62	21.41	0.44
VR	1758	PF 1	135.00	4971.62	4973.83		4974.17	0.014910	4.68	28.85	18.20	0.66
VR	1616	PF 1	135.00	4970.15	4971.81		4972.05	0.014673	3.94	34.30	28.79	0.64
VR	1279	PF 1	135.00	4966.28	4966.71		4966.81	0.016166	2.47	54.57	175.86	0.78
VR	1042	PF 1	135.00	4961.67	4962.16	4962.14	4962.28	0.022969	2.79	48.43	169.86	0.92
VR	1000	PF 1	135.00	4961.00	4961.58	4961.46	4961.65	0.010006	2.11	63.89	182.00	0.63

Total flow in cross section.

Stream 4

HEC-RAS Plan: vrmod River: Stream 4 Reach: VR Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude # Chl
VR	3688	PF 1	123.00	5025.98	5026.63	5026.63	5026.84	0.023455	3.71	33.15	76.90	1.00
VR	3496	PF 1	123.00	5018.86	5019.51	5019.65	5019.98	0.060448	5.54	22.22	57.52	1.57
VR	3331	PF 1	123.00	5012.88	5013.59	5013.60	5013.82	0.024713	3.84	32.02	73.30	1.02
VR	3161	PF 1	123.00	5006.98	5007.80	5007.94	5008.26	0.044927	5.47	22.50	47.49	1.40
VR	2950	PF 1	123.00	5001.32	5002.08	5002.08	5002.31	0.023543	3.88	31.69	68.86	1.01
VR	2795	PF 1	123.00	4997.31	4997.89	4997.91	4998.10	0.031575	3.68	33.40	97.89	1.11
VR	2673	PF 1	123.00	4992.98	4994.22	4994.26	4994.47	0.041374	4.00	30.76	97.48	1.25
VR	2599	PF 1	123.00	4990.91	4992.20	4992.21	4992.44	0.024446	3.88	31.69	70.74	1.02
VR	2507	PF 1	123.00	4988.49	4989.40	4989.48	4989.75	0.036450	4.72	26.04	58.50	1.25
VR	2487	PF 1	123.00	4983.53	4986.65	4984.70	4986.72	0.000685	2.00	61.57	23.08	0.22
VR	2486		Culvert									
VR	2427	PF 1	123.00	4981.81	4983.37		4983.64	0.013511	4.13	29.79	20.85	0.61
VR	2407	PF 1	123.00	4981.20	4982.75	4982.56	4983.21	0.025505	5.47	22.48	16.46	0.83
VR	2346	PF 1	123.00	4979.23	4980.64	4980.64	4981.27	0.038531	6.35	19.36	15.58	1.00

Total flow in cross section.

Stream 5

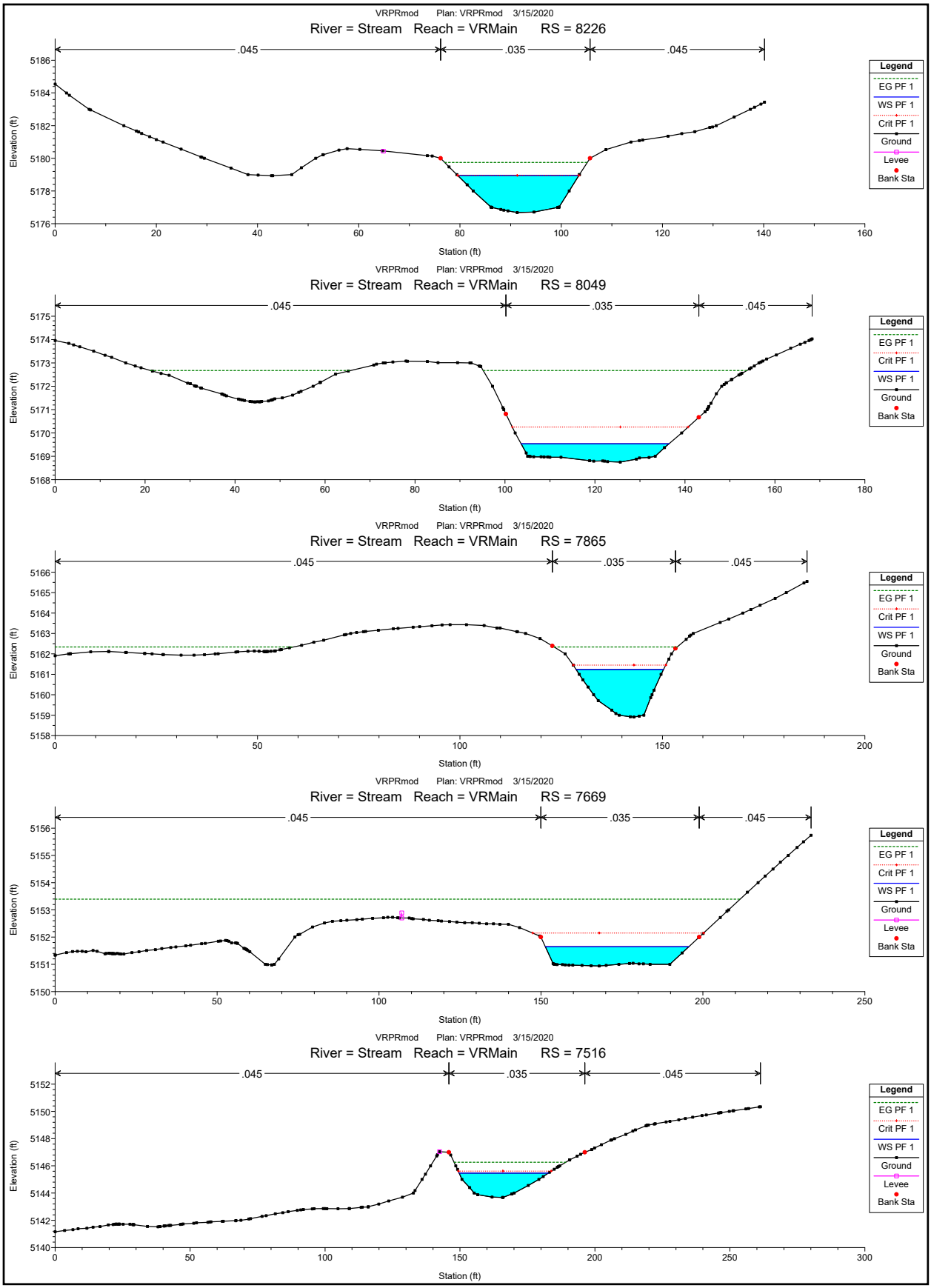
HEC-RAS Plan: vrmod River: Stream 5 Reach: VR Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
VR	3344	PF 1	135.00	5007.23	5007.70	5007.70	5007.86	0.025841	3.20	42.20	131.78	1.00
VR	3231	PF 1	135.00	5004.83	5005.34	5005.26	5005.43	0.013289	2.47	54.76	153.18	0.73
VR	3001	PF 1	135.00	5000.46	5000.97	5000.97	5001.14	0.027873	3.31	40.83	128.17	1.03
VR	2847	PF 1	135.00	4993.26	4994.80	4994.93	4995.57	0.050244	7.01	19.26	16.73	1.15
VR	2792	PF 1	135.00	4991.50	4994.86	4992.79	4994.90	0.000226	1.60	84.45	36.48	0.19
VR	2791		Culvert									
VR	2702	PF 1	135.00	4989.27	4991.56		4991.81	0.009162	4.02	33.59	17.93	0.52
VR	2652	PF 1	135.00	4989.05	4990.71		4991.11	0.019890	5.04	26.76	18.42	0.74
VR	2415	PF 1	135.00	4986.57	4988.01		4988.29	0.007803	4.21	32.03	26.25	0.67
VR	2137	PF 1	135.00	4983.92	4984.41	4984.41	4984.56	0.027242	3.15	42.90	142.58	1.01
VR	1817	PF 1	135.00	4978.98	4979.42	4979.32	4979.47	0.008950	1.85	72.83	232.32	0.58
VR	1525	PF 1	135.00	4974.70	4975.07	4975.07	4975.20	0.027708	2.90	46.62	177.69	1.00
VR	1292	PF 1	135.00	4970.96	4971.56	4971.41	4971.62	0.008723	1.99	67.90	191.20	0.59
VR	1027	PF 1	135.00	4967.22	4967.71	4967.71	4967.84	0.027458	2.93	46.09	171.55	1.00

Stream 6

HEC-RAS Plan: vrmod River: Stream 6 Reach: VR Profile: PF 1 — Reload Data

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
VR	4795	PF 1	115.00	5062.69	5063.34	5063.34	5063.56	0.023851	3.70	31.08	73.32	1.00
VR	4700	PF 1	115.00	5057.63	5058.08	5058.32	5058.92	0.145181	7.36	15.63	50.94	2.34
VR	4611	PF 1	115.00	5053.21	5053.90	5053.92	5054.16	0.026020	4.11	27.98	60.16	1.06
VR	4510	PF 1	115.00	5047.93	5048.55	5048.85	5049.51	0.096895	7.87	14.60	31.70	2.05
VR	4381	PF 1	115.00	5042.28	5042.96	5042.98	5043.20	0.027880	3.90	29.50	72.35	1.08
VR	4228	PF 1	115.00	5034.76	5035.24	5035.42	5035.85	0.101600	6.24	18.43	58.88	1.97
VR	4095	PF 1	115.00	5028.71	5029.44	5029.45	5029.68	0.025666	3.86	29.81	69.75	1.04
VR	4017	PF 1	115.00	5025.17	5025.64	5025.81	5026.18	0.093191	5.90	19.49	63.46	1.88
VR	3893	PF 1	115.00	5020.13	5020.52	5020.62	5020.84	0.064493	4.51	25.51	94.37	1.53
VR	3764	PF 1	115.00	5015.24	5015.74	5015.79	5015.99	0.036351	3.94	29.19	87.65	1.19
VR	3609	PF 1	115.00	5010.00	5010.52	5010.55	5010.75	0.031365	3.81	30.16	83.53	1.12
VR	3519	PF 1	115.00	5007.26	5007.74	5007.76	5007.94	0.031217	3.56	32.29	98.67	1.10
VR	3372	PF 1	115.00	5002.90	5003.43	5003.36	5003.52	0.014997	2.45	46.86	144.48	0.76
VR	3185	PF 1	115.00	4999.24	4999.84	4999.84	5000.04	0.023708	3.60	31.92	77.97	0.99
VR	3160	PF 1	115.00	4994.79	4997.88	4995.92	4997.93	0.000279	1.82	63.08	25.07	0.20
VR	3159		Culvert									
VR	3033	PF 1	115.00	4991.39	4992.85		4993.19	0.004388	4.68	24.55	19.27	0.73
VR	3008	PF 1	115.00	4990.96	4992.67		4992.98	0.017527	4.45	25.82	20.25	0.70
VR	2928	PF 1	115.00	4989.57	4991.29		4991.59	0.017138	4.42	26.02	20.30	0.69
VR	2827	PF 1	115.00	4987.82	4989.53		4989.84	0.017571	4.46	25.79	20.23	0.70
VR	2677	PF 1	115.00	4985.00	4986.64		4986.98	0.020555	4.71	24.40	19.82	0.75
VR	2527	PF 1	115.00	4982.67	4984.58		4984.78	0.010593	3.63	31.70	23.28	0.55
VR	2434	PF 1	115.00	4981.00	4984.46		4984.50	0.001093	1.63	70.38	30.73	0.19
VR	2414	PF 1	115.00	4980.67	4984.45	4981.80	4984.48	0.000574	1.36	85.68	93.47	0.14
VR	2413		Culvert									
VR	2333	PF 1	115.00	4979.52	4982.35		4982.39	0.001120	1.58	72.78	34.37	0.19
VR	2313	PF 1	238.00	4979.20	4981.74		4982.18	0.016161	5.31	44.79	25.24	0.70
VR	2152	PF 1	238.00	4976.59	4979.13		4979.57	0.016160	5.31	44.80	25.25	0.70
VR	2077	PF 1	238.00	4975.38	4977.93		4978.37	0.015861	5.28	45.10	25.32	0.70
VR	1960	PF 1	238.00	4973.49	4976.01		4976.46	0.016766	5.38	44.20	25.11	0.72
VR	1864	PF 1	238.00	4971.94	4974.57		4974.97	0.014072	5.05	47.11	25.80	0.66
VR	1813	PF 1	238.00	4971.11	4974.08		4974.36	0.008668	4.24	56.18	27.82	0.53
VR	1793	PF 1	238.00	4970.79	4974.04	4972.39	4974.20	0.003429	3.20	74.48	26.32	0.33
VR	1792		Culvert									
VR	1703	PF 1	238.00	4968.71	4971.63		4971.84	0.005013	3.67	64.80	23.57	0.39
VR	1683	PF 1	238.00	4968.52	4971.33		4971.66	0.010791	4.59	51.88	26.88	0.58
VR	1411	PF 1	238.00	4966.05	4968.12	4968.11	4968.32	0.013512	4.35	84.81	182.21	0.63
VR	1211	PF 1	238.00	4964.23	4964.89	4964.86	4965.05	0.020098	3.20	74.41	192.02	0.91
VR	1011	PF 1	238.00	4961.21	4962.18	4962.04	4962.28	0.009998	2.59	91.88	192.31	0.66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Bank Sta
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Station (ft)
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Crit PF 1
WS PF 1
Ground
Bank Sta
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Crit PF 1
WS PF 1
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Bank Sta
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Station (ft)
Legend
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Crit PF 1
WS PF 1
Ground
Levee
Bank Sta
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Station (ft)
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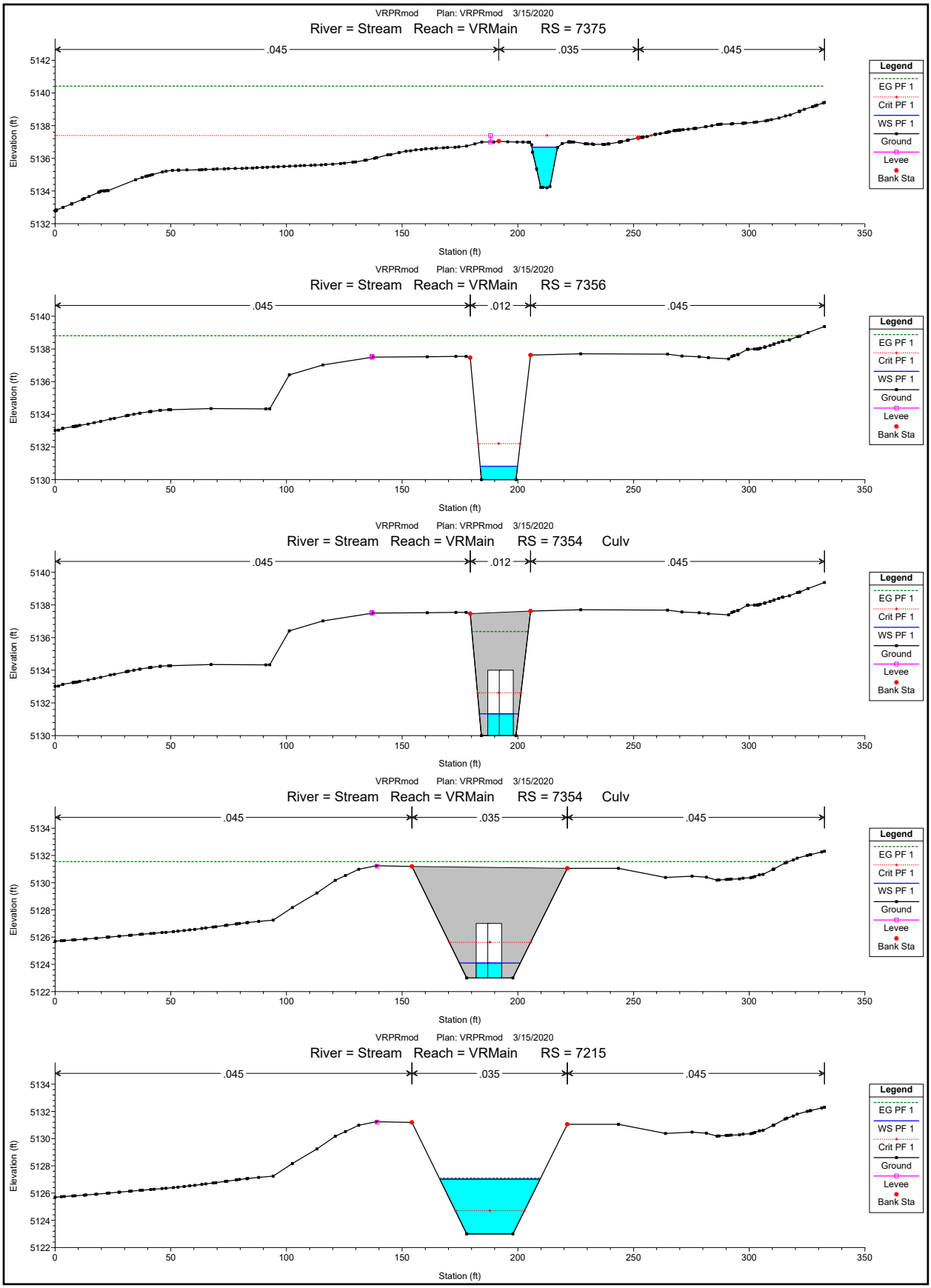
Crit PF 1
WS PF 1
Ground
Levee
Bank Sta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Station (ft)
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Crit PF 1
WS PF 1
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Levee
Bank Sta
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Station (ft)
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Crit PF 1
WS PF 1
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Levee
Bank Sta
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Crit PF 1
WS PF 1
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Levee
Bank Sta
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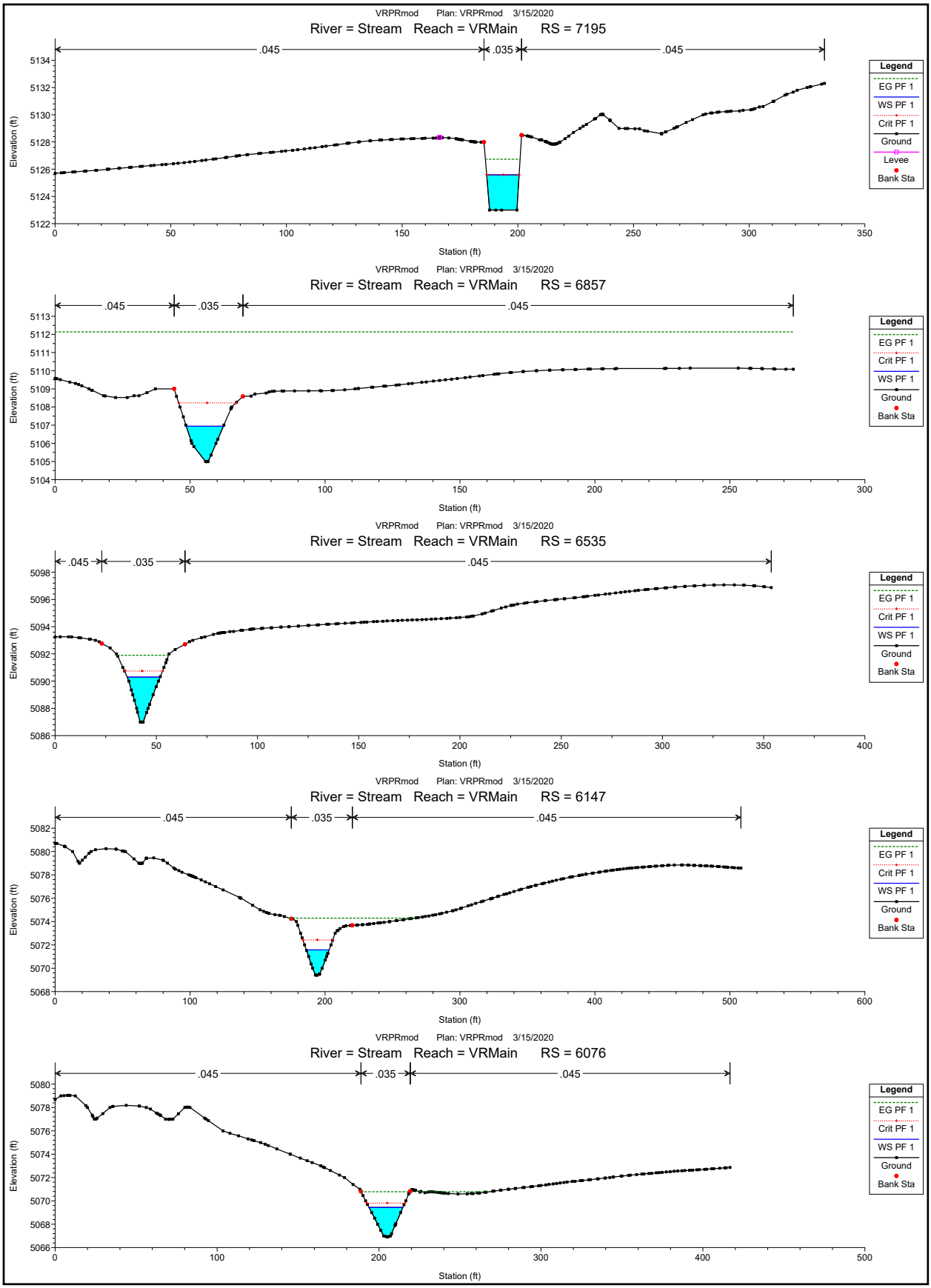
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Station (ft)
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Crit PF 1
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Bank Sta
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Station (ft)
Legend
EG PF 1
Crit PF 1
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Bank Sta
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Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
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Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
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River = Stream Reach = VRMain RS = 6076
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Elevation (ft)
Station (ft)
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Crit PF 1
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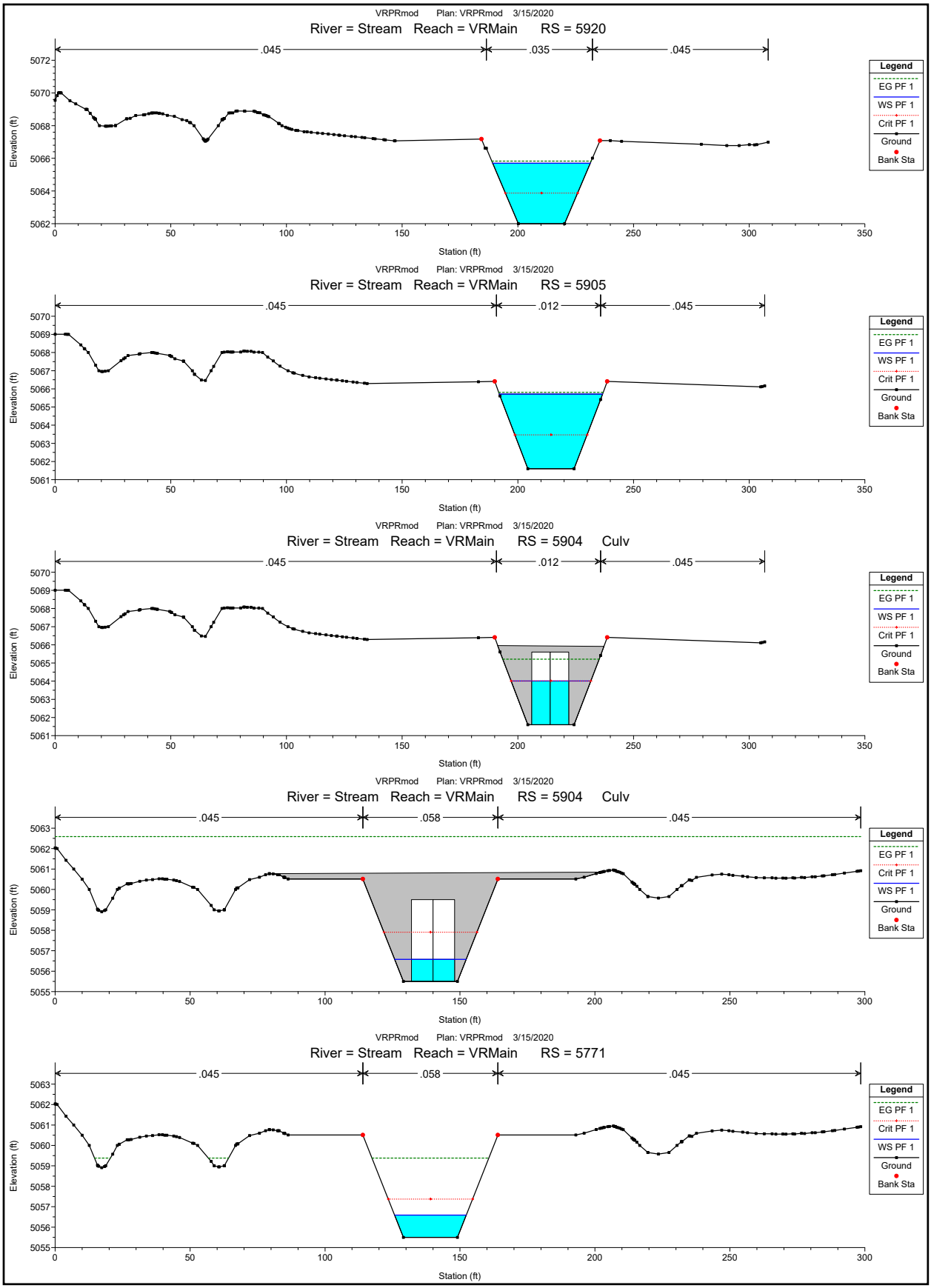
Ground
Bank Sta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Station (ft)
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WS PF 1
Crit PF 1
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Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
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Elevation (ft)
Station (ft)
Legend
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WS PF 1
Crit PF 1
Ground
Bank Sta
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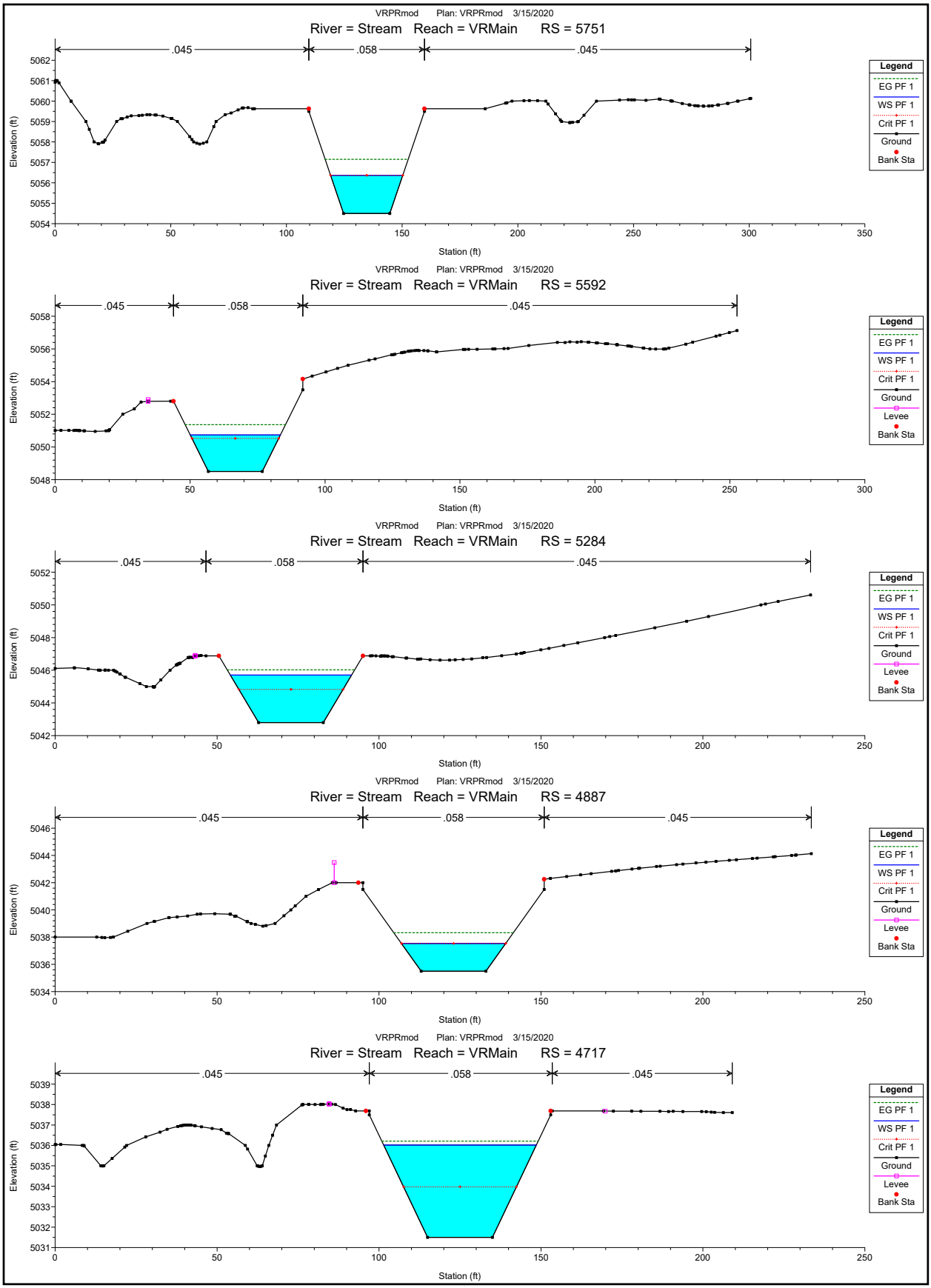
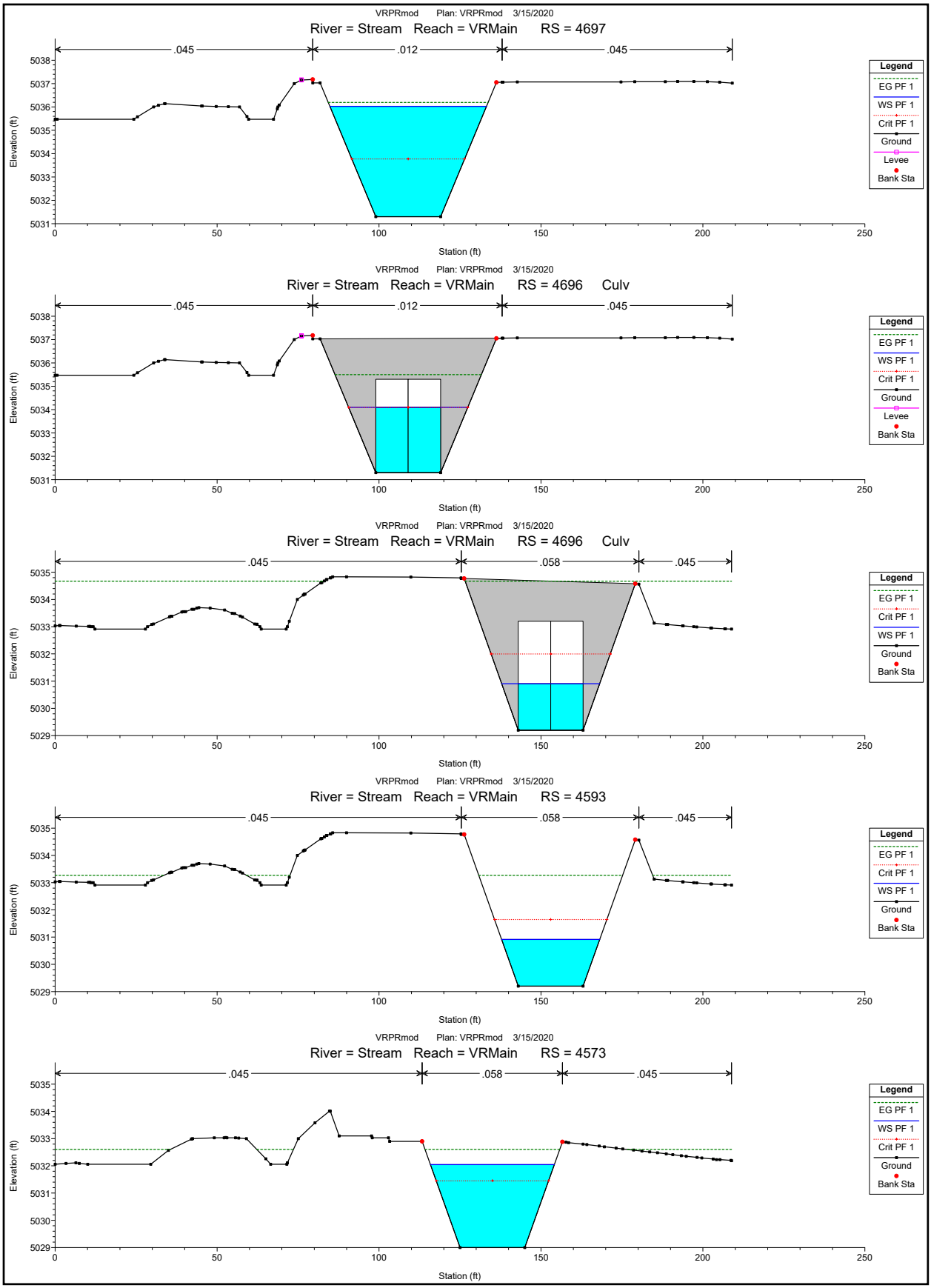
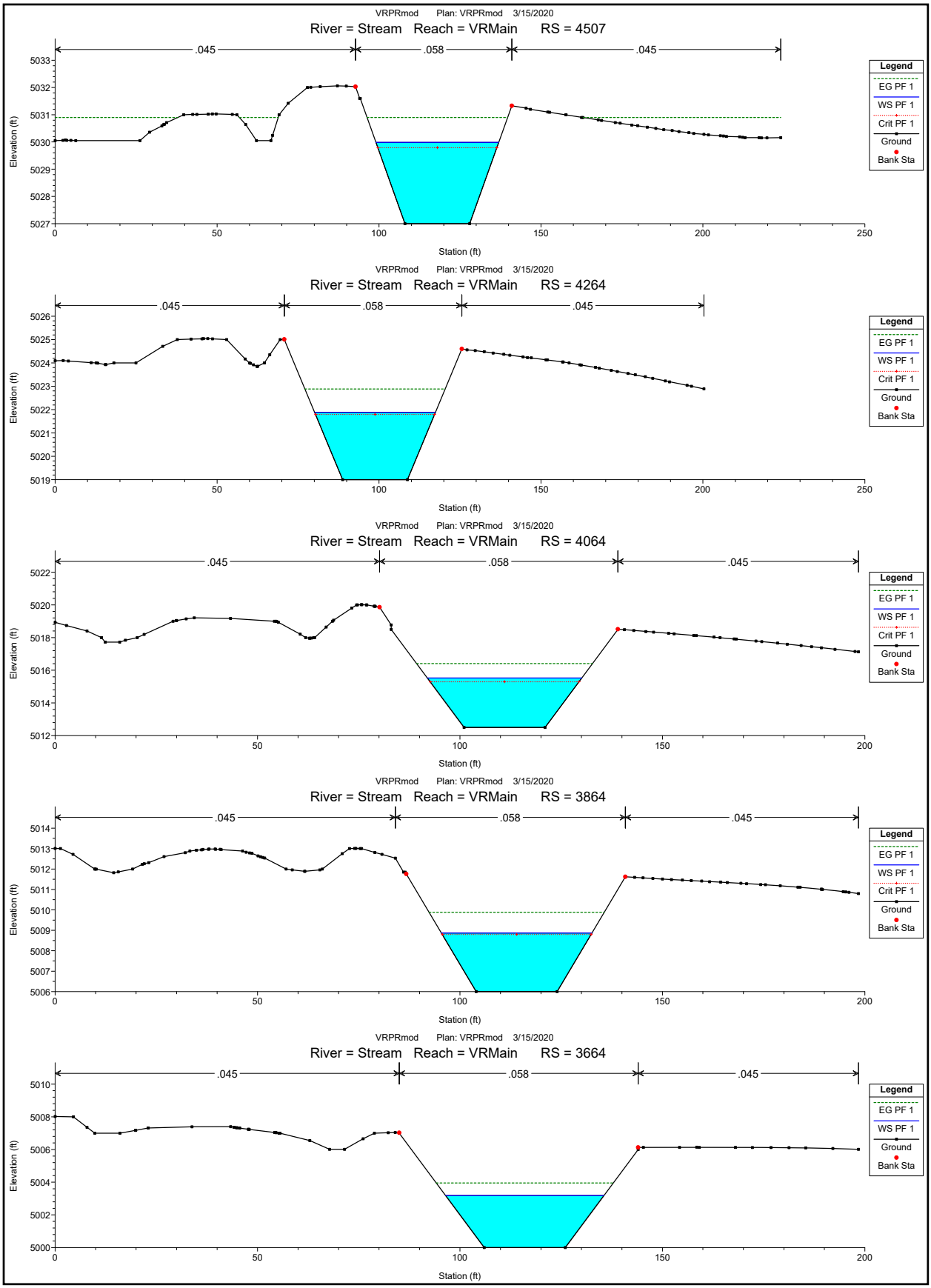
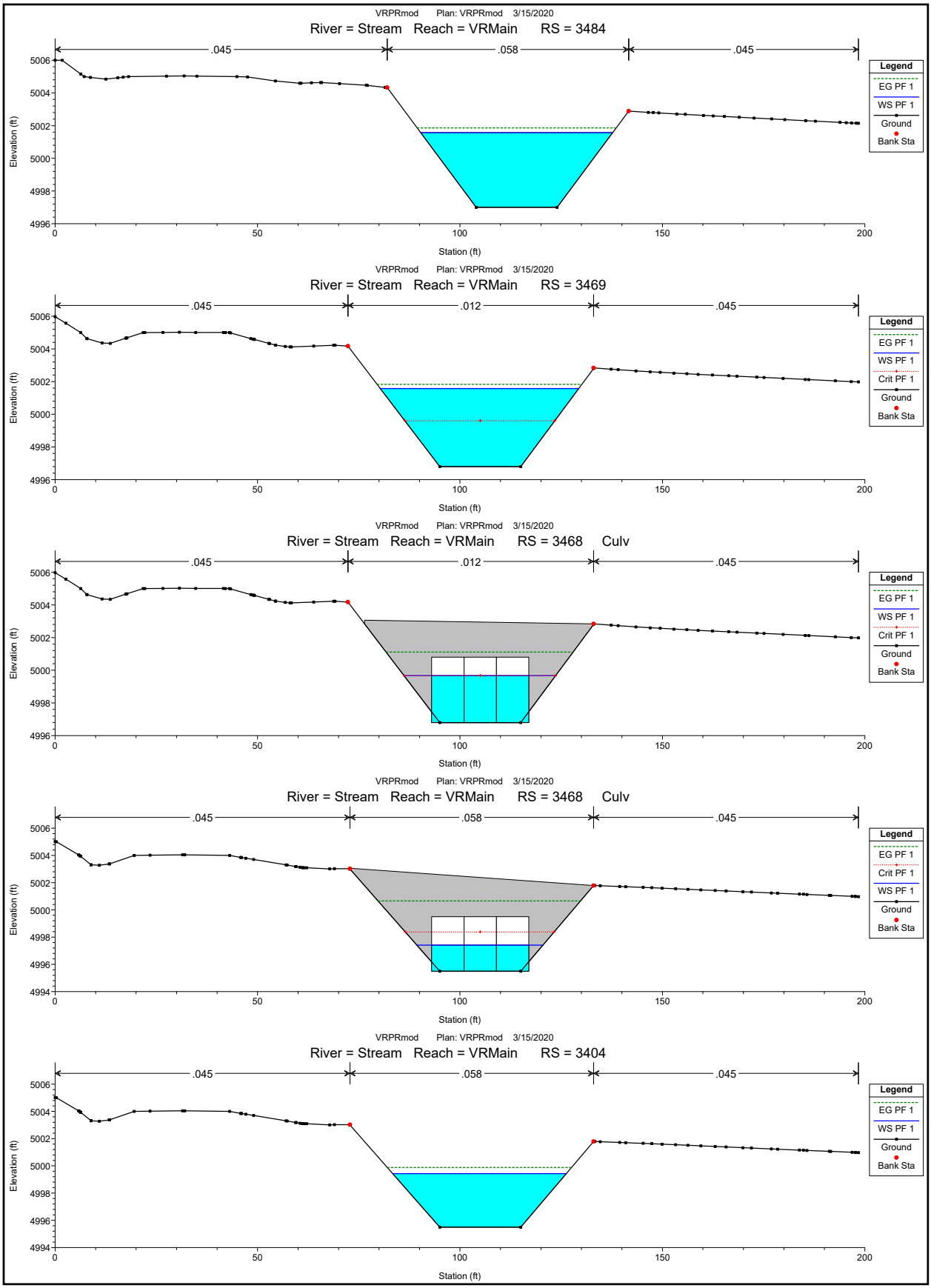
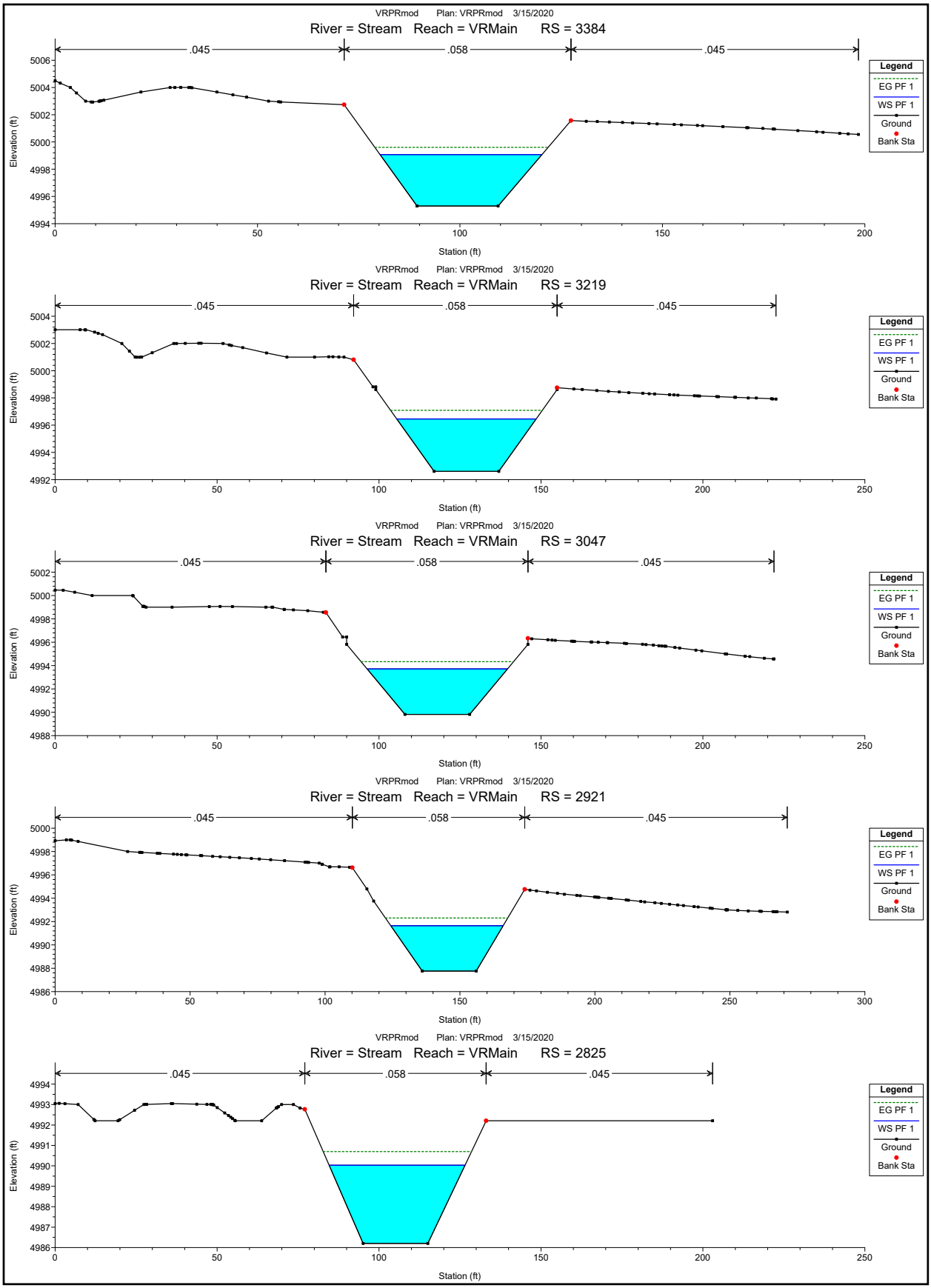
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 5771
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta

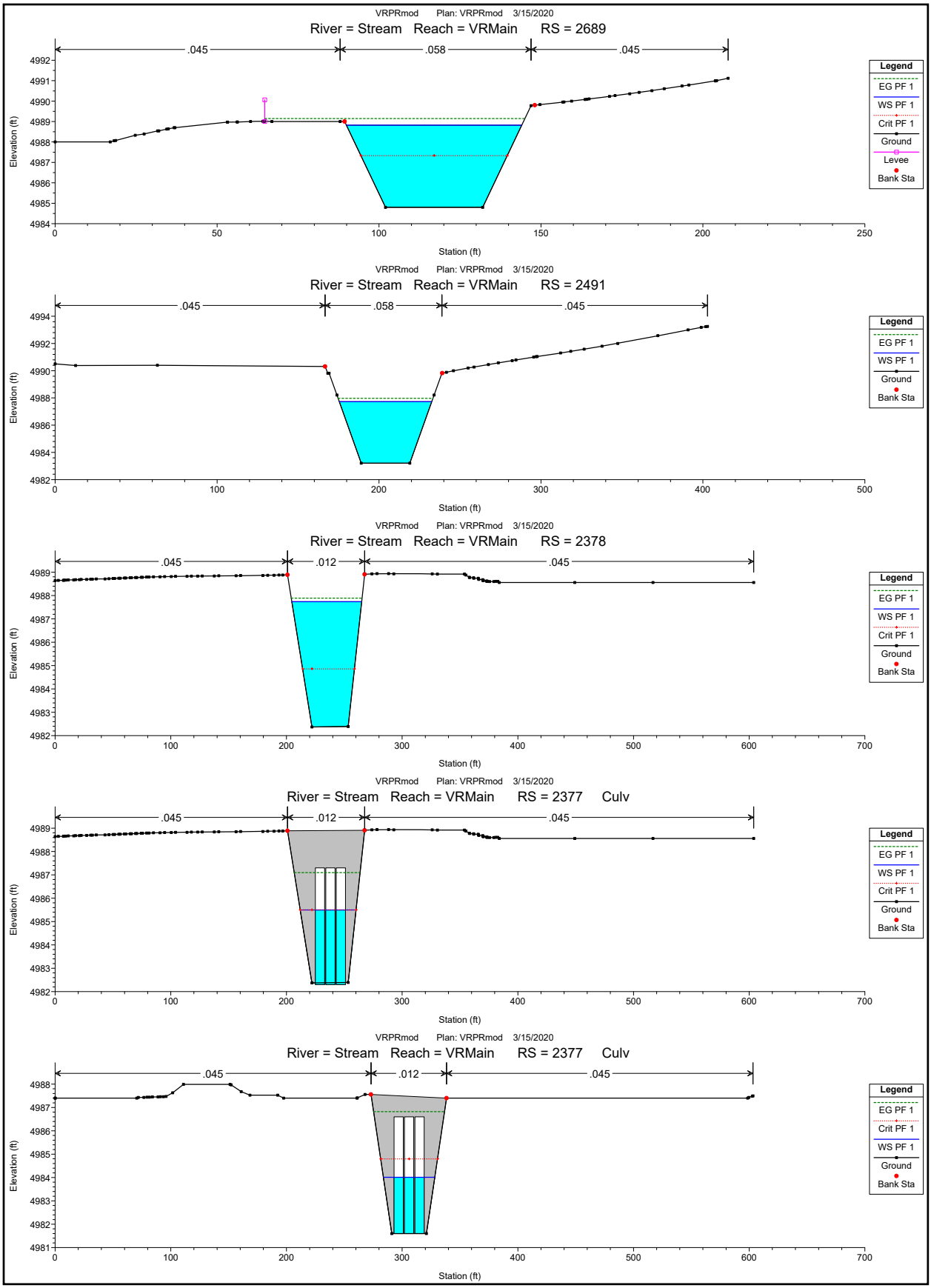

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 5751
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 5592
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 5284
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4887
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4717
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta

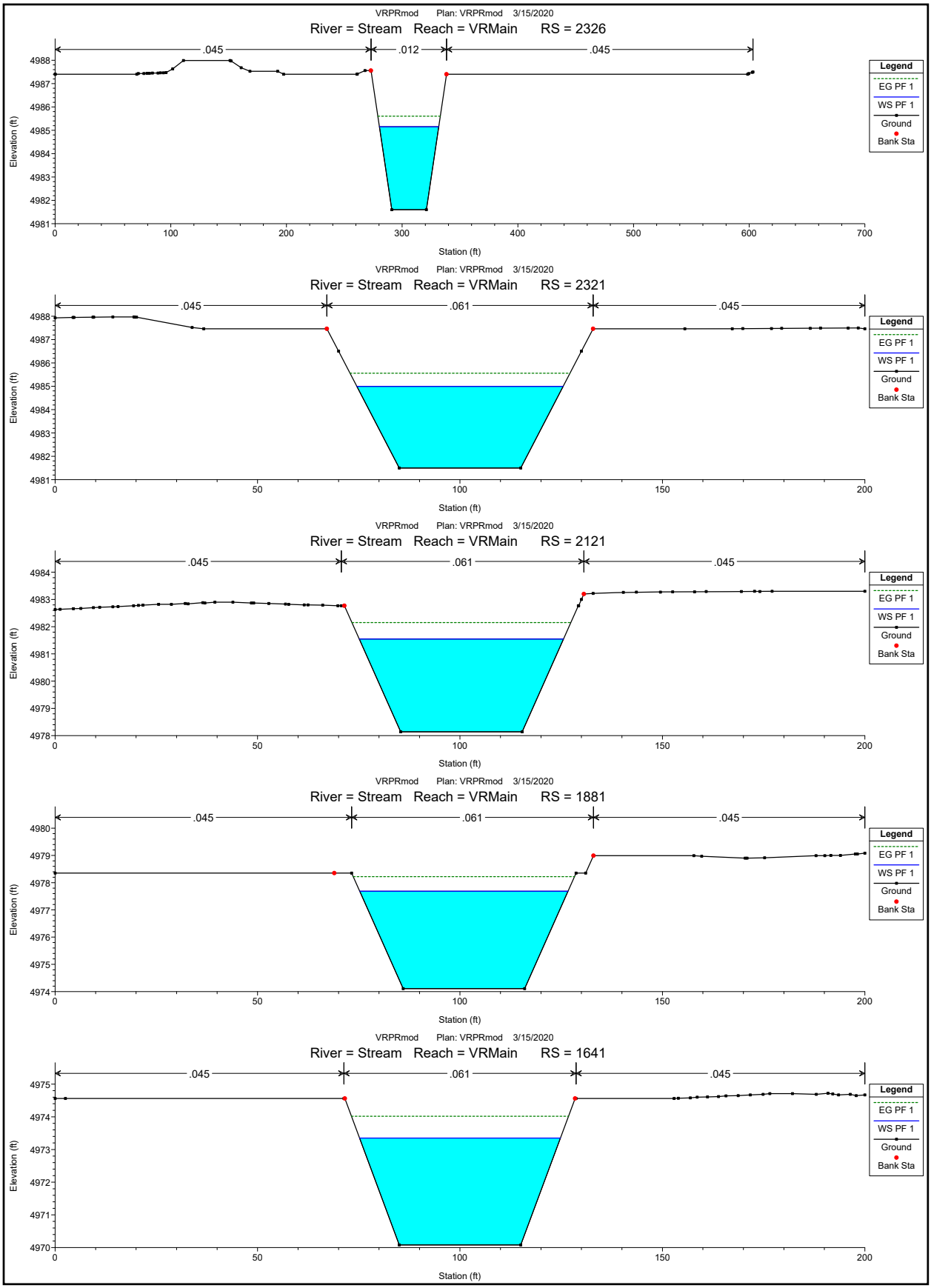

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4697
.045
.012
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4696 Culv
.045
.012
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4696 Culv
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4593
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4573
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta

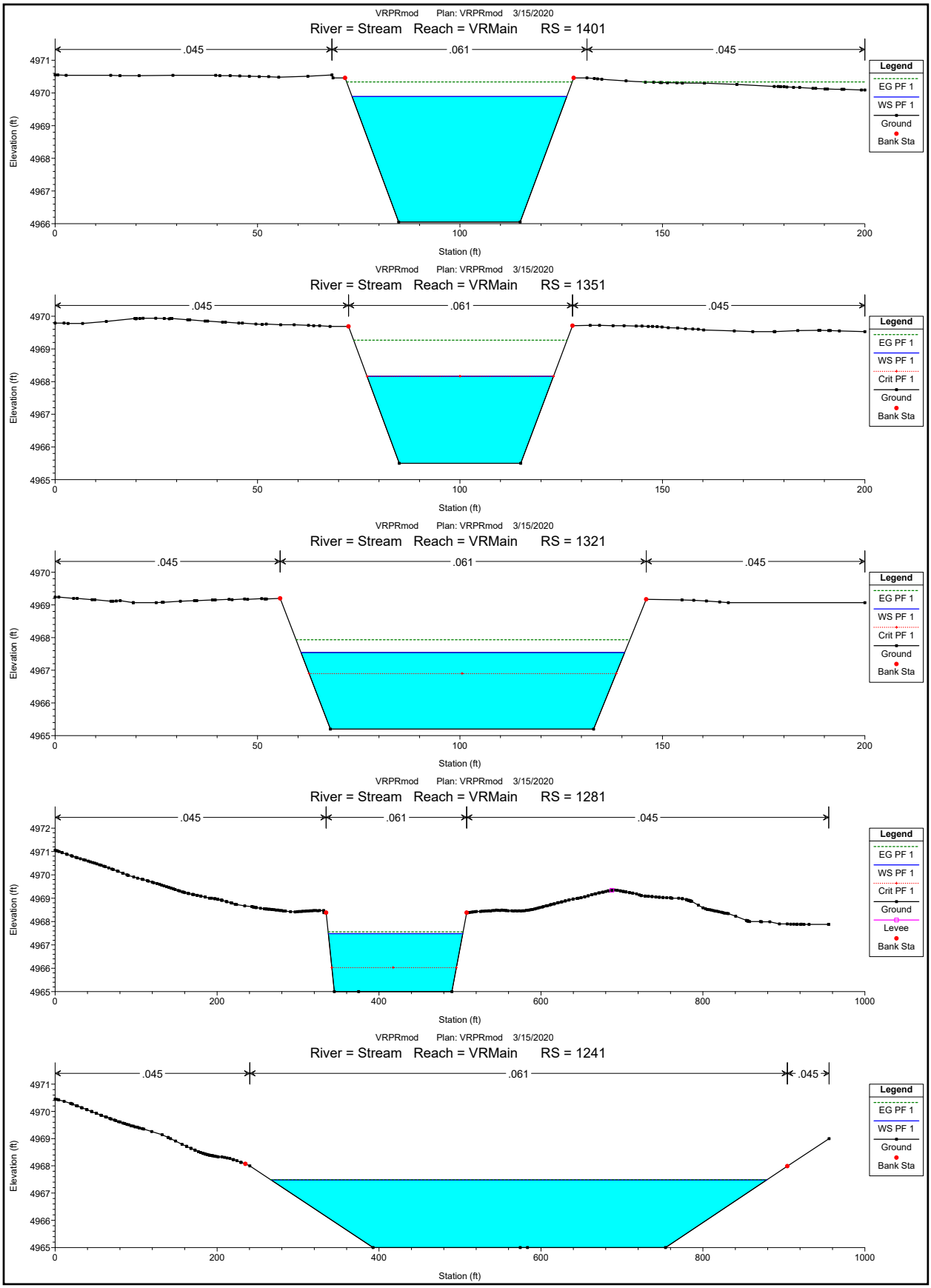

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4507
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4264
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 4064
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3864
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3664
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta

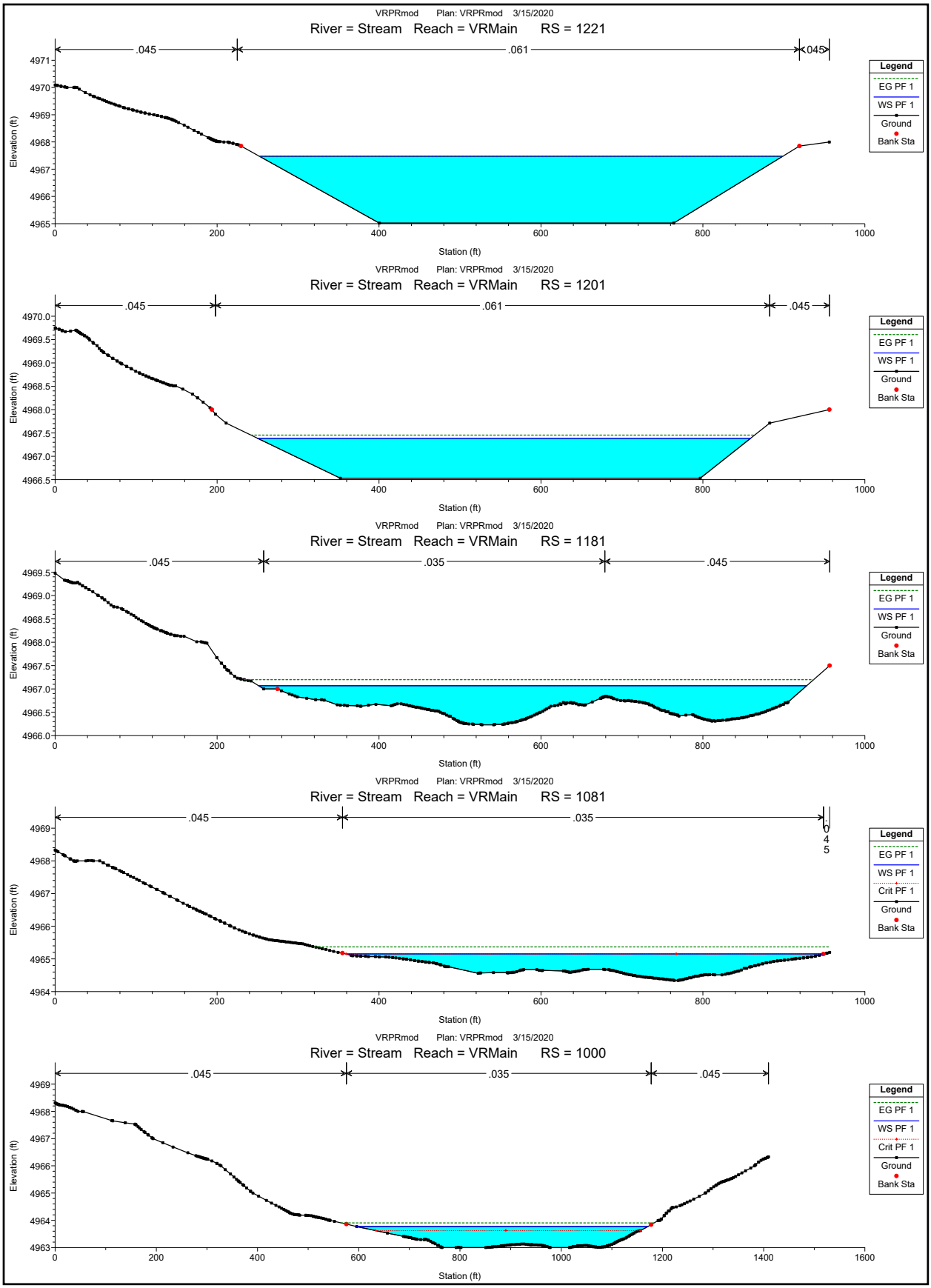

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3484
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3469
.045
.012
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3468 Culv
.045
.012
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3468 Culv
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3404
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta

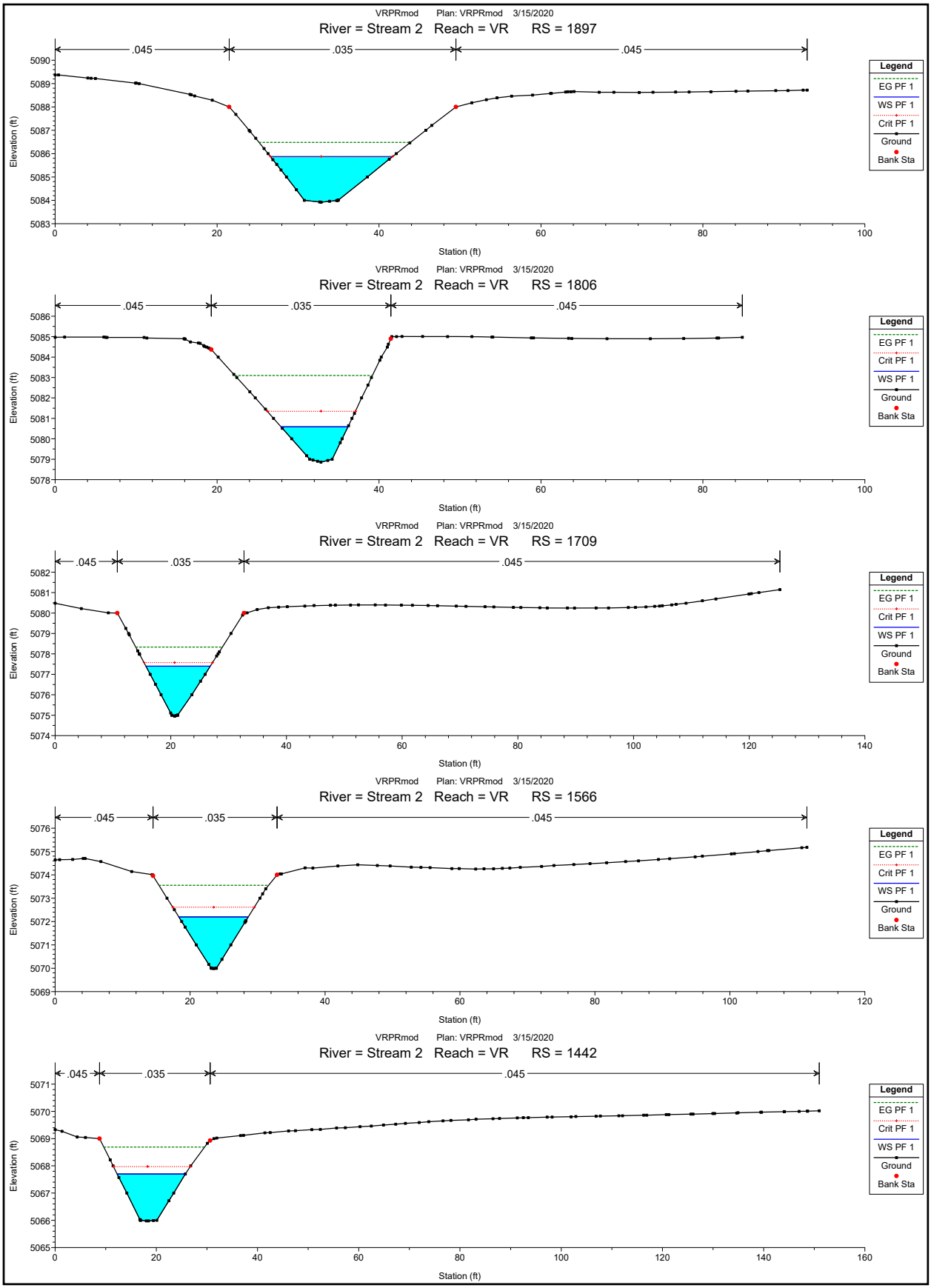

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3384
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3219
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 3047
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2921
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2825
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2689
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2491
.045
.058
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2378
.045
.012
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2377 Culv
.045
.012
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2377 Culv
.045
.012
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2326
.045
.012
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2321
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 2121
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1881
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1641
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta

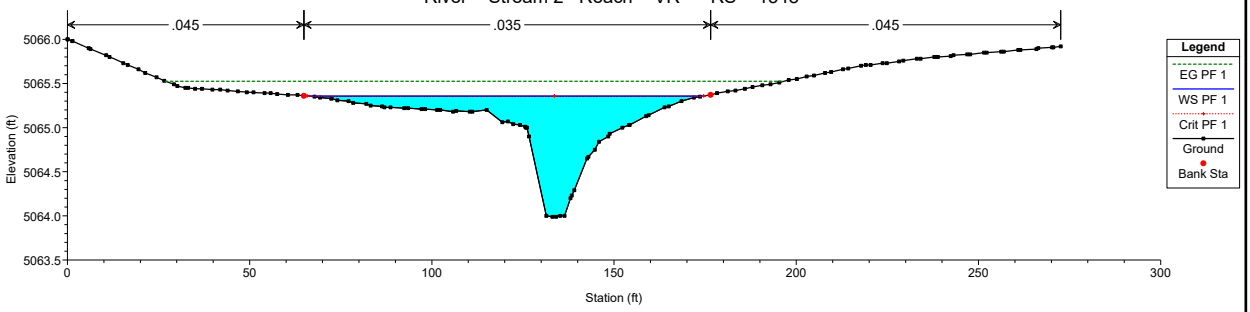

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1401
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1351
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1321
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1281
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Levee
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1241
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1221
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1201
.045
.061
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1181
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1081
.045
.035
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream Reach = VRMain RS = 1000
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 2 Reach = VR RS = 1897
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 2 Reach = VR RS = 1806
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 2 Reach = VR RS = 1709
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 2 Reach = VR RS = 1566
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 2 Reach = VR RS = 1442
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta

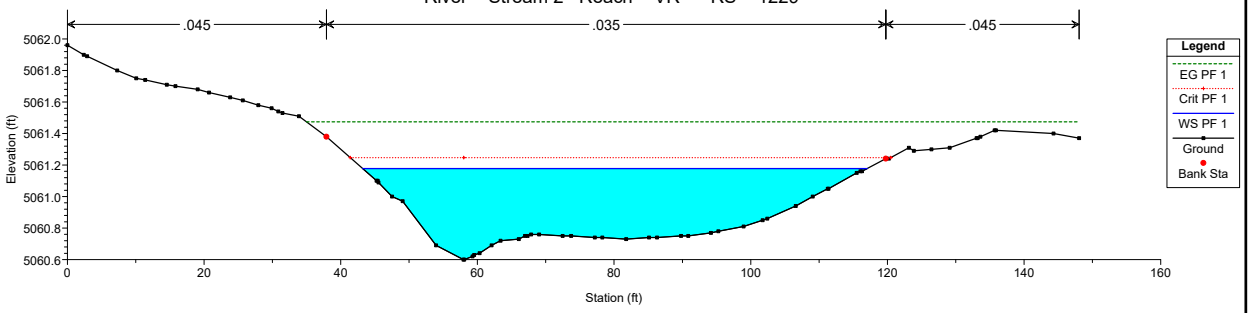
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 2 Reach = VR RS = 1348



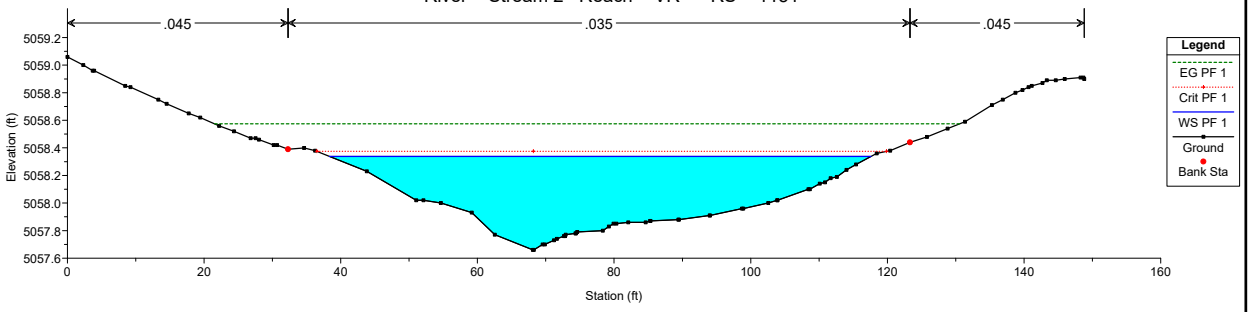
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 2 Reach = VR RS = 1229



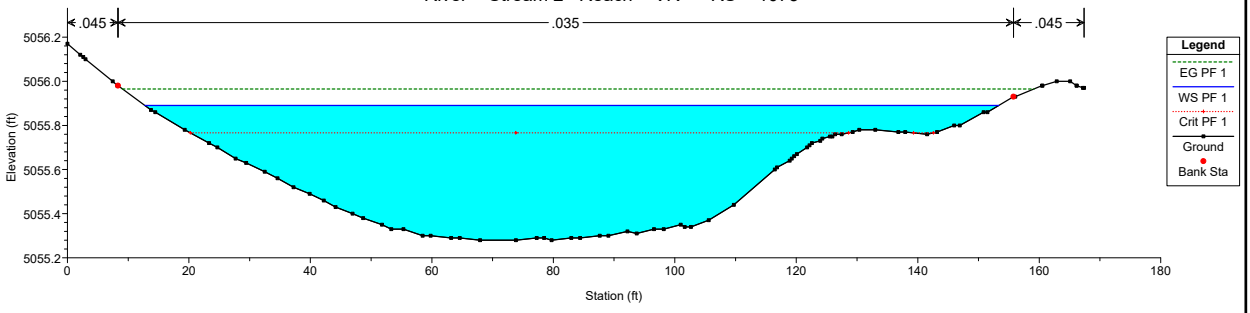
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 2 Reach = VR RS = 1151



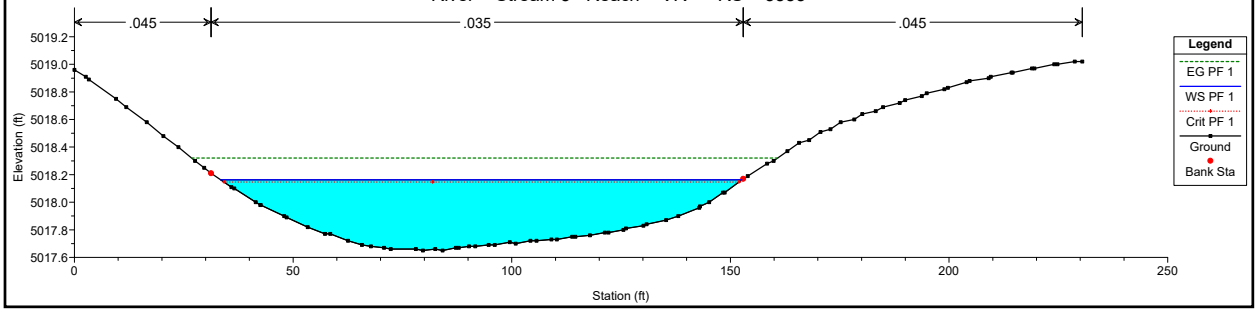
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 2 Reach = VR RS = 1073



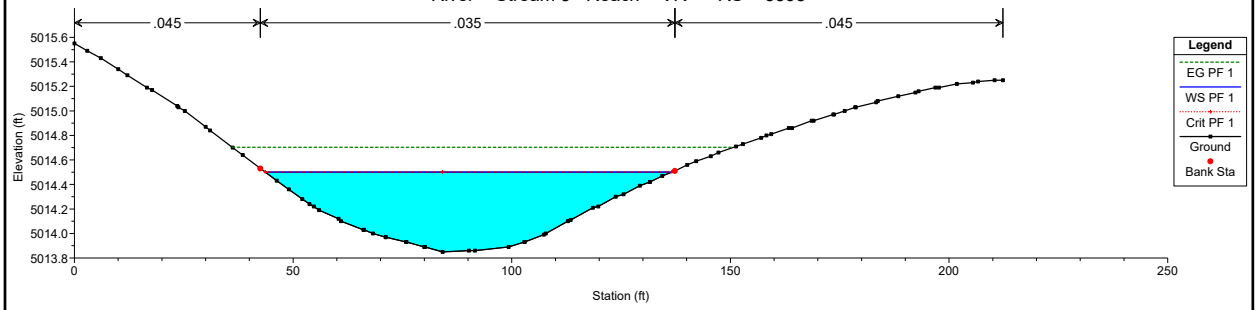
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 3 Reach = VR RS = 3553



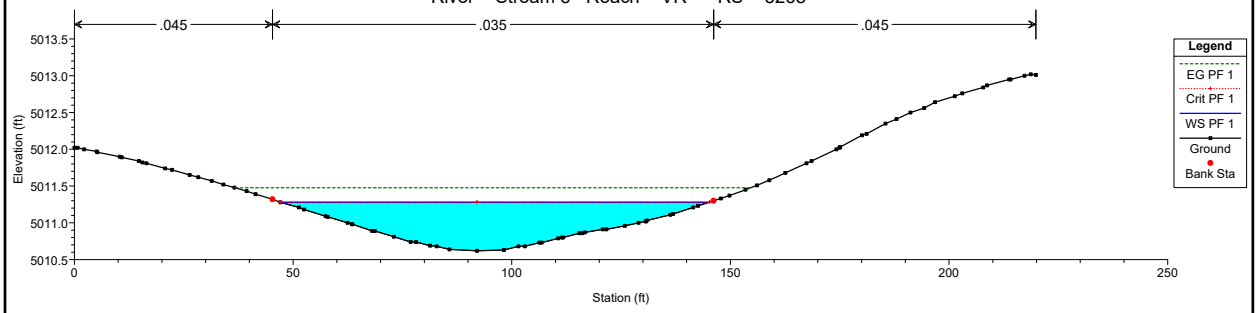
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 3 Reach = VR RS = 3398



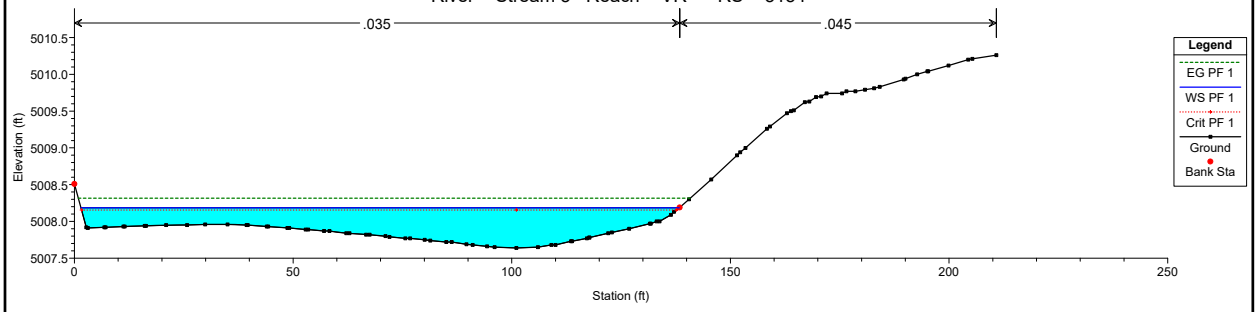
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 3 Reach = VR RS = 3268



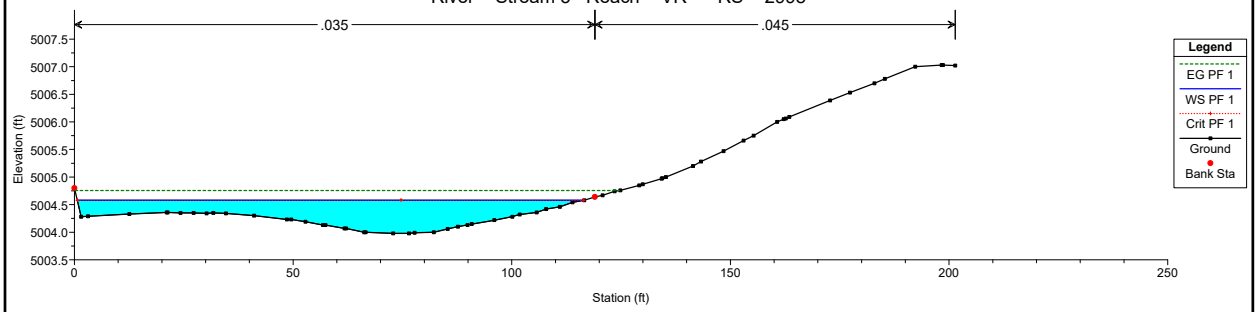
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 3 Reach = VR RS = 3154



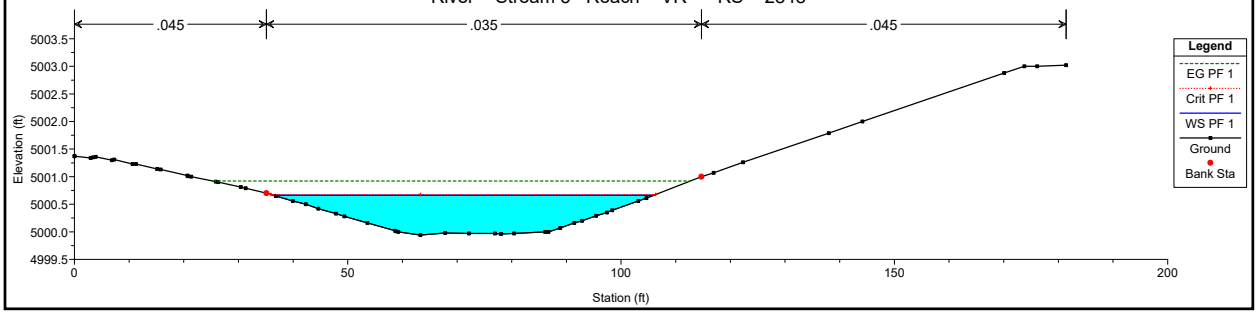
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 3 Reach = VR RS = 2998



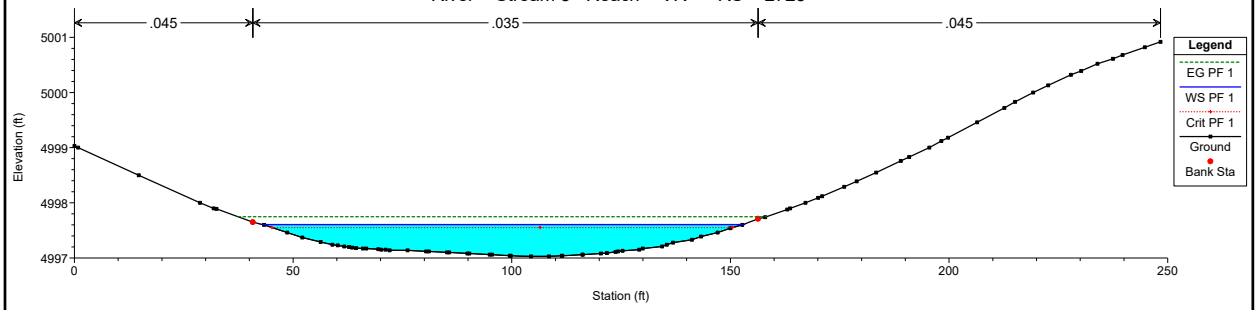
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 3 Reach = VR RS = 2848



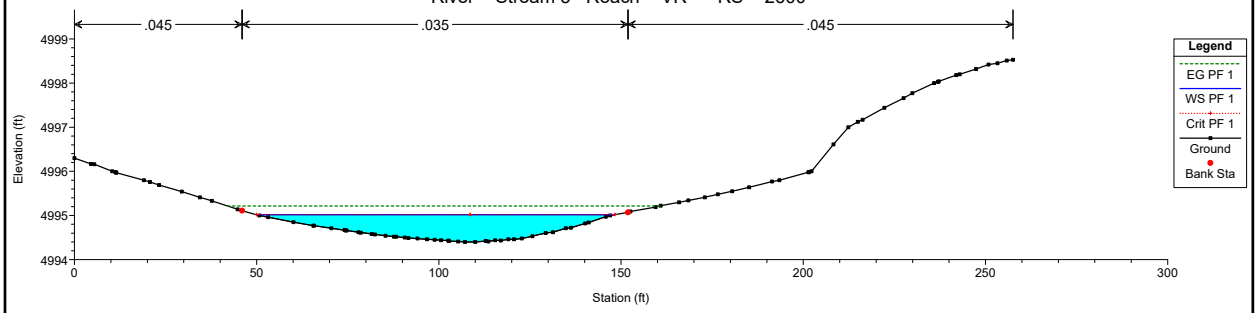
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 3 Reach = VR RS = 2725



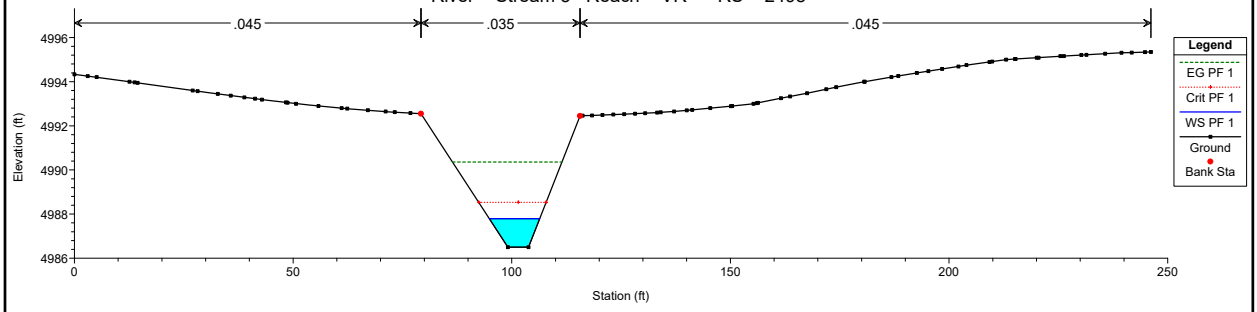
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 3 Reach = VR RS = 2600



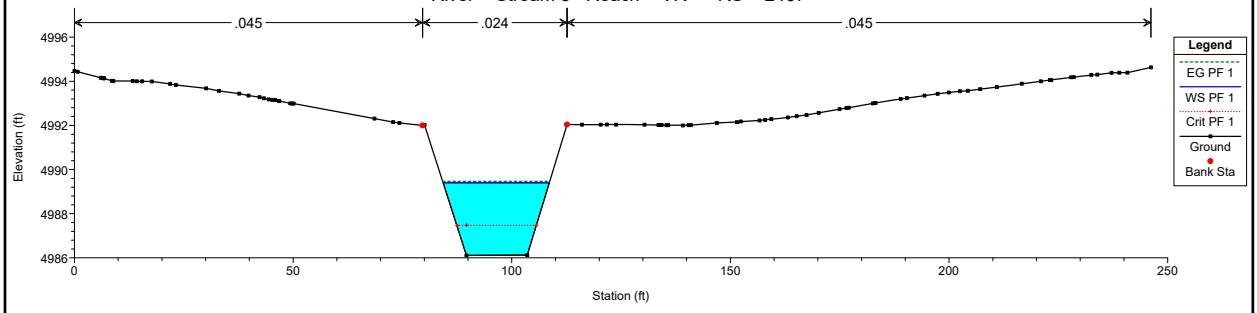
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 3 Reach = VR RS = 2498



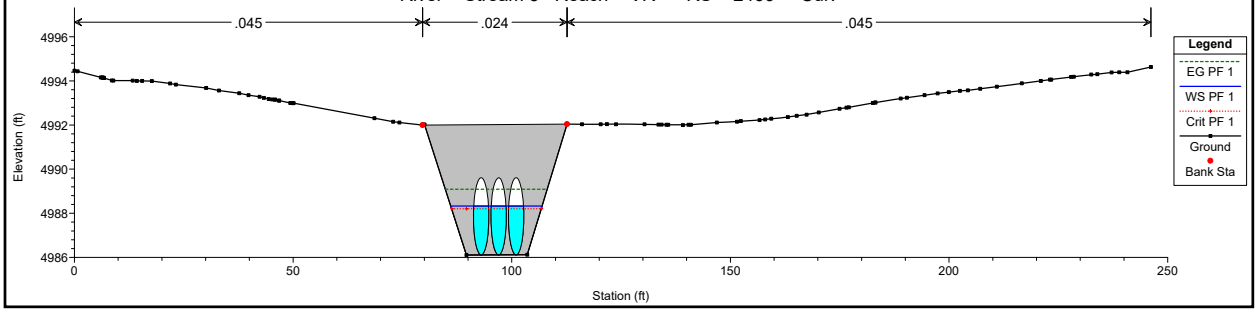
VRPRmod Plan: VRPRmod 3/15/2020

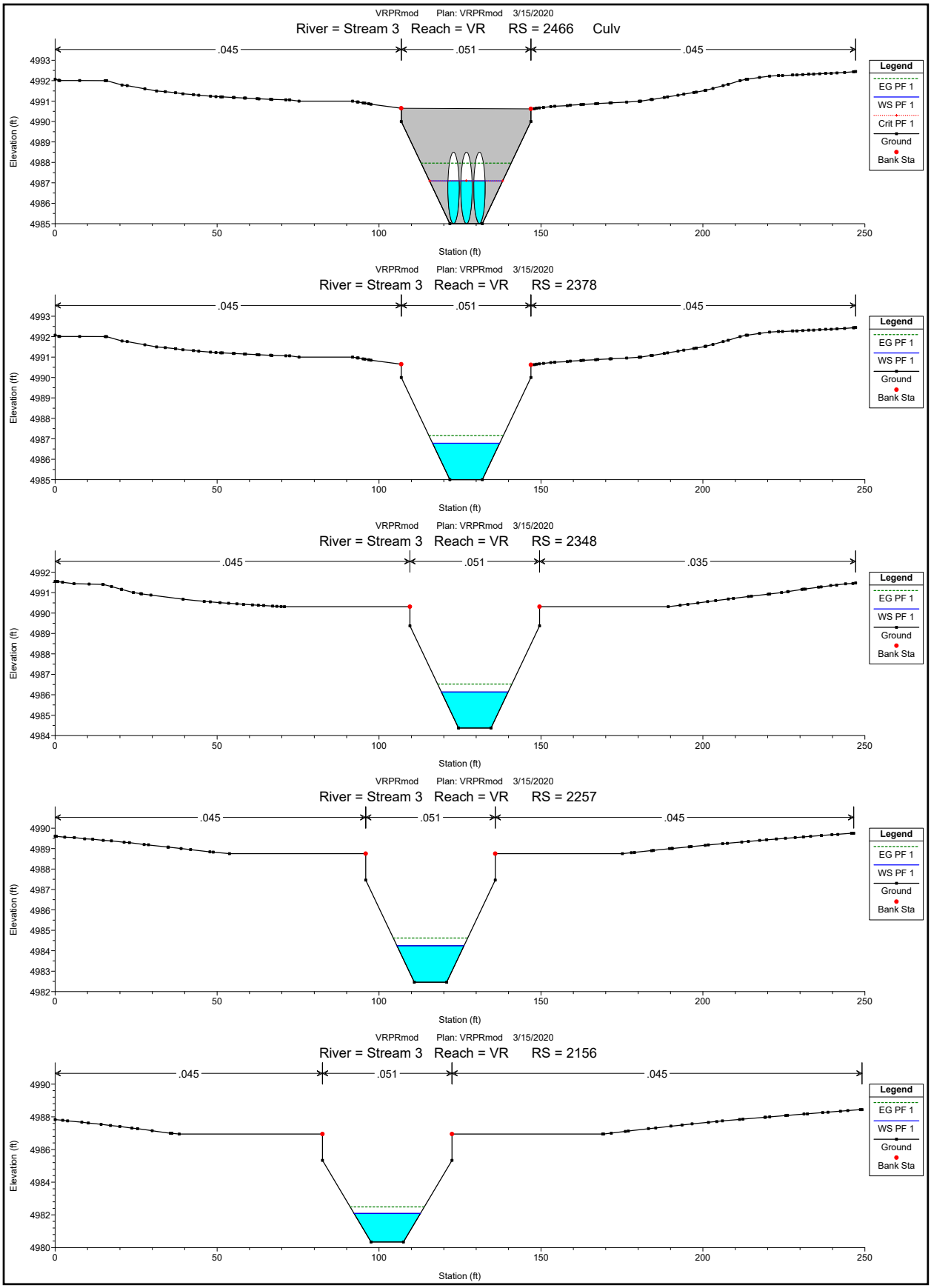
River = Stream 3 Reach = VR RS = 2467

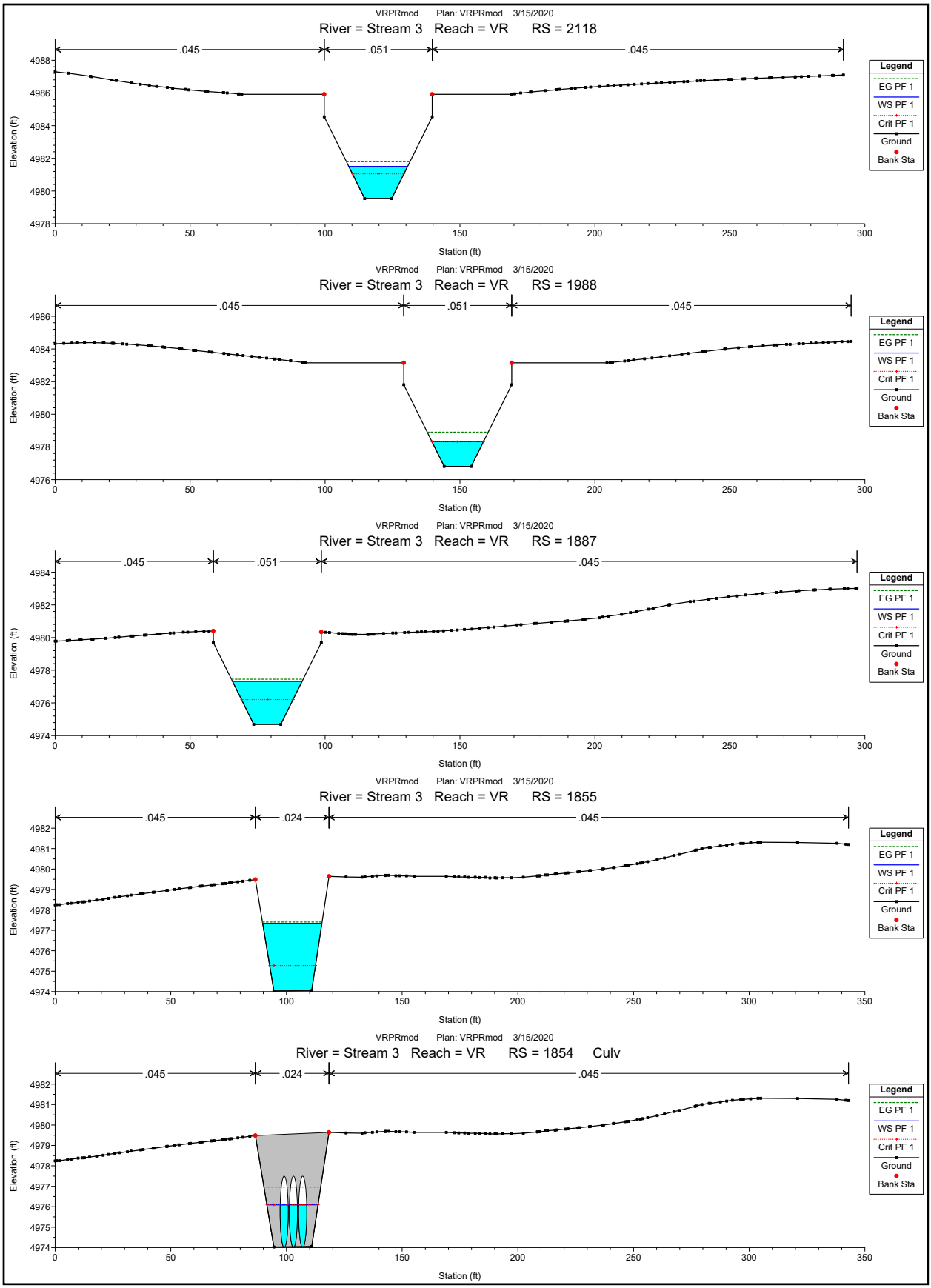


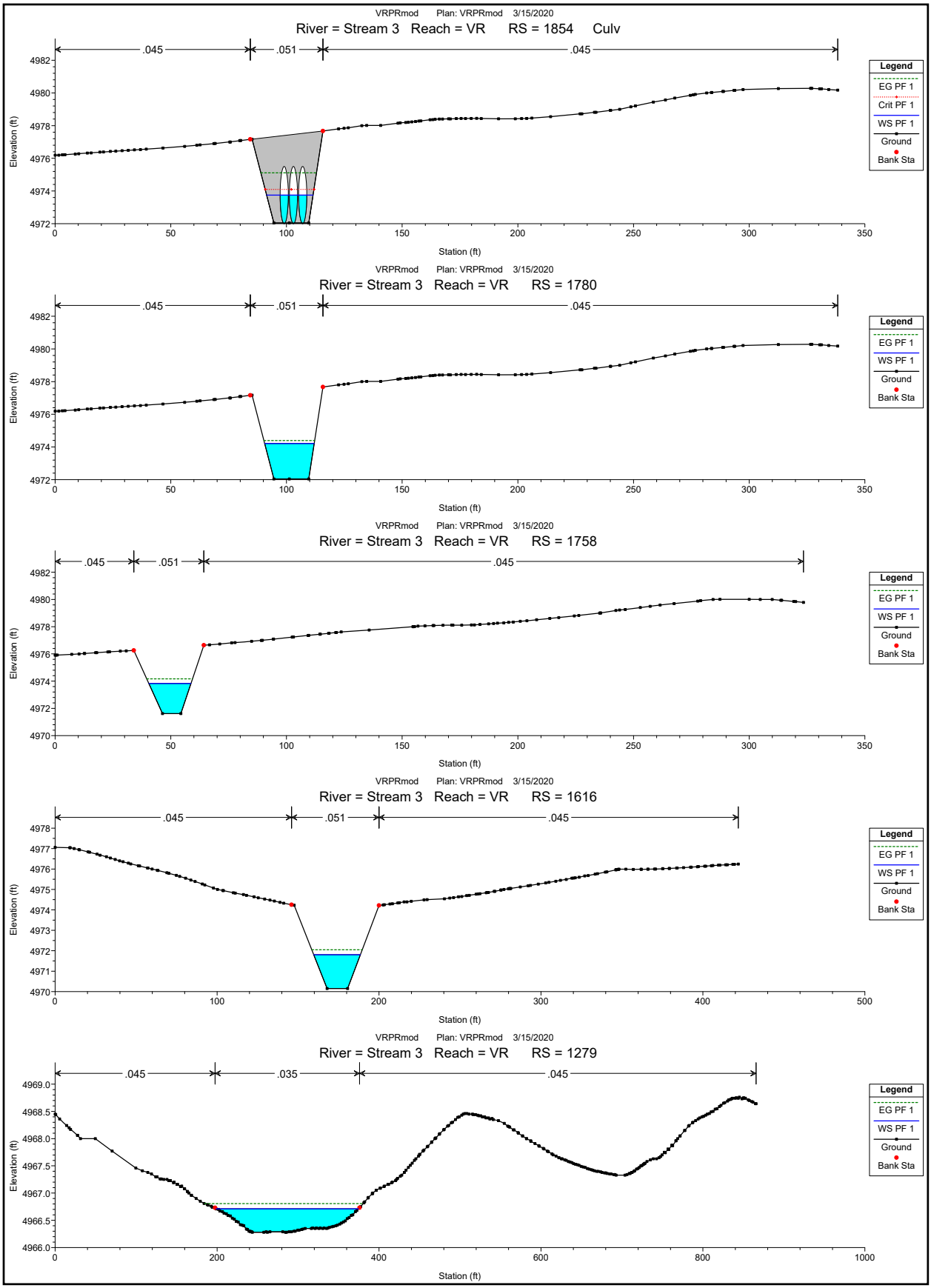
VRPRmod Plan: VRPRmod 3/15/2020

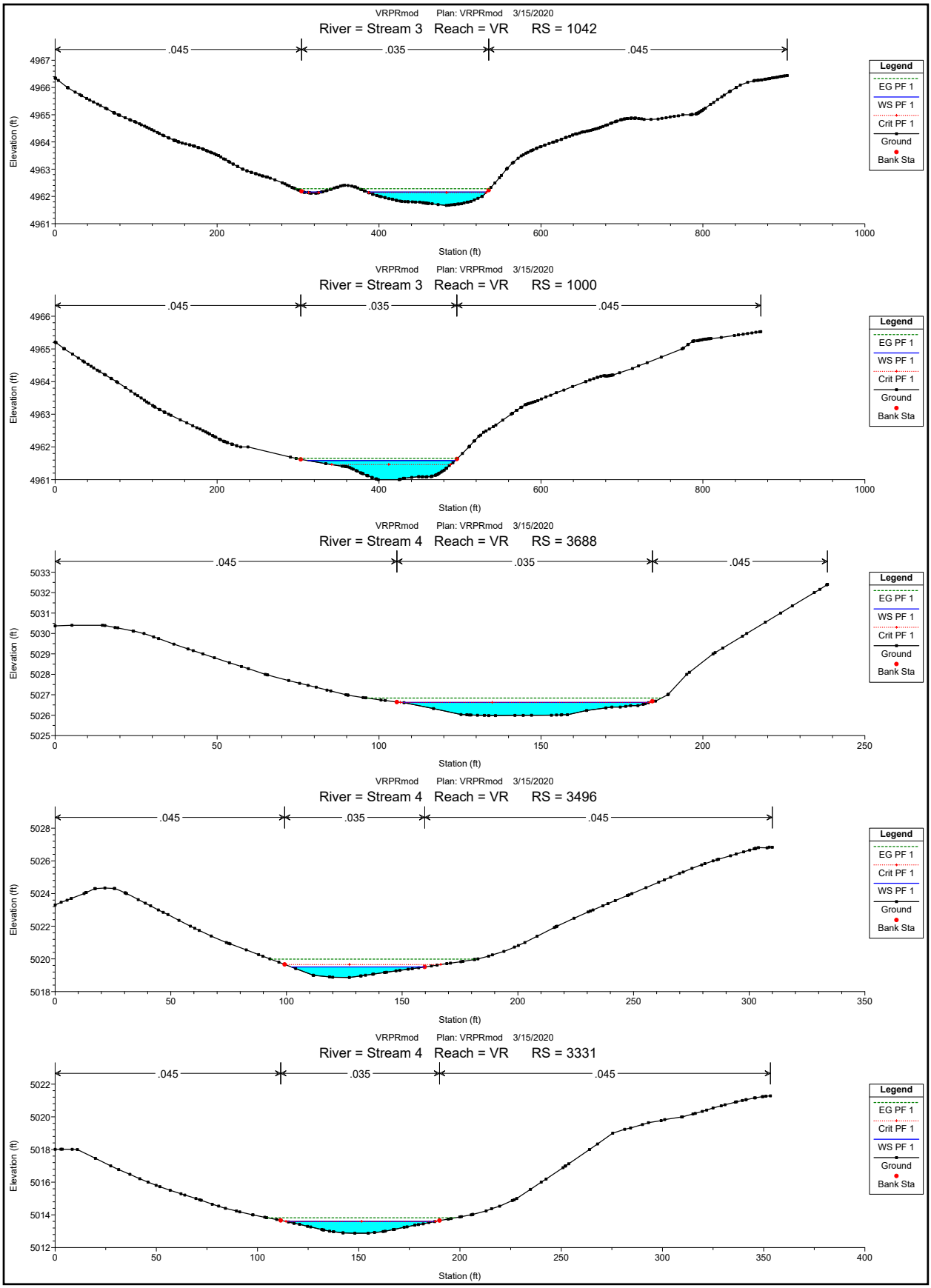
River = Stream 3 Reach = VR RS = 2466 Culv

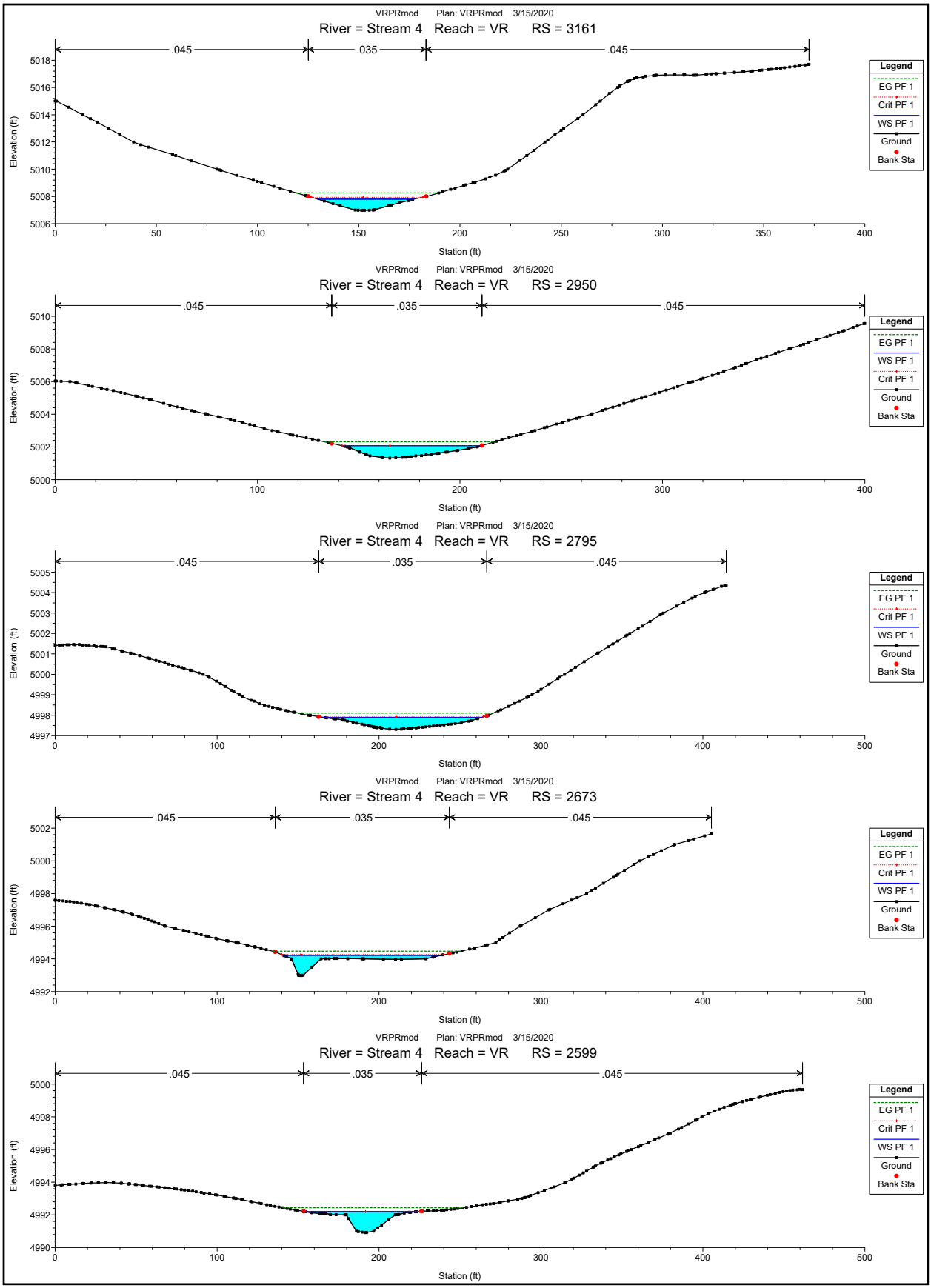


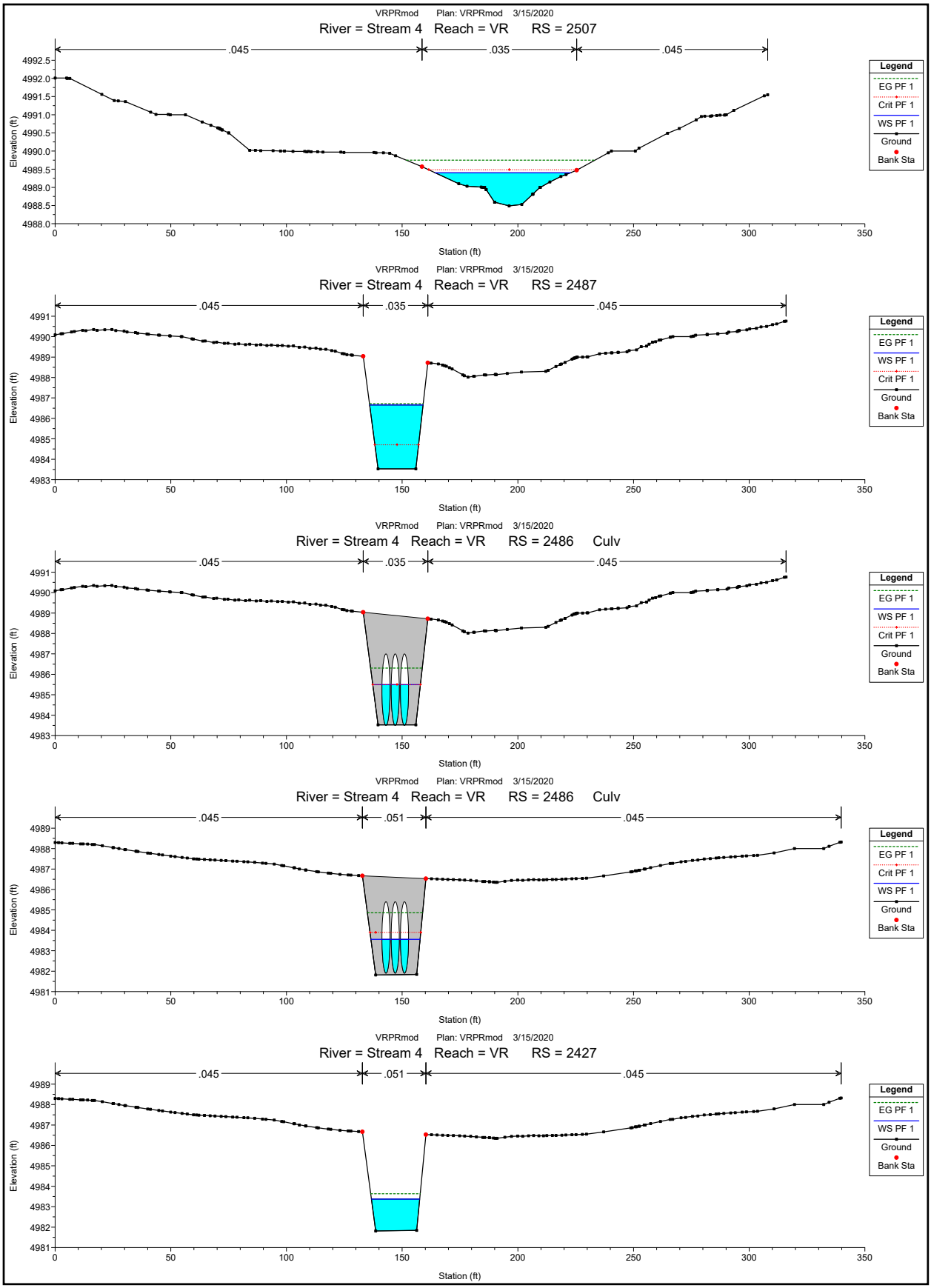

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 2466 Culv
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 2378
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 2348
.045
.051
.035
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 2257
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 2156
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 2118
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1988
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1887
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1855
.045
.024
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1854 Culv
.045
.024
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1854 Culv
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1780
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1758
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1616
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1279
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta

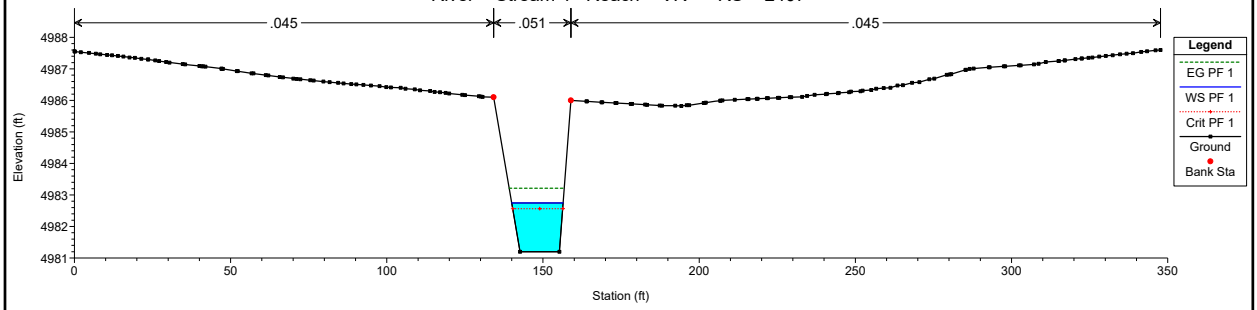

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1042
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 3 Reach = VR RS = 1000
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 3688
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 3496
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 3331
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 3161
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 2950
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 2795
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 2673
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 2599
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 2507
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 2487
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 2486 Culv
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 2486 Culv
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 4 Reach = VR RS = 2427
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta

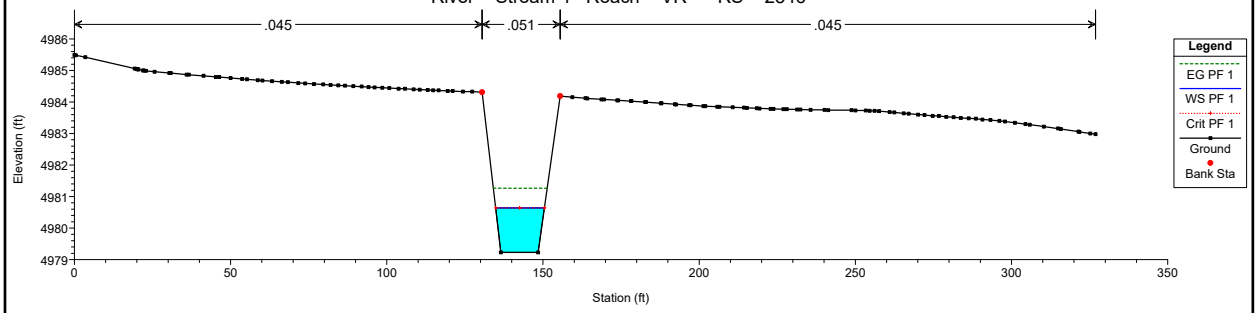
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 4 Reach = VR RS = 2407



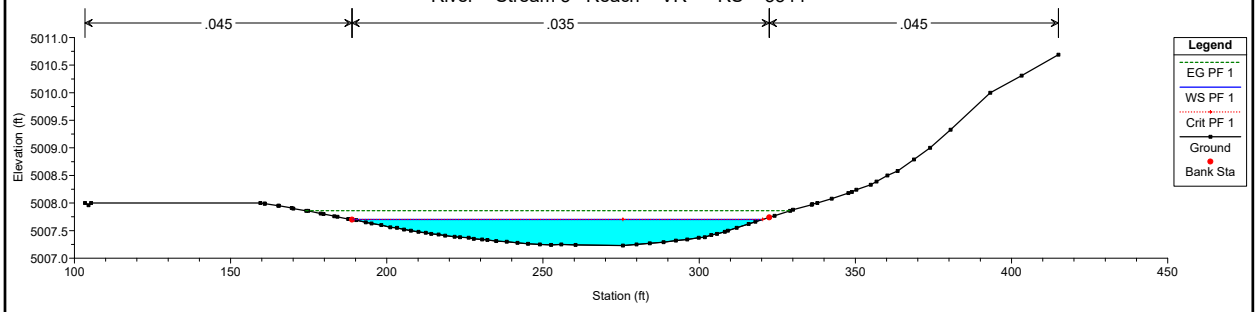
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 4 Reach = VR RS = 2346



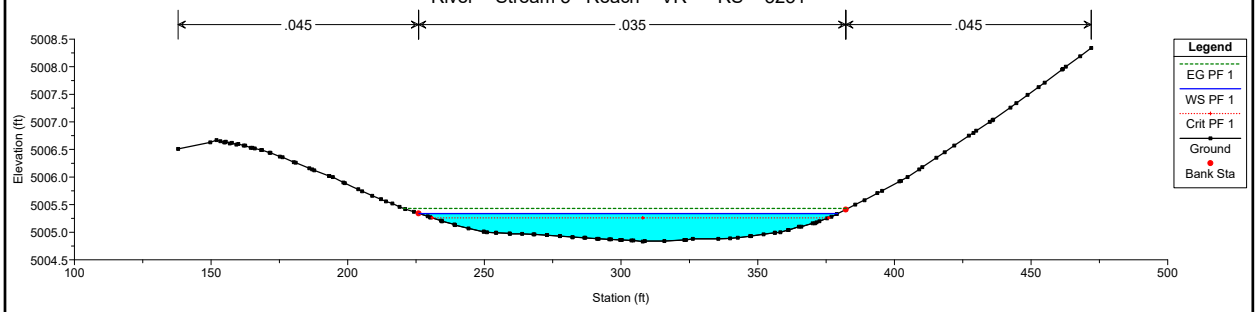
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 5 Reach = VR RS = 3344



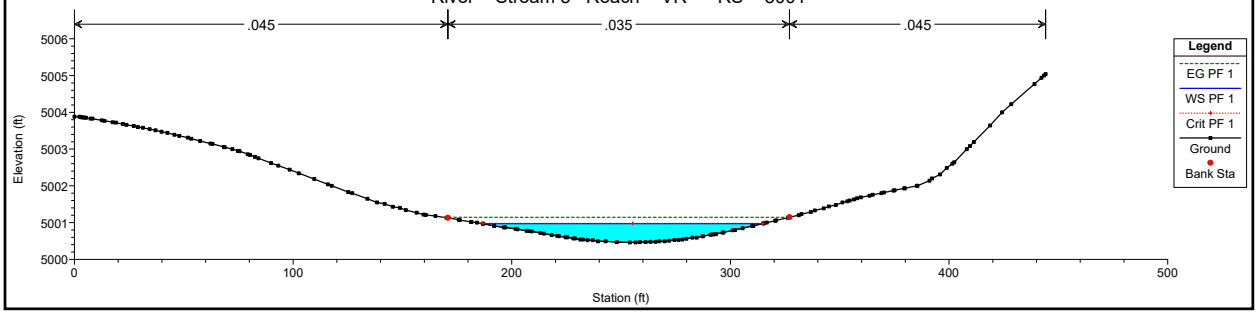
VRPRmod Plan: VRPRmod 3/15/2020

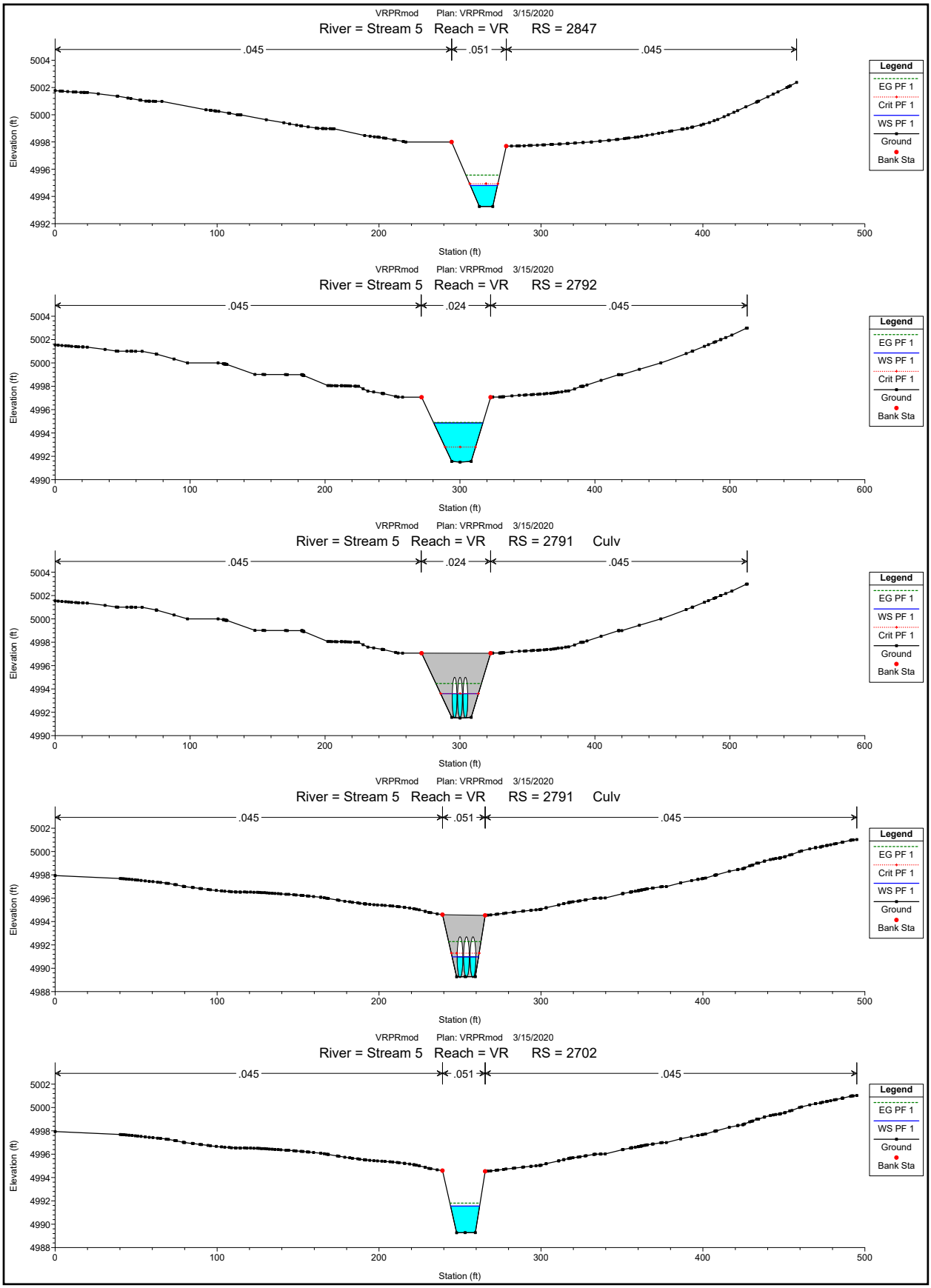
River = Stream 5 Reach = VR RS = 3231

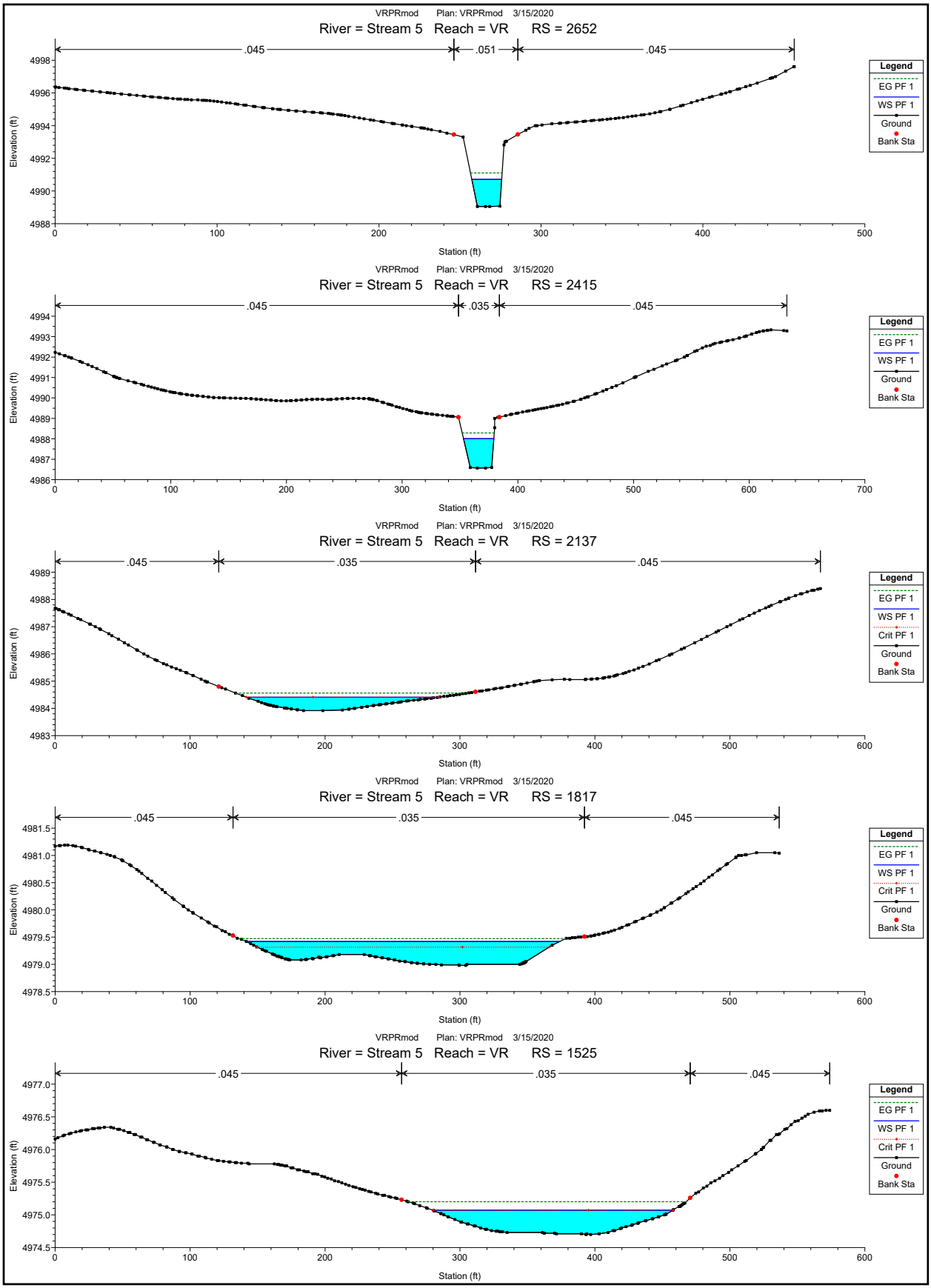


VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 5 Reach = VR RS = 3001

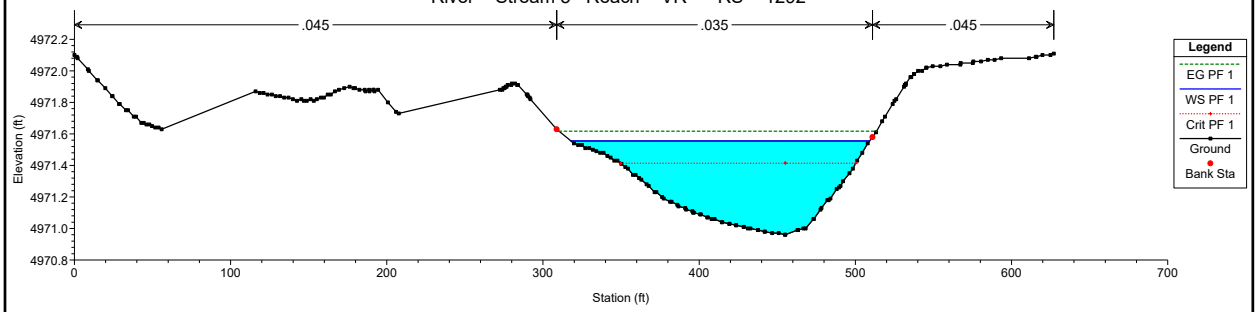



VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 2847
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 2792
.045
.024
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 2791 Culv
.045
.024
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 2791 Culv
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 2702
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 2652
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 2415
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 2137
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 1817
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 5 Reach = VR RS = 1525
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta

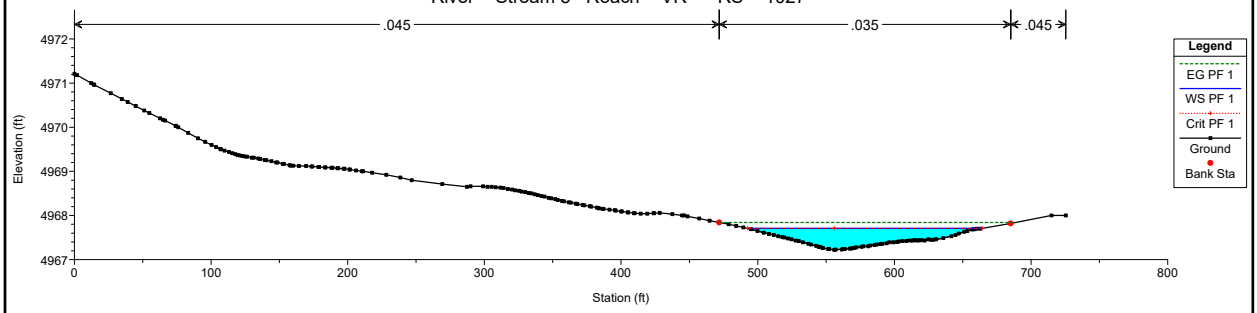
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 5 Reach = VR RS = 1292



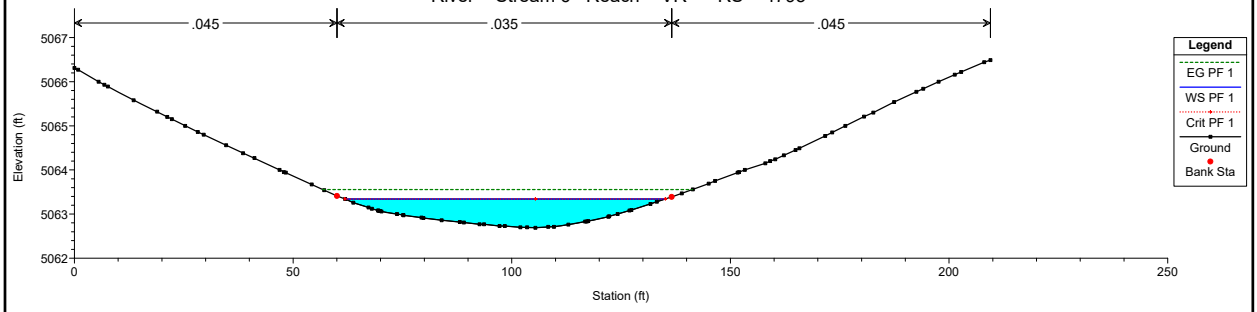
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 5 Reach = VR RS = 1027



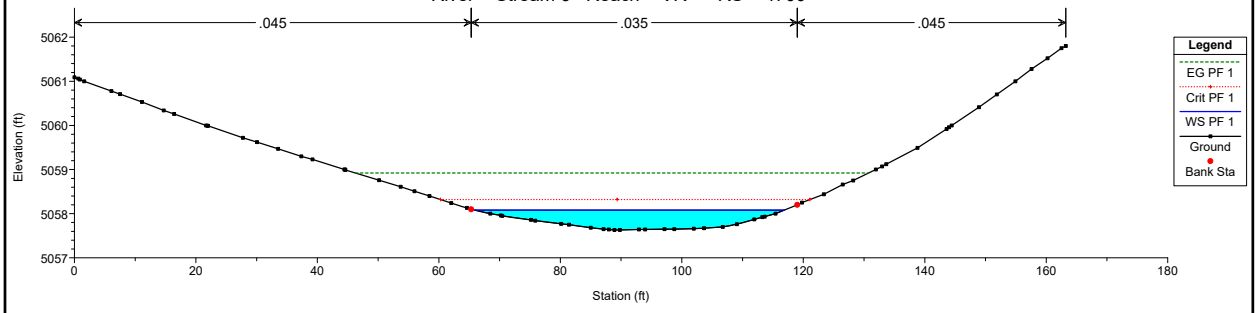
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 6 Reach = VR RS = 4795



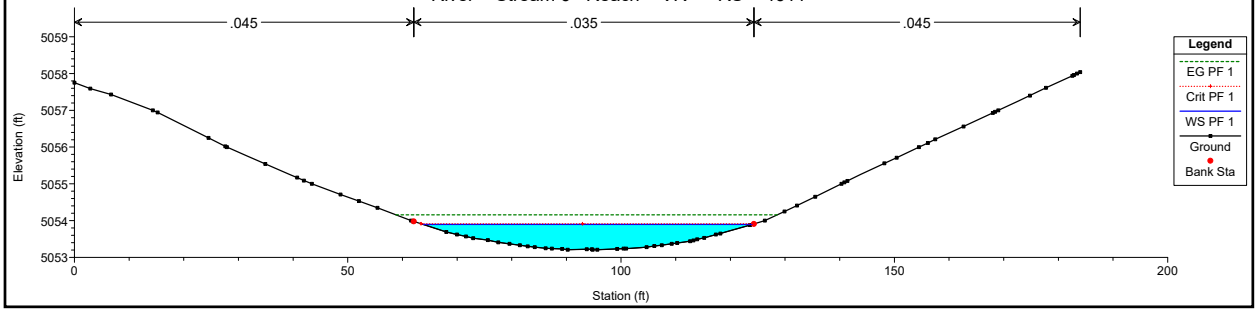
VRPRmod Plan: VRPRmod 3/15/2020

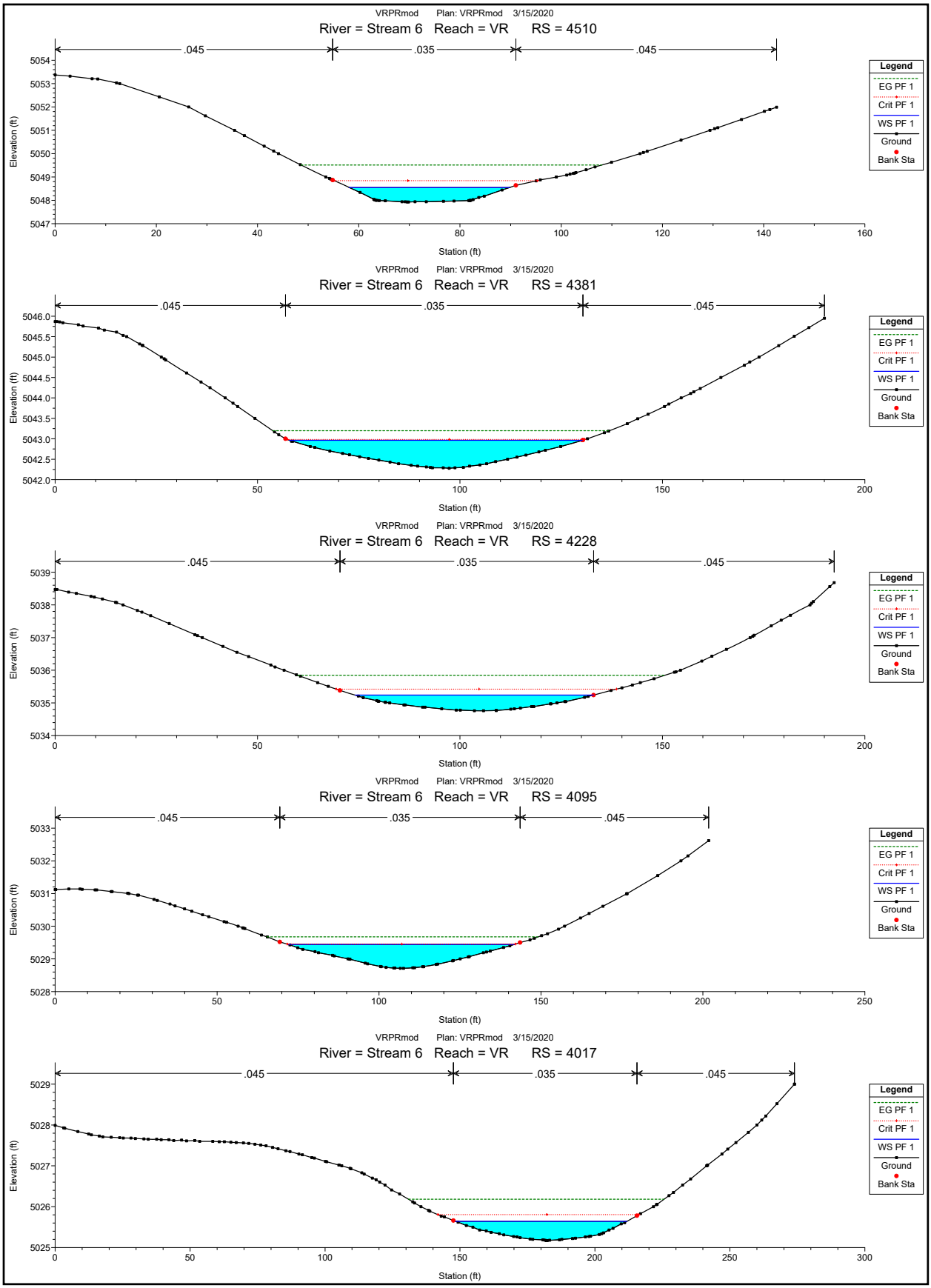
River = Stream 6 Reach = VR RS = 4700

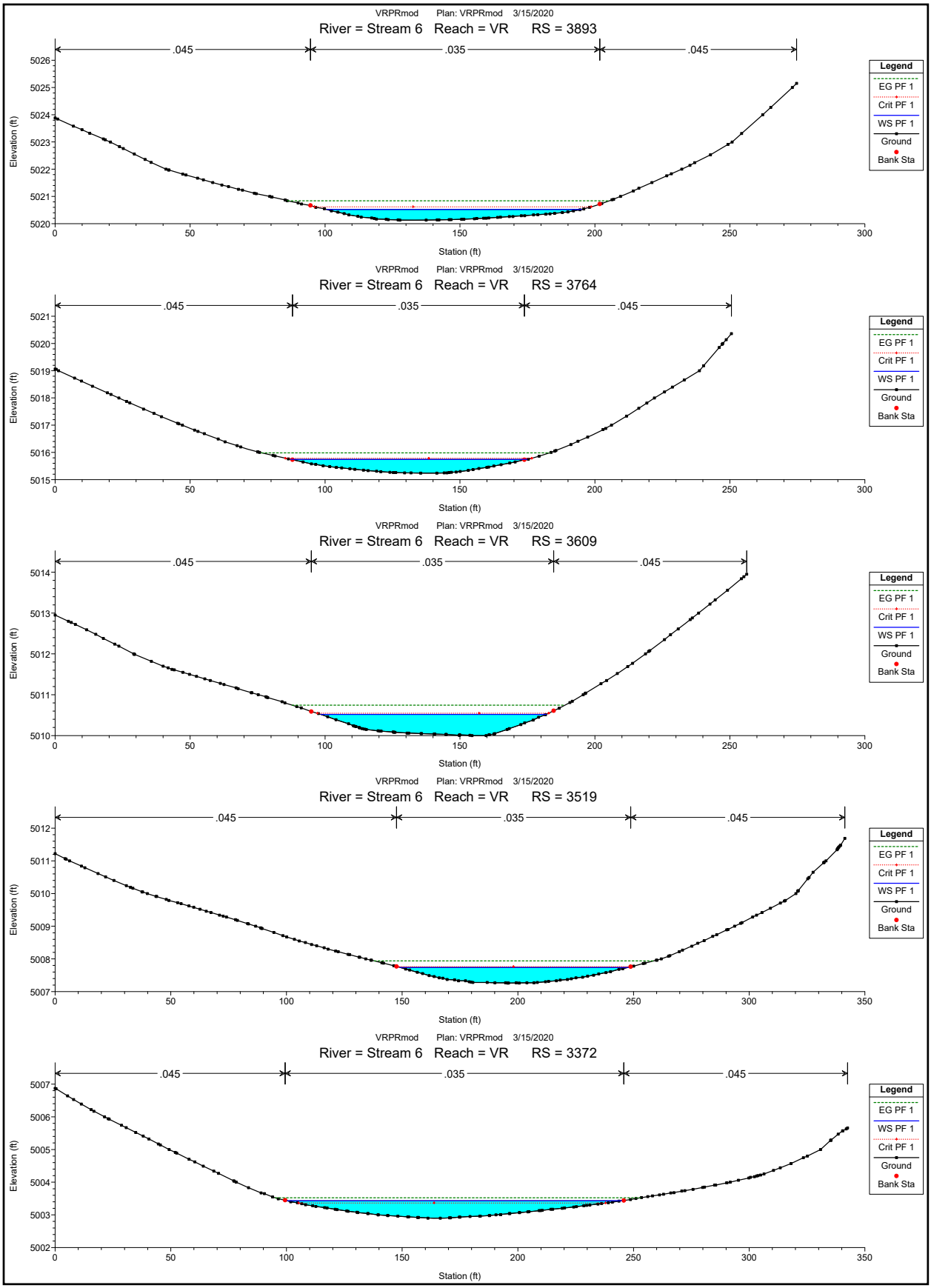


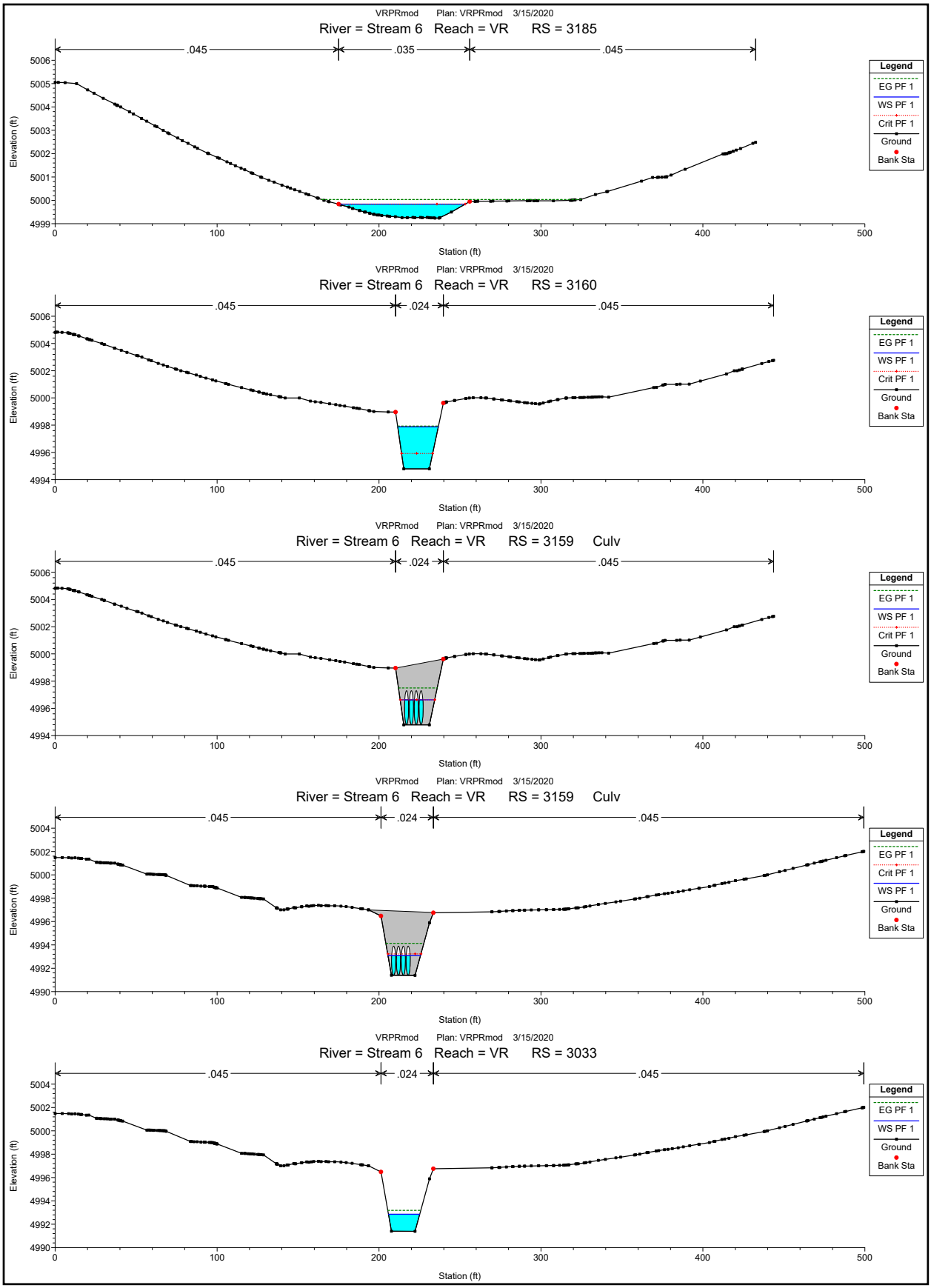
VRPRmod Plan: VRPRmod 3/15/2020

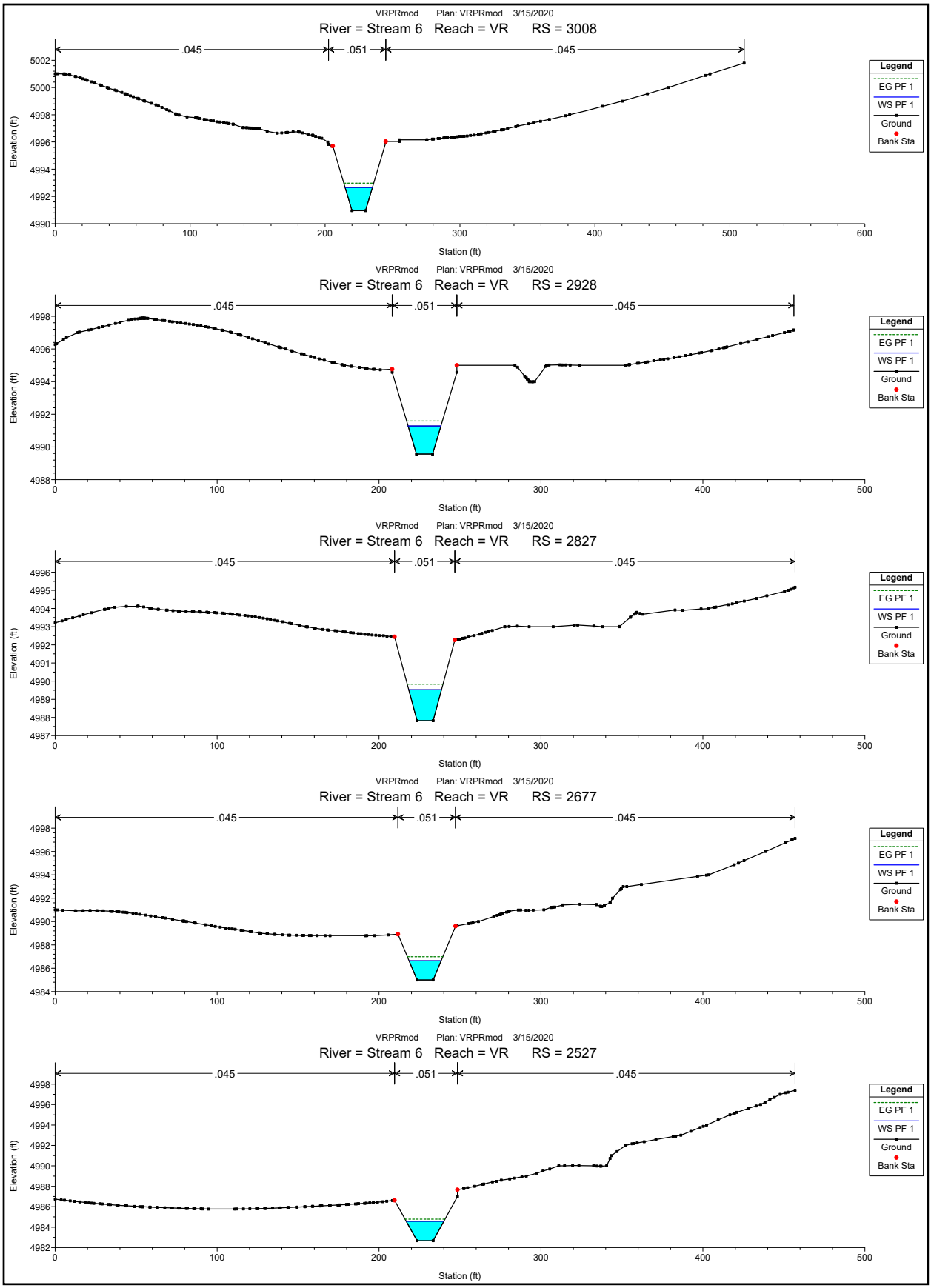
River = Stream 6 Reach = VR RS = 4611

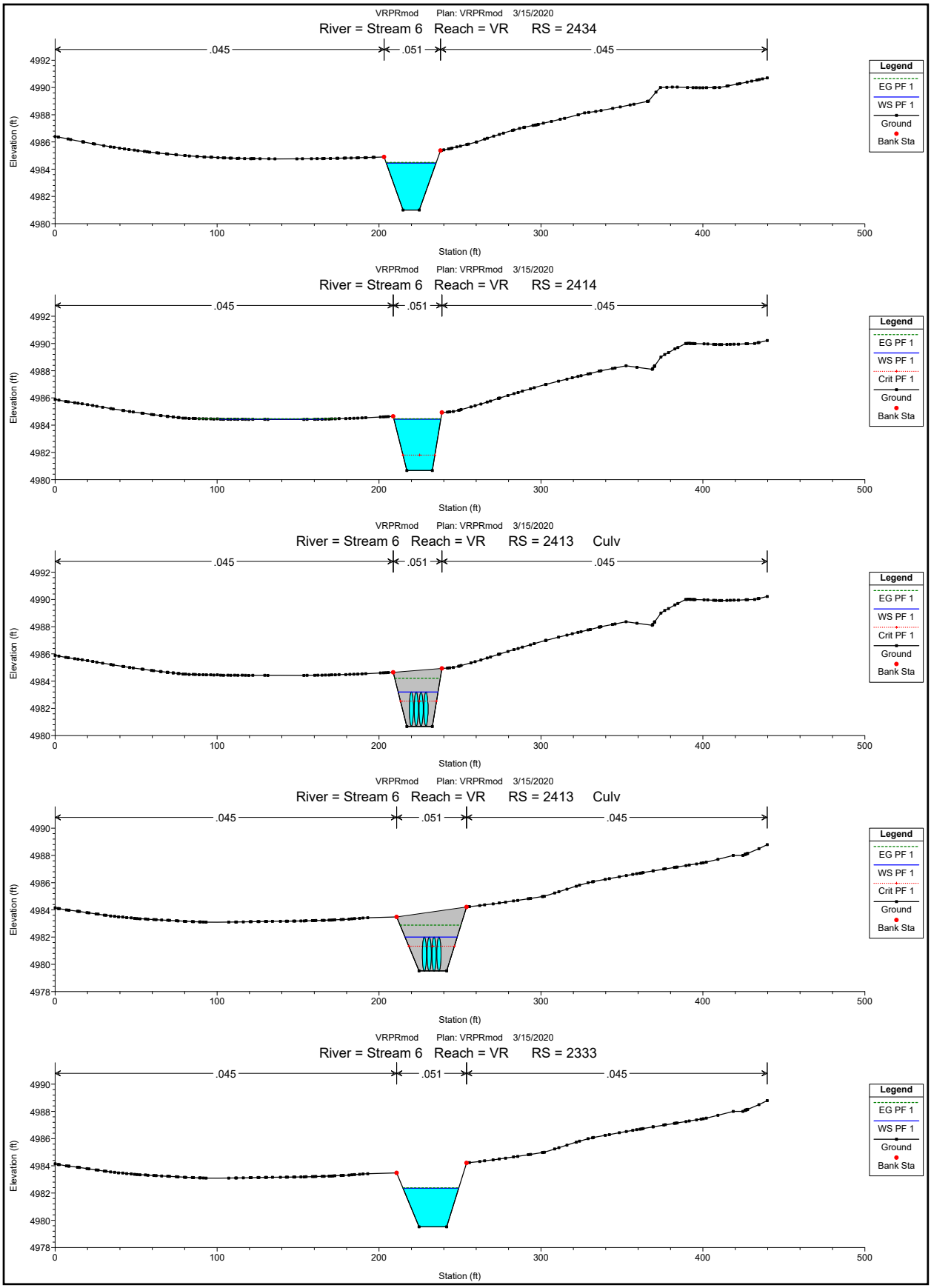


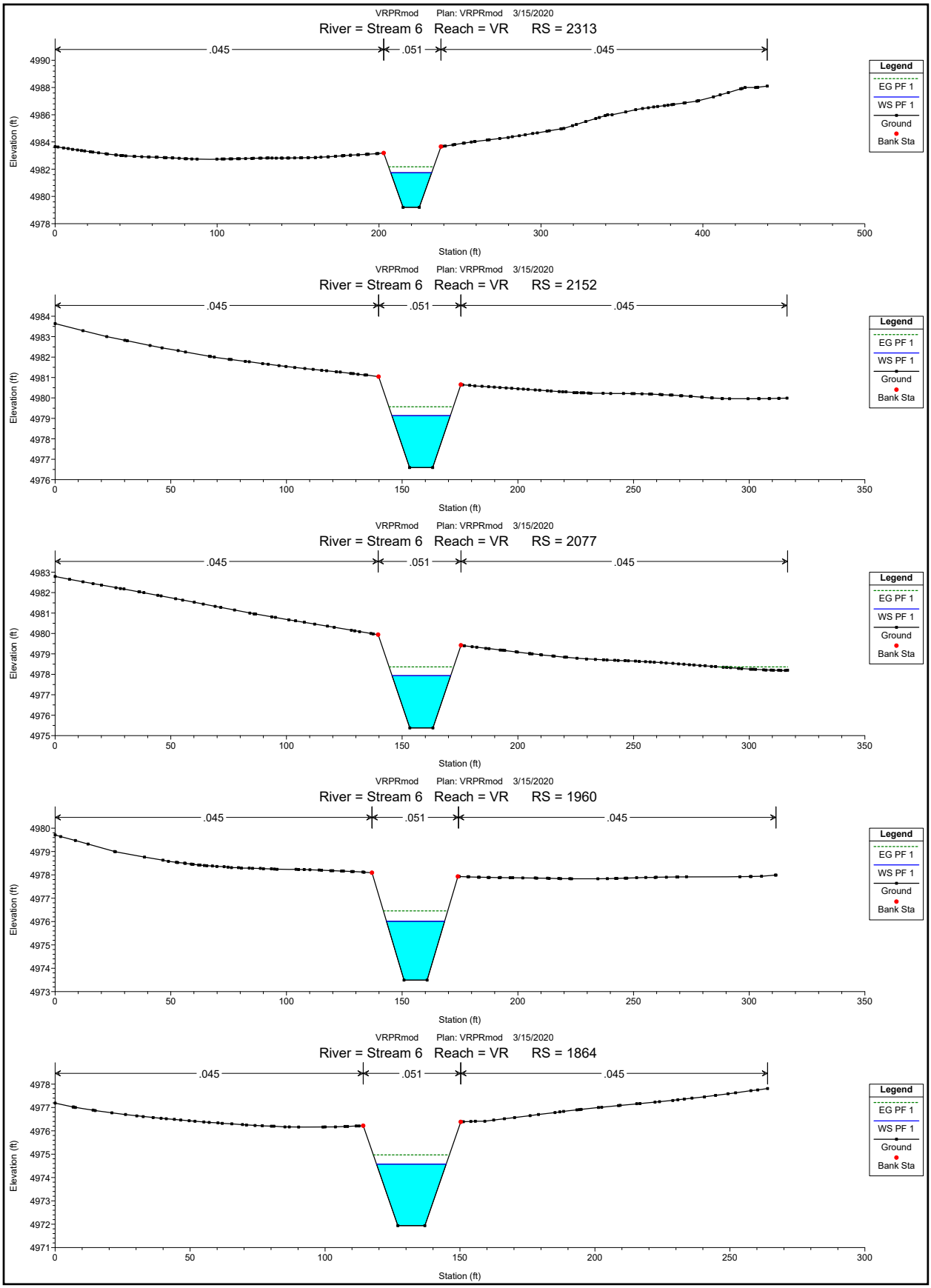

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 4510
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 4381
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 4228
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 4095
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 4017
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta

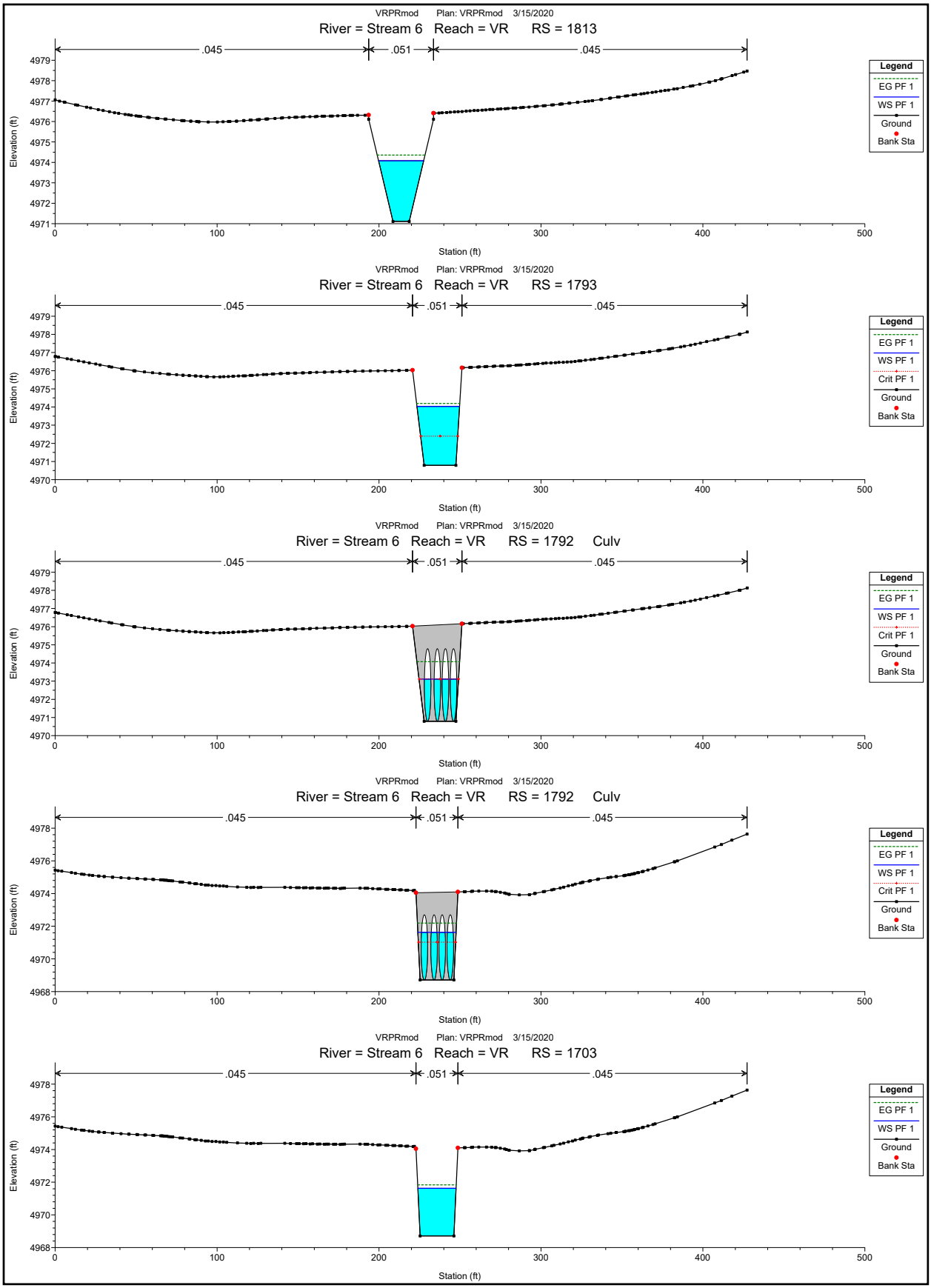

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3893
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3764
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3609
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3519
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3372
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta

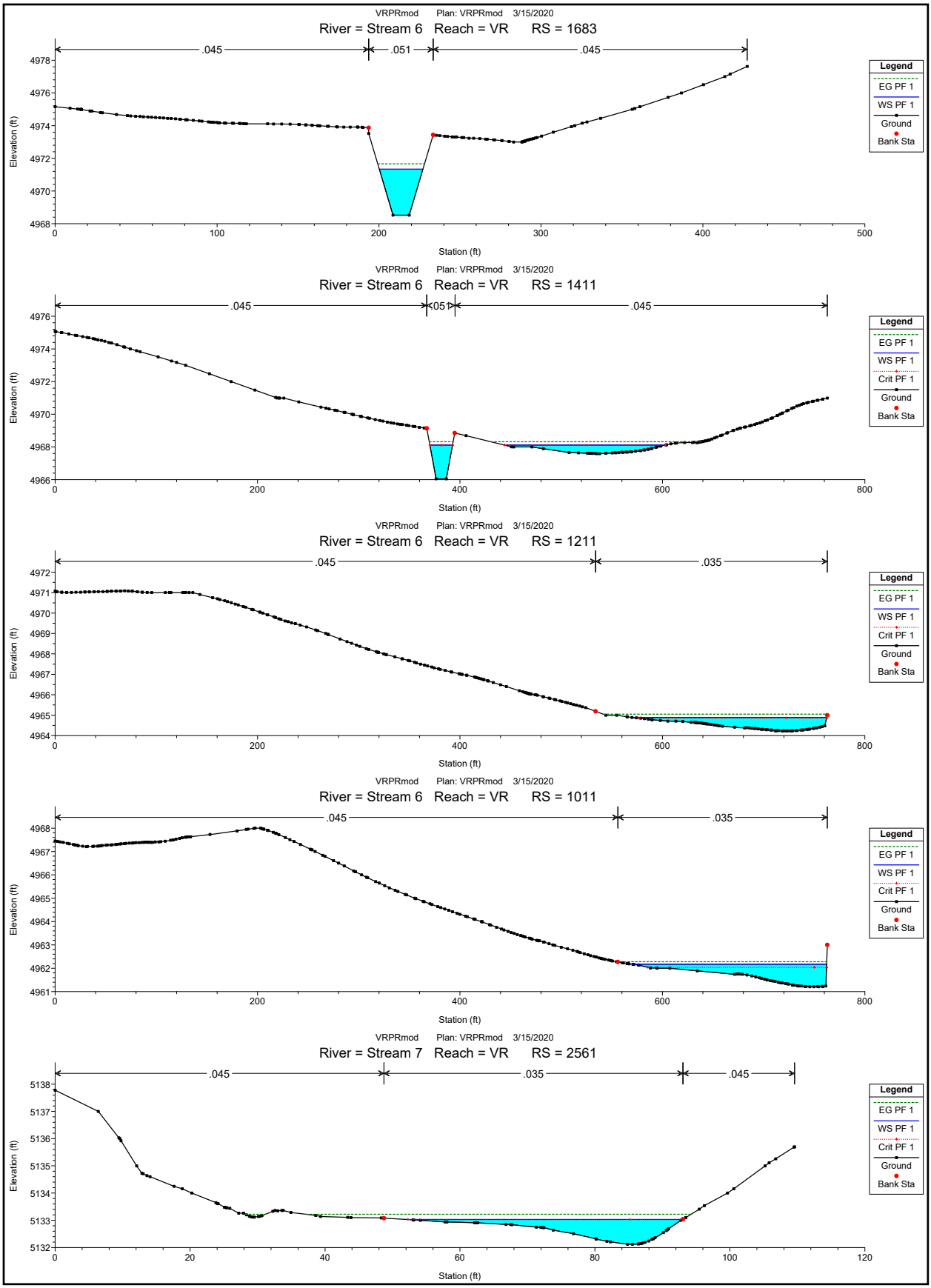

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3185
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3160
.045
.024
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3159 Culv
.045
.024
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3159 Culv
.045
.024
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3033
.045
.024
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta

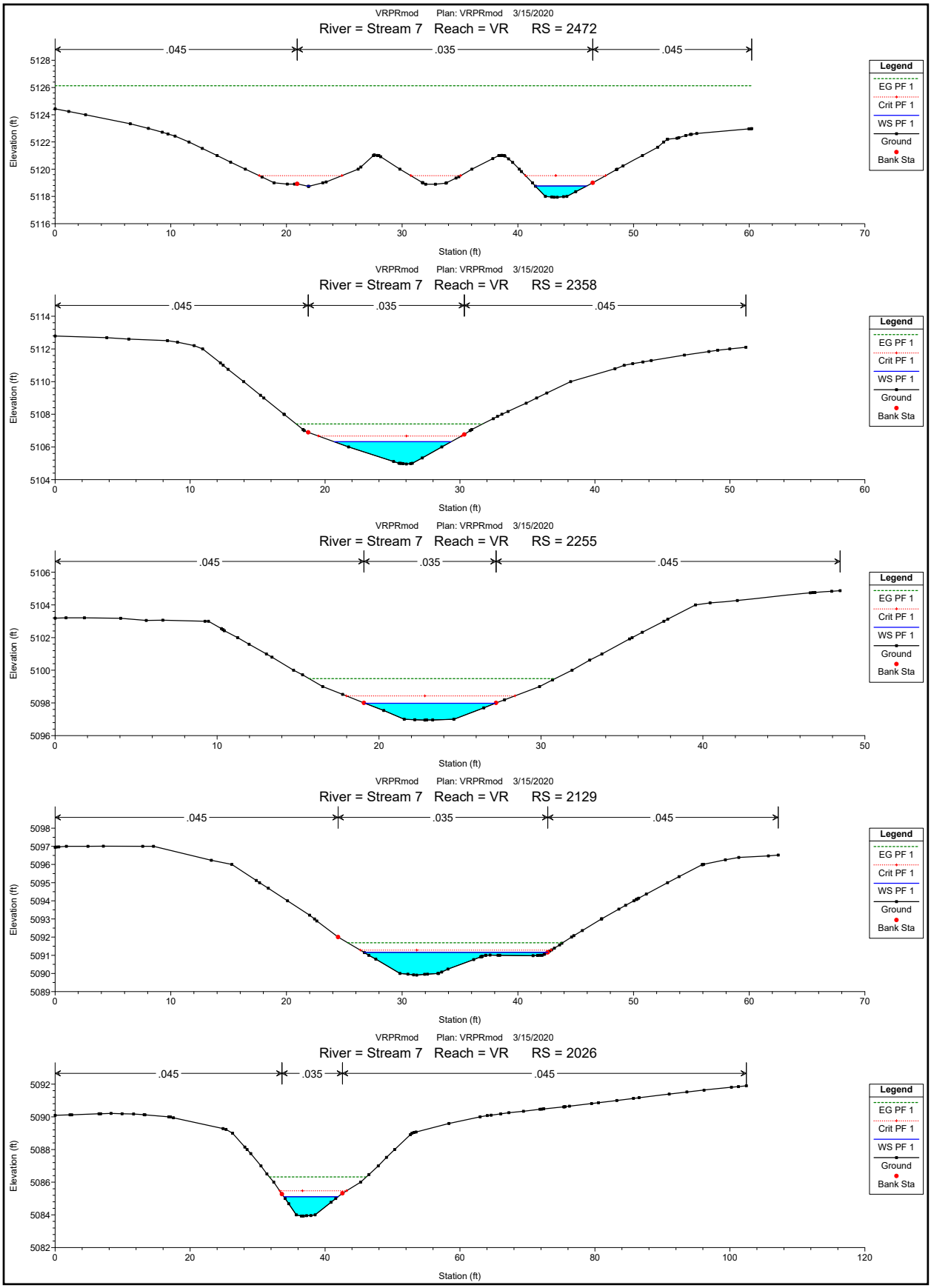

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 3008
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2928
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2827
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2677
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2527
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta

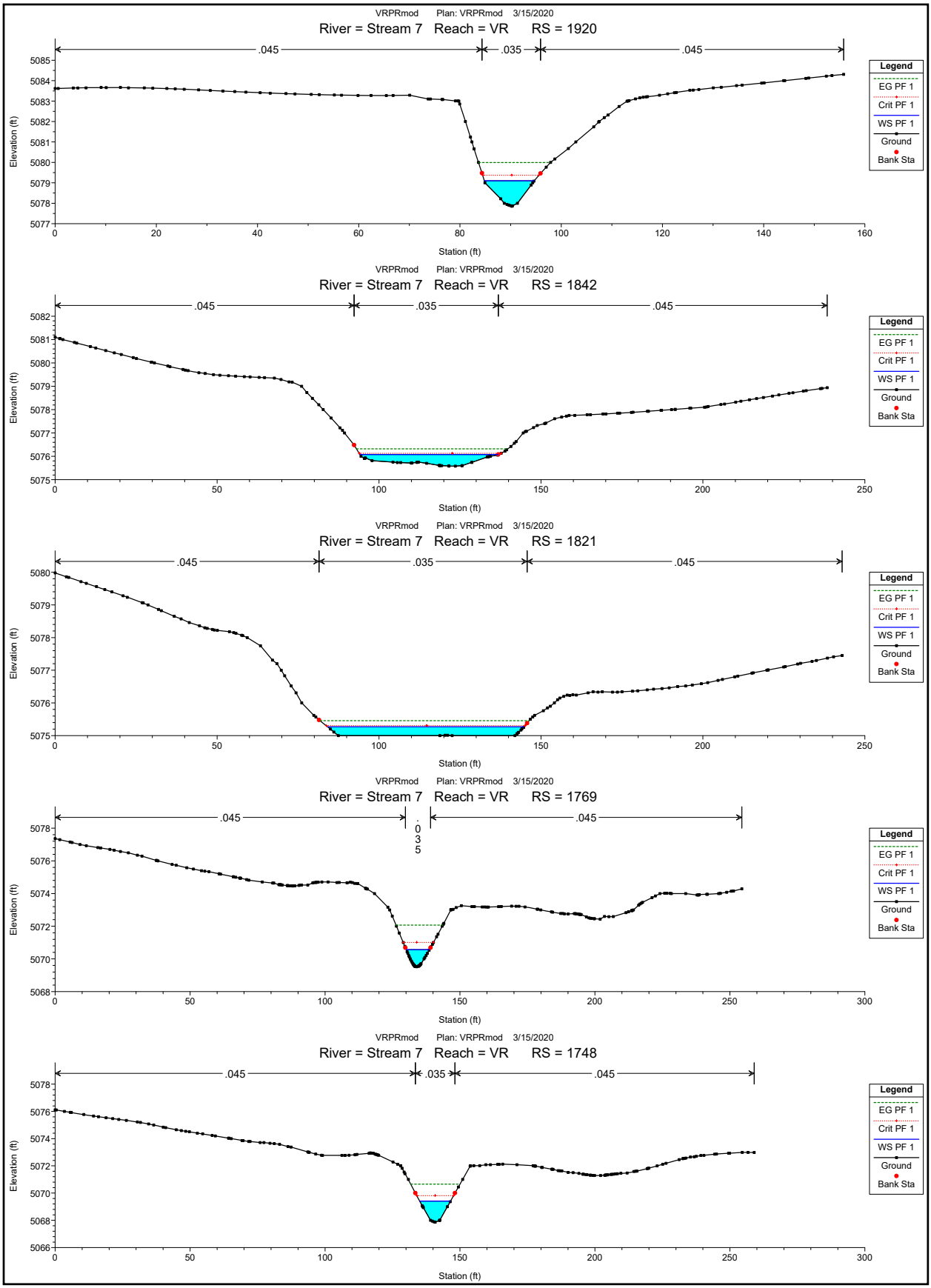

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2434
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2414
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2413 Culv
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2413 Culv
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2333
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta

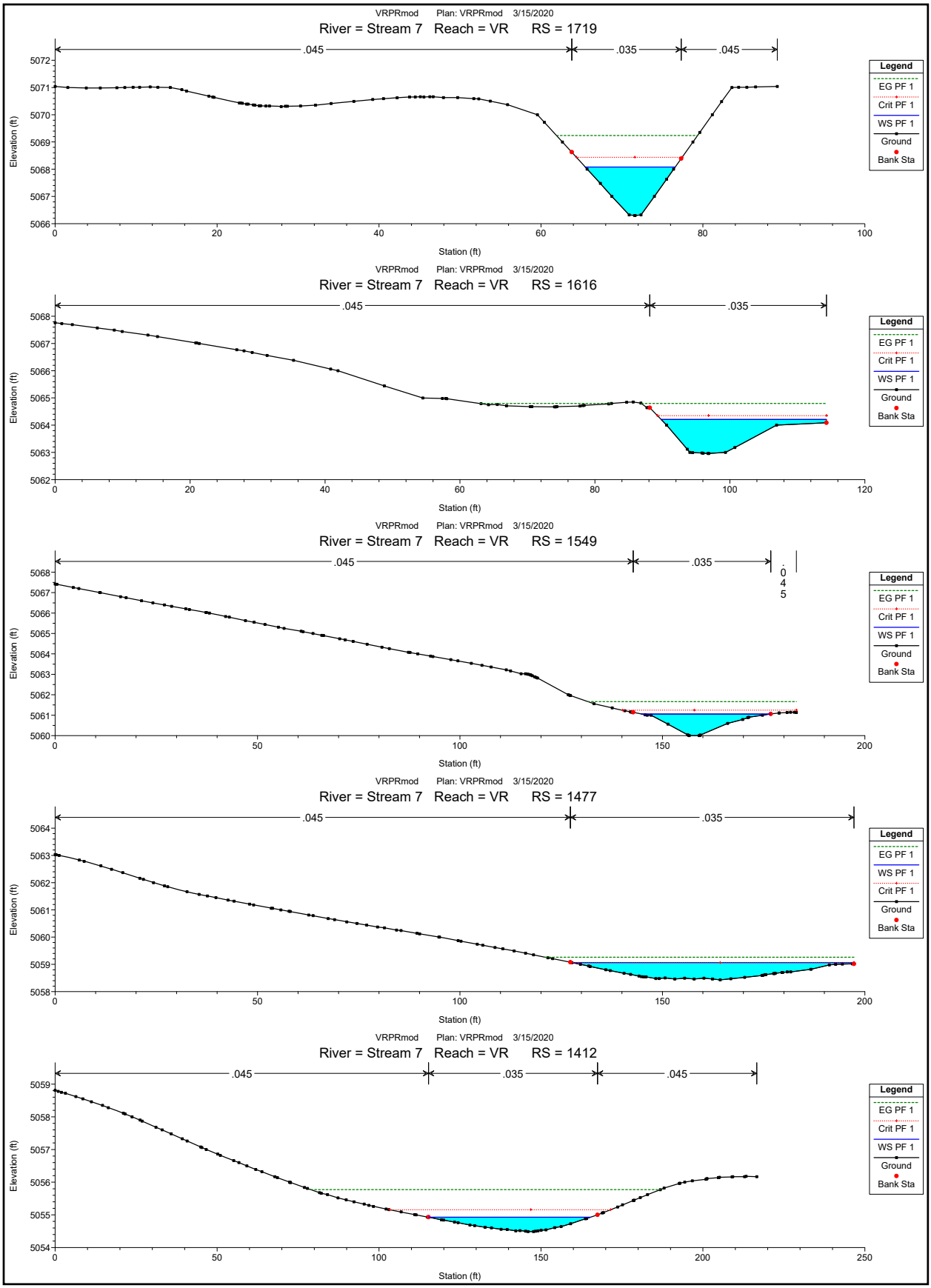

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2313
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2152
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 2077
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1960
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1864
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1813
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1793
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1792 Culv
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1792 Culv
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1703
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1683
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1411
.045
.051
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1211
.045
.035
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 6 Reach = VR RS = 1011
.045
.035
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 2561
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta

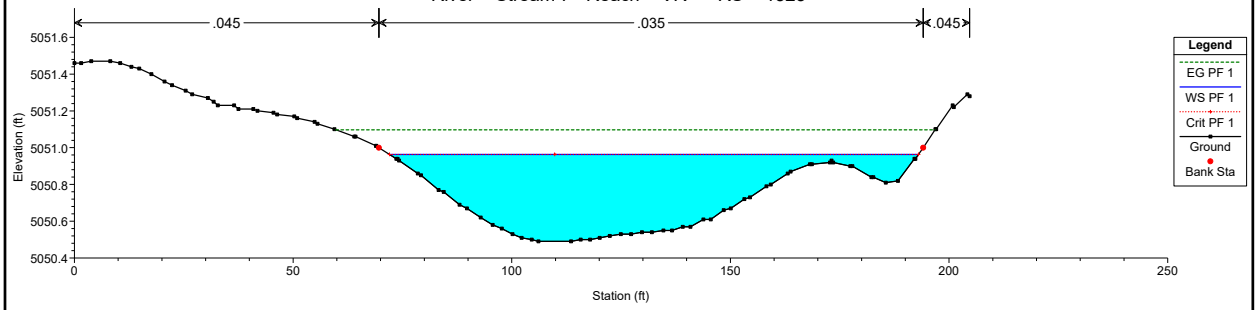

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 2472
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 2358
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 2255
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 2129
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 2026
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1920
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1842
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1821
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1769
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1748
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1719
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1616
.045
.035
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1549
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1477
.045
.035
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 7 Reach = VR RS = 1412
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta

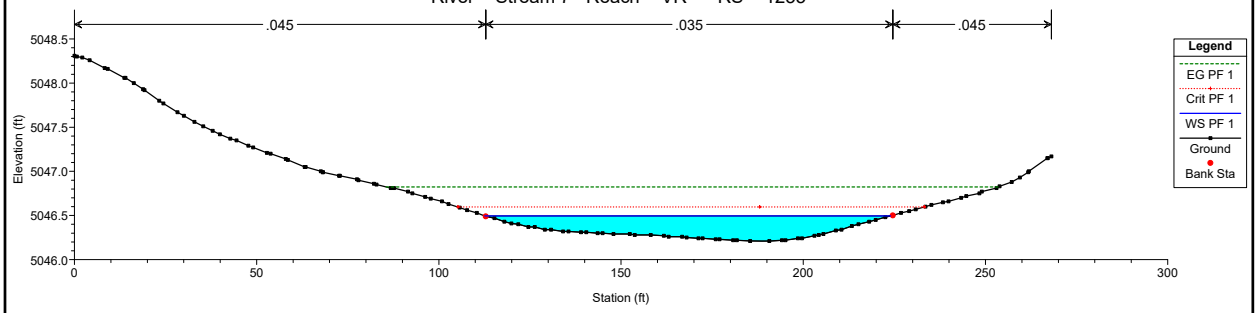
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 7 Reach = VR RS = 1323



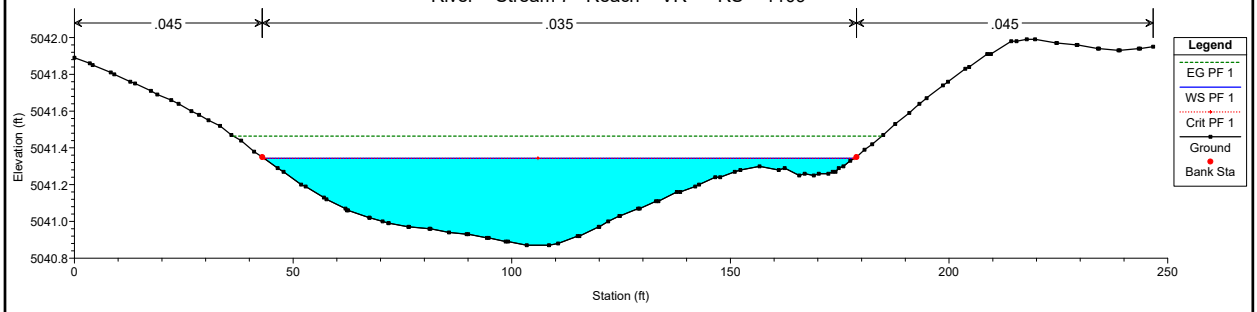
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 7 Reach = VR RS = 1235



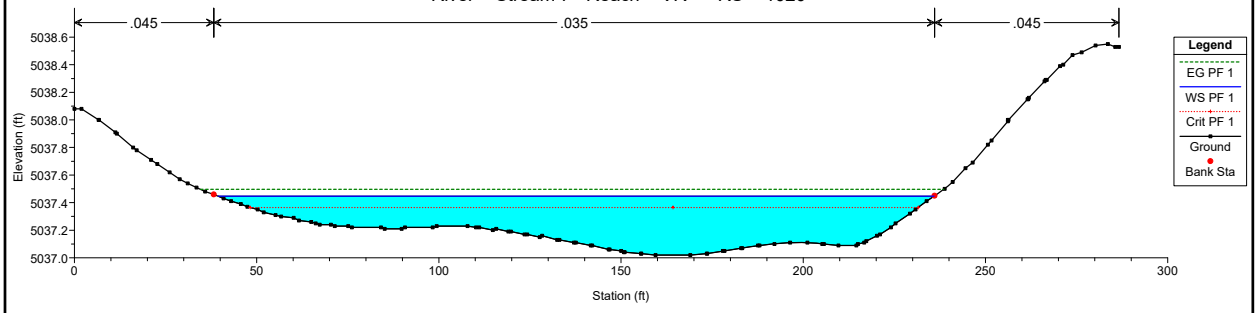
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 7 Reach = VR RS = 1109



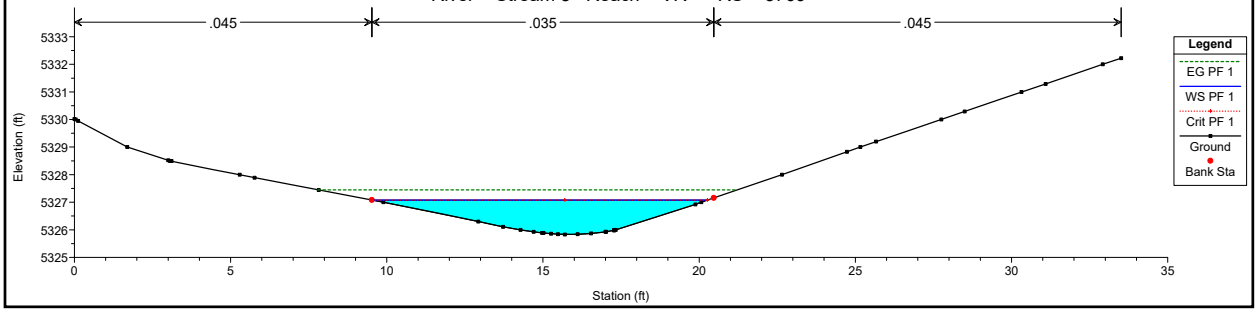
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 7 Reach = VR RS = 1020



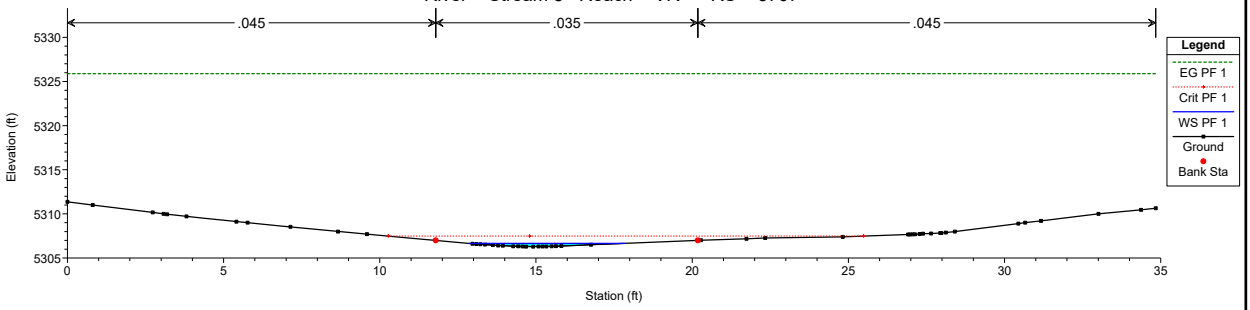
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 8 Reach = VR RS = 3769



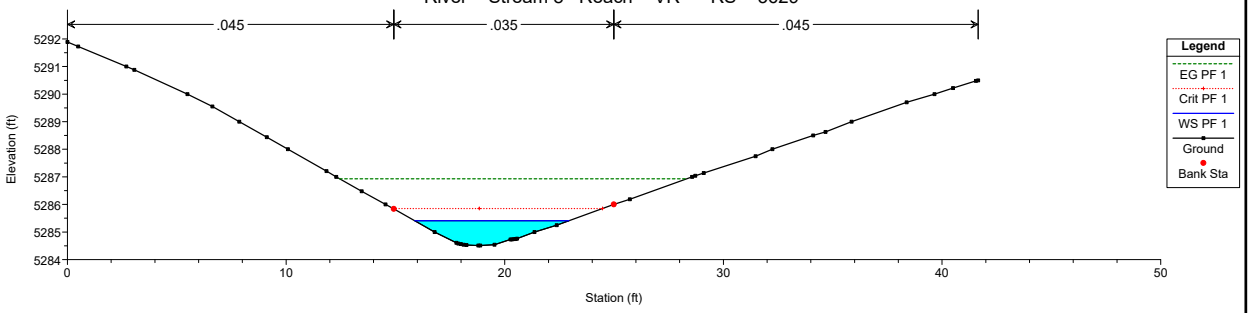
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 8 Reach = VR RS = 3707



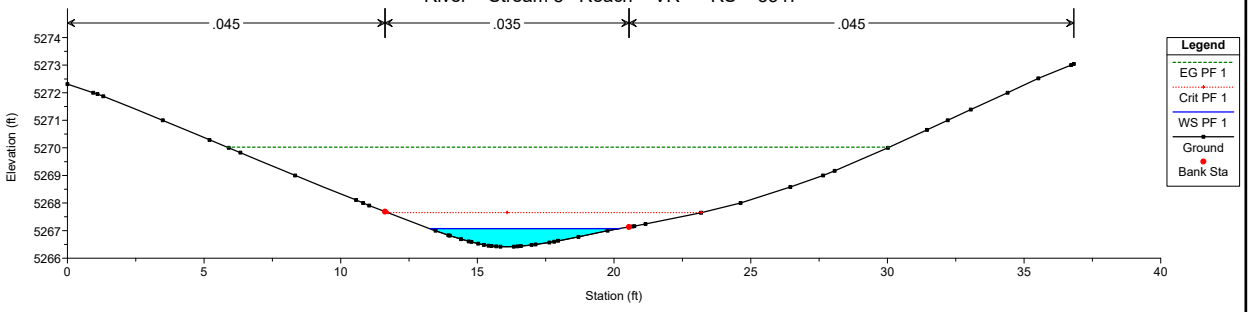
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 8 Reach = VR RS = 3629



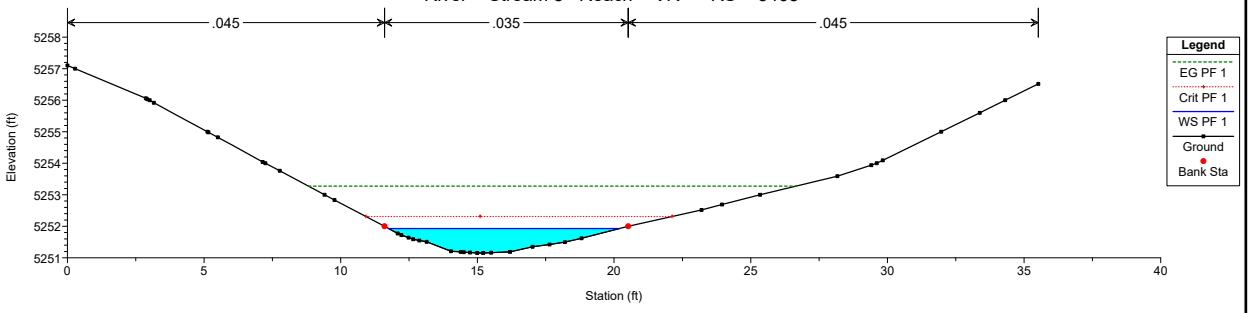
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 8 Reach = VR RS = 3547



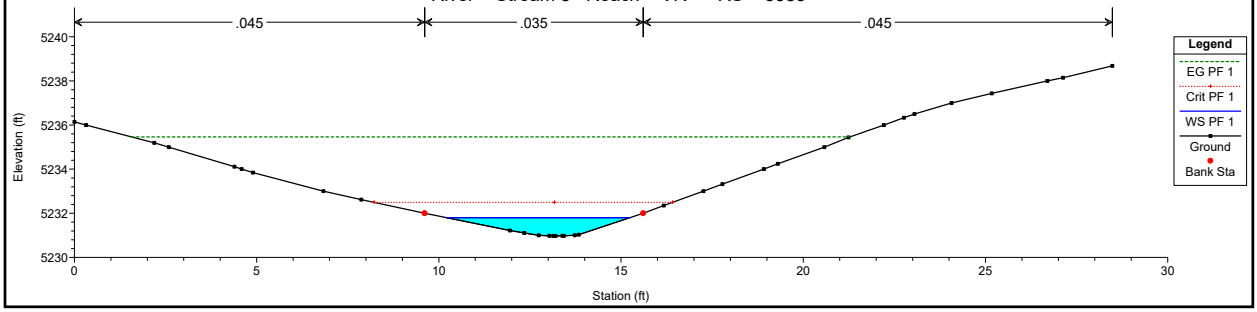
VRPRmod Plan: VRPRmod 3/15/2020

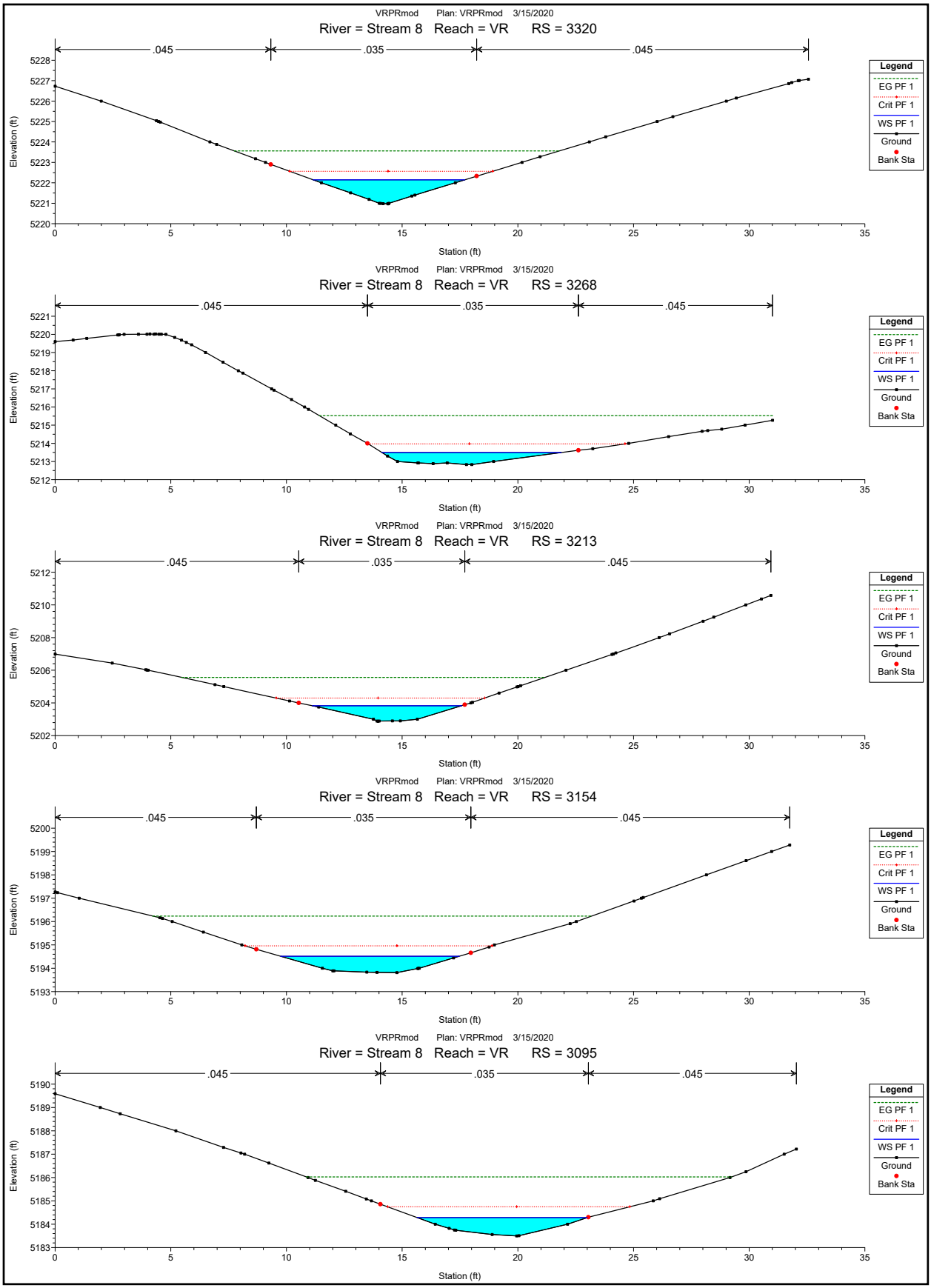
River = Stream 8 Reach = VR RS = 3468



VRPRmod Plan: VRPRmod 3/15/2020

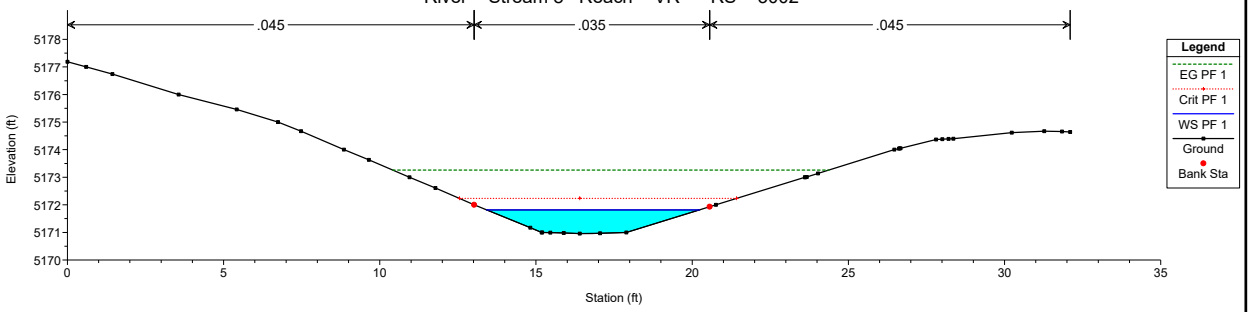
River = Stream 8 Reach = VR RS = 3383




VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 3320
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 3268
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 3213
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 3154
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 3095
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta

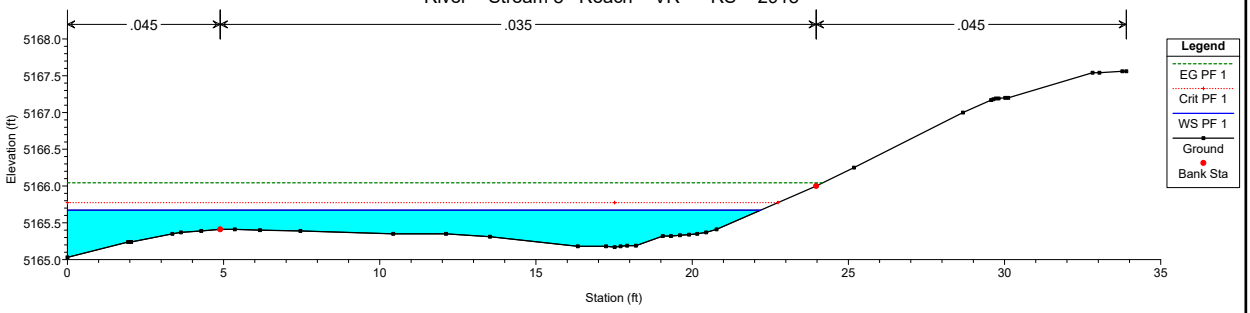
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 8 Reach = VR RS = 3002



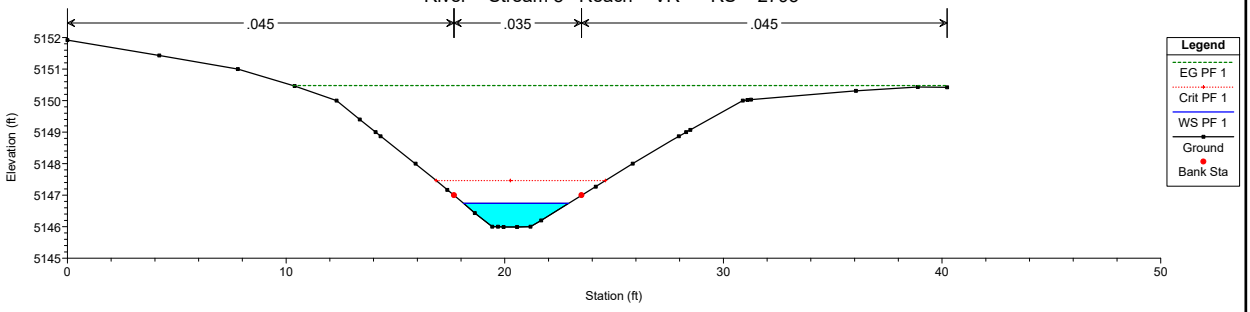
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 8 Reach = VR RS = 2918



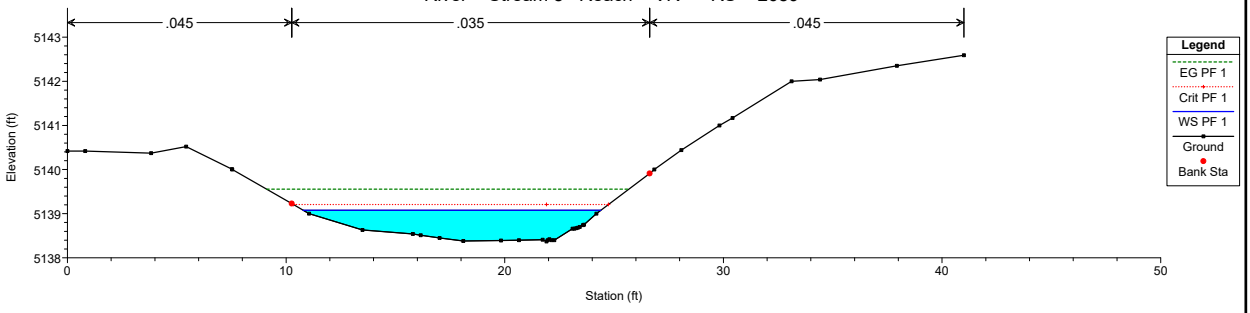
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 8 Reach = VR RS = 2793



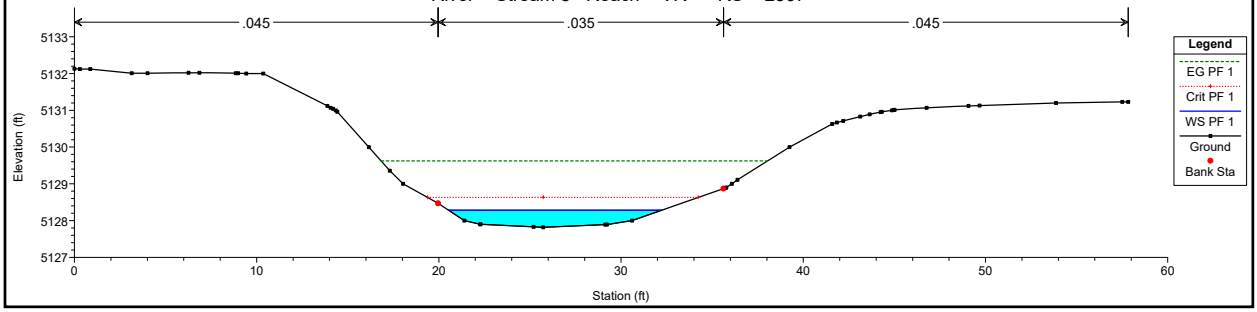
VRPRmod Plan: VRPRmod 3/15/2020

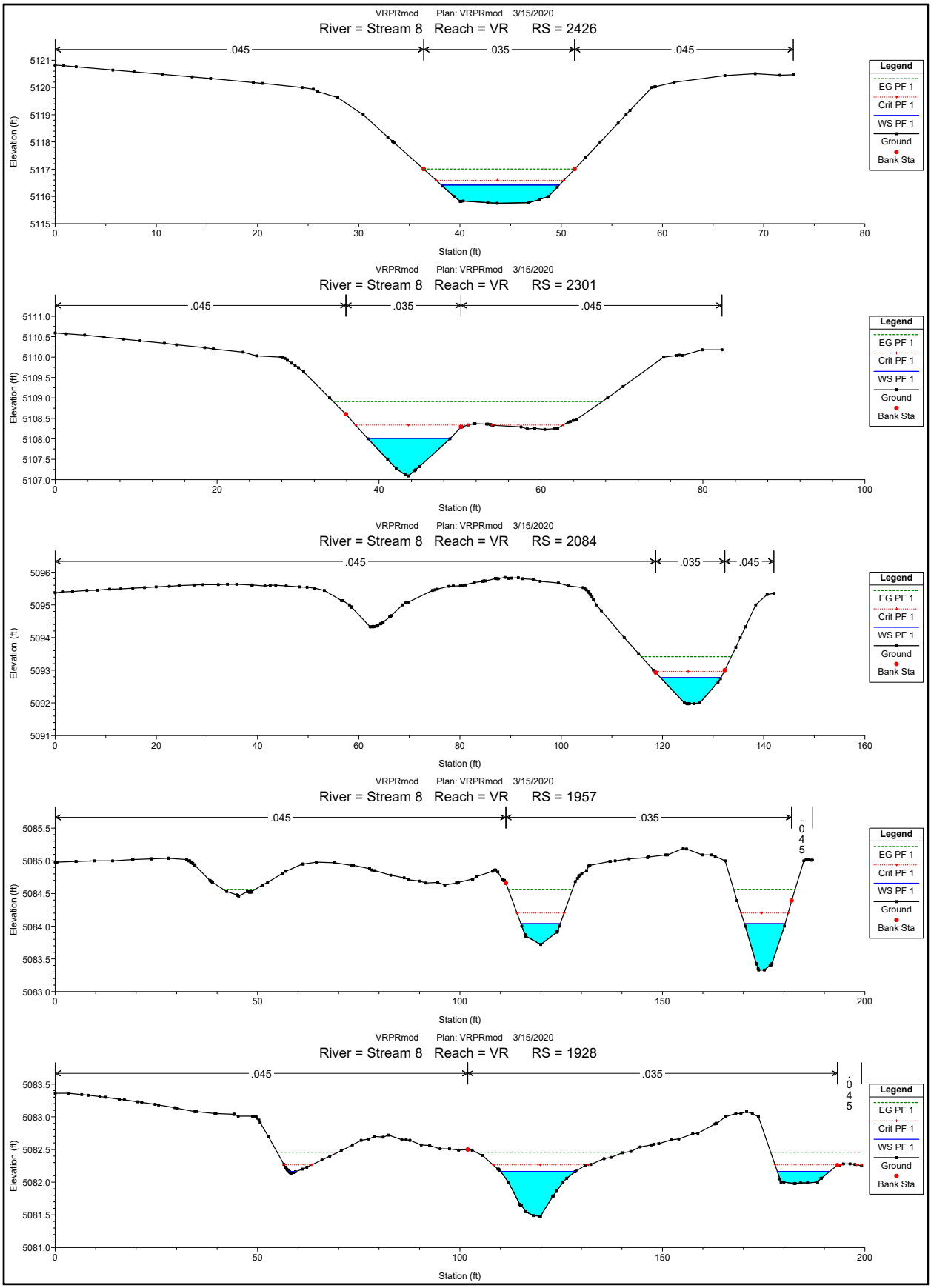
River = Stream 8 Reach = VR RS = 2689

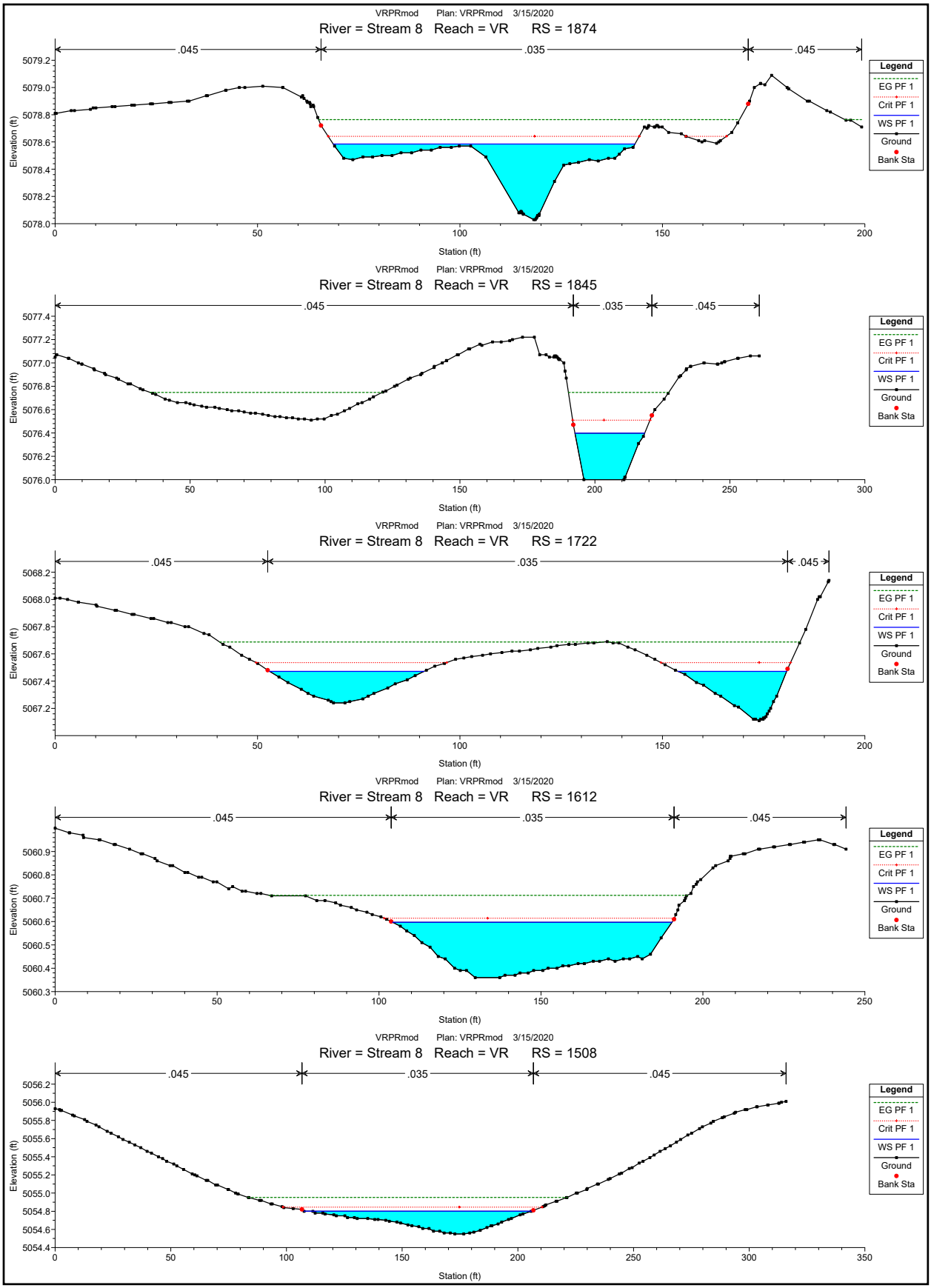


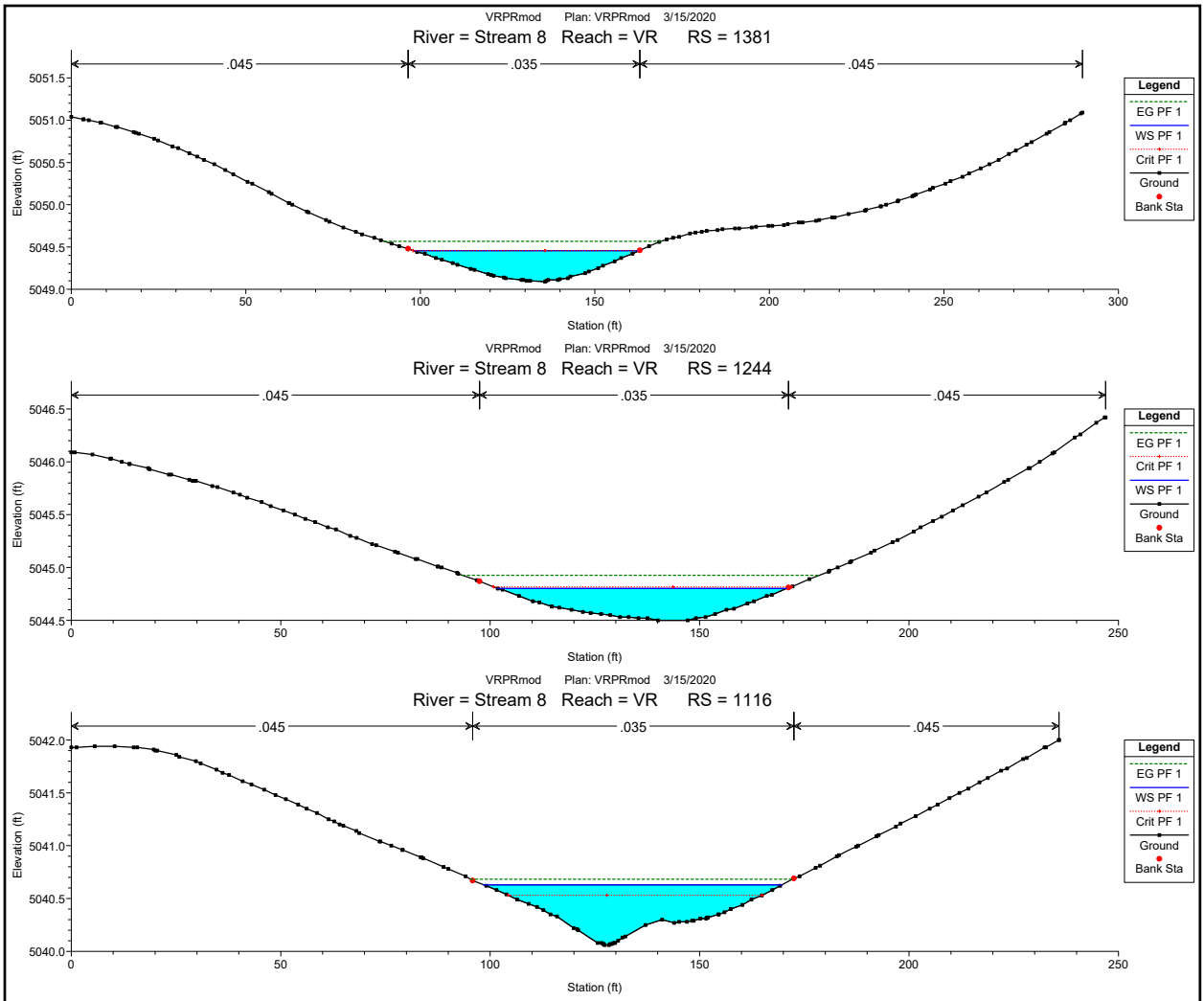
VRPRmod Plan: VRPRmod 3/15/2020

River = Stream 8 Reach = VR RS = 2567



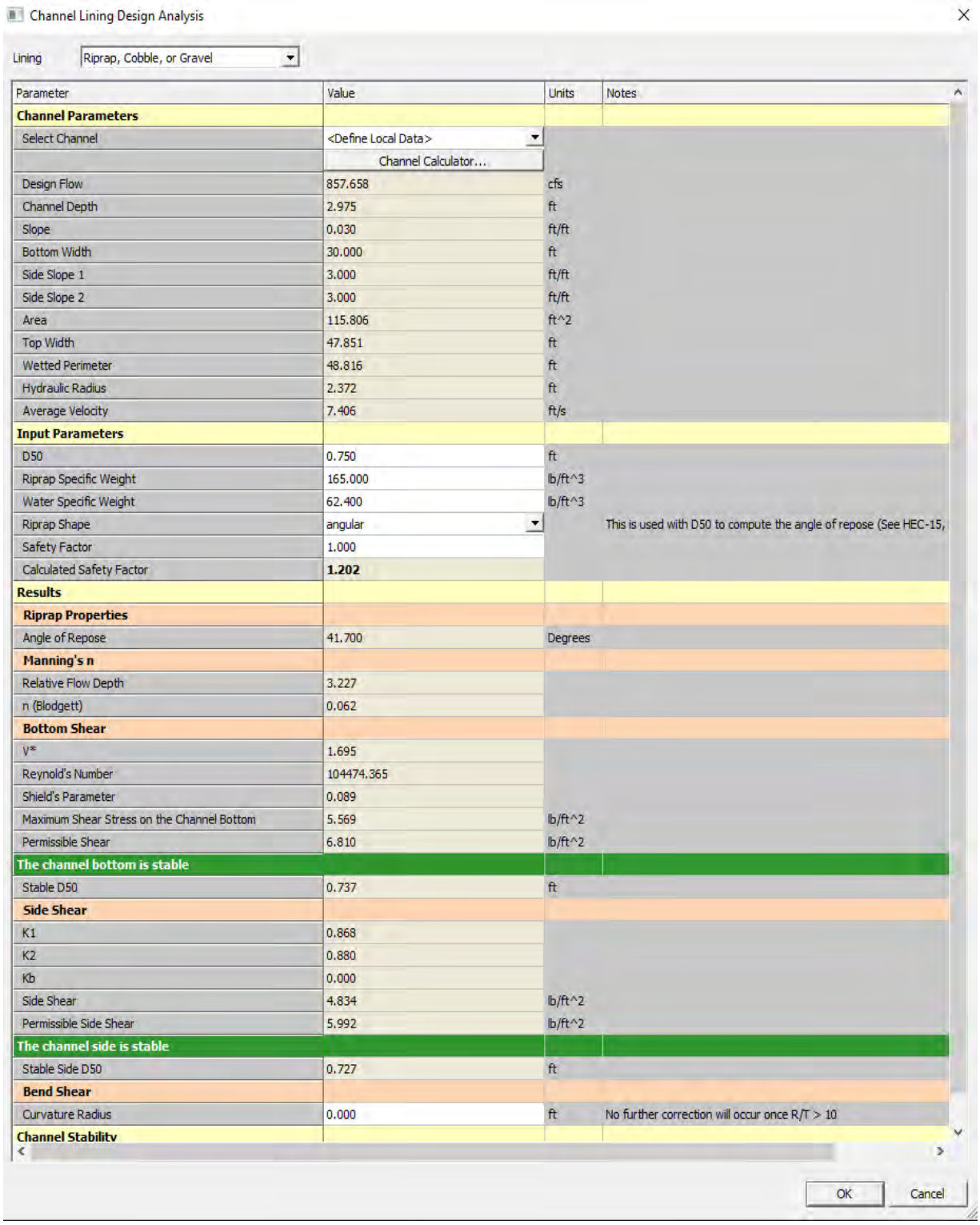

VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 2426
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 2301
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 2084
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1957
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1928
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1874
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1845
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1722
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1612
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1508
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta


VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1381
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1244
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
Crit PF 1
WS PF 1
Ground
Bank Sta
VRPRmod Plan: VRPRmod 3/15/2020
River = Stream 8 Reach = VR RS = 1116
.045
.035
.045
Elevation (ft)
Station (ft)
Legend
EG PF 1
WS PF 1
Crit PF 1
Ground
Bank Sta

RIPRAP CALCULATIONS

VR Main Stream Flows : VR16111 Use 9”D50 Min.



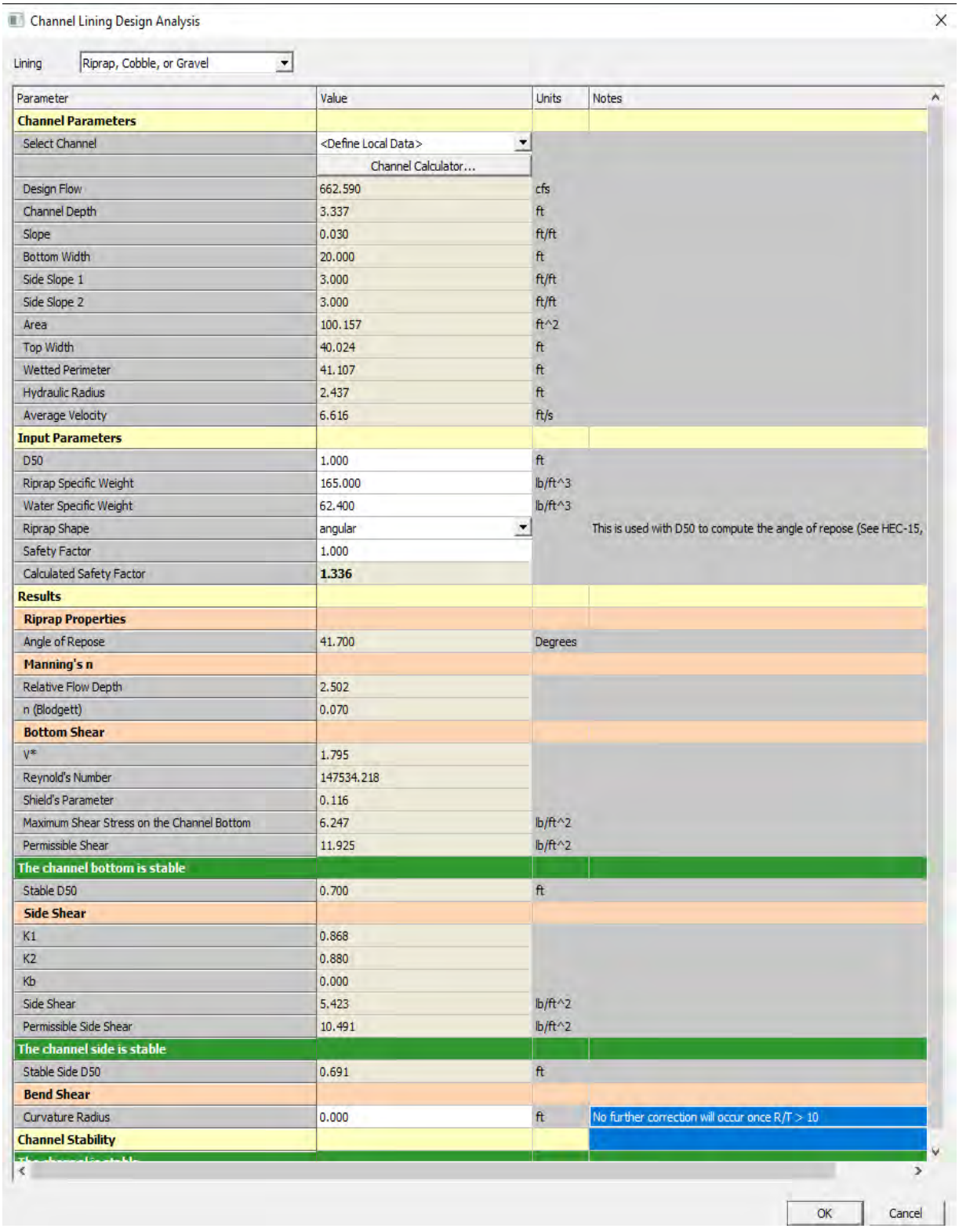
Channel Lining Design Analysis

Lining: Riprap, Cobble, or Gravel

Parameter	Value	Units	Notes
Channel Parameters			
Select Channel	<Define Local Data>		
	Channel Calculator...		
Design Flow	857.658	cfs	
Channel Depth	2.975	ft	
Slope	0.030	ft/ft	
Bottom Width	30.000	ft	
Side Slope 1	3.000	ft/ft	
Side Slope 2	3.000	ft/ft	
Area	115.806	ft^2	
Top Width	47.851	ft	
Wetted Perimeter	48.816	ft	
Hydraulic Radius	2.372	ft	
Average Velocity	7.406	ft/s	
Input Parameters			
D50	0.750	ft	
Riprap Specific Weight	165.000	lb/ft^3	
Water Specific Weight	62.400	lb/ft^3	
Riprap Shape	angular		This is used with D50 to compute the angle of repose (See HEC-15,
Safety Factor	1.000		
Calculated Safety Factor	**1.202**		
Results			
Riprap Properties			
Angle of Repose	41.700	Degrees	
Manning's n			
Relative Flow Depth	3.227		
n (Blodgett)	0.062		
Bottom Shear			
V*	1.695		
Reynold's Number	104474.365		
Shield's Parameter	0.089		
Maximum Shear Stress on the Channel Bottom	5.569	lb/ft^2	
Permissible Shear	6.810	lb/ft^2	
The channel bottom is stable			
Stable D50	0.737	ft	
Side Shear			
K1	0.868		
K2	0.880		
Kb	0.000		
Side Shear	4.834	lb/ft^2	
Permissible Side Shear	5.992	lb/ft^2	
The channel side is stable			
Stable Side D50	0.727	ft	
Bend Shear			
Curvature Radius	0.000	ft	No further correction will occur once R/T > 10
Channel Stability			

OK Cancel

VR Main Stream Flows : VR16106 Use 12”D50 Min.



Stream 5 Flows : VR11102 Use 8”D50 Min.

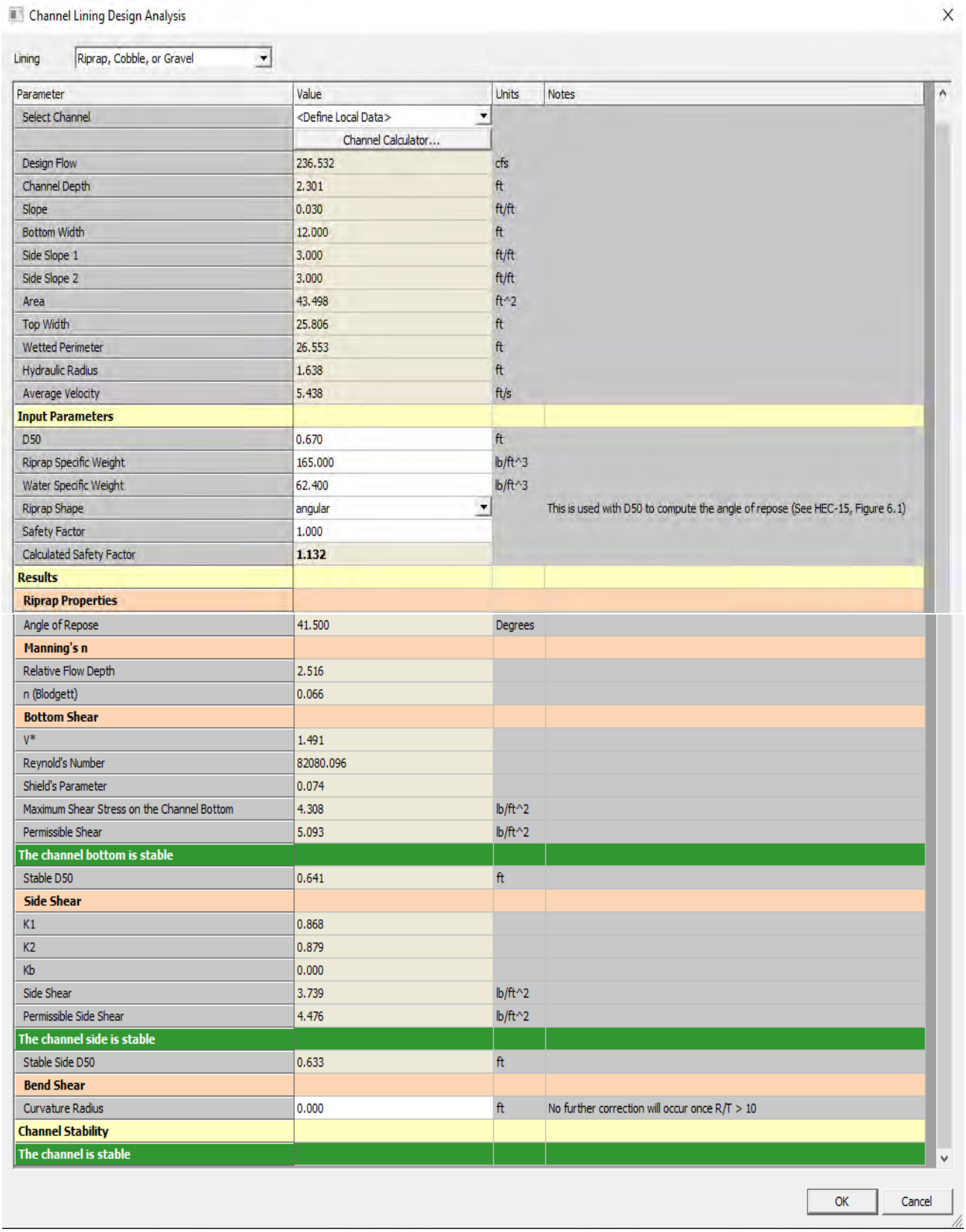
Channel Lining Design Analysis

Lining: Riprap, Cobble, or Gravel

Parameter	Value	Units	Notes
Channel Parameters			
Select Channel	<Define Local Data>		
	Channel Calculator...		
Design Flow	173.660	cfs	
Channel Depth	2.140	ft	
Slope	0.030	ft/ft	
Bottom Width	10.000	ft	
Side Slope 1	3.000	ft/ft	
Side Slope 2	3.000	ft/ft	
Area	35.137	ft^2	
Top Width	22.839	ft	
Wetted Perimeter	23.534	ft	
Hydraulic Radius	1.493	ft	
Average Velocity	4.942	ft/s	
Input Parameters			
D50	0.670	ft	
Riprap Specific Weight	165.000	lb/ft^3	
Water Specific Weight	62.400	lb/ft^3	
Riprap Shape	angular		This is used with D50 to compute the angle of repose (See HEC-15, Figure 6.1)
Safety Factor	1.000		
Calculated Safety Factor	**1.123**		
Results			
Riprap Properties			
Angle of Repose	41.500	Degrees	
Manning's n			
Relative Flow Depth	2.296		
n (Blodgett)	0.068		
Bottom Shear			
V*	1.438		
Reynold's Number	79153.596		
Shield's Parameter	0.072		
Maximum Shear Stress on the Channel Bottom	4.006	lb/ft^2	
Permissible Shear	4.964	lb/ft^2	
The channel bottom is stable			
Stable D50	0.607	ft	
Side Shear			
K1	0.868		
K2	0.879		
Kb	0.000		
Side Shear	3.477	lb/ft^2	
Permissible Side Shear	4.362	lb/ft^2	
The channel side is stable			
Stable Side D50	0.600	ft	
Bend Shear			
Curvature Radius	0.000	ft	No further correction will occur once R/T > 10

OK Cancel

Stream 6 Flows : VR12104 Use 8”D50 Min.



Channel Lining Design Analysis

Lining: Riprap, Cobble, or Gravel

Parameter	Value	Units	Notes
Select Channel	<Define Local Data>		
	Channel Calculator...		
Design Flow	236.532	cfs	
Channel Depth	2.301	ft	
Slope	0.030	ft/ft	
Bottom Width	12.000	ft	
Side Slope 1	3.000	ft/ft	
Side Slope 2	3.000	ft/ft	
Area	43.498	ft^2	
Top Width	25.806	ft	
Wetted Perimeter	26.553	ft	
Hydraulic Radius	1.638	ft	
Average Velocity	5.438	ft/s	
Input Parameters			
D50	0.670	ft	
Riprap Specific Weight	165.000	lb/ft^3	
Water Specific Weight	62.400	lb/ft^3	
Riprap Shape	angular		This is used with D50 to compute the angle of repose (See HEC-15, Figure 6.1)
Safety Factor	1.000		
Calculated Safety Factor	**1.132**		
Results			
Riprap Properties			
Angle of Repose	41.500	Degrees	
Manning's n			
Relative Flow Depth	2.516		
n (Blodgett)	0.066		
Bottom Shear			
V*	1.491		
Reynold's Number	82080.096		
Shield's Parameter	0.074		
Maximum Shear Stress on the Channel Bottom	4.308	lb/ft^2	
Permissible Shear	5.093	lb/ft^2	
The channel bottom is stable			
Stable D50	0.641	ft	
Side Shear			
K1	0.868		
K2	0.879		
Kb	0.000		
Side Shear	3.739	lb/ft^2	
Permissible Side Shear	4.476	lb/ft^2	
The channel side is stable			
Stable Side D50	0.633	ft	
Bend Shear			
Curvature Radius	0.000	ft	No further correction will occur once R/T > 10
Channel Stability			
The channel is stable			

OK Cancel

Check Dam Spacing Calculations

First Flush Capacity Contained Volumes by Check dams										
Channel Geometry Trapizodial ditch 2 foot bottom with 12 in of storage.										
	VOLUMES/100FT									
		Roadway Slope								
Slope	1%	2%	3%	4%	5.0%	6%	7%	8%	9%	10%
Calculated Spacing	400	200	133	100	80.0	66.67	57.1	50	43	40
Applied Spacing	400	200	150	100	100	75	50	50	40	40
	PAVEMENT WIDTH	20								
	100 FT	100								
	.5 INCHS	0.0416	83.2	FT/100	Required Volume per 100 ft of roadway					

APPENDIX F

Soils Report

- **Yavapai County, Arizona, Western Part, May 6, 2019**

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

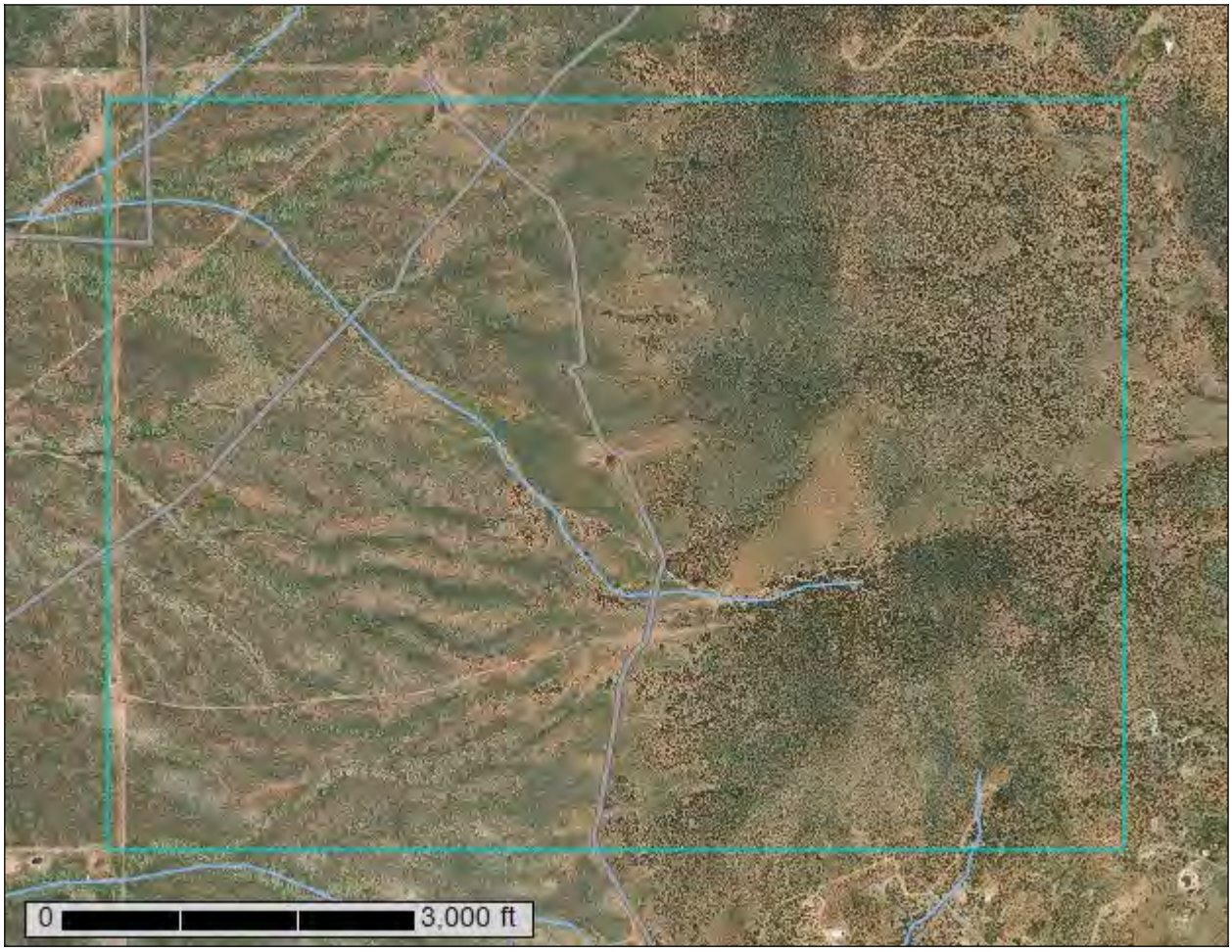
A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Yavapai County, Arizona, Western Part

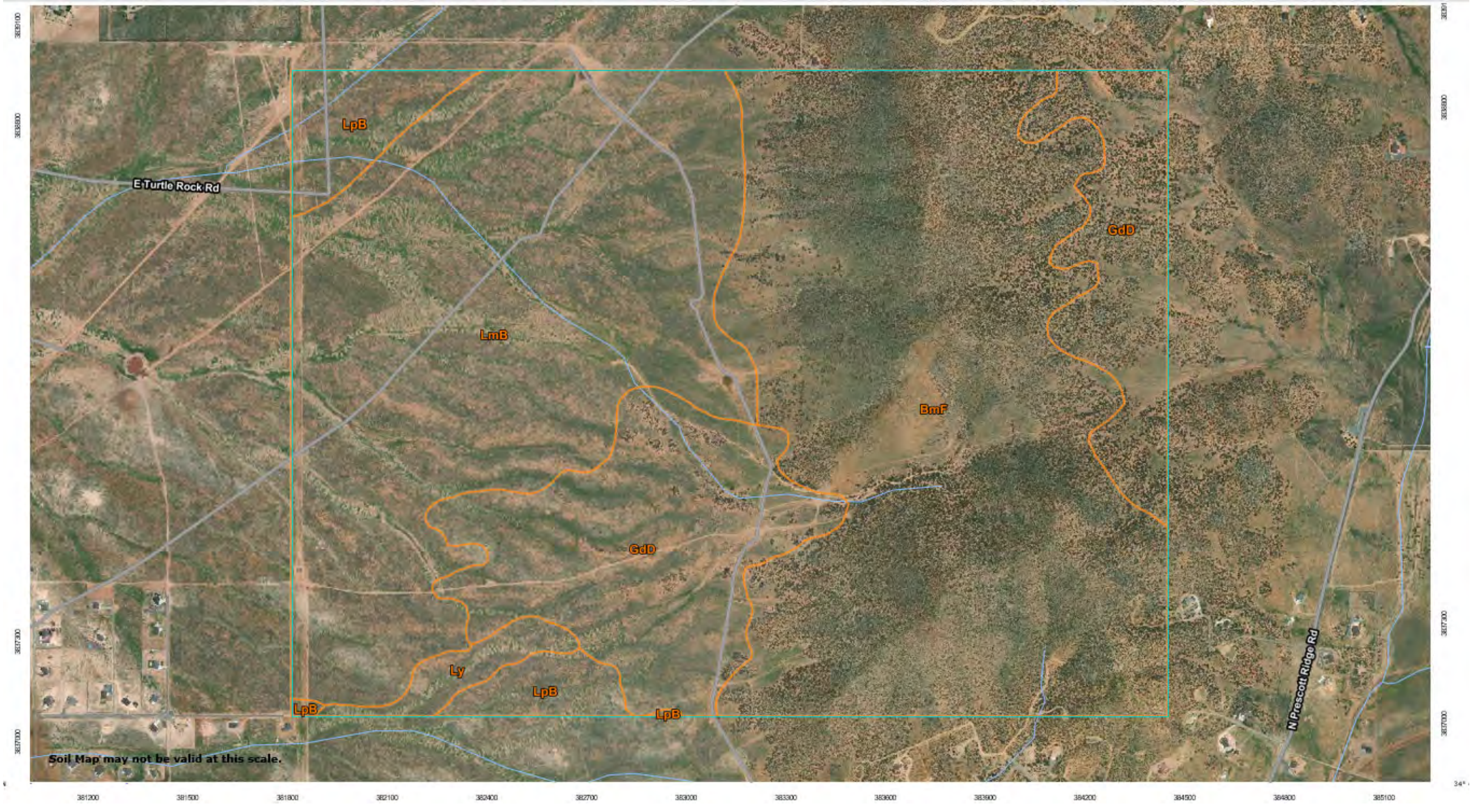
Ventura Ranch

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.



May 6, 2019


LpB
E Turtle Rock Rd
LmB
GdD
BmF
GdD
Ly
LpB
LpB
LpB
N Prescott Ridge Rd
Soil Map may not be valid at this scale.
381200
381500
381800
382100
382400
382700
383000
383300
383600
383900
384200
384500
384800
385100

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:31,700.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Yavapai County, Arizona, Western Part
Survey Area Data: Version 10, Sep 12, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 17, 2015—Oct 14, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BmF	Barkerville cobbly sandy loam, 20 to 60 percent slopes	515.3	40.7%
GdD	Gaddes gravelly sandy loam, 3 to 25 percent slopes	245.0	19.3%
LmB	Lonti gravelly loam, 0 to 8 percent slopes	433.3	34.2%
LpB	Lonti-Abra gravelly sandy loams, 0 to 8 percent slopes	54.8	4.3%
Ly	Lynx soils	17.7	1.4%
Totals for Area of Interest		**1,266.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

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