

E78 GROSSETO - FANO
Tratto Nodo di Arezzo – Selci – Lama (E45) –
Palazzo del Pero – Completamento

PROGETTO DEFINITIVO

FI 509

ANAS - DIREZIONE PROGETTAZIONE E REALIZZAZIONE LAVORI

| | | |
|---|---|---|
| <p>IL GEOLOGO</p> <p><i>Dott. Geol. Marco Leonardi</i> Ordine dei geologi della Regione Lazio n. 1541</p> | <p>I PROGETTISTI SPECIALISTICI</p> <p><i>Ing. Ambrogio Signorelli</i> Ordine Ingegneri Provincia di Roma n. A35011</p> | <p>PROGETTAZIONE ATI: (Mandataria) GPI INGEGNERIA <i>GESTIONE PROGETTI INGEGNERIA srl</i></p> <p>(Mandante)  cooprogetti</p> <p>(Mandante)  engeko</p> <p>(Mandante)  AIM <i>Studio di Architettura e Ingegneria Moderna</i></p> |
| <p>COORDINATORE PER LA SICUREZZA IN FASE DI PROGETTAZIONE</p> <p><i>Arch. Santo Salvatore Vermiglio</i> Ordine Architetti Provincia di Reggio Calabria n. 1270</p> | <p><i>Ing. Moreno Panfilì</i> Ordine Ingegneri Provincia di Perugia n. A2657</p> <p><i>Ing. Matteo Bordugo</i> Ordine Ingegneri Provincia di Pordenone al n. 790A</p> | <p>IL PROGETTISTA RESPONSABILE DELL'INTEGRAZIONE DELLE PRESTAZIONI SPECIALISTICHE. (DPR207/10 ART 15 COMMA 12):</p> <p><i>Dott. Ing. GIORGIO GUIDUCCI</i> Ordine Ingegneri Provincia di Roma n. 14035</p> |
| <p>VISTO: IL RESP. DEL PROCEDIMENTO</p> <p><i>Ing. Francesco Pisani</i></p> | <p><i>Ing. Giuseppe Resta</i> Ordine Ingegneri Provincia di Roma n. 20629</p> | <p>IL PROGETTISTA RESPONSABILE DELL'INTEGRAZIONE DELLE PRESTAZIONI SPECIALISTICHE. (DPR207/10 ART 15 COMMA 12):</p> <p><i>Dott. Ing. GIORGIO GUIDUCCI</i> Ordine Ingegneri Provincia di Roma n. 14035</p> |
| <p>VISTO: IL RESP. DEL PROGETTO</p> <p><i>Arch. Pianif. Marco Colazza</i></p> | <p><i>Ing. Giuseppe Resta</i> Ordine Ingegneri Provincia di Roma n. 20629</p> | <p>IL PROGETTISTA RESPONSABILE DELL'INTEGRAZIONE DELLE PRESTAZIONI SPECIALISTICHE. (DPR207/10 ART 15 COMMA 12):</p> <p><i>Dott. Ing. GIORGIO GUIDUCCI</i> Ordine Ingegneri Provincia di Roma n. 14035</p> |

STUDI E INDAGINI

Idrologia e idraulica

Relazione idraulica attraversamenti minori (tombini)

| | | | |
|---|---|-------------------------|---------------------|
| <p>CODICE PROGETTO</p> <p>PROGETTO LIV.PROG ANNO</p> | <p>NOME FILE</p> <p>TOOID00IDRRE03_A</p> | <p>REVISIONE</p> | <p>SCALA</p> |
| <p>DPAN259 D 21</p> | <p>CODICE ELAB. T O O I D O O I D R R E O 3</p> | <p>A</p> | <p>-</p> |
| <p>D</p> | | | |
| <p>C</p> | | | |
| <p>B</p> | | | |
| <p>A</p> | <p>Emissione</p> | <p>Maggio '22</p> | <p>Capponi</p> |
| <p>REV.</p> | <p>DESCRIZIONE</p> | <p>DATA</p> | <p>REDATTO</p> |
| <p>VERIFICATO</p> | <p>APPROVATO</p> | <p>Panfilì</p> | <p>Guiducci</p> |

INDICE

| | | |
|-----------|---|----------|
| 1. | PREMESSA..... | 2 |
| 2. | RIFERIMENTI NORMATIVI | 3 |
| 3. | ATTRAVERSAMENTI IDRAULICI MINORI E NTC2018..... | 4 |
| 4. | ANALISI IDRAULICHE DI SUPPORTO ALLA RISOLUZIONE DELLE INTERFERENZE CON IL RETICOLO IDROGRAFICO | 5 |
| 4.1. | ANALISI NUMERICHE IN REGIME DI MOTO VARIO | 5 |
| 4.2. | AREA DI STUDIO E TRATTI DEI CORSI D'ACQUA MODELLATI | 6 |
| 4.2.1. | Modello idraulico "TORRENTE VINGONE – FOSSO SELLINA" | 7 |
| 4.2.2. | Modello idraulico "RIO DELL'OLMO - RIO DI SANT'ANTONIO – RIO DI RIOLO".... | 12 |
| 4.2.3. | Modello idraulico "RIO DELLE QUERCE – FOSSO AV 43922"..... | 17 |
| 4.2.4. | Modello idraulico "TORRENTE LOTA - TORRENTE VINGONE (2) – FOSSO AV 20123" | 21 |

Appendice 1: Outputs grafici e numerici delle simulazioni 1D+2D effettuate in regime di moto vario con il software Hec-Ras

1. PREMESSA

Scopo della presente relazione è quello di descrivere le analisi e le verifiche idrauliche condotte nell'ambito del progetto definitivo relativo all'intervento "*E 78 Grosseto – Fano, Tratto Nodo di Arezzo - Selci - Lama (E 45) – Palazzo del Pero - Completamento*".

Il presente studio va esaminato congiuntamente all'elaborato T00 ID 00 IDR RE 01 "*Relazione idrologica*", nell'ambito della quale si sono sviluppati i modelli concettuali utili alla definizione delle portate di riferimento.

In particolare, il presente studio idraulico teso a fornire un'analisi delle interazioni tra le opere viarie e i corsi d'acqua secondari con esse interferenti, valutando l'adeguatezza dei manufatti di attraversamento, in progetto, sia in termini di sezione idraulica sia di franco di sicurezza rispetto all'intradosso del manufatto.

PROGETTAZIONE ATI:

2. RIFERIMENTI NORMATIVI

L'infrastruttura stradale in progetto, sotto il profilo idraulico, deve soddisfare le prescrizioni previste dal seguente quadro normativo vigente:

- Regio Decreto 25 luglio 1904, n°523 "Testo unico delle disposizioni di legge intorno alle opere idrauliche delle diverse categorie"
- Norme Tecniche per le Costruzioni 2018 DM 17 gennaio 2018_5.1 Ponti_5.1.2.3. Compatibilità idraulica;
- Circolare n.7 del 21 gennaio 2019_ Istruzioni per l'applicazione dell'aggiornamento Norme tecniche per le costruzioni di cui al decreto ministeriale 17 gennaio 2018_C 5.1.2.3 Compatibilità Idraulica;
- Piano di Gestione del Rischio Alluvioni (PGRA) dell'Autorità di Bacino Distrettuale dell'Appennino Settentrionale di cui alla Direttiva 2007/60/CE, recepita con D.Lgs. 49/2010, approvato con delibera del Comitato Istituzionale n. 235 del 3 marzo 2016;
- L.R. n.41 24/07/2018.

PROGETTAZIONE ATI:

3. ATTRAVERSAMENTI IDRAULICI MINORI E NTC2018

L'infrastruttura in progetto prevede l'attraversamento del reticolo idrografico interferente mediante opere trasversali che sono state dimensionate ai sensi delle NTC2018 con riferimento a portate di picco duecentennali (punto 5.1.2.3). Per i tombini si fa riferimento alla Circolare n.7 del 21 gennaio 2019 "Istruzioni per l'applicazione dell'aggiornamento NTC 2018 DM 17 gennaio 2018" ove si specifica che:

"nel caso di funzionamento a superficie libera, il tirante idrico non dovrà superare i 2/3 dell'altezza della sezione garantendo comunque un franco minimo di 0,50 m;

[...] - il calcolo idraulico è da sviluppare prendendo in considerazione le condizioni che si realizzano nel tratto del corso a d'acqua valle del tombino;

[...] - il massimo rigurgito previsto a monte del tombino deve garantire il rispetto del franco idraulico nel tratto del corso a d'acqua a monte;

- nel caso sia da temersi l'ostruzione anche parziale del manufatto da parte dei detriti galleggianti trasportati dalla corrente, è da disporre immediatamente a monte una varice presidiata da una griglia che consenta il passaggio di elementi caratterizzati da dimensioni non superiori alla metà della larghezza del tombino; in alternativa il tombino è da dimensionare assumendo che la sezione efficace ai fini del deflusso delle acque sia ridotta almeno alla metà di quella effettiva [...]

- i tratti del corso d'acqua immediatamente prospicienti l'imbocco e lo sbocco del manufatto devono essere protetti da fenomeni di scalzamento e/o erosione, e opportune soluzioni tecniche sono da adottare per evitare i fenomeni di sifonamento.

PROGETTAZIONE ATI:

4. ANALISI IDRAULICHE DI SUPPORTO ALLA RISOLUZIONE DELLE INTERFERENZE CON IL RETICOLO IDROGRAFICO

La risoluzione delle interferenze tra l'infrastruttura stradale di progetto ed il reticolo idrografico sono state condotte, previa analisi idrologica (vedi elaborato T00 ID 00 IDR RE 01), mediante l'implementazione di modelli numerici di propagazione delle piene in alveo ed extra alveo di tipo accoppiato 1D+2D in regime di moto vario.

In tali modelli, oltre alle opere di attraversamento dei corsi d'acqua interferiti, sono stati implementati anche i tombini posti extra alveo, in area golenale, ritenuti necessari al fine di garantire la "trasparenza idraulica" dell'infrastruttura stradale di progetto rispetto alla propagazione delle piene, ai fini della compatibilità idraulica degli interventi e della verifica di non incremento di rischio idraulico in altre aree imposto dalla normativa vigente di settore.

Per quanto concerne la verifica ai sensi delle NTC degli attraversamenti dei corsi d'acqua appartenenti al reticolo idrografico regionale, premesso che tutti gli attraversamenti delle aste idriche interferenti che sono state investigate rientrano nella categoria "tombini" ("*manufatto totalmente rivestito in sezione, ..., in grado di condurre complessivamente portate fino a 50 m³/s*"), quindi nell'ambito di applicazione della Circolare, i risultati mostrano il soddisfacimento della prescrizione di legge circa la sussistenza di un franco maggiore di 50 cm e/o di un terzo dell'altezza rispetto alla portata idraulica TR = 200 anni.

4.1. ANALISI NUMERICHE IN REGIME DI MOTO VARIO

Rimandando all'indirizzo internet <http://www.hec.usace.army.mil> per l'esauritiva trattazione dei principi teorici sui quali si basa la soluzione numerica delle equazioni di moto e di continuità che regolano il processo di moto (in particolare alle pubblicazioni "*Hydraulic Reference Manual*", "*User's Manual*" e "*Two-Dimensional Modeling User's Manual*"), si riportano di seguito alcuni brevi cenni di come viene effettuata la modellazione numerica 2D dal software Hec-Ras v.5 o v.6.

Il programma risolve sia le equazioni 2D di diffusione dell'onda o quelle complete di Saint Venant. Il risolutore delle equazioni di moto bidimensionale utilizza un algoritmo implicito ai volumi finiti. Tale algoritmo di soluzione, oltre a consentire passi temporali di calcolo maggiori rispetto ai metodi espliciti, presenta miglioramenti in termini di stabilità e robustezza rispetto alle tradizionali tecniche differenziali di soluzione basate su metodi a elementi finiti.

Il software è stato progettato per utilizzare mesh computazionali strutturate o non strutturate. Ciò significa che le celle computazionali possono essere variabili e presentare forme triangolari, quadrate, rettangolari, pentagonali, esagonali, ettagonali oppure ottagonali.

Ogni cella e ogni faccia della cella, per tutta la maglia di calcolo, è pre-processata al fine di calcolare le tabelle di proprietà idrauliche basate sul DTM di base, che mantiene la propria risoluzione spaziale generalmente, come in questo caso, superiore a quella della mesh (Figura 4-1).

Nella Figura 4-1 è illustrato uno schema della maglia di calcolo sovrapposta ad un DTM avente maggior risoluzione spaziale della mesh. Le celle computazionali sono rappresentate dalle linee

PROGETTAZIONE ATI:

nera spesso. Il centro delle celle di calcolo è rappresentato dai nodi neri e sono i punti in cui vengono calcolati per ogni cella il livello idrico e la portata. La curva altezza/volume viene calcolata nella fase di pre-processing per ogni cella sulla base del DTM sottostante. Ogni faccia della cella è una sezione trasversale dettagliata basata anch'essa sul terreno sottostante. Questo metodo di rappresentazione delle celle permette all'acqua di spostarsi tra celle contigue in base ai dati morfologici sottostanti. Pertanto, un piccolo canale che attraversa le celle e le cui dimensioni sono molto più piccole della dimensione della mesh viene comunque rappresentato tramite le curve altezza/volume oltreché dalle proprietà idrauliche delle facce. Ciò significa che l'acqua scorre tra le celle più grandi ma comunque il deflusso si concentra inizialmente nelle zone più depresse.

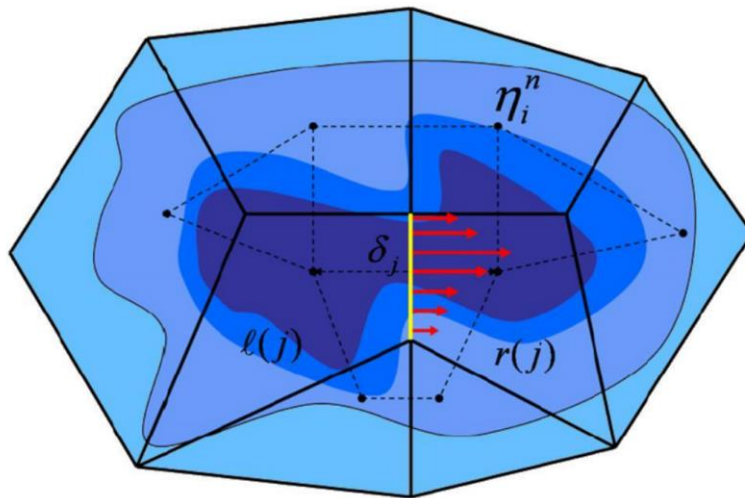


Figura 4-1: schema concettuale dell'algoritmo a volumi finiti adottato dal software Hec-Ras 2D.

Nell'ambiente RAS Mapper, il software Hec-Ras consente di effettuare la perimetrazione delle aree allagabili, la mappatura delle varie grandezze idrauliche (tra cui velocità, sforzi tangenziali, ecc...) l'animazione della propagazione della piena nel tempo. La mappatura delle aree allagate si basa sul DTM e ne mantiene la risoluzione: ciò significa che la reale superficie bagnata sarà basata sui dettagli morfologici del terreno sottostante e non sulla dimensione della cella di calcolo. Le celle, quindi, possono anche essere parzialmente bagnate/asciutte.

4.2. AREA DI STUDIO E TRATTI DEI CORSI D'ACQUA MODELLATI

I modelli numerici implementati (di tipo accoppiato 1D in alveo e puramente 2D extra-alveo, in regime di moto vario), ed i corsi d'acqua analizzati sono i seguenti:

- **Torrente Vingone – Fosso Sellina;**
- **Rio dell'Olmo – Rio di Sant'Antonio – Rio di Riolo;**
- **Rio delle Querce - fosso AV 43922;**
- **Torrente Lota – Torrente Vingone (2) – fosso AV20123.**

La geometria degli alvei è stata ricavata dai rilievi topografici strumentali effettuati a supporto del presente progetto, integrati con le sezioni trasversali desunte dagli studi idraulici redatti a supporto del nuovo Piano Strutturale e Piano Operativo del Comune di Arezzo.

Al fine di aumentare la precisione della soluzione numerica, alle sezioni disponibili sono state aggiunte sezioni interpolate.

PROGETTAZIONE ATI:

Su ciascuna sezione è stata individuata la quota di “sfioro” (quote del massimo contenimento delle acque in alveo), sia in destra che in sinistra idraulica, necessaria al software per il corretto accoppiamento del modello monodimensionale dell’alveo inciso con quello bidimensionale delle aree golenali. Gli sfioratori laterali di connessione sono modellati come soglie a stramazzo.

La caratterizzazione geometrica delle aree 2D è stata implementata a partire dai dati Lidar, risalenti agli anni 2008-2010, messi a disposizione dalla Regione Toscana, aventi una risoluzione spaziale di 1m x 1m. Le aree 2D sono state discretizzate con celle di calcolo di dimensioni variabili aventi mediamente una superficie pari a circa 90 mq. La mesh di calcolo è stata strutturata in modo tale da allineare le facce delle celle alle principali discontinuità morfologiche presenti all’interno del dominio di calcolo allo scopo di ottenere una maggiore accuratezza dei risultati.

Di seguito si riporta un estratto dei risultati delle analisi condotte, rimandando all’Appendice 1 per la consultazione degli outputs grafici e numerici di dettaglio.

4.2.1. Modello idraulico “TORRENTE VINGONE – FOSSO SELLINA”

4.2.1.1. Descrizione, scabrezze, condizioni al contorno e durata critica

I tratti dei corsi d’acqua modellati sono:

- **Torrente Vingone:** dalla sezione posta circa 300 m a monte dalla località Gragnone, alla sezione posta in prossimità dell’immissione nel Canale Maestro della Chiana, per una lunghezza complessiva di circa 9 Km.
- **Rio Valtina:** dalla sezione posta in prossimità della località Caselle, fino alla confluenza con il Torrente Vingone, per una lunghezza complessiva di 1.4 Km.
- **Fosso Sellina-Fossatone:** dalla sezione posta in località San Marco, alla sezione posta in corrispondenza dell’immissione nel Canale Maestro della Chiana, per una lunghezza complessiva di circa 6.5 Km.
- **N° 2 fossi minori appartenenti al reticolo di acque basse:** il primo, denominato “fosso 1”, da località Bagnoro all’immissione nel torrente Vingone, per una lunghezza complessiva di circa 3.6 km; il secondo, denominato “fosso 2”, dalla sezione posta a monte dell’attraversamento della E78 in prossimità del distributore di carburante fino all’inizio del tratto tombato in prossimità della zona industriale San Lazzaro, per una lunghezza complessiva di circa 260 m.

Per quanto riguarda le scabrezze medie attribuibili ai corsi d’acqua sulla base dello stato dei luoghi e coerentemente ai normali valori proposti in letteratura¹, si è assunto, con riferimento al valore del coefficiente n di Manning:

- Vingone: $n = 0.04 \text{ m}^{-1/3}\text{s}$
- Valtina: $n = 0.03 \text{ m}^{-1/3} \text{ s}$
- Sellina - Fossatone: $n = 0.03 \div 0.04 \text{ m}^{-1/3} \text{ s}$
- Fossi minori: $n = 0.04 \text{ m}^{-1/3} \text{ s}$

¹ Manuale di Ingegneria Civile - Volume I .Ed.Zanichelli/Esac.

Per quanto riguarda la scabrezza extra-alveo adottata nella modellazione idraulica bidimensionale del cosiddetto "overland flow", si è fatto riferimento alla tabella seguente, sempre tratta dalla letteratura di settore: il valore del coefficiente n di Manning assunto è costante e pari a $0.10 \text{ m}^{-1/3}\text{s}$.

| Table 1. Overland Flow Manning's n Roughness Values¹ | |
|--|---------------|
| Surface | n-value |
| Dense turf | 0.17 - 0.80 |
| Bermuda and dense grass, dense vegetation | 0.17 - 0.48 |
| Shrubs and forest litter, pasture | 0.30 - 0.40 |
| Average grass cover | 0.20 - 0.40 |
| Poor grass cover on rough surface | 0.20 - 0.30 |
| Short prairie grass | 0.10 - 0.20 |
| Sparse vegetation | 0.05 - 0.13 |
| Sparse rangeland with debris | |
| 0% cover | 0.09 - 0.34 |
| 20 % cover | 0.05 - 0.25 |
| Plowed or tilled fields | |
| Fallow - no residue | 0.008 - 0.012 |
| Conventional tillage | 0.06 - 0.22 |
| Chisel plow | 0.06 - 0.16 |
| Fall disking | 0.30 - 0.50 |
| No till - no residue | 0.04 - 0.10 |
| No till (20 - 40% residue cover) | 0.07 - 0.17 |
| No till (60 - 100% residue cover) | 0.17 - 0.47 |
| Open ground with debris | 0.10 - 0.20 |
| Shallow glow on asphalt or concrete (0.25" to 1.0") | 0.10 - 0.15 |
| Fallow fields | 0.08 - 0.12 |
| Open ground, no debris | 0.04 - 0.10 |
| Asphalt or concrete | 0.02 - 0.05 |

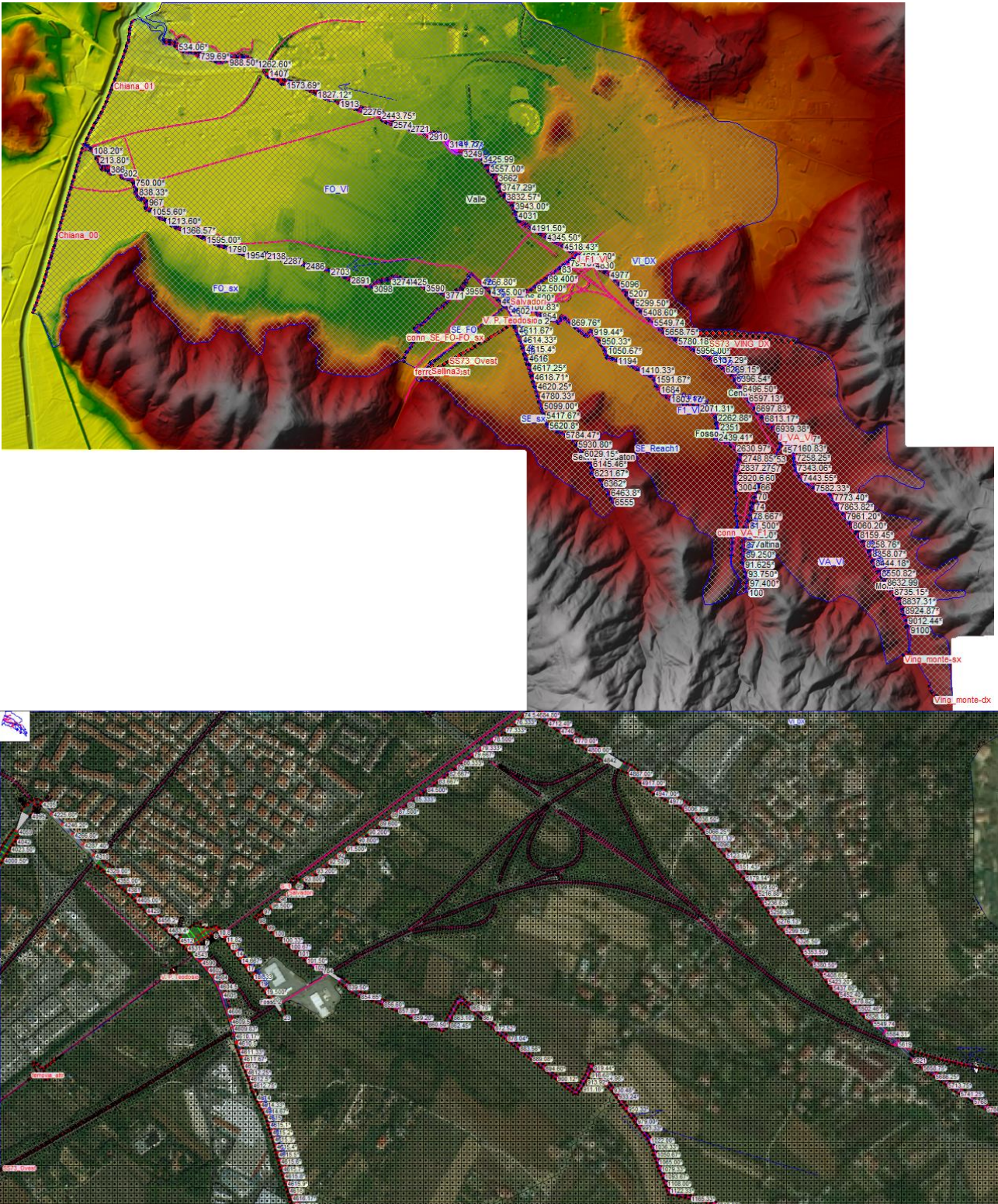
¹Adapted from COE, HEC-1 Manual, 1990 and the COE, Technical Engineering and Design Guide, No. 19, 1997 with modifications.

Figura 4-2: Valori di scabrezza al variare del tipo di copertura per "overland flow"

Le condizioni al contorno di monte sono costituite dagli idrogrammi desunti dall'analisi idrologica (vedi elaborato T00 ID 00 IDR RE 01). Quelle di valle sono sufficientemente distanti in modo da non poter influenzare i risultati di calcolo nei tratti di interesse.

La durata critica del F. Sellina è pari a 1 h, quella del T. Vingone è pari a 2 h.

4.2.1.2. Planimetrie e profili modello idraulico



PROGETTAZIONE ATI:

RELAZIONE IDRAULICA ATTRAVERSAMENTI MINORI (TOMBINI)

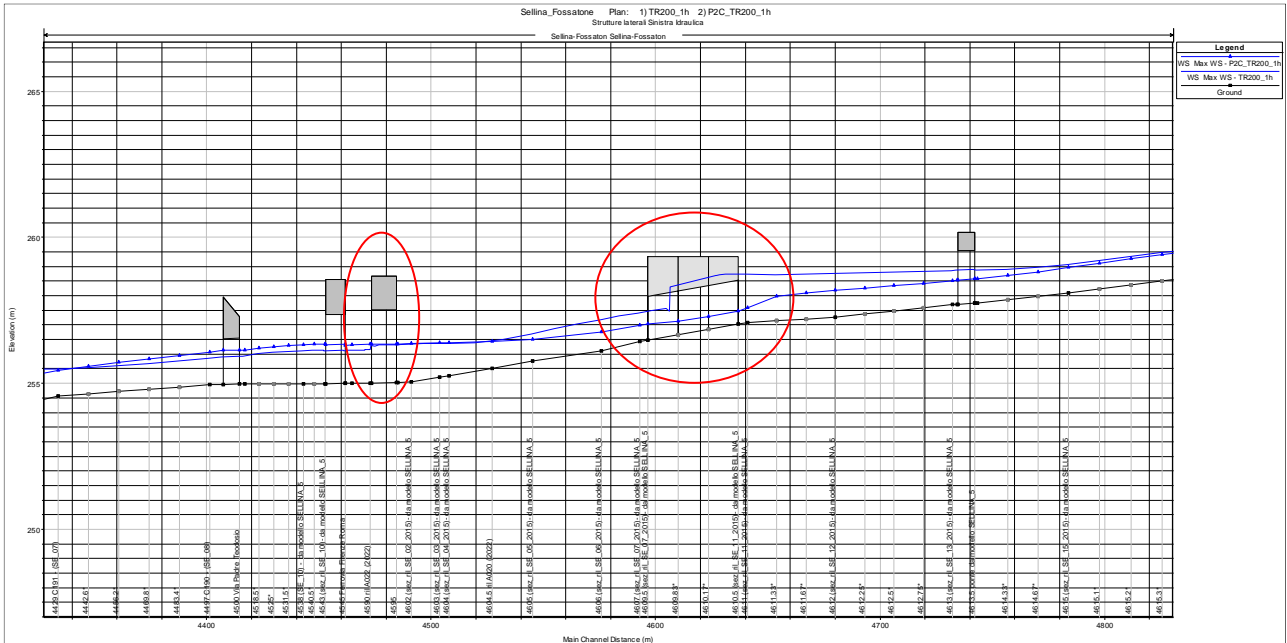


Figura 4-3: profilo longitudinale F Sellina – TR200 – attuale vs progetto

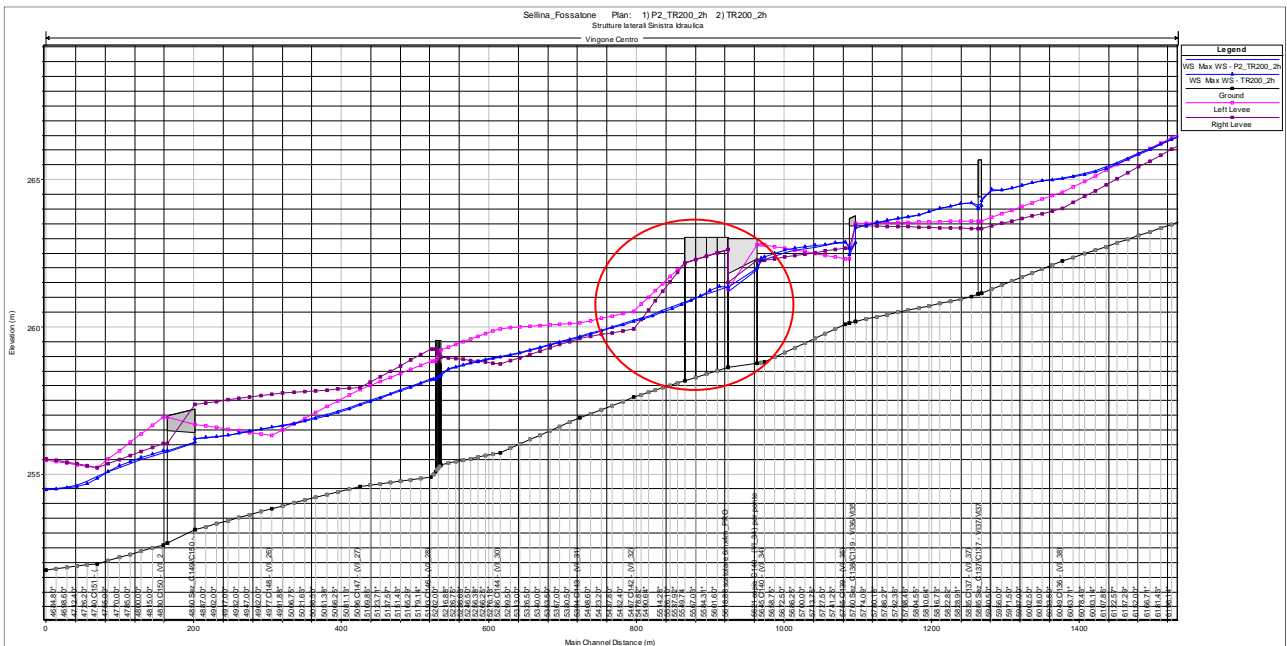


Figura 4-4: profilo longitudinale T. Vingone – TR200 – attuale vs progetto

PROGETTAZIONE ATI:

4.2.1.3. Confronto aree allagabili stato attuale – stato di progetto e verifica di non incremento di rischio in altre aree

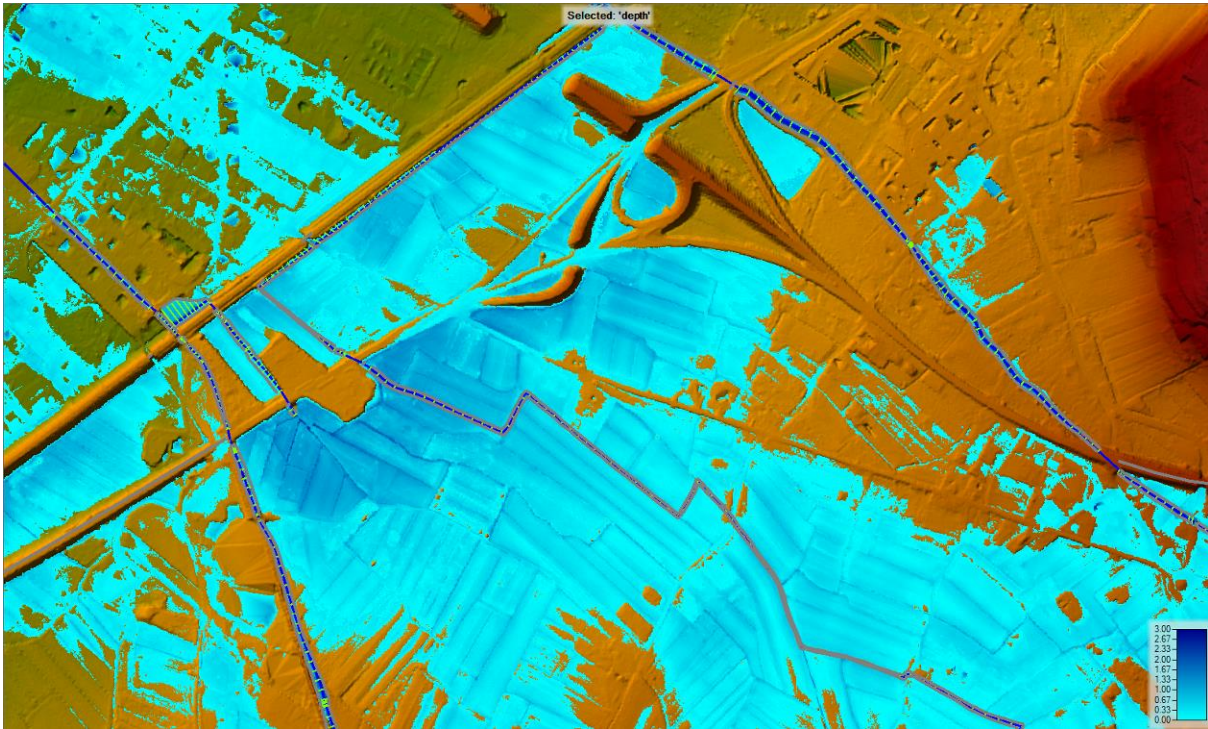


Figura 4-5: inviluppo aree allagabili TR200 – stato attuale

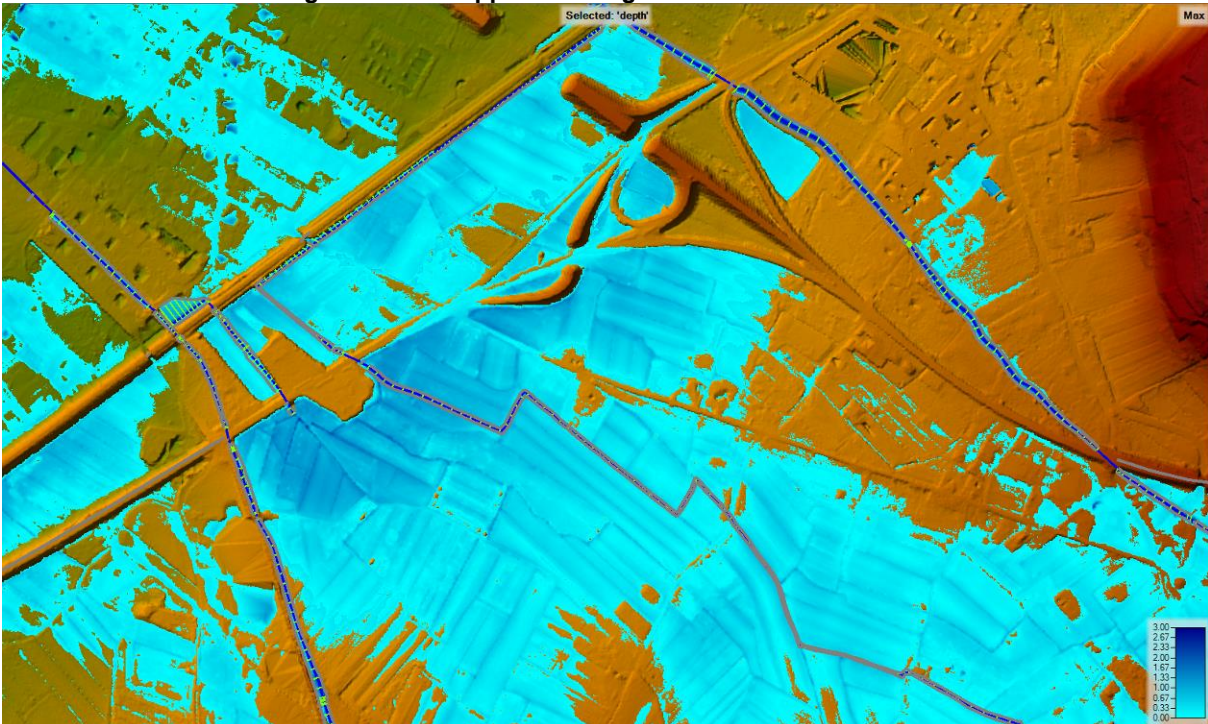


Figura 4-6: inviluppo aree allagabili TR200 – stato di progetto

PROGETTAZIONE ATI:

4.2.1.4. Verifica rispetto franco idraulico minimo in corrispondenza degli attraversamenti di progetto

Tabella 4-1: verifica rispetto franco idraulico minimo in corrispondenza degli attraversamenti di progetto dimensioni

| Corso d'acqua | Tombino / sez Hec-Ras | B (m) | H (m) | Quota intradosso (m s.l.m.) | Tirante TR200 (m s.l.m.) | Franco (m) | Franco min richiesto (m) |
|--|-----------------------|-------|-------|-----------------------------|--------------------------|------------|--------------------------|
| Sellina | 4610.5-4609.5 | 3.5 | 1.5 | 258.53 | 257.47 | 1.06 | 0.5 |
| Sellina | 4595 | 3.5 | 2.5 | 257.52 | 256.35 | 1.17 | 0.83 |
| Vingone (*prolungamento tombino esistente) | 5618.88-5549.74 | 6 | 4 | 262.63 | 261.36 | 1.27* | 1.33 |

4.2.2. Modello idraulico “RIO DELL’OLMO - RIO DI SANT’ANTONIO – RIO DI RIOLO”

4.2.2.1. Descrizione, scabrezze, condizioni al contorno e durata critica

I tratti dei corsi d’acqua modellati sono:

- **Rio dell’Olmo:** dalla sezione posta circa 55 m a valle dell’attraversamento della linea ferroviaria Firenze-Roma in località Ripa dell’Olmo, alla sezione posta circa 90 m a monte dell’immissione nel Canale Maestro della Chiana, per una lunghezza complessiva di circa 2.4 Km.
- **Rio di Sant’Antonio:** dalla sezione posta circa 165 m a monte dell’attraversamento delle SR 71 Umbro-Casentinese-Romagnola in località Sant’Anastasio, fino alla sezione posta circa 660 m a valle dell’attraversamento della linea ferroviaria Firenze-Roma, per una lunghezza complessiva di circa 1.4 Km.
- **Rio di Riolo:** dalla sezione posta in località Pieve a Quarto, alla sezione posta 14 m a valle dell’attraversamento della linea ferroviaria Firenze-Roma, per una lunghezza complessiva di circa 1.0 Km.

Per quanto riguarda le scabrezze medie attribuibili ai corsi d’acqua sulla base dello stato dei luoghi e coerentemente ai normali valori proposti in letteratura², si è assunto, con riferimento al valore del coefficiente n di Manning:

- Olmo: $n = 0.03 \div 0.045 \text{ m}^{-1/3}\text{s}$
- Sant’Antonio: $n = 0.025 \div 0.04 \text{ m}^{-1/3}\text{s}$
- Riolo: $n = 0.035 \div 0.04 \text{ m}^{-1/3}\text{s}$

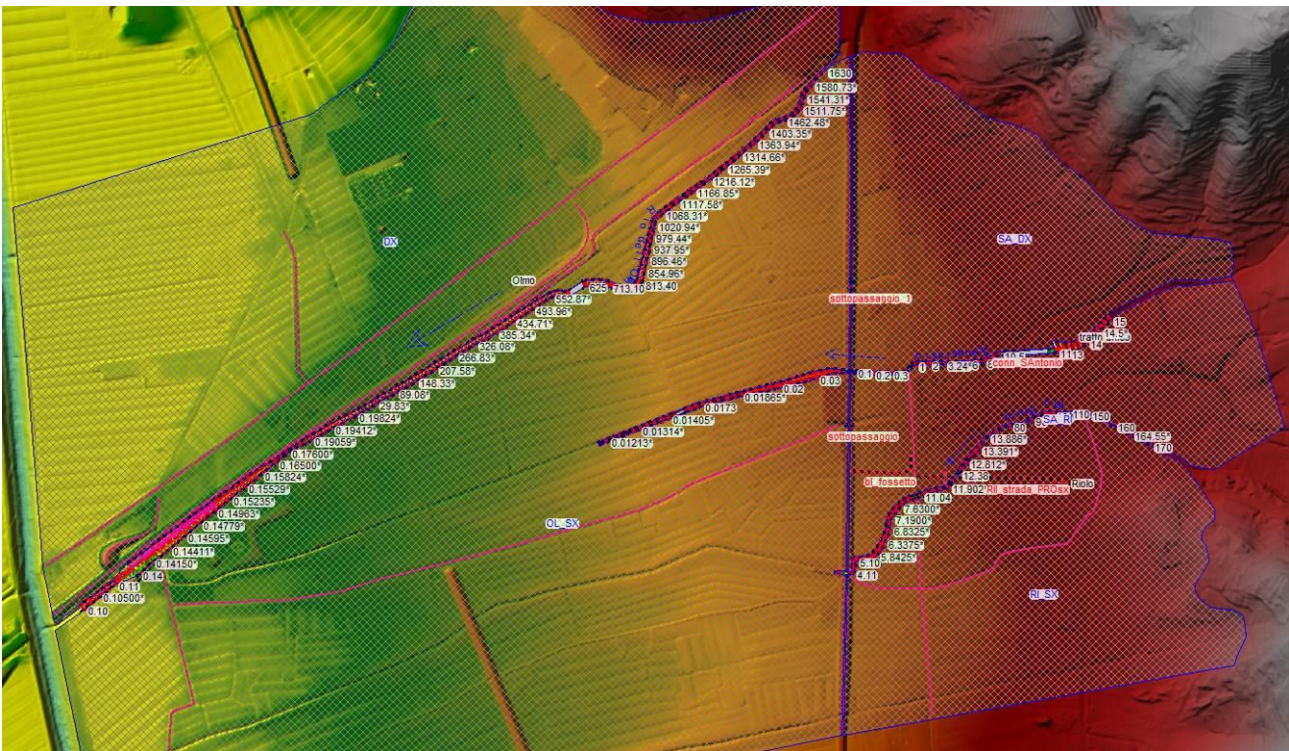
² Manuale di Ingegneria Civile - Volume I .Ed.Zanichelli/Esac.

Per quanto riguarda la scabrezza extra-alveo adottata nella modellazione idraulica bidimensionale del cosiddetto "overland flow", si è fatto riferimento alla tabella di Figura 4-2 tratta dalla letteratura di settore: il valore del coefficiente n di Manning assunto è pari a $0.10 \text{ m}^{-1/3}\text{s}$.

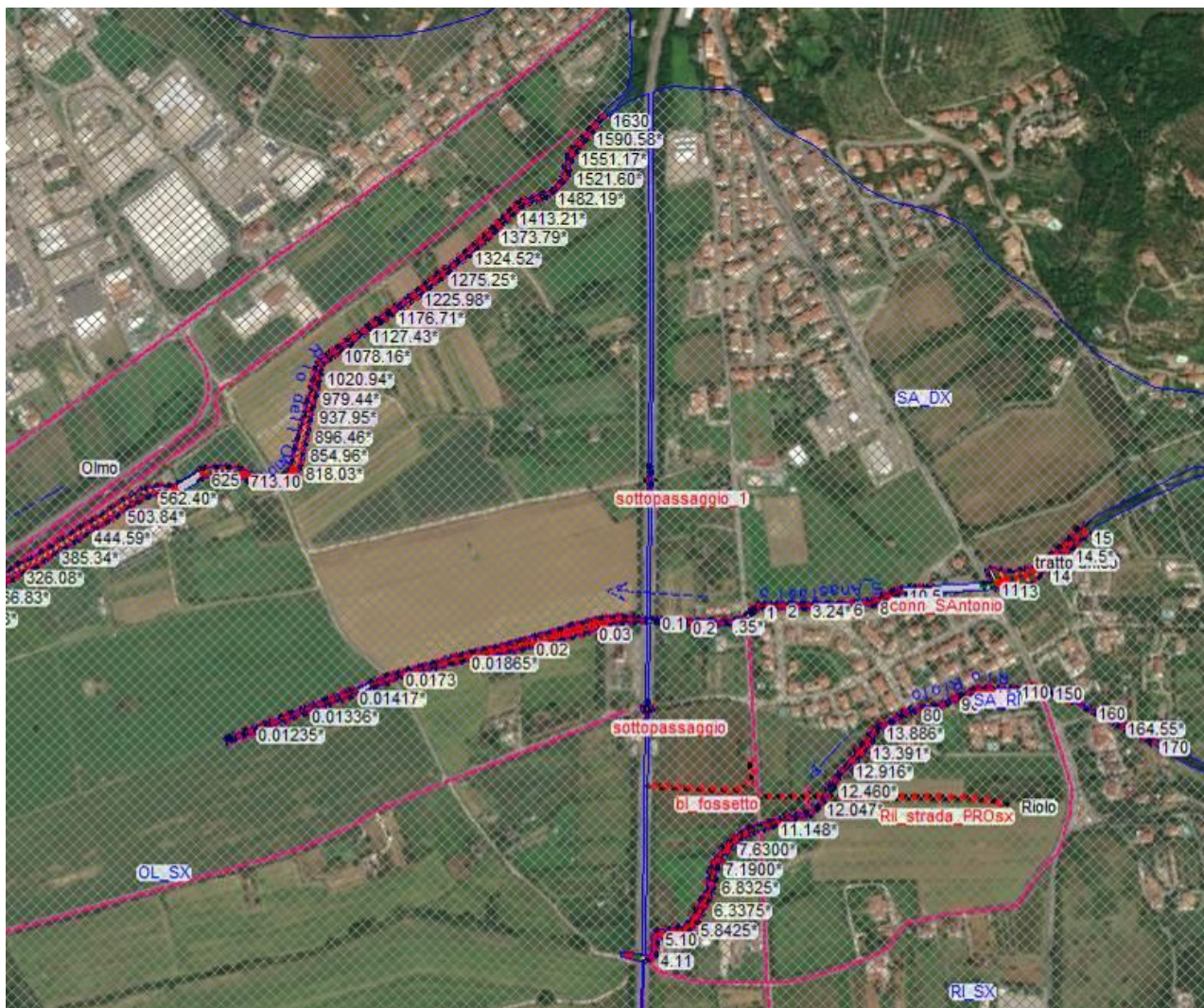
Le condizioni al contorno di monte sono costituite dagli idrogrammi desunti dall'analisi idrologica (vedi elaborato T00 ID 00 IDR RE 01). Come condizioni al contorno di valle sono state assunte le altezze di moto uniforme.

Le durate critiche del Rio dell'Olmo e del Rio di Sant'Antonio sono pari a 30 min, quella del Rio di Riolo è pari a 1 ora.

4.2.2.2. Planimetrie e profili modello idraulico



PROGETTAZIONE ATI:



PROGETTAZIONE ATI:

RELAZIONE IDRAULICA ATTRAVERSAMENTI MINORI (TOMBINI)

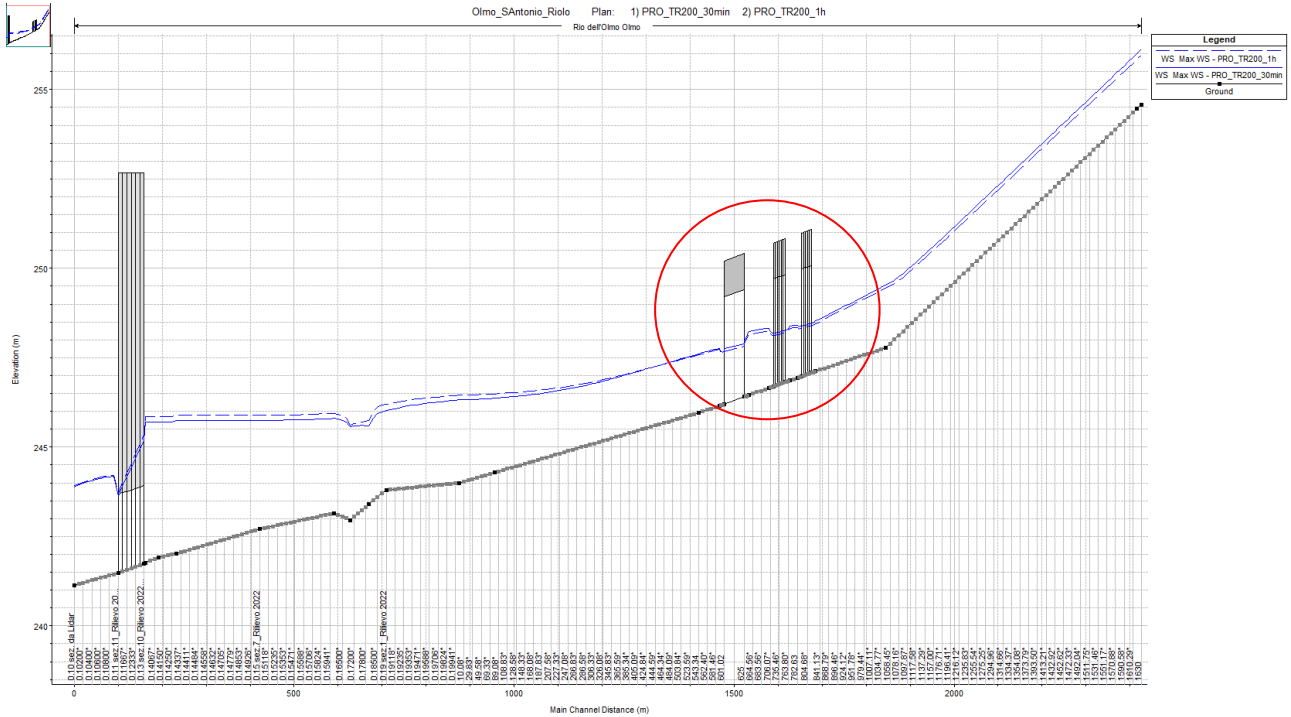


Figura 4-7: profilo longitudinale Rio dell'Olmo – TR200 – configurazione di progetto

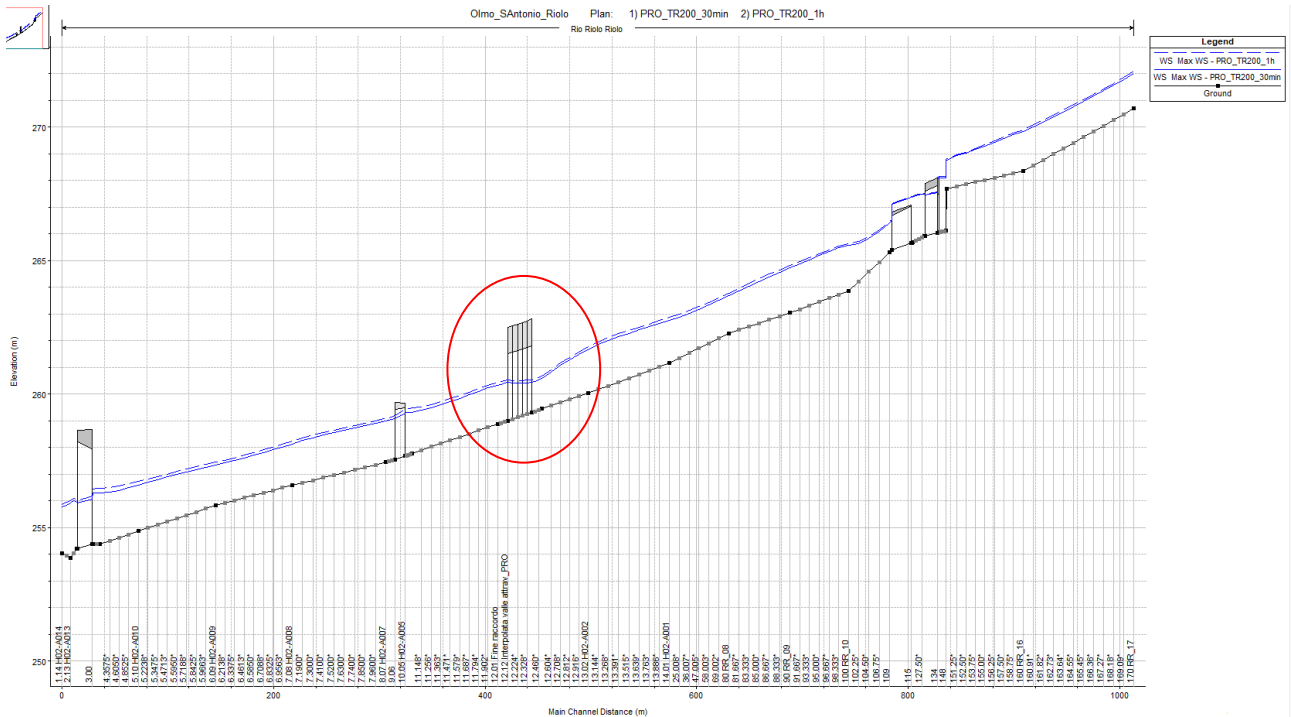


Figura 4-8: profilo longitudinale Rio di Riolo – TR200 – configurazione di progetto

PROGETTAZIONE ATI:

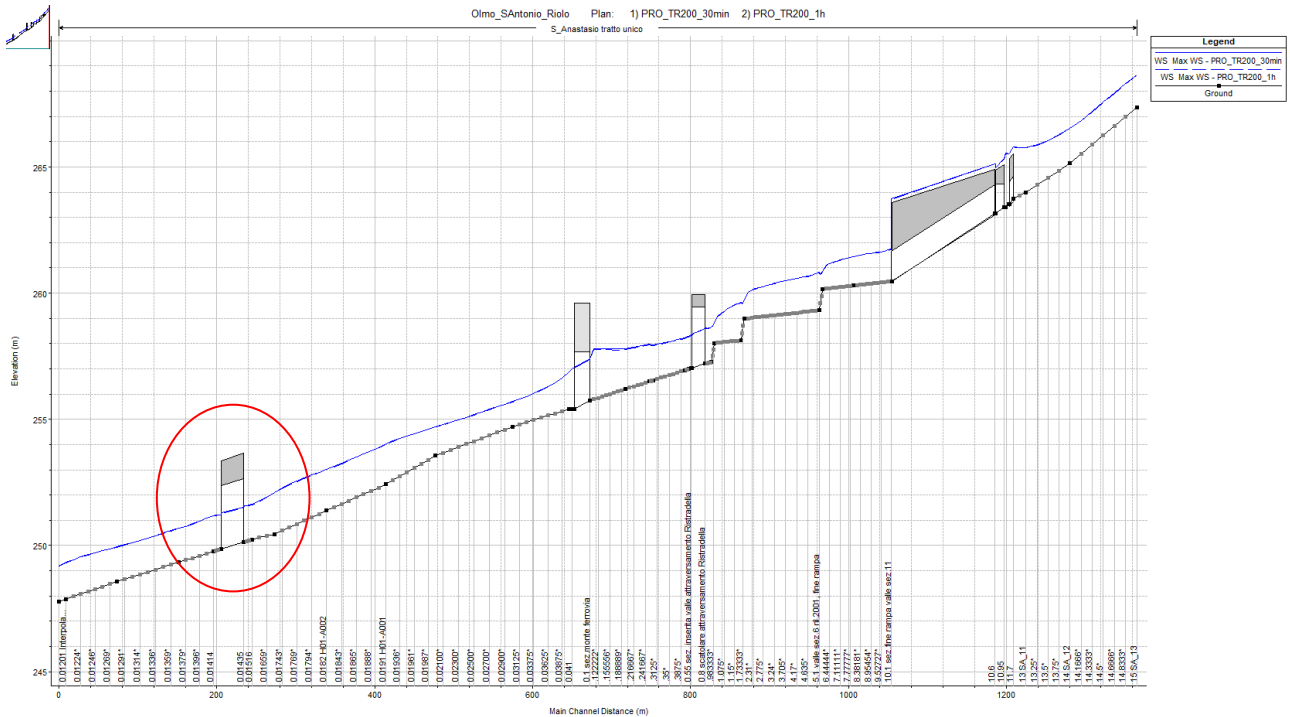


Figura 4-9: profilo longitudinale Rio di Sant'Antonio – TR200 – configurazione di progetto

4.2.2.3. Confronto aree allagabili stato attuale – stato di progetto e verifica di non incremento di rischio in altre aree

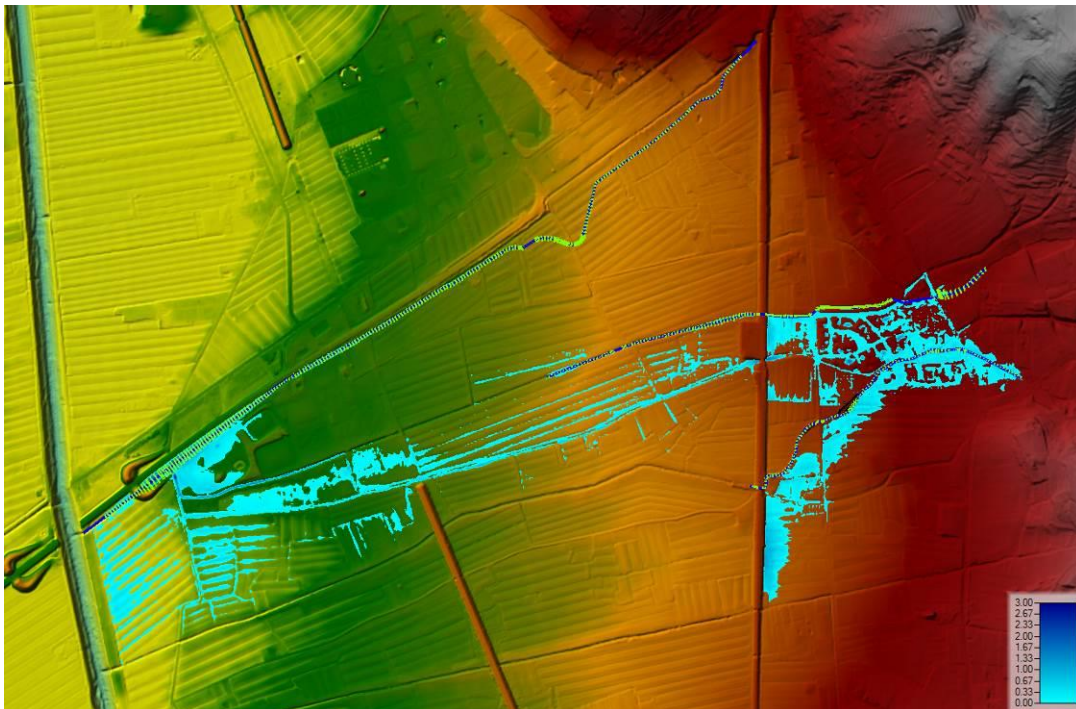


Figura 4-10: involucro aree allagabili TR200 – stato di progetto

PROGETTAZIONE ATI:

Per la consultazione delle aree allagabili allo stato attuale, da confrontare con i risultati ottenuti nella configurazione di progetto, si rimanda al PGRA oppure alla cartografia di Piano Strutturale e di Piano Operativo vigenti del Comune di Arezzo.

4.2.2.4. Verifica rispetto franco idraulico minimo in corrispondenza degli attraversamenti di progetto

Tabella 4-2: verifica rispetto franco idraulico minimo in corrispondenza degli attraversamenti di progetto

| Corso d'acqua | Tombino / sez Hec-Ras | Dimensioni | | Quota intradosso (m s.l.m.) | Tirante TR200 (m s.l.m.) | Franco (m) | Franco min richiesto (m) |
|---------------|-----------------------|------------|-------|-----------------------------|--------------------------|------------|--------------------------|
| | | B (m) | H (m) | | | | |
| Riolo | sez. 12.38- 12.12 | 4 | 2.5 | 261.8 | 260.53 | 1.27 | 0.83 |
| Olmo | sez-813.40-791.60 | 4.5 | 3 | 250.08 | 248.46 | 1.62 | 1.00 |
| Olmo | sez. 757.82-713.10 | 4.5 | 3 | 249.82 | 248.26 | 1.56 | 1.00 |
| Olmo | 625 | 4.5 | 3 | 249.41 | 247.95 | 1.46 | 1.00 |
| S. Antonio | 0.01435 | 4 | 2.5 | 252.65 | 251.57 | 1.08 | 0.83 |

4.2.3. Modello idraulico "RIO DELLE QUERCE – FOSSO AV 43922"

4.2.3.1. Descrizione, scabrezze, condizioni al contorno e durata critica

I tratti dei corsi d'acqua modellati sono:

- **Rio delle Querce:** dalla sezione posta circa 350 m a monte dell'attraversamento della linea ferroviaria Firenze-Roma lungo il confine Nord dell'area industriale in località San Zeno, alla sezione posta circa 130 m a valle della Strada Comunale di San Zeno, per una lunghezza complessiva di circa 600 m.
- **Fosso AV 43922:** denominato "affluente", dalla sezione posta circa in località San Zeno circa 80 m a monte del sottopassaggio della linea Ferroviaria Firenze- Roma, fino alla confluenza con il Rio delle Querce, per una lunghezza complessiva di circa 160 m.

Per quanto riguarda le scabrezze medie attribuibili ai corsi d'acqua sulla base dello stato dei luoghi e coerentemente ai normali valori proposti in letteratura³, si è assunto, con riferimento al valore del coefficiente n di Manning:

- Querce: $n = 0.03 \div 0.04 \text{ m}^{-1/3}\text{s}$
- Fosso AV 43922: $n = 0.03 \div 0.04 \text{ m}^{-1/3}\text{s}$

Per quanto riguarda la scabrezza extra-alveo adottata nella modellazione idraulica bidimensionale del cosiddetto "overland flow", si è fatto riferimento alla tabella di Figura 4-2 tratta dalla letteratura di settore: il valore del coefficiente n di Manning assunto è pari a $0.06 \text{ m}^{-1/3}\text{s}$.

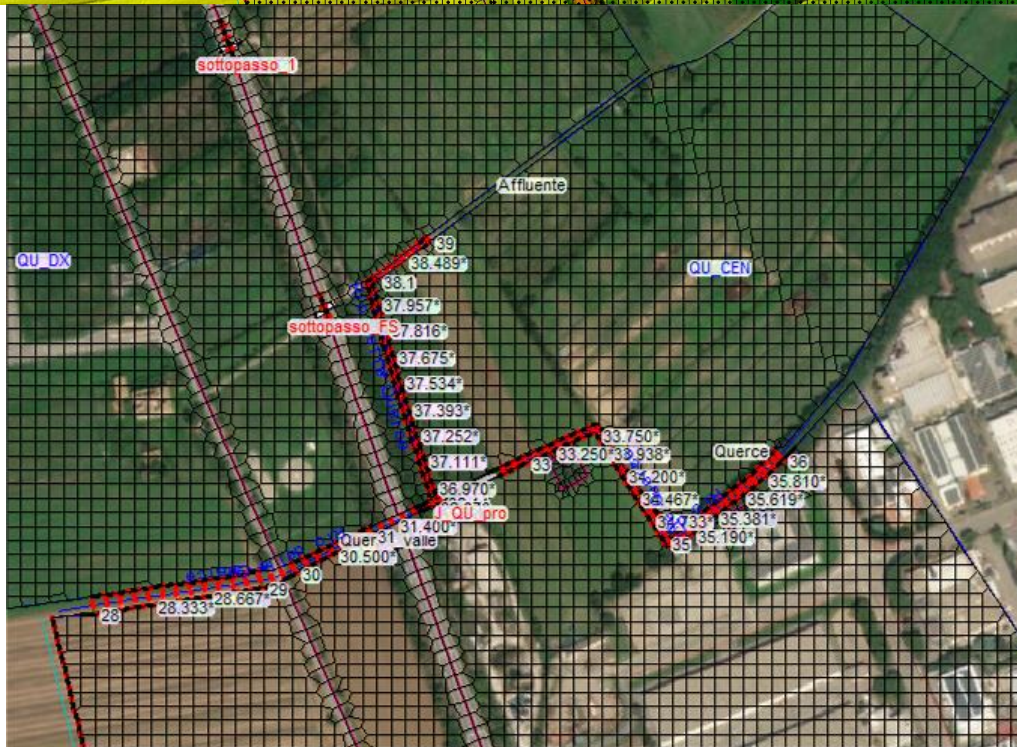
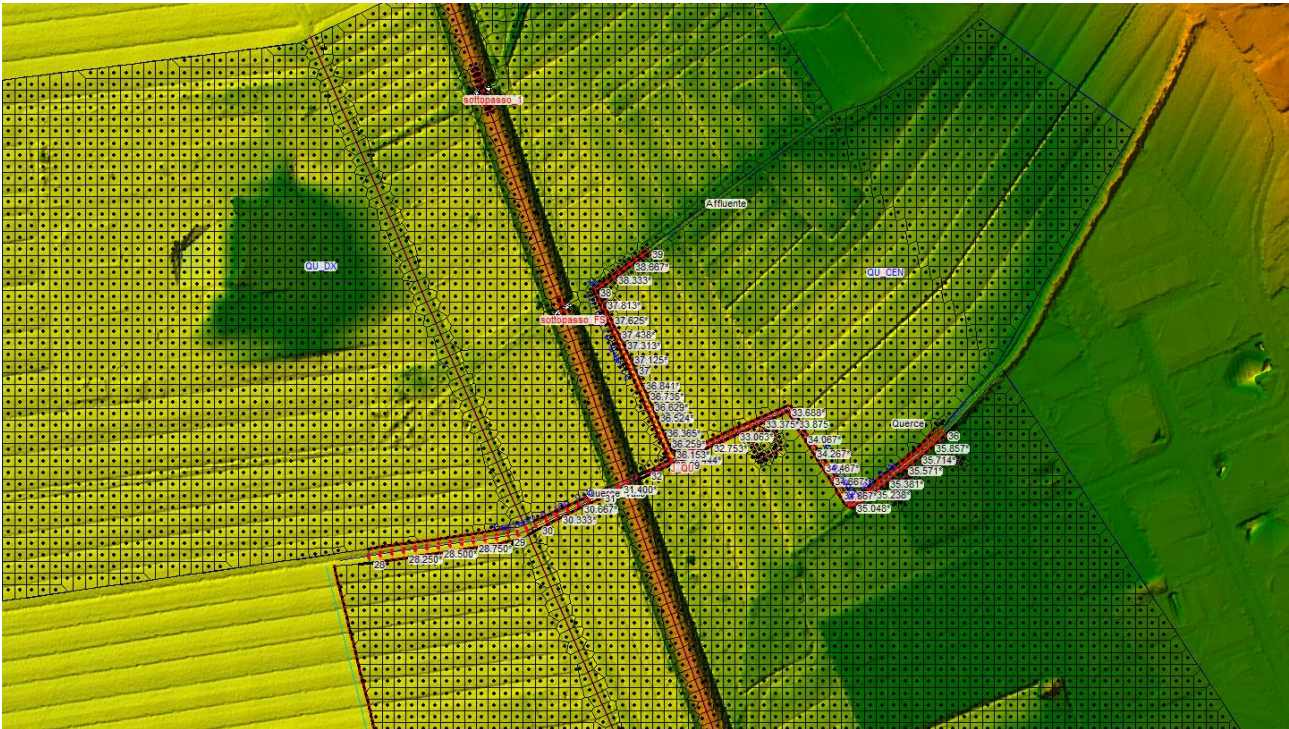
Le condizioni al contorno di monte sono costituite dagli idrogrammi desunti dall'analisi idrologica (vedi elaborato T00 ID 00 IDR RE 01). Come condizione al contorno di valle è stata assunta l'altezza di moto uniforme.

³ Manuale di Ingegneria Civile - Volume I .Ed.Zanichelli/Esac.

PROGETTAZIONE ATI:

La durata critica del Rio delle Querce è pari a 30 min.

4.2.3.2. Planimetrie e profili modello idraulico



PROGETTAZIONE ATI:

RELAZIONE IDRAULICA ATTRAVERSAMENTI MINORI (TOMBINI)

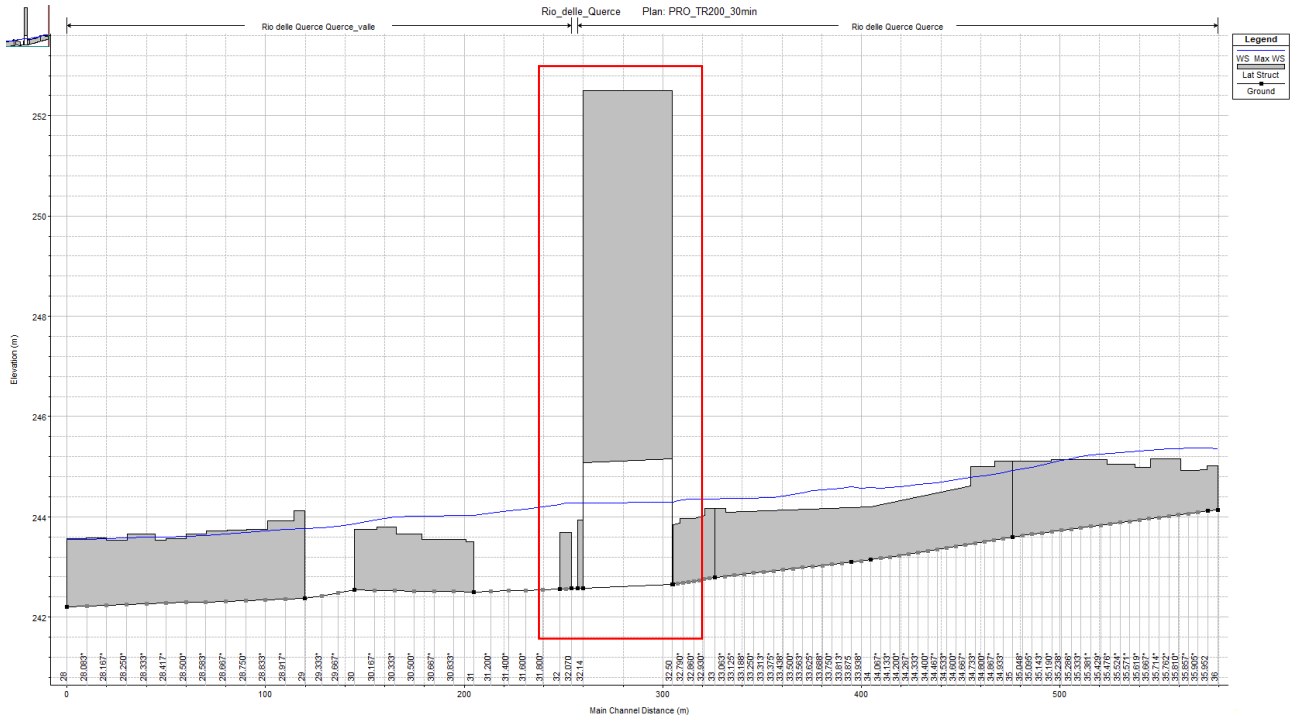


Figura 4-11: profilo longitudinale Rio delle Querce – TR200 – configurazione di progetto

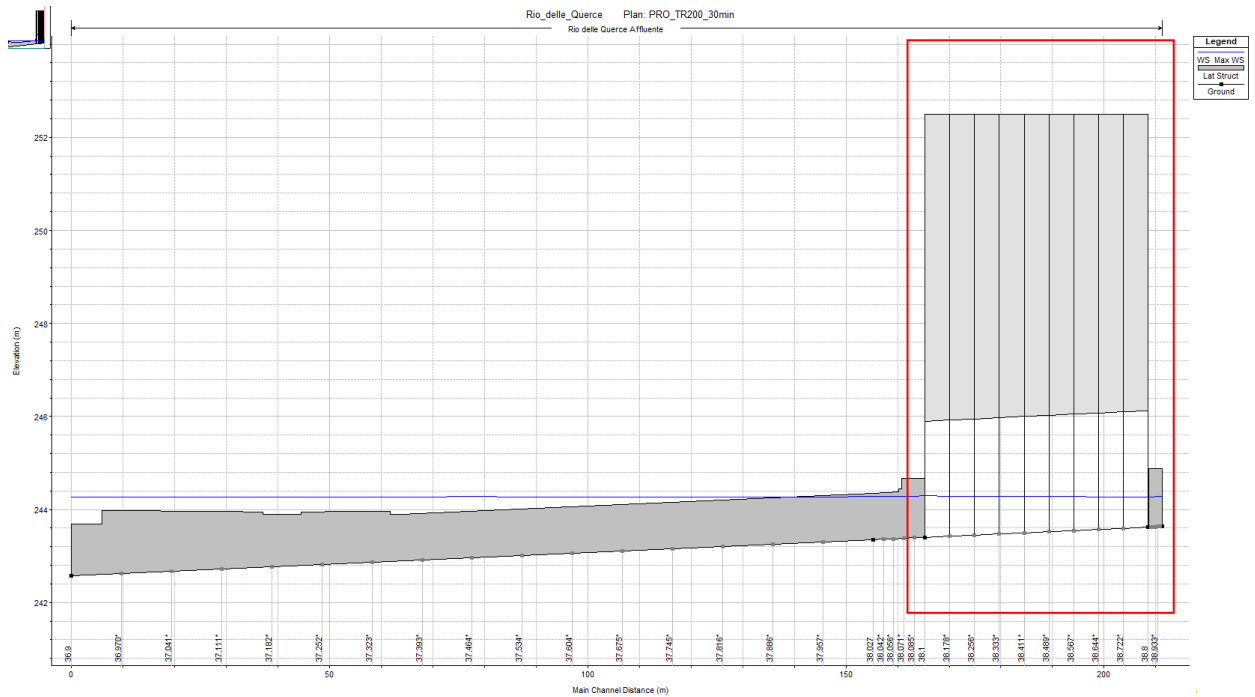


Figura 4-12: profilo longitudinale fosso AV 43922 – TR200 – configurazione di progetto

PROGETTAZIONE ATI:

4.2.3.3. Confronto aree allagabili stato attuale – stato di progetto e verifica di non incremento di rischio in altre aree

Il confronto tra la Figura 4-13 e Figura 4-14 evidenzia che le aree allagabili per TR = 200 anni subiscono, tra stato attuale e progetto, locali variazioni, sia in riduzione che in aumento, che riguardano tuttavia aree agricole e che pertanto non danno luogo ad incrementi di rischio idraulico.

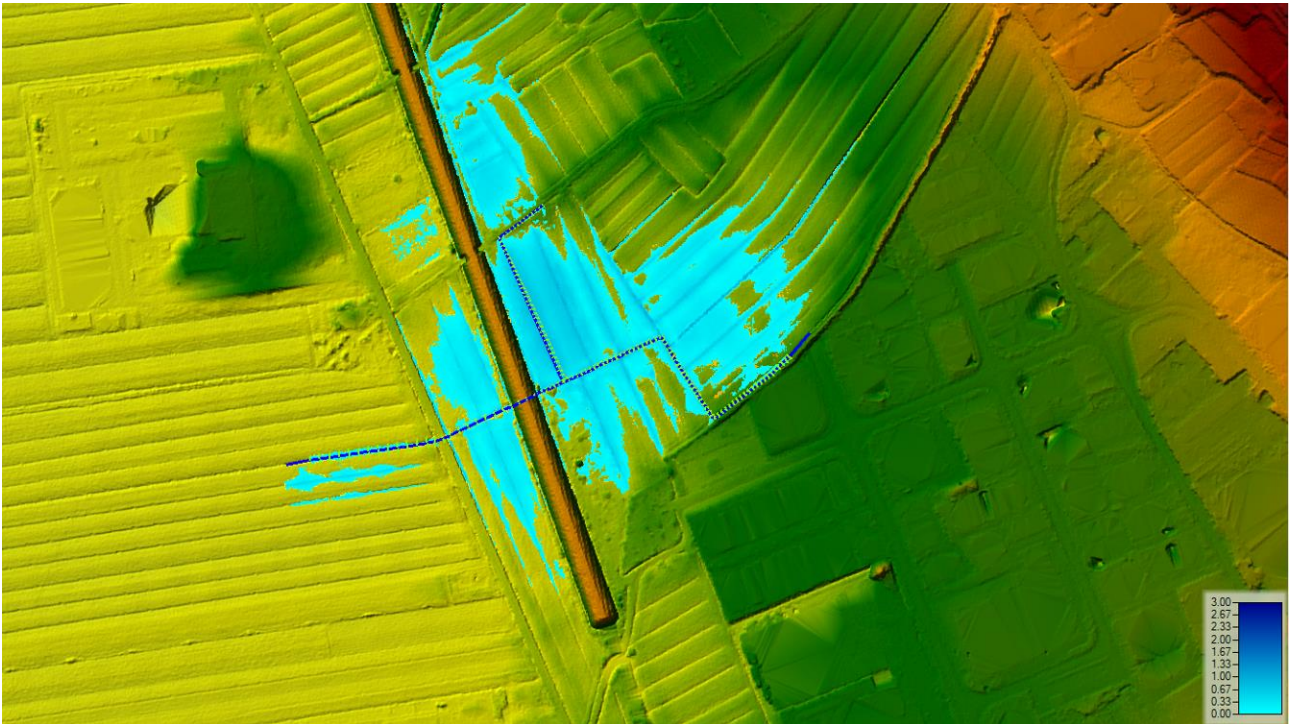


Figura 4-13: inviluppo aree allagabili TR200 – stato attuale

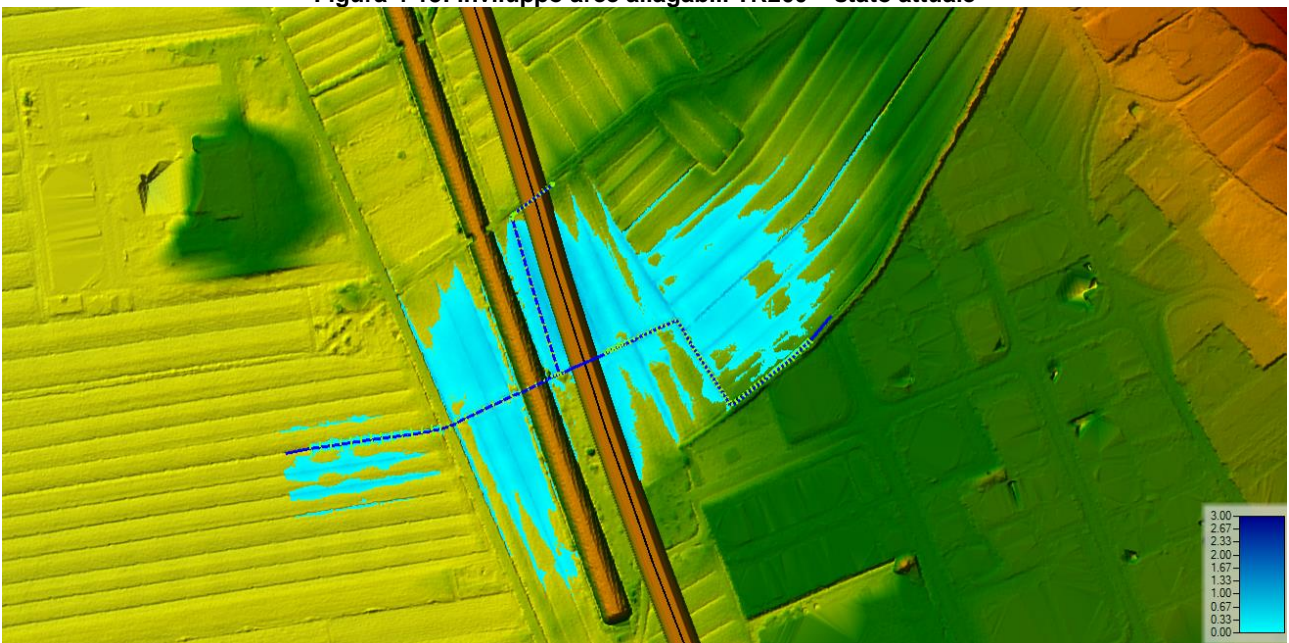


Figura 4-14: inviluppo aree allagabili TR200 – stato di progetto

PROGETTAZIONE ATI:

4.2.3.4. Verifica rispetto franco idraulico minimo in corrispondenza degli attraversamenti di progetto

Tabella 4-3: verifica rispetto franco idraulico minimo in corrispondenza degli attraversamenti di progetto

| Corso d'acqua | Tombino / sez Hec-Ras | Dimensioni | | Quota intradosso (m s.l.m.) | Tirante TR200 (m s.l.m.) | Franco (m) | Franco min richiesto (m) |
|-----------------------|-----------------------|------------|-------|-----------------------------|--------------------------|------------|--------------------------|
| | | B (m) | H (m) | | | | |
| Querce Fosso AV 43922 | 32.50 | 3.5 | 2.5 | 245.15 | 244.29 | 0.86 | 0.83 |
| | sez.38.8-38.1 | 3.5 | 2.5 | 246.12 | 244.27 | 1.85 | 0.83 |

4.2.4. Modello idraulico "TORRENTE LOTA - TORRENTE VINGONE (2) – FOSSO AV 20123"

4.2.4.1. Descrizione, scabrezze, condizioni al contorno e durata critica

I tratti dei corsi d'acqua modellati sono:

- **Torrente Lota:** dalla sezione posta circa 250 m a monte dell'attraversamento della linea ferroviaria Direttissima Firenze-Roma, alla sezione posta subito a monte dell'attraversamento del raccordo autostradale Arezzo-Battifolle in località Ponte a Chiani, per una lunghezza complessiva di circa 700 m.
- **Torrente Vingone (2):** dalla sezione posta in località Ponte alla Nave, alla sezione posta in corrispondenza dell'immissione nel Torrente Lota, per una lunghezza complessiva di circa 700 m.
- **Fosso AV20123:** denominato "fosso 1", da località Il Prato all'immissione nel Torrente Lota, per una lunghezza complessiva di circa 400 m.

Per quanto riguarda le scabrezze medie attribuibili ai corsi d'acqua sulla base dello stato dei luoghi e coerentemente ai normali valori proposti in letteratura⁴, si è assunto, con riferimento al valore del coefficiente n di Manning:

- Lota: $n = 0.03 \div 0.045 \text{ m}^{-1/3} \text{ s}$
- Vingone (2): $n = 0.03 \div 0.045 \text{ m}^{-1/3} \text{ s}$
- Fosso AV20123: $n = 0.03 \div 0.045 \text{ m}^{-1/3} \text{ s}$

Per quanto riguarda la scabrezza extra-alveo adottata nella modellazione idraulica bidimensionale del cosiddetto "overland flow", si è fatto riferimento alla tabella di Figura 4-2 tratta dalla letteratura di settore: il valore del coefficiente n di Manning assunto è pari a $0.10 \text{ m}^{-1/3} \text{ s}$.

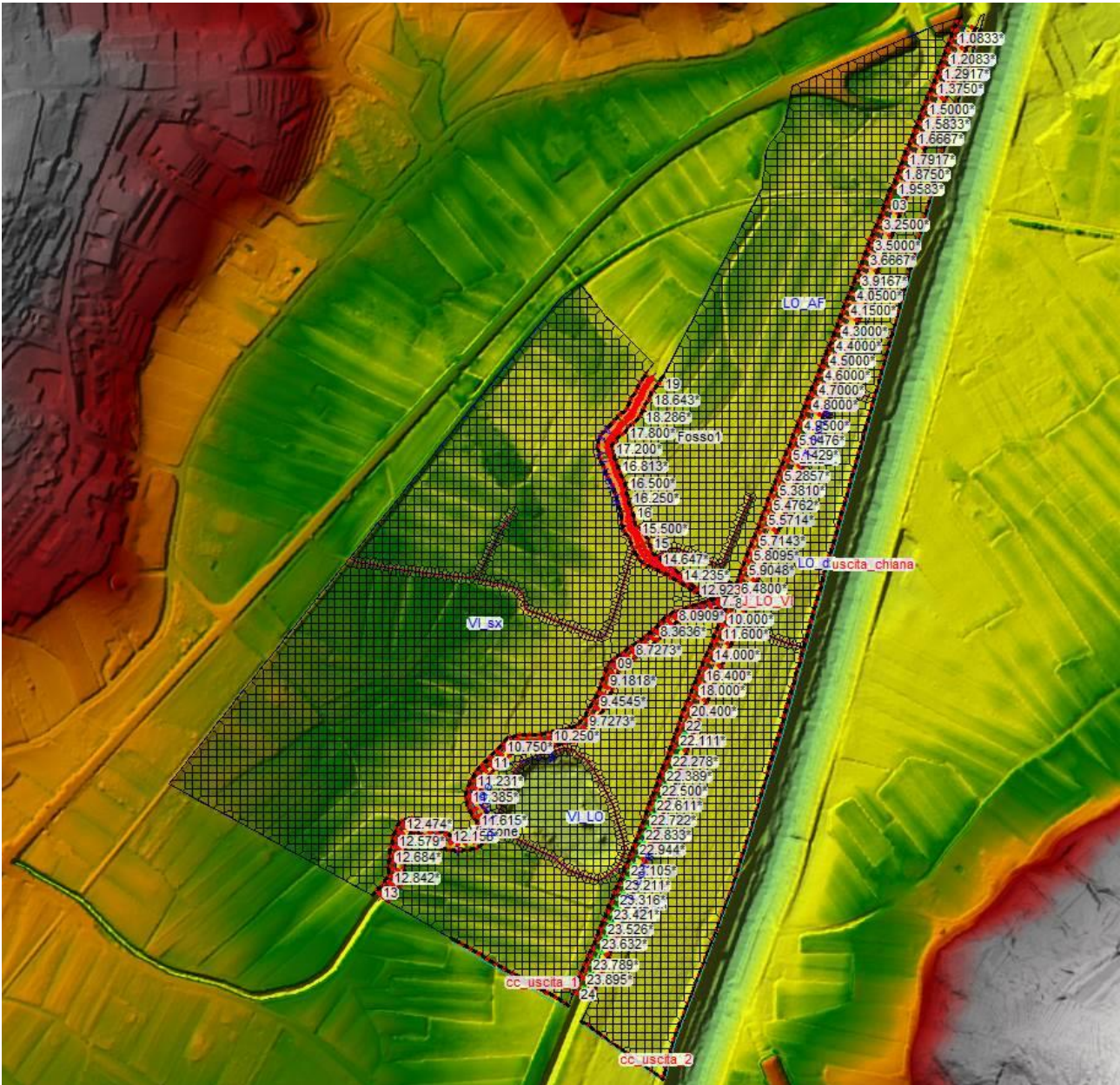
⁴ Manuale di Ingegneria Civile - Volume I .Ed.Zanichelli/Esac.

PROGETTAZIONE ATI:

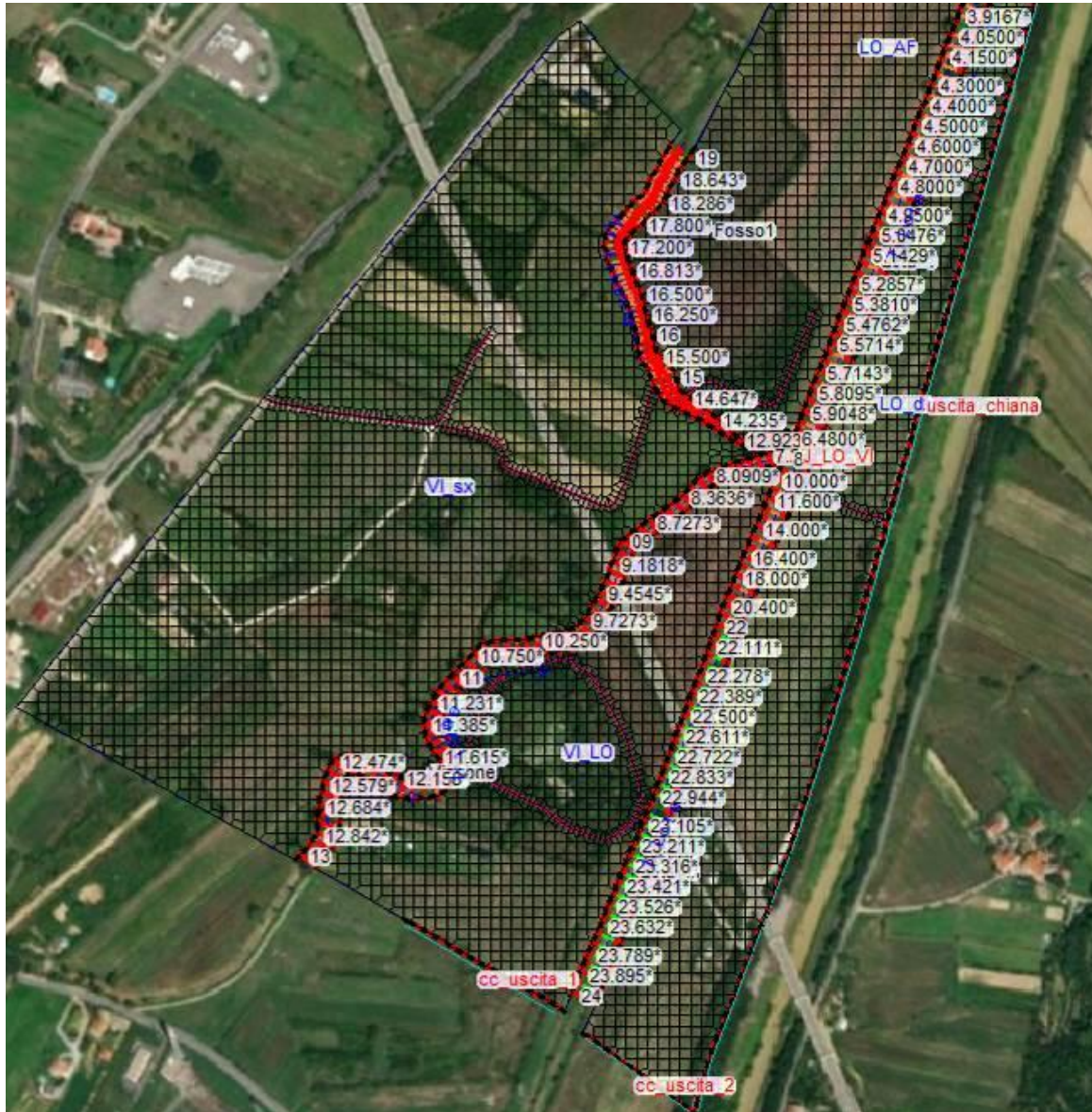
Le condizioni al contorno di monte sono costituite dagli idrogrammi desunti dall'analisi idrologica (vedi elaborato T00 ID 00 IDR RE 01). Come condizione al contorno di valle è stata assunta l'altezza di moto uniforme.

La durata critica del sistema è pari a 1 ora.

4.2.4.2. Planimetrie e profili modello idraulico



PROGETTAZIONE ATI:



Nelle figure che seguono, contenenti i profili longitudinali dei corsi d'acqua investigati, è indicata l'ubicazione planimetrica del viadotto di progetto. Detto viadotto non è stato inserito nel modello numerico come impalcato ma solo come pile e spalle del DTM associato alla configurazione geometrica di progetto stanti le quote dell'impalcato stesso, molto superiori a quelle del piano campagna (vedi Tabella 4-4).

PROGETTAZIONE ATI:

RELAZIONE IDRAULICA ATTRAVERSAMENTI MINORI (TOMBINI)

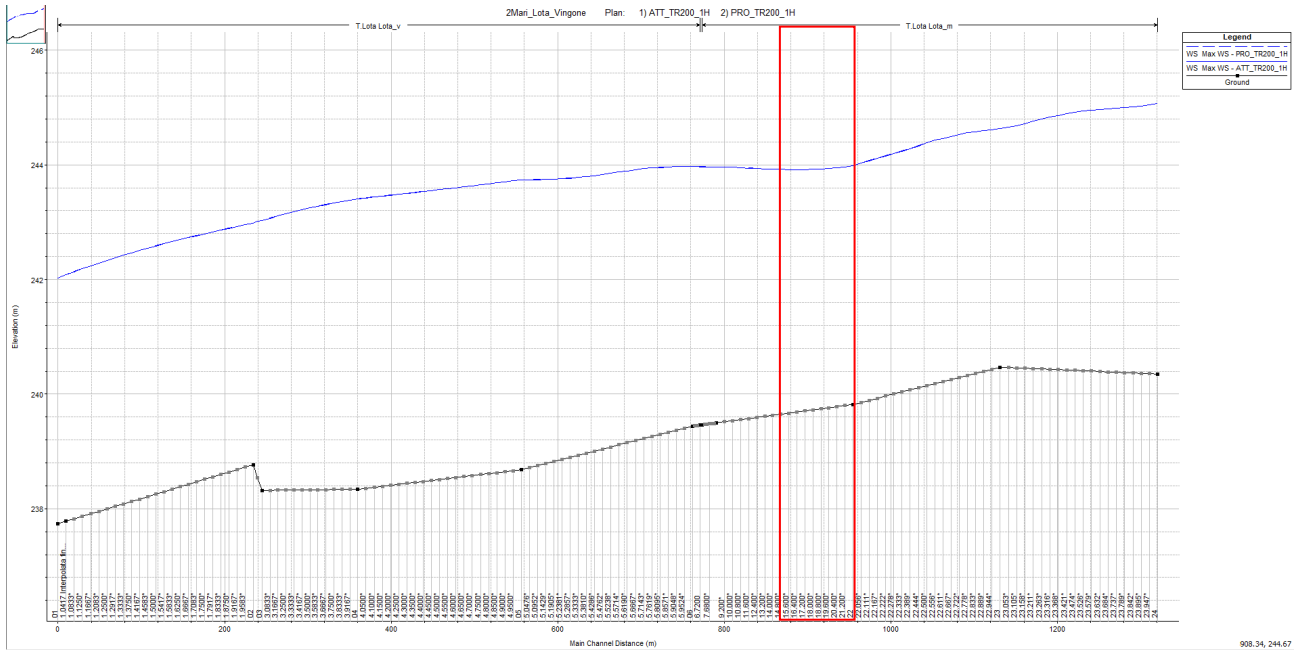


Figura 4-15: profilo longitudinale T. Lota – TR200 – attuale vs progetto

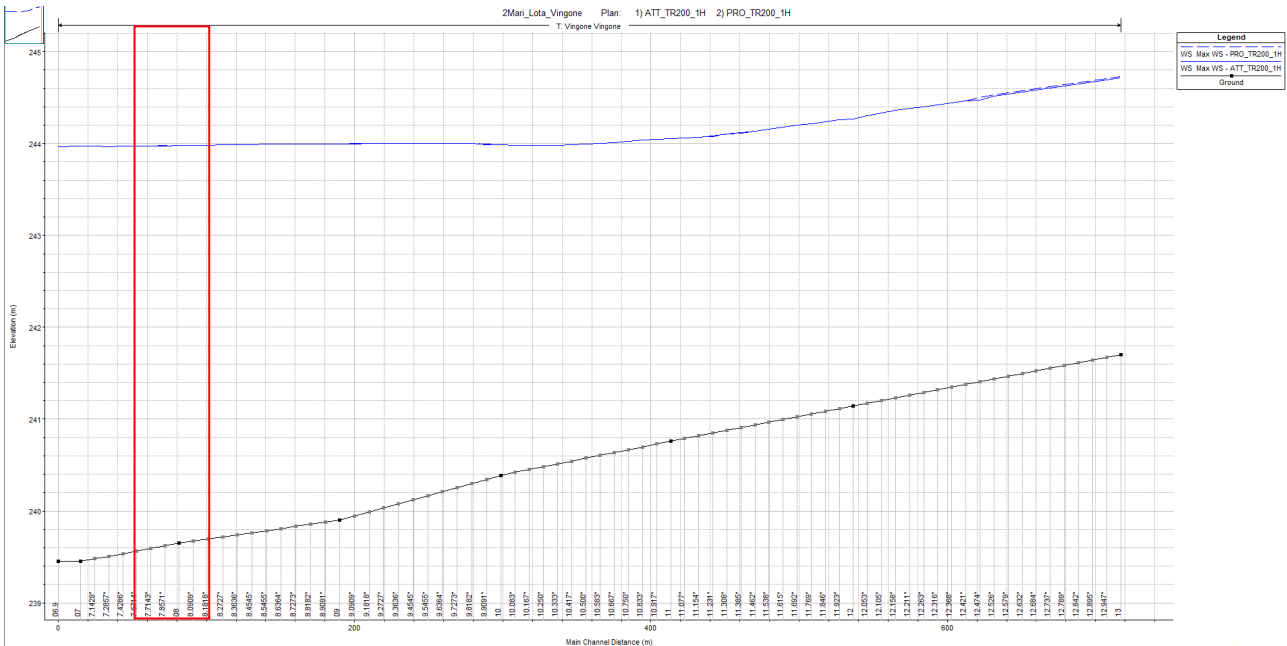


Figura 4-16: profilo longitudinale T. Vingone (2) - TR200 - attuale vs progetto

PROGETTAZIONE ATI:

RELAZIONE IDRAULICA ATTRAVERSAMENTI MINORI (TOMBINI)

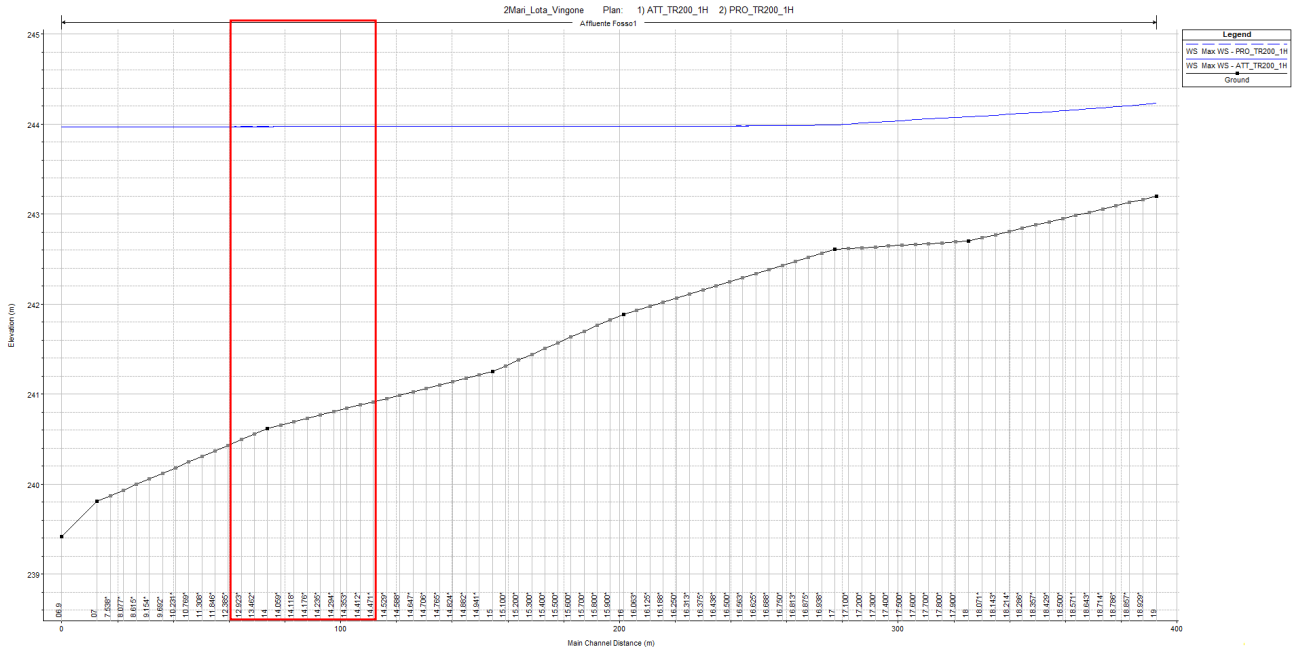


Figura 4-17: profilo longitudinale F.so AV20123 – TR200 – attuale vs progetto

PROGETTAZIONE ATI:

4.2.4.3. Confronto aree allagabili stato attuale – stato di progetto e verifica di non incremento di rischio in altre aree

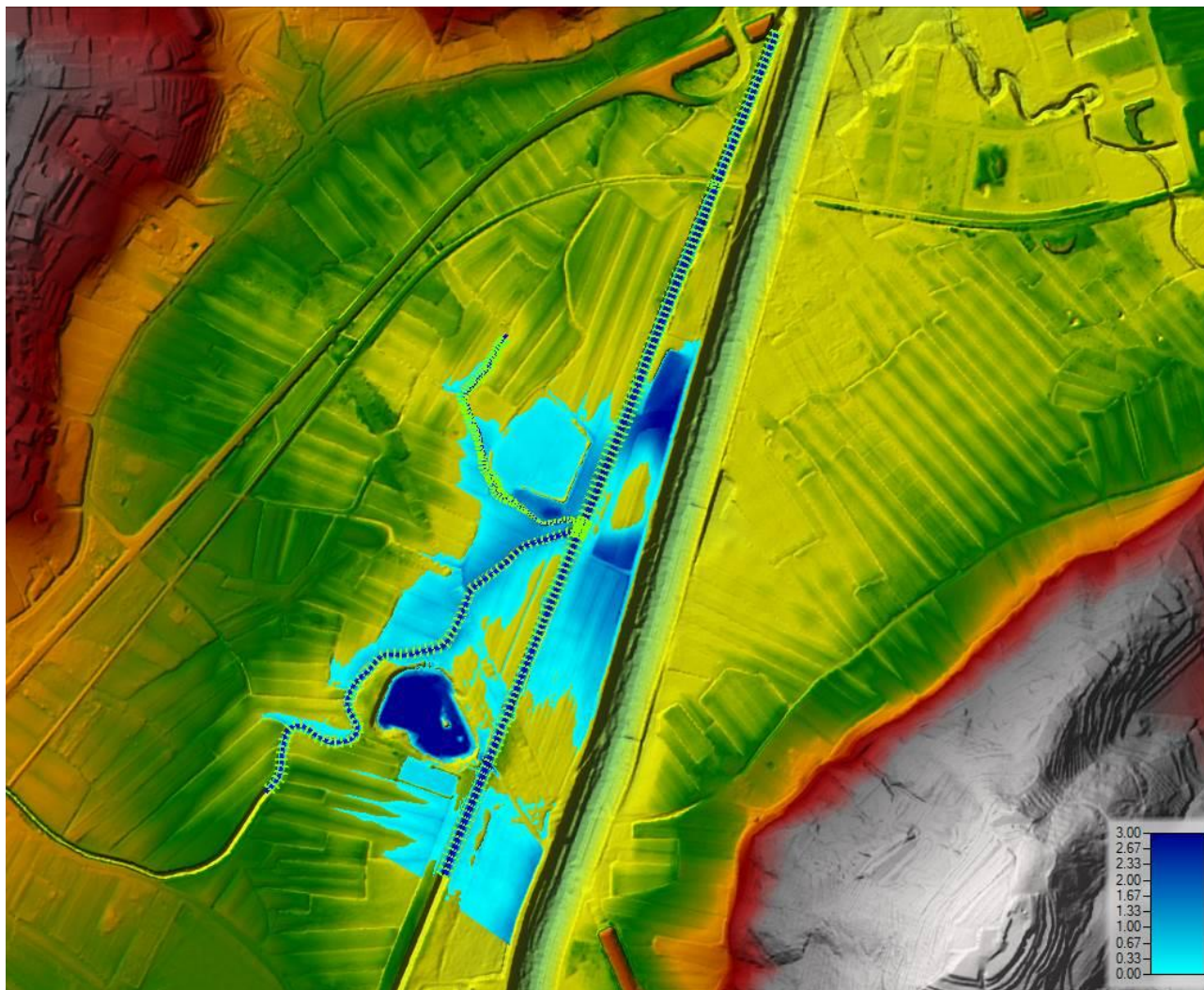


Figura 4-18: inviluppo aree allagabili TR200 – stato attuale

PROGETTAZIONE ATI:

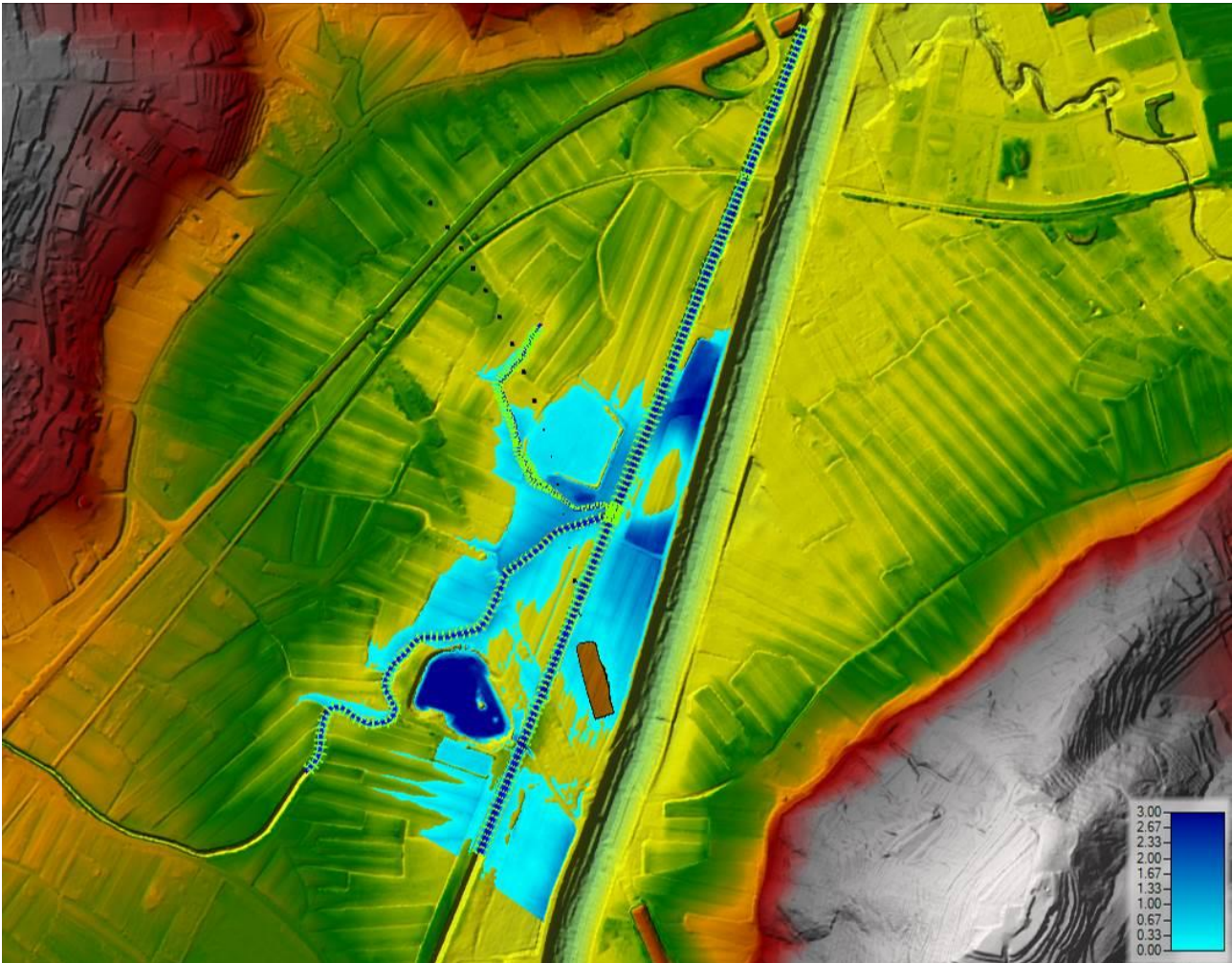


Figura 4-19: inviluppo aree allagabili TR200 – stato di progetto

4.2.4.4. Verifica rispetto franco idraulico minimo in corrispondenza degli attraversamenti di progetto

Tabella 4-4: verifica rispetto franco idraulico minimo in corrispondenza degli attraversamenti di progetto
dimensioni

| Corso d'acqua | Tombino / sez Hec-Ras | B (m) | H (m) | Quota intradosso (m s.l.m.) | Tirante TR200 (m s.l.m.) | Franco (m) |
|------------------|--------------------------|----------|----------|-----------------------------------|--------------------------------|---------------|
| Lota | sez. 22 | viadotto | | 247.59 | 243.99 | 3.60 |
| Vingone | sez. 8.1818* | viadotto | | 248.36 | 243.98 | 4.38 |
| Affluente_Fosso1 | sez.14.471* | viadotto | | 248.98 | 243.98 | 5.00 |

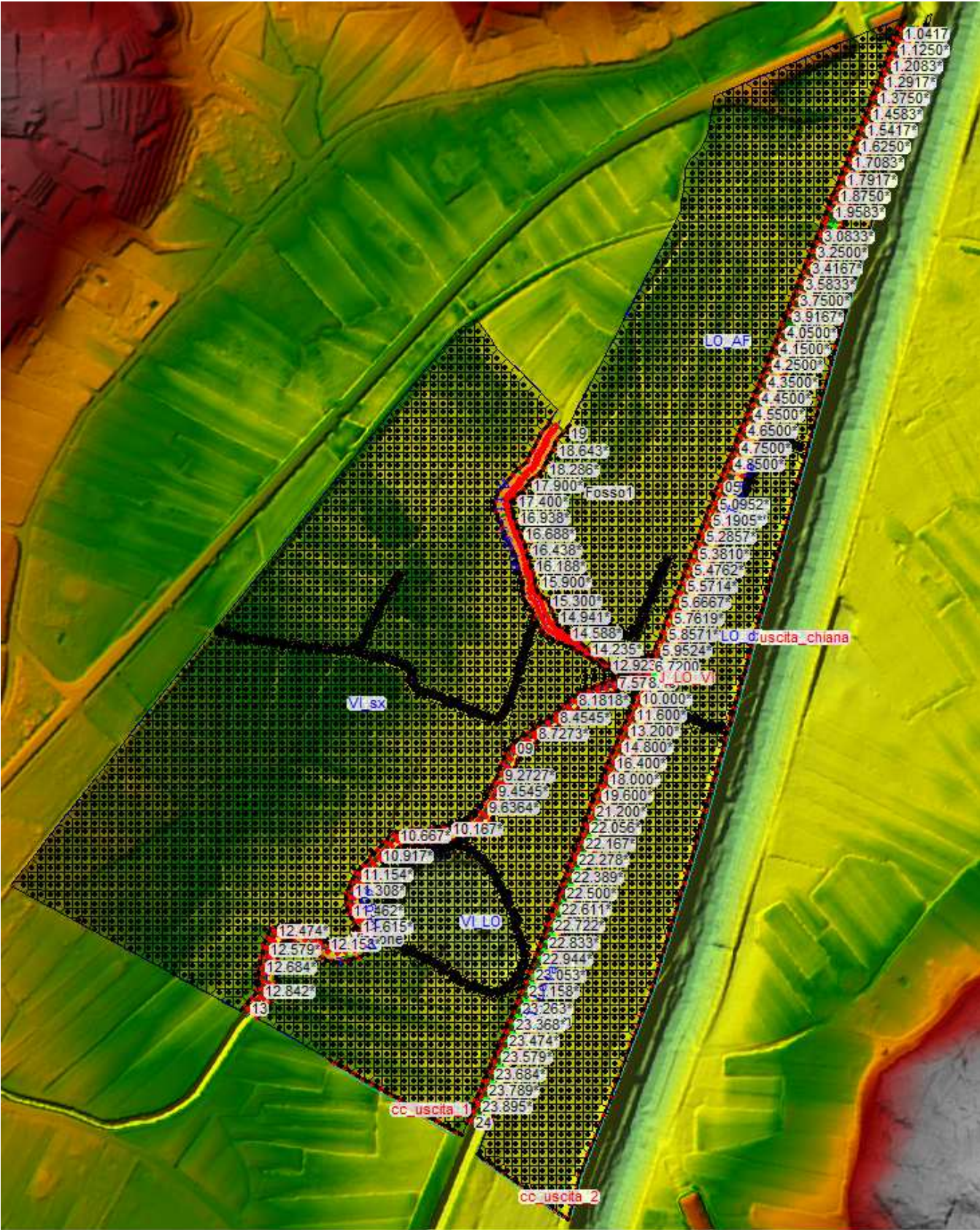
PROGETTAZIONE ATI:

Appendice 1: Outputs grafici e numerici delle simulazioni 1D+2D effettuate in regime di moto vario con il software Hec-Ras

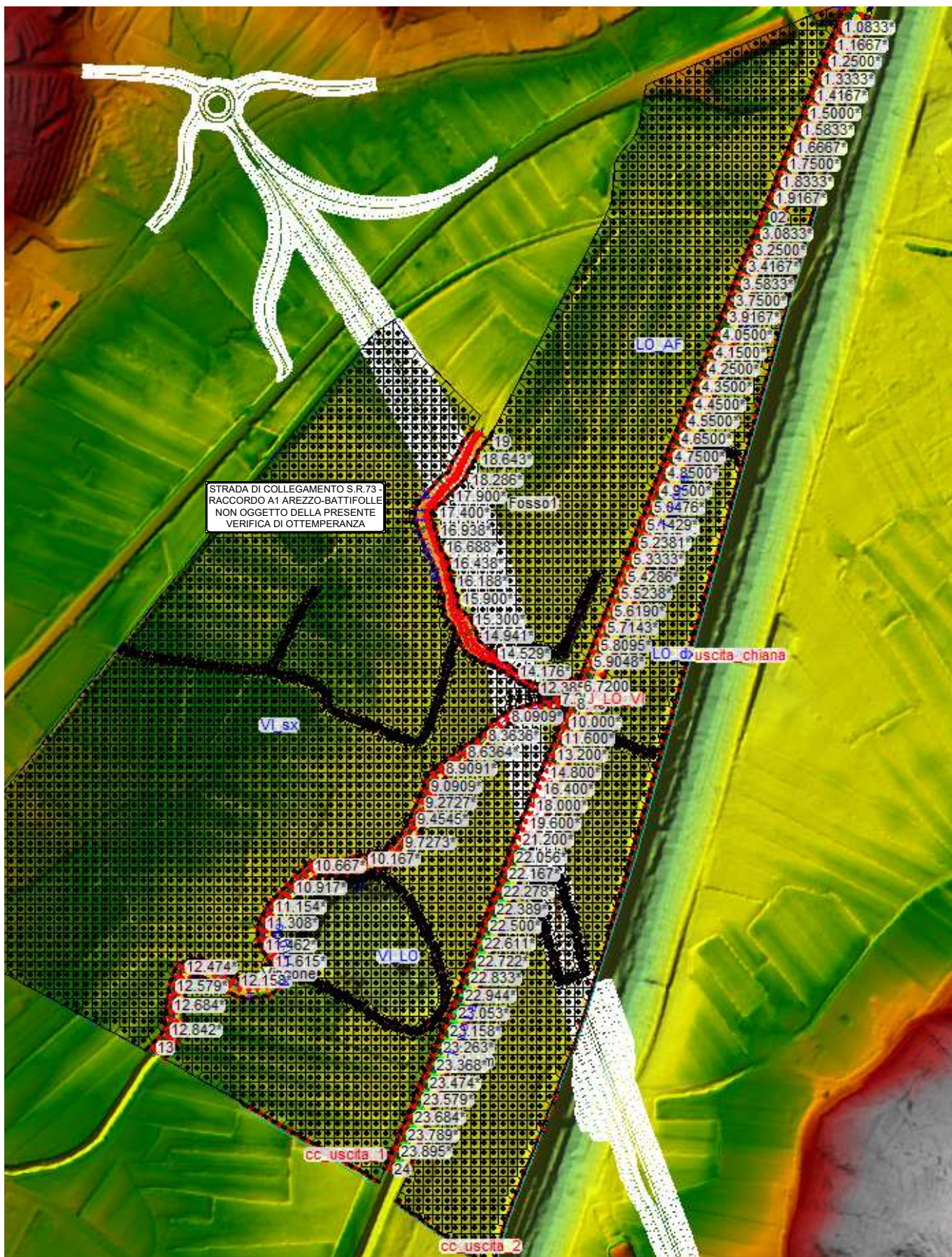
PROGETTAZIONE ATI:

TORRENTE LOTA
TORRENTE VINGONE (2)
Fosso AV20123

Planimetria Stato Attuale



Planimetria Stato di Progetto

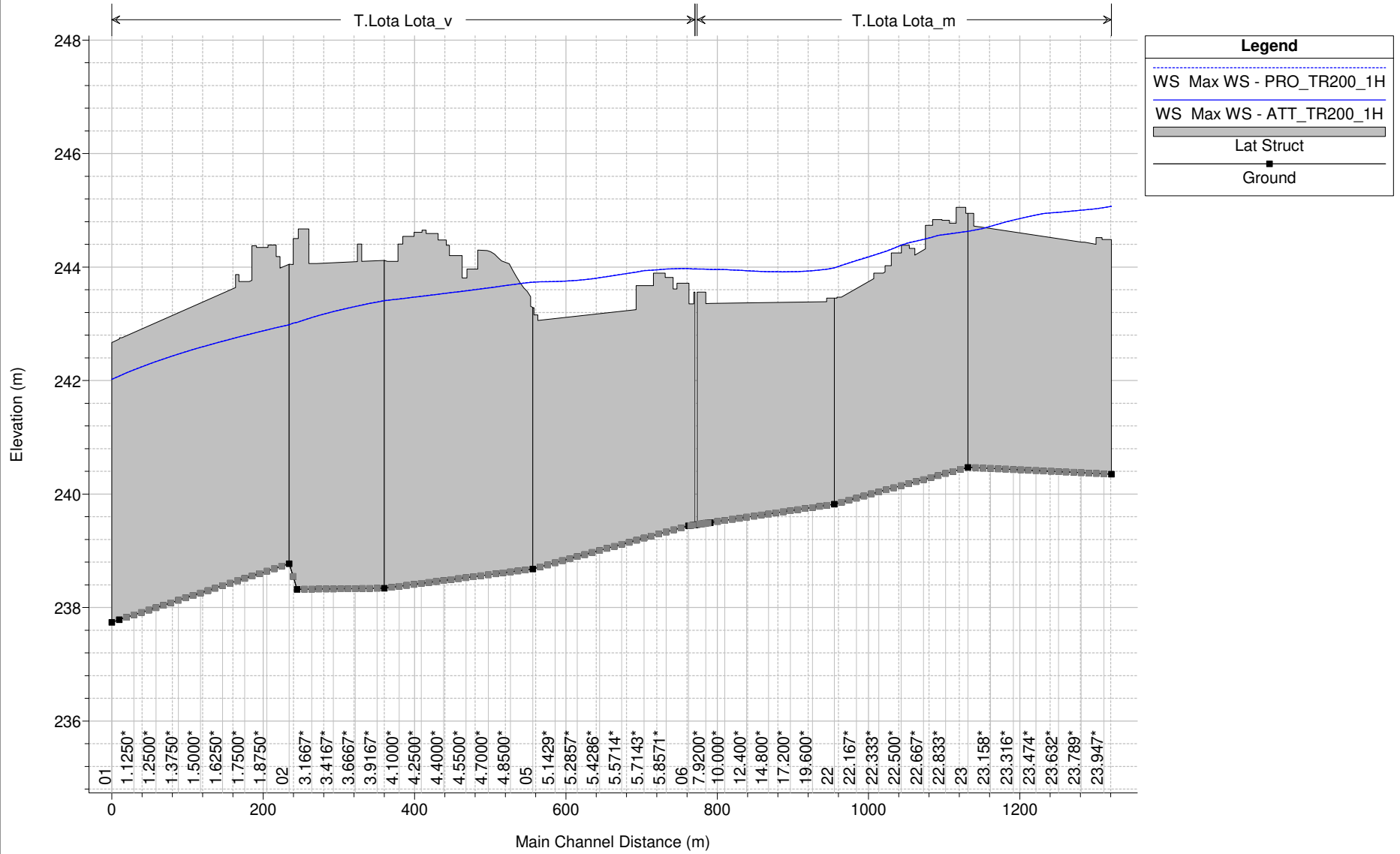


TORRENTE
LOTA

2Mari_Lota_Vingone

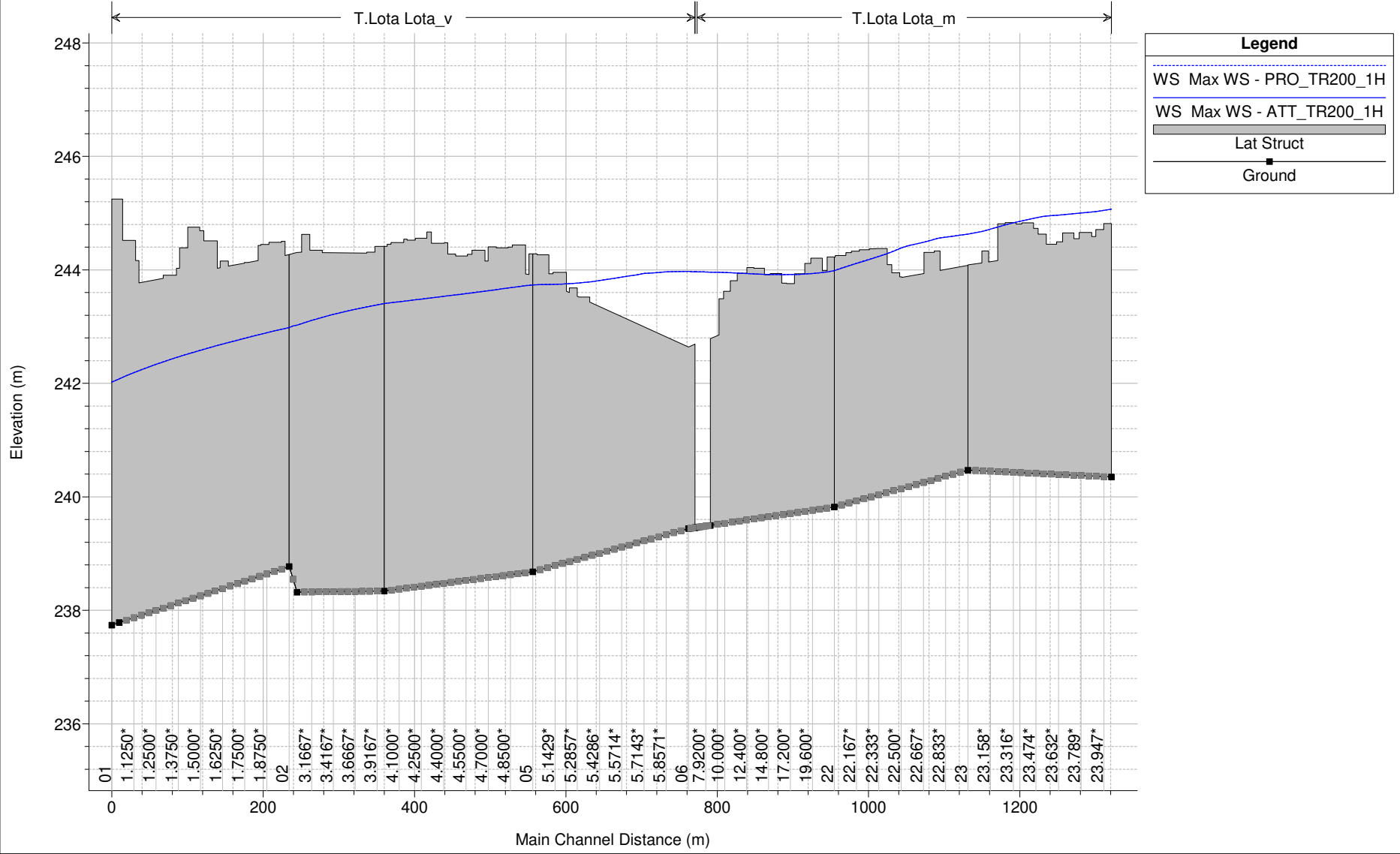
Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

Strutture Laterali Destra Idraulica



1 cm Horiz. = 75 m 1 cm Vert. = 1 m

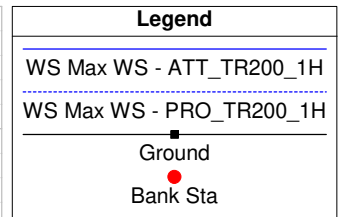
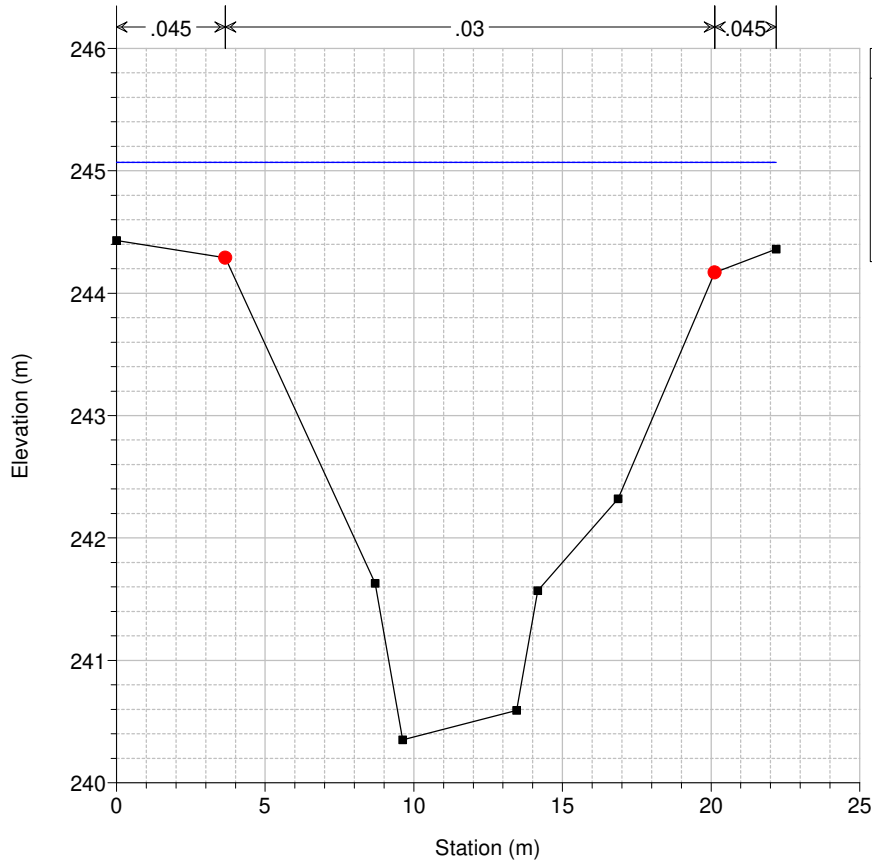
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H
 Strutture Laterali Sinistra Idraulica



1 cm Horiz. = 75 m 1 cm Vert. = 1 m

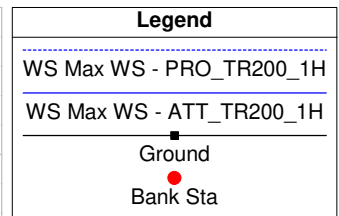
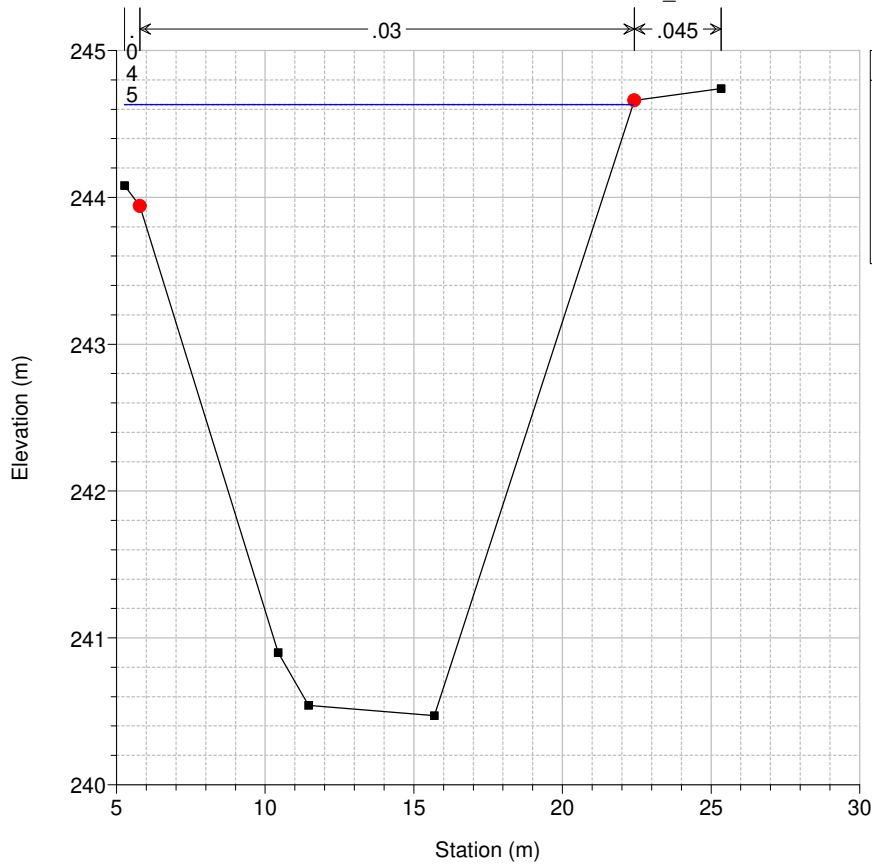
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T.Lota Reach = Lota_m RS = 24



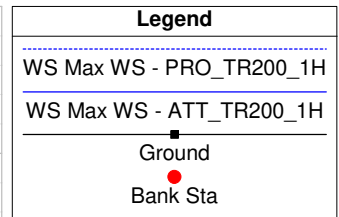
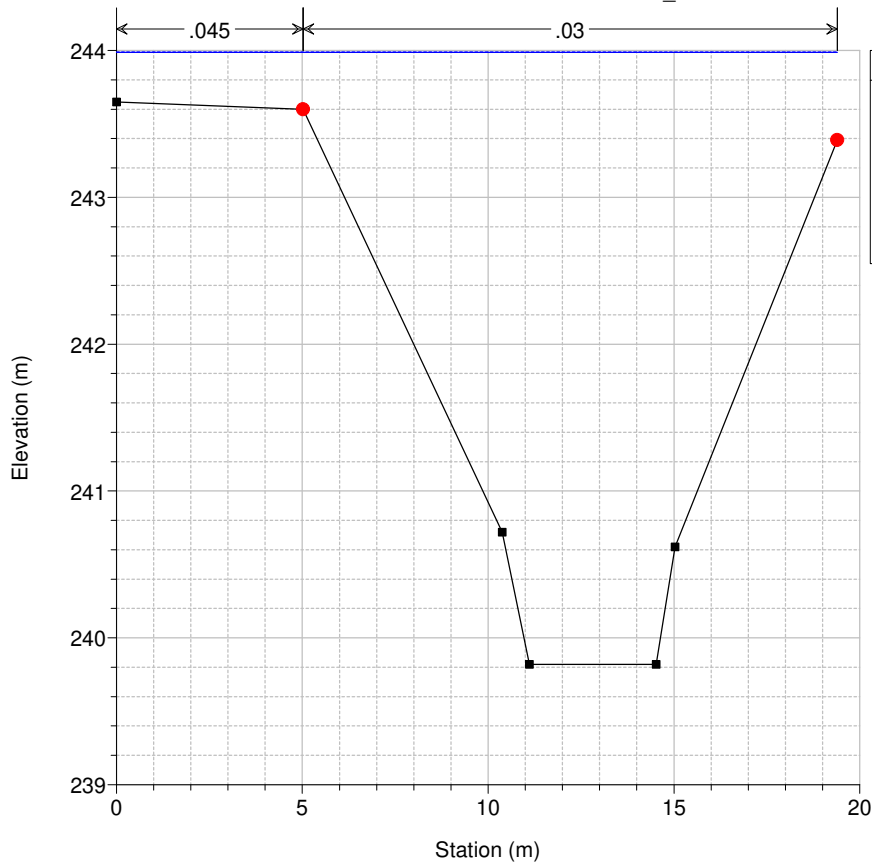
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T.Lota Reach = Lota_m RS = 23



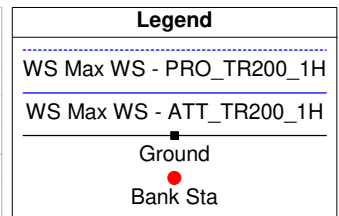
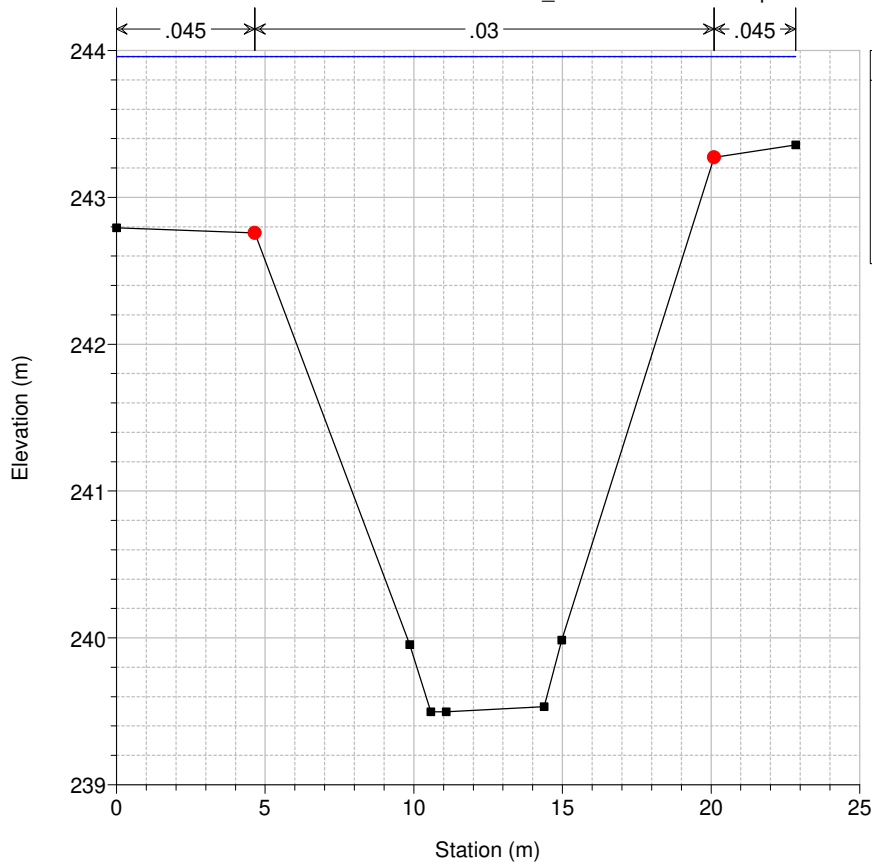
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T.Lota Reach = Lota_m RS = 22



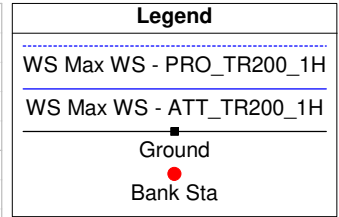
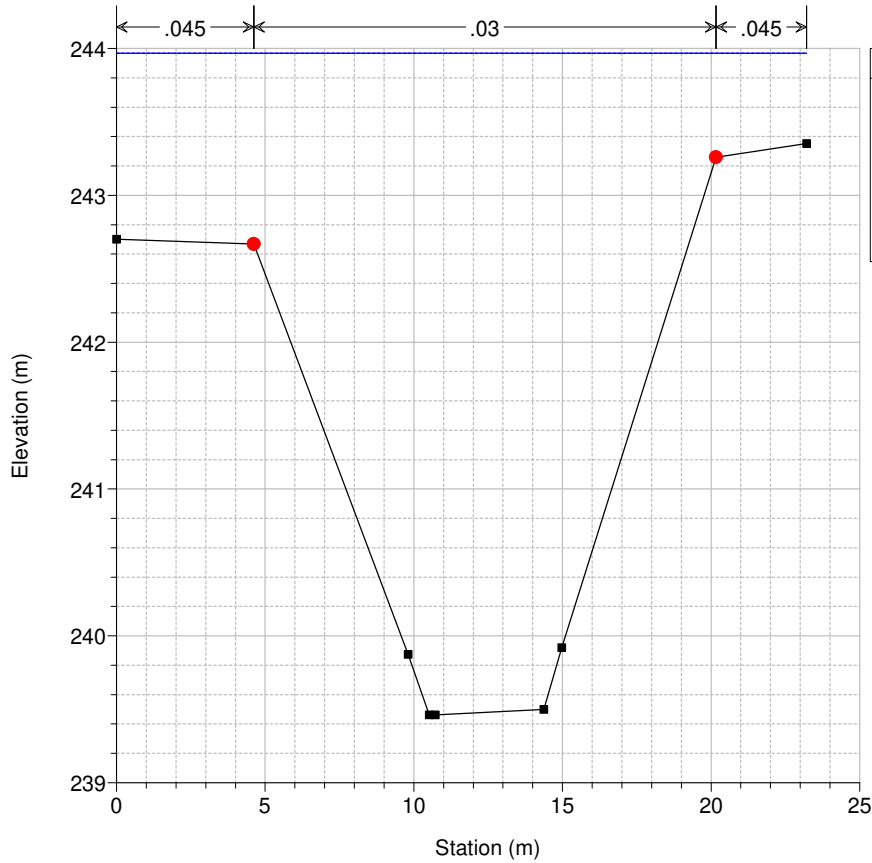
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T.Lota Reach = Lota_m RS = 8.40 Interpolata fine LS in sx



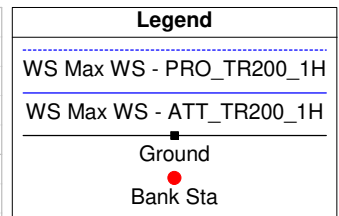
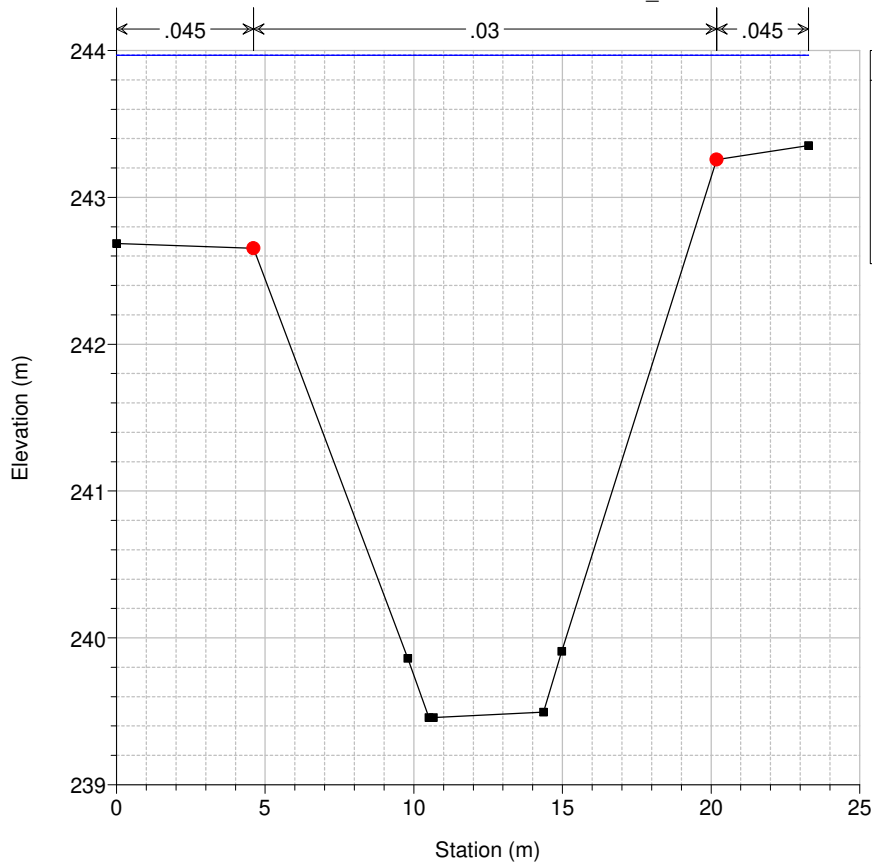
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

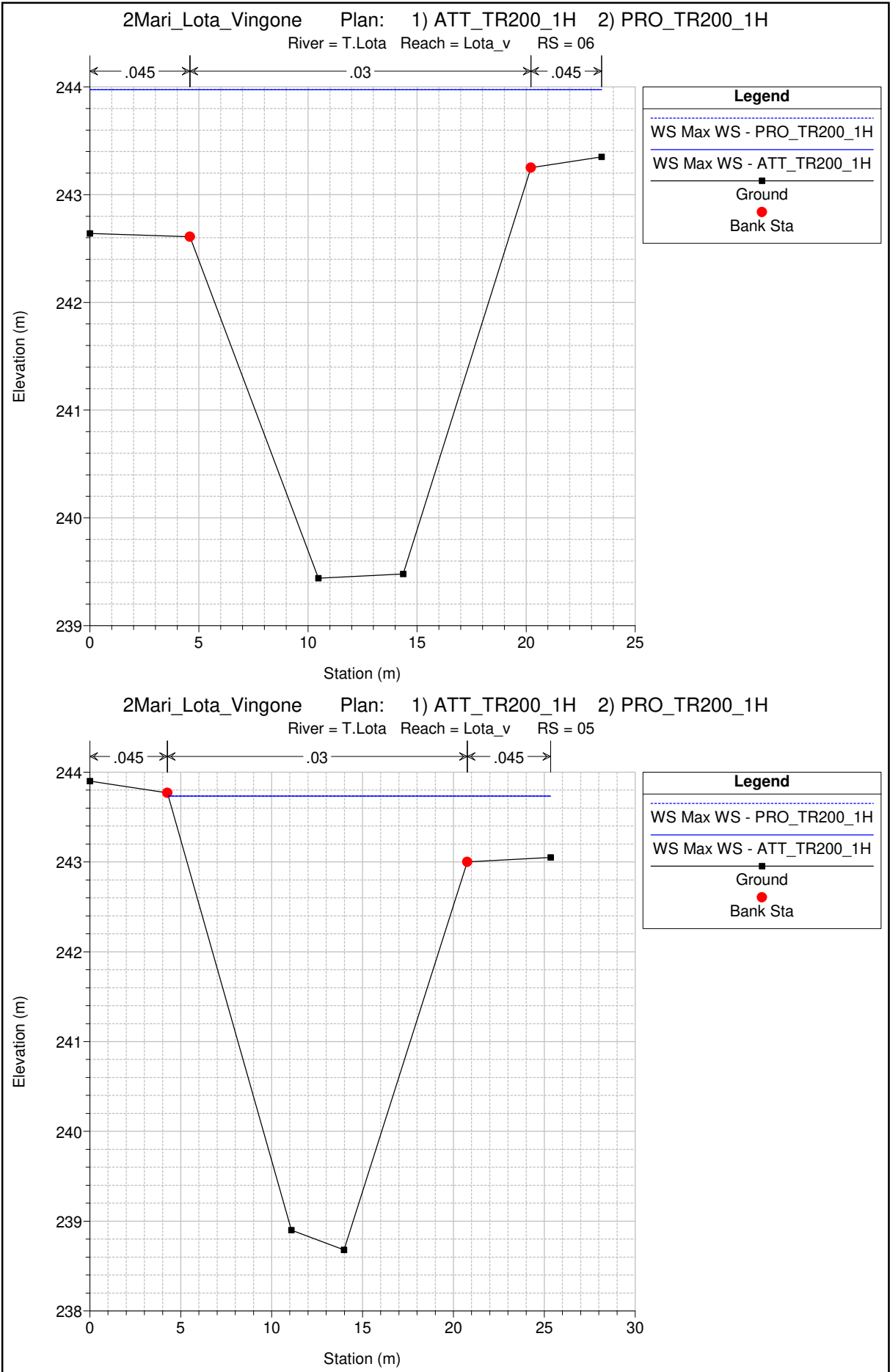
River = T.Lota Reach = Lota_m RS = 6.9600



2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

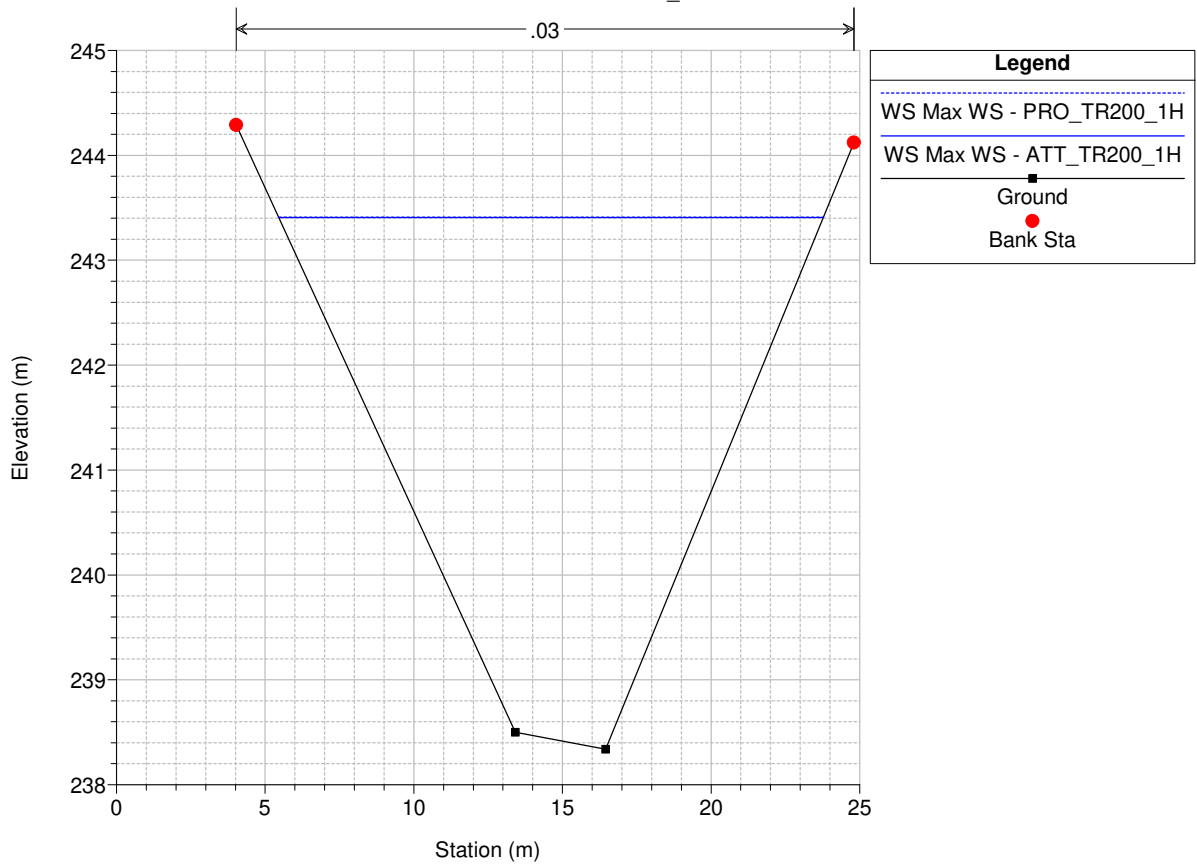
River = T.Lota Reach = Lota_v RS = 6.7200





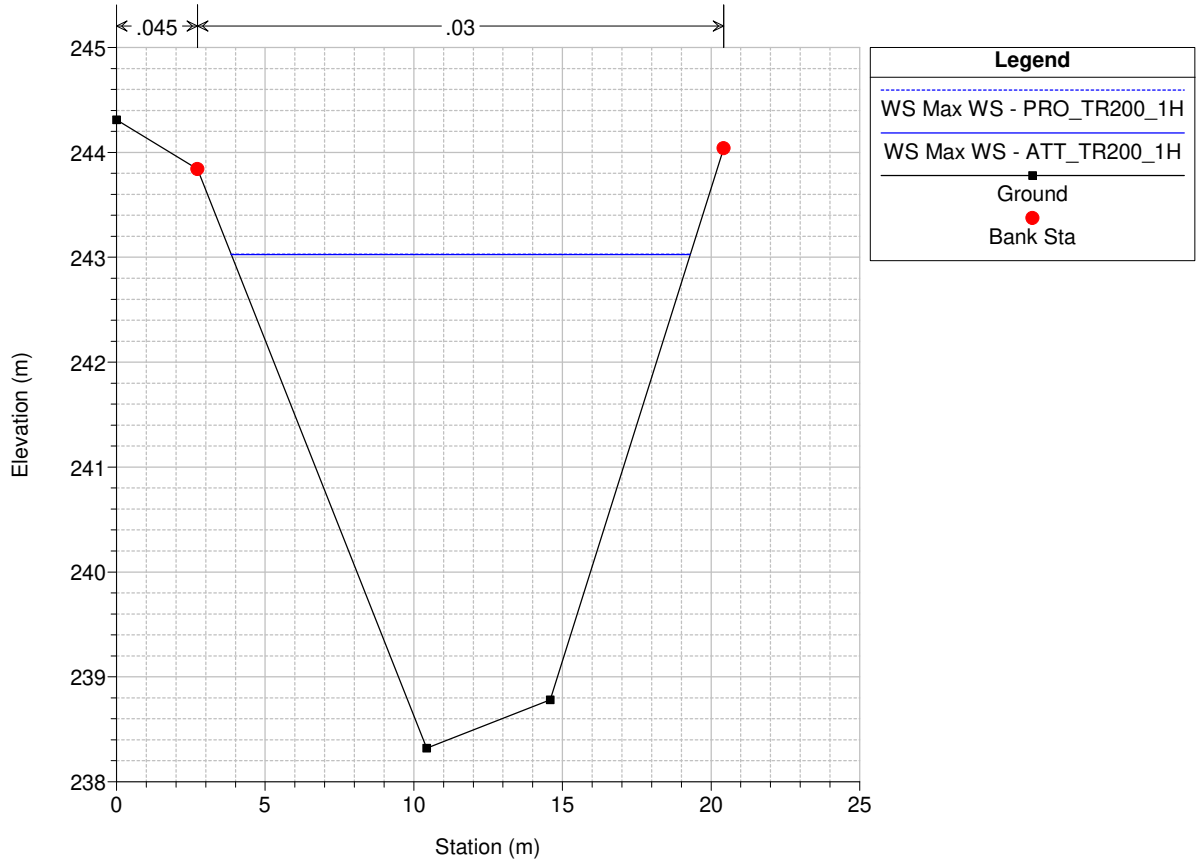
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

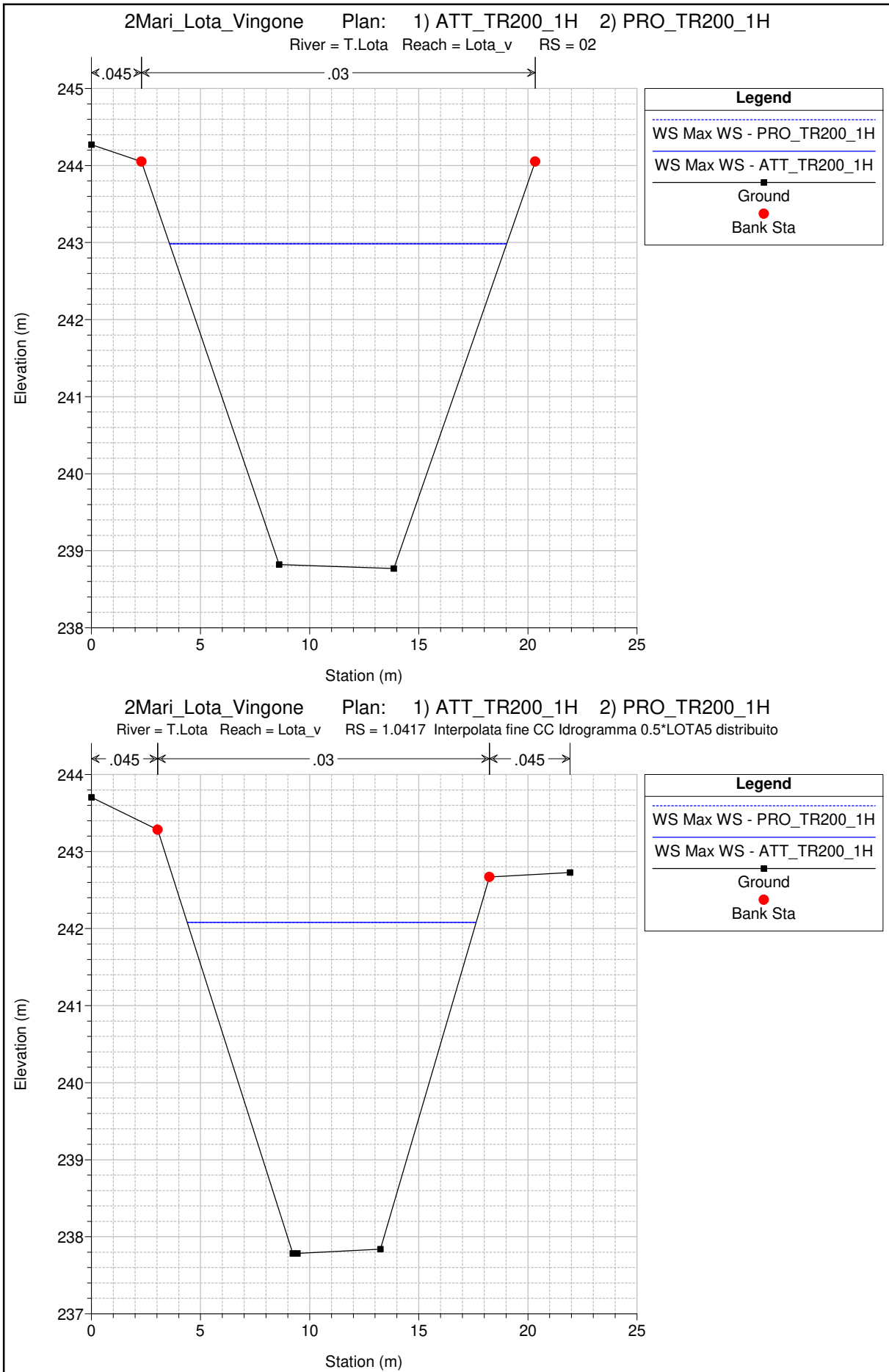
River = T.Lota Reach = Lota_v RS = 04



2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

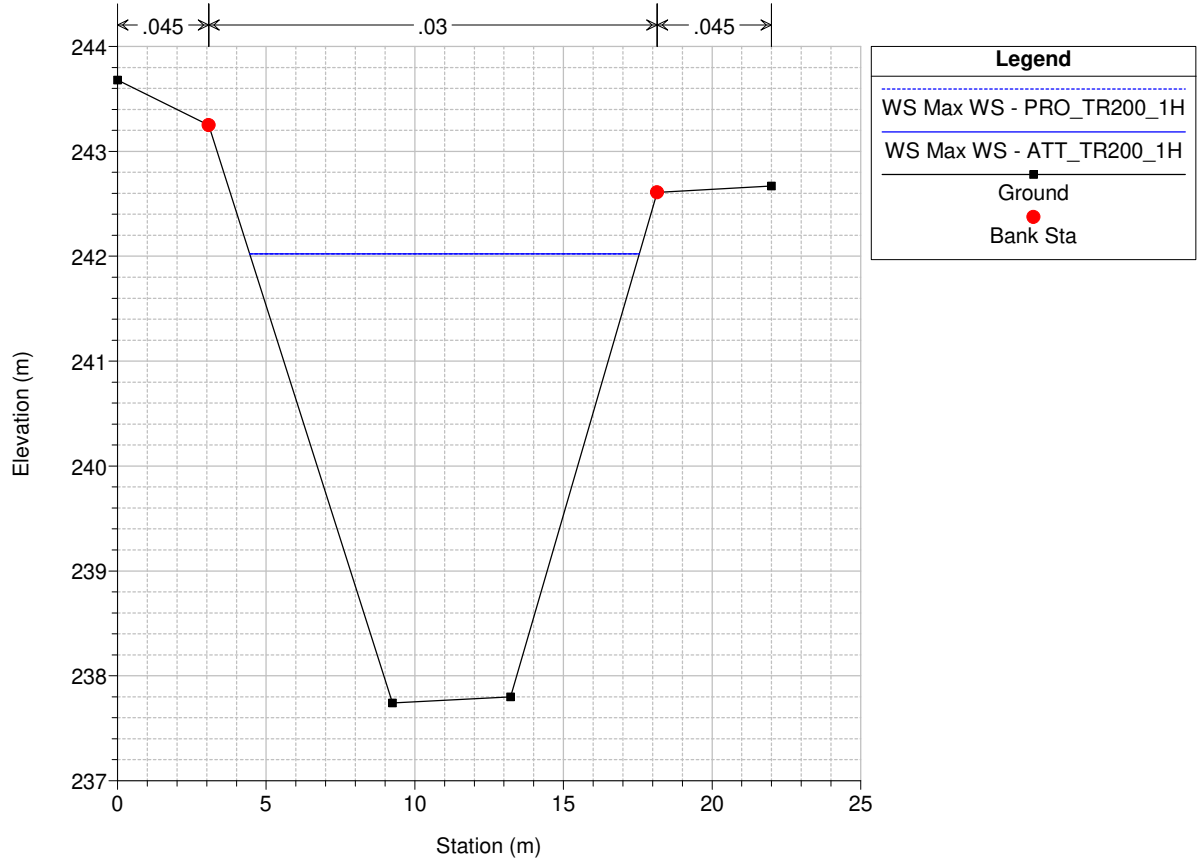
River = T.Lota Reach = Lota_v RS = 03





2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T.Lota Reach = Lota_v RS = 01

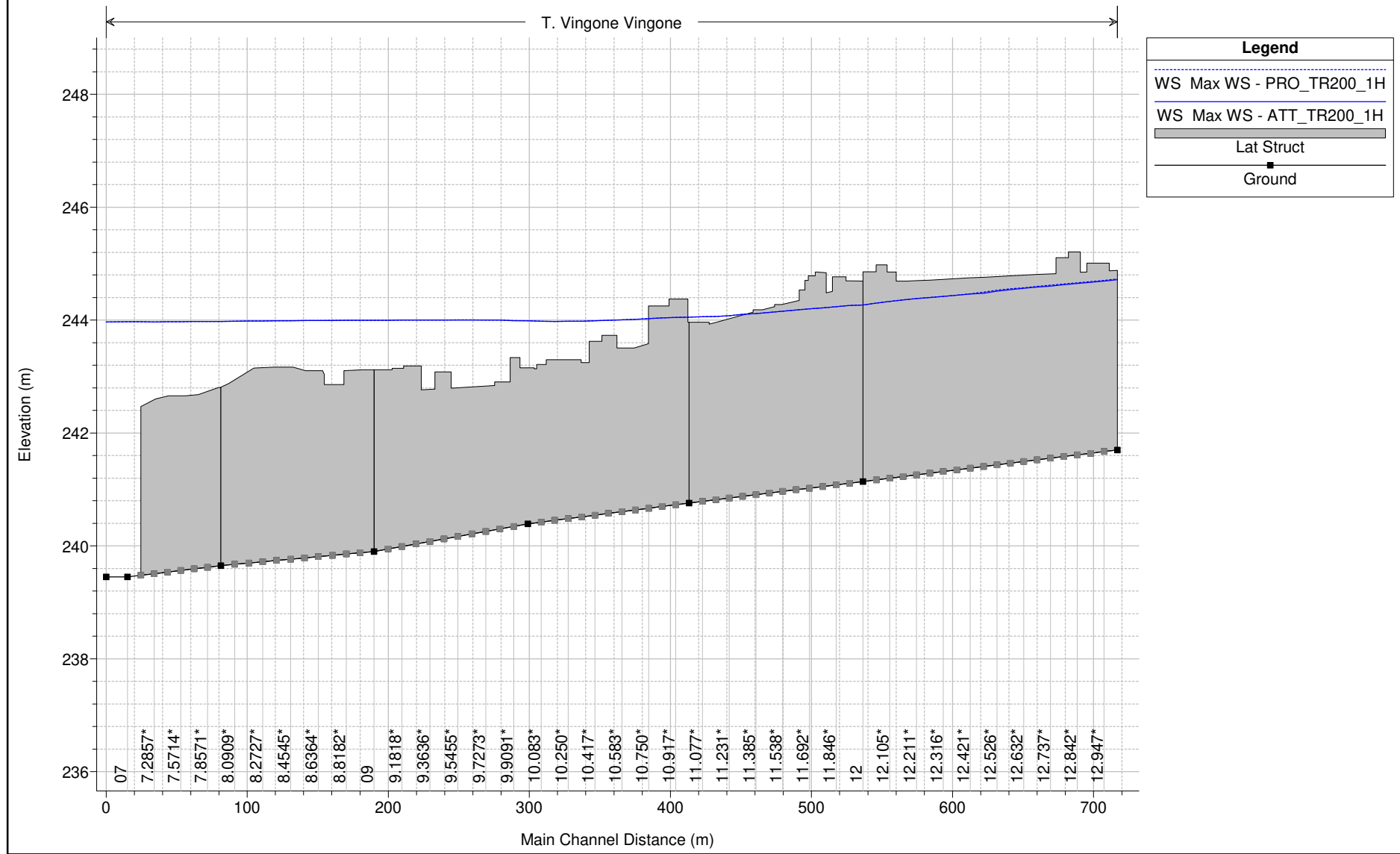


| Reach | River Sta | Profile | Plan | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|--------|-----------|---------|--------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Lota_m | 24 | Max WS | ATT_TR200_1H | 171.93 | 240.35 | 245.07 | | 245.65 | 0.002929 | 3.42 | 53.48 | 22.19 | 0.63 |
| Lota_m | 24 | Max WS | PRO_TR200_1H | 171.93 | 240.35 | 245.07 | | 245.65 | 0.002929 | 3.42 | 53.48 | 22.19 | 0.63 |
| Lota_m | 23.99 | | | | | | | | | | | | |
| Lota_m | 23.98 | | | | | | | | | | | | |
| Lota_m | 23 | Max WS | ATT_TR200_1H | 153.86 | 240.47 | 244.63 | | 245.21 | 0.003116 | 3.37 | 45.96 | 17.10 | 0.65 |
| Lota_m | 23 | Max WS | PRO_TR200_1H | 153.79 | 240.47 | 244.63 | | 245.21 | 0.003111 | 3.37 | 45.97 | 17.10 | 0.65 |
| Lota_m | 22.99 | | | | | | | | | | | | |
| Lota_m | 22.98 | | | | | | | | | | | | |
| Lota_m | 22 | Max WS | ATT_TR200_1H | 141.20 | 239.82 | 243.99 | | 244.70 | 0.004573 | 3.75 | 39.11 | 19.40 | 0.74 |
| Lota_m | 22 | Max WS | PRO_TR200_1H | 141.45 | 239.82 | 243.99 | | 244.70 | 0.004580 | 3.76 | 39.14 | 19.40 | 0.74 |
| Lota_m | 21.99 | | | | | | | | | | | | |
| Lota_m | 21.98 | | | | | | | | | | | | |
| Lota_m | 8.40 | Max WS | ATT_TR200_1H | 115.63 | 239.50 | 243.96 | | 244.22 | 0.001241 | 2.31 | 55.21 | 22.85 | 0.42 |
| Lota_m | 8.40 | Max WS | PRO_TR200_1H | 115.54 | 239.50 | 243.96 | | 244.22 | 0.001237 | 2.30 | 55.24 | 22.85 | 0.42 |
| Lota_m | 6.9600 | Max WS | ATT_TR200_1H | 111.24 | 239.46 | 243.97 | | 244.19 | 0.001047 | 2.15 | 57.18 | 23.22 | 0.39 |
| Lota_m | 6.9600 | Max WS | PRO_TR200_1H | 110.14 | 239.46 | 243.97 | | 244.19 | 0.001025 | 2.13 | 57.22 | 23.22 | 0.38 |
| Lota_v | 6.7200 | Max WS | ATT_TR200_1H | 149.60 | 239.46 | 243.97 | | 244.37 | 0.001869 | 2.88 | 57.48 | 23.28 | 0.52 |
| Lota_v | 6.7200 | Max WS | PRO_TR200_1H | 149.16 | 239.46 | 243.97 | | 244.37 | 0.001855 | 2.87 | 57.52 | 23.28 | 0.51 |
| Lota_v | 6.719 | | | | | | | | | | | | |
| Lota_v | 6.718 | | | | | | | | | | | | |
| Lota_v | 06 | Max WS | ATT_TR200_1H | 148.91 | 239.44 | 243.97 | | 244.36 | 0.001764 | 2.82 | 58.55 | 23.46 | 0.50 |
| Lota_v | 06 | Max WS | PRO_TR200_1H | 150.08 | 239.44 | 243.97 | | 244.37 | 0.001790 | 2.84 | 58.57 | 23.46 | 0.51 |
| Lota_v | 05 | Max WS | ATT_TR200_1H | 133.72 | 238.68 | 243.73 | | 244.08 | 0.001710 | 2.61 | 53.58 | 21.04 | 0.48 |
| Lota_v | 05 | Max WS | PRO_TR200_1H | 133.83 | 238.68 | 243.74 | | 244.08 | 0.001709 | 2.61 | 53.62 | 21.04 | 0.48 |
| Lota_v | 4.99 | | | | | | | | | | | | |
| Lota_v | 4.98 | | | | | | | | | | | | |
| Lota_v | 04 | Max WS | ATT_TR200_1H | 134.19 | 238.34 | 243.41 | | 243.73 | 0.001688 | 2.52 | 53.21 | 18.32 | 0.47 |
| Lota_v | 04 | Max WS | PRO_TR200_1H | 134.27 | 238.34 | 243.41 | | 243.73 | 0.001687 | 2.52 | 53.24 | 18.32 | 0.47 |
| Lota_v | 3.99 | | | | | | | | | | | | |
| Lota_v | 3.98 | | | | | | | | | | | | |
| Lota_v | 03 | Max WS | ATT_TR200_1H | 134.70 | 238.32 | 243.03 | | 243.50 | 0.002661 | 3.06 | 44.08 | 15.44 | 0.58 |
| Lota_v | 03 | Max WS | PRO_TR200_1H | 134.81 | 238.32 | 243.03 | | 243.50 | 0.002662 | 3.06 | 44.10 | 15.44 | 0.58 |
| Lota_v | 02 | Max WS | ATT_TR200_1H | 134.75 | 238.77 | 242.98 | | 243.48 | 0.002779 | 3.11 | 43.38 | 15.45 | 0.59 |
| Lota_v | 02 | Max WS | PRO_TR200_1H | 134.85 | 238.77 | 242.99 | | 243.48 | 0.002778 | 3.11 | 43.41 | 15.46 | 0.59 |
| Lota_v | 1.99 | | | | | | | | | | | | |
| Lota_v | 1.98 | | | | | | | | | | | | |
| Lota_v | 1.0417 | Max WS | ATT_TR200_1H | 136.00 | 237.78 | 242.08 | | 242.77 | 0.004231 | 3.69 | 36.84 | 13.24 | 0.71 |
| Lota_v | 1.0417 | Max WS | PRO_TR200_1H | 136.10 | 237.78 | 242.08 | | 242.78 | 0.004231 | 3.69 | 36.86 | 13.24 | 0.71 |
| Lota_v | 01 | Max WS | ATT_TR200_1H | 136.00 | 237.74 | 242.02 | 241.35 | 242.74 | 0.004400 | 3.75 | 36.29 | 13.10 | 0.72 |
| Lota_v | 01 | Max WS | PRO_TR200_1H | 136.10 | 237.74 | 242.02 | 241.35 | 242.74 | 0.004400 | 3.75 | 36.31 | 13.10 | 0.72 |

| Reach | River Sta | Profile | Plan | Q US (m3/s) | Q Leaving Total (m3/s) | Q DS (m3/s) | Q Weir (m3/s) | Q Gates (m3/s) | Wr Top Wdth (m) | Weir Max Depth (m) | Weir Avg Depth (m) | Min El Weir Flow (m) | E.G. US. (m) | W.S. US. (m) | E.G. DS (m) | W.S. DS (m) |
|--------|-----------|---------|--------------|----------------|---------------------------|----------------|------------------|-------------------|--------------------|-----------------------|-----------------------|-------------------------|-----------------|-----------------|----------------|----------------|
| Lota_m | 23.99 | Max WS | ATT_TR200_1H | 171.93 | 10.43 | 153.86 | 10.43 | | 165.54 | 0.63 | 0.38 | 244.40 | 245.65 | 245.07 | 245.21 | 244.63 |
| Lota_m | 23.99 | Max WS | PRO_TR200_1H | 171.93 | 10.45 | 153.79 | 10.45 | | 165.63 | 0.63 | 0.38 | 244.40 | 245.65 | 245.07 | 245.21 | 244.63 |
| Lota_m | 23.98 | Max WS | ATT_TR200_1H | 171.93 | 4.92 | 153.86 | 4.92 | | 167.40 | 0.59 | 0.36 | 244.09 | 245.65 | 245.07 | 245.21 | 244.63 |
| Lota_m | 23.98 | Max WS | PRO_TR200_1H | 171.93 | 4.89 | 153.79 | 4.89 | | 167.50 | 0.59 | 0.36 | 244.09 | 245.65 | 245.07 | 245.21 | 244.63 |
| Lota_m | 22.99 | Max WS | ATT_TR200_1H | 153.86 | 6.12 | 141.20 | 6.12 | | 120.86 | 0.56 | 0.32 | 243.46 | 245.21 | 244.63 | 244.70 | 243.99 |
| Lota_m | 22.99 | Max WS | PRO_TR200_1H | 153.79 | 5.40 | 141.45 | 5.40 | | 120.86 | 0.56 | 0.33 | 243.46 | 245.21 | 244.63 | 244.70 | 243.99 |
| Lota_m | 22.98 | Max WS | ATT_TR200_1H | 153.86 | 5.06 | 141.20 | 5.06 | | 106.64 | 0.57 | 0.46 | 243.87 | 245.21 | 244.63 | 244.70 | 243.99 |
| Lota_m | 22.98 | Max WS | PRO_TR200_1H | 153.79 | 4.92 | 141.45 | 4.92 | | 106.66 | 0.57 | 0.46 | 243.87 | 245.21 | 244.63 | 244.70 | 243.99 |
| Lota_m | 21.99 | Max WS | ATT_TR200_1H | 141.20 | 20.84 | 111.24 | 20.84 | | 181.36 | 0.61 | 0.55 | 243.36 | 244.70 | 243.99 | 244.19 | 243.97 |
| Lota_m | 21.99 | Max WS | PRO_TR200_1H | 141.45 | 20.87 | 110.14 | 20.87 | | 181.36 | 0.61 | 0.55 | 243.36 | 244.70 | 243.99 | 244.19 | 243.97 |
| Lota_m | 21.98 | Max WS | ATT_TR200_1H | 141.20 | 1.24 | 115.63 | 1.24 | | 72.50 | 1.17 | 0.32 | 242.79 | 244.70 | 243.99 | 244.22 | 243.96 |
| Lota_m | 21.98 | Max WS | PRO_TR200_1H | 141.45 | 1.33 | 115.54 | 1.33 | | 73.53 | 1.17 | 0.31 | 242.79 | 244.70 | 243.99 | 244.22 | 243.96 |
| Lota_v | 6.719 | Max WS | ATT_TR200_1H | 149.60 | 19.49 | 133.72 | 19.49 | | 213.55 | 0.68 | 0.50 | 243.06 | 244.37 | 243.97 | 244.08 | 243.73 |
| Lota_v | 6.719 | Max WS | PRO_TR200_1H | 149.16 | 19.57 | 133.83 | 19.57 | | 213.55 | 0.68 | 0.50 | 243.06 | 244.37 | 243.97 | 244.08 | 243.73 |
| Lota_v | 6.718 | Max WS | ATT_TR200_1H | 149.60 | 4.64 | 133.72 | 4.64 | | 169.56 | 1.33 | 0.79 | 242.64 | 244.37 | 243.97 | 244.08 | 243.73 |
| Lota_v | 6.718 | Max WS | PRO_TR200_1H | 149.16 | 4.71 | 133.83 | 4.71 | | 169.56 | 1.33 | 0.79 | 242.64 | 244.37 | 243.97 | 244.08 | 243.73 |
| Lota_v | 4.99 | Max WS | ATT_TR200_1H | 133.72 | 0.44 | 134.19 | 0.44 | | 17.18 | 0.44 | 0.19 | 243.29 | 244.08 | 243.73 | 243.73 | 243.41 |
| Lota_v | 4.99 | Max WS | PRO_TR200_1H | 133.83 | 0.45 | 134.27 | 0.45 | | 17.27 | 0.45 | 0.19 | 243.29 | 244.08 | 243.73 | 243.73 | 243.41 |
| Lota_v | 4.98 | Max WS | ATT_TR200_1H | 133.72 | 0.00 | 134.19 | 0.00 | | | | | 243.92 | 244.08 | 243.73 | 243.73 | 243.41 |
| Lota_v | 4.98 | Max WS | PRO_TR200_1H | 133.83 | 0.00 | 134.27 | 0.00 | | | | | 243.92 | 244.08 | 243.73 | 243.73 | 243.41 |
| Lota_v | 3.99 | Max WS | ATT_TR200_1H | 134.19 | 0.00 | 134.75 | 0.00 | | | | | 244.05 | 243.73 | 243.41 | 243.48 | 242.98 |
| Lota_v | 3.99 | Max WS | PRO_TR200_1H | 134.27 | 0.00 | 134.85 | 0.00 | | | | | 244.05 | 243.73 | 243.41 | 243.48 | 242.99 |
| Lota_v | 3.98 | Max WS | ATT_TR200_1H | 134.19 | 0.00 | 134.75 | 0.00 | | | | | 244.27 | 243.73 | 243.41 | 243.48 | 242.98 |
| Lota_v | 3.98 | Max WS | PRO_TR200_1H | 134.27 | 0.00 | 134.85 | 0.00 | | | | | 244.27 | 243.73 | 243.41 | 243.48 | 242.99 |
| Lota_v | 1.99 | Max WS | ATT_TR200_1H | 134.75 | 0.00 | 136.00 | 0.00 | | | | | 242.67 | 243.48 | 242.98 | 242.74 | 242.02 |
| Lota_v | 1.99 | Max WS | PRO_TR200_1H | 134.85 | 0.00 | 136.10 | 0.00 | | | | | 242.67 | 243.48 | 242.99 | 242.74 | 242.02 |
| Lota_v | 1.98 | Max WS | ATT_TR200_1H | 134.75 | 0.00 | 136.00 | 0.00 | | 0.00 | 0.04 | 0.02 | 243.77 | 243.48 | 242.98 | 242.74 | 242.02 |
| Lota_v | 1.98 | Max WS | PRO_TR200_1H | 134.85 | 0.00 | 136.10 | 0.00 | | 0.00 | 0.04 | 0.02 | 243.77 | 243.48 | 242.99 | 242.74 | 242.02 |

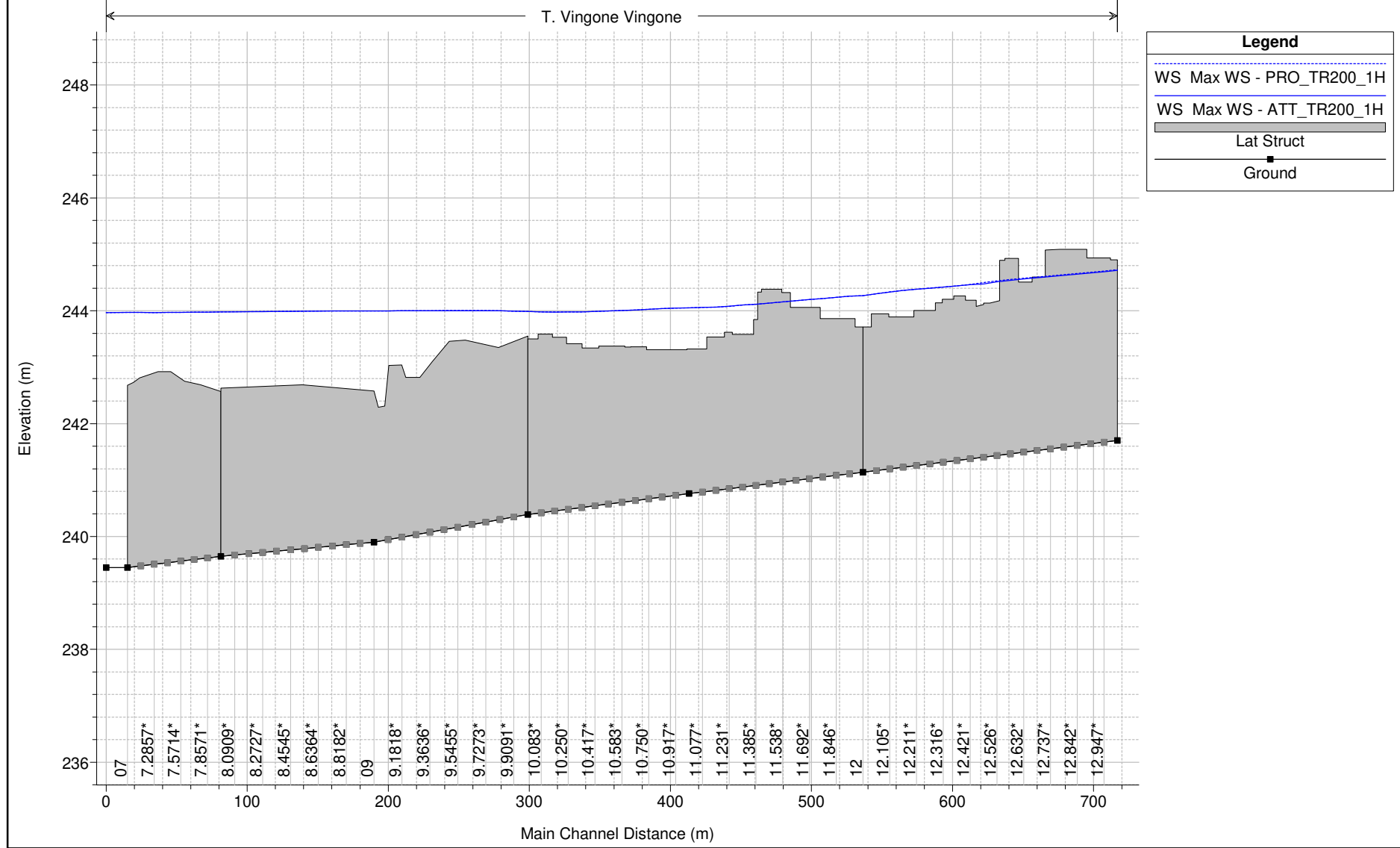
TORRENTE
VINGONE (2)

2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H
 Strutture Laterali Destra Idraulica

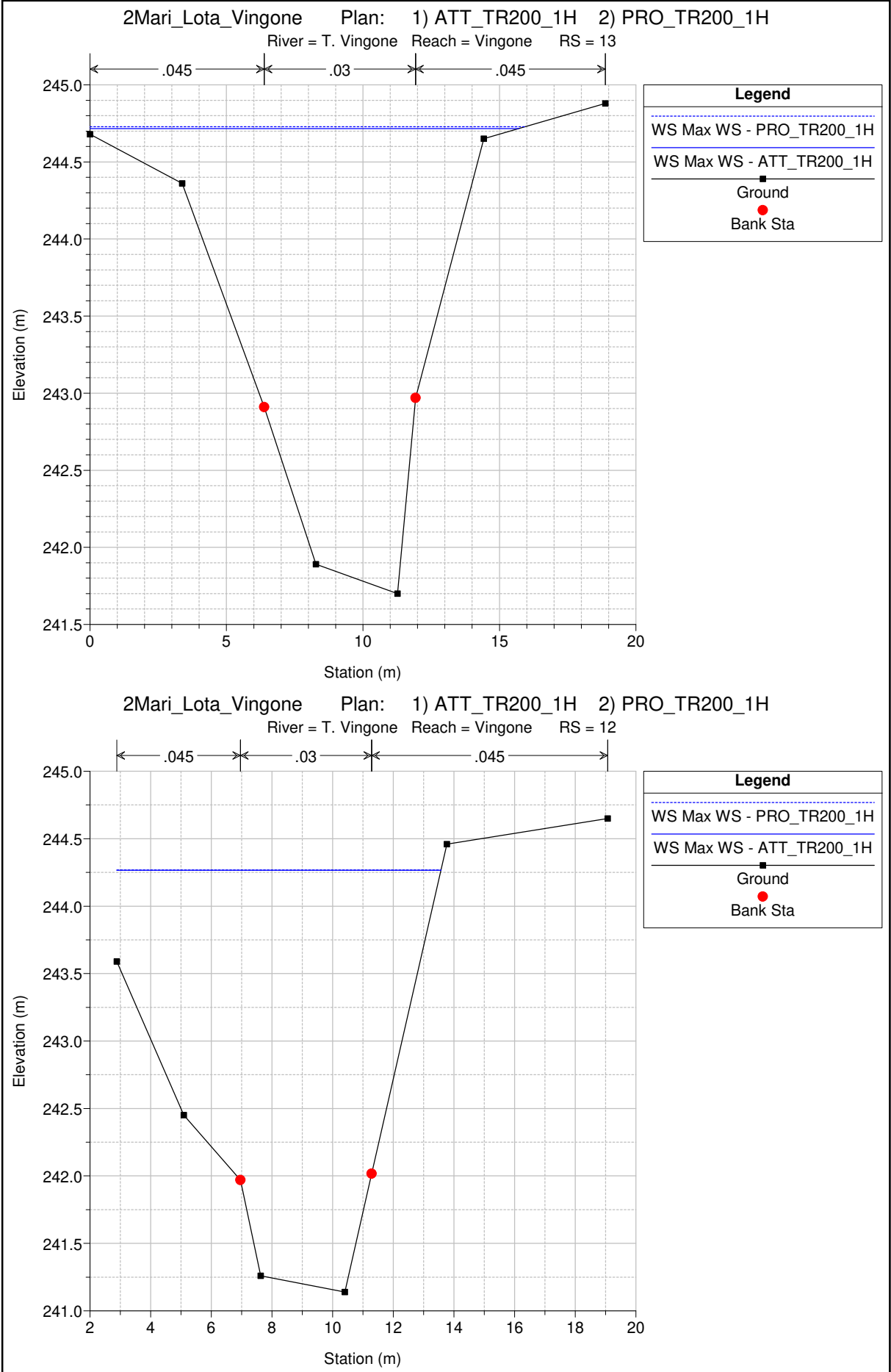


1 cm Horiz. = 40 m 1 cm Vert. = 1 m

2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H
 Strutture Laterali Sinistra Idraulica

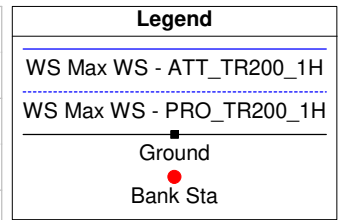
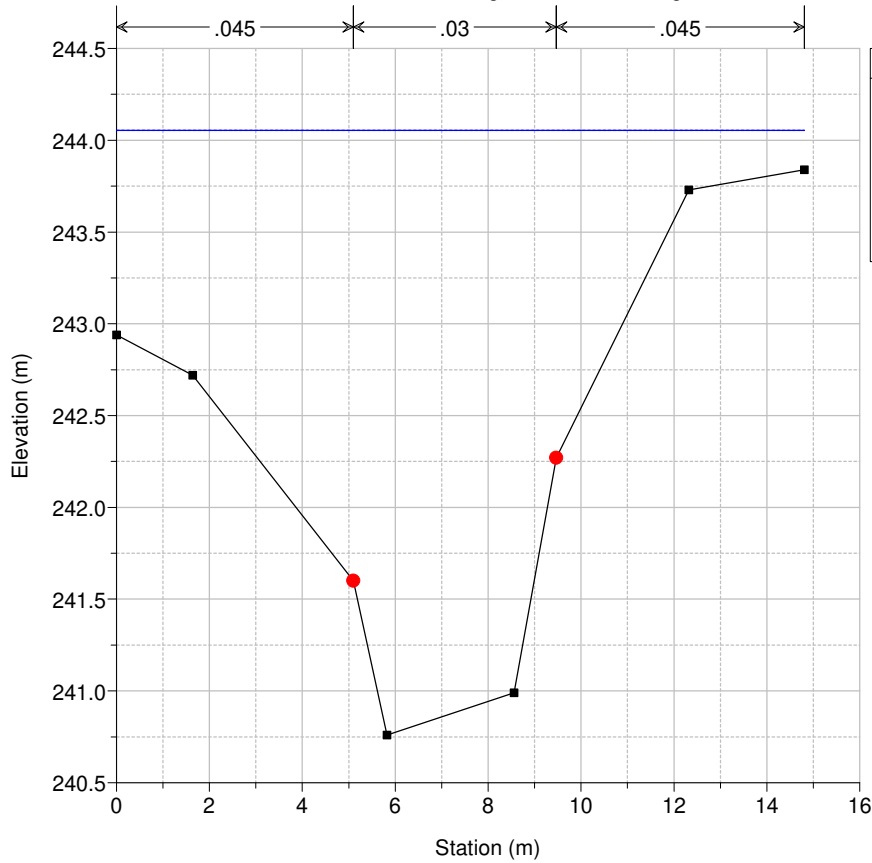


1 cm Horiz. = 40 m 1 cm Vert. = 1 m



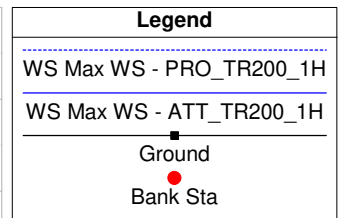
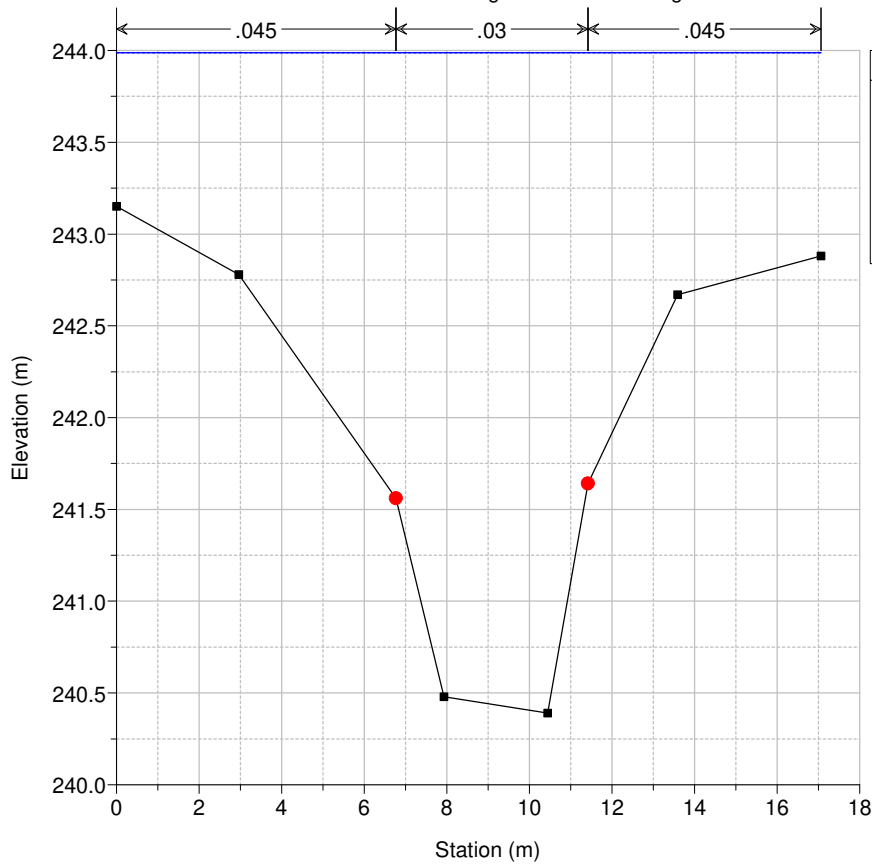
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T. Vingone Reach = Vingone RS = 11



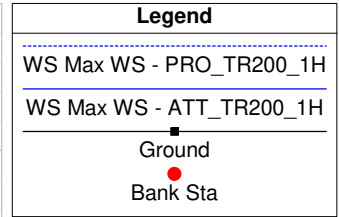
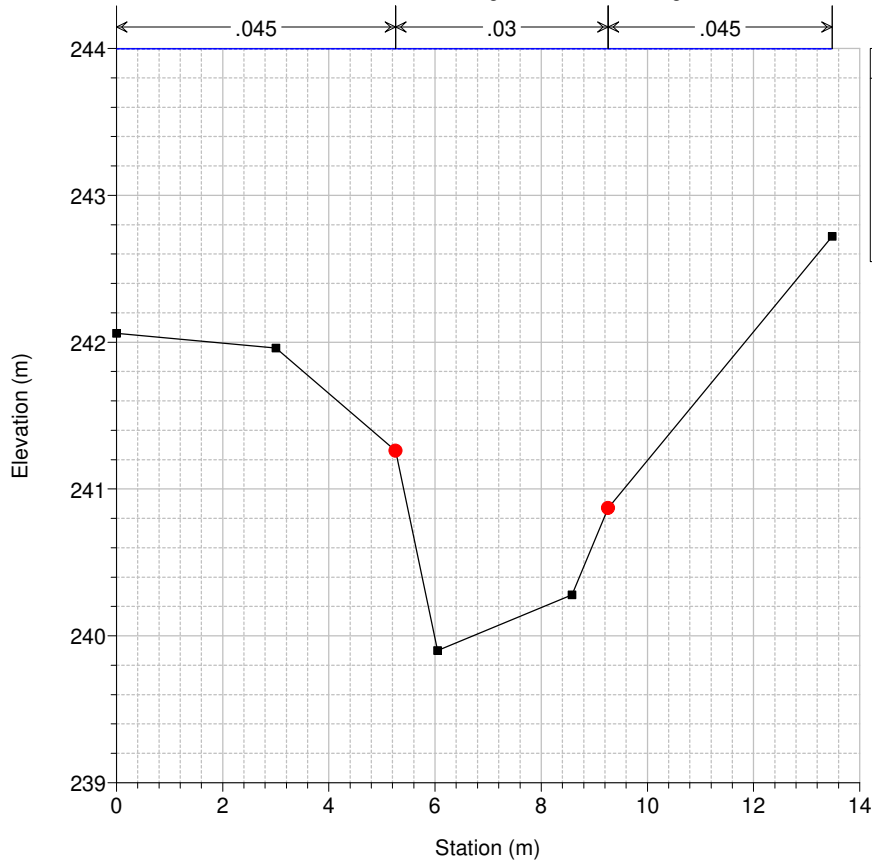
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T. Vingone Reach = Vingone RS = 10



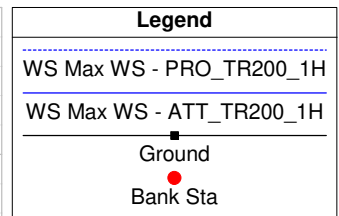
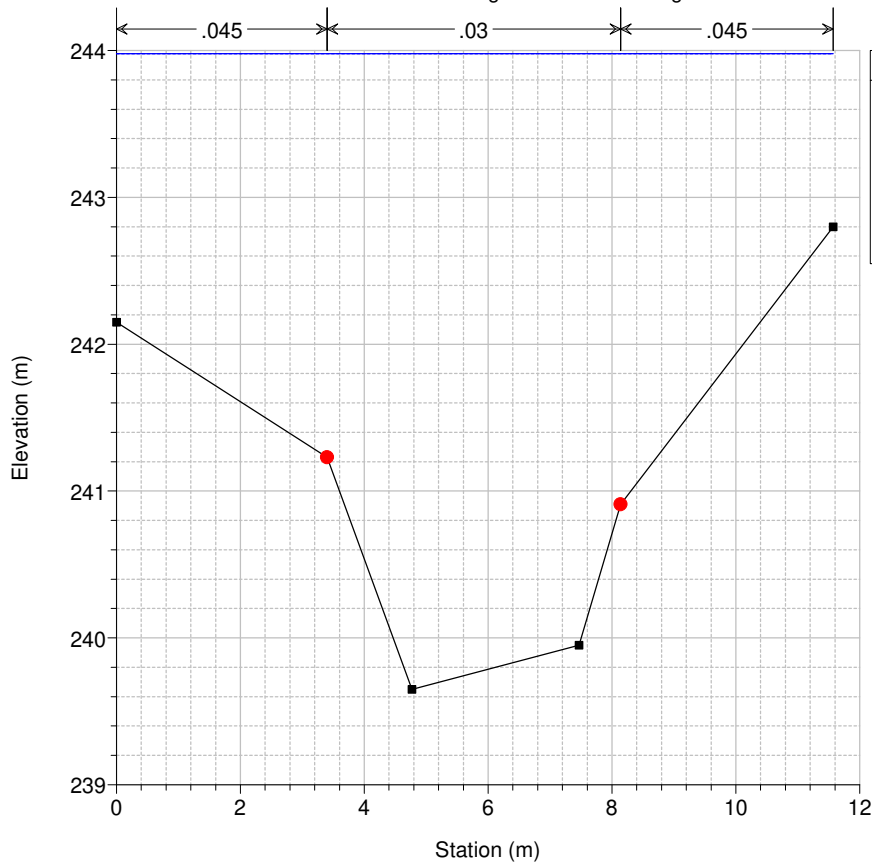
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T. Vingone Reach = Vingone RS = 09



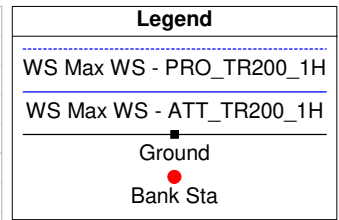
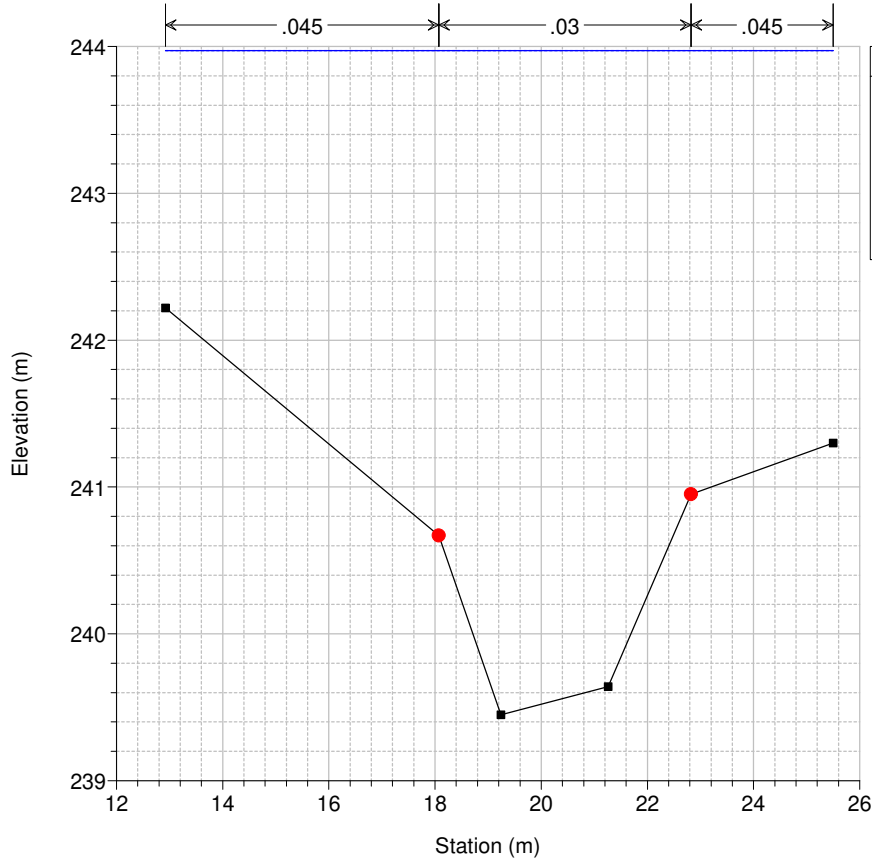
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T. Vingone Reach = Vingone RS = 08



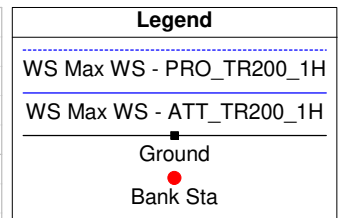
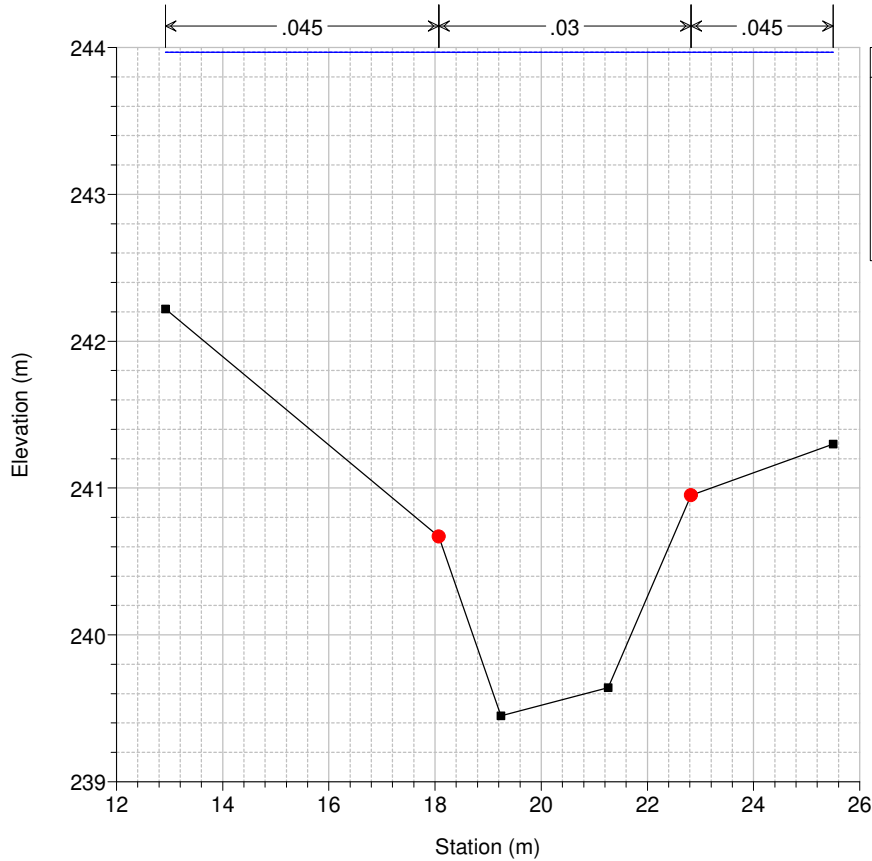
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T. Vingone Reach = Vingone RS = 07



2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = T. Vingone Reach = Vingone RS = 06.9



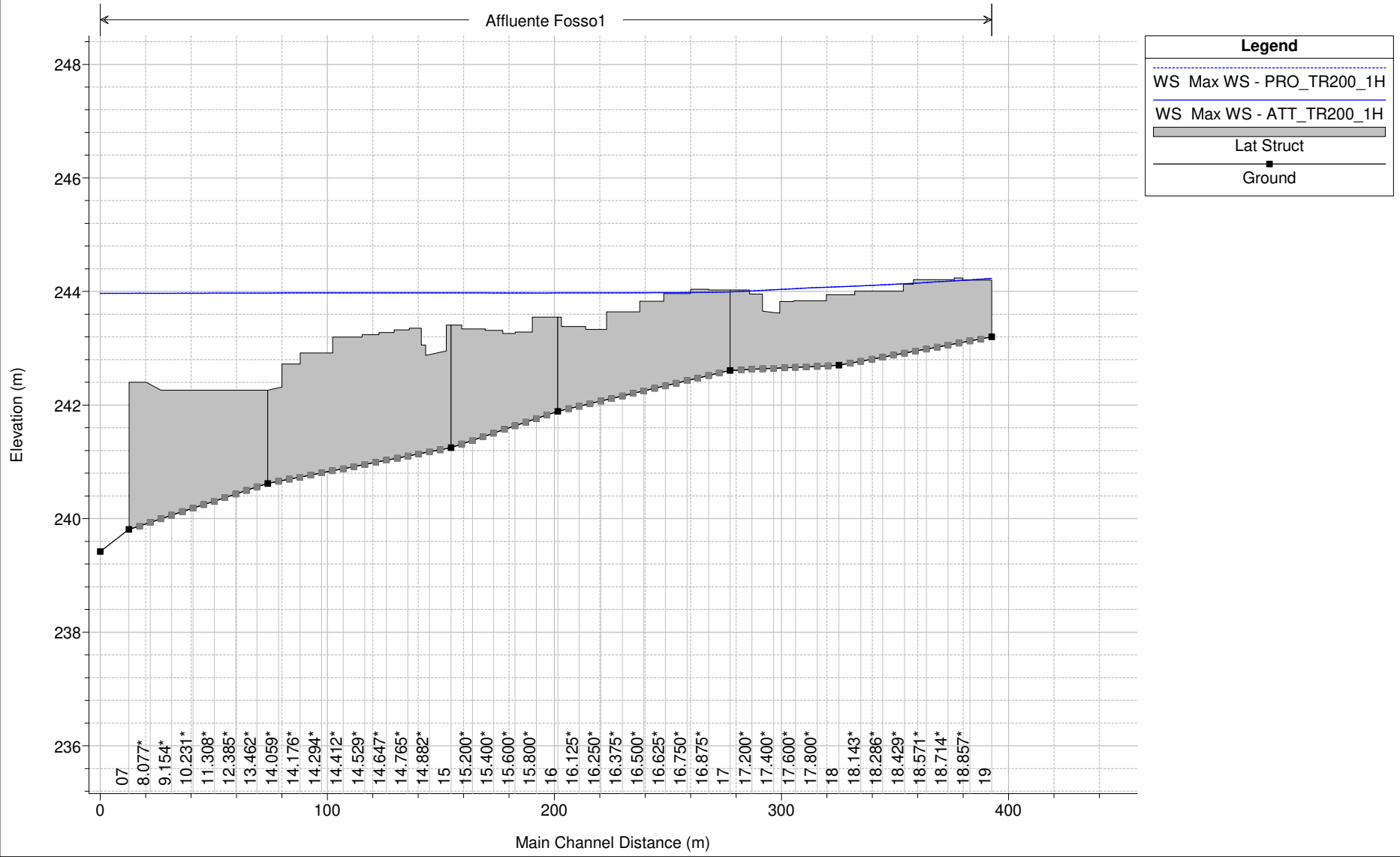
| Reach | River Sta | Profile | Plan | Q US (m3/s) | Q Leaving Total (m3/s) | Q DS (m3/s) | Q Weir (m3/s) | Q Gates (m3/s) | Wt Top Wdth (m) | Weir Max Depth (m) | Weir Avg Depth (m) | Min El Weir Flow (m) | E.G. US. (m) | W.S. US. (m) | E.G. DS (m) | W.S. DS (m) |
|---------|-----------|---------|--------------|----------------|---------------------------|----------------|------------------|-------------------|--------------------|-----------------------|-----------------------|-------------------------|-----------------|-----------------|----------------|----------------|
| Vingone | 12.99 | Max WS | ATT_TR200_1H | 51.30 | 0.00 | 51.25 | 0.00 | | | | | 244.69 | 245.17 | 244.72 | 244.68 | 244.27 |
| Vingone | 12.99 | Max WS | PRO_TR200_1H | 51.17 | 0.00 | 51.35 | 0.00 | | | | | 244.69 | 245.17 | 244.73 | 244.68 | 244.27 |
| Vingone | 12.98 | Max WS | ATT_TR200_1H | 51.30 | 2.21 | 51.25 | 2.21 | | 115.34 | 0.58 | 0.32 | 243.71 | 245.17 | 244.72 | 244.68 | 244.27 |
| Vingone | 12.98 | Max WS | PRO_TR200_1H | 51.17 | -1.16 | 51.35 | -1.16 | | 124.73 | 0.58 | 0.33 | 243.71 | 245.17 | 244.73 | 244.68 | 244.27 |
| Vingone | 11.99 | Max WS | ATT_TR200_1H | 51.25 | 0.02 | 50.06 | 0.02 | | 36.17 | 0.15 | 0.08 | 243.93 | 244.68 | 244.27 | 244.36 | 244.05 |
| Vingone | 11.99 | Max WS | PRO_TR200_1H | 51.35 | -0.38 | 50.29 | -0.38 | | 36.14 | 0.18 | 0.11 | 243.93 | 244.68 | 244.27 | 244.37 | 244.05 |
| Vingone | 11.98 | Max WS | ATT_TR200_1H | 51.25 | -0.45 | 46.02 | -0.45 | | 209.32 | 0.74 | 0.54 | 243.31 | 244.68 | 244.27 | 244.14 | 243.99 |
| Vingone | 11.98 | Max WS | PRO_TR200_1H | 51.35 | 0.16 | 46.27 | 0.16 | | 209.32 | 0.74 | 0.55 | 243.31 | 244.68 | 244.27 | 244.15 | 243.99 |
| Vingone | 10.99 | Max WS | ATT_TR200_1H | 50.06 | 9.15 | 36.96 | 9.15 | | 194.13 | 1.24 | 0.82 | 242.76 | 244.36 | 244.05 | 244.08 | 244.00 |
| Vingone | 10.99 | Max WS | PRO_TR200_1H | 50.29 | 7.50 | 36.77 | 7.50 | | 194.13 | 1.24 | 0.83 | 242.76 | 244.37 | 244.05 | 244.08 | 244.00 |
| Vingone | 9.98 | Max WS | ATT_TR200_1H | 46.02 | 19.81 | 31.03 | 19.81 | | 214.15 | 1.71 | 1.11 | 242.29 | 244.14 | 243.99 | 244.04 | 243.98 |
| Vingone | 9.98 | Max WS | PRO_TR200_1H | 46.27 | 18.82 | 31.03 | 18.82 | | 214.15 | 1.71 | 1.11 | 242.29 | 244.15 | 243.99 | 244.04 | 243.98 |
| Vingone | 8.99 | Max WS | ATT_TR200_1H | 36.96 | 7.17 | 31.03 | 7.17 | | 105.67 | 1.17 | 0.92 | 242.81 | 244.08 | 244.00 | 244.04 | 243.98 |
| Vingone | 8.99 | Max WS | PRO_TR200_1H | 36.77 | 6.59 | 31.03 | 6.59 | | 105.67 | 1.17 | 0.92 | 242.81 | 244.08 | 244.00 | 244.04 | 243.98 |
| Vingone | 7.99 | Max WS | ATT_TR200_1H | 31.03 | 9.55 | 31.22 | 9.55 | | 56.54 | 1.50 | 1.31 | 242.47 | 244.04 | 243.98 | 244.02 | 243.97 |
| Vingone | 7.99 | Max WS | PRO_TR200_1H | 31.03 | 9.44 | 30.97 | 9.44 | | 56.54 | 1.50 | 1.31 | 242.47 | 244.04 | 243.98 | 244.02 | 243.97 |
| Vingone | 7.98 | Max WS | ATT_TR200_1H | 31.03 | 10.17 | 31.16 | 10.17 | | 68.58 | 1.41 | 1.20 | 242.57 | 244.04 | 243.98 | 244.02 | 243.97 |
| Vingone | 7.98 | Max WS | PRO_TR200_1H | 31.03 | 10.16 | 30.90 | 10.16 | | 68.58 | 1.41 | 1.20 | 242.57 | 244.04 | 243.98 | 244.02 | 243.97 |

| Reach | River Sta | Profile | Plan | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|---------|-----------|---------|--------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Vingone | 13 | Max WS | ATT_TR200_1H | 51.30 | 241.70 | 244.72 | | 245.17 | 0.003031 | 3.14 | 20.92 | 15.71 | 0.62 |
| Vingone | 13 | Max WS | PRO_TR200_1H | 51.17 | 241.70 | 244.73 | | 245.17 | 0.002964 | 3.11 | 21.11 | 15.94 | 0.61 |
| Vingone | 12.99 | | | Lat Struct | | | | | | | | | |
| Vingone | 12.98 | | | Lat Struct | | | | | | | | | |
| Vingone | 12 | Max WS | ATT_TR200_1H | 51.25 | 241.14 | 244.27 | | 244.68 | 0.002585 | 3.15 | 21.83 | 10.69 | 0.59 |
| Vingone | 12 | Max WS | PRO_TR200_1H | 51.35 | 241.14 | 244.27 | | 244.68 | 0.002593 | 3.15 | 21.84 | 10.69 | 0.59 |
| Vingone | 11.99 | | | Lat Struct | | | | | | | | | |
| Vingone | 11.98 | | | Lat Struct | | | | | | | | | |
| Vingone | 11 | Max WS | ATT_TR200_1H | 50.06 | 240.76 | 244.05 | | 244.36 | 0.002213 | 2.81 | 25.21 | 14.81 | 0.52 |
| Vingone | 11 | Max WS | PRO_TR200_1H | 50.29 | 240.76 | 244.05 | | 244.37 | 0.002234 | 2.82 | 25.21 | 14.81 | 0.52 |
| Vingone | 10.99 | | | Lat Struct | | | | | | | | | |
| Vingone | 10 | Max WS | ATT_TR200_1H | 46.02 | 240.39 | 243.99 | | 244.14 | 0.001014 | 2.05 | 33.40 | 17.06 | 0.36 |
| Vingone | 10 | Max WS | PRO_TR200_1H | 46.27 | 240.39 | 243.99 | | 244.15 | 0.001024 | 2.06 | 33.42 | 17.06 | 0.36 |
| Vingone | 9.98 | | | Lat Struct | | | | | | | | | |
| Vingone | 09 | Max WS | ATT_TR200_1H | 36.96 | 239.90 | 244.00 | | 244.08 | 0.000505 | 1.55 | 35.56 | 13.48 | 0.26 |
| Vingone | 09 | Max WS | PRO_TR200_1H | 36.77 | 239.90 | 244.00 | | 244.08 | 0.000500 | 1.54 | 35.57 | 13.48 | 0.25 |
| Vingone | 8.99 | | | Lat Struct | | | | | | | | | |
| Vingone | 08 | Max WS | ATT_TR200_1H | 31.03 | 239.65 | 243.98 | | 244.04 | 0.000319 | 1.27 | 33.56 | 11.57 | 0.20 |
| Vingone | 08 | Max WS | PRO_TR200_1H | 31.03 | 239.65 | 243.98 | | 244.04 | 0.000319 | 1.26 | 33.56 | 11.57 | 0.20 |
| Vingone | 7.99 | | | Lat Struct | | | | | | | | | |
| Vingone | 7.98 | | | Lat Struct | | | | | | | | | |
| Vingone | 07 | Max WS | ATT_TR200_1H | 31.16 | 239.45 | 243.97 | | 244.02 | 0.000224 | 1.12 | 39.90 | 12.58 | 0.18 |
| Vingone | 07 | Max WS | PRO_TR200_1H | 30.90 | 239.45 | 243.97 | | 244.02 | 0.000220 | 1.11 | 39.91 | 12.58 | 0.18 |
| Vingone | 06.9 | Max WS | ATT_TR200_1H | 30.74 | 239.45 | 243.97 | | 244.01 | 0.000219 | 1.10 | 39.83 | 12.58 | 0.17 |
| Vingone | 06.9 | Max WS | PRO_TR200_1H | 31.16 | 239.45 | 243.97 | | 244.02 | 0.000225 | 1.12 | 39.85 | 12.58 | 0.18 |

FOSSO

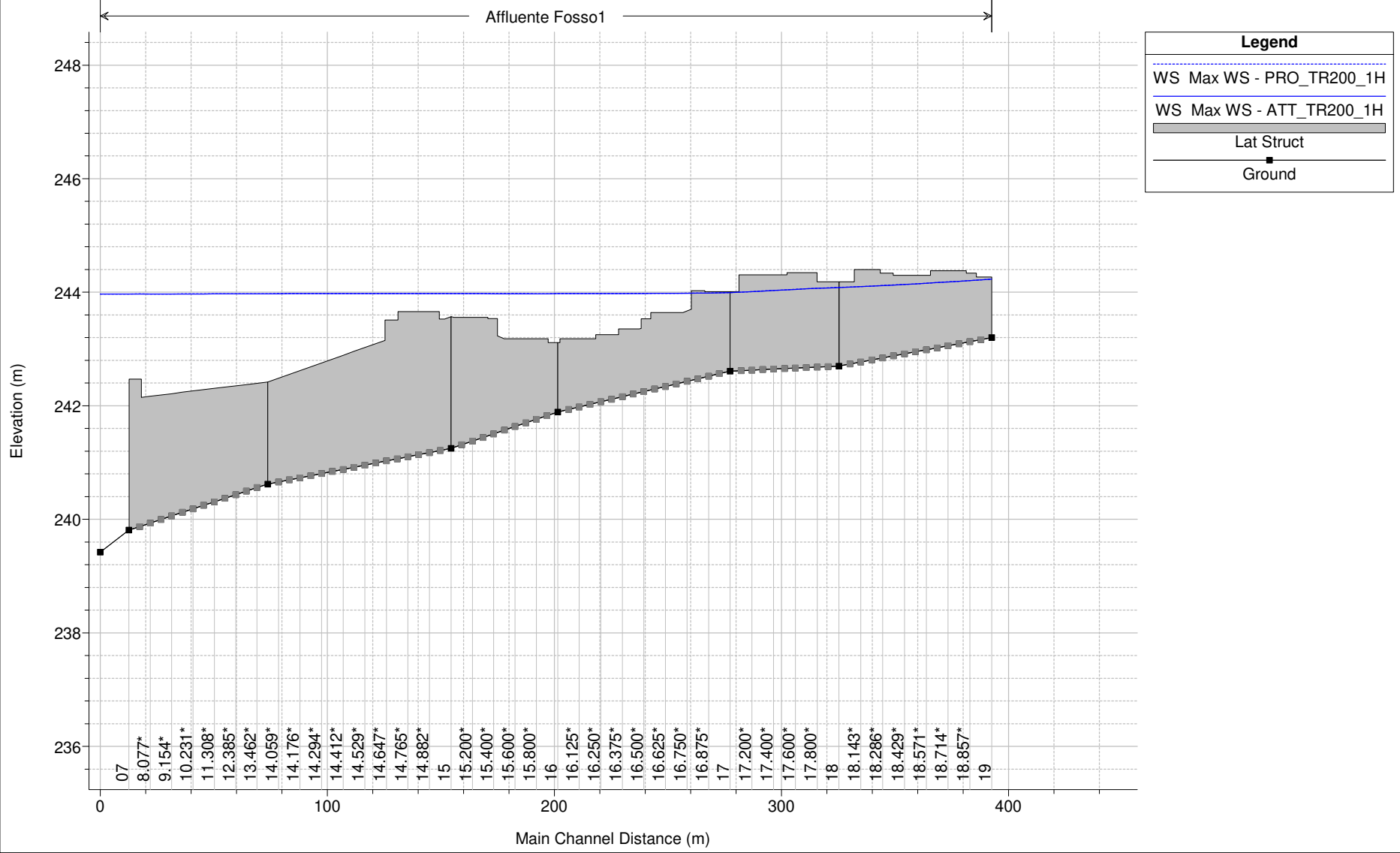
AV20123

2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H
 Strutture Laterali Destra Idraulica

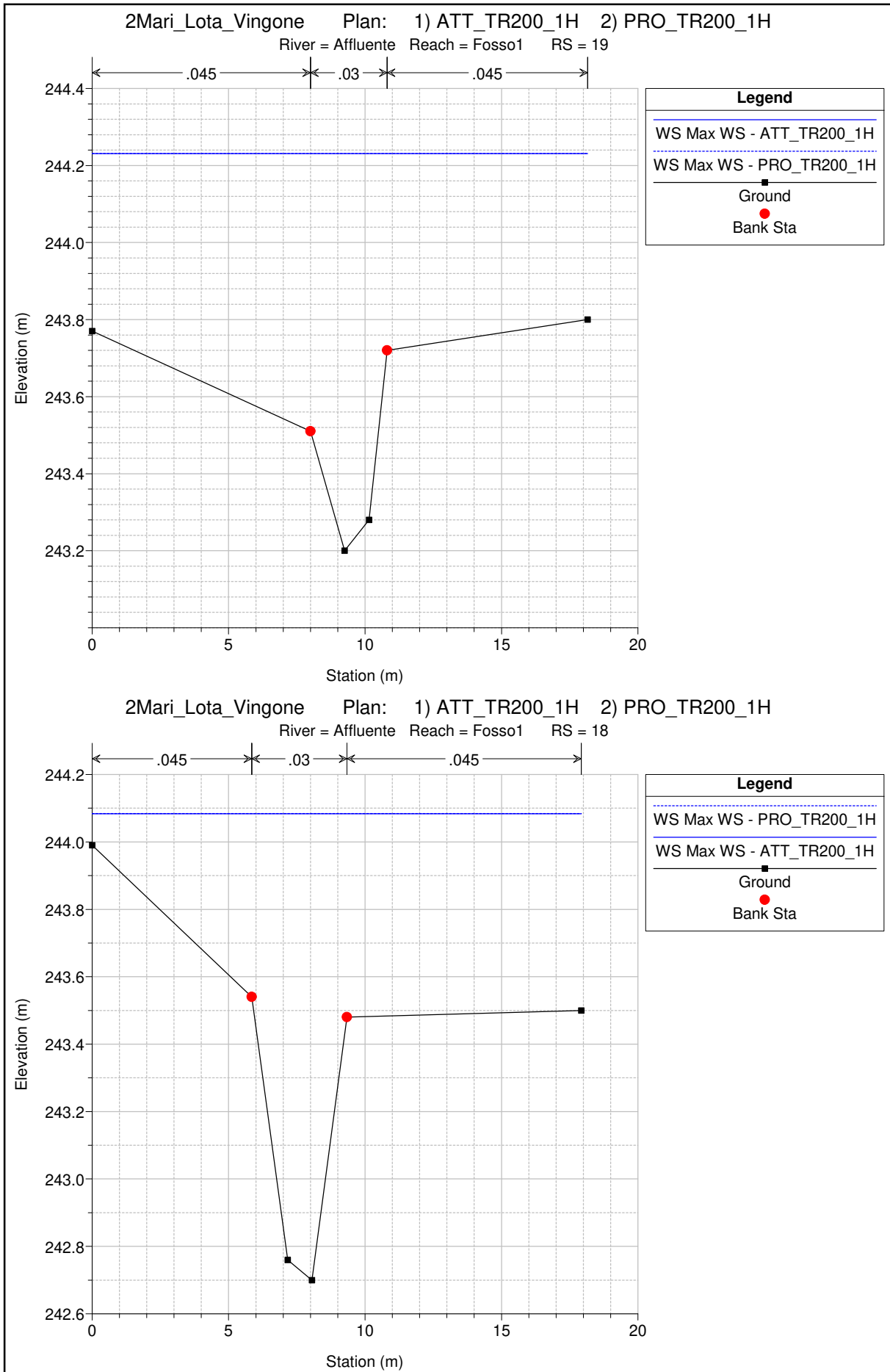


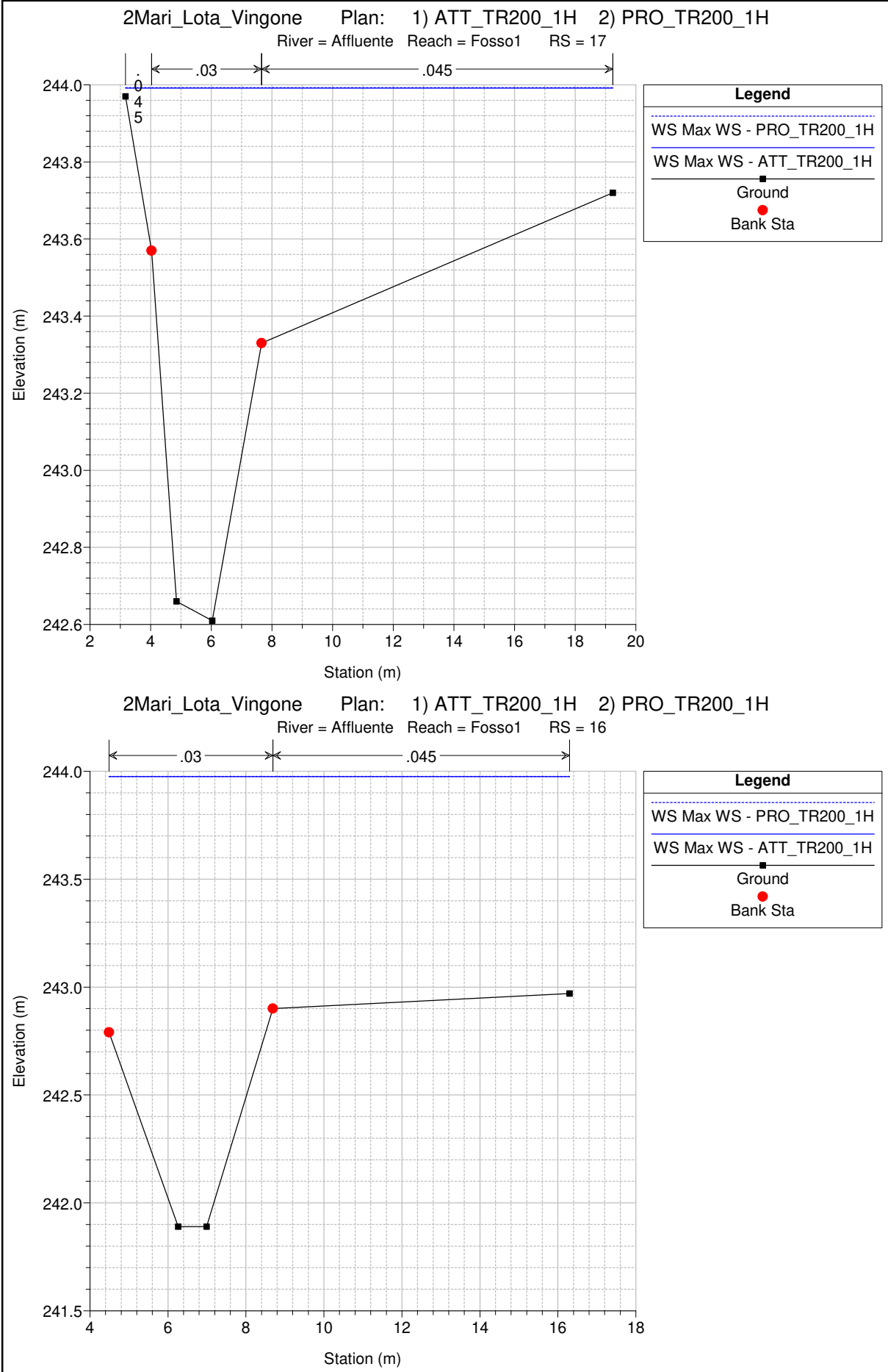
1 cm Horiz. = 25 m 1 cm Vert. = 1 m

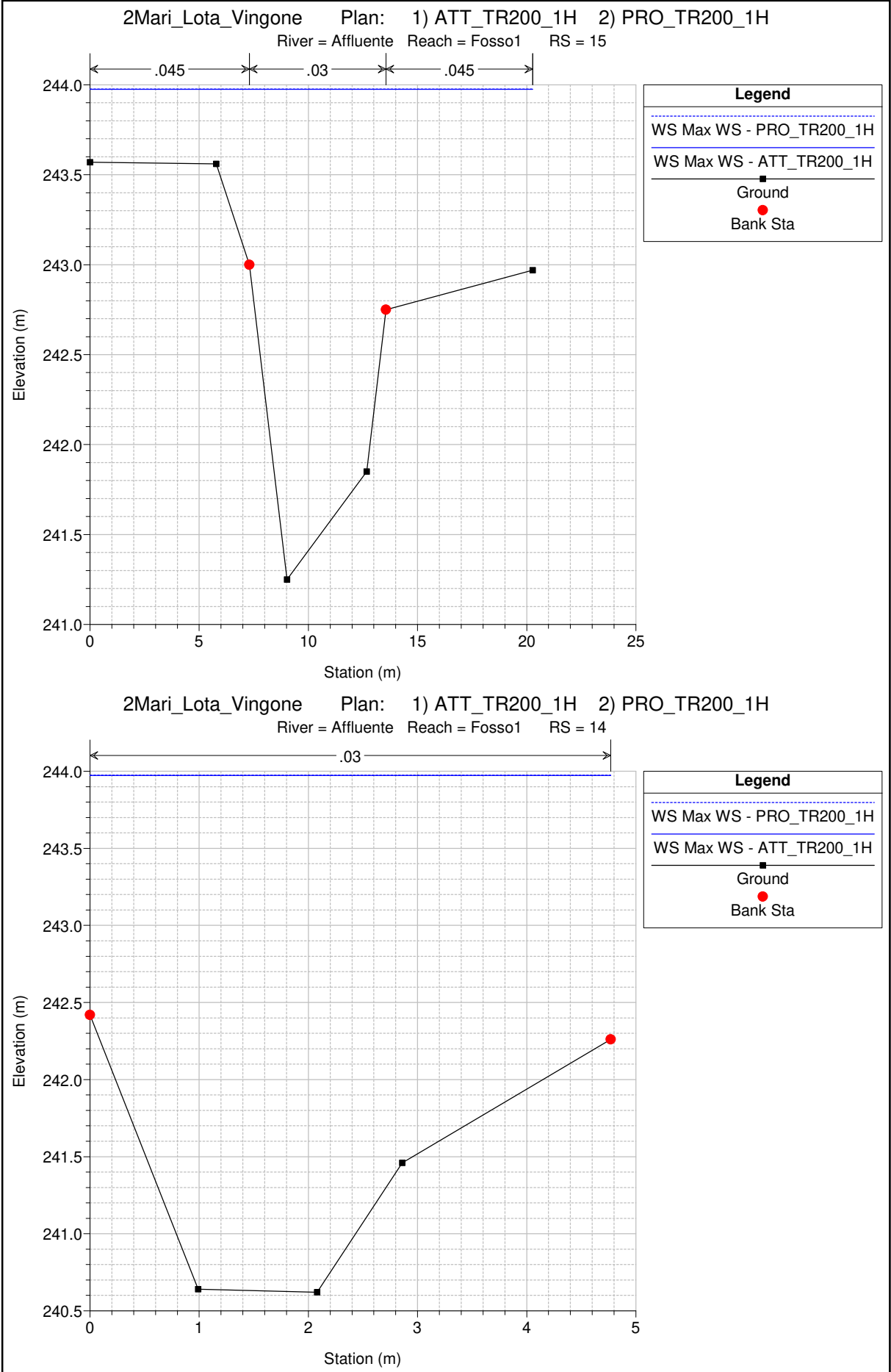
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H
 Strutture Laterali Sinistra Idraulica



1 cm Horiz. = 25 m 1 cm Vert. = 1 m

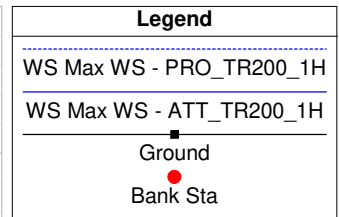
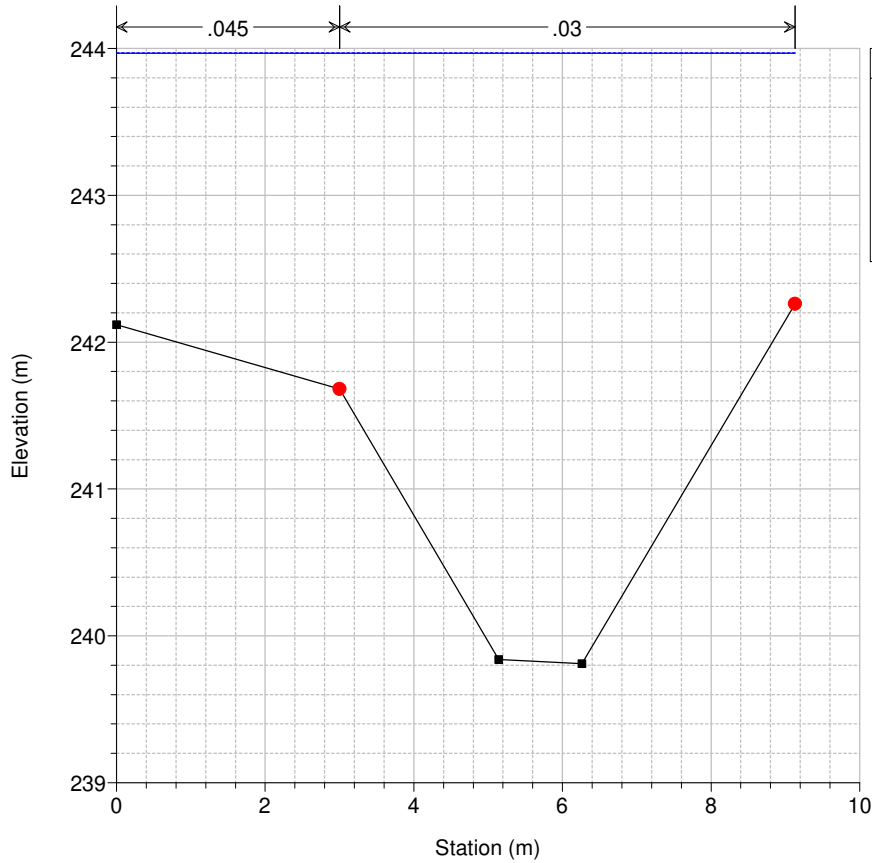






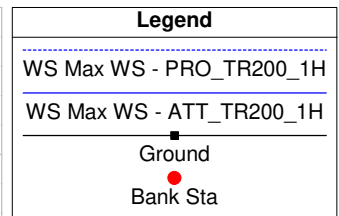
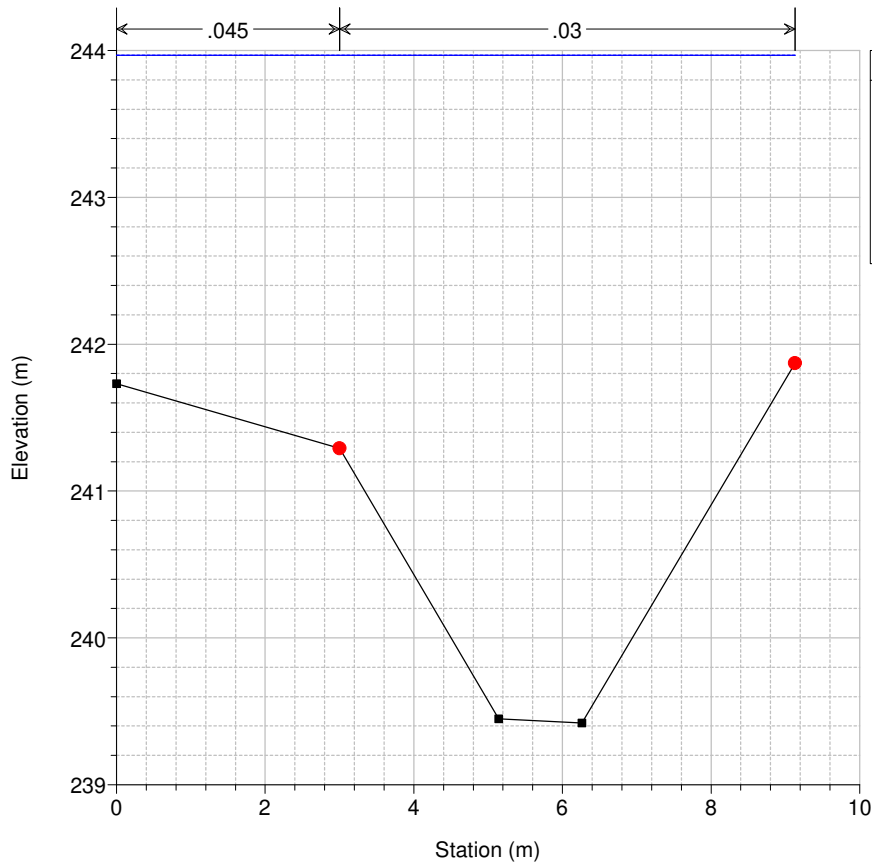
2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = Affluente Reach = Fosso1 RS = 07



2Mari_Lota_Vingone Plan: 1) ATT_TR200_1H 2) PRO_TR200_1H

River = Affluente Reach = Fosso1 RS = 06.9

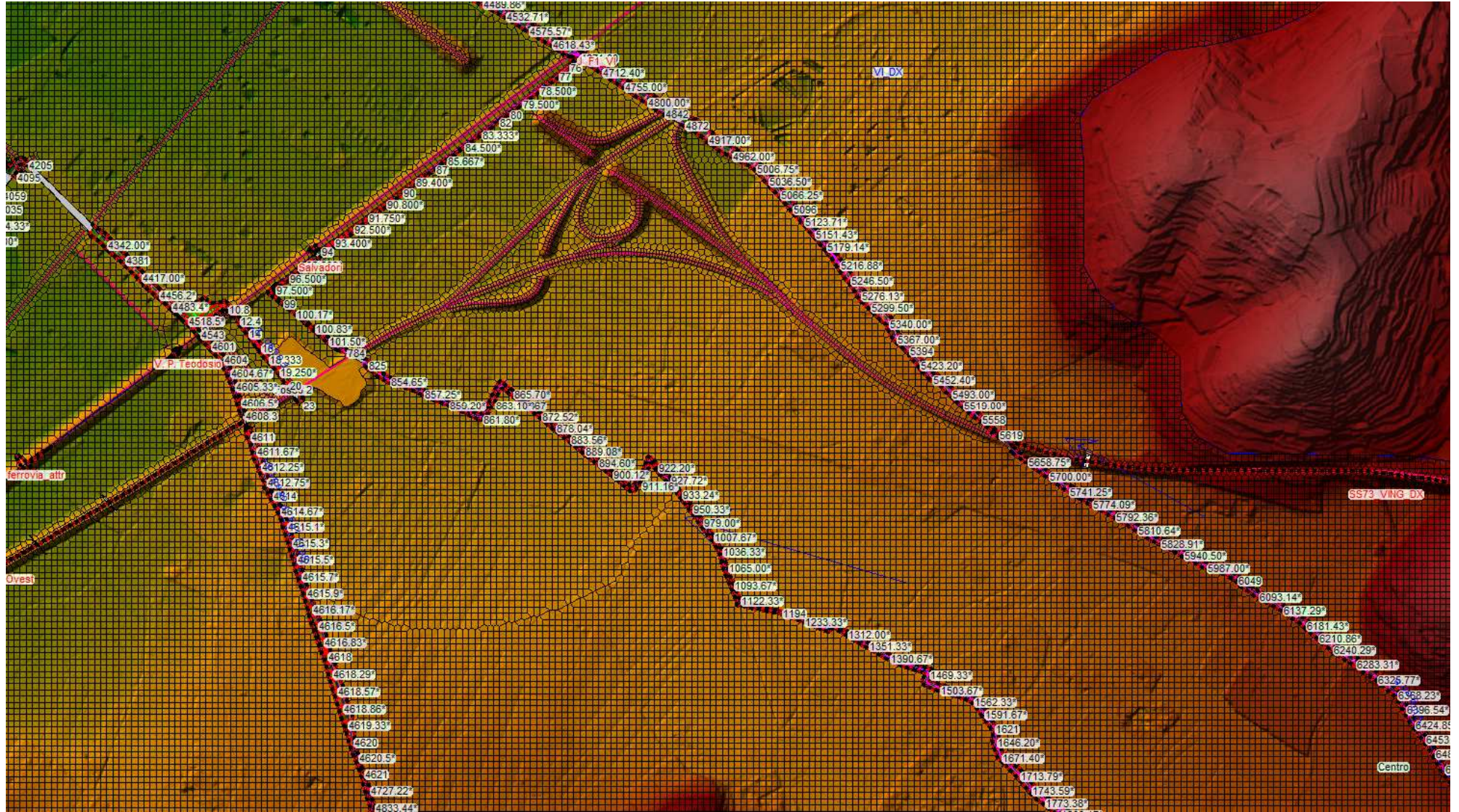


| Reach | River Sta | Profile | Plan | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|--------|-----------|---------|--------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Fosso1 | 19 | Max WS | ATT_TR200_1H | 9.05 | 243.20 | 244.23 | | 244.28 | 0.002304 | 1.41 | 10.66 | 18.16 | 0.48 |
| Fosso1 | 19 | Max WS | PRO_TR200_1H | 9.03 | 243.20 | 244.23 | | 244.28 | 0.002293 | 1.41 | 10.66 | 18.16 | 0.48 |
| Fosso1 | 18.99 | | | | | | | | | | | | |
| Fosso1 | 18.98 | | | | | | | | | | | | |
| Fosso1 | 18 | Max WS | ATT_TR200_1H | 8.80 | 242.70 | 244.08 | | 244.14 | 0.001681 | 1.32 | 10.67 | 17.92 | 0.41 |
| Fosso1 | 18 | Max WS | PRO_TR200_1H | 8.83 | 242.70 | 244.08 | | 244.14 | 0.001689 | 1.32 | 10.68 | 17.92 | 0.41 |
| Fosso1 | 17.98 | | | | | | | | | | | | |
| Fosso1 | 17 | Max WS | ATT_TR200_1H | 8.43 | 242.61 | 243.99 | | 244.06 | 0.001759 | 1.35 | 9.58 | 16.07 | 0.41 |
| Fosso1 | 17 | Max WS | PRO_TR200_1H | 8.45 | 242.61 | 243.99 | | 244.06 | 0.001762 | 1.35 | 9.59 | 16.07 | 0.41 |
| Fosso1 | 16.99 | | | | | | | | | | | | |
| Fosso1 | 16.98 | | | | | | | | | | | | |
| Fosso1 | 16 | Max WS | ATT_TR200_1H | 7.92 | 241.89 | 243.97 | | 243.99 | 0.000332 | 0.69 | 15.01 | 11.81 | 0.17 |
| Fosso1 | 16 | Max WS | PRO_TR200_1H | 7.95 | 241.89 | 243.98 | | 243.99 | 0.000334 | 0.69 | 15.02 | 11.81 | 0.17 |
| Fosso1 | 15.99 | | | | | | | | | | | | |
| Fosso1 | 15.98 | | | | | | | | | | | | |
| Fosso1 | 15 | Max WS | ATT_TR200_1H | 7.68 | 241.25 | 243.98 | | 243.98 | 0.000076 | 0.43 | 24.44 | 20.27 | 0.09 |
| Fosso1 | 15 | Max WS | PRO_TR200_1H | 7.64 | 241.25 | 243.98 | | 243.98 | 0.000075 | 0.43 | 24.46 | 20.27 | 0.09 |
| Fosso1 | 14.99 | | | | | | | | | | | | |
| Fosso1 | 14.98 | | | | | | | | | | | | |
| Fosso1 | 14 | Max WS | ATT_TR200_1H | 4.96 | 240.62 | 243.97 | | 243.98 | 0.000103 | 0.40 | 12.39 | 4.77 | 0.08 |
| Fosso1 | 14 | Max WS | PRO_TR200_1H | 4.97 | 240.62 | 243.97 | | 243.98 | 0.000103 | 0.40 | 12.39 | 4.77 | 0.08 |
| Fosso1 | 13.99 | | | | | | | | | | | | |
| Fosso1 | 13.98 | | | | | | | | | | | | |
| Fosso1 | 07 | Max WS | ATT_TR200_1H | 7.58 | 239.81 | 243.97 | | 243.97 | 0.000036 | 0.33 | 26.11 | 9.13 | 0.06 |
| Fosso1 | 07 | Max WS | PRO_TR200_1H | 7.89 | 239.81 | 243.97 | | 243.97 | 0.000039 | 0.34 | 26.14 | 9.13 | 0.06 |
| Fosso1 | 06.9 | Max WS | ATT_TR200_1H | 7.62 | 239.42 | 243.97 | | 243.97 | 0.000026 | 0.29 | 29.67 | 9.13 | 0.05 |
| Fosso1 | 06.9 | Max WS | PRO_TR200_1H | 7.86 | 239.42 | 243.97 | | 243.97 | 0.000028 | 0.30 | 29.69 | 9.13 | 0.05 |

| Reach | River Sta | Profile | Plan | Q US (m3/s) | Q Leaving Total (m3/s) | Q DS (m3/s) | Q Weir (m3/s) | Q Gates (m3/s) | Wt Top Wdth (m) | Weir Max Depth (m) | Weir Avg Depth (m) | Min El Weir Flow (m) | E.G. US. (m) | W.S. US. (m) | E.G. DS (m) | W.S. DS (m) |
|--------|-----------|---------|--------------|----------------|---------------------------|----------------|------------------|-------------------|--------------------|-----------------------|-----------------------|-------------------------|-----------------|-----------------|----------------|----------------|
| Fosso1 | 18.99 | Max WS | ATT_TR200_1H | 9.05 | 0.71 | 8.43 | 0.71 | | 91.77 | 0.42 | 0.16 | 243.62 | 244.28 | 244.23 | 244.06 | 243.99 |
| Fosso1 | 18.99 | Max WS | PRO_TR200_1H | 9.03 | 0.59 | 8.45 | 0.59 | | 91.77 | 0.42 | 0.16 | 243.62 | 244.28 | 244.23 | 244.06 | 243.99 |
| Fosso1 | 18.98 | Max WS | ATT_TR200_1H | 9.05 | 0.00 | 8.80 | 0.00 | | | | | 244.19 | 244.28 | 244.23 | 244.14 | 244.08 |
| Fosso1 | 18.98 | Max WS | PRO_TR200_1H | 9.03 | 0.00 | 8.83 | 0.00 | | | | | 244.19 | 244.28 | 244.23 | 244.14 | 244.08 |
| Fosso1 | 17.98 | Max WS | ATT_TR200_1H | 8.80 | 0.00 | 8.43 | 0.00 | | | | | 244.01 | 244.14 | 244.08 | 244.06 | 243.99 |
| Fosso1 | 17.98 | Max WS | PRO_TR200_1H | 8.83 | 0.00 | 8.45 | 0.00 | | | | | 244.01 | 244.14 | 244.08 | 244.06 | 243.99 |
| Fosso1 | 16.99 | Max WS | ATT_TR200_1H | 8.43 | 1.48 | 7.92 | 1.48 | | 56.88 | 0.64 | 0.33 | 243.33 | 244.06 | 243.99 | 243.99 | 243.97 |
| Fosso1 | 16.99 | Max WS | PRO_TR200_1H | 8.45 | 1.44 | 7.95 | 1.44 | | 56.88 | 0.64 | 0.33 | 243.33 | 244.06 | 243.99 | 243.99 | 243.98 |
| Fosso1 | 16.98 | Max WS | ATT_TR200_1H | 8.43 | 2.74 | 7.92 | 2.74 | | 59.10 | 0.86 | 0.59 | 243.11 | 244.06 | 243.99 | 243.99 | 243.97 |
| Fosso1 | 16.98 | Max WS | PRO_TR200_1H | 8.45 | 2.64 | 7.95 | 2.64 | | 59.10 | 0.86 | 0.59 | 243.11 | 244.06 | 243.99 | 243.99 | 243.98 |
| Fosso1 | 15.99 | Max WS | ATT_TR200_1H | 7.92 | 2.58 | 7.68 | 2.58 | | 49.25 | 0.71 | 0.61 | 243.26 | 243.99 | 243.97 | 243.98 | 243.98 |
| Fosso1 | 15.99 | Max WS | PRO_TR200_1H | 7.95 | 2.54 | 7.64 | 2.54 | | 49.25 | 0.71 | 0.61 | 243.26 | 243.99 | 243.98 | 243.98 | 243.98 |
| Fosso1 | 15.98 | Max WS | ATT_TR200_1H | 7.92 | 2.52 | 7.68 | 2.52 | | 46.05 | 0.86 | 0.62 | 243.11 | 243.99 | 243.97 | 243.98 | 243.98 |
| Fosso1 | 15.98 | Max WS | PRO_TR200_1H | 7.95 | 2.43 | 7.64 | 2.43 | | 46.05 | 0.86 | 0.62 | 243.11 | 243.99 | 243.98 | 243.98 | 243.98 |
| Fosso1 | 14.99 | Max WS | ATT_TR200_1H | 7.68 | 8.03 | 4.96 | 8.03 | | 85.48 | 1.71 | 0.93 | 242.26 | 243.98 | 243.98 | 243.98 | 243.97 |
| Fosso1 | 14.99 | Max WS | PRO_TR200_1H | 7.64 | 7.82 | 4.97 | 7.82 | | 85.48 | 1.71 | 0.93 | 242.26 | 243.98 | 243.98 | 243.98 | 243.97 |
| Fosso1 | 14.98 | Max WS | ATT_TR200_1H | 7.68 | 9.32 | 4.96 | 9.32 | | 76.47 | 1.55 | 0.93 | 242.42 | 243.98 | 243.98 | 243.98 | 243.97 |
| Fosso1 | 14.98 | Max WS | PRO_TR200_1H | 7.64 | 9.29 | 4.97 | 9.29 | | 76.47 | 1.55 | 0.94 | 242.42 | 243.98 | 243.98 | 243.98 | 243.97 |
| Fosso1 | 13.99 | Max WS | ATT_TR200_1H | 4.96 | 12.85 | 7.58 | 12.85 | | 62.45 | 1.71 | 1.69 | 242.26 | 243.98 | 243.97 | 243.97 | 243.97 |
| Fosso1 | 13.99 | Max WS | PRO_TR200_1H | 4.97 | 12.93 | 7.89 | 12.93 | | 62.45 | 1.71 | 1.69 | 242.26 | 243.98 | 243.97 | 243.97 | 243.97 |
| Fosso1 | 13.98 | Max WS | ATT_TR200_1H | 4.96 | 13.78 | 7.58 | 13.78 | | 60.10 | 1.82 | 1.67 | 242.15 | 243.98 | 243.97 | 243.97 | 243.97 |
| Fosso1 | 13.98 | Max WS | PRO_TR200_1H | 4.97 | 13.85 | 7.89 | 13.85 | | 60.10 | 1.82 | 1.68 | 242.15 | 243.98 | 243.97 | 243.97 | 243.97 |

TORRENTE VINGONE
FOSSO SELLINA

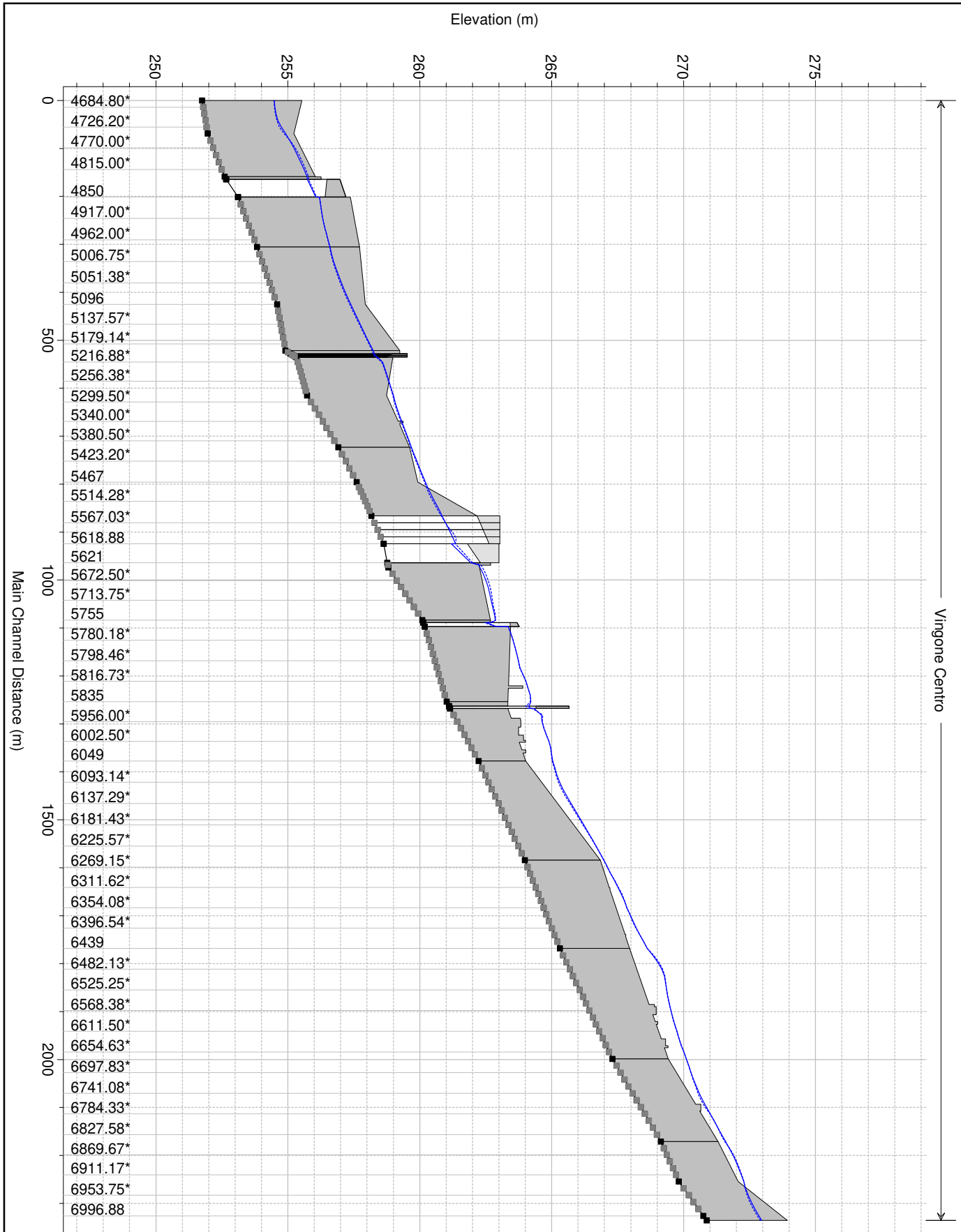
Planimetria Stato Attuale



TORRENTE
VINGONE
(tratto Vingone_Centro)

Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 Struttura Laterali Destra Idraulica

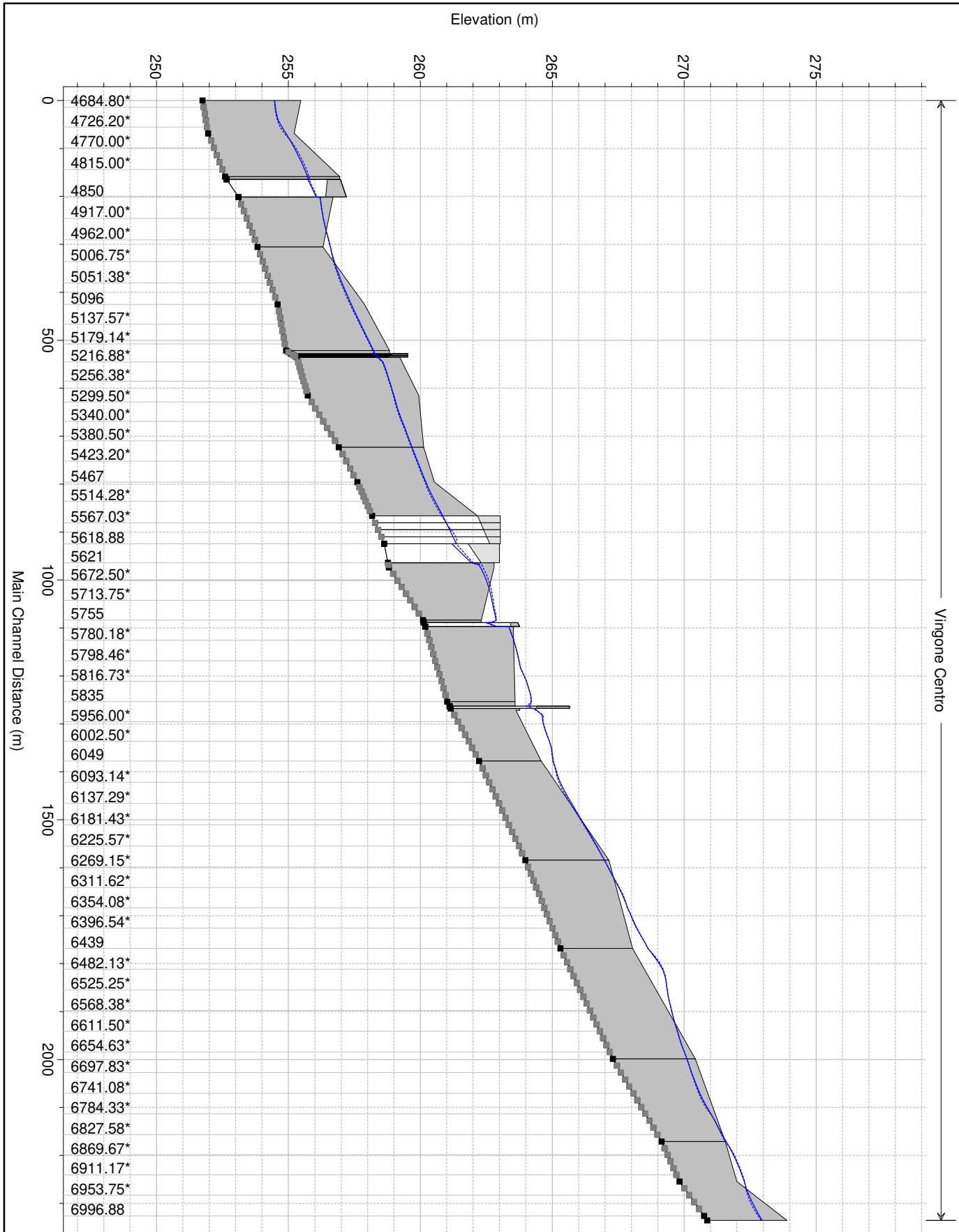
Vingone Centro



| Legend | |
|--------|-------------------------|
| | WS Max WS - P2_TR200_2h |
| | WS Max WS - TR200_2h |
| | Lat Struct |
| | Ground |

Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 Structure Laterali Sinistra Idraulica

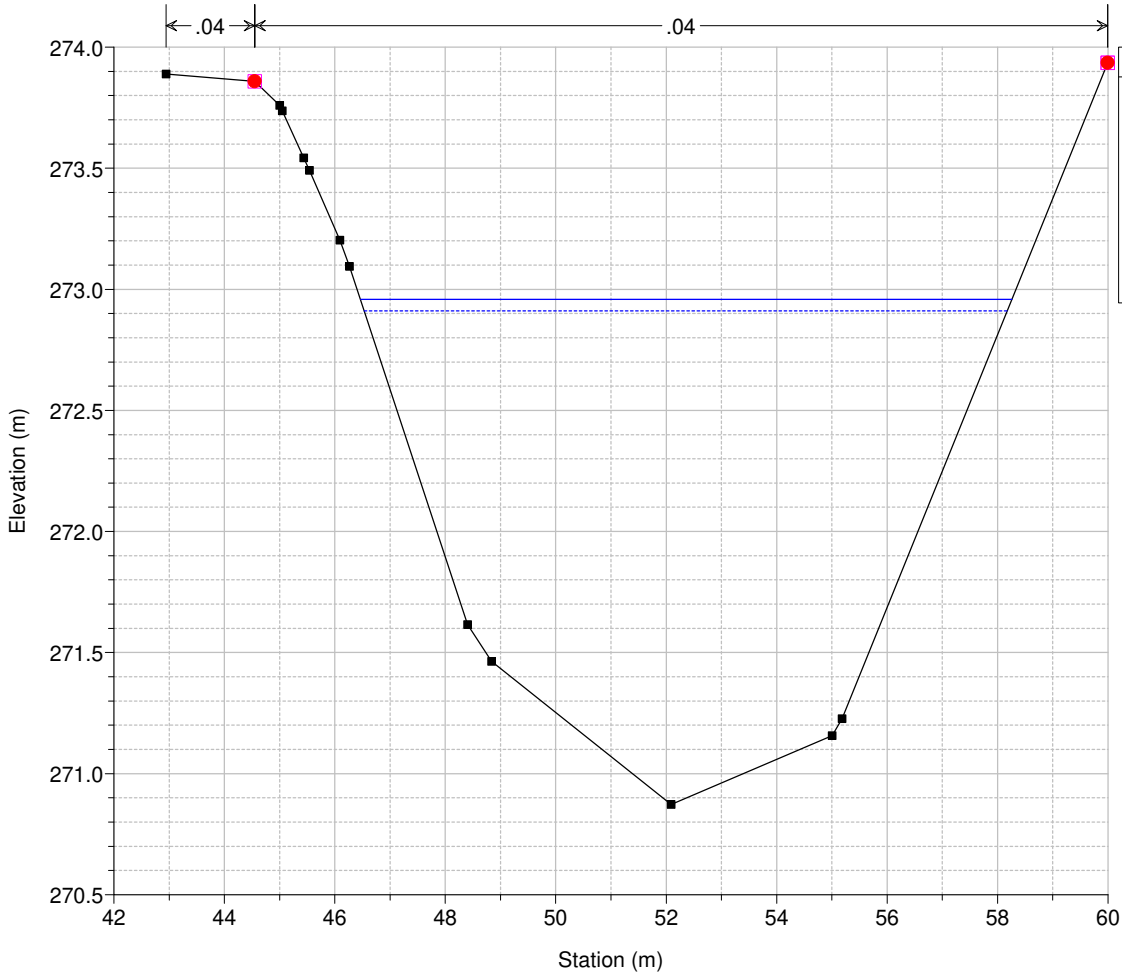
Vingone Centro



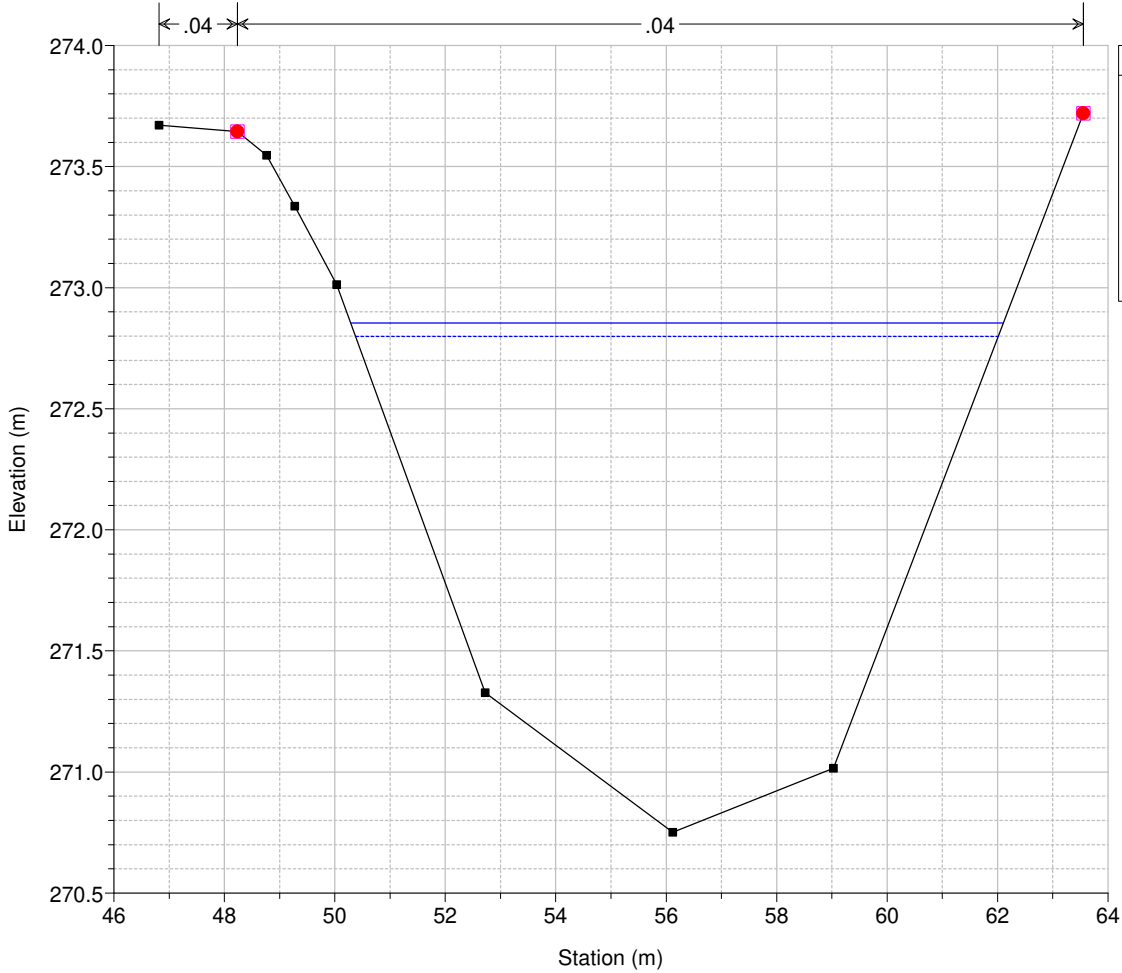
Legend

- WS Max WS - P2_TR200_2h
- WS Max WS - TR200_2h
- Lat Struct
- Ground

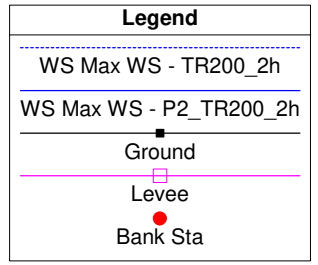
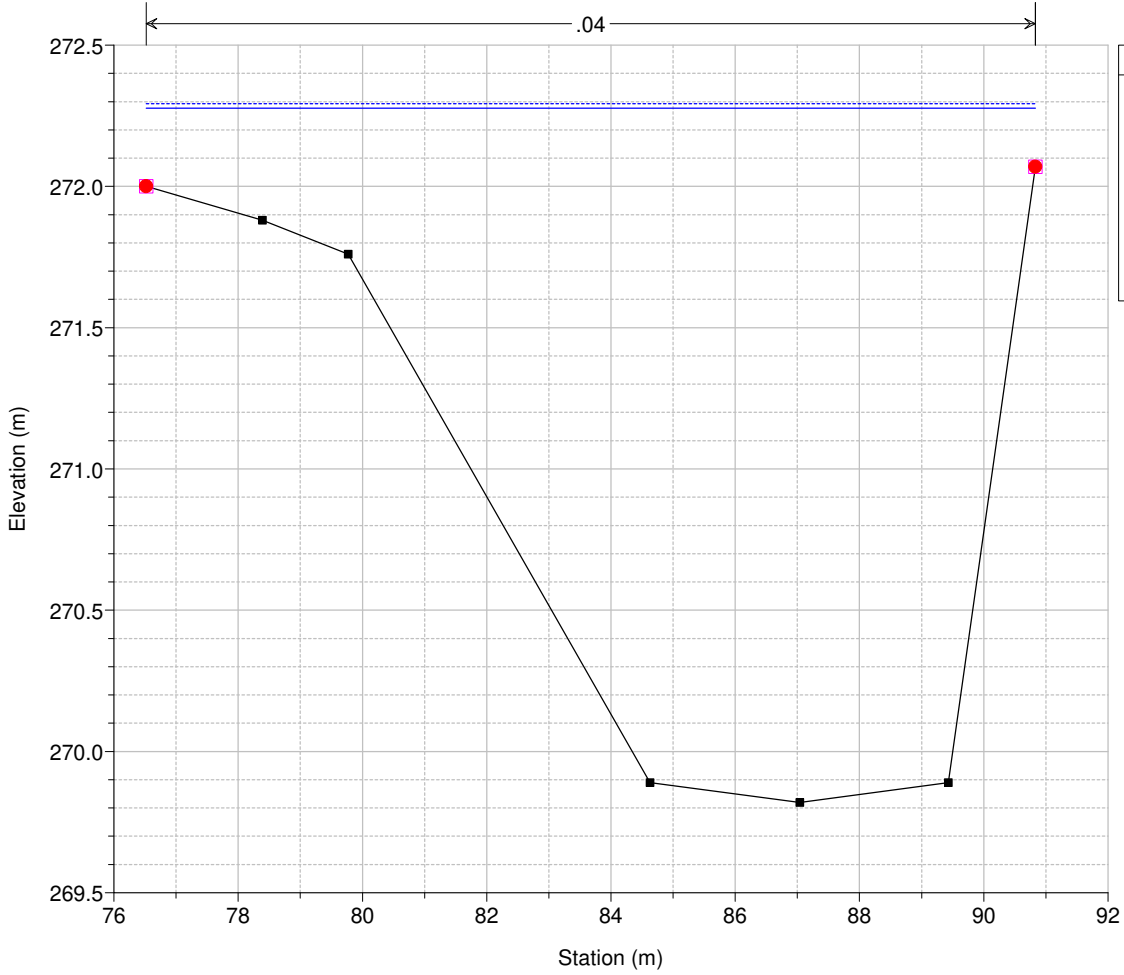
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 7006.25 Interpolata valle J_VA_VI



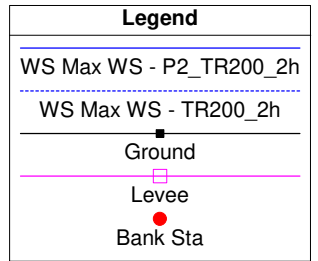
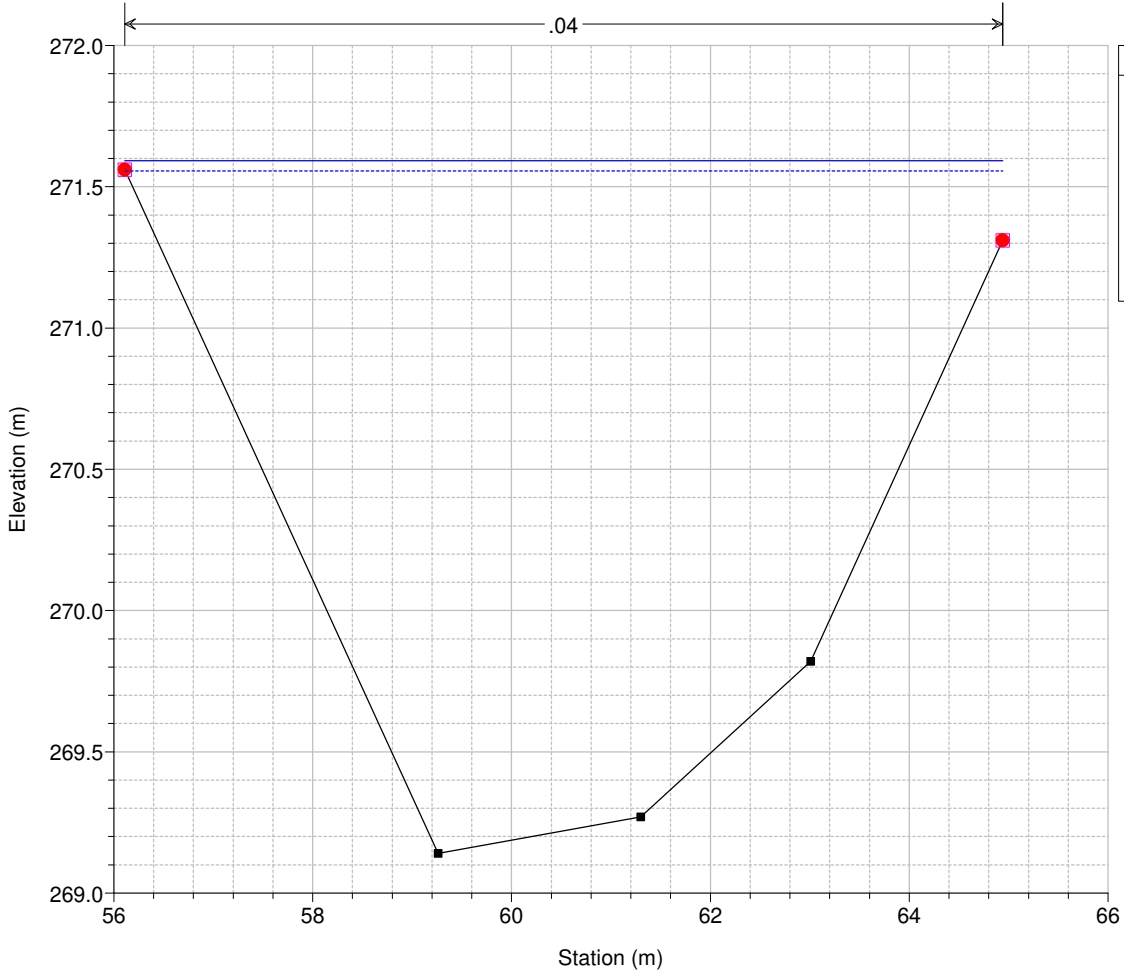
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 6996.88 Interpolata per J_VA_VI



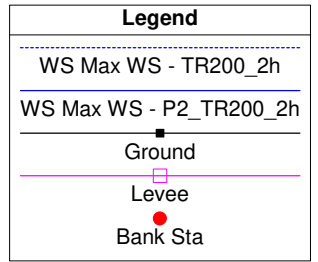
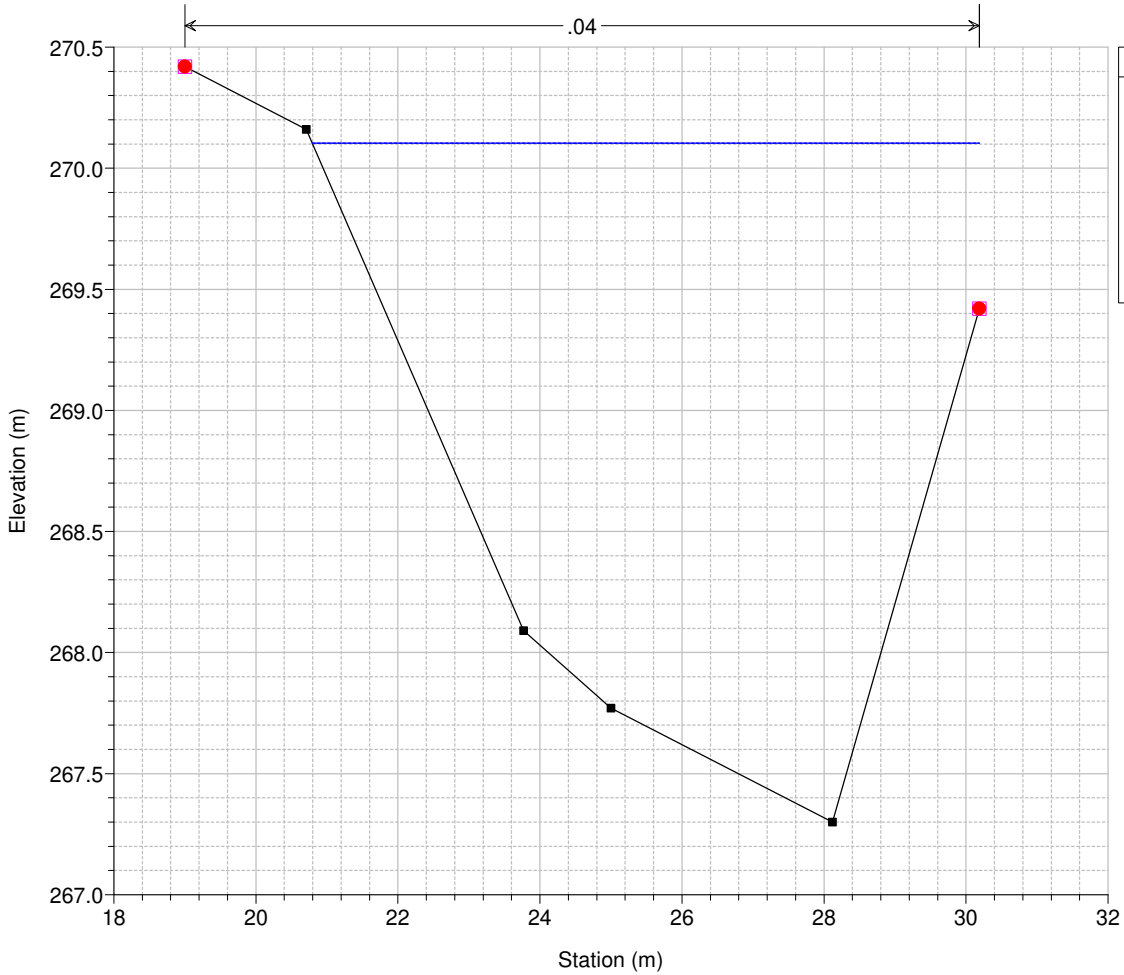
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 6925 C131 - (VI_42.5)



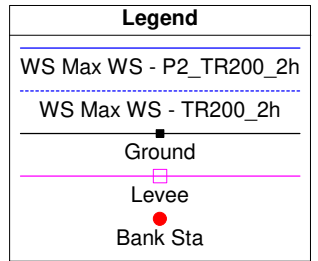
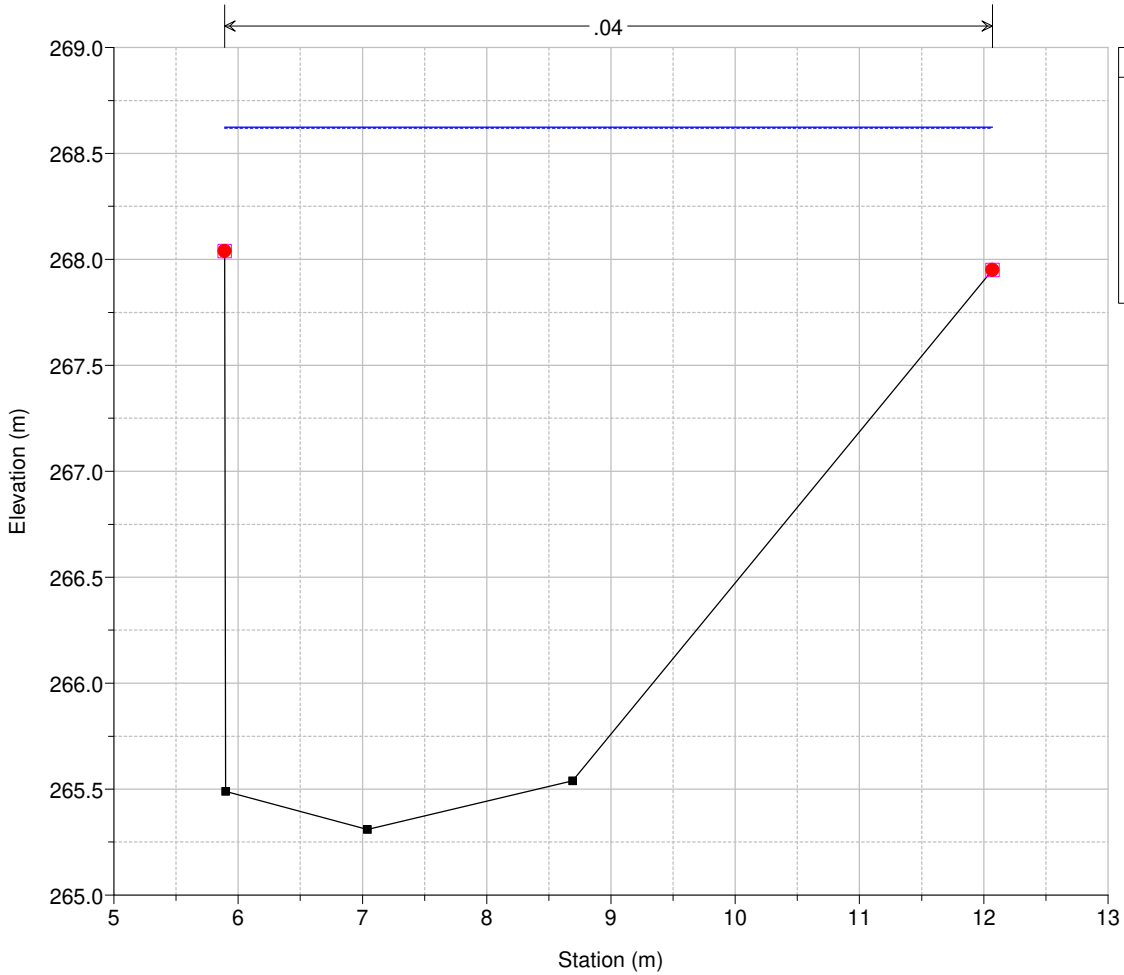
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 6842 C132 - (VI_42)



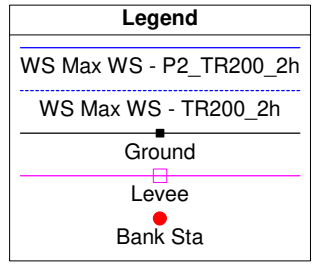
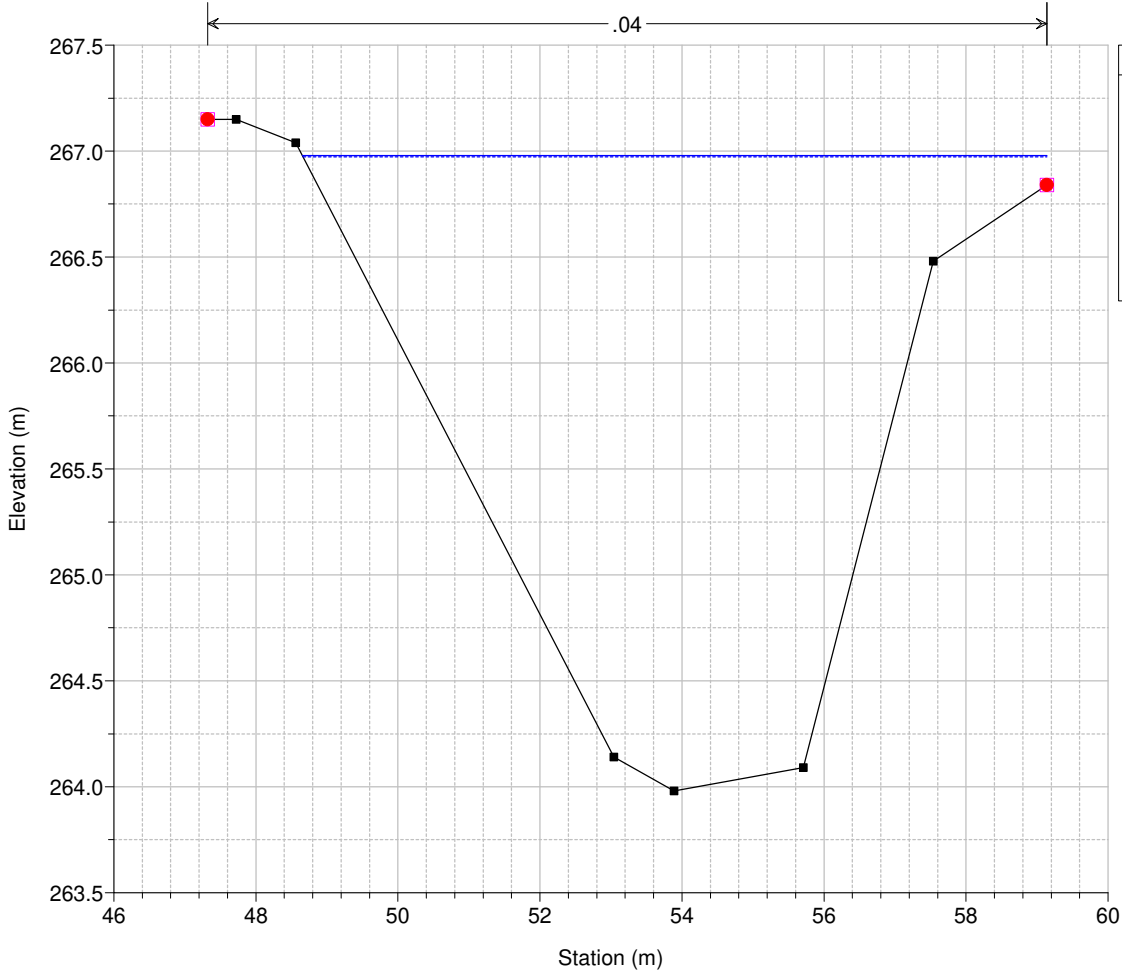
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 6669 C133 - (VI_41)



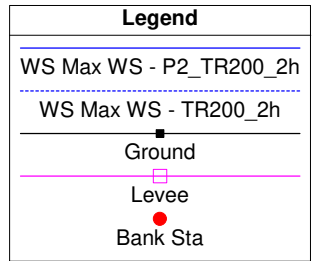
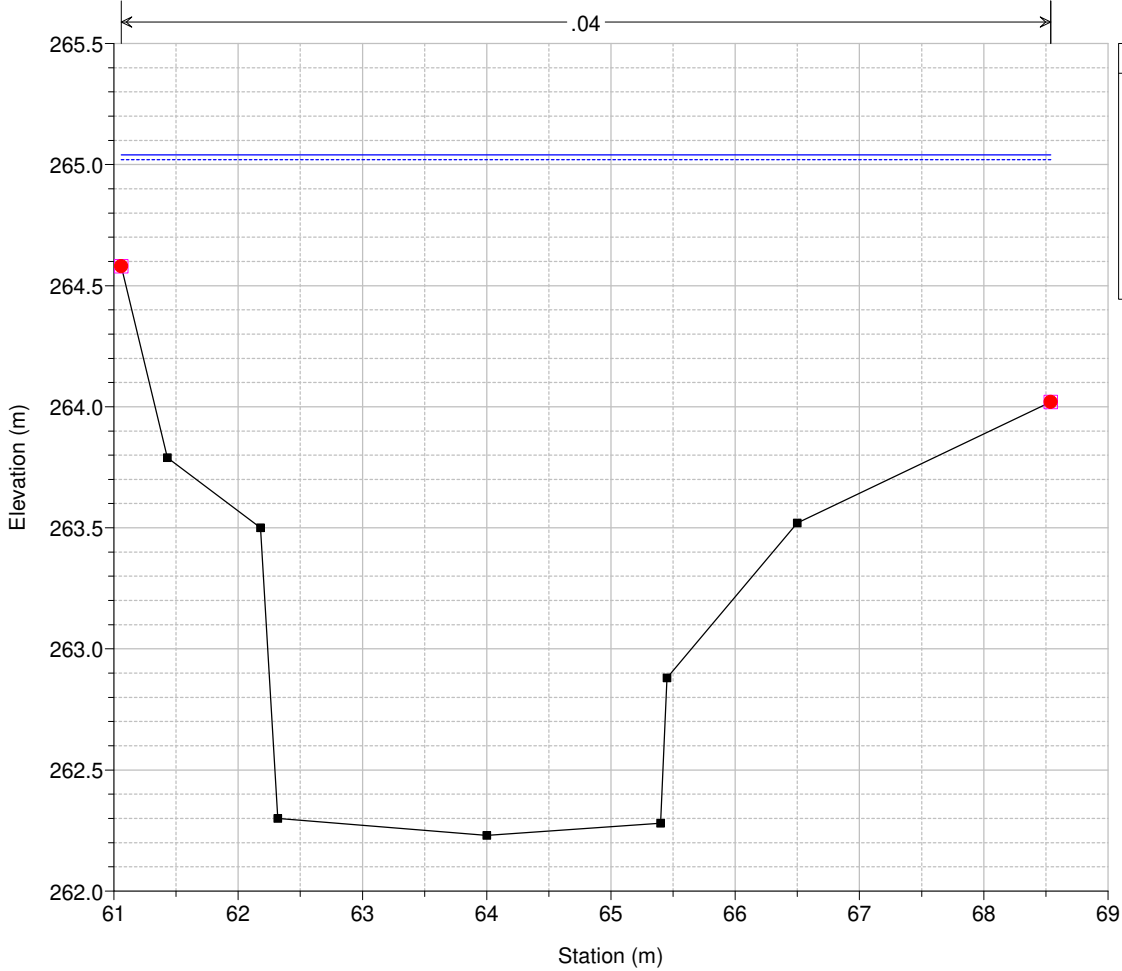
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 6439 C134 - (VI_40)



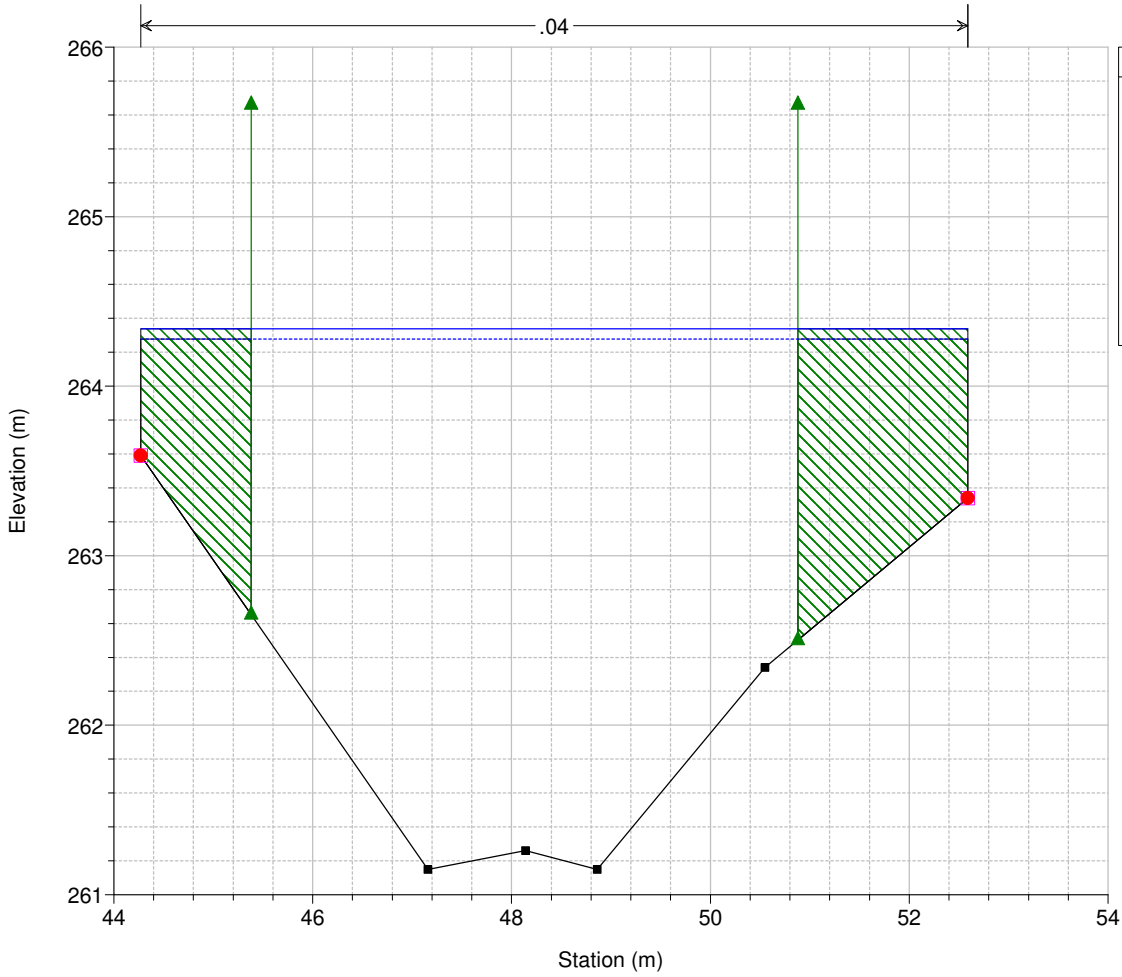
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 6255 C135 - (VI_39)



Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 6049 C136 - (VI_38)

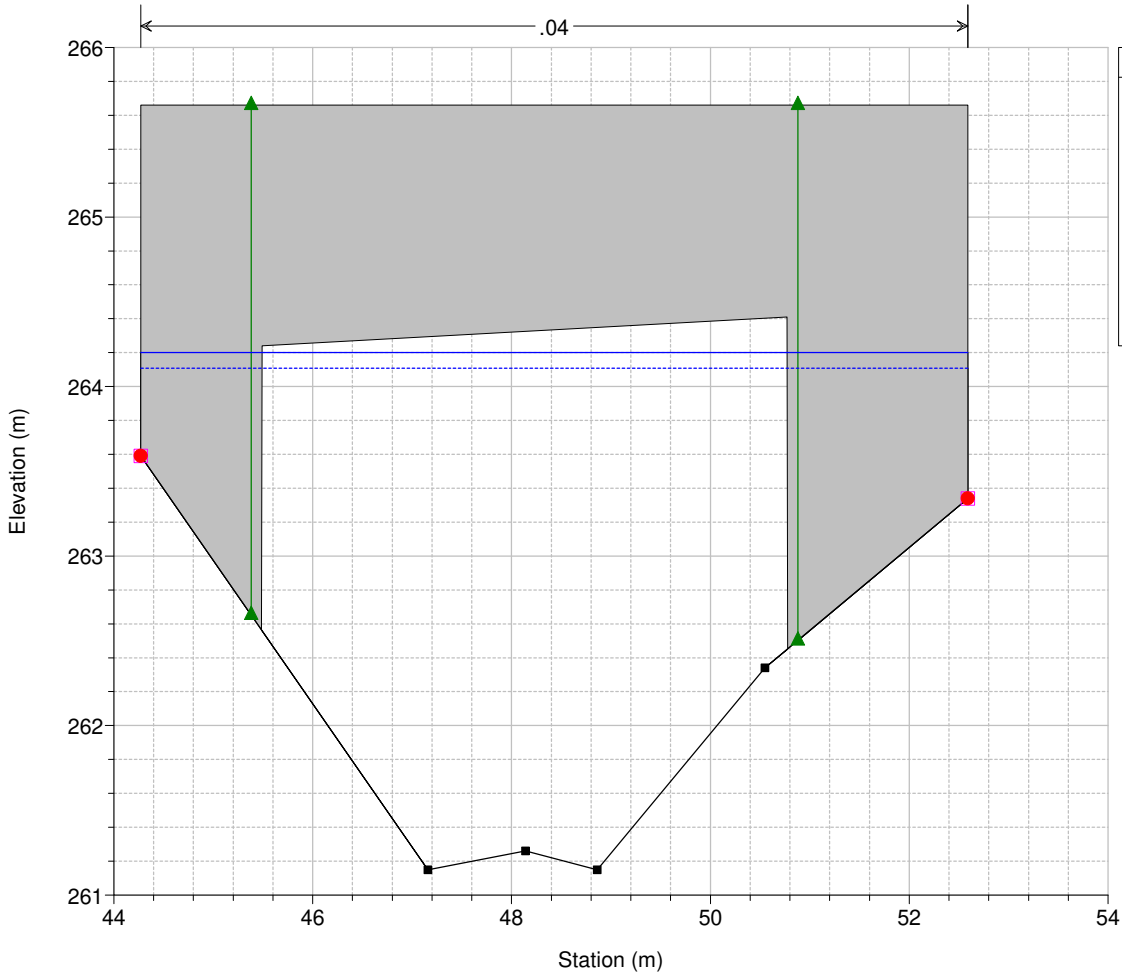


Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5925 C137 - (VI_37)



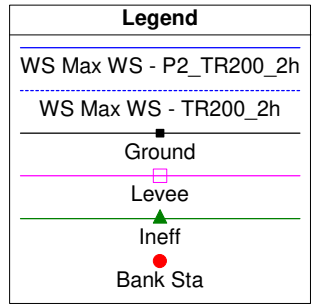
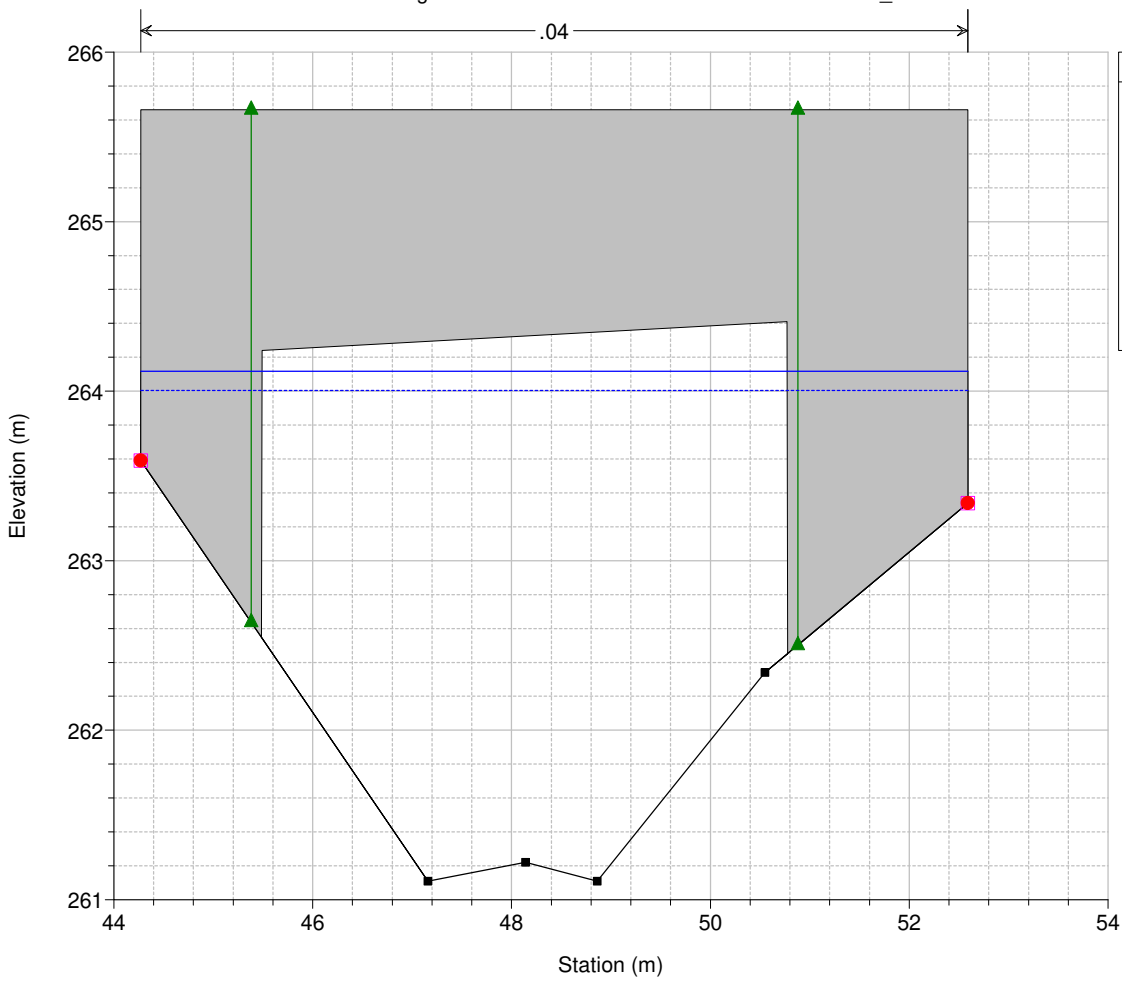
| Legend | |
|---------------------|-------------------------|
| — (solid blue) | WS Max WS - P2_TR200_2h |
| - - - (dashed blue) | WS Max WS - TR200_2h |
| — (solid black) | Ground |
| — (solid pink) | Levee |
| — (solid green) | Ineff |
| ● (red) | Bank Sta |

Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5885 BR Sez_C137/C137 - VI37/VI37

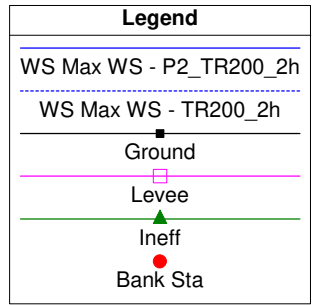
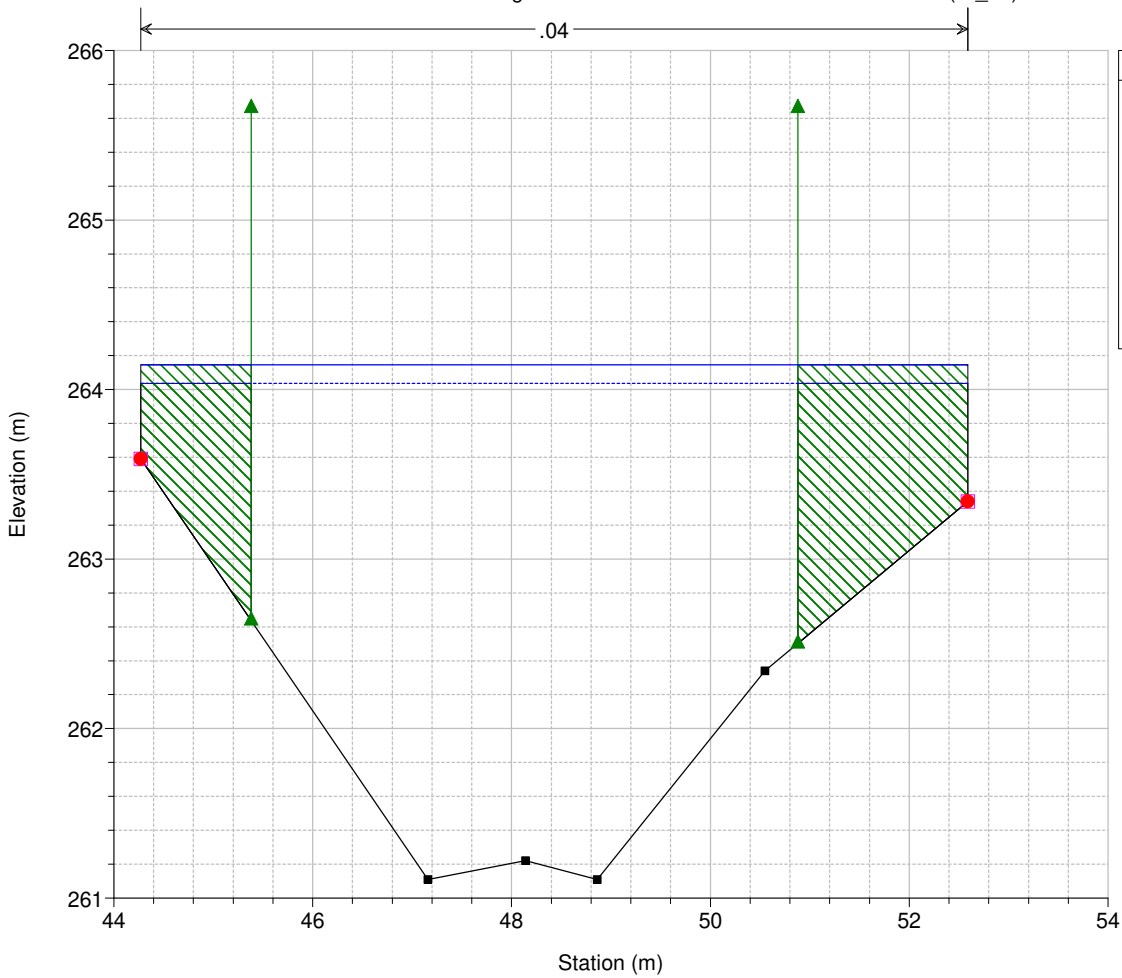


| Legend | |
|---------------------|-------------------------|
| — (solid blue) | WS Max WS - P2_TR200_2h |
| - - - (dashed blue) | WS Max WS - TR200_2h |
| — (solid black) | Ground |
| — (solid pink) | Levee |
| — (solid green) | Ineff |
| ● (red) | Bank Sta |

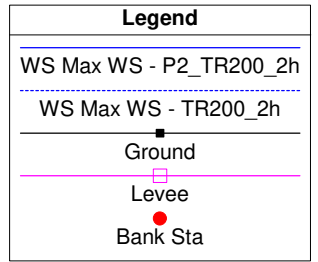
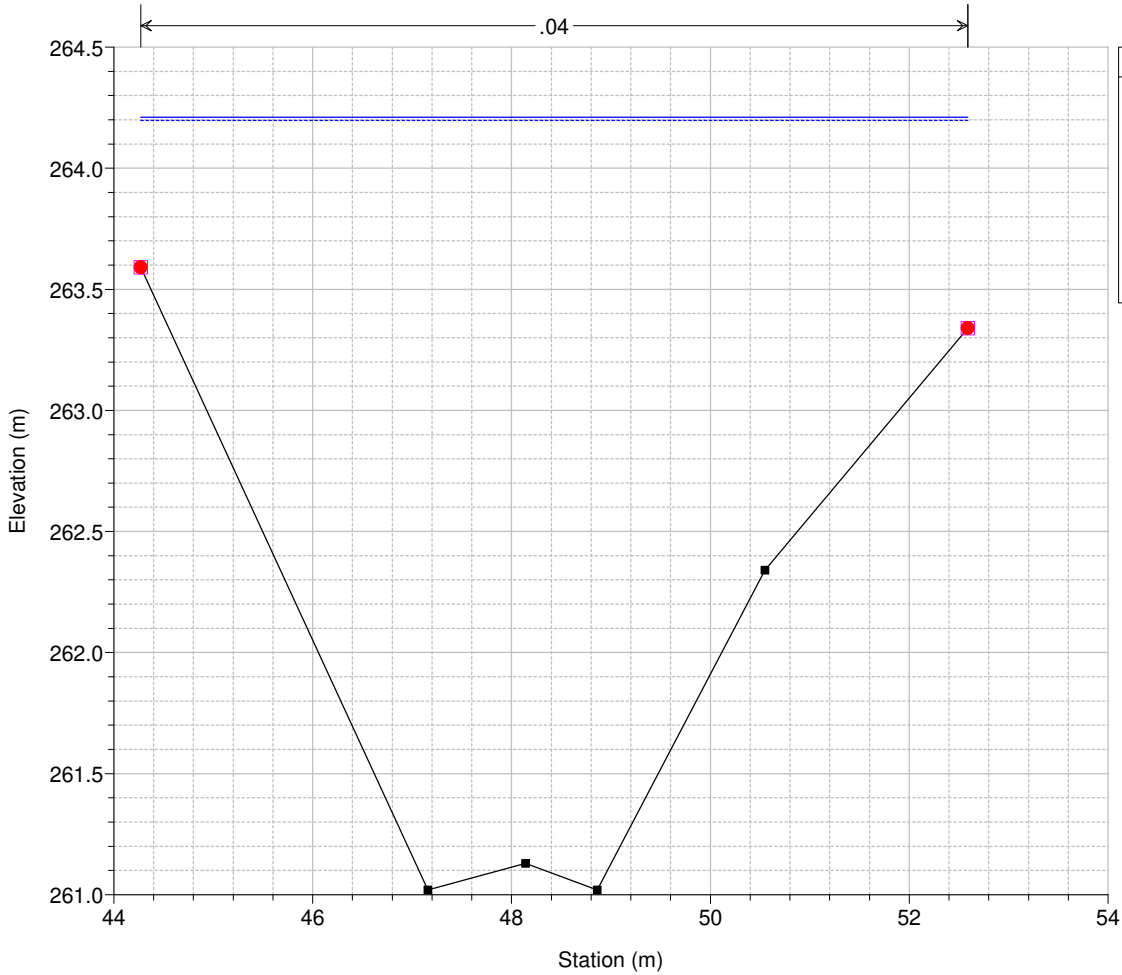
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5885 BR Sez_C137/C137 - VI37/VI37



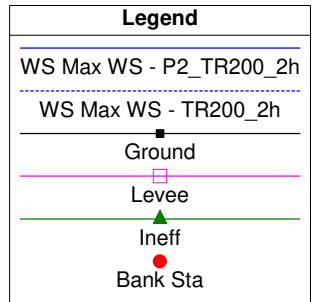
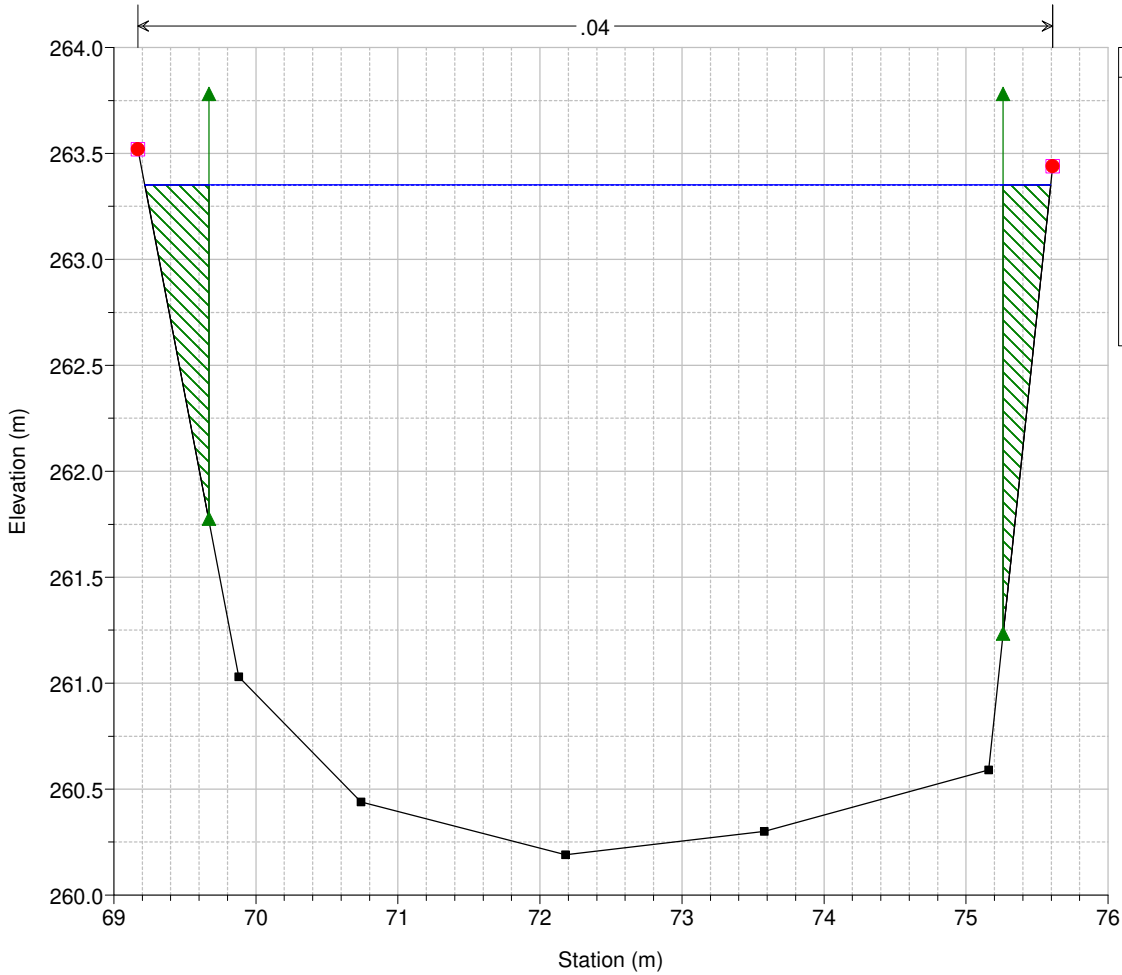
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5880 C137 - (VI_37)



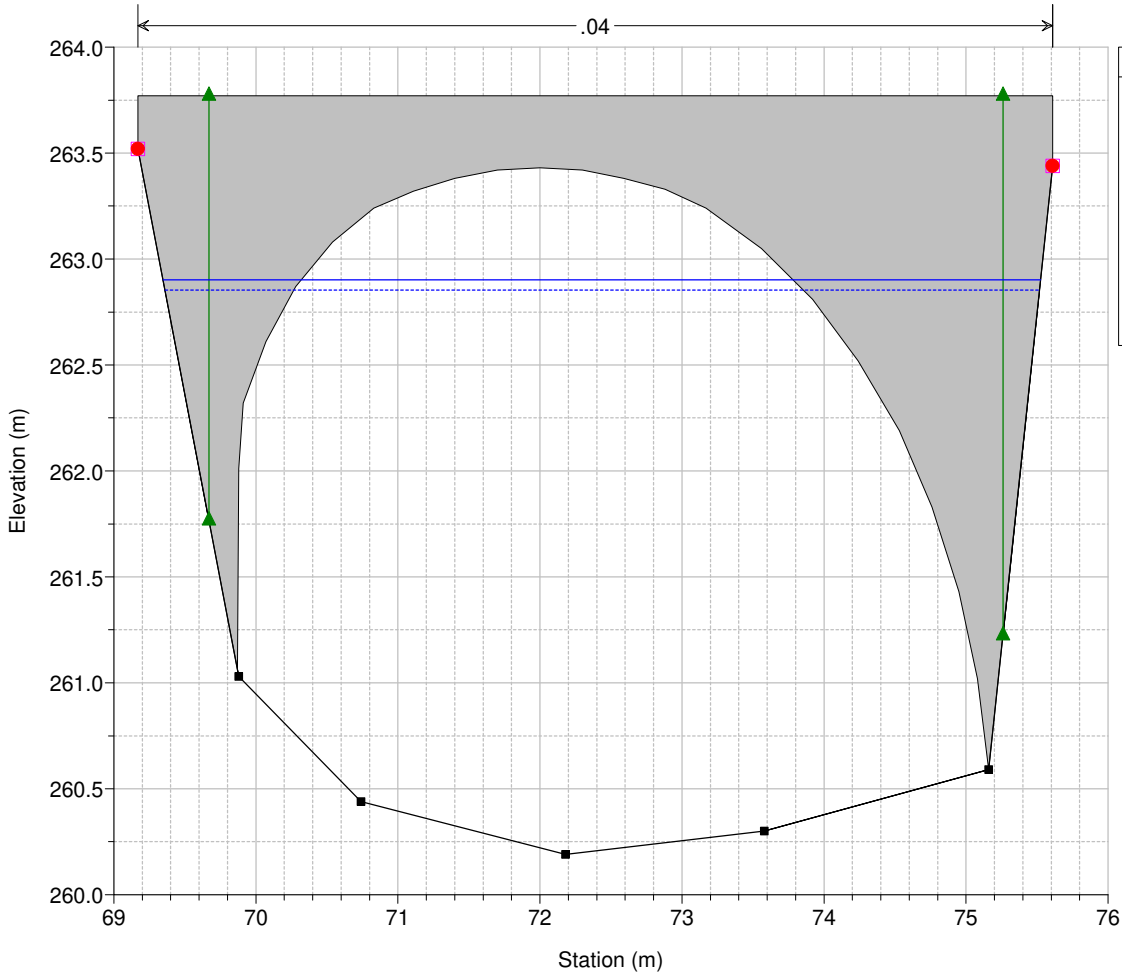
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5835 C137 - (VI_37)



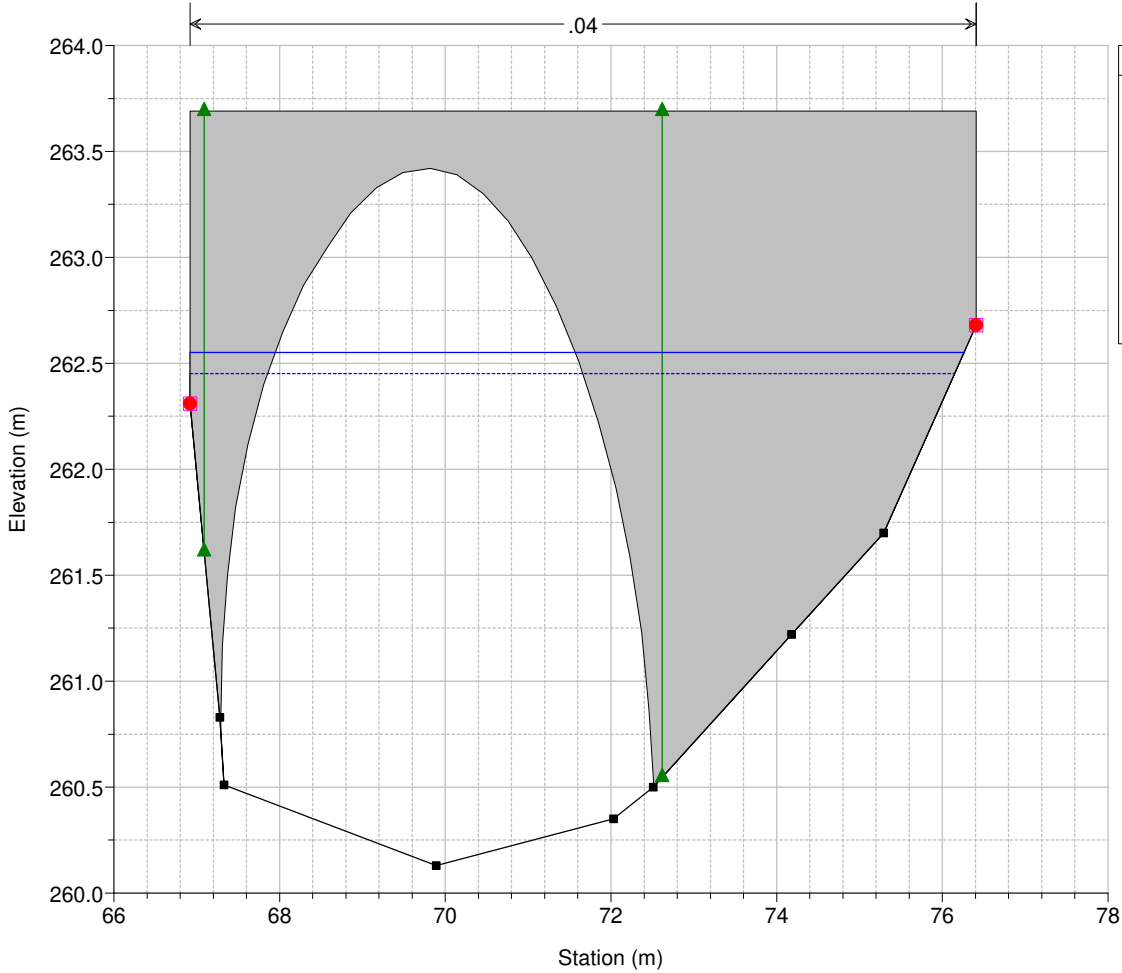
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5768 C138 - (VI_36)



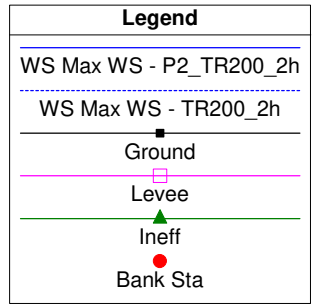
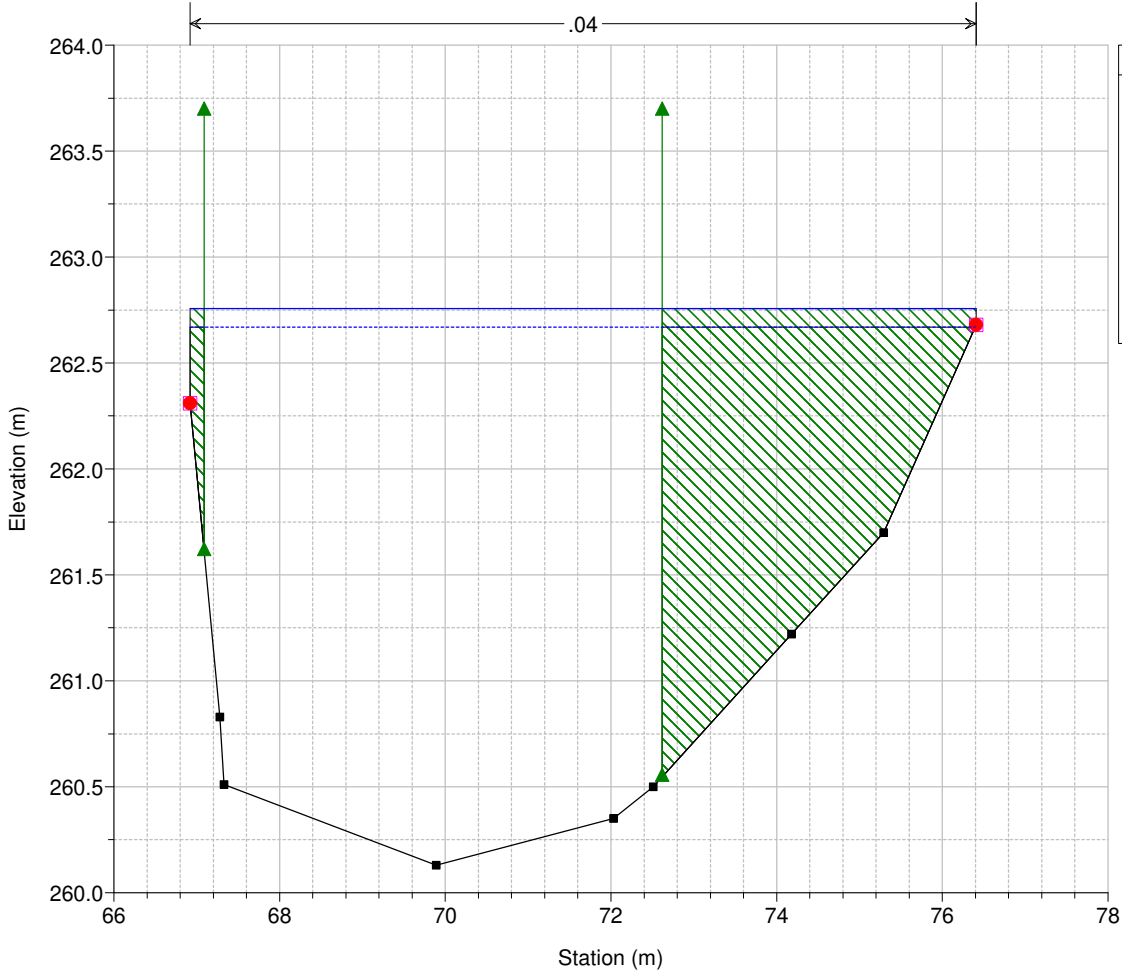
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5760 BR Sez_C138/C139 - VI36/VI35



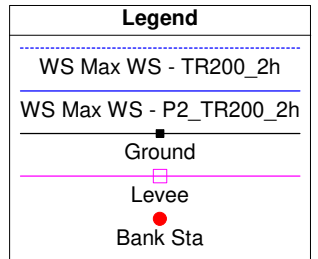
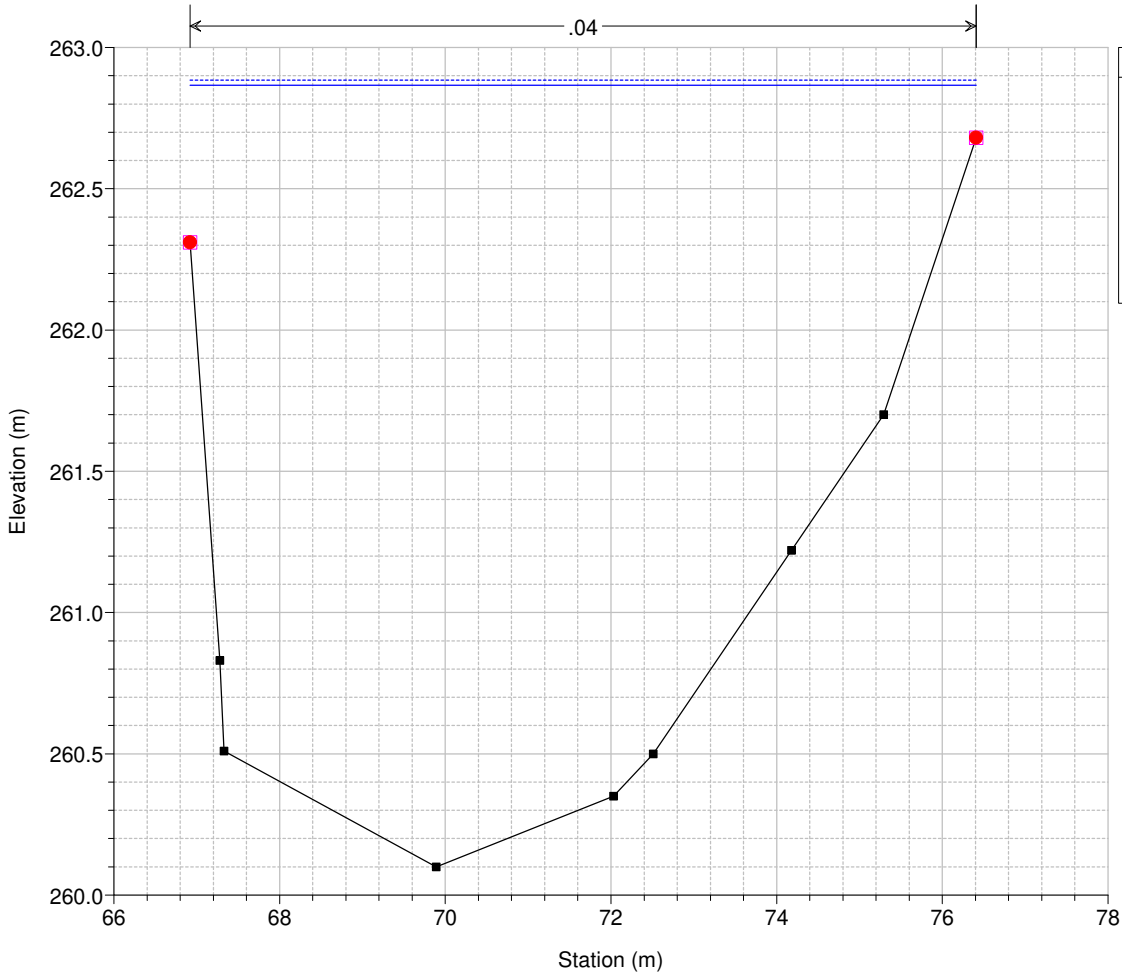
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5760 BR Sez_C138/C139 - VI36/VI35



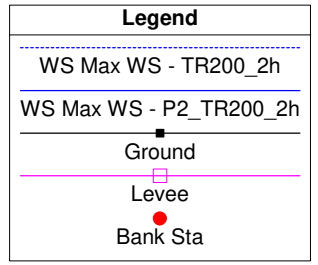
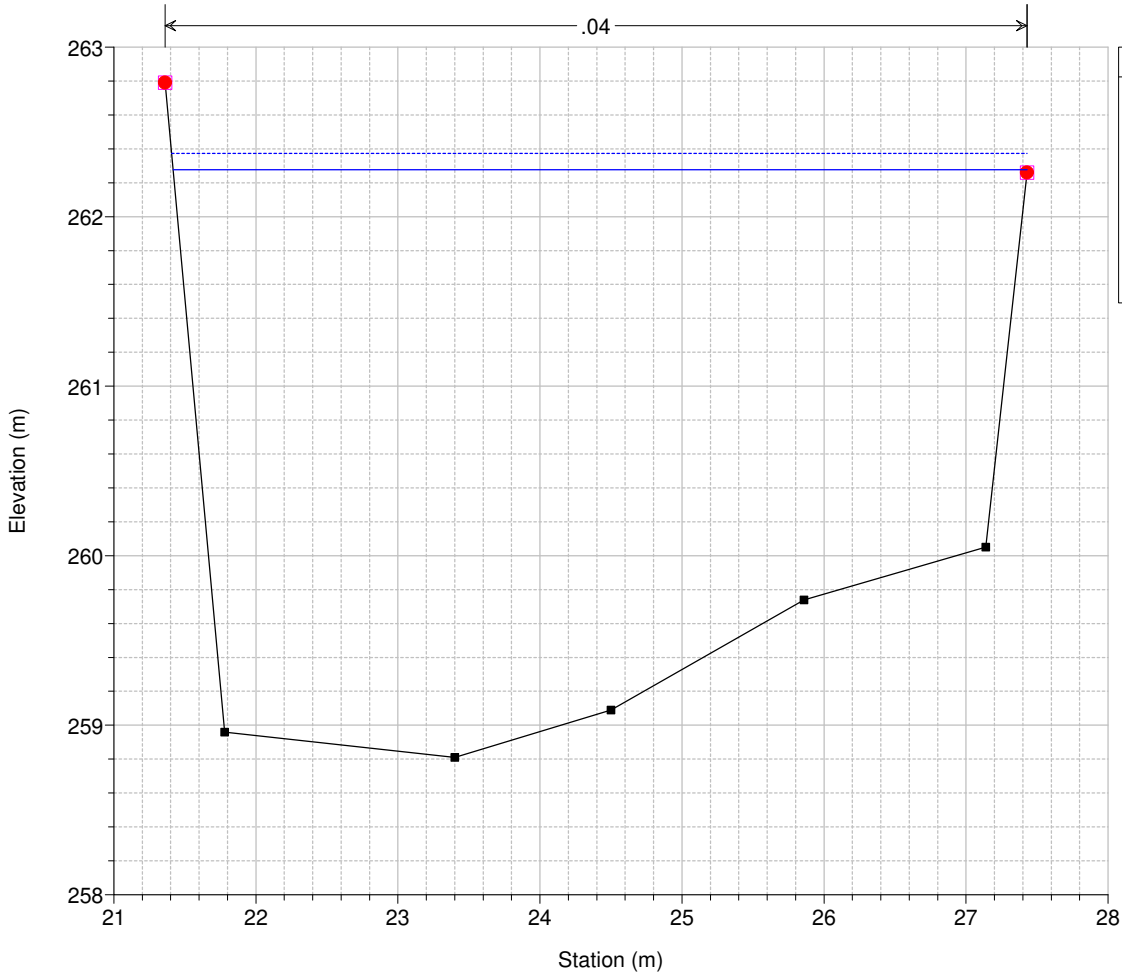
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5758 copia C139 - (VI_35) valle ponte



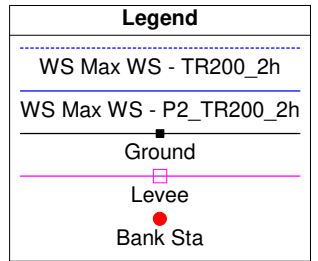
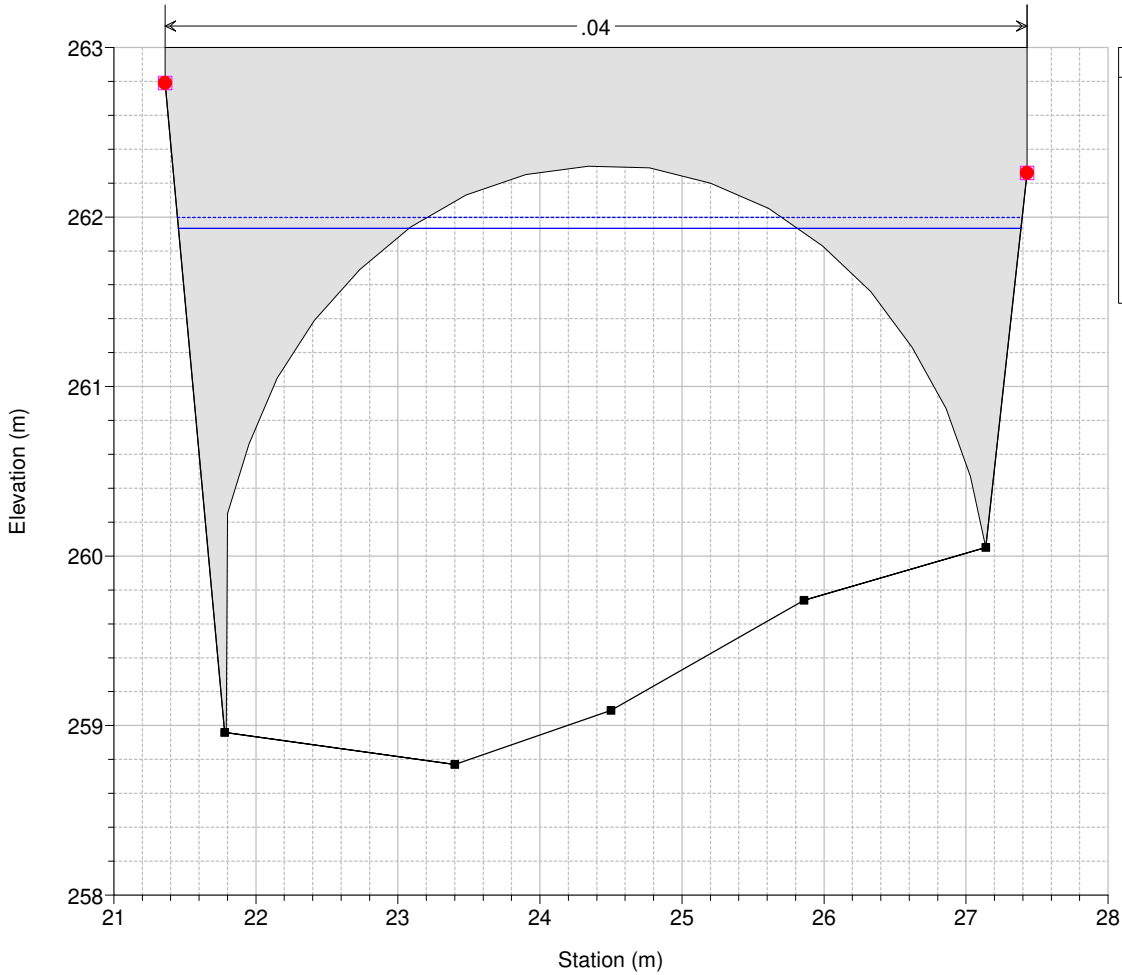
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5755 C139 - (VI_35)



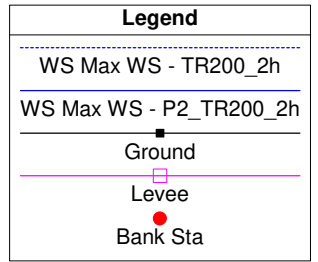
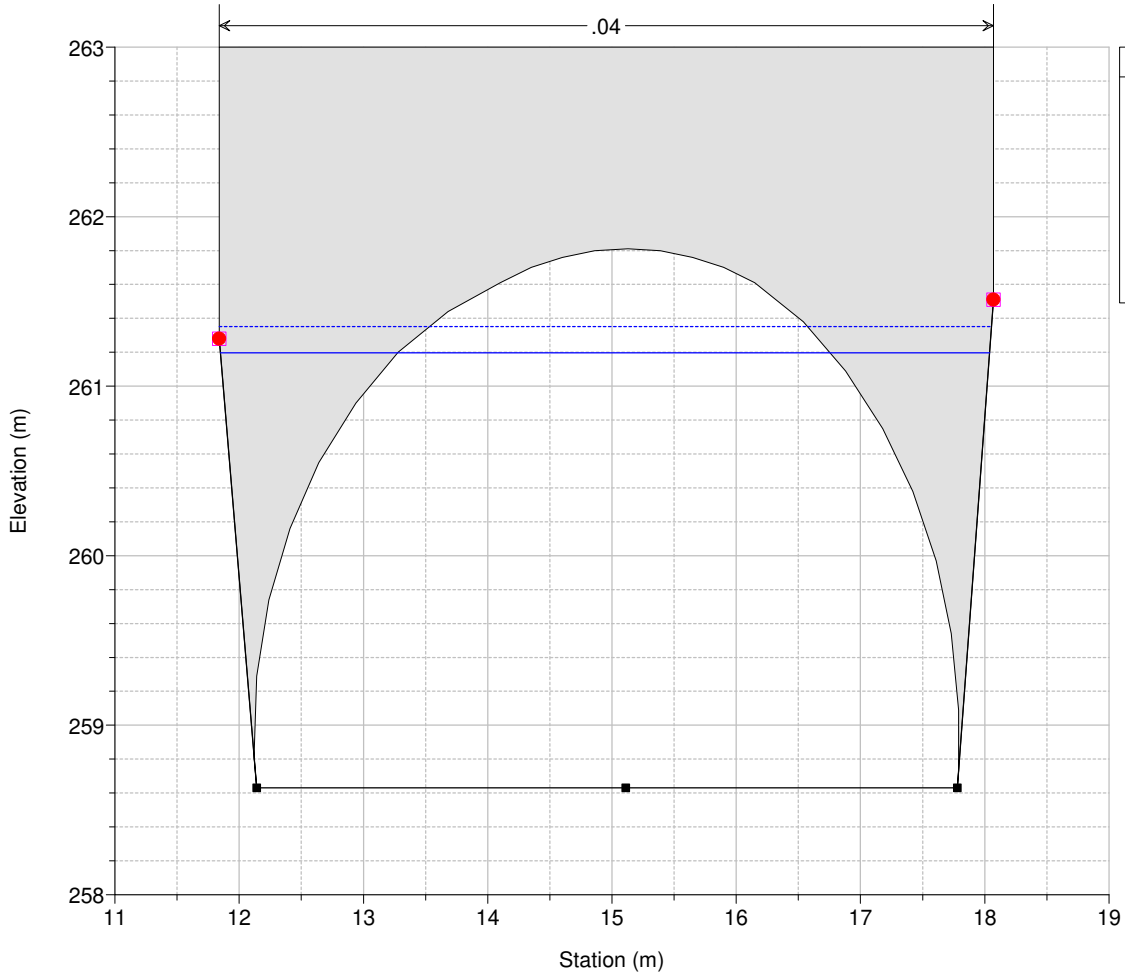
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5645 C140 - (VI_34)



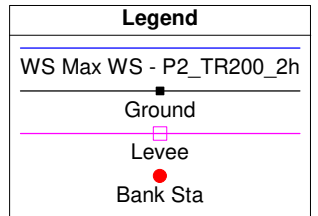
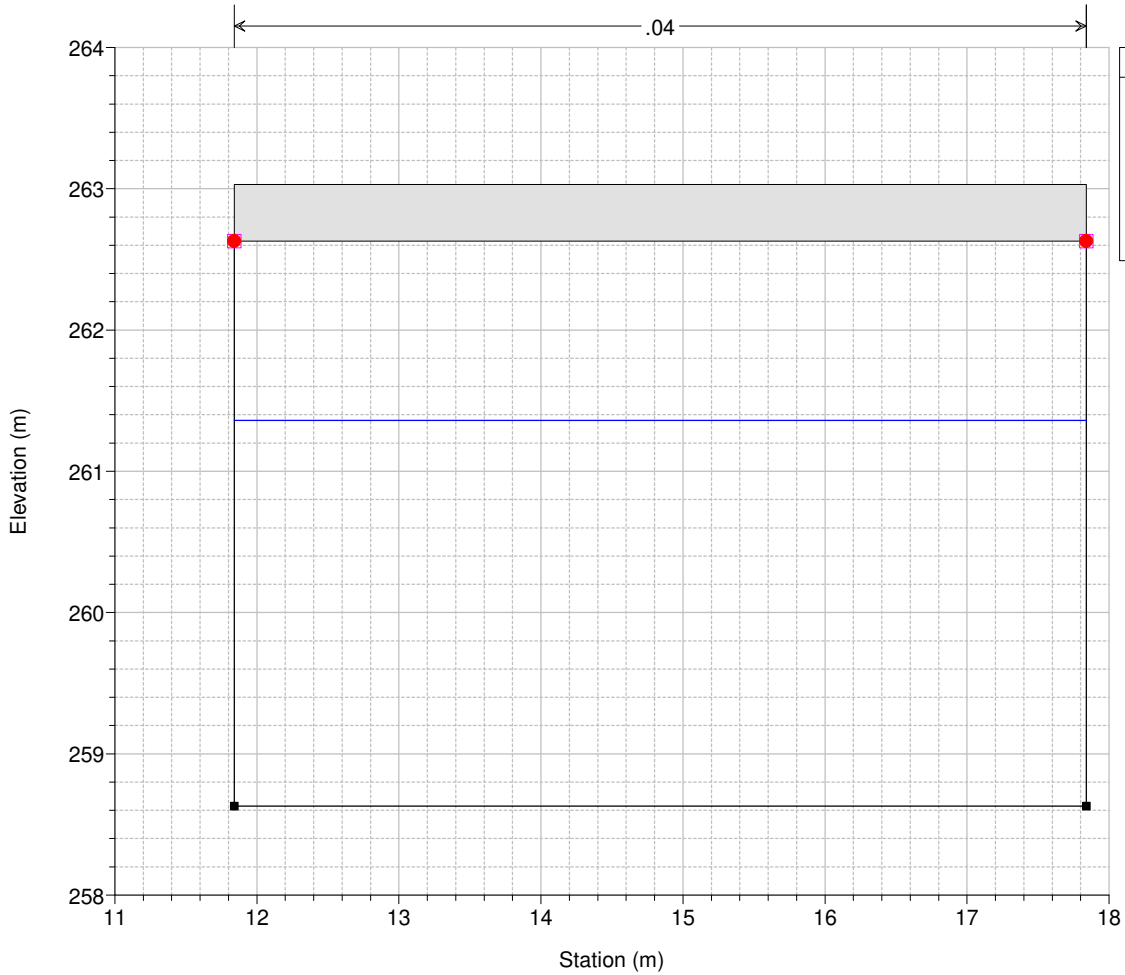
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5621 copia C140 - (VI_34) per ponte



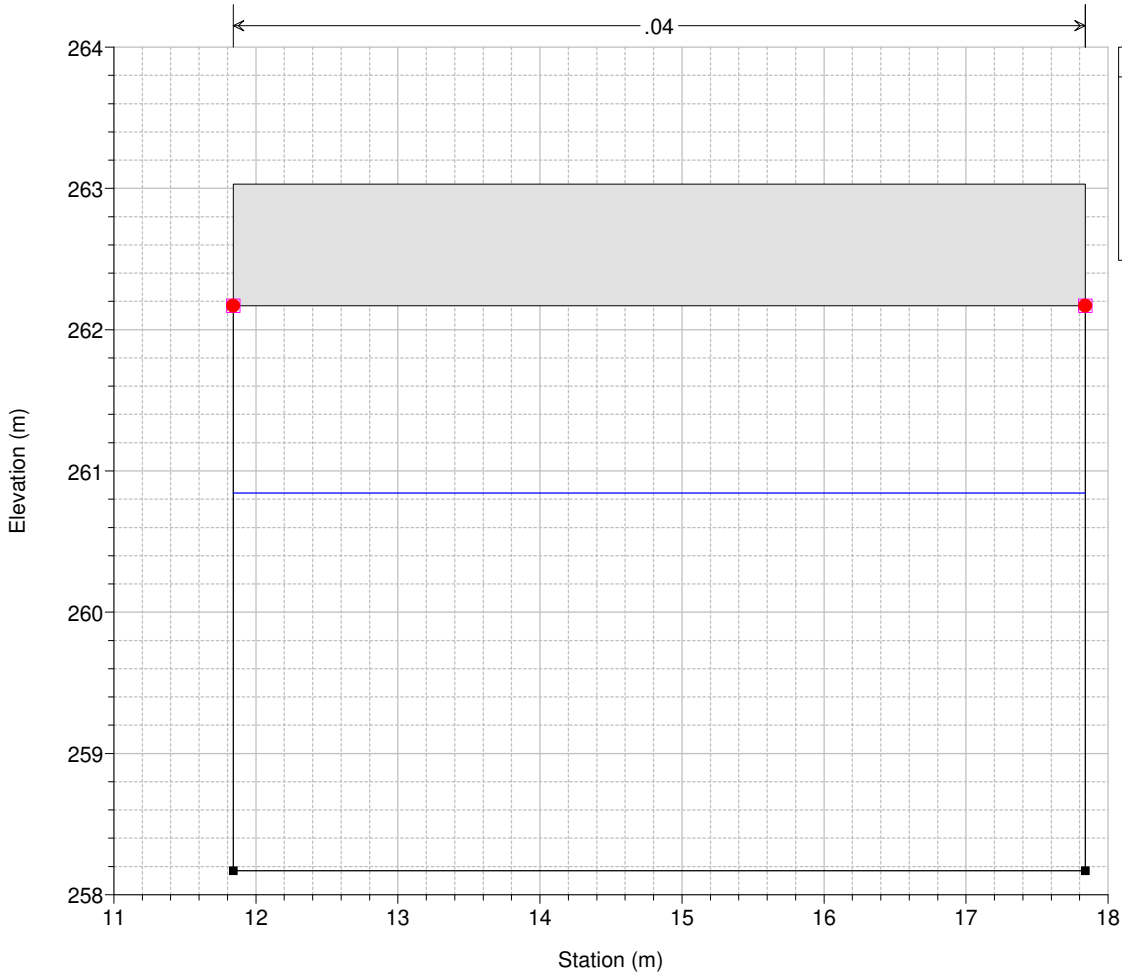
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5619 copia C141 - (VI_33) per ponte



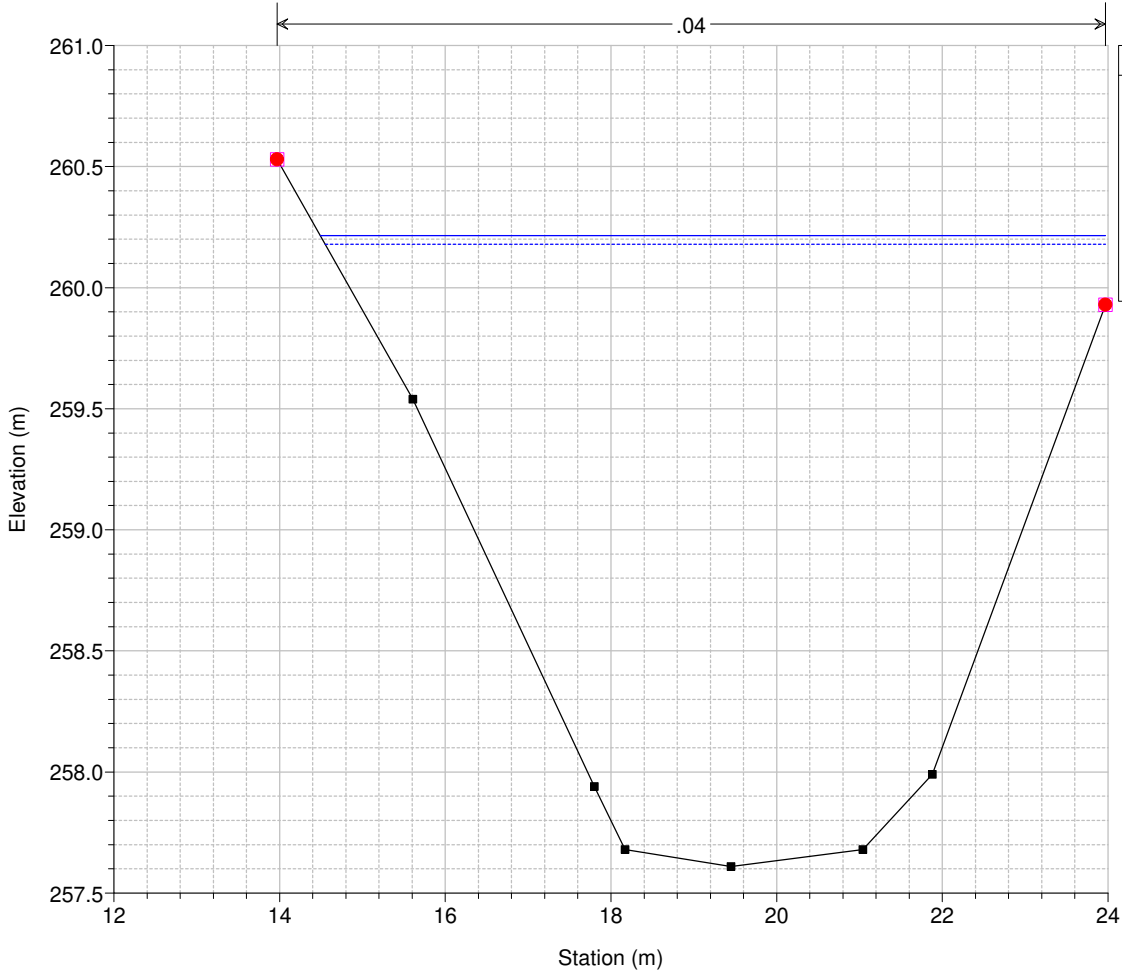
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5618.88 scatolare 6mx4m_PRO



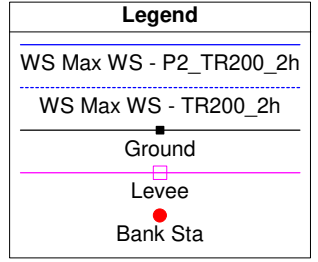
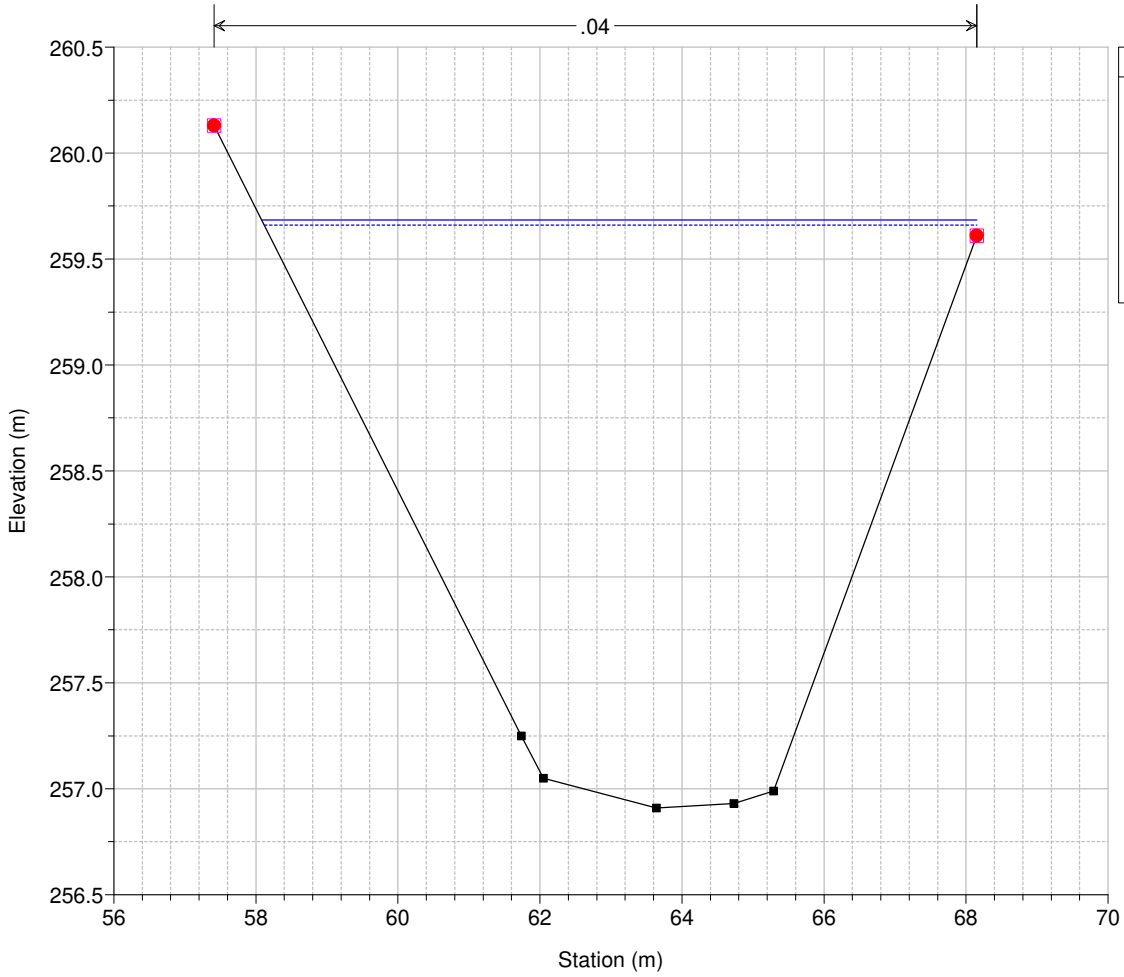
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5549.74



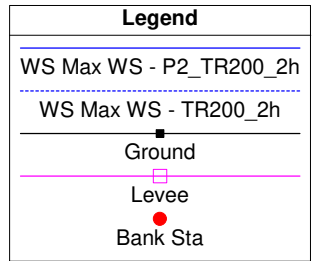
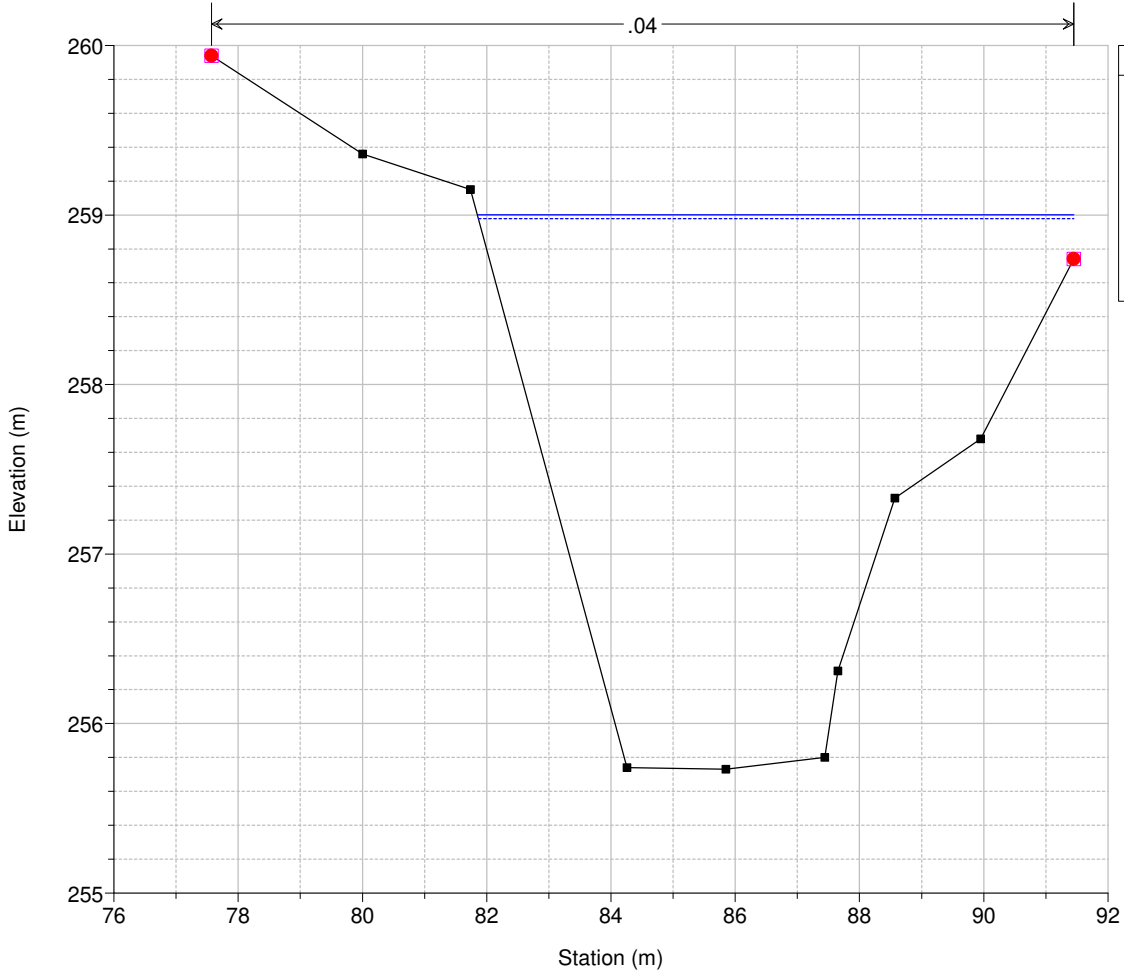
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5467 C142 - (VI_32)



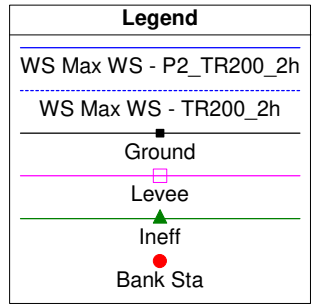
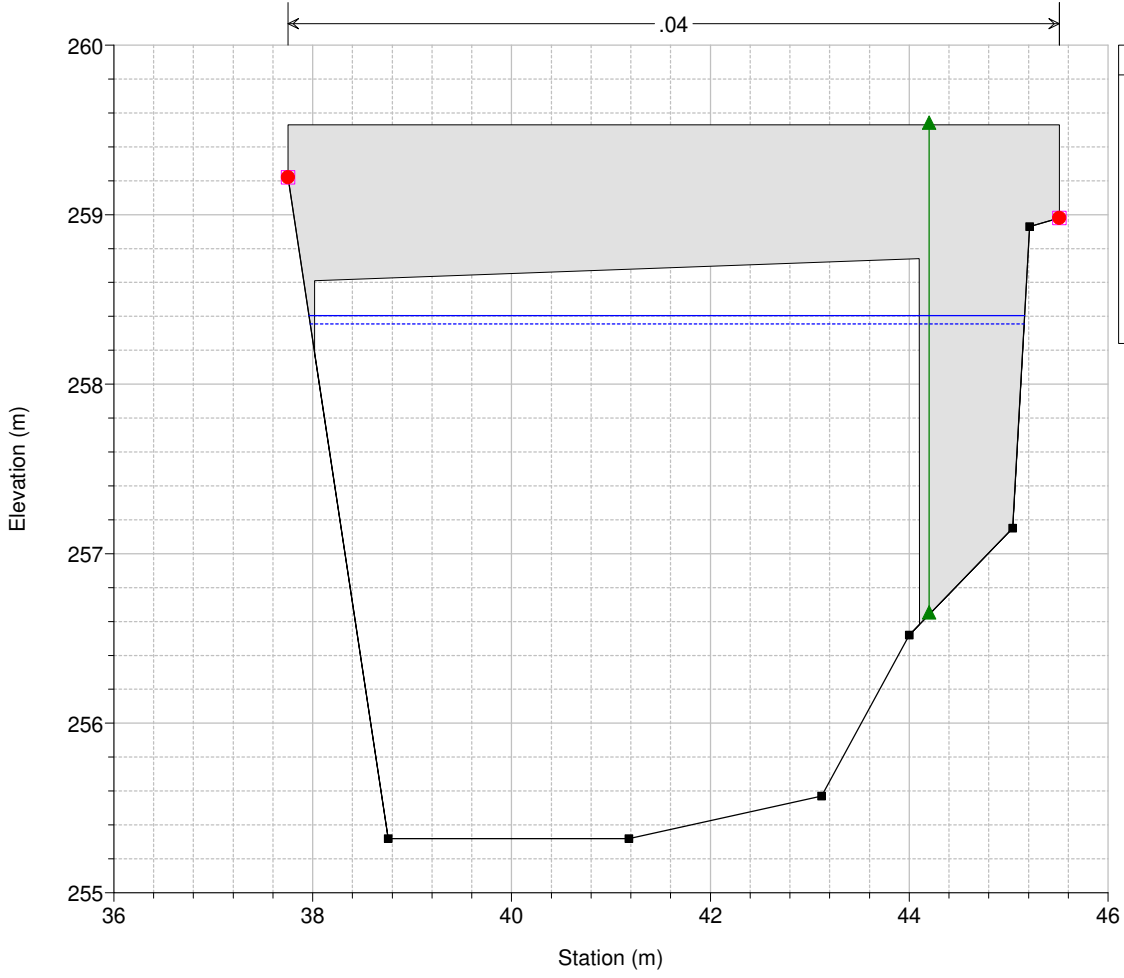
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5394 C143 - (VI_31)



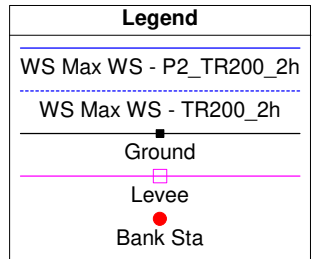
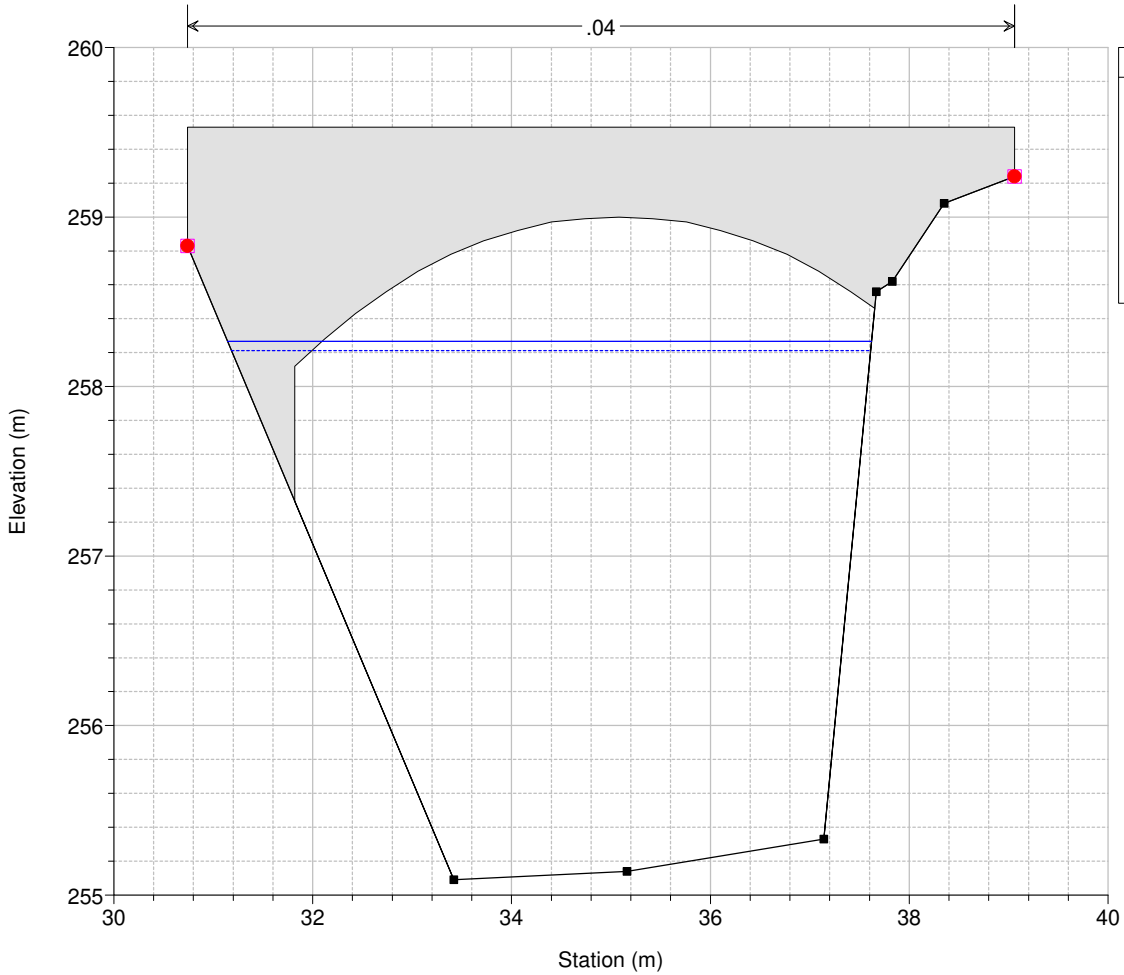
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5286 C144 - (VI_30)



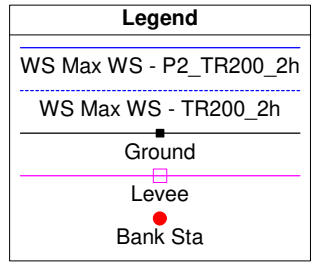
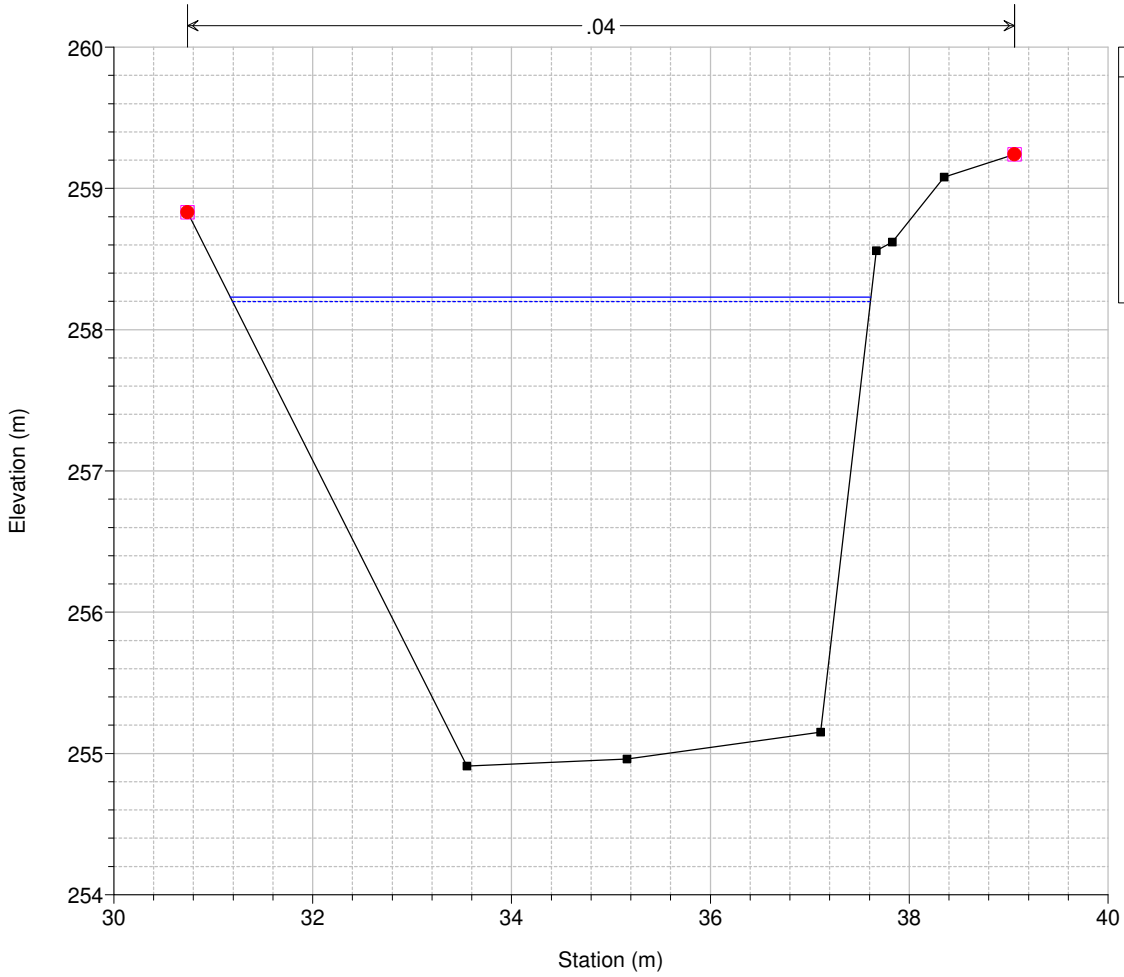
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5207 C145 - (VI_29)



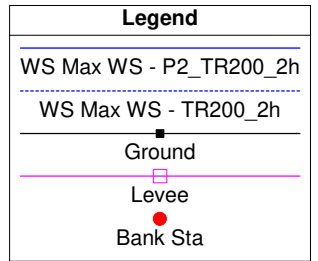
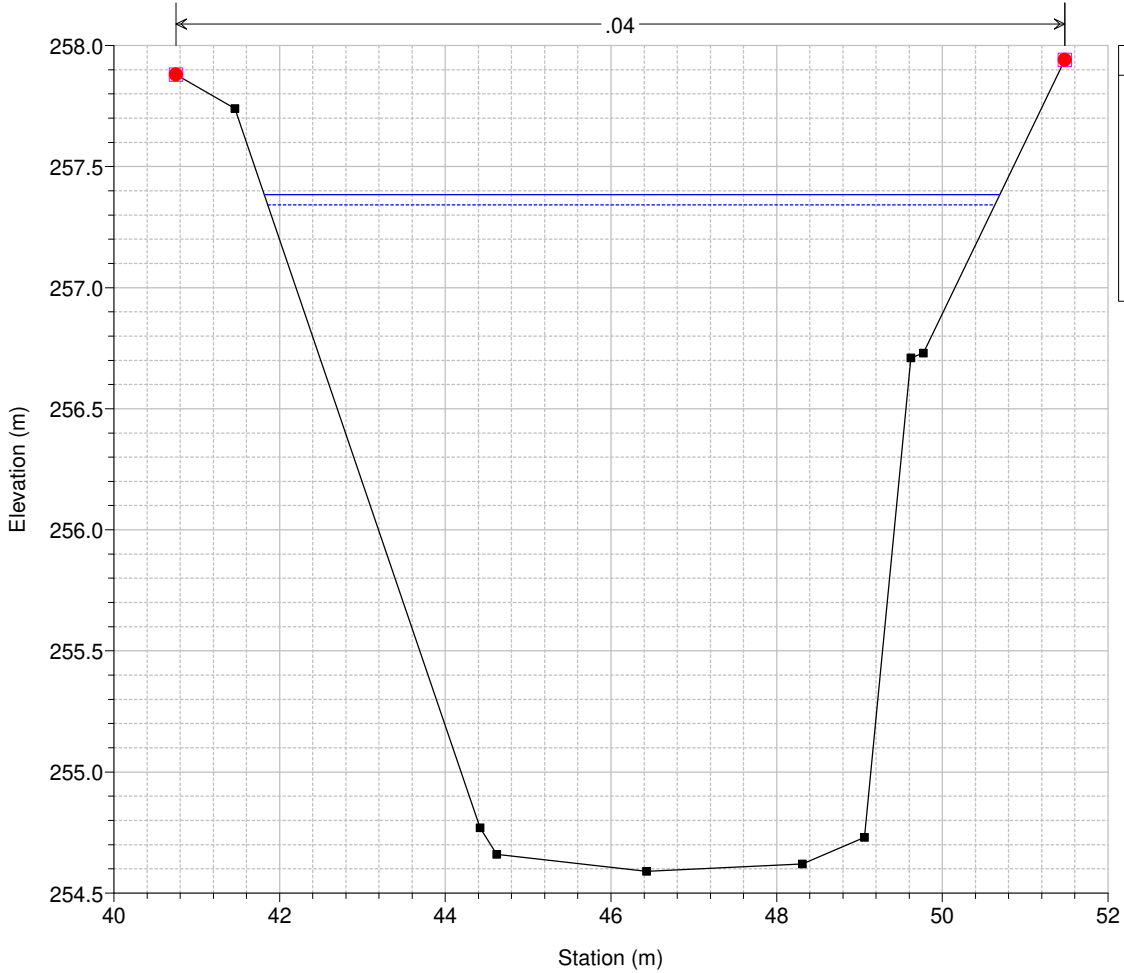
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5197 copia C146 - (VI_28) per ponte



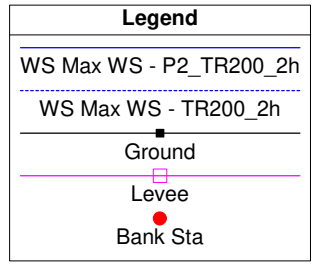
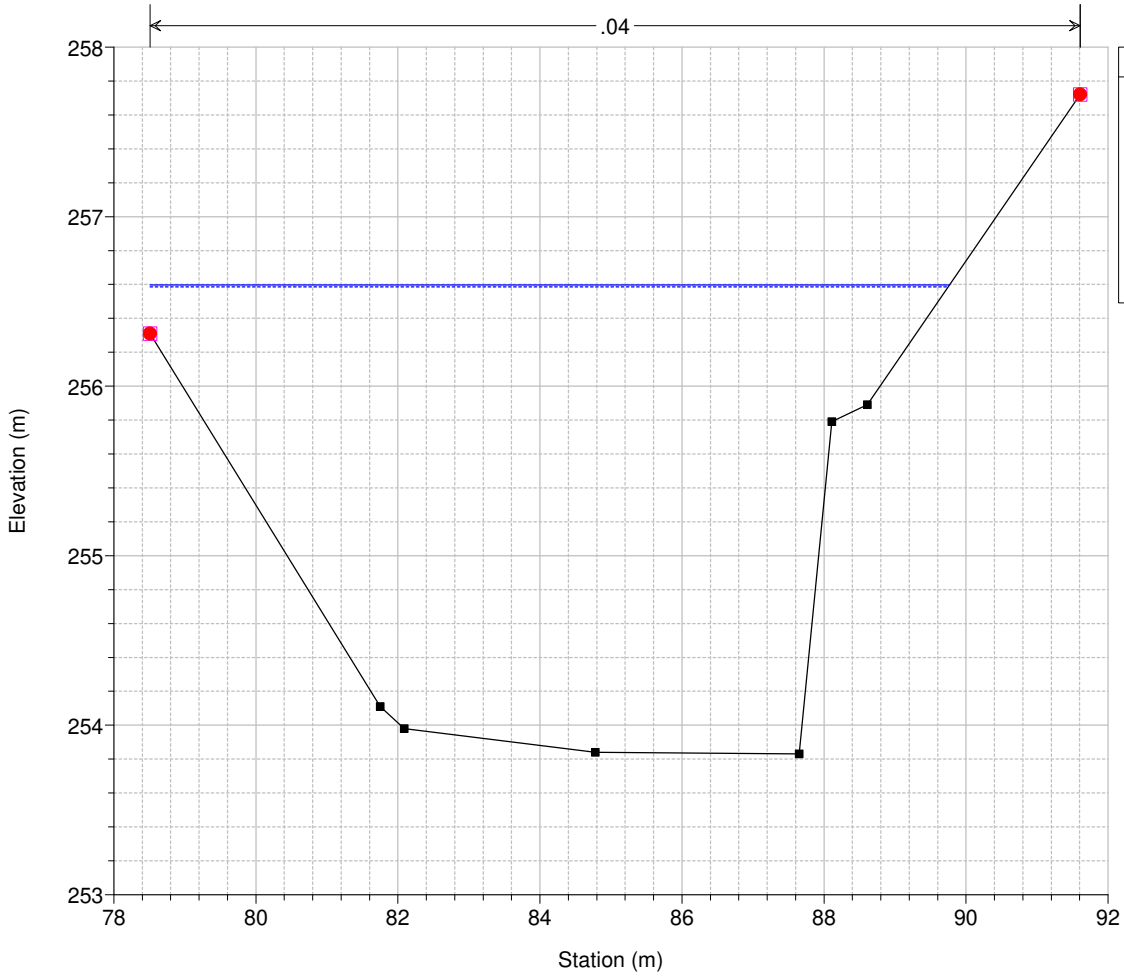
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5193 C146 - (VI_28)



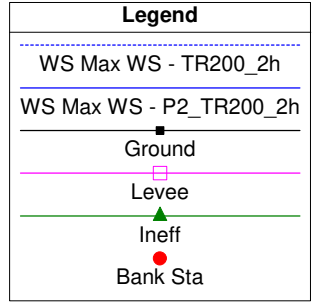
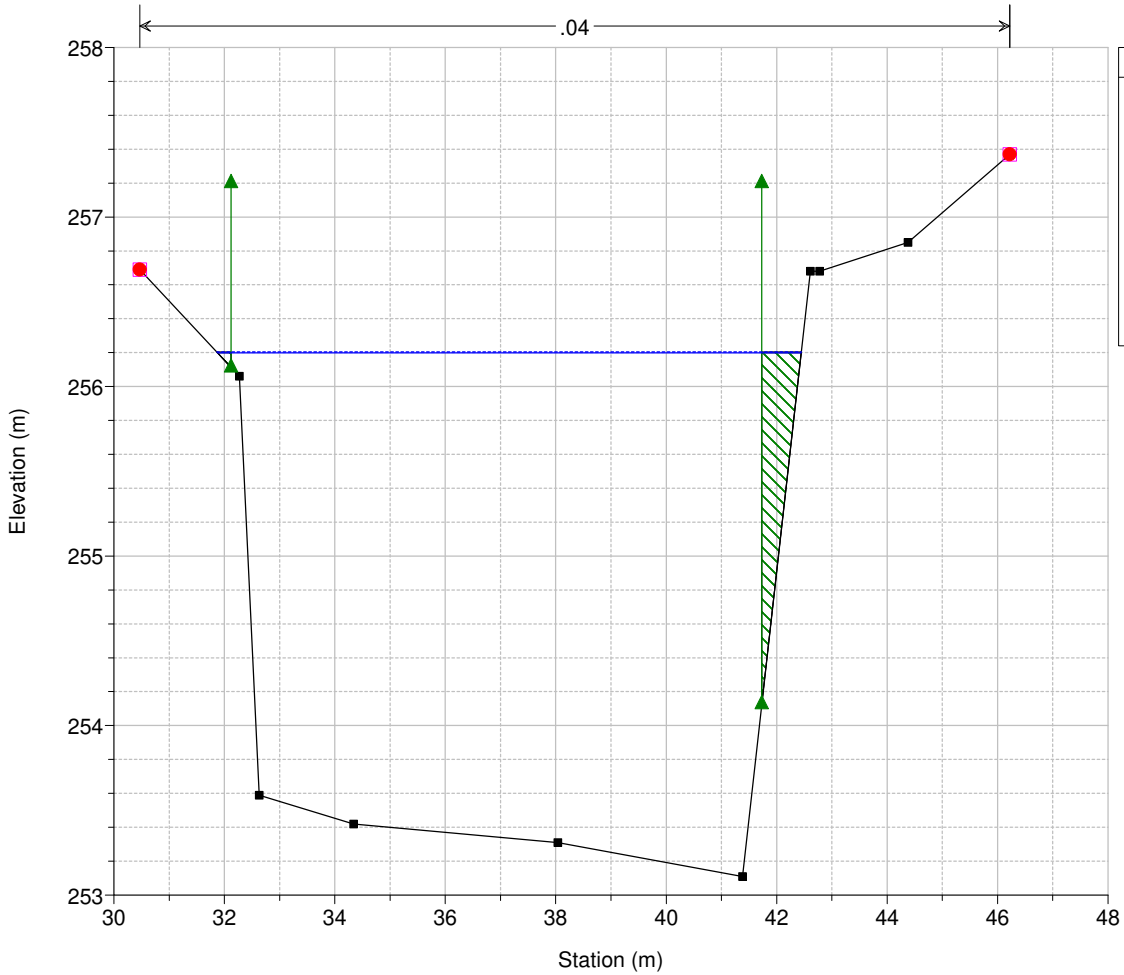
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 5096 C147 - (VI_27)



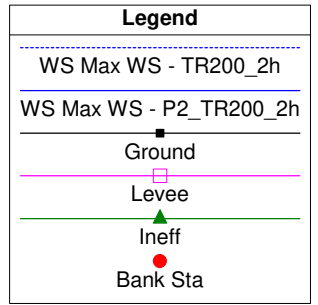
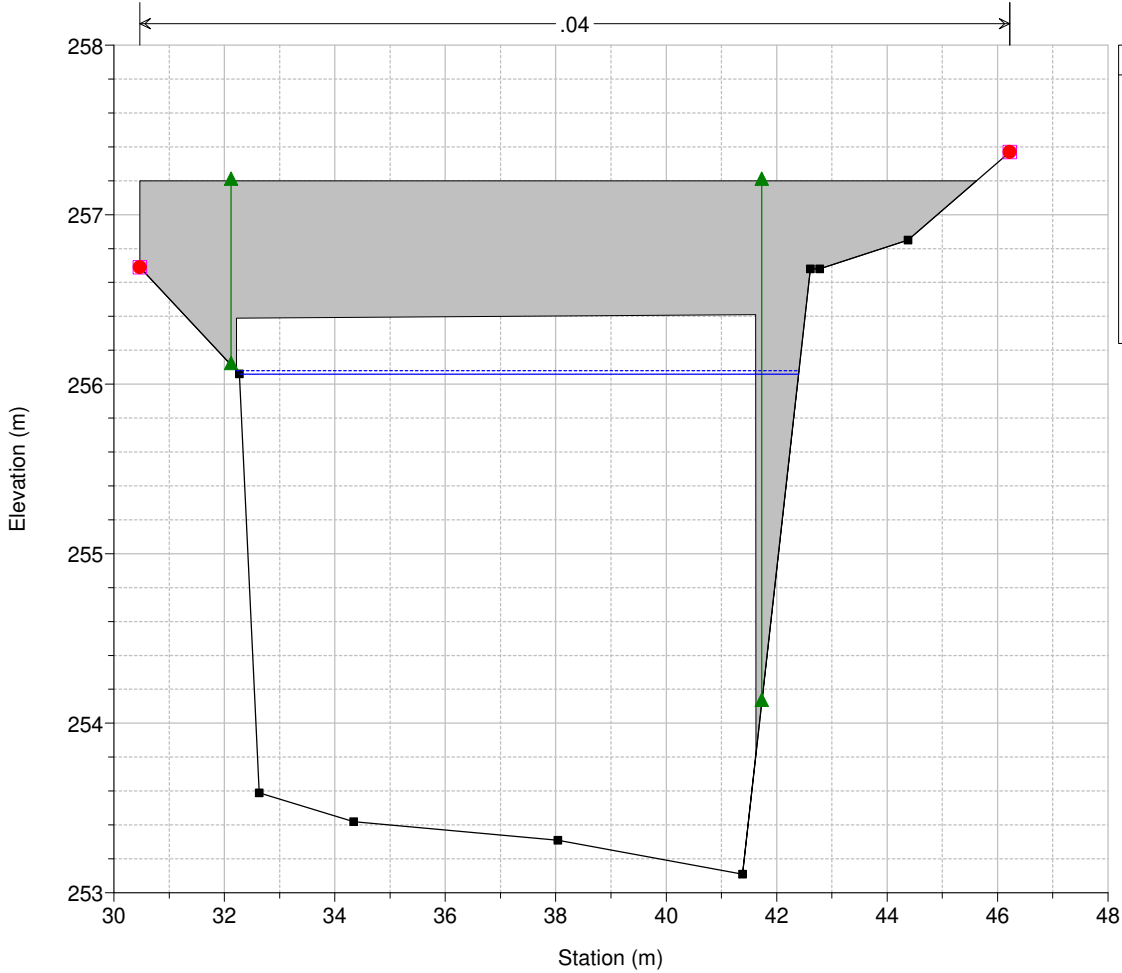
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 4977 C148 - (VI_26)



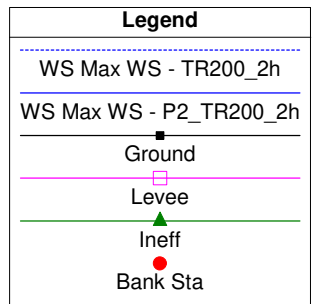
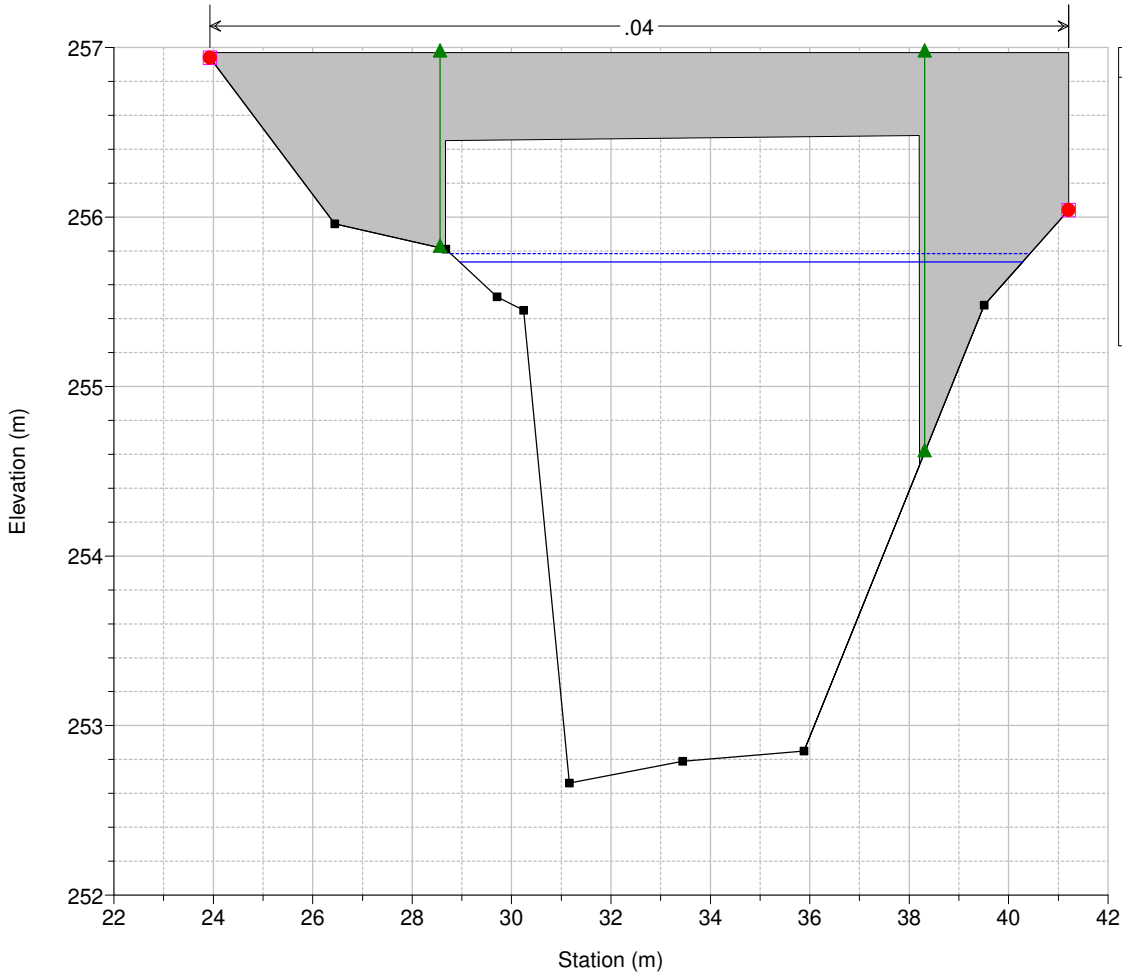
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 4872 C149 - (VI_25)



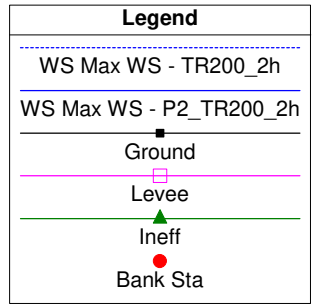
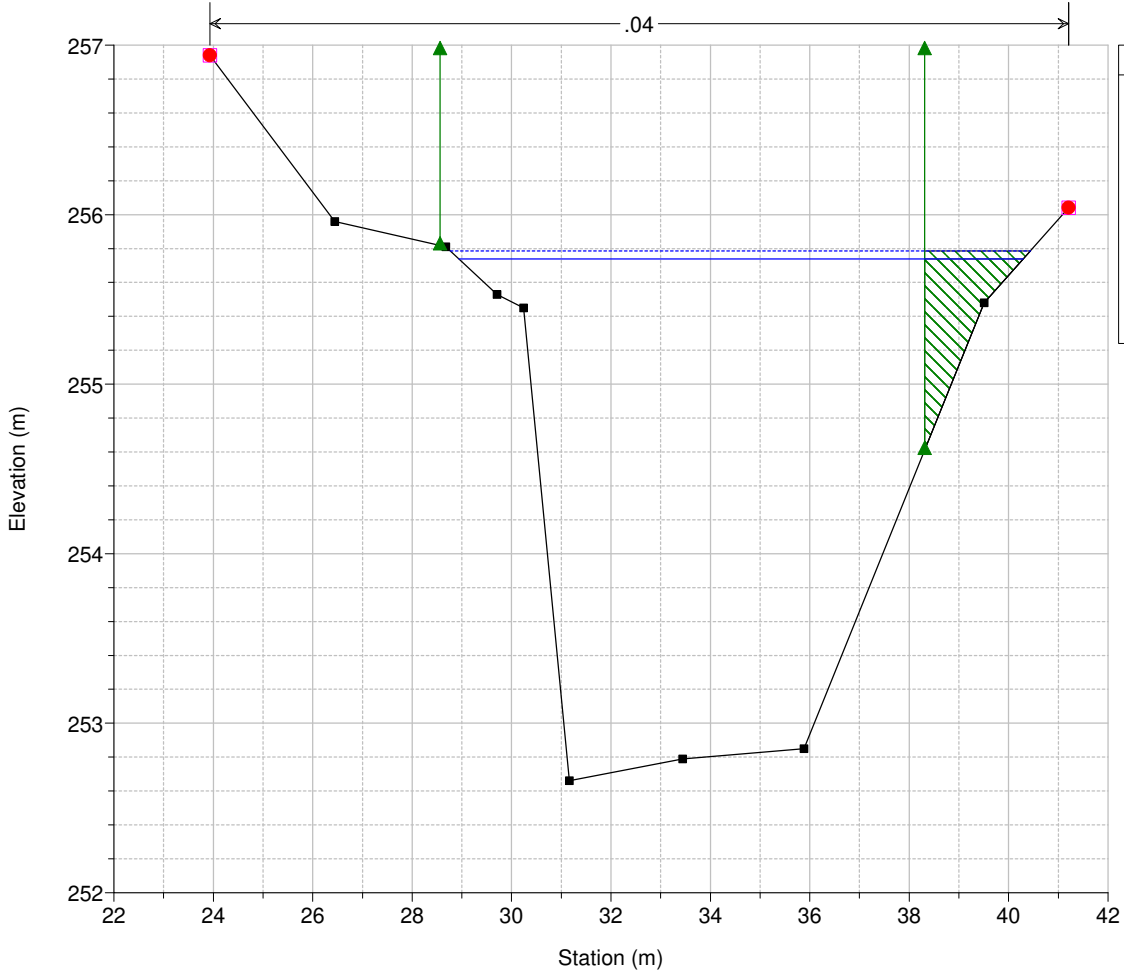
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 4850 BR Sez_C149/C150 - VI25/VI24



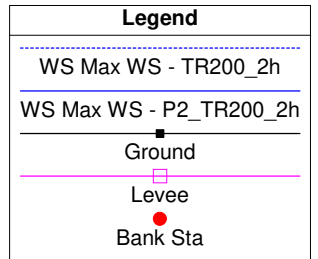
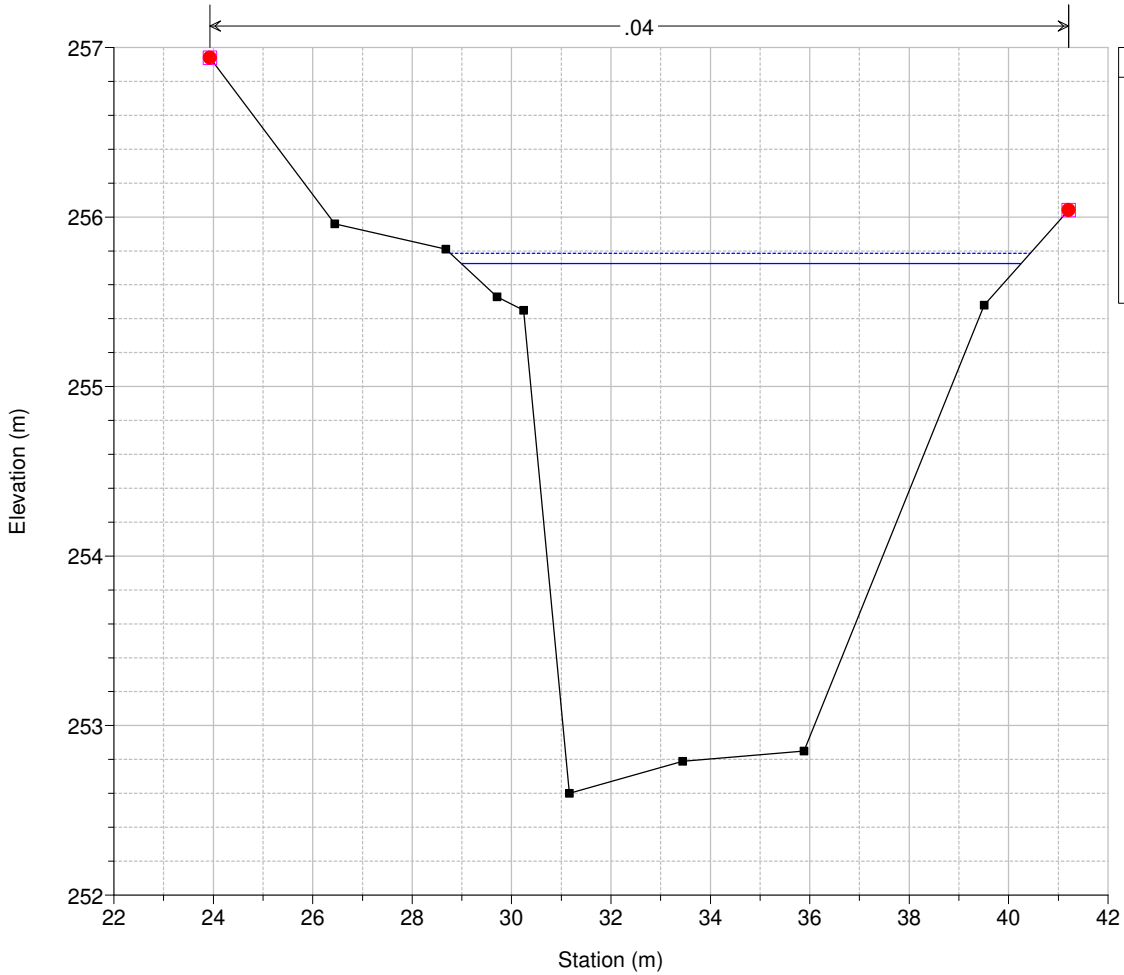
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 4850 BR Sez_C149/C150 - VI25/VI24



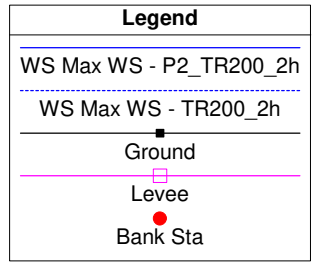
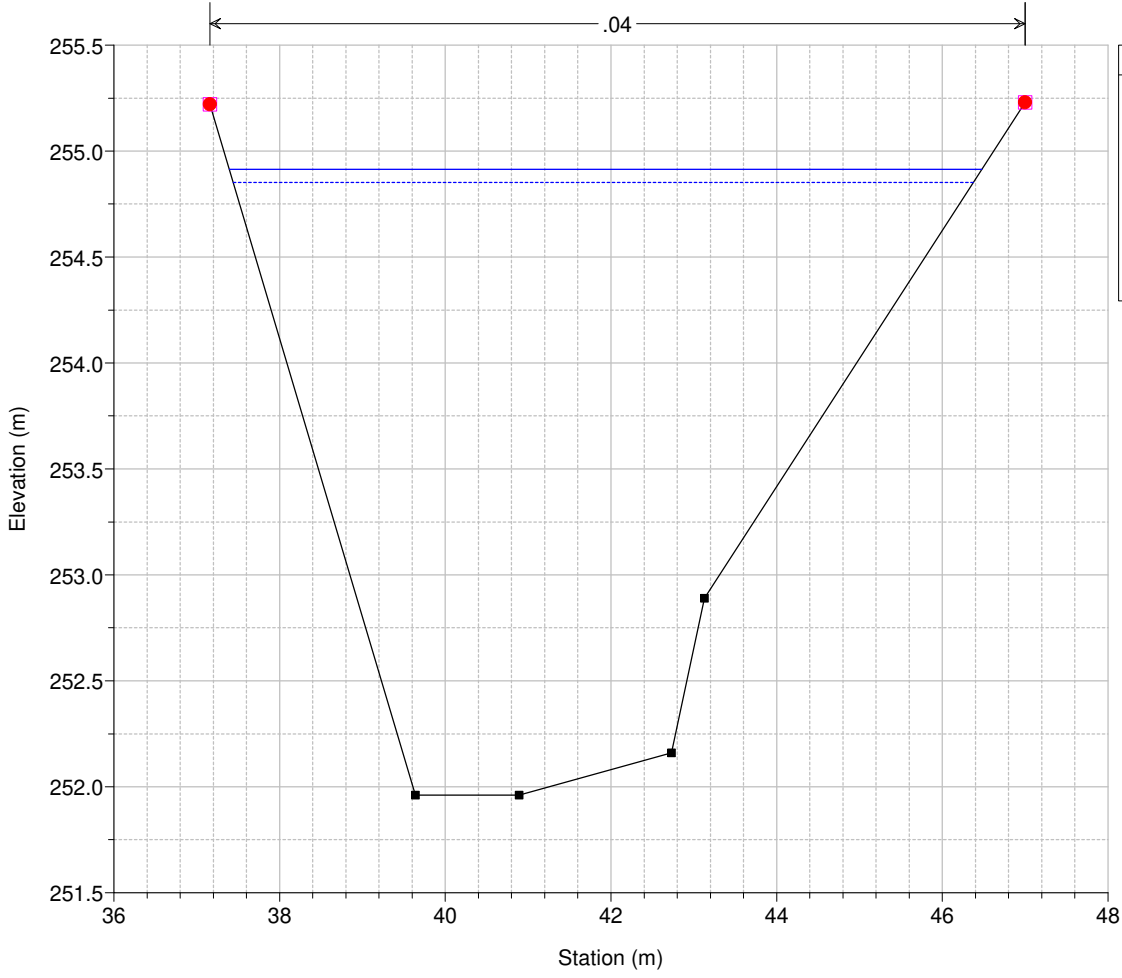
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 4842 copia C150 - (VI_24) per ponte



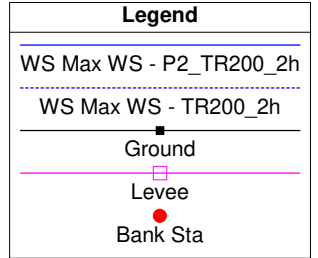
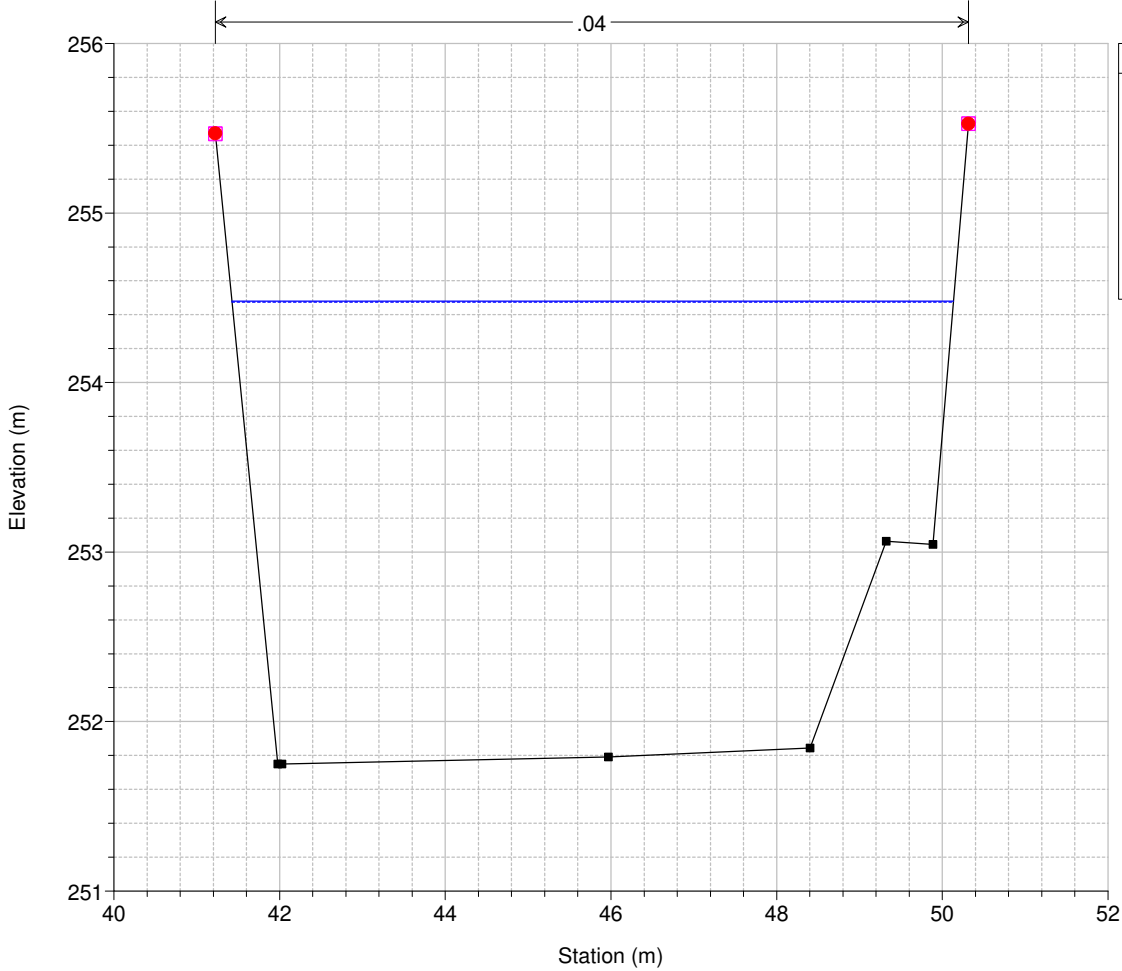
Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 4830 C150 - (VI_24)



Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 4740 C151 - (VI_23)



Sellina_Fossatone Plan: 1) P2_TR200_2h 2) TR200_2h
 River = Vingone Reach = Centro RS = 4671.00 aggiunta per J_F1_VI



| Reach | River Sta | Profile | Plan | Q Total (m ³ /s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m ²) | Top Width (m) | Froude # Chl |
|--------|-----------|---------|-------------|--------------------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|--------------------------------|------------------|--------------|
| Centro | 7006.25 | Max WS | P2_TR200_2h | 51.35 | 270.87 | 272.96 | 272.79 | 273.46 | 0.011280 | 3.13 | 16.38 | 11.80 | 0.85 |
| Centro | 7006.25 | Max WS | TR200_2h | 51.23 | 270.87 | 272.91 | 272.79 | 273.44 | 0.012363 | 3.24 | 15.83 | 11.64 | 0.89 |
| Centro | 7006.24 | | | Lat Struct | | | | | | | | | |
| Centro | 7006.23 | | | Lat Struct | | | | | | | | | |
| Centro | 6996.88 | Max WS | P2_TR200_2h | 51.20 | 270.75 | 272.85 | 272.67 | 273.34 | 0.010815 | 3.09 | 16.59 | 11.82 | 0.83 |
| Centro | 6996.88 | Max WS | TR200_2h | 51.11 | 270.75 | 272.80 | 272.67 | 273.32 | 0.012064 | 3.21 | 15.93 | 11.63 | 0.88 |
| Centro | 6925 | Max WS | P2_TR200_2h | 50.55 | 269.82 | 272.28 | 271.69 | 272.55 | 0.005892 | 2.32 | 21.76 | 14.31 | 0.60 |
| Centro | 6925 | Max WS | TR200_2h | 50.64 | 269.82 | 272.29 | 271.68 | 272.56 | 0.005739 | 2.30 | 21.98 | 14.31 | 0.59 |
| Centro | 6842 | Max WS | P2_TR200_2h | 45.07 | 269.14 | 271.59 | 271.34 | 272.10 | 0.010711 | 3.16 | 14.26 | 8.83 | 0.79 |
| Centro | 6842 | Max WS | TR200_2h | 44.56 | 269.14 | 271.56 | 271.33 | 272.08 | 0.011173 | 3.20 | 13.95 | 8.82 | 0.81 |
| Centro | 6841.99 | | | Lat Struct | | | | | | | | | |
| Centro | 6841.98 | | | Lat Struct | | | | | | | | | |
| Centro | 6669 | Max WS | P2_TR200_2h | 44.52 | 267.30 | 270.10 | 269.51 | 270.44 | 0.006274 | 2.57 | 17.29 | 9.40 | 0.61 |
| Centro | 6669 | Max WS | TR200_2h | 44.62 | 267.30 | 270.10 | 269.51 | 270.44 | 0.006298 | 2.58 | 17.30 | 9.40 | 0.61 |
| Centro | 6668.99 | | | Lat Struct | | | | | | | | | |
| Centro | 6668.98 | | | Lat Struct | | | | | | | | | |
| Centro | 6439 | Max WS | P2_TR200_2h | 48.88 | 265.31 | 268.62 | 268.00 | 269.14 | 0.010187 | 3.19 | 15.32 | 6.18 | 0.65 |
| Centro | 6439 | Max WS | TR200_2h | 47.61 | 265.31 | 268.62 | 267.97 | 269.11 | 0.009711 | 3.11 | 15.29 | 6.18 | 0.63 |
| Centro | 6438.99 | | | Lat Struct | | | | | | | | | |
| Centro | 6438.98 | | | Lat Struct | | | | | | | | | |
| Centro | 6255 | Max WS | P2_TR200_2h | 53.73 | 263.98 | 266.98 | 266.57 | 267.45 | 0.009527 | 3.04 | 17.67 | 10.48 | 0.75 |
| Centro | 6255 | Max WS | TR200_2h | 52.99 | 263.98 | 266.97 | 266.55 | 267.43 | 0.009353 | 3.01 | 17.61 | 10.48 | 0.74 |
| Centro | 6254.99 | | | Lat Struct | | | | | | | | | |
| Centro | 6254.98 | | | Lat Struct | | | | | | | | | |
| Centro | 6049 | Max WS | P2_TR200_2h | 37.67 | 262.23 | 265.04 | 264.42 | 265.37 | 0.007186 | 2.53 | 14.87 | 7.48 | 0.57 |
| Centro | 6049 | Max WS | TR200_2h | 39.30 | 262.23 | 265.02 | 264.46 | 265.38 | 0.008061 | 2.67 | 14.72 | 7.48 | 0.61 |
| Centro | 6048.99 | | | Lat Struct | | | | | | | | | |
| Centro | 6048.98 | | | Lat Struct | | | | | | | | | |
| Centro | 5925 | Max WS | P2_TR200_2h | 45.17 | 261.15 | 264.34 | 263.57 | 264.82 | 0.005096 | 3.08 | 14.68 | 8.32 | 0.60 |
| Centro | 5925 | Max WS | TR200_2h | 44.82 | 261.15 | 264.28 | 263.56 | 264.77 | 0.005413 | 3.12 | 14.34 | 8.32 | 0.62 |
| Centro | 5885 | | | Bridge | | | | | | | | | |
| Centro | 5880 | Max WS | P2_TR200_2h | 45.17 | 261.11 | 264.15 | 263.55 | 264.69 | 0.006348 | 3.28 | 13.77 | 8.32 | 0.66 |
| Centro | 5880 | Max WS | TR200_2h | 44.86 | 261.11 | 264.04 | 263.54 | 264.63 | 0.007269 | 3.41 | 13.17 | 8.32 | 0.70 |
| Centro | 5879.99 | | | Lat Struct | | | | | | | | | |
| Centro | 5879.98 | | | Lat Struct | | | | | | | | | |
| Centro | 5835 | Max WS | P2_TR200_2h | 44.19 | 261.02 | 264.21 | 263.47 | 264.52 | 0.005393 | 2.47 | 17.91 | 8.32 | 0.54 |
| Centro | 5835 | Max WS | TR200_2h | 43.50 | 261.02 | 264.20 | 263.45 | 264.50 | 0.005319 | 2.44 | 17.79 | 8.32 | 0.53 |
| Centro | 5834.99 | | | Lat Struct | | | | | | | | | |
| Centro | 5834.98 | | | Lat Struct | | | | | | | | | |
| Centro | 5768 | Max WS | P2_TR200_2h | 43.27 | 260.19 | 263.35 | 262.28 | 263.71 | 0.003658 | 2.67 | 16.22 | 6.38 | 0.50 |
| Centro | 5768 | Max WS | TR200_2h | 43.13 | 260.19 | 263.35 | 262.28 | 263.71 | 0.003637 | 2.66 | 16.22 | 6.38 | 0.50 |
| Centro | 5760 | | | Bridge | | | | | | | | | |
| Centro | 5758 | Max WS | P2_TR200_2h | 43.27 | 260.13 | 262.76 | 262.18 | 263.29 | 0.006371 | 3.23 | 13.38 | 9.49 | 0.66 |
| Centro | 5758 | Max WS | TR200_2h | 42.84 | 260.13 | 262.67 | 262.17 | 263.23 | 0.007065 | 3.32 | 12.90 | 9.48 | 0.69 |
| Centro | 5757.99 | | | Lat Struct | | | | | | | | | |
| Centro | 5757.98 | | | Lat Struct | | | | | | | | | |
| Centro | 5755 | Max WS | P2_TR200_2h | 43.83 | 260.10 | 262.87 | 262.03 | 263.12 | 0.004305 | 2.23 | 19.63 | 9.49 | 0.50 |
| Centro | 5755 | Max WS | TR200_2h | 43.62 | 260.10 | 262.88 | 262.03 | 263.13 | 0.004158 | 2.20 | 19.80 | 9.49 | 0.49 |
| Centro | 5754.99 | | | Lat Struct | | | | | | | | | |
| Centro | 5754.98 | | | Lat Struct | | | | | | | | | |
| Centro | 5645 | Max WS | P2_TR200_2h | 45.08 | 258.81 | 262.28 | 261.18 | 262.63 | 0.006393 | 2.65 | 17.03 | 6.01 | 0.50 |
| Centro | 5645 | Max WS | TR200_2h | 44.10 | 258.81 | 262.37 | 261.16 | 262.69 | 0.005605 | 2.51 | 17.60 | 6.02 | 0.47 |

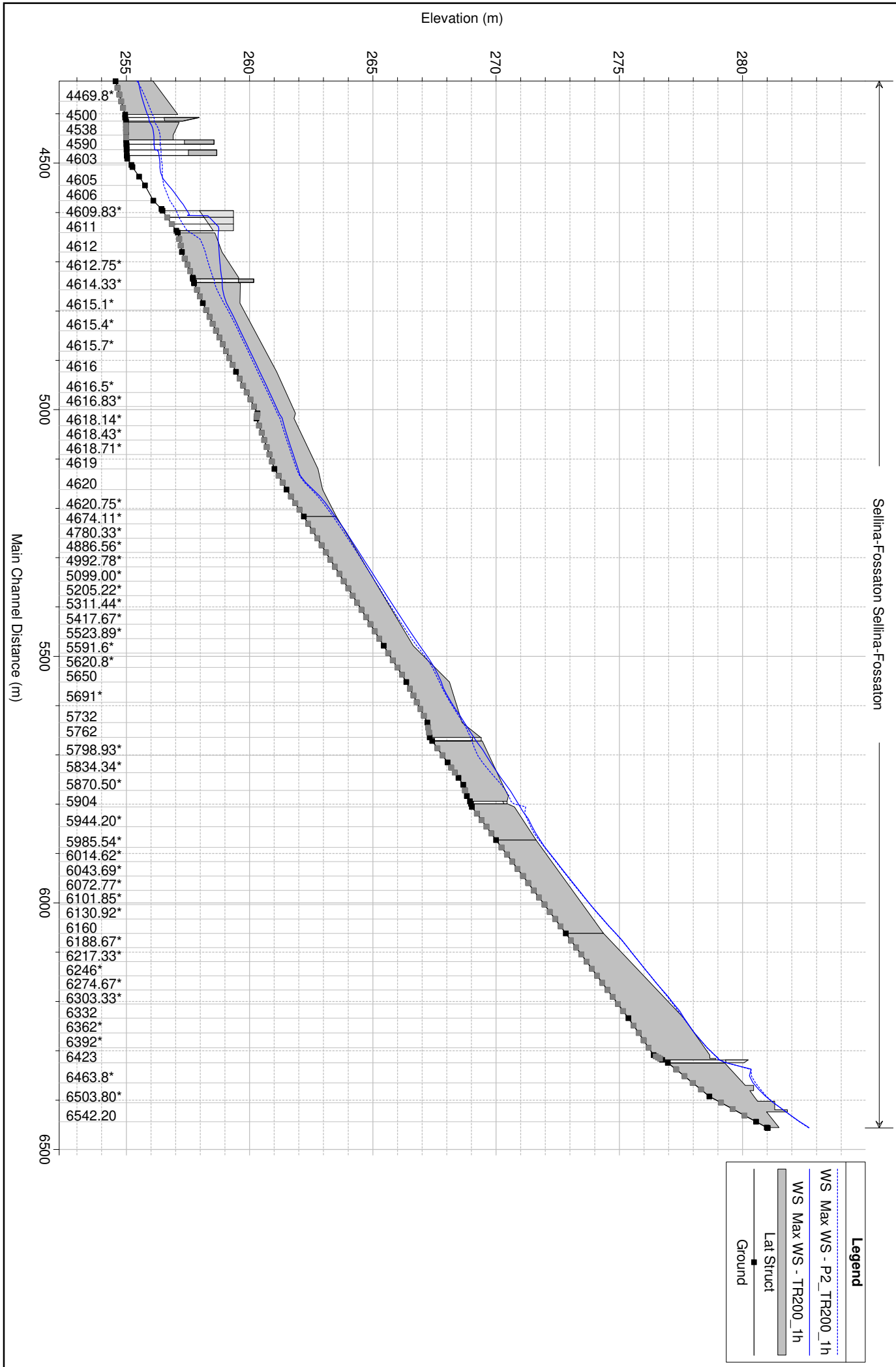
| Reach | River Sta | Profile | Plan | Q Total (m ³ /s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m ²) | Top Width (m) | Froude # Chl |
|--------|-----------|---------|-------------|--------------------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|--------------------------------|------------------|--------------|
| Centro | 5621 | Max WS | P2_TR200_2h | 45.41 | 258.77 | 261.93 | 261.16 | 262.59 | 0.018215 | 3.60 | 12.61 | 2.73 | 0.65 |
| Centro | 5621 | Max WS | TR200_2h | 44.45 | 258.77 | 262.00 | 261.14 | 262.61 | 0.017237 | 3.48 | 12.77 | 2.49 | 0.62 |
| Centro | 5619 | Max WS | P2_TR200_2h | 46.00 | 258.63 | 261.20 | 260.49 | 261.83 | 0.016830 | 3.53 | 13.02 | 3.48 | 0.70 |
| Centro | 5619 | Max WS | TR200_2h | 45.05 | 258.63 | 261.35 | 260.53 | 261.95 | 0.016025 | 3.41 | 13.20 | 3.04 | 0.66 |
| Centro | 5618.88 | Max WS | P2_TR200_2h | 46.00 | 258.63 | 261.36 | 260.45 | 261.76 | 0.007834 | 2.81 | 16.38 | 6.00 | 0.54 |
| Centro | 5558 | Max WS | TR200_2h | 45.63 | 258.50 | 261.05 | 260.49 | 261.57 | 0.010572 | 3.19 | 14.29 | 6.16 | 0.67 |
| Centro | 5549.74 | Max WS | P2_TR200_2h | 46.89 | 258.17 | 260.84 | 260.01 | 261.28 | 0.008606 | 2.92 | 16.05 | 6.00 | 0.57 |
| Centro | 5549.73 | | | Lat Struct | | | | | | | | | |
| Centro | 5549.72 | | | Lat Struct | | | | | | | | | |
| Centro | 5467 | Max WS | P2_TR200_2h | 47.88 | 257.61 | 260.22 | 259.79 | 260.64 | 0.008210 | 2.90 | 16.50 | 9.48 | 0.70 |
| Centro | 5467 | Max WS | TR200_2h | 47.00 | 257.61 | 260.18 | 259.77 | 260.61 | 0.008373 | 2.91 | 16.16 | 9.42 | 0.71 |
| Centro | 5394 | Max WS | P2_TR200_2h | 49.12 | 256.91 | 259.68 | 259.14 | 260.06 | 0.006864 | 2.72 | 18.04 | 10.07 | 0.65 |
| Centro | 5394 | Max WS | TR200_2h | 48.20 | 256.91 | 259.66 | 259.12 | 260.03 | 0.006871 | 2.71 | 17.79 | 10.03 | 0.65 |
| Centro | 5393.99 | | | Lat Struct | | | | | | | | | |
| Centro | 5393.98 | | | Lat Struct | | | | | | | | | |
| Centro | 5286 | Max WS | P2_TR200_2h | 50.09 | 255.73 | 259.00 | 258.19 | 259.32 | 0.005338 | 2.49 | 20.14 | 9.60 | 0.55 |
| Centro | 5286 | Max WS | TR200_2h | 49.37 | 255.73 | 258.98 | 258.17 | 259.29 | 0.005340 | 2.48 | 19.94 | 9.58 | 0.55 |
| Centro | 5207 | Max WS | P2_TR200_2h | 51.57 | 255.32 | 258.40 | 257.58 | 258.89 | 0.008528 | 3.09 | 16.70 | 6.08 | 0.56 |
| Centro | 5207 | Max WS | TR200_2h | 50.80 | 255.32 | 258.36 | 257.56 | 258.85 | 0.008680 | 3.10 | 16.40 | 6.08 | 0.57 |
| Centro | 5197 | Max WS | P2_TR200_2h | 51.69 | 255.09 | 258.27 | 257.59 | 258.84 | 0.010742 | 3.34 | 15.47 | 5.53 | 0.60 |
| Centro | 5197 | Max WS | TR200_2h | 50.92 | 255.09 | 258.21 | 257.57 | 258.79 | 0.010894 | 3.36 | 15.17 | 5.62 | 0.61 |
| Centro | 5196.99 | | | Lat Struct | | | | | | | | | |
| Centro | 5196.98 | | | Lat Struct | | | | | | | | | |
| Centro | 5193 | Max WS | P2_TR200_2h | 51.78 | 254.91 | 258.23 | 257.48 | 258.75 | 0.009440 | 3.19 | 16.23 | 6.45 | 0.64 |
| Centro | 5193 | Max WS | TR200_2h | 51.02 | 254.91 | 258.20 | 257.46 | 258.72 | 0.009476 | 3.18 | 16.02 | 6.42 | 0.64 |
| Centro | 5192.99 | | | Lat Struct | | | | | | | | | |
| Centro | 5192.98 | | | Lat Struct | | | | | | | | | |
| Centro | 5096 | Max WS | P2_TR200_2h | 53.25 | 254.59 | 257.38 | 256.83 | 257.86 | 0.008630 | 3.04 | 17.53 | 8.88 | 0.69 |
| Centro | 5096 | Max WS | TR200_2h | 52.51 | 254.59 | 257.34 | 256.81 | 257.82 | 0.008882 | 3.06 | 17.15 | 8.78 | 0.70 |
| Centro | 4977 | Max WS | P2_TR200_2h | 54.53 | 253.83 | 256.60 | 255.81 | 256.91 | 0.005281 | 2.46 | 22.13 | 11.26 | 0.56 |
| Centro | 4977 | Max WS | TR200_2h | 53.90 | 253.83 | 256.59 | 255.79 | 256.89 | 0.005249 | 2.45 | 21.99 | 11.24 | 0.56 |
| Centro | 4976.99 | | | Lat Struct | | | | | | | | | |
| Centro | 4976.98 | | | Lat Struct | | | | | | | | | |
| Centro | 4872 | Max WS | P2_TR200_2h | 55.54 | 253.11 | 256.20 | 254.90 | 256.42 | 0.002586 | 2.10 | 26.48 | 10.57 | 0.40 |
| Centro | 4872 | Max WS | TR200_2h | 54.97 | 253.11 | 256.20 | 254.89 | 256.42 | 0.002515 | 2.07 | 26.54 | 10.59 | 0.40 |
| Centro | 4850 | | | Bridge | | | | | | | | | |
| Centro | 4842 | Max WS | P2_TR200_2h | 55.54 | 252.66 | 255.74 | 254.87 | 256.11 | 0.005623 | 2.69 | 20.63 | 11.35 | 0.58 |
| Centro | 4842 | Max WS | TR200_2h | 54.97 | 252.66 | 255.79 | 254.87 | 256.13 | 0.005231 | 2.61 | 21.08 | 11.67 | 0.56 |
| Centro | 4841.99 | | | Lat Struct | | | | | | | | | |
| Centro | 4841.98 | | | Lat Struct | | | | | | | | | |
| Centro | 4830 | Max WS | P2_TR200_2h | 55.62 | 252.60 | 255.73 | 254.89 | 256.07 | 0.006190 | 2.59 | 21.51 | 11.26 | 0.60 |
| Centro | 4830 | Max WS | TR200_2h | 55.06 | 252.60 | 255.79 | 254.88 | 256.10 | 0.005667 | 2.48 | 22.22 | 11.67 | 0.57 |
| Centro | 4829.99 | | | Lat Struct | | | | | | | | | |
| Centro | 4829.98 | | | Lat Struct | | | | | | | | | |
| Centro | 4740 | Max WS | P2_TR200_2h | 56.95 | 251.96 | 254.91 | 254.62 | 255.51 | 0.011606 | 3.43 | 16.61 | 9.08 | 0.81 |
| Centro | 4740 | Max WS | TR200_2h | 56.38 | 251.96 | 254.85 | 254.61 | 255.48 | 0.012460 | 3.51 | 16.05 | 8.93 | 0.84 |
| Centro | 4671.00 | Max WS | P2_TR200_2h | 46.19 | 251.75 | 254.48 | 253.46 | 254.73 | 0.004047 | 2.21 | 20.90 | 8.71 | 0.46 |
| Centro | 4671.00 | Max WS | TR200_2h | 46.05 | 251.75 | 254.47 | 253.46 | 254.72 | 0.004056 | 2.21 | 20.84 | 8.71 | 0.46 |

| Reach | River Sta | Profile | Plan | Q US (m3/s) | Q Leaving Total (m3/s) | Q DS (m3/s) | Q Weir (m3/s) | Q Gates (m3/s) | Wr Top Wtdh (m) | Weir Max Depth (m) | Weir Avg Depth (m) | Min El Weir Flow (m) | E.G. US. (m) | W.S. US. (m) | E.G. DS (m) | W.S. DS (m) |
|--------|-----------|---------|-------------|----------------|---------------------------|----------------|------------------|-------------------|--------------------|-----------------------|-----------------------|-------------------------|-----------------|-----------------|----------------|----------------|
| Centro | 7006.24 | Max WS | P2_TR200_2h | 51.35 | 2.28 | 45.07 | 2.28 | | 99.86 | 0.28 | 0.18 | 271.56 | 273.46 | 272.96 | 272.10 | 271.59 |
| Centro | 7006.24 | Max WS | TR200_2h | 51.23 | 2.59 | 44.56 | 2.59 | | 98.32 | 0.29 | 0.20 | 271.56 | 273.44 | 272.91 | 272.08 | 271.56 |
| Centro | 7006.23 | Max WS | P2_TR200_2h | 51.35 | 3.54 | 45.07 | 3.54 | | 94.85 | 0.30 | 0.26 | 271.31 | 273.46 | 272.96 | 272.10 | 271.59 |
| Centro | 7006.23 | Max WS | TR200_2h | 51.23 | 3.87 | 44.56 | 3.87 | | 94.13 | 0.33 | 0.27 | 271.31 | 273.44 | 272.91 | 272.08 | 271.56 |
| Centro | 6841.99 | Max WS | P2_TR200_2h | 45.07 | 2.72 | 44.52 | 2.72 | | 171.52 | 0.71 | 0.42 | 269.42 | 272.10 | 271.59 | 270.44 | 270.10 |
| Centro | 6841.99 | Max WS | TR200_2h | 44.56 | 2.21 | 44.62 | 2.21 | | 171.52 | 0.71 | 0.40 | 269.42 | 272.08 | 271.56 | 270.44 | 270.10 |
| Centro | 6841.98 | Max WS | P2_TR200_2h | 45.07 | 0.01 | 44.52 | 0.01 | | 8.09 | 0.03 | 0.02 | 270.42 | 272.10 | 271.59 | 270.44 | 270.10 |
| Centro | 6841.98 | Max WS | TR200_2h | 44.56 | 0.00 | 44.62 | 0.00 | | | | | 270.42 | 272.08 | 271.56 | 270.44 | 270.10 |
| Centro | 6668.99 | Max WS | P2_TR200_2h | 44.52 | -14.65 | 48.88 | -14.65 | | 230.39 | 1.19 | 0.80 | 267.95 | 270.44 | 270.10 | 269.14 | 268.62 |
| Centro | 6668.99 | Max WS | TR200_2h | 44.62 | -14.03 | 47.61 | -14.03 | | 230.39 | 1.20 | 0.80 | 267.95 | 270.44 | 270.10 | 269.11 | 268.62 |
| Centro | 6668.98 | Max WS | P2_TR200_2h | 44.52 | 13.73 | 48.88 | 13.73 | | 155.22 | 0.69 | 0.43 | 268.04 | 270.44 | 270.10 | 269.14 | 268.62 |
| Centro | 6668.98 | Max WS | TR200_2h | 44.62 | 14.38 | 47.61 | 14.38 | | 153.89 | 0.72 | 0.45 | 268.04 | 270.44 | 270.10 | 269.11 | 268.62 |
| Centro | 6438.99 | Max WS | P2_TR200_2h | 48.88 | -16.61 | 53.73 | -16.61 | | 186.11 | 0.80 | 0.53 | 266.84 | 269.14 | 268.62 | 267.45 | 266.98 |
| Centro | 6438.99 | Max WS | TR200_2h | 47.61 | -16.68 | 52.99 | -16.68 | | 186.11 | 0.80 | 0.53 | 266.84 | 269.11 | 268.62 | 267.43 | 266.97 |
| Centro | 6438.98 | Max WS | P2_TR200_2h | 48.88 | 6.90 | 53.73 | 6.90 | | 145.73 | 0.58 | 0.28 | 267.15 | 269.14 | 268.62 | 267.45 | 266.98 |
| Centro | 6438.98 | Max WS | TR200_2h | 47.61 | 6.79 | 52.99 | 6.79 | | 145.97 | 0.58 | 0.28 | 267.15 | 269.11 | 268.62 | 267.43 | 266.97 |
| Centro | 6254.99 | Max WS | P2_TR200_2h | 53.73 | 16.04 | 37.67 | 16.04 | | 205.97 | 1.02 | 0.50 | 264.02 | 267.45 | 266.98 | 265.37 | 265.04 |
| Centro | 6254.99 | Max WS | TR200_2h | 52.99 | 14.41 | 39.30 | 14.41 | | 205.97 | 1.00 | 0.46 | 264.02 | 267.43 | 266.97 | 265.38 | 265.02 |
| Centro | 6254.98 | Max WS | P2_TR200_2h | 53.73 | 2.04 | 37.67 | 2.04 | | 129.46 | 0.46 | 0.15 | 264.58 | 267.45 | 266.98 | 265.37 | 265.04 |
| Centro | 6254.98 | Max WS | TR200_2h | 52.99 | 1.58 | 39.30 | 1.58 | | 97.45 | 0.44 | 0.15 | 264.58 | 267.43 | 266.97 | 265.38 | 265.02 |
| Centro | 6048.99 | Max WS | P2_TR200_2h | 37.67 | -12.91 | 45.17 | -12.91 | | 111.79 | 1.33 | 1.06 | 263.34 | 265.37 | 265.04 | 264.82 | 264.34 |
| Centro | 6048.99 | Max WS | TR200_2h | 39.30 | -11.22 | 44.82 | -11.22 | | 111.79 | 1.33 | 1.05 | 263.34 | 265.38 | 265.02 | 264.78 | 264.28 |
| Centro | 6048.98 | Max WS | P2_TR200_2h | 37.67 | 6.62 | 45.17 | 6.62 | | 109.34 | 0.90 | 0.70 | 263.62 | 265.37 | 265.04 | 264.82 | 264.34 |
| Centro | 6048.98 | Max WS | TR200_2h | 39.30 | 6.86 | 44.82 | 6.86 | | 109.34 | 0.95 | 0.70 | 263.62 | 265.38 | 265.02 | 264.78 | 264.28 |
| Centro | 5879.99 | Max WS | P2_TR200_2h | 45.17 | -0.75 | 44.19 | -0.75 | | 9.19 | 0.87 | 0.87 | 263.34 | 264.69 | 264.15 | 264.52 | 264.21 |
| Centro | 5879.99 | Max WS | TR200_2h | 44.86 | -1.89 | 43.50 | -1.89 | | 9.19 | 0.88 | 0.88 | 263.34 | 264.63 | 264.04 | 264.50 | 264.20 |
| Centro | 5879.98 | Max WS | P2_TR200_2h | 45.17 | 1.17 | 44.19 | 1.17 | | 9.19 | 0.62 | 0.59 | 263.59 | 264.69 | 264.15 | 264.52 | 264.21 |
| Centro | 5879.98 | Max WS | TR200_2h | 44.86 | 0.98 | 43.50 | 0.98 | | 9.19 | 0.61 | 0.53 | 263.59 | 264.63 | 264.04 | 264.50 | 264.20 |
| Centro | 5834.99 | Max WS | P2_TR200_2h | 44.19 | -14.98 | 43.27 | -14.98 | | 152.36 | 1.23 | 0.55 | 263.34 | 264.52 | 264.21 | 263.71 | 263.35 |
| Centro | 5834.99 | Max WS | TR200_2h | 43.50 | -15.23 | 43.13 | -15.23 | | 152.36 | 1.21 | 0.55 | 263.34 | 264.50 | 264.20 | 263.71 | 263.35 |
| Centro | 5834.98 | Max WS | P2_TR200_2h | 44.19 | 7.52 | 43.27 | 7.52 | | 129.20 | 0.62 | 0.32 | 263.52 | 264.52 | 264.21 | 263.71 | 263.35 |
| Centro | 5834.98 | Max WS | TR200_2h | 43.50 | 7.46 | 43.13 | 7.46 | | 129.82 | 0.61 | 0.32 | 263.52 | 264.50 | 264.20 | 263.71 | 263.35 |
| Centro | 5757.99 | Max WS | P2_TR200_2h | 43.27 | -0.12 | 43.83 | -0.12 | | 4.88 | 0.19 | 0.19 | 262.68 | 263.29 | 262.76 | 263.12 | 262.87 |
| Centro | 5757.99 | Max WS | TR200_2h | 42.84 | -0.13 | 43.62 | -0.13 | | 4.88 | 0.21 | 0.21 | 262.68 | 263.23 | 262.67 | 263.13 | 262.88 |
| Centro | 5757.98 | Max WS | P2_TR200_2h | 43.27 | -0.36 | 43.83 | -0.36 | | 4.88 | 0.55 | 0.54 | 262.31 | 263.29 | 262.76 | 263.12 | 262.87 |
| Centro | 5757.98 | Max WS | TR200_2h | 42.84 | -0.49 | 43.62 | -0.49 | | 4.88 | 0.54 | 0.54 | 262.31 | 263.23 | 262.67 | 263.13 | 262.88 |
| Centro | 5754.99 | Max WS | P2_TR200_2h | 43.83 | -1.51 | 45.41 | -1.51 | | 111.56 | 0.29 | 0.21 | 262.26 | 263.12 | 262.87 | 262.59 | 261.93 |
| Centro | 5754.99 | Max WS | TR200_2h | 43.62 | -1.49 | 44.45 | -1.49 | | 111.87 | 0.32 | 0.26 | 262.26 | 263.13 | 262.88 | 262.62 | 262.00 |
| Centro | 5754.98 | Max WS | P2_TR200_2h | 43.83 | 1.00 | 45.41 | 1.00 | | 67.64 | 0.56 | 0.29 | 262.31 | 263.12 | 262.87 | 262.59 | 261.93 |
| Centro | 5754.98 | Max WS | TR200_2h | 43.62 | 1.69 | 44.45 | 1.69 | | 75.42 | 0.57 | 0.30 | 262.31 | 263.13 | 262.88 | 262.62 | 262.00 |
| Centro | 5618.99 | Max WS | TR200_2h | 45.05 | 0.00 | 45.63 | 0.00 | | | | | 261.51 | 261.95 | 261.35 | 261.57 | 261.05 |
| Centro | 5618.98 | Max WS | TR200_2h | 45.05 | 0.00 | 45.63 | 0.00 | | | | | 261.28 | 261.95 | 261.35 | 261.57 | 261.05 |
| Centro | 5557.99 | Max WS | TR200_2h | 45.63 | -0.36 | 48.20 | -0.36 | | 97.19 | 0.27 | 0.16 | 259.61 | 261.57 | 261.05 | 260.03 | 259.66 |
| Centro | 5557.98 | Max WS | TR200_2h | 45.63 | 0.00 | 48.20 | 0.00 | | | | | 260.13 | 261.57 | 261.05 | 260.03 | 259.66 |
| Centro | 5549.73 | Max WS | P2_TR200_2h | 46.89 | -0.38 | 49.12 | -0.38 | | 84.50 | 0.32 | 0.19 | 259.61 | 261.28 | 260.84 | 260.06 | 259.68 |
| Centro | 5549.72 | Max WS | P2_TR200_2h | 46.89 | 0.00 | 49.12 | 0.00 | | | | | 260.13 | 261.28 | 260.84 | 260.06 | 259.68 |
| Centro | 5393.99 | Max WS | P2_TR200_2h | 49.12 | 0.02 | 51.57 | 0.02 | | 166.70 | 0.31 | 0.13 | 258.74 | 260.06 | 259.68 | 258.89 | 258.41 |
| Centro | 5393.99 | Max WS | TR200_2h | 48.20 | -0.04 | 50.80 | -0.04 | | 157.44 | 0.28 | 0.11 | 258.74 | 260.03 | 259.66 | 258.85 | 258.36 |
| Centro | 5393.98 | Max WS | P2_TR200_2h | 49.12 | 0.00 | 51.57 | 0.00 | | | | | 259.22 | 260.06 | 259.68 | 258.89 | 258.41 |
| Centro | 5393.98 | Max WS | TR200_2h | 48.20 | 0.00 | 50.80 | 0.00 | | | | | 259.22 | 260.03 | 259.66 | 258.85 | 258.36 |
| Centro | 5196.99 | Max WS | P2_TR200_2h | 51.69 | 0.00 | 51.78 | 0.00 | | | | | 259.24 | 258.84 | 258.27 | 258.75 | 258.23 |
| Centro | 5196.99 | Max WS | TR200_2h | 50.92 | 0.00 | 51.02 | 0.00 | | | | | 259.24 | 258.79 | 258.21 | 258.72 | 258.20 |
| Centro | 5196.98 | Max WS | P2_TR200_2h | 51.69 | 0.00 | 51.78 | 0.00 | | | | | 258.83 | 258.84 | 258.27 | 258.75 | 258.23 |
| Centro | 5196.98 | Max WS | TR200_2h | 50.92 | 0.00 | 51.02 | 0.00 | | | | | 258.83 | 258.79 | 258.21 | 258.72 | 258.20 |
| Centro | 5192.99 | Max WS | P2_TR200_2h | 51.78 | 0.00 | 54.53 | 0.00 | | | | | 257.72 | 258.75 | 258.23 | 256.91 | 256.60 |
| Centro | 5192.99 | Max WS | TR200_2h | 51.02 | 0.00 | 53.90 | 0.00 | | | | | 257.72 | 258.72 | 258.20 | 256.89 | 256.59 |
| Centro | 5192.98 | Max WS | P2_TR200_2h | 51.78 | 0.56 | 54.53 | 0.56 | | 34.65 | 0.29 | 0.13 | 256.31 | 258.75 | 258.23 | 256.91 | 256.60 |
| Centro | 5192.98 | Max WS | TR200_2h | 51.02 | 0.46 | 53.90 | 0.46 | | 29.97 | 0.28 | 0.13 | 256.31 | 258.72 | 258.20 | 256.89 | 256.59 |
| Centro | 4976.99 | Max WS | P2_TR200_2h | 54.53 | 0.00 | 55.54 | 0.00 | | | | | 257.37 | 256.91 | 256.60 | 256.42 | 256.20 |
| Centro | 4976.99 | Max WS | TR200_2h | 53.90 | 0.00 | 54.97 | 0.00 | | | | | 257.37 | 256.89 | 256.59 | 256.42 | 256.20 |
| Centro | 4976.98 | Max WS | P2_TR200_2h | 54.53 | 0.59 | 55.54 | 0.59 | | 34.26 | 0.29 | 0.14 | 256.31 | 256.91 | 256.60 | 256.42 | 256.20 |
| Centro | 4976.98 | Max WS | TR200_2h | 53.90 | 0.53 | 54.97 | 0.53 | | 33.19 | 0.28 | 0.14 | 256.31 | 256.89 | 256.59 | 256.42 | 256.20 |
| Centro | 4841.99 | Max WS | P2_TR200_2h | 55.54 | 0.00 | 55.62 | 0.00 | | | | | 256.04 | 256.11 | 255.74 | 256.07 | 255.73 |
| Centro | 4841.99 | Max WS | TR200_2h | 54.97 | 0.00 | 55.06 | 0.00 | | | | | 256.04 | 256.13 | 255.79 | 256.10 | 255.79 |
| Centro | 4841.98 | Max WS | P2_TR200_2h | 55.54 | 0.00 | 55.62 | 0.00 | | | | | 256.94 | 256.11 | 255.74 | 256.07 | 255.73 |
| Centro | 4841.98 | Max WS | TR200_2h | 54.97 | 0.00 | 55.06 | 0.00 | | | | | 256.94 | 256.13 | 255.79 | 256.10 | 255.79 |
| Centro | 4829.99 | | | | | | | | | | | | | | | |

FOSSO
SELLINA

Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 Struttura Laterali Destra Idraulica

Sellina-Fossaton Sellina-Fossaton

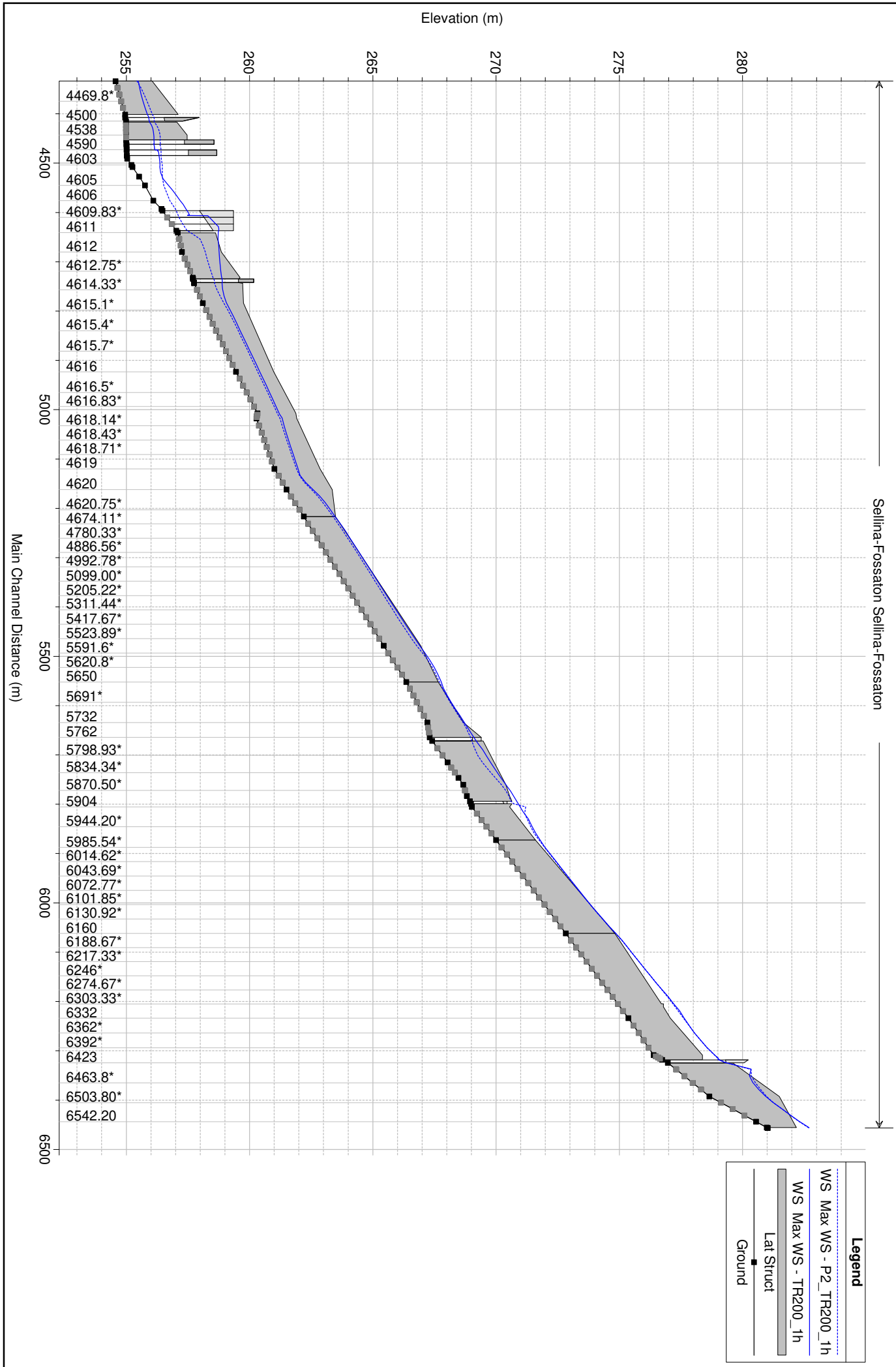


Legend

- WS Max WS - P2_TR200_1h
- WS Max WS - TR200_1h
- Lat Struct
- Ground

Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 Struttura Laterali Sinistra Idraulica

Sellina-Fossaton Sellina-Fossaton



Legend

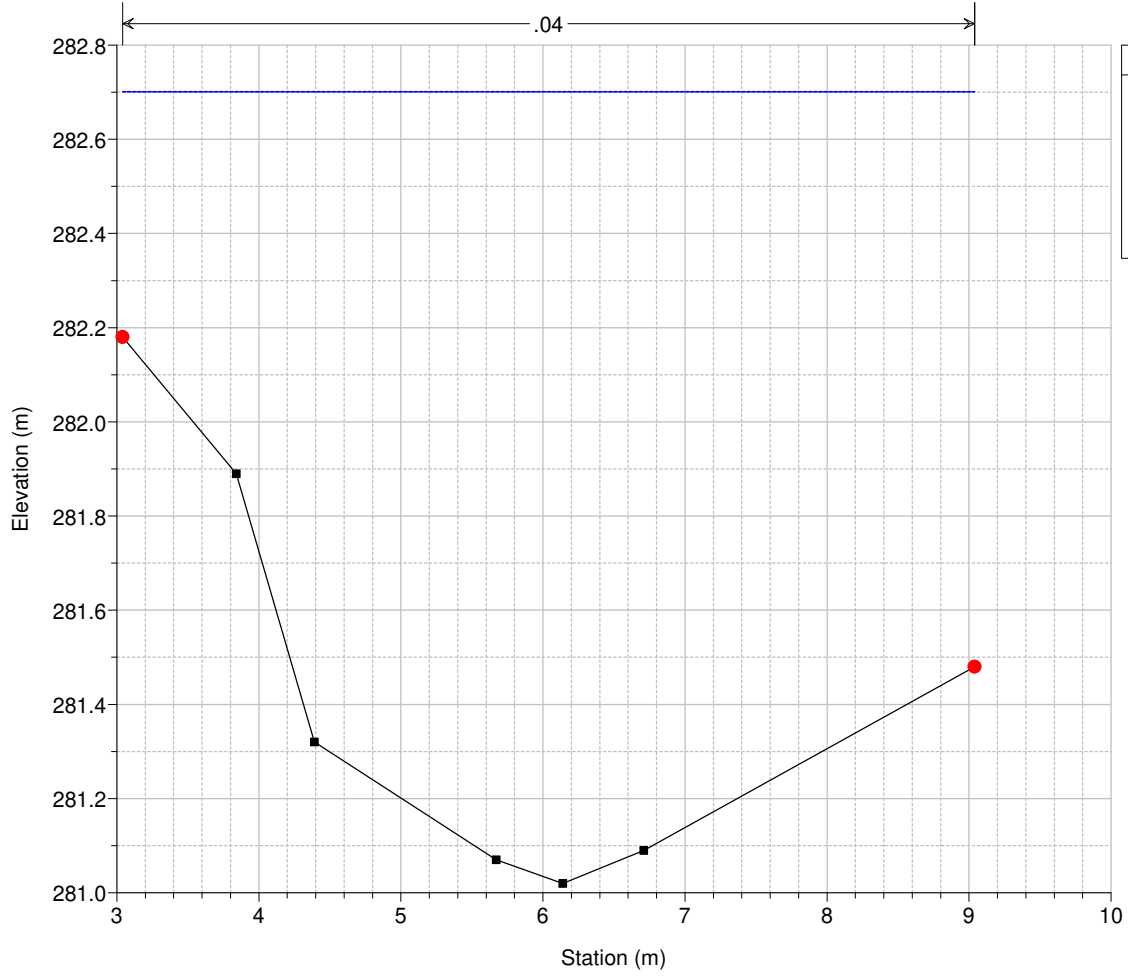
- WS Max WS - P2_TR200_1h
- WS Max WS - TR200_1h
- Lat Struct
- Ground

1 cm Horiz. = 100 m 1 cm Vert. = 2 m

Main Channel Distance (m)

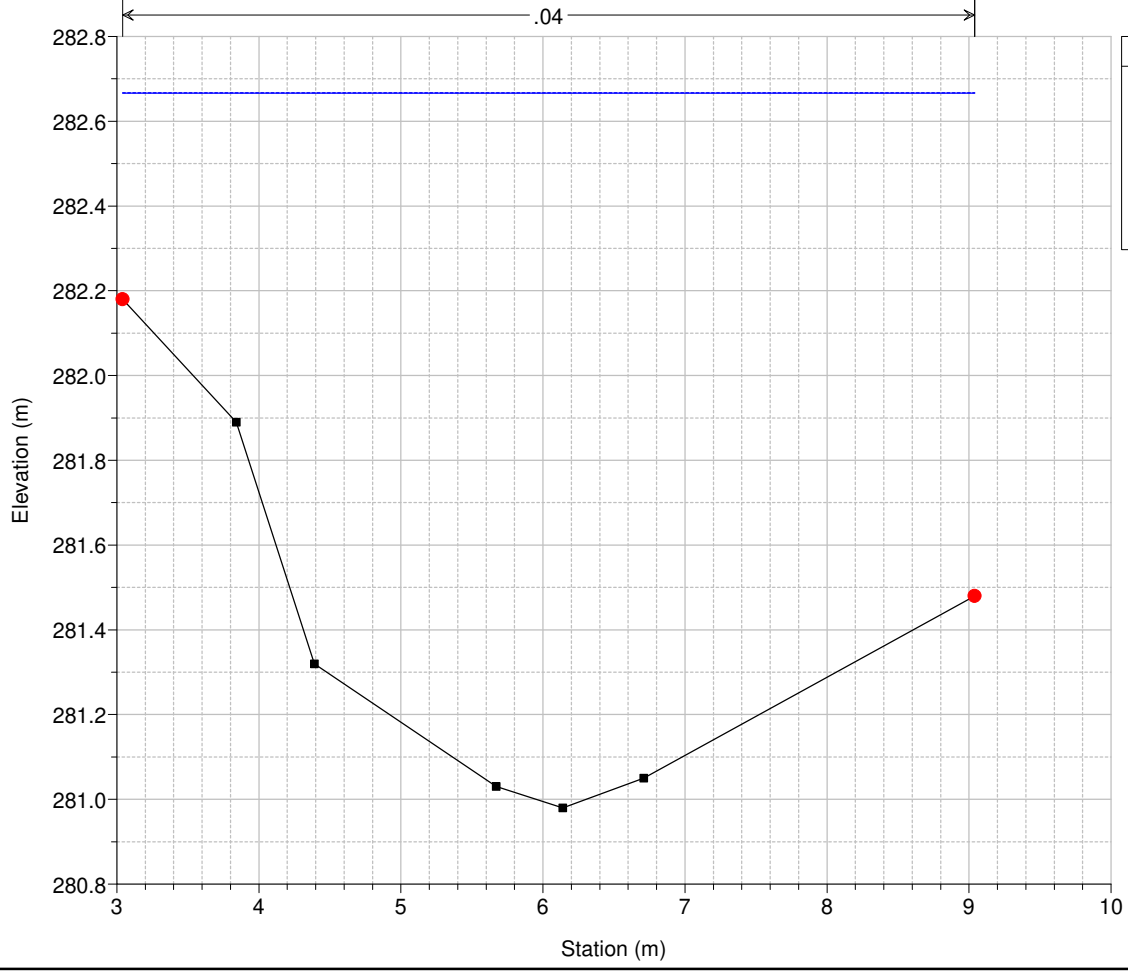
Elevation (m)

Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 6555 C10 - (SE_33)



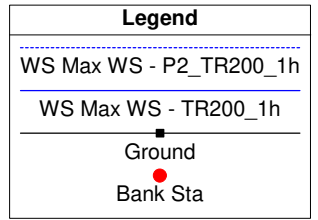
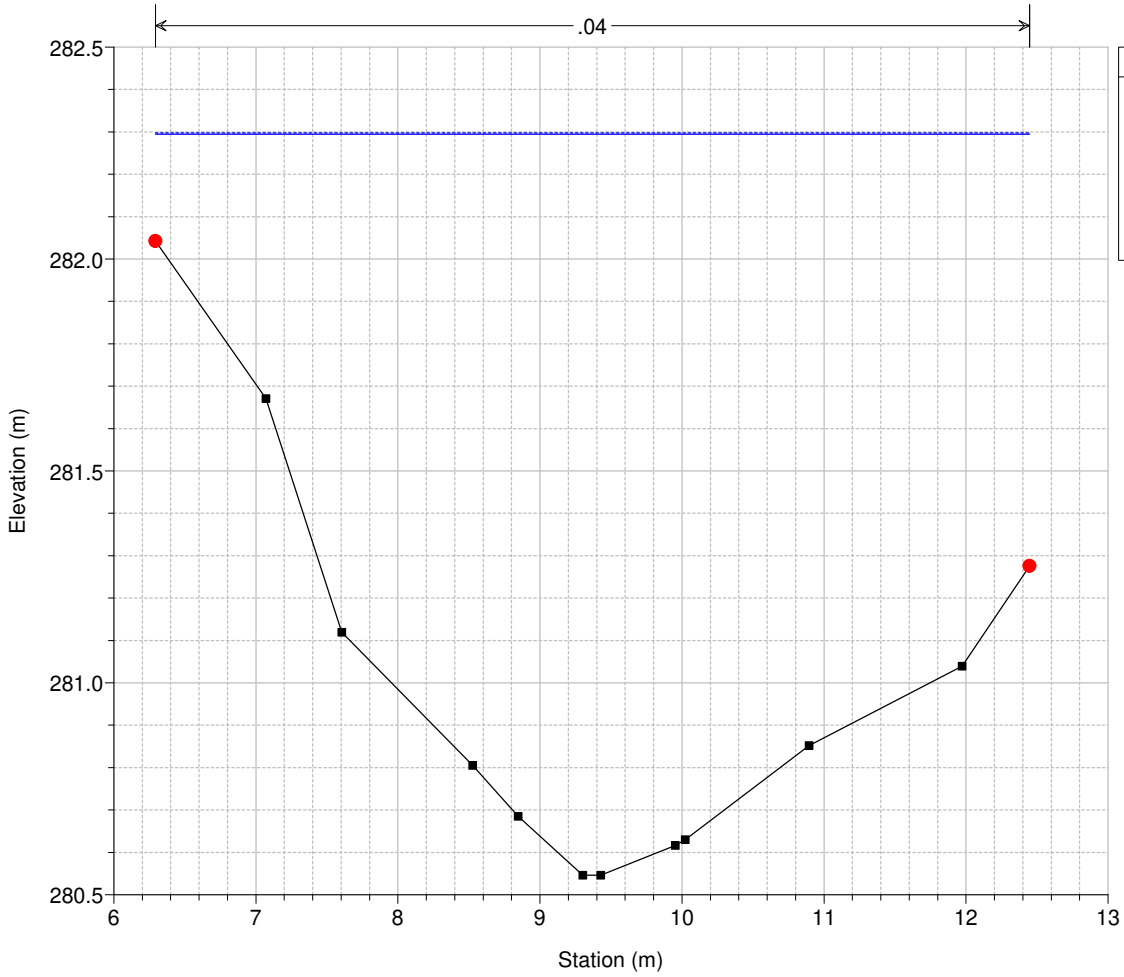
| Legend | |
|-----------------|-------------------------|
| — (dotted blue) | WS Max WS - P2_TR200_1h |
| — (solid blue) | WS Max WS - TR200_1h |
| — (solid black) | Ground |
| ● (red) | Bank Sta |

Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 6554 C10 - (SE_33)

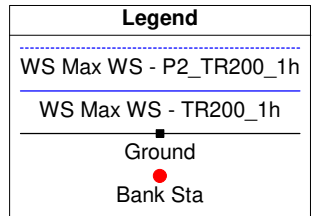
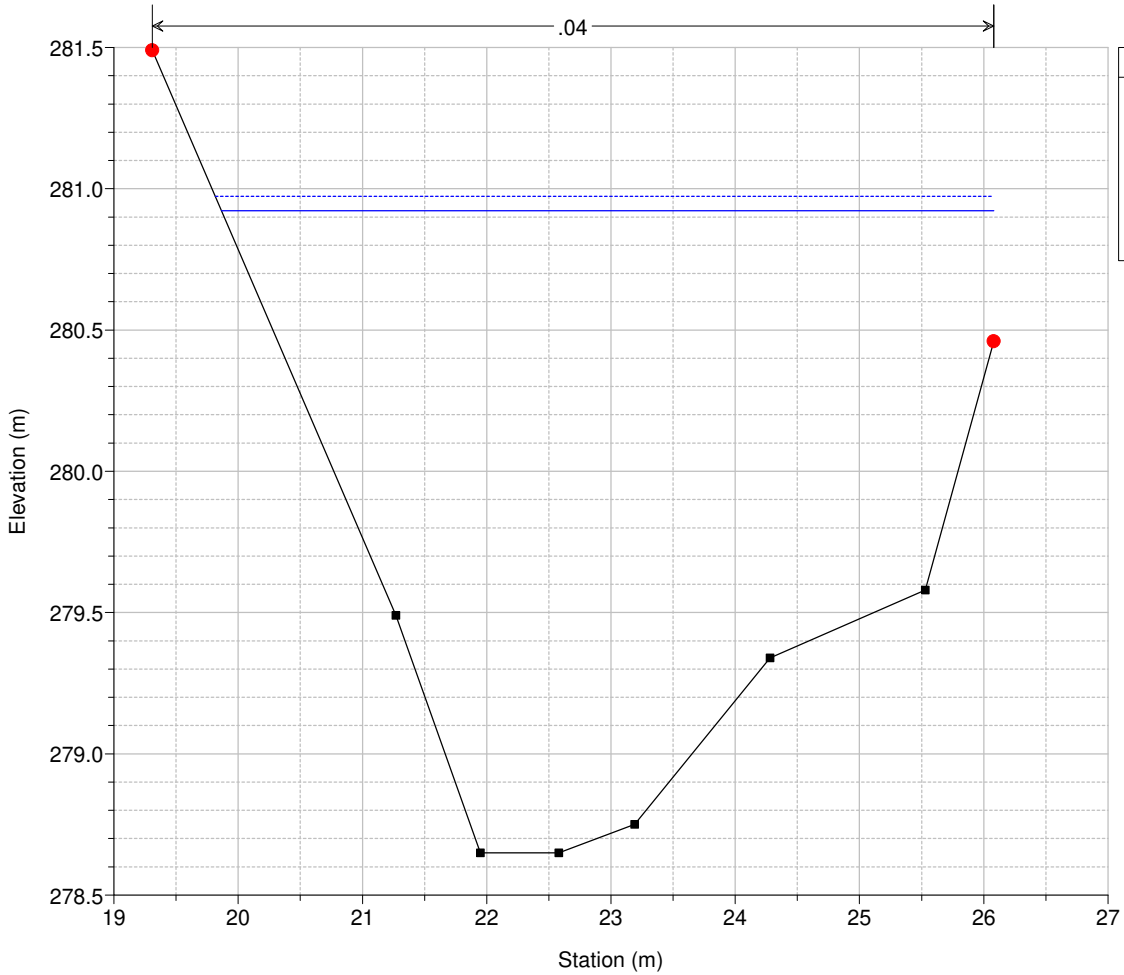


| Legend | |
|-----------------|-------------------------|
| — (dotted blue) | WS Max WS - P2_TR200_1h |
| — (solid blue) | WS Max WS - TR200_1h |
| — (solid black) | Ground |
| ● (red) | Bank Sta |

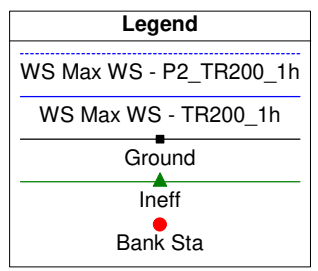
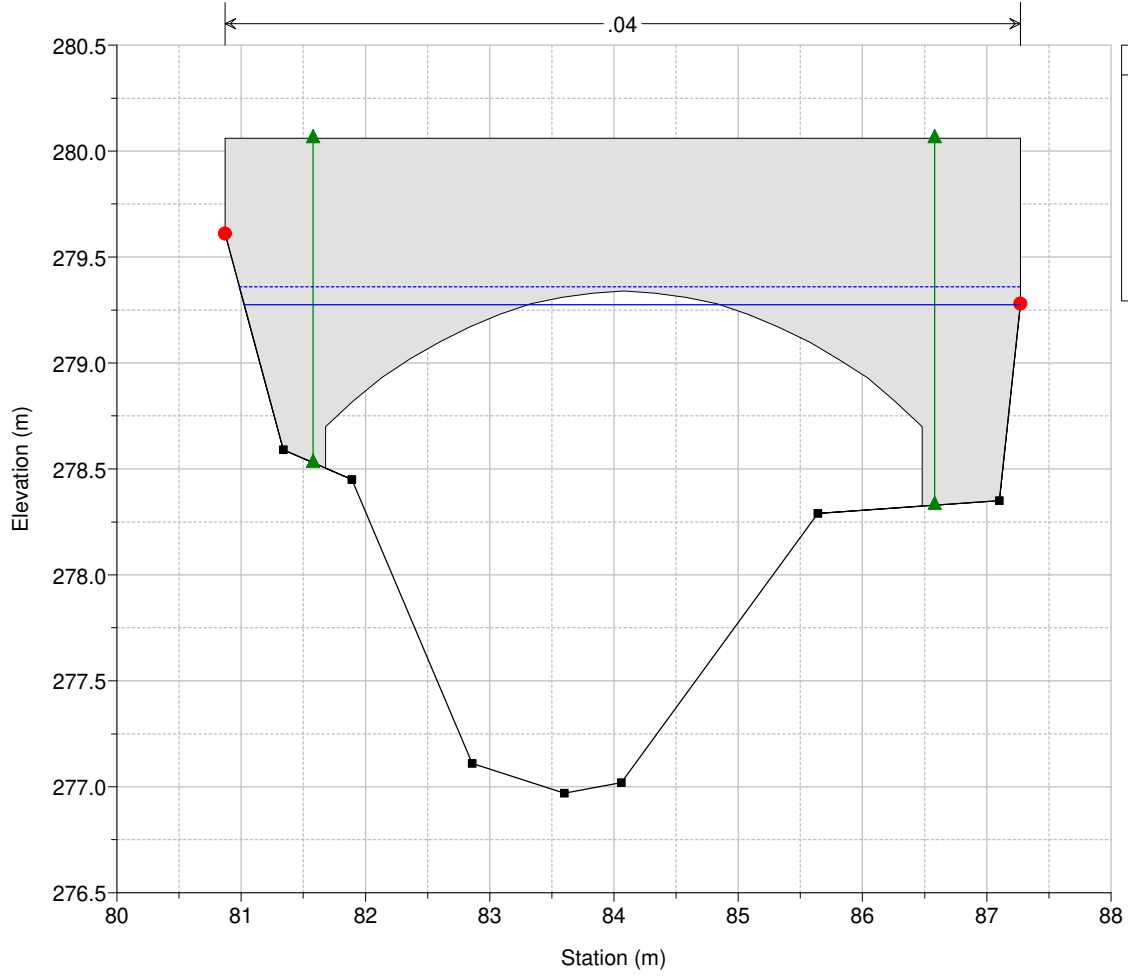
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 6542.20



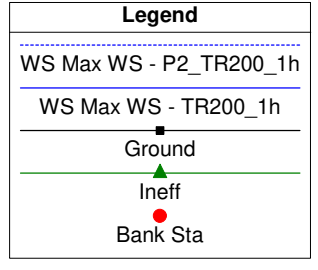
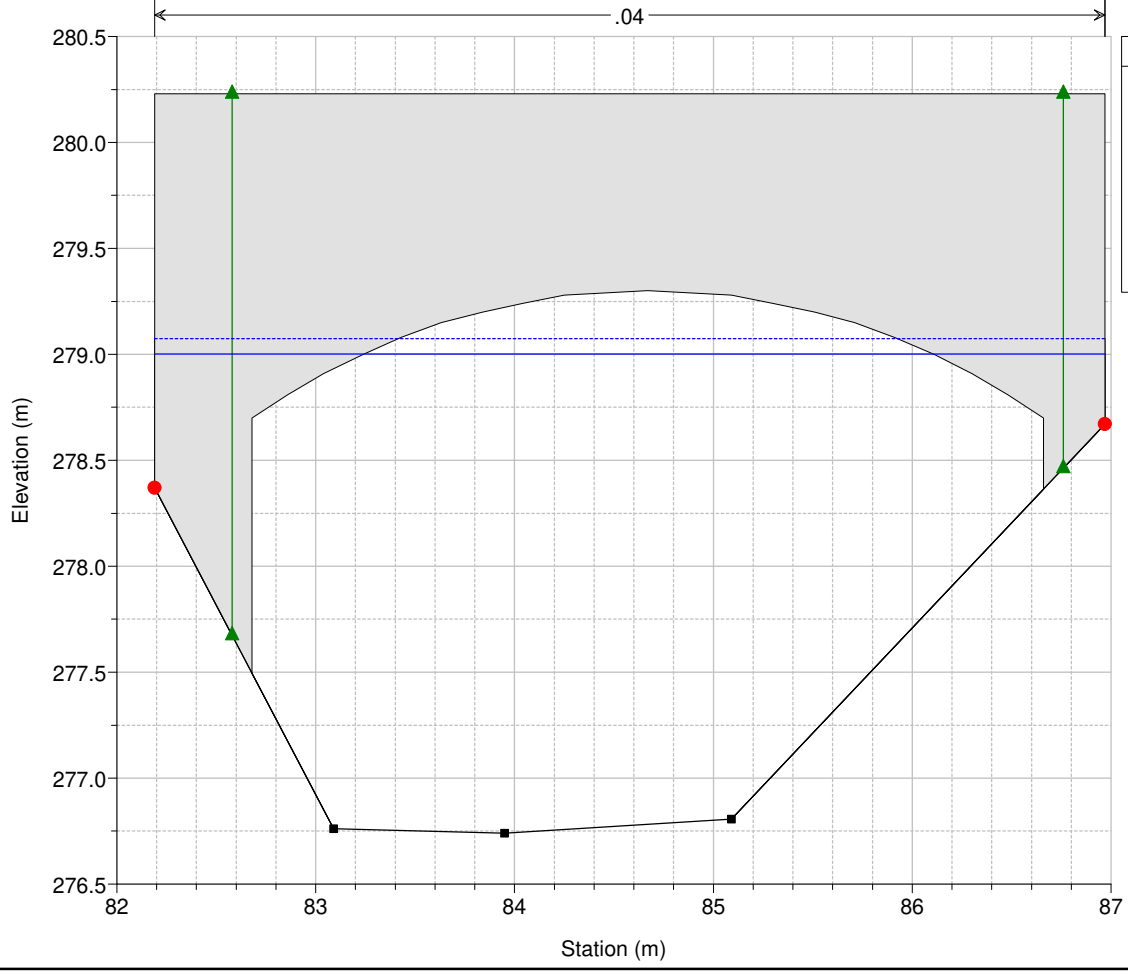
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 6491 C11 - (SE_32)



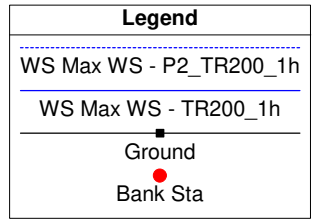
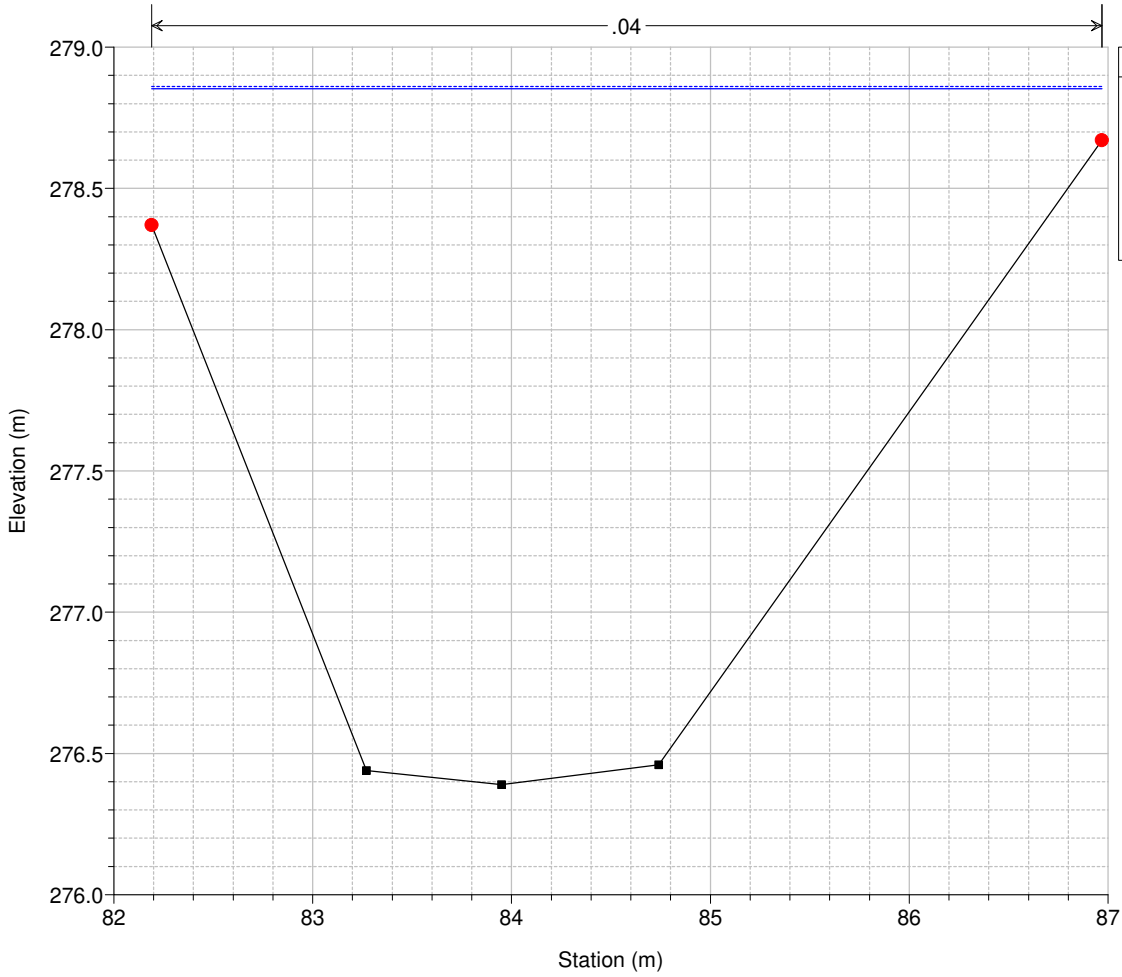
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 6423 C12 - (SE_31)



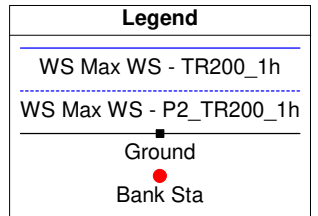
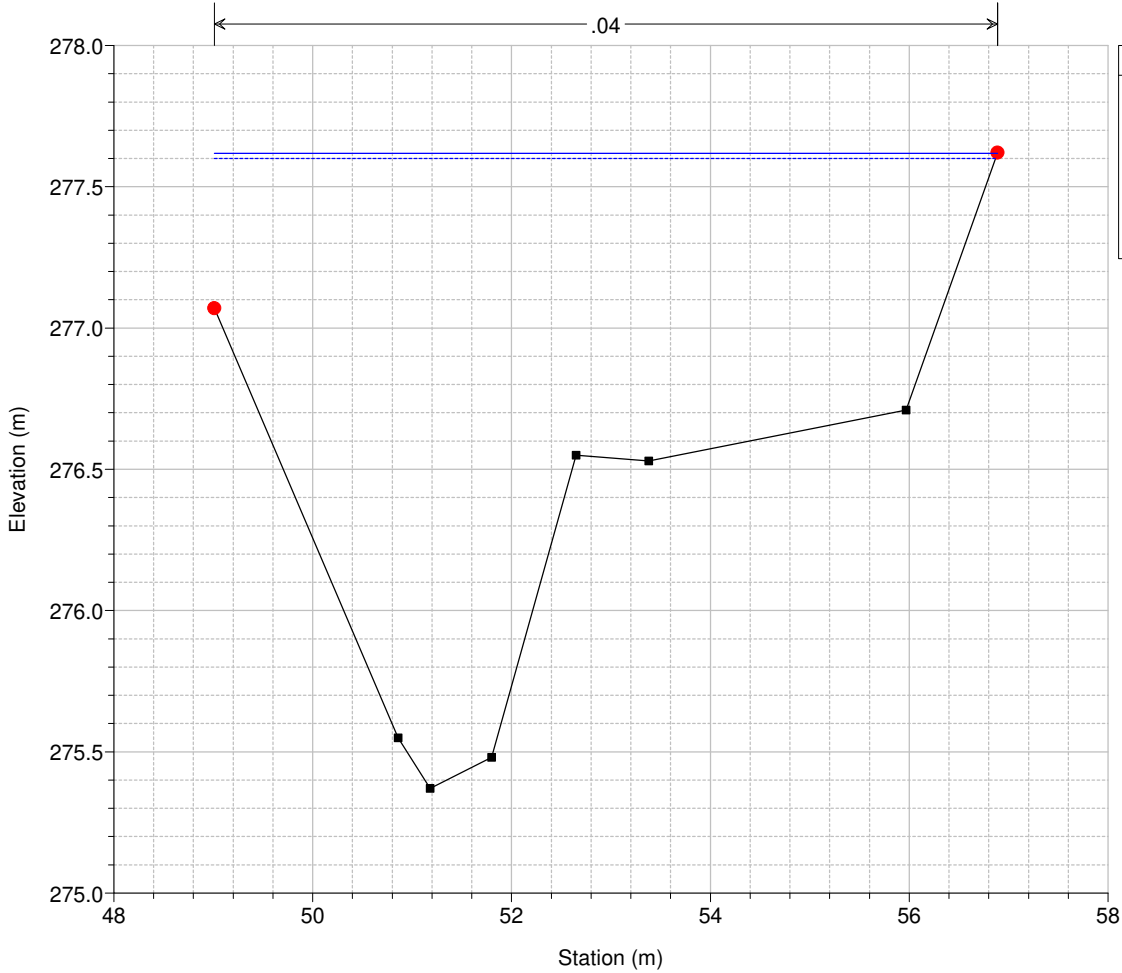
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 6410 C13 - (SE_30), copiata a 0.1m dal ponte, alzato fondo



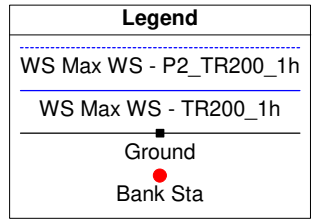
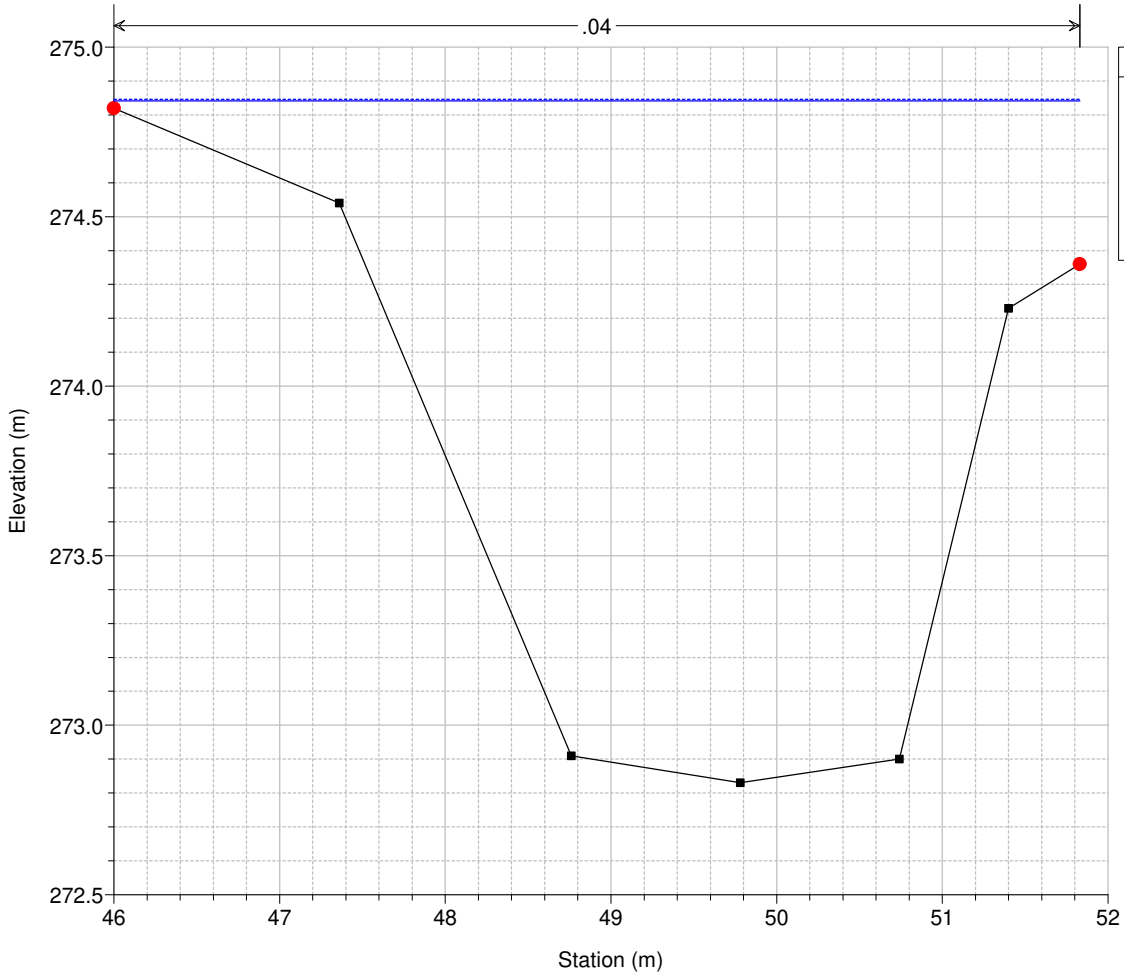
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 6407 C13 - (SE_30)



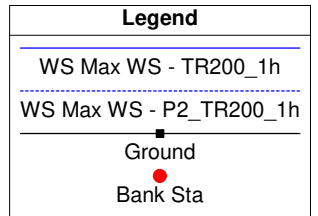
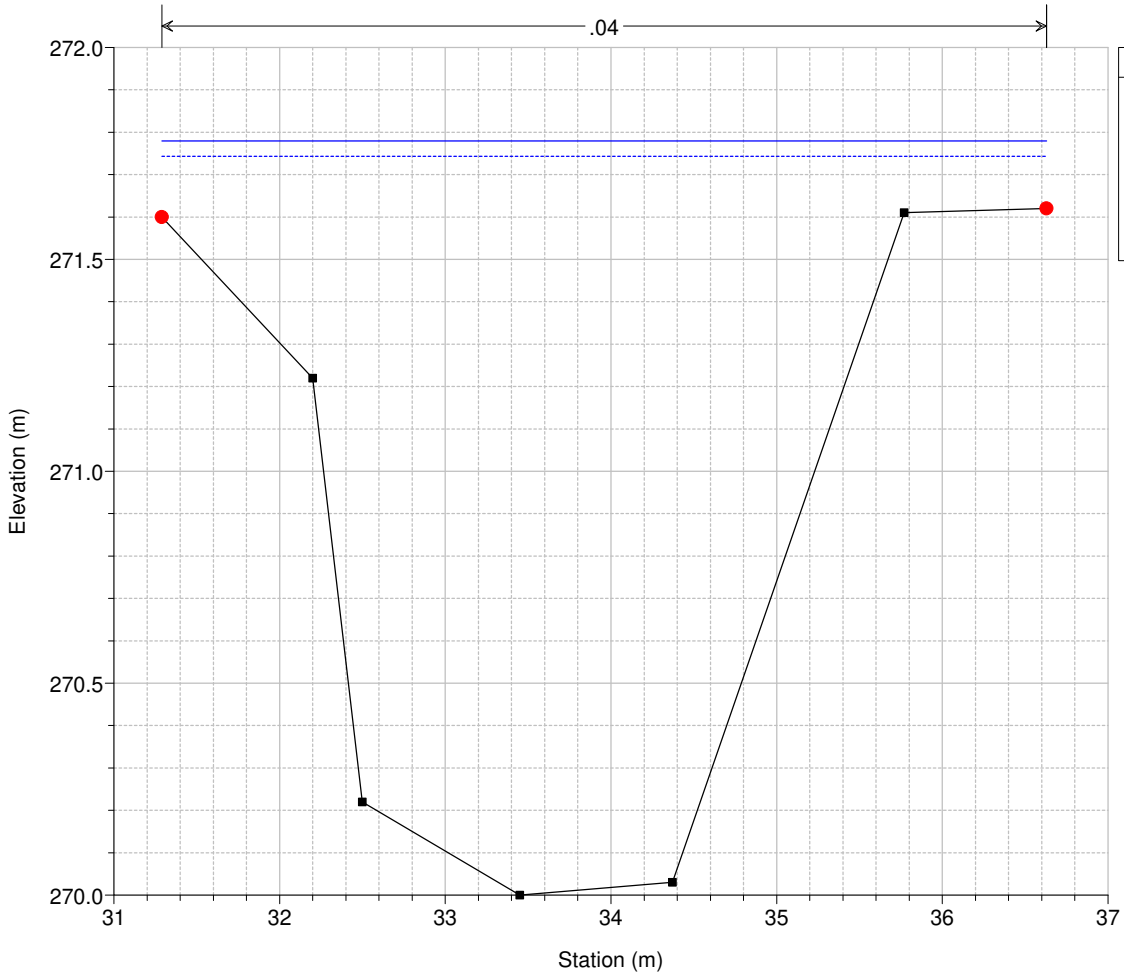
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 6332 C14 - (SE_29)



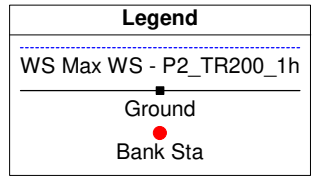
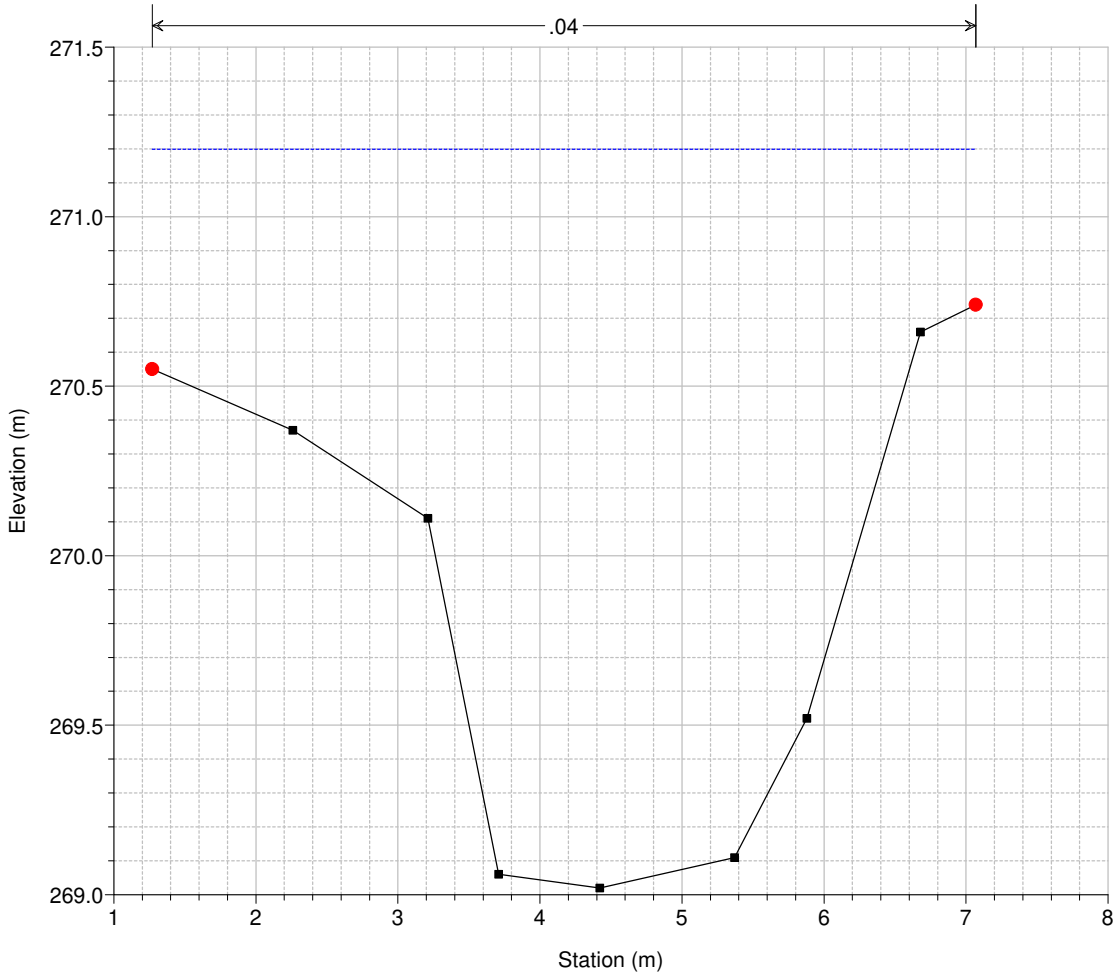
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 6160 C15 - (SE_28)



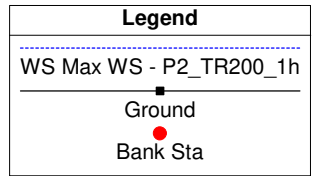
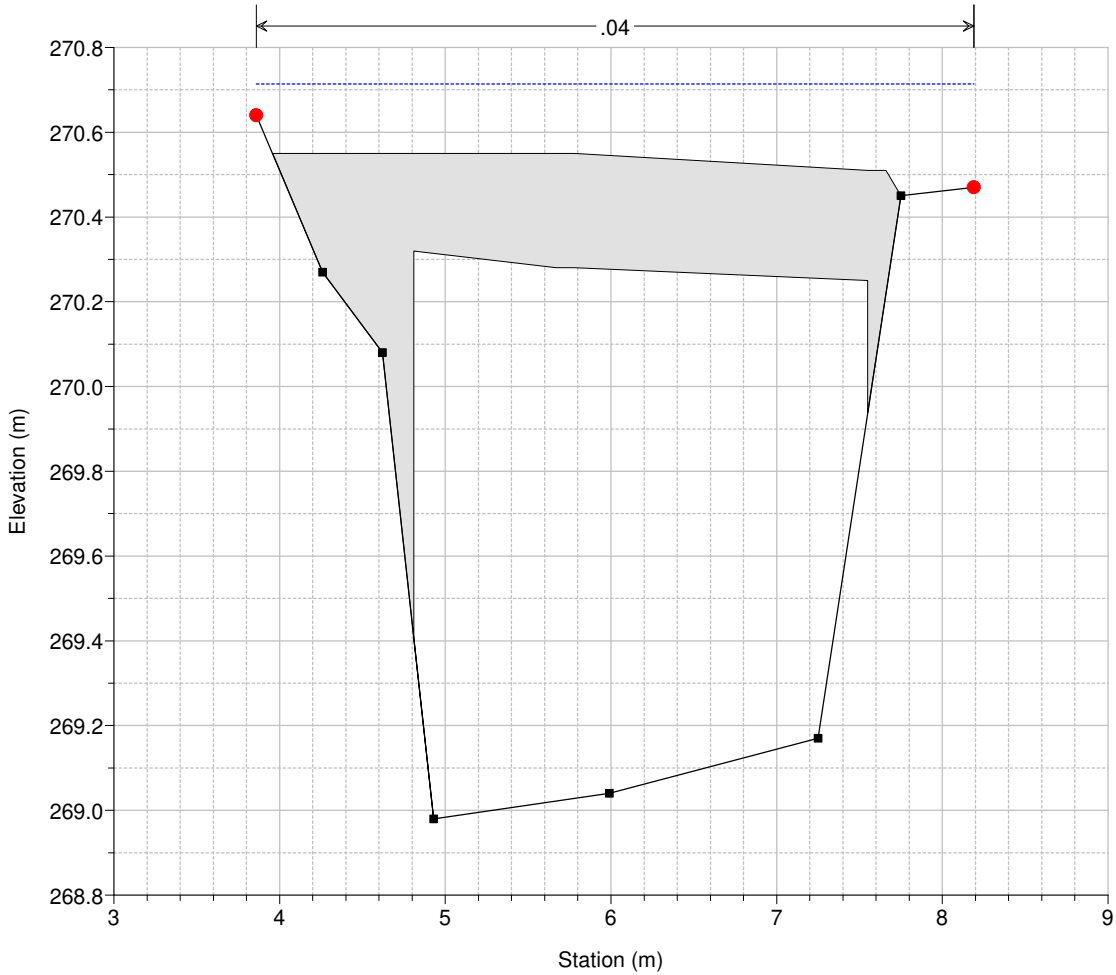
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5971 C16 - (SE_27)



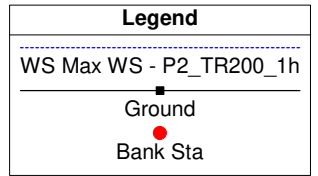
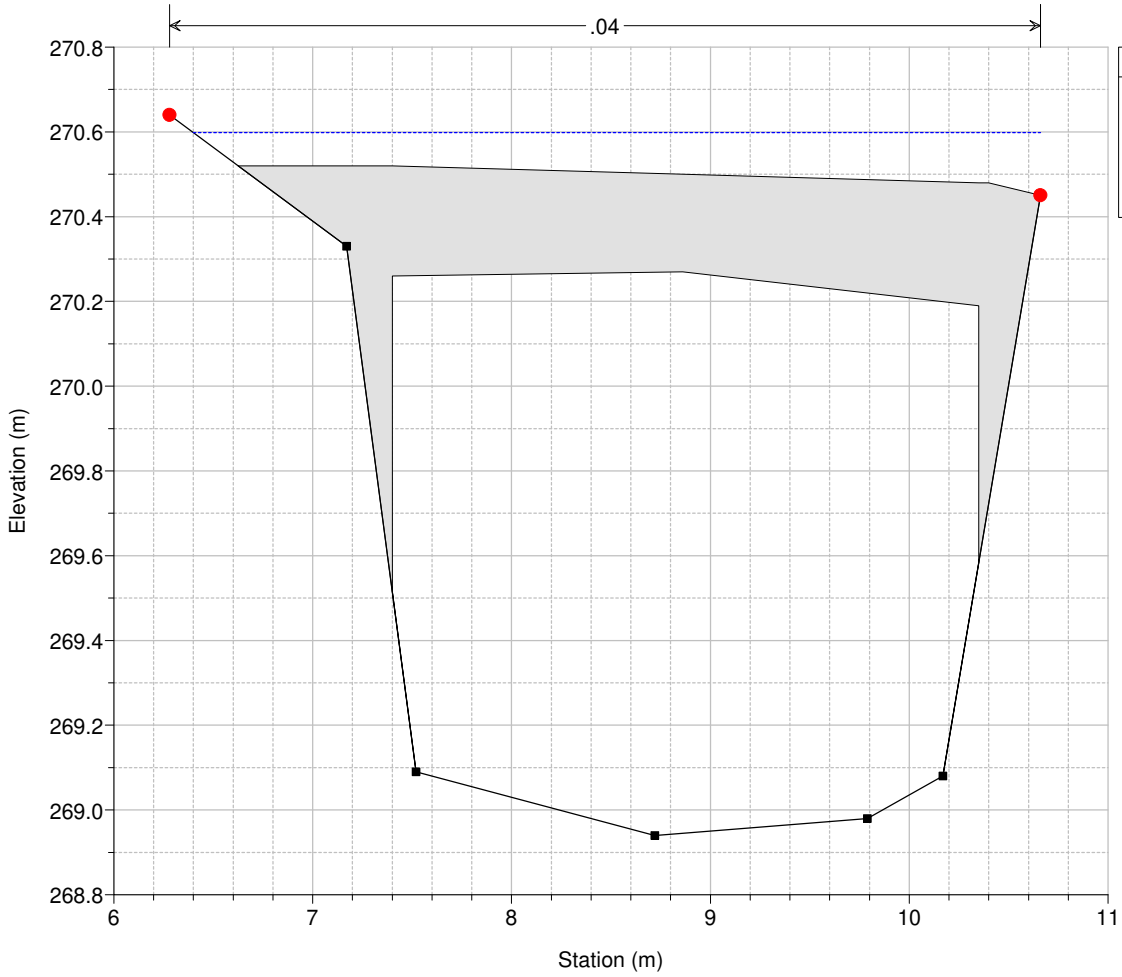
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5904 ril 2022



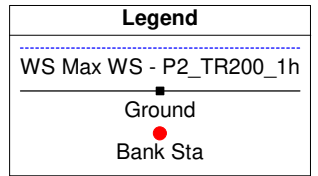
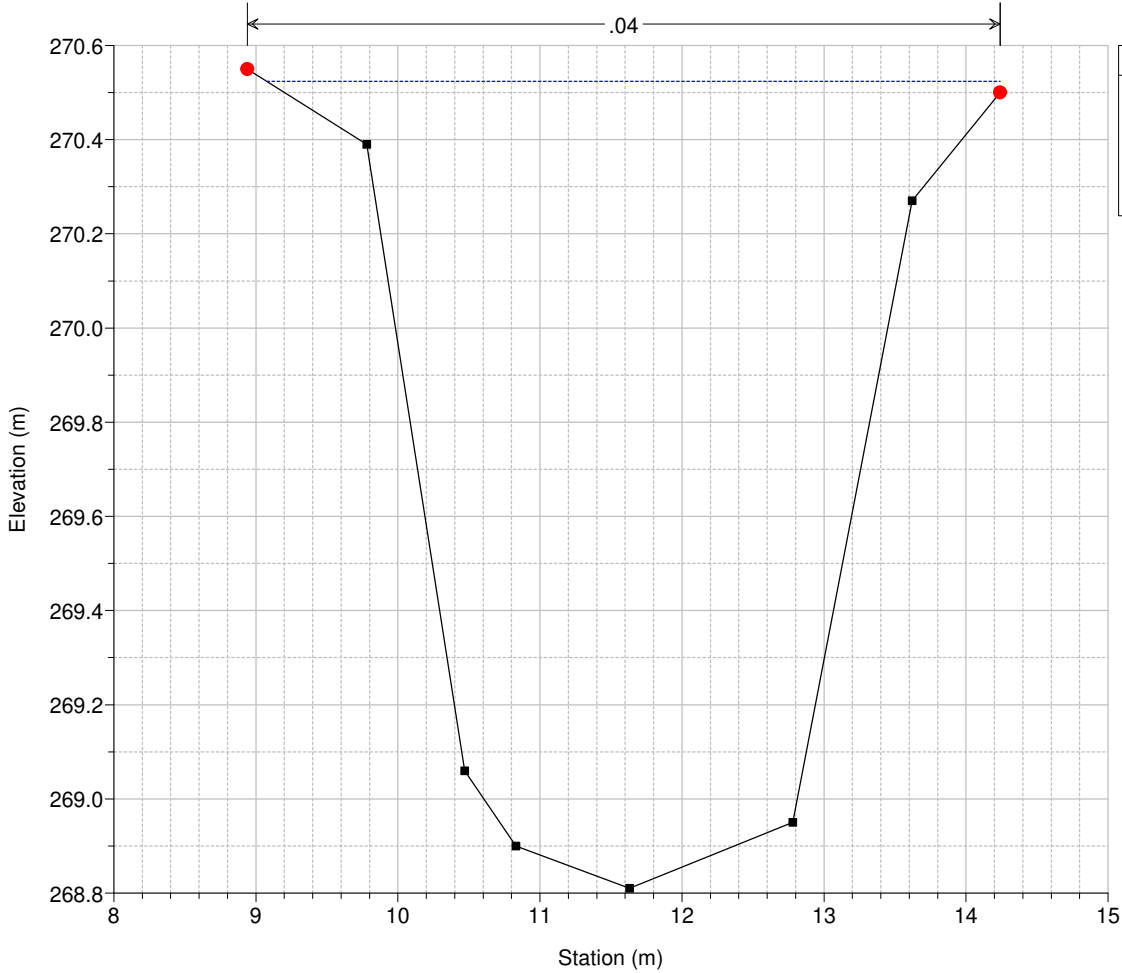
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5898 ril 2022



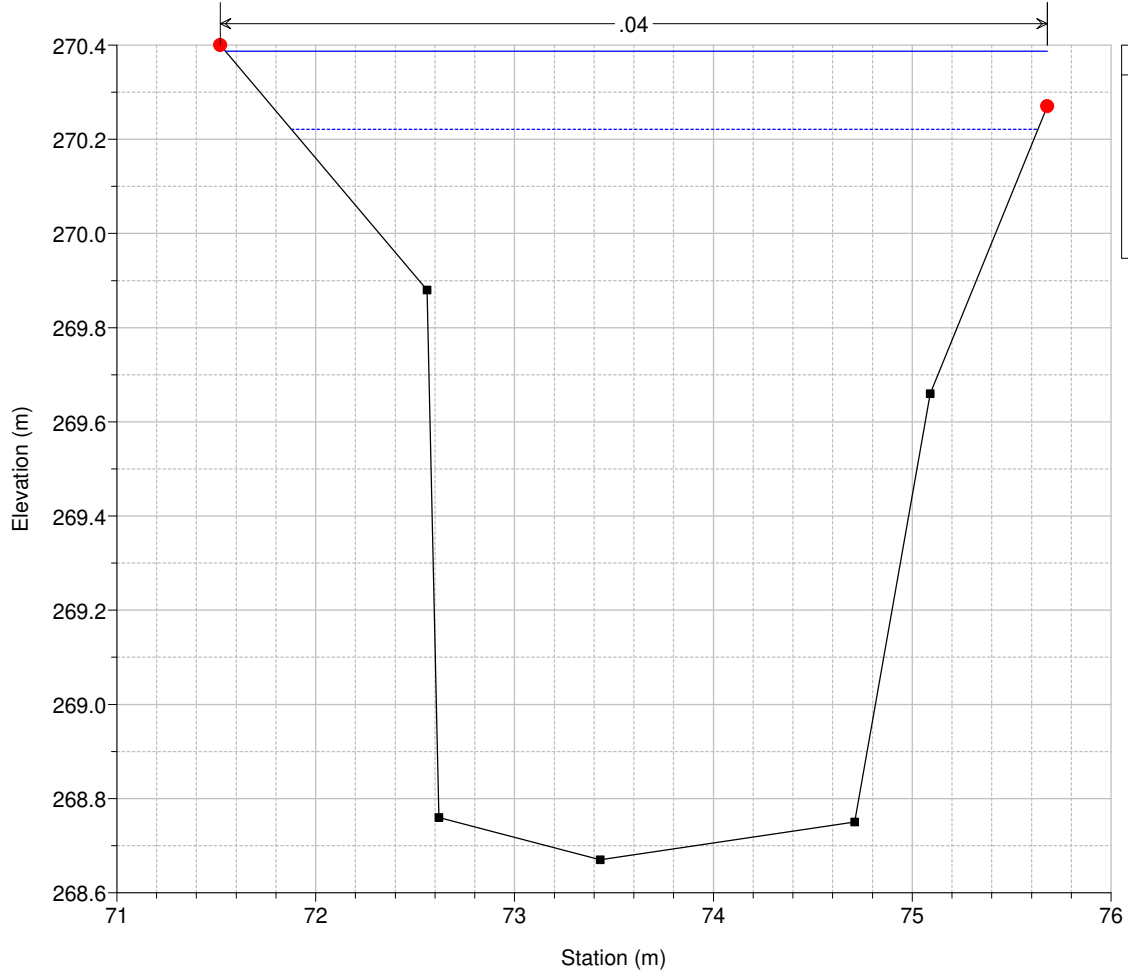
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5893 ril 2022



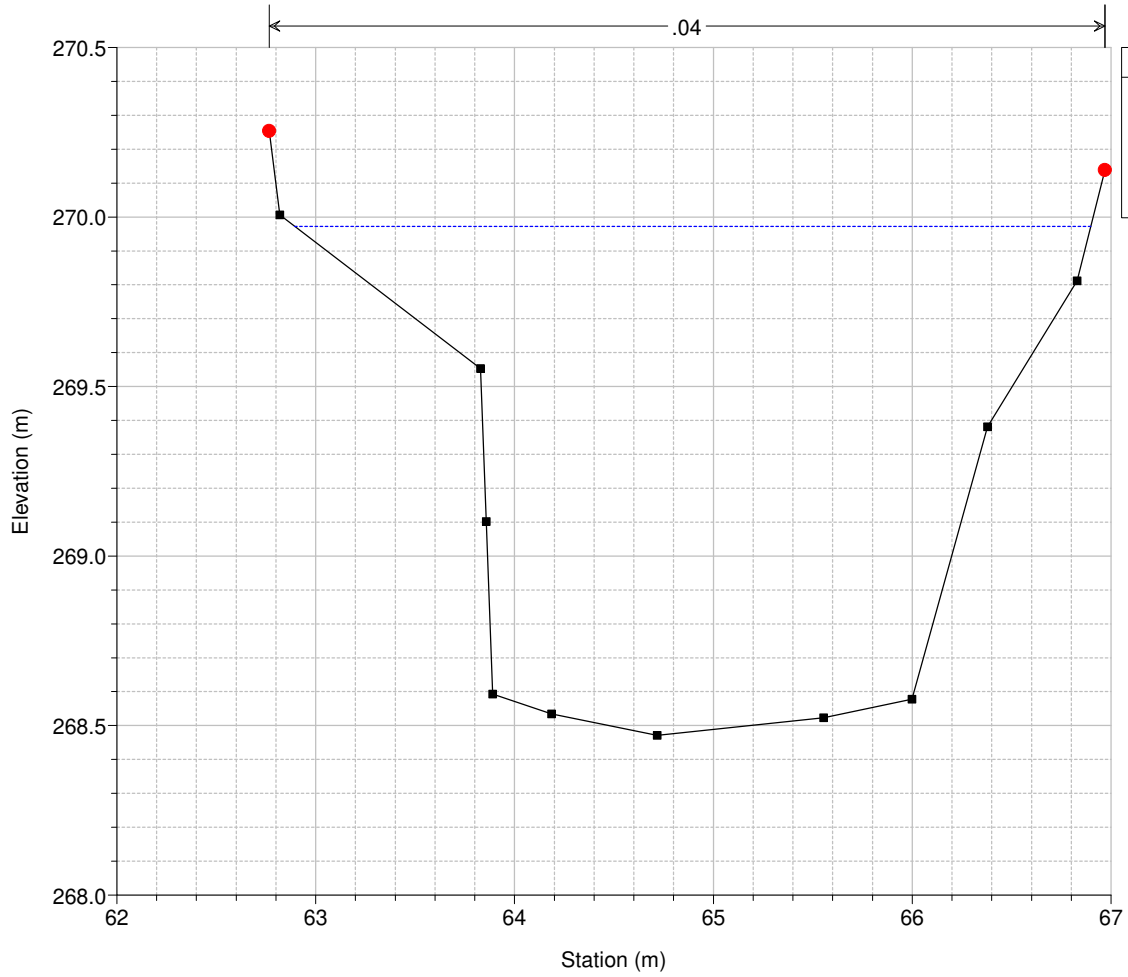
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5882 ril 2022



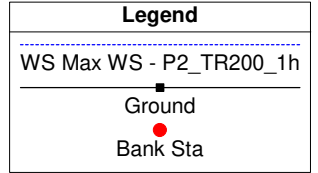
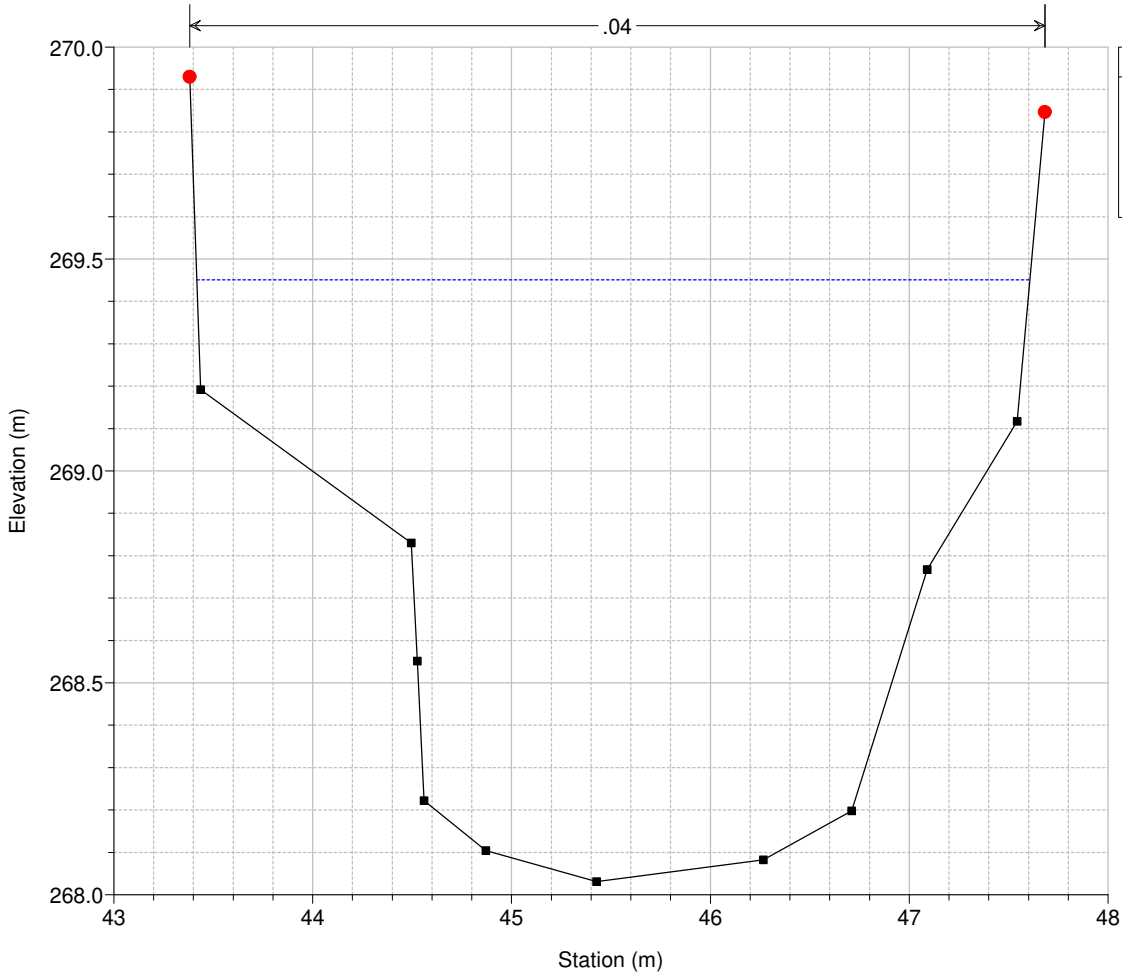
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossatone Reach = Sellina-Fossatone RS = 5859 C17 - (SE_26)



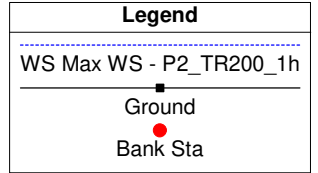
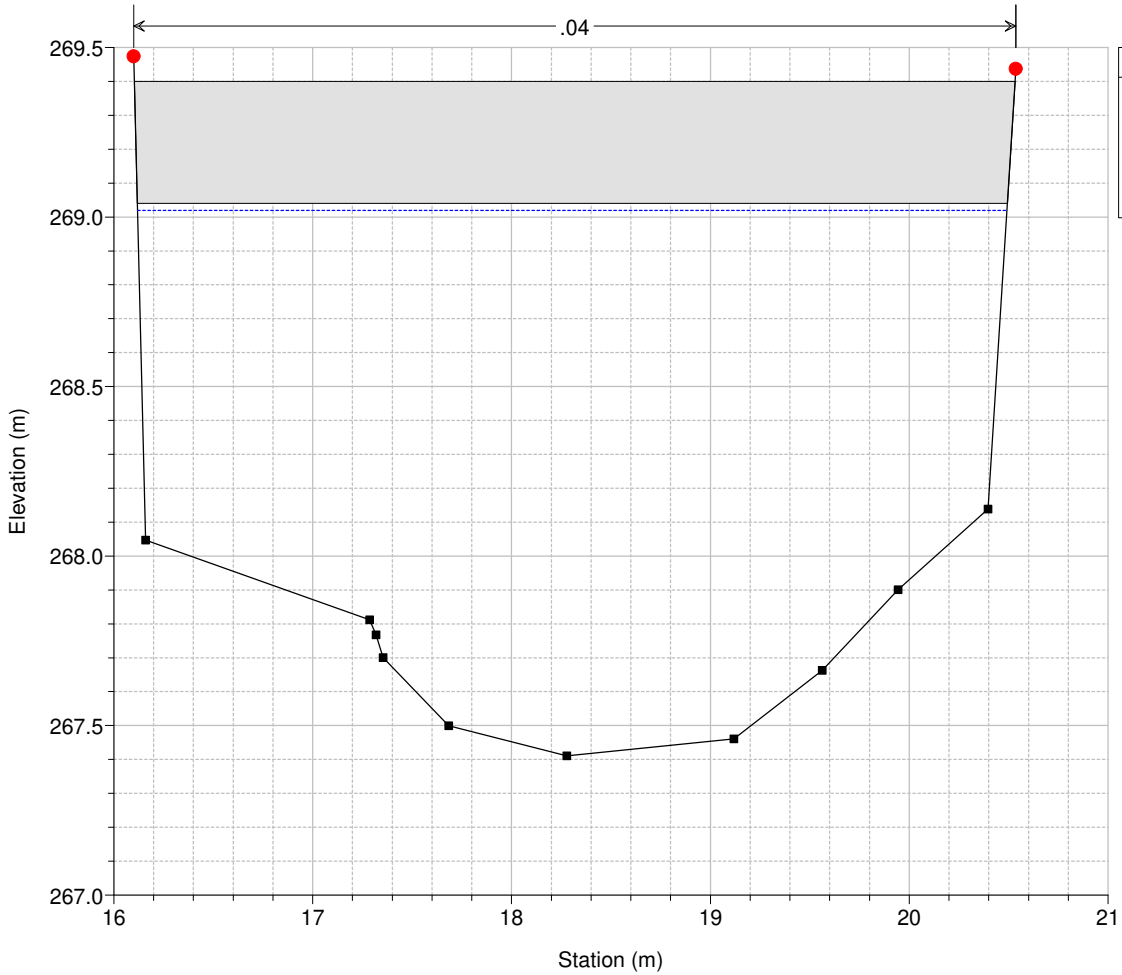
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossatone Reach = Sellina-Fossatone RS = 5844.81 int



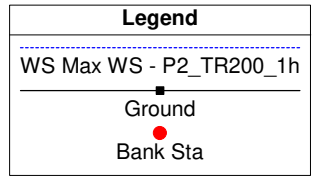
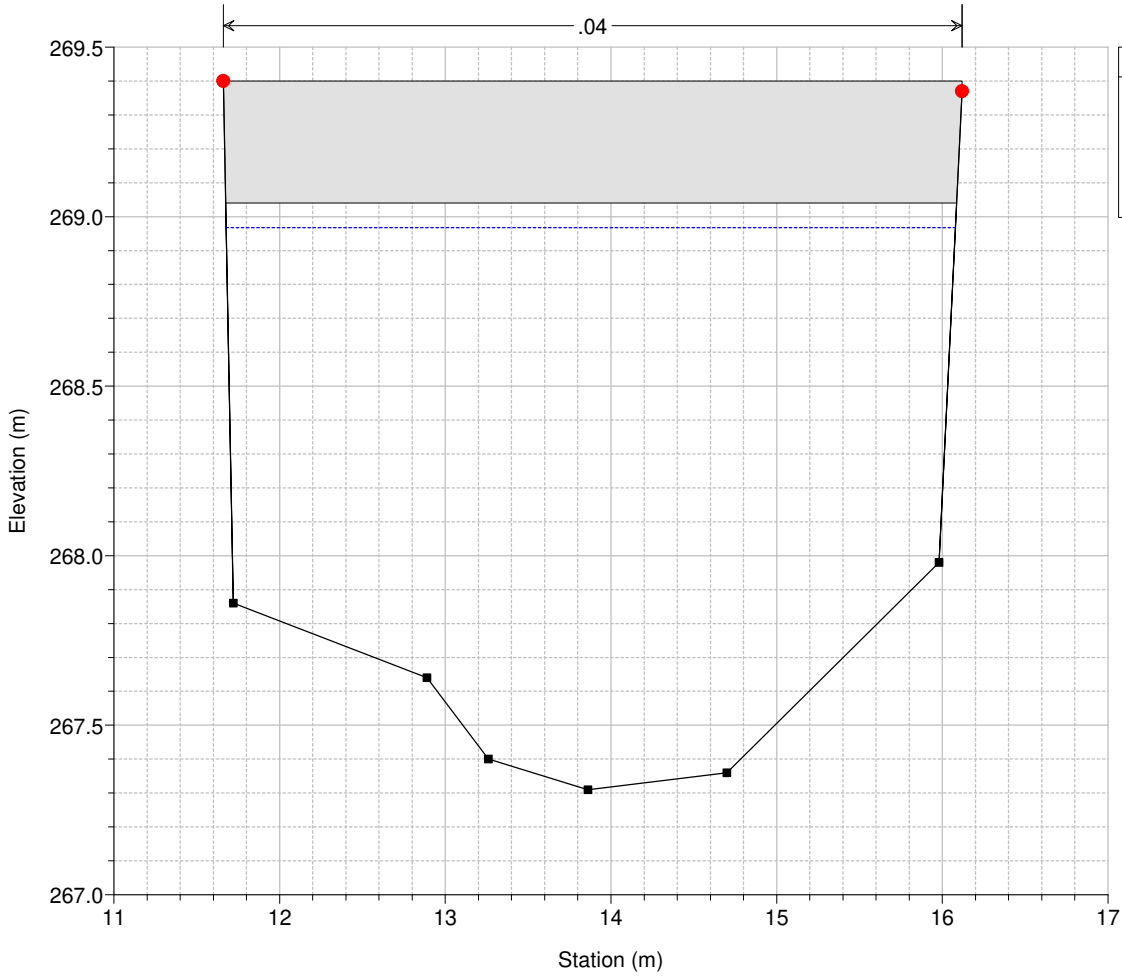
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5813.40 int



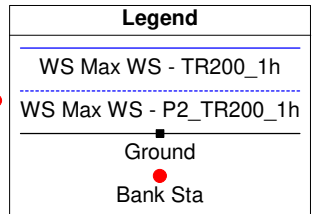
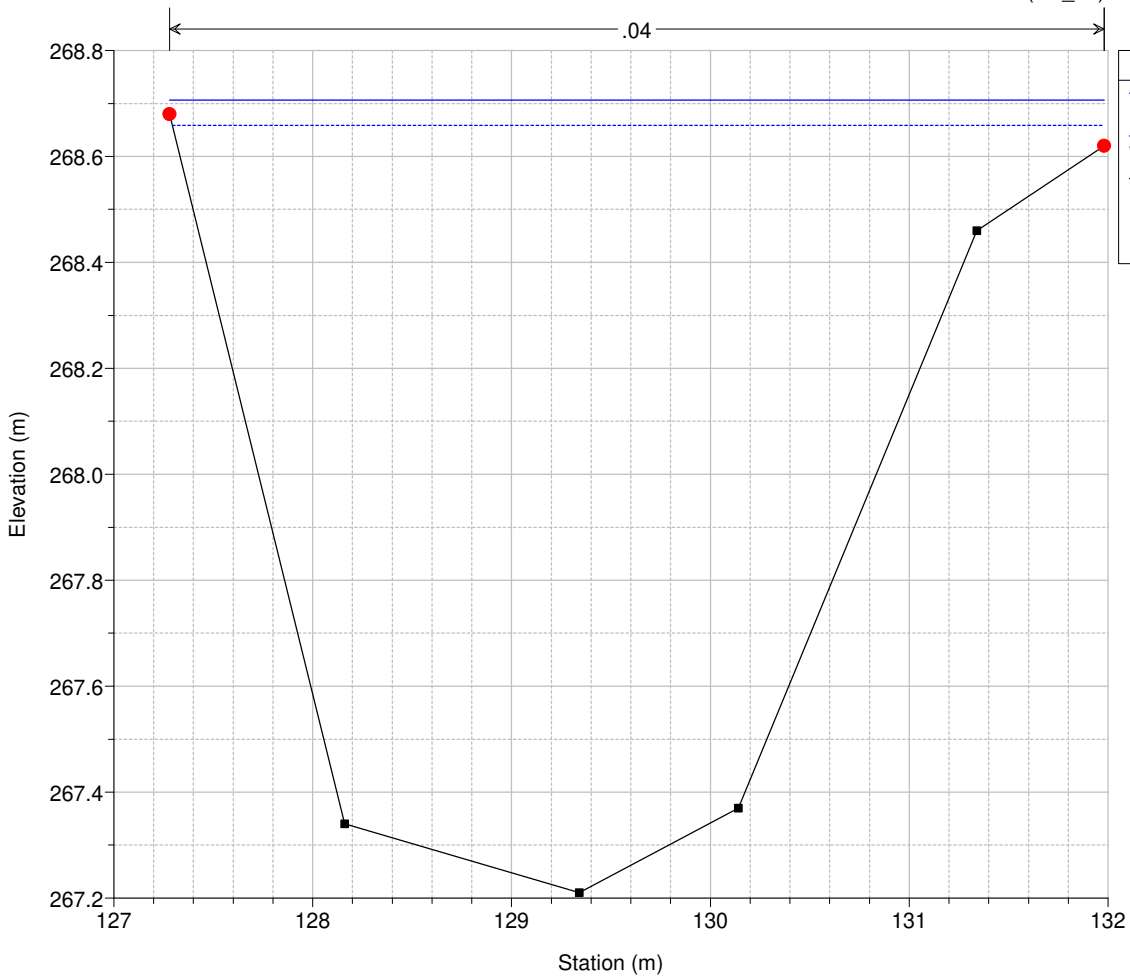
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5770 int



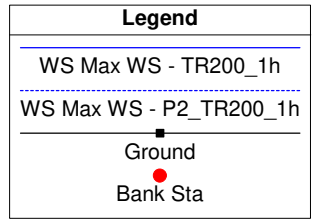
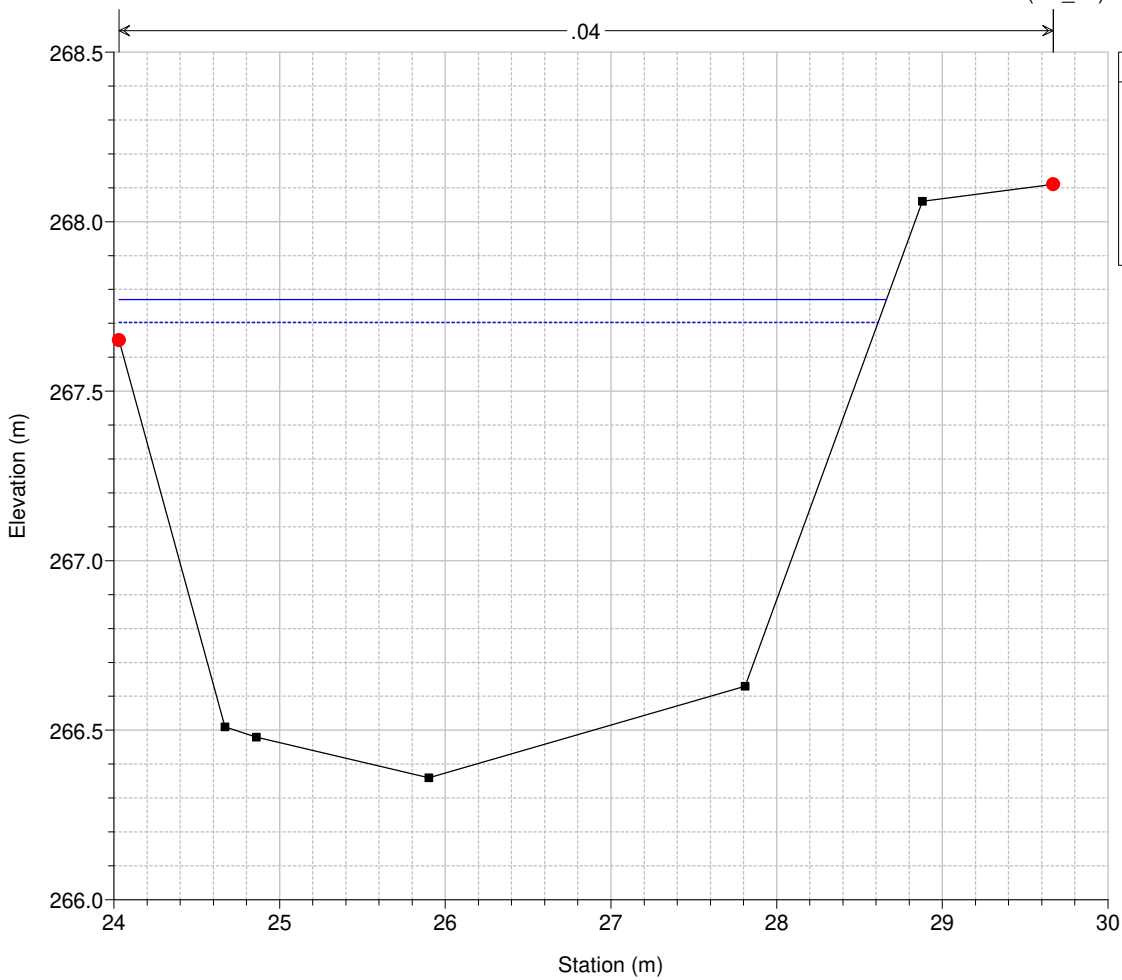
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5762 ril 2022



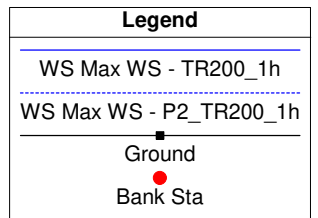
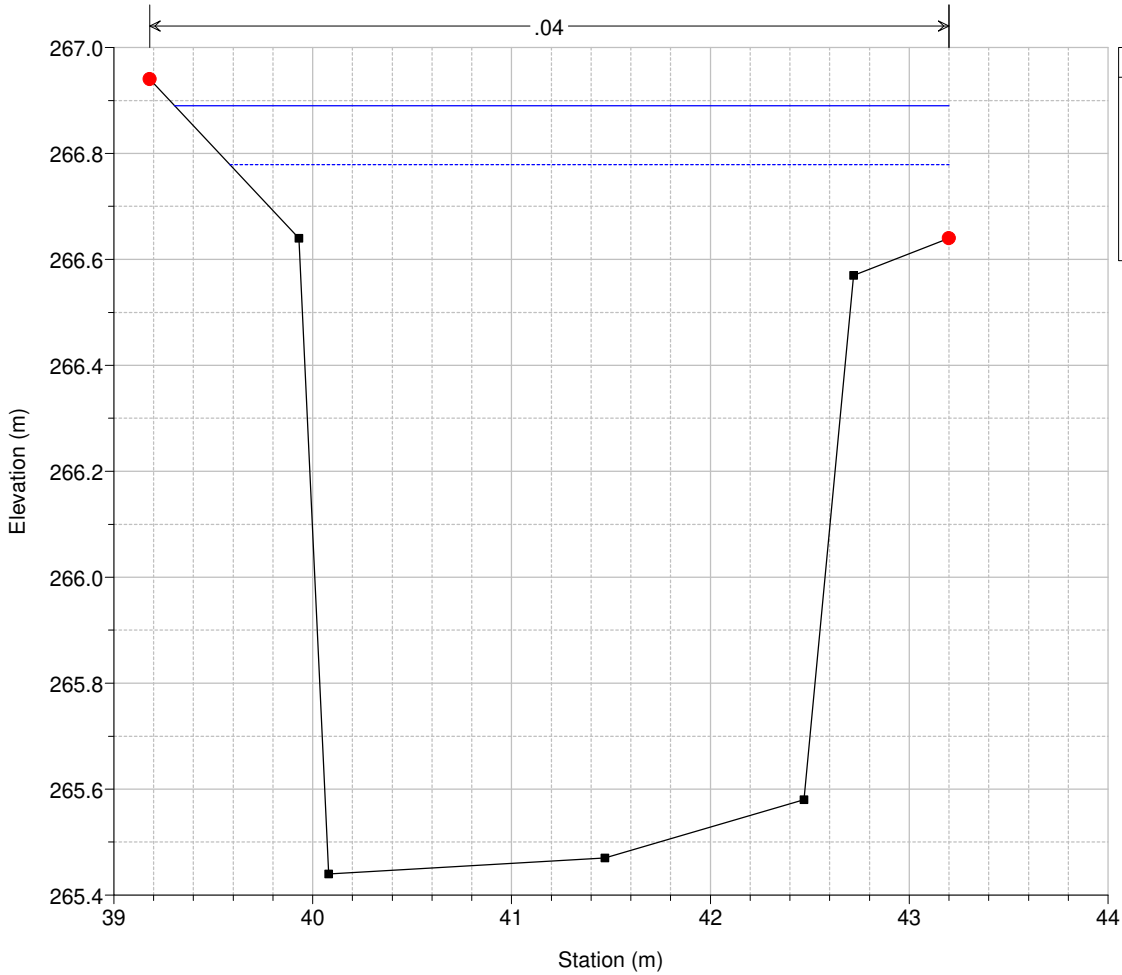
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5732 C18 - (SE_25)

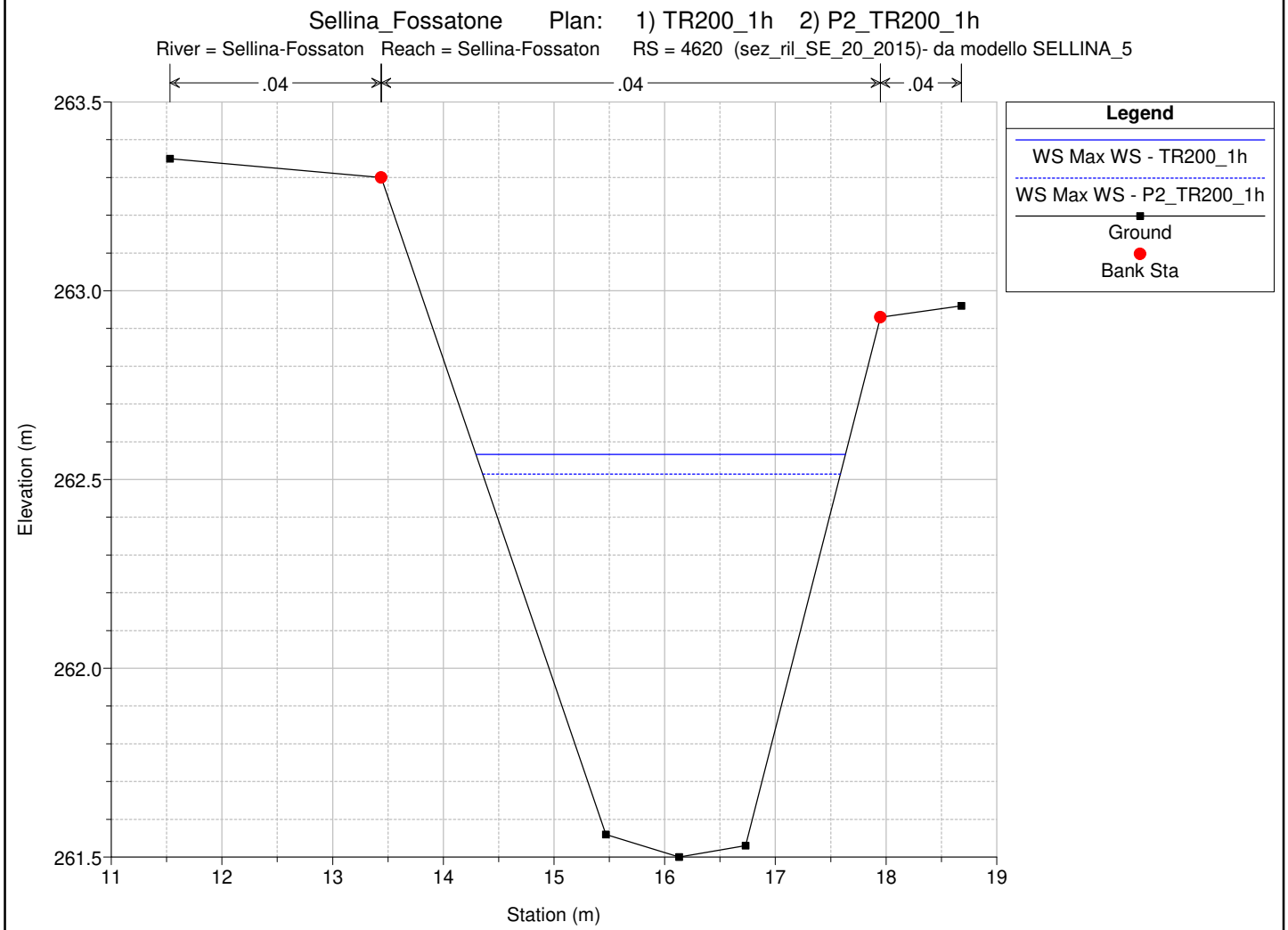
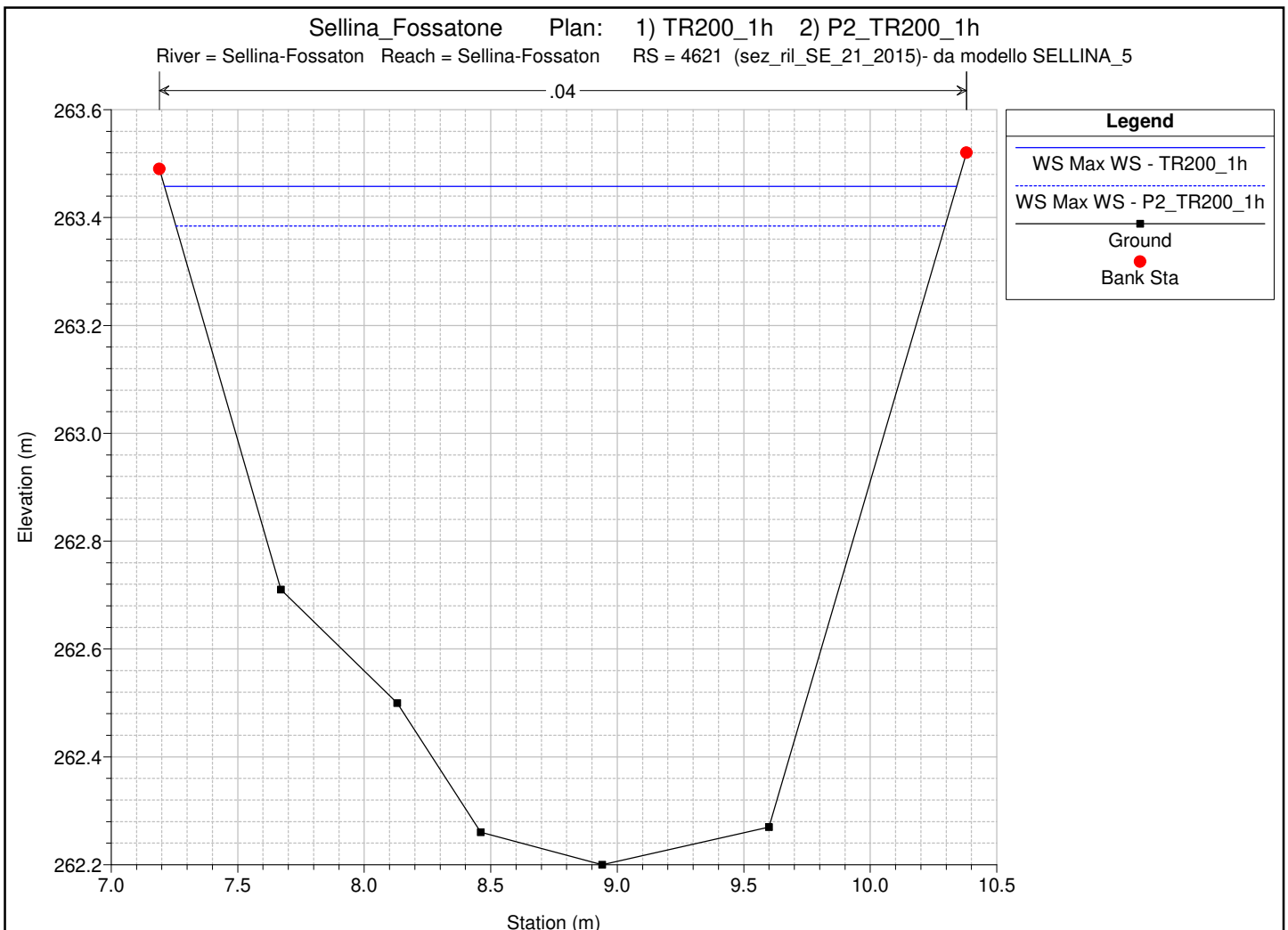


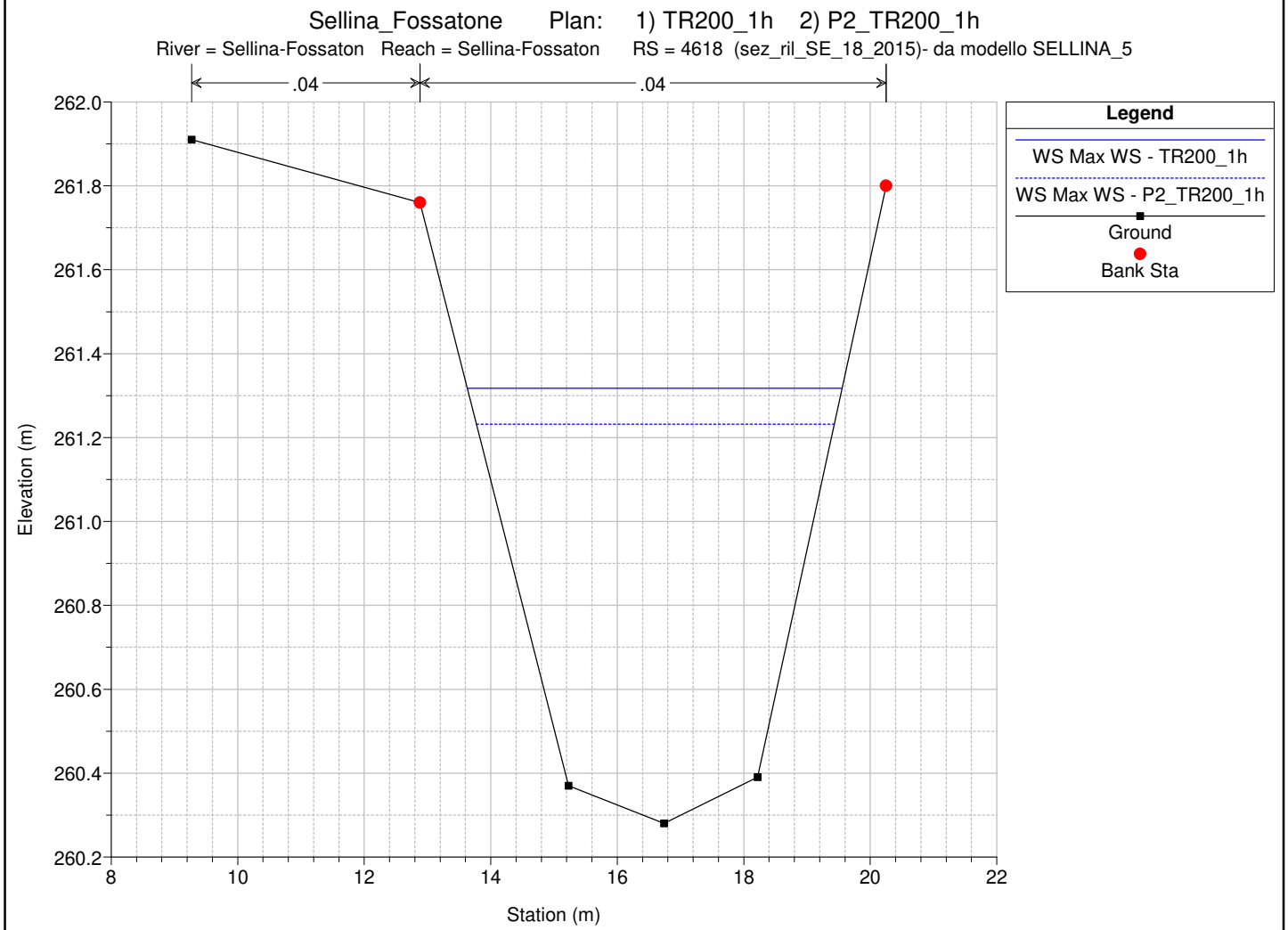
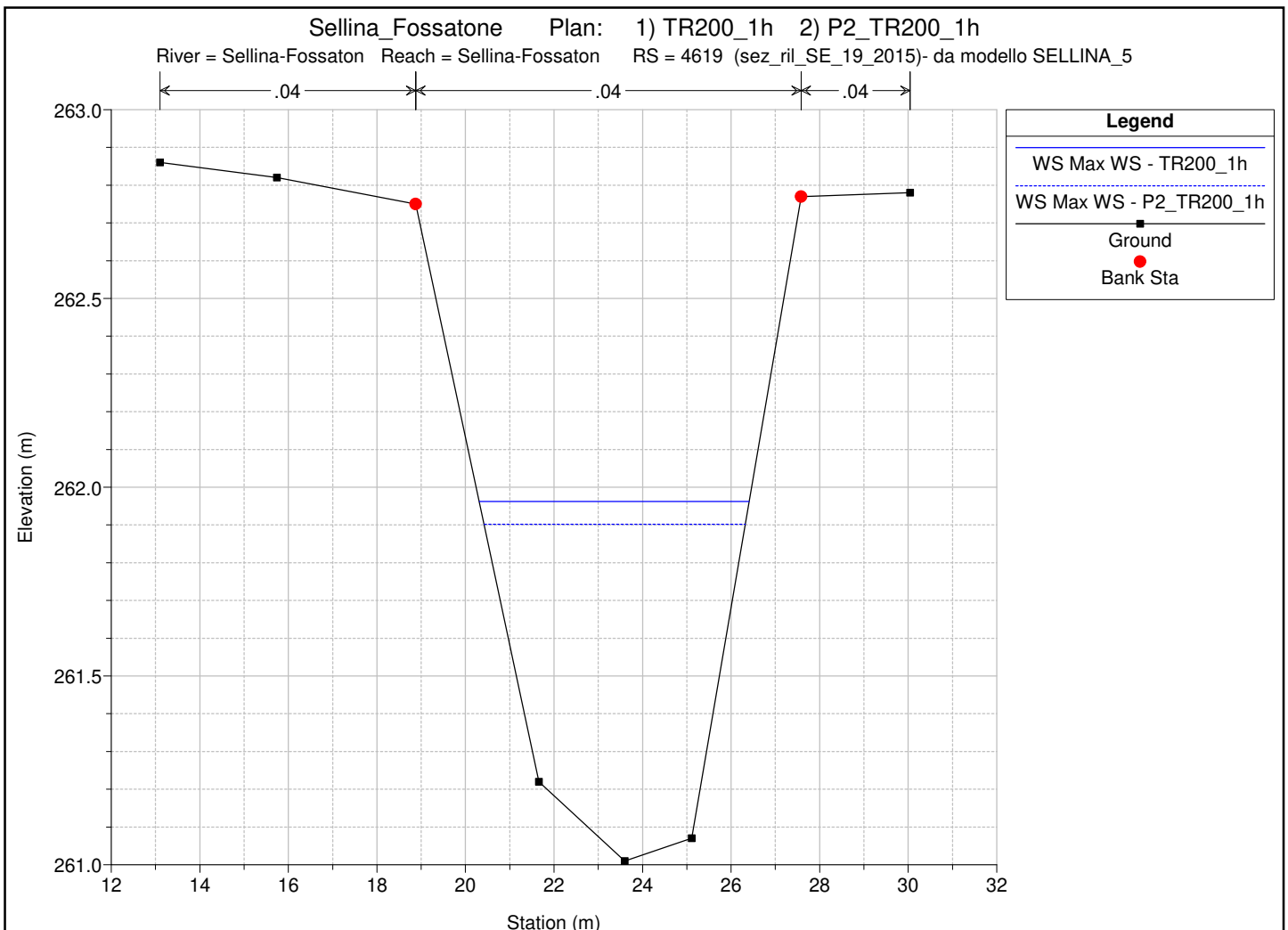
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5650 C19 - (SE_24)

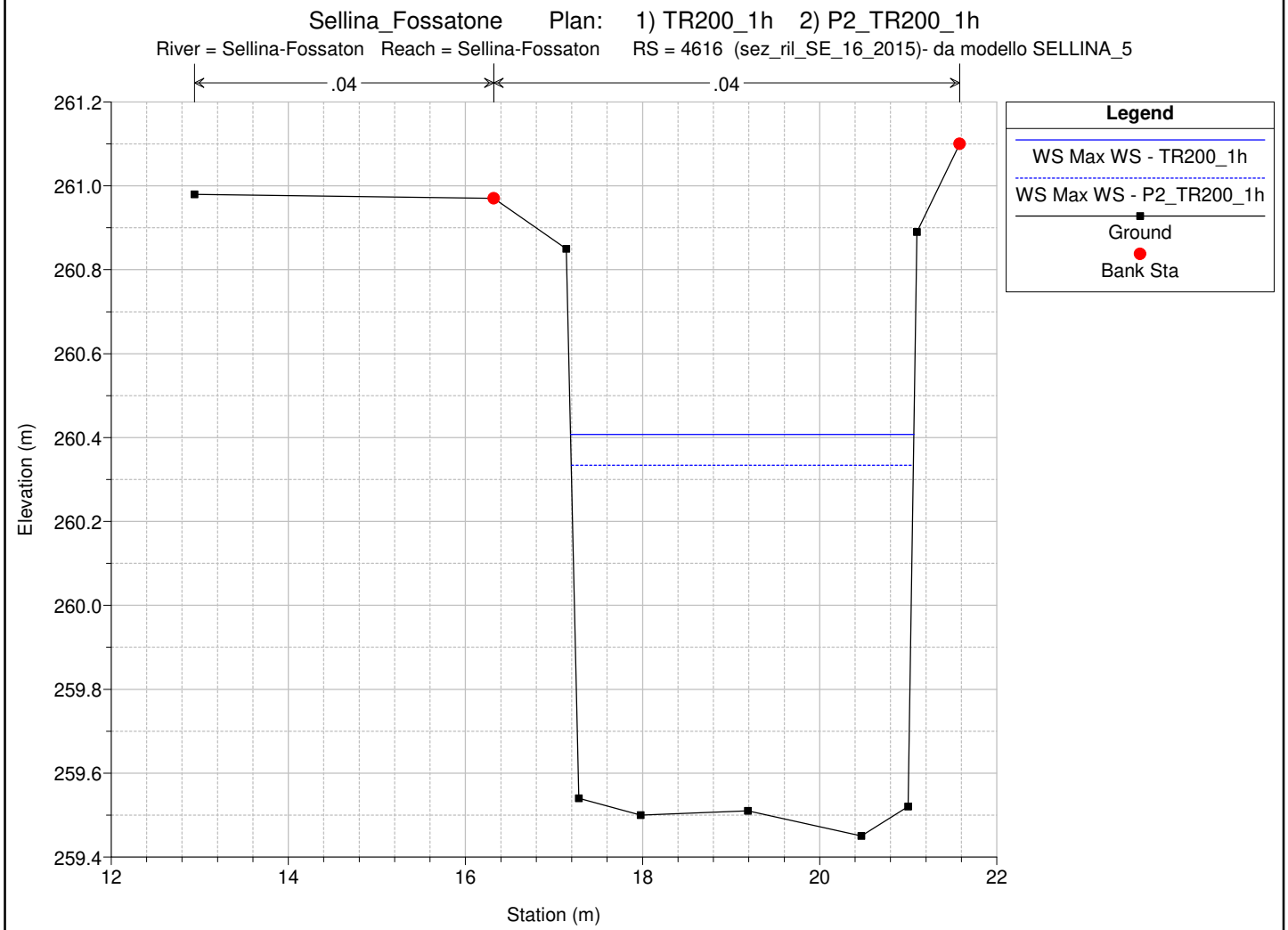
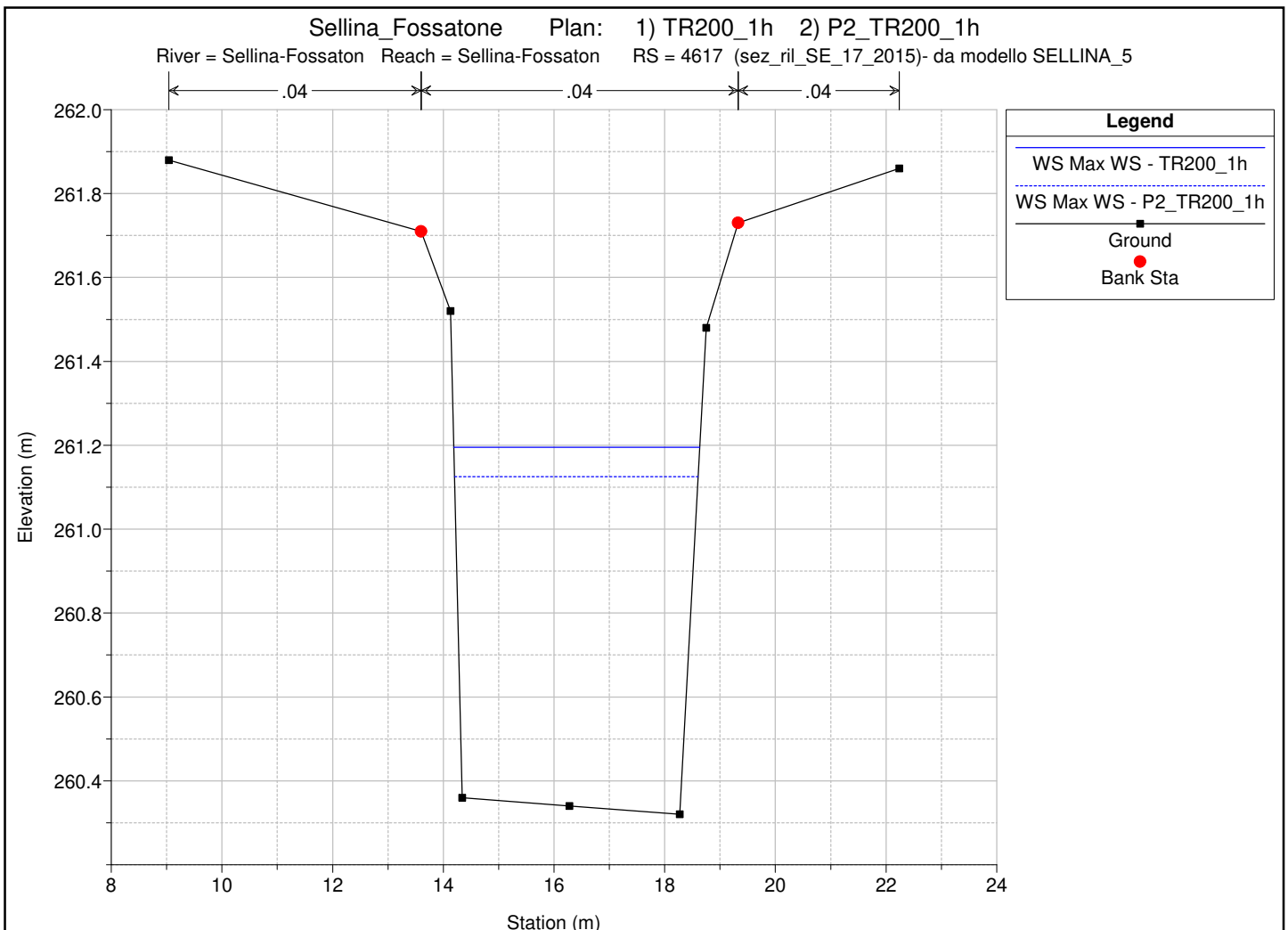


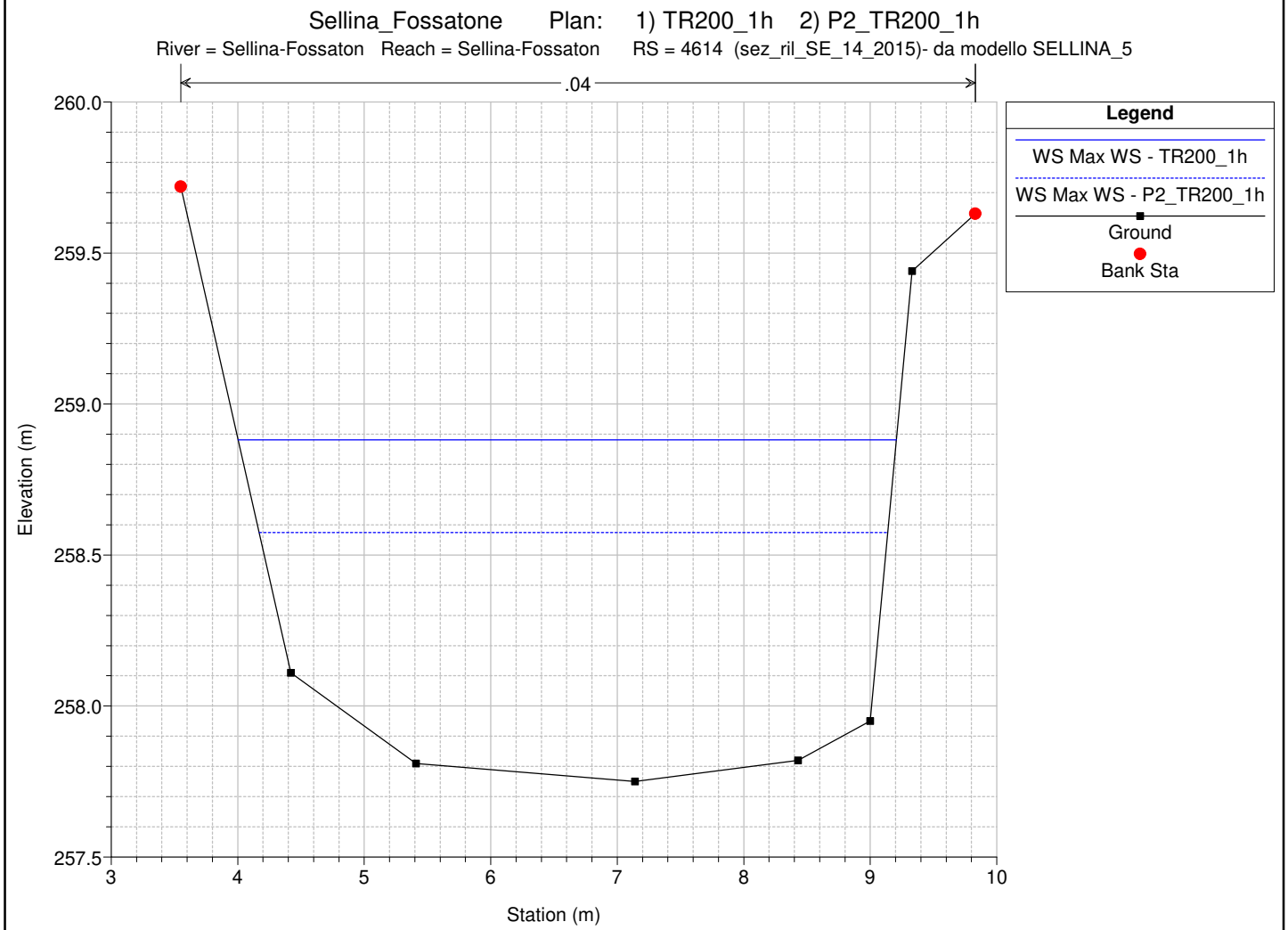
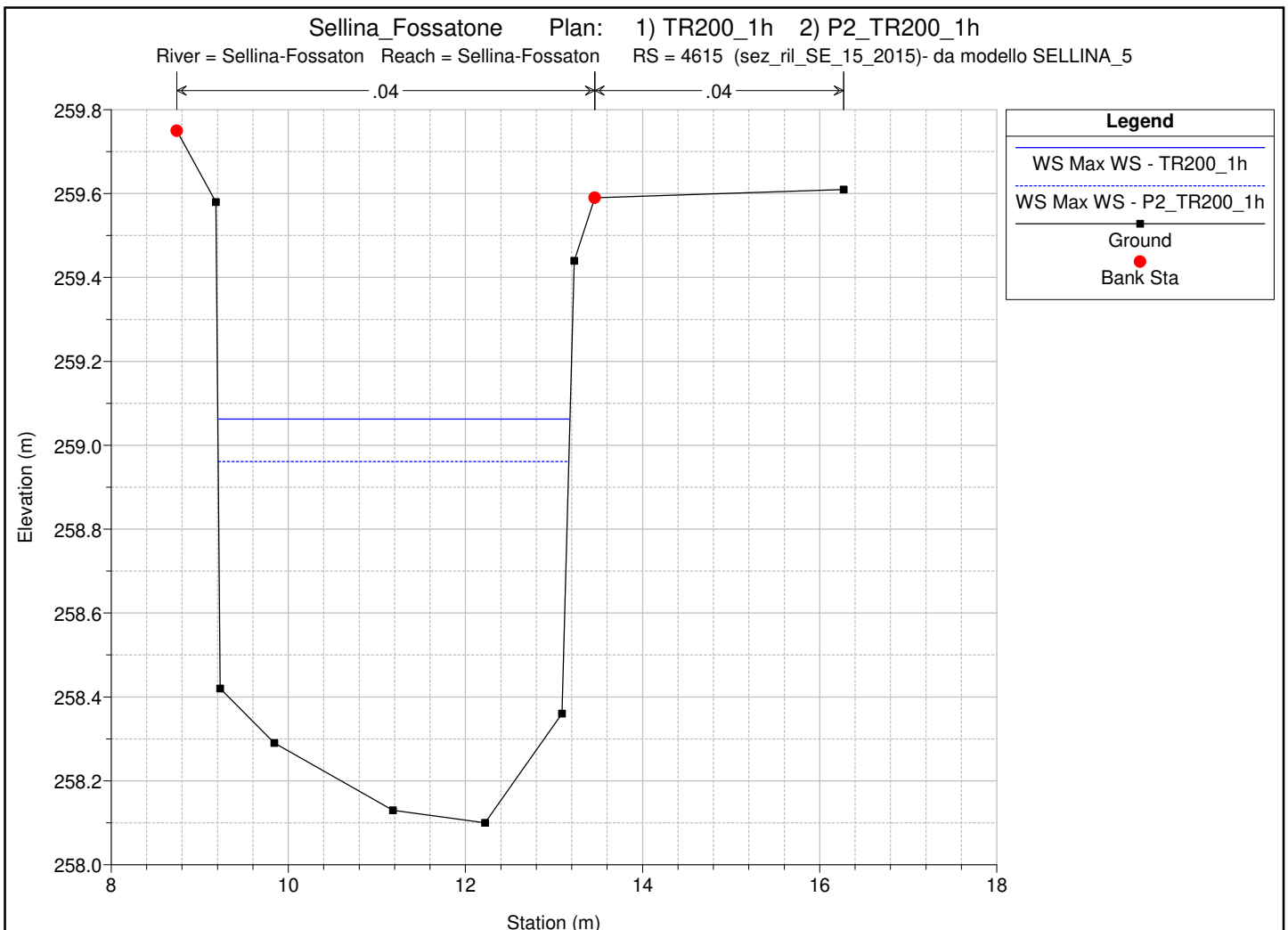
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 5577 C20 - (SE_23)



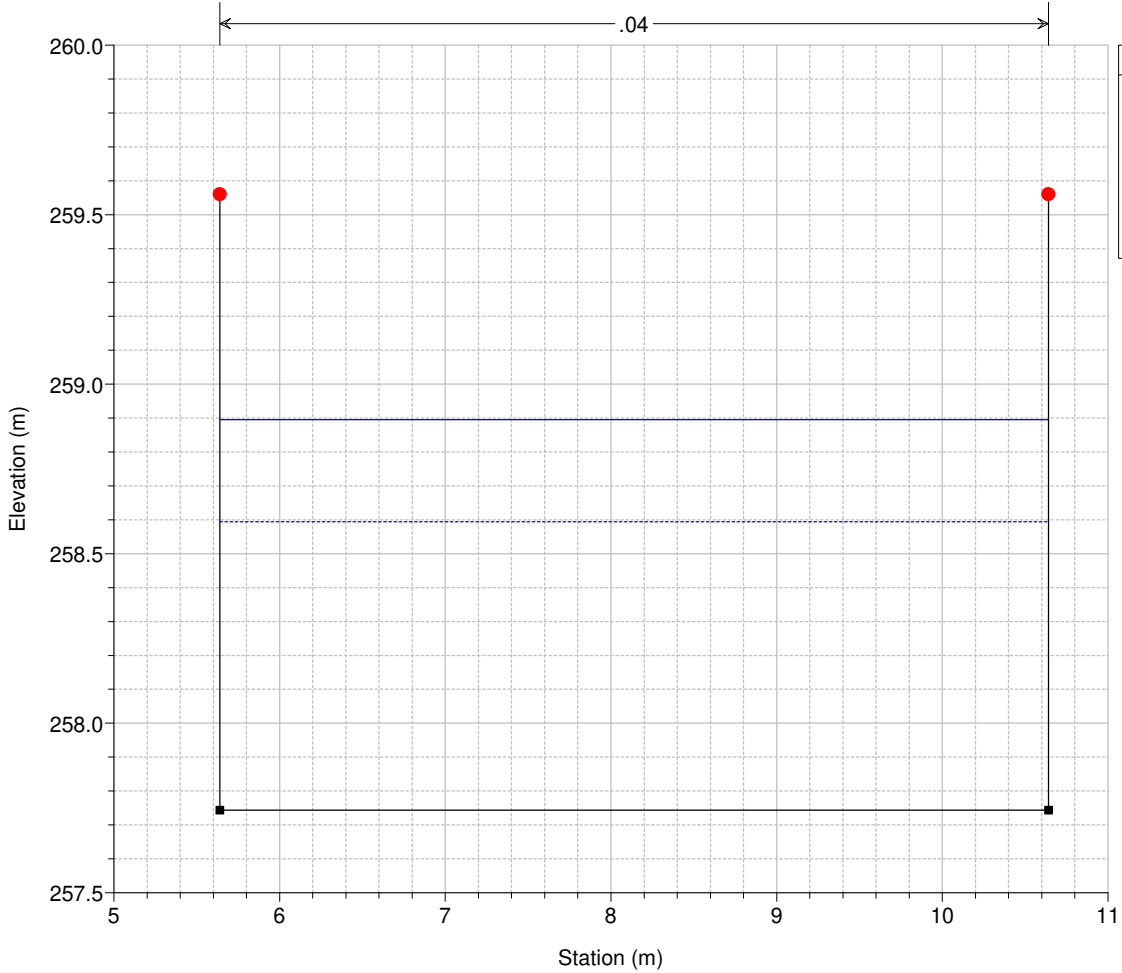






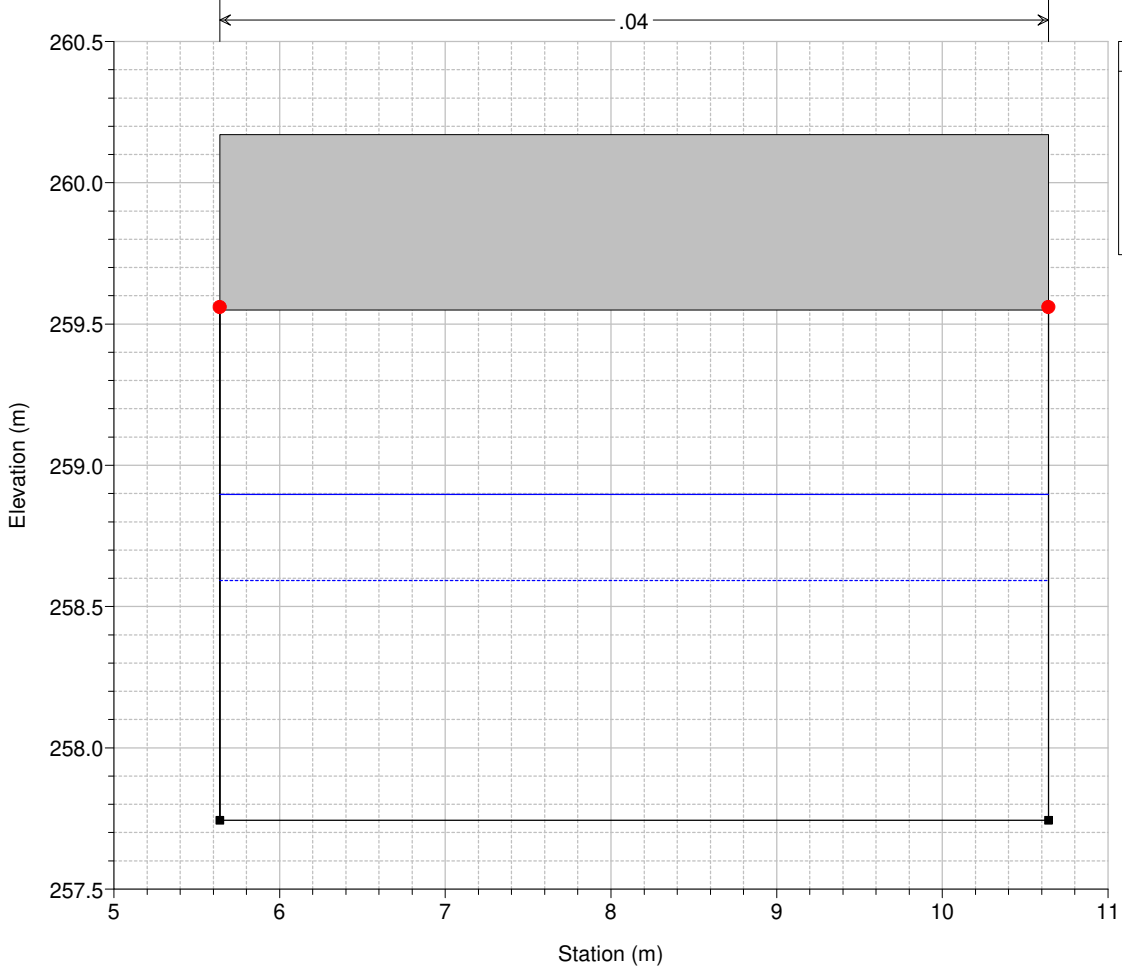


Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4613.7 - da modello SELLINA_5



| Legend | |
|--------|-------------------------|
| — | WS Max WS - TR200_1h |
| - - - | WS Max WS - P2_TR200_1h |
| — | Ground |
| ● | Bank Sta |

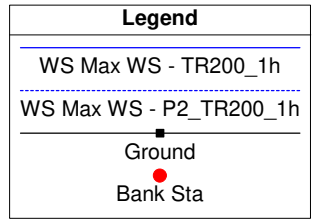
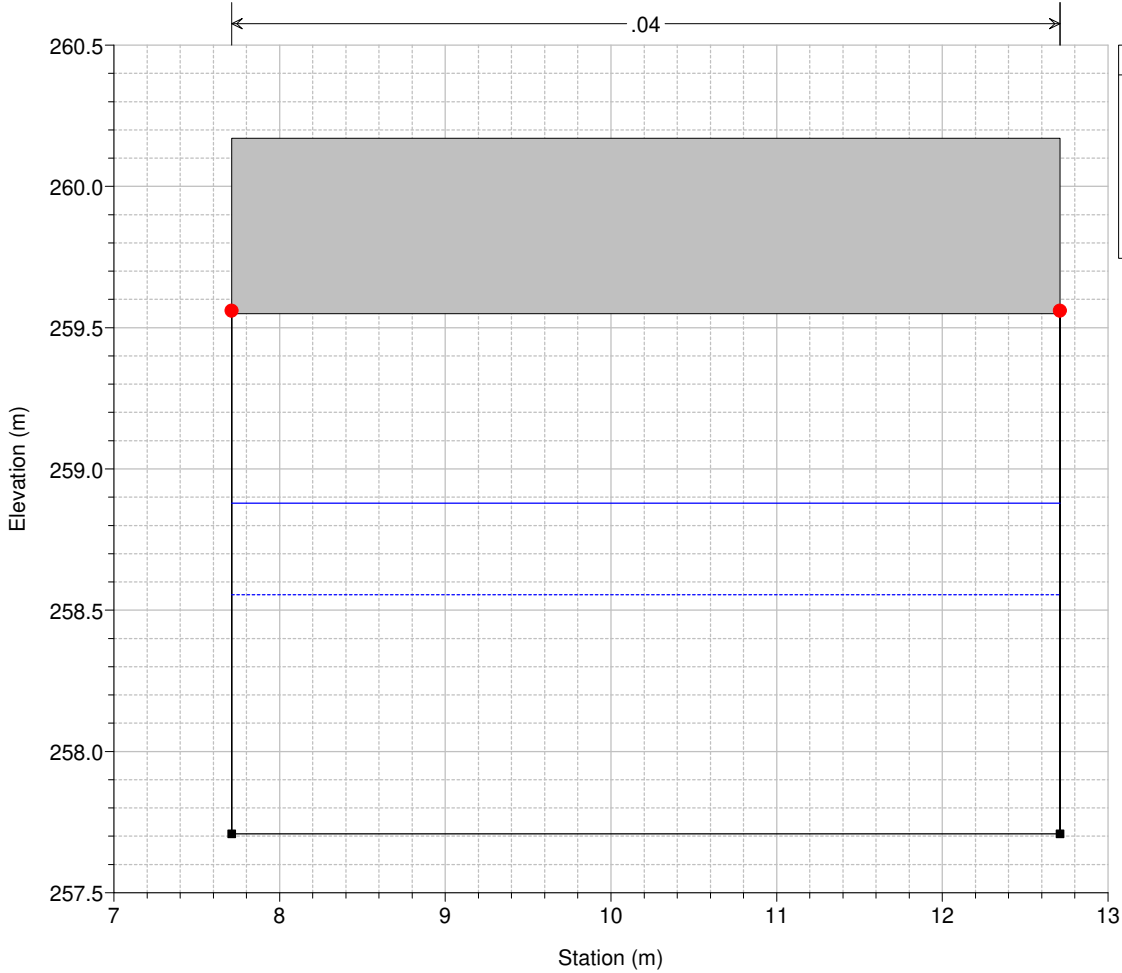
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4613.5 BR ponte da modello SELLINA_5



| Legend | |
|--------|-------------------------|
| — | WS Max WS - TR200_1h |
| - - - | WS Max WS - P2_TR200_1h |
| — | Ground |
| ● | Bank Sta |

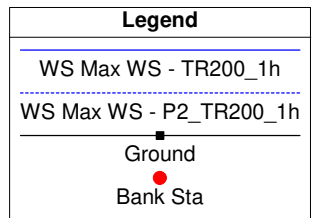
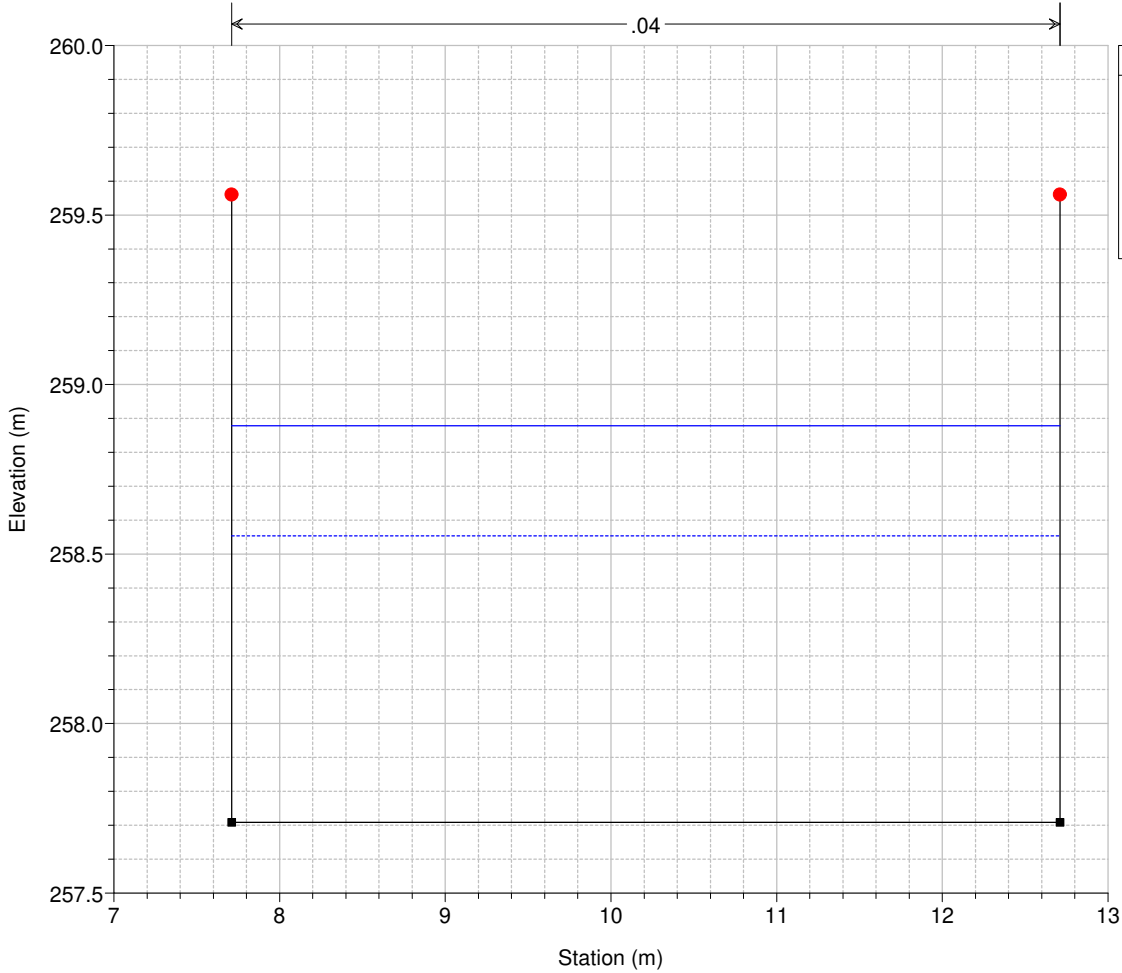
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h

River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4613.5 BR ponte da modello SELLINA_5

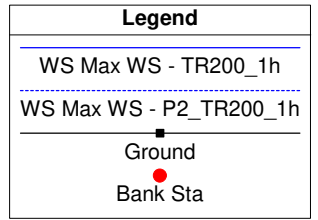
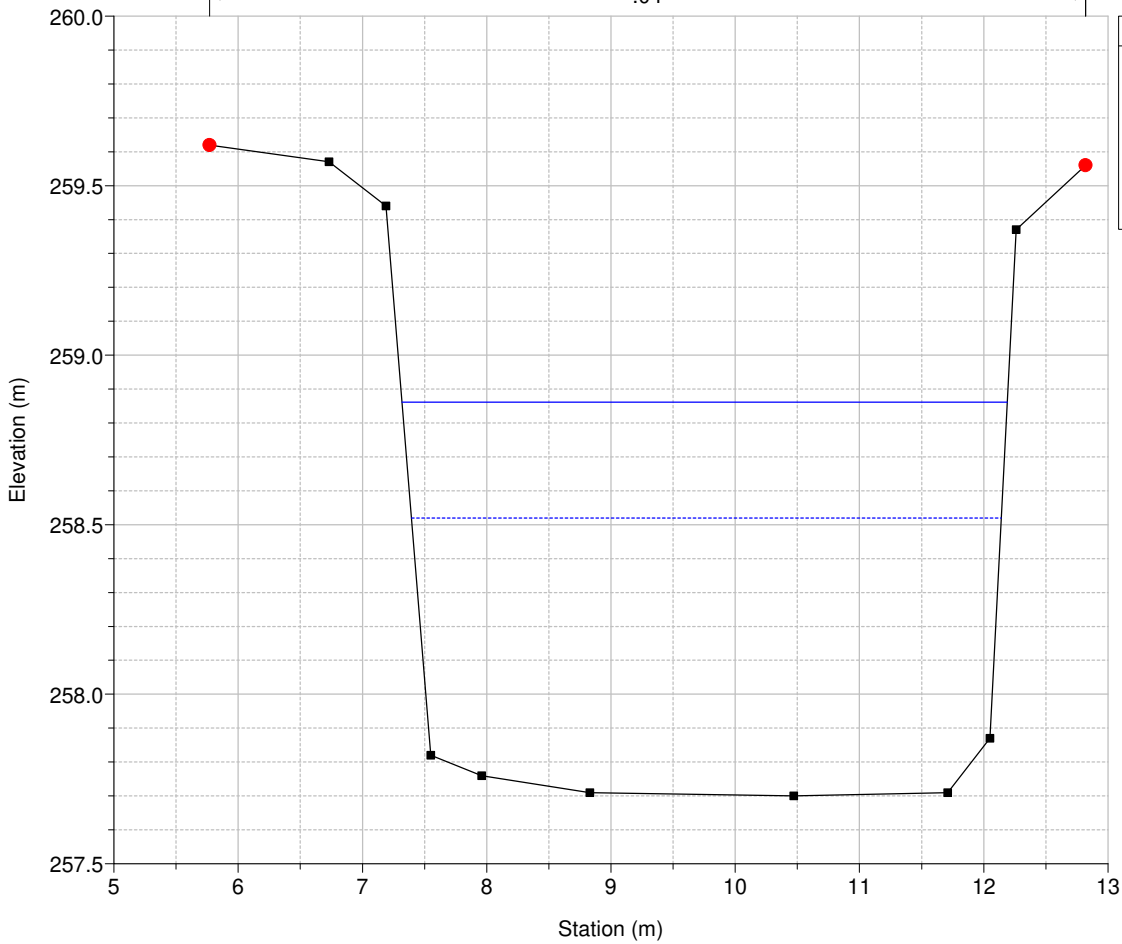


Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h

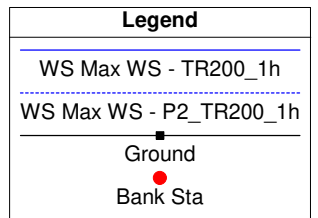
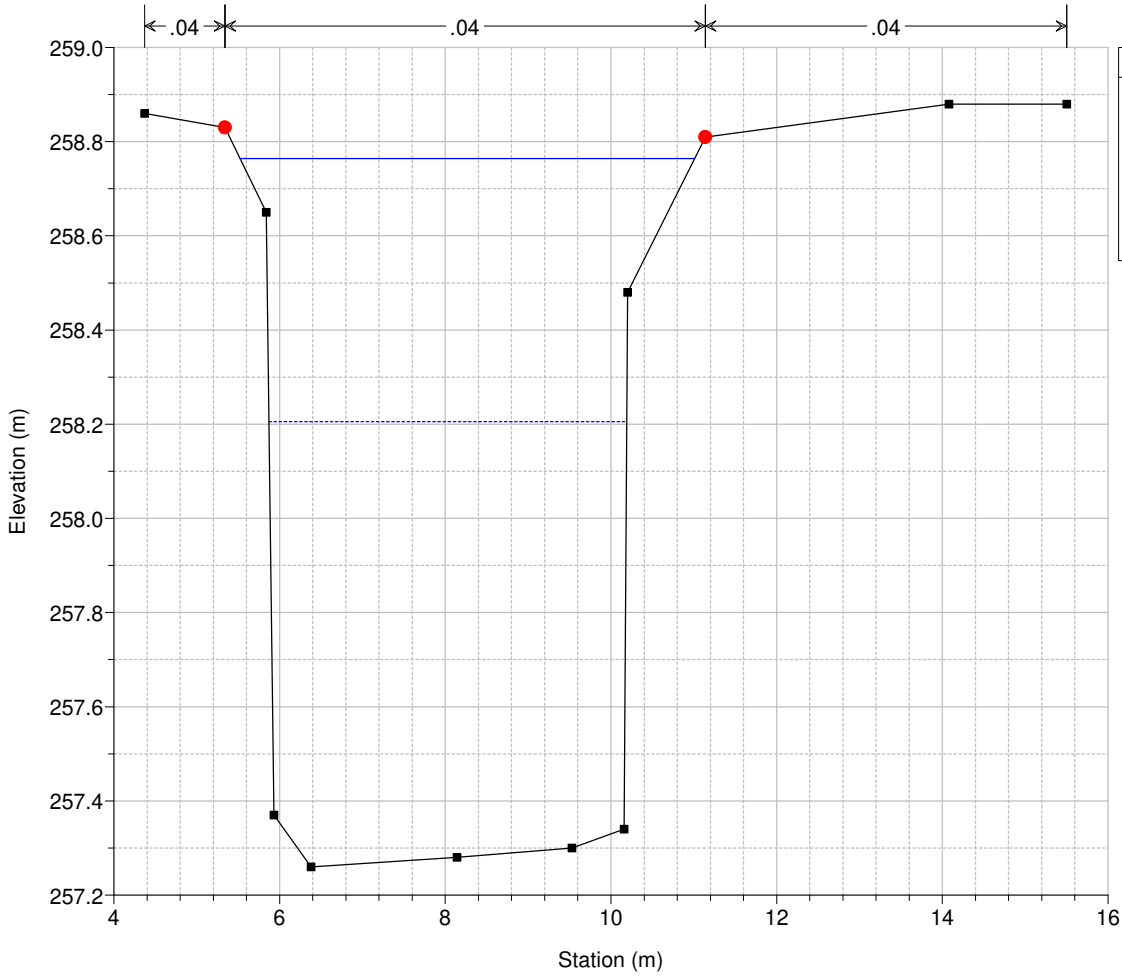
River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4613.3 - da modello SELLINA_5

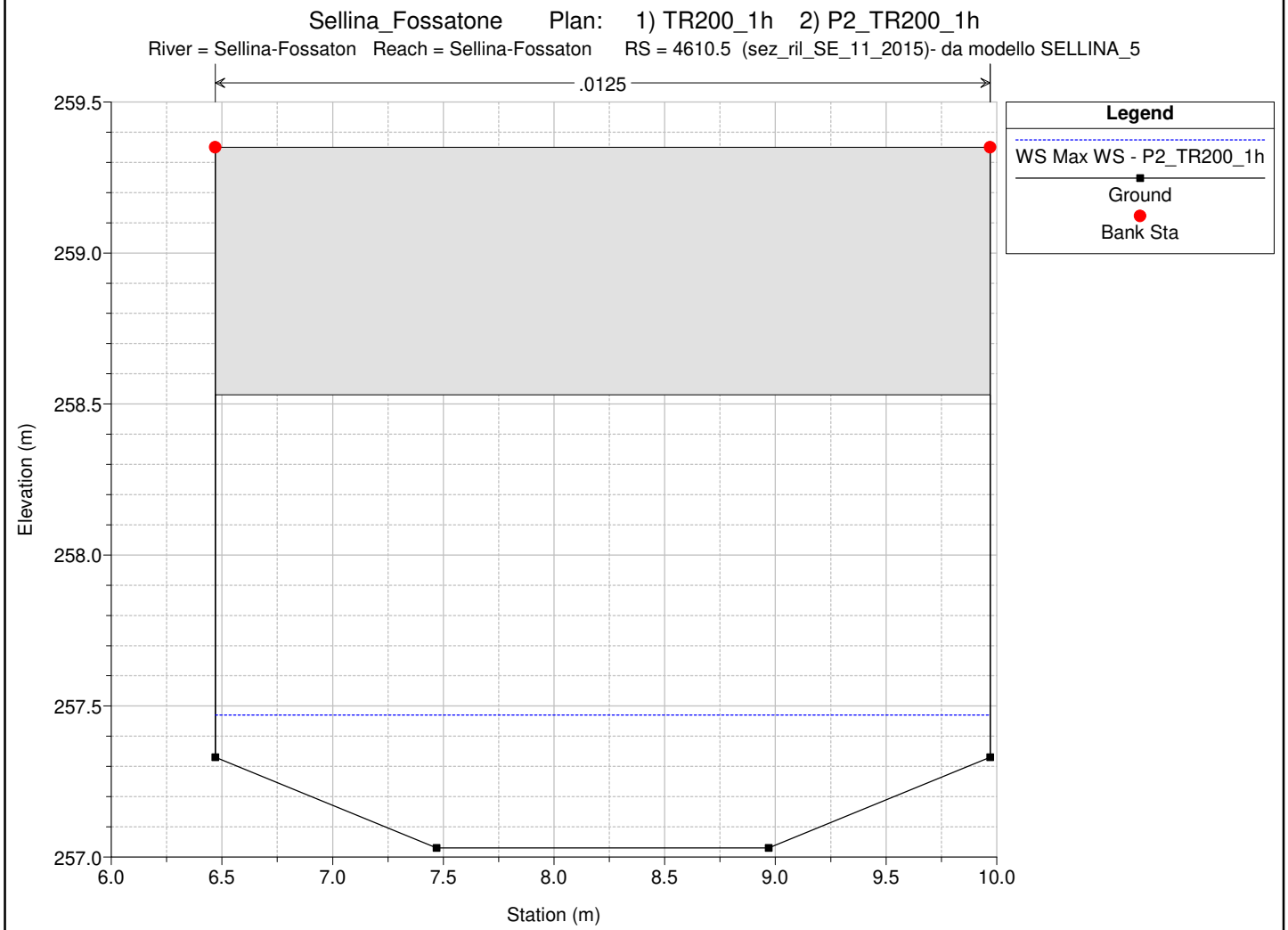
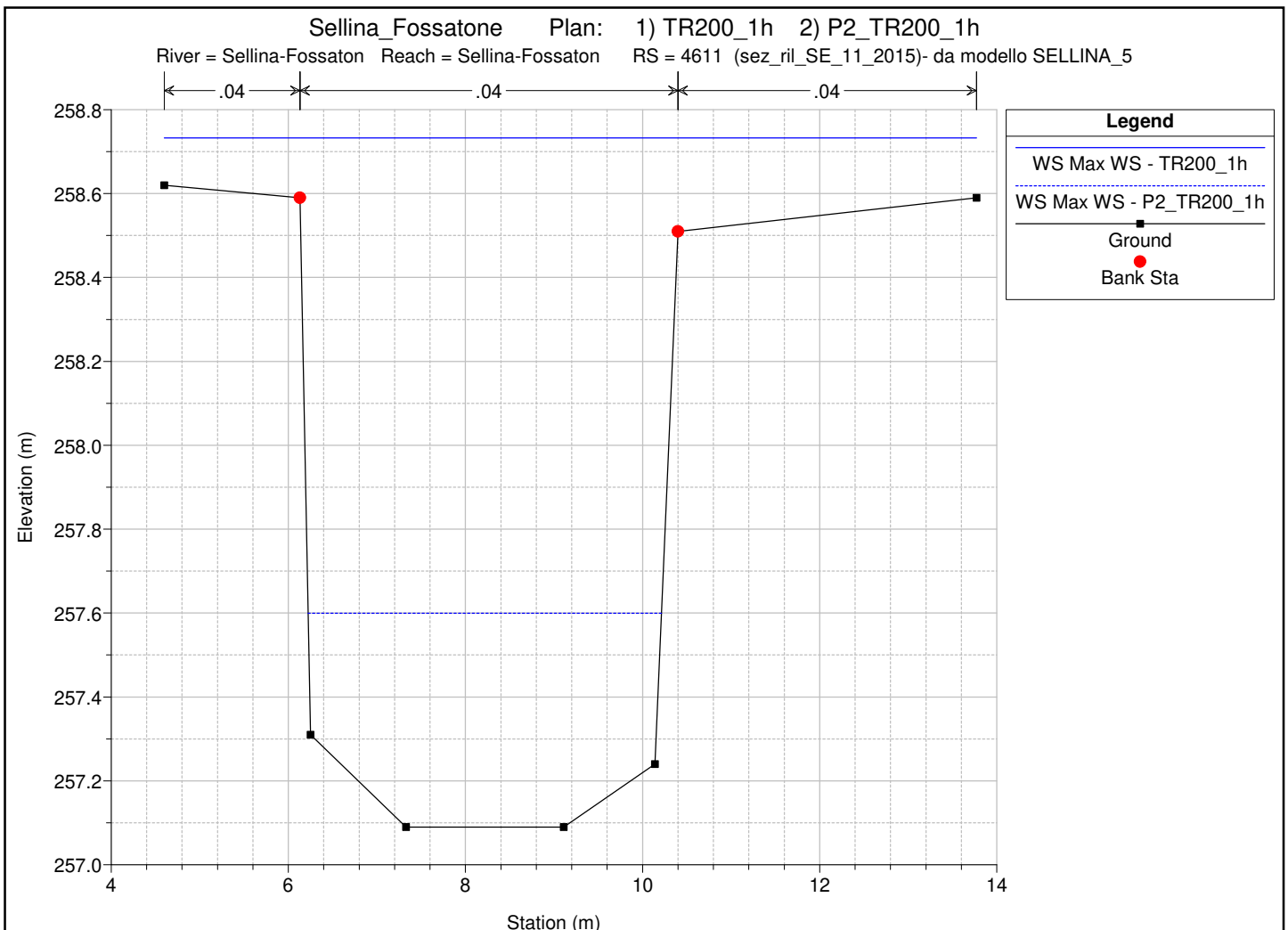


Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4613 (sez_ril_SE_13_2015)- da modello SELLINA_5

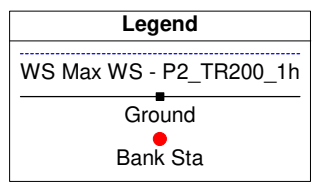
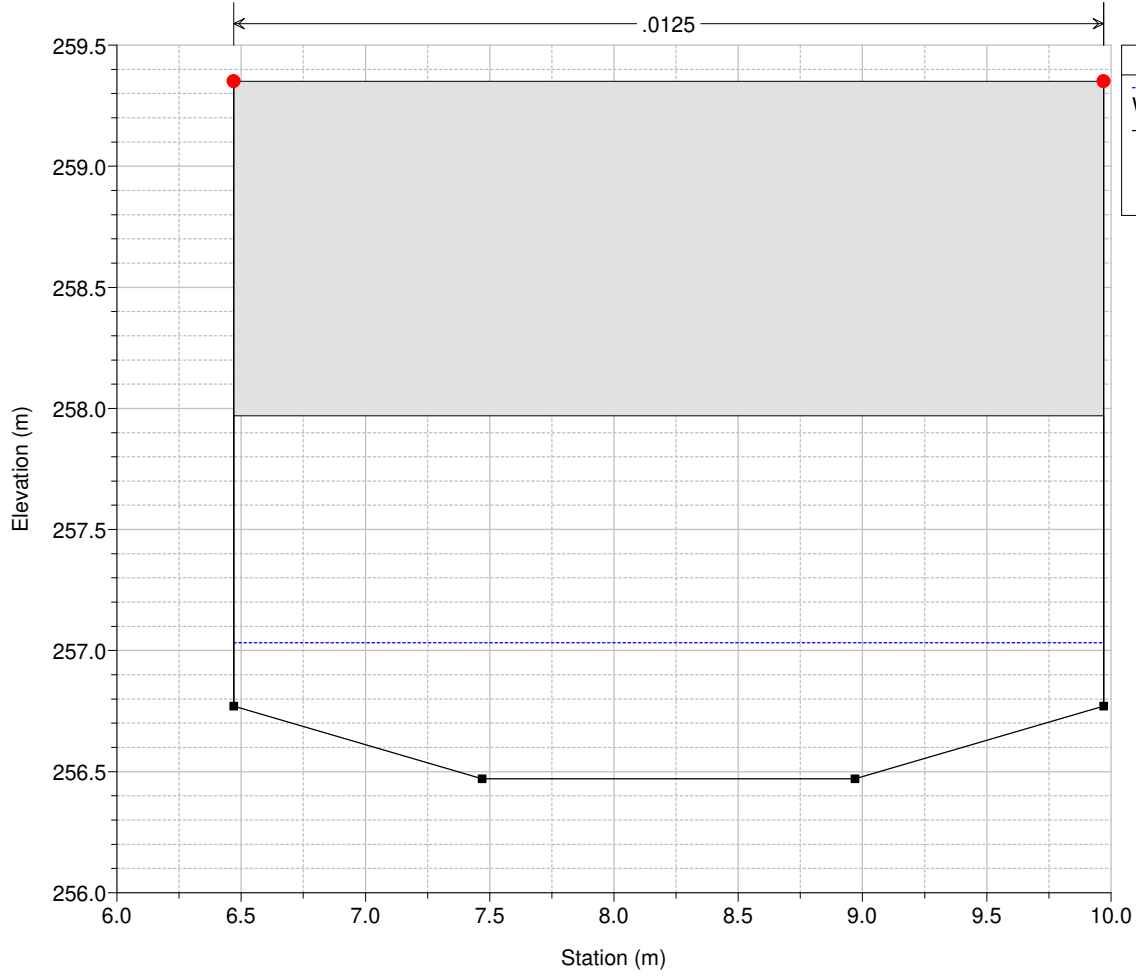


Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4612 (sez_ril_SE_12_2015)- da modello SELLINA_5

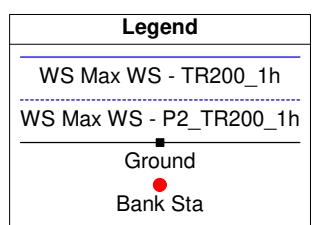
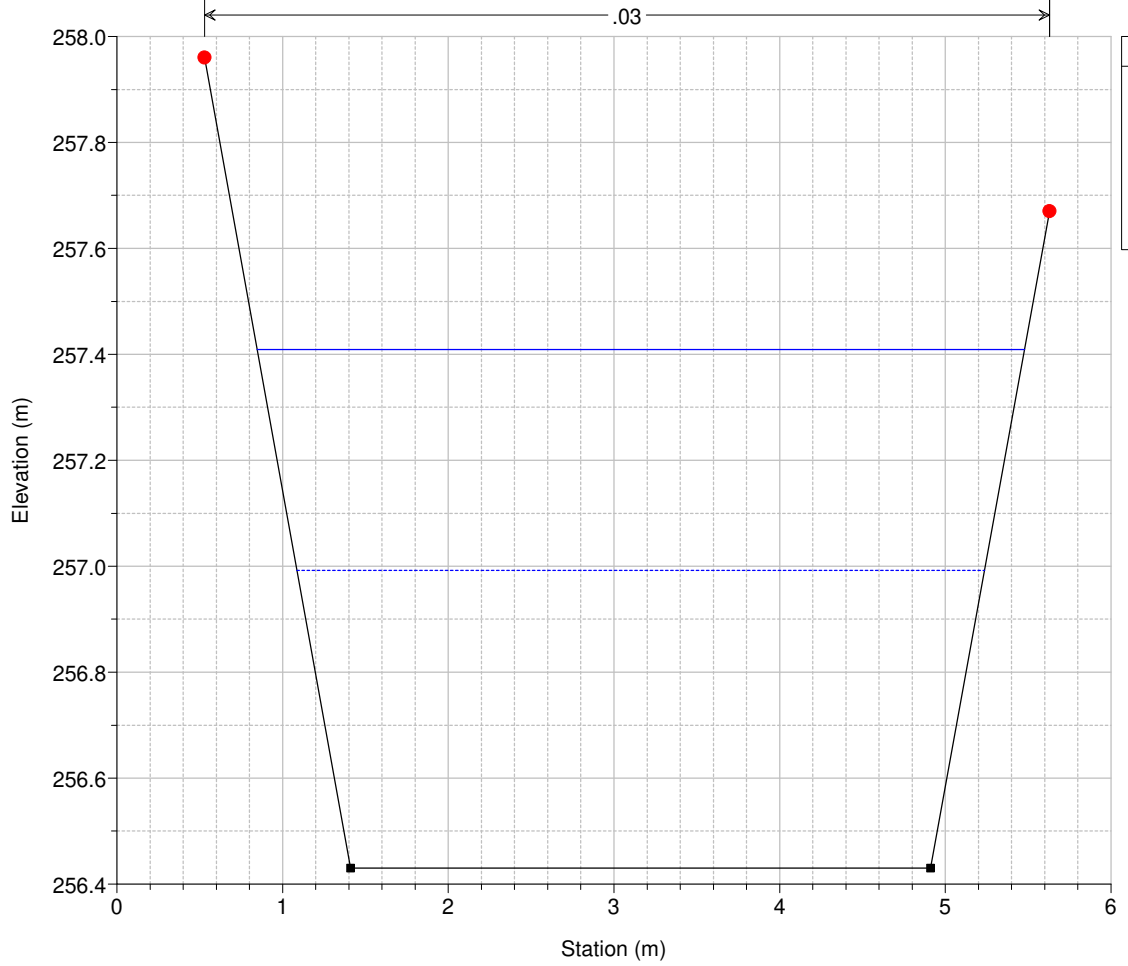


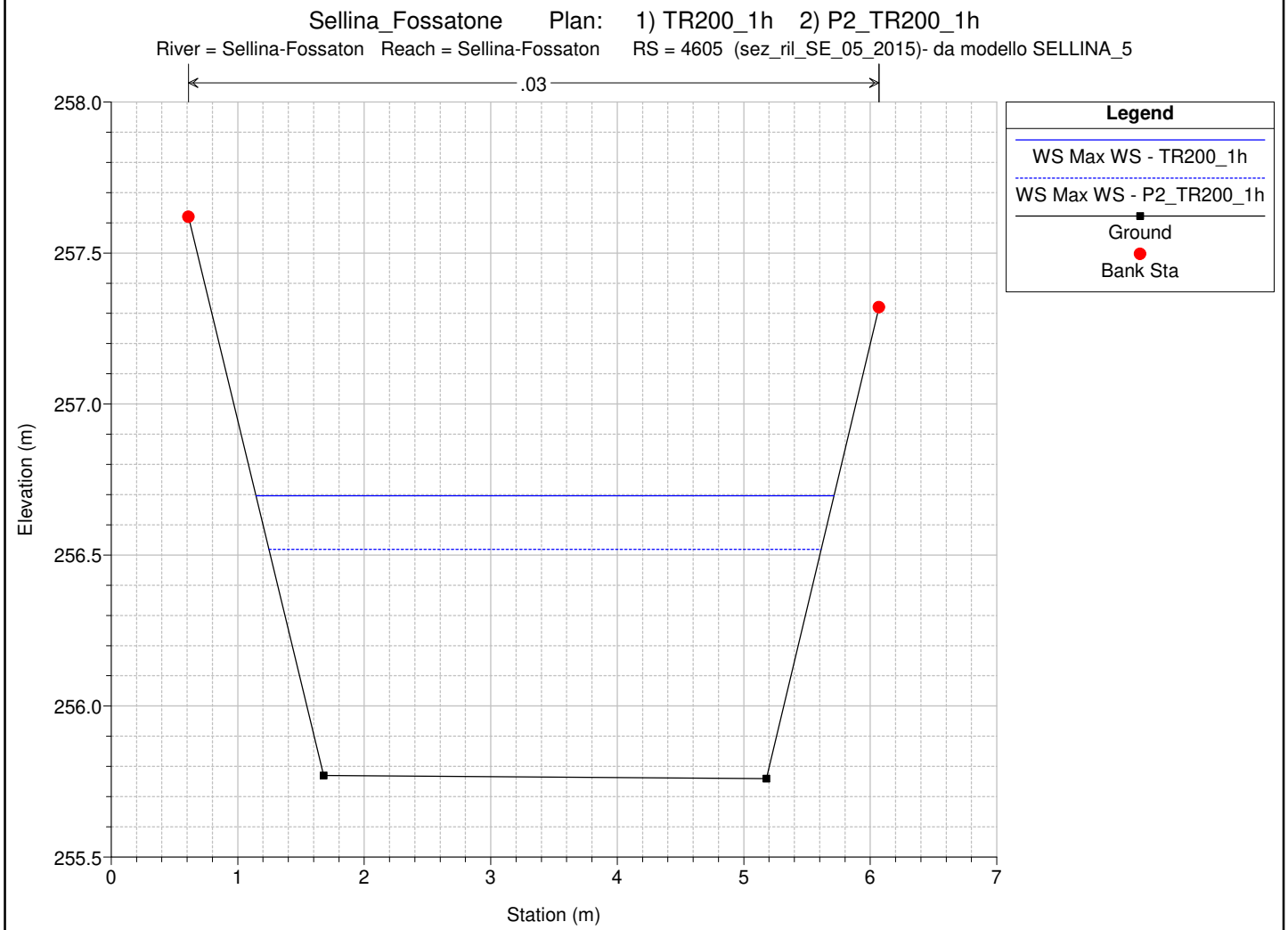
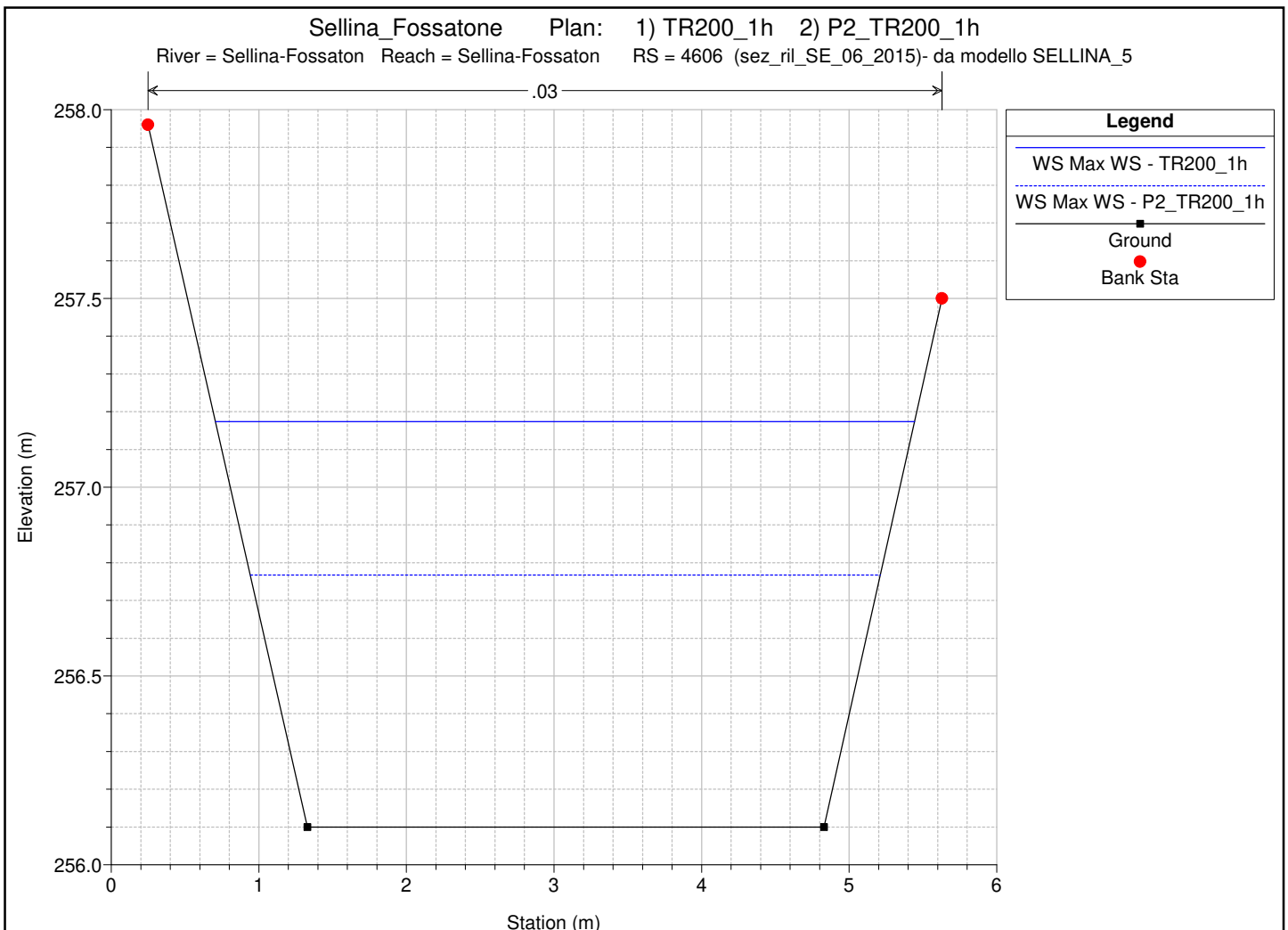


Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4609.5 (sez_ril_SE_07_2015)- da modello SELLINA_5

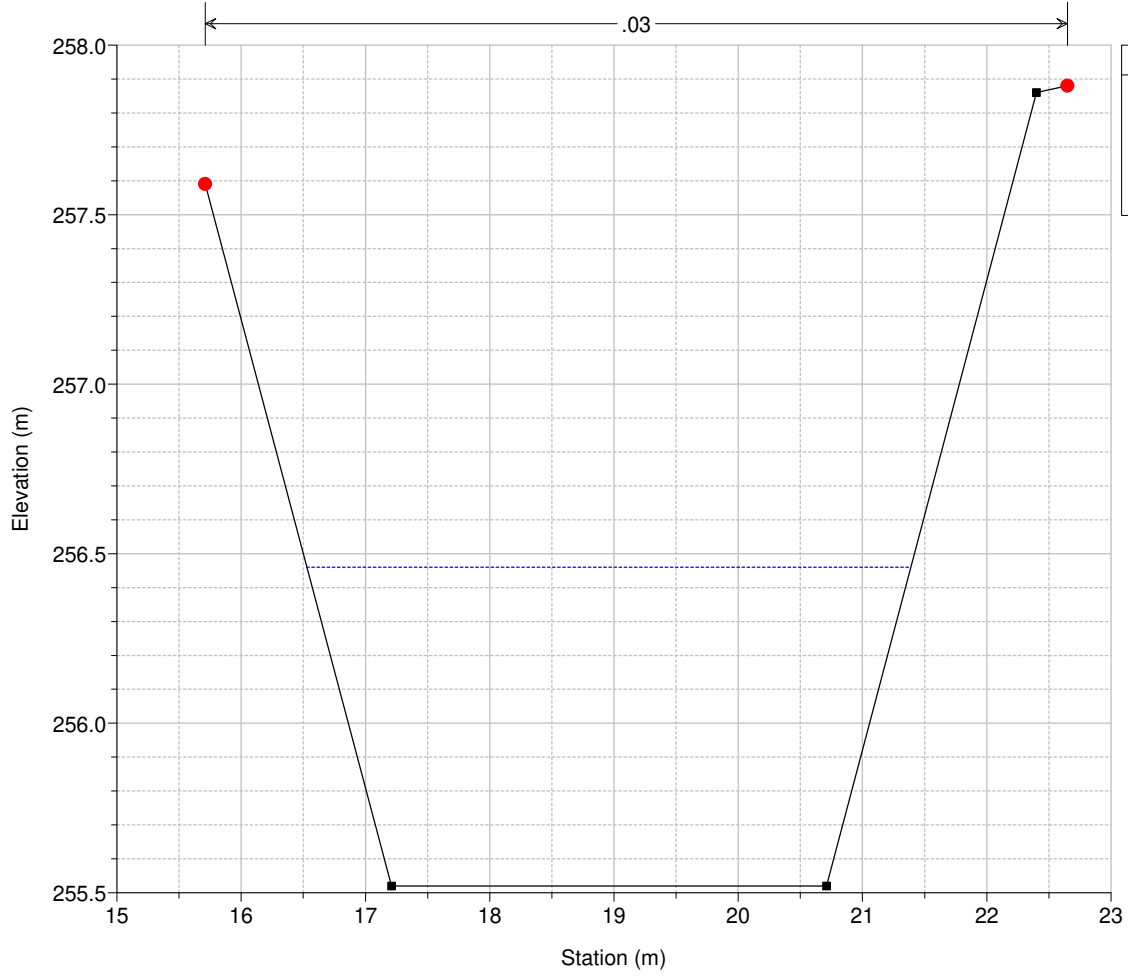


Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4607 (sez_ril_SE_07_2015)- da modello SELLINA_5

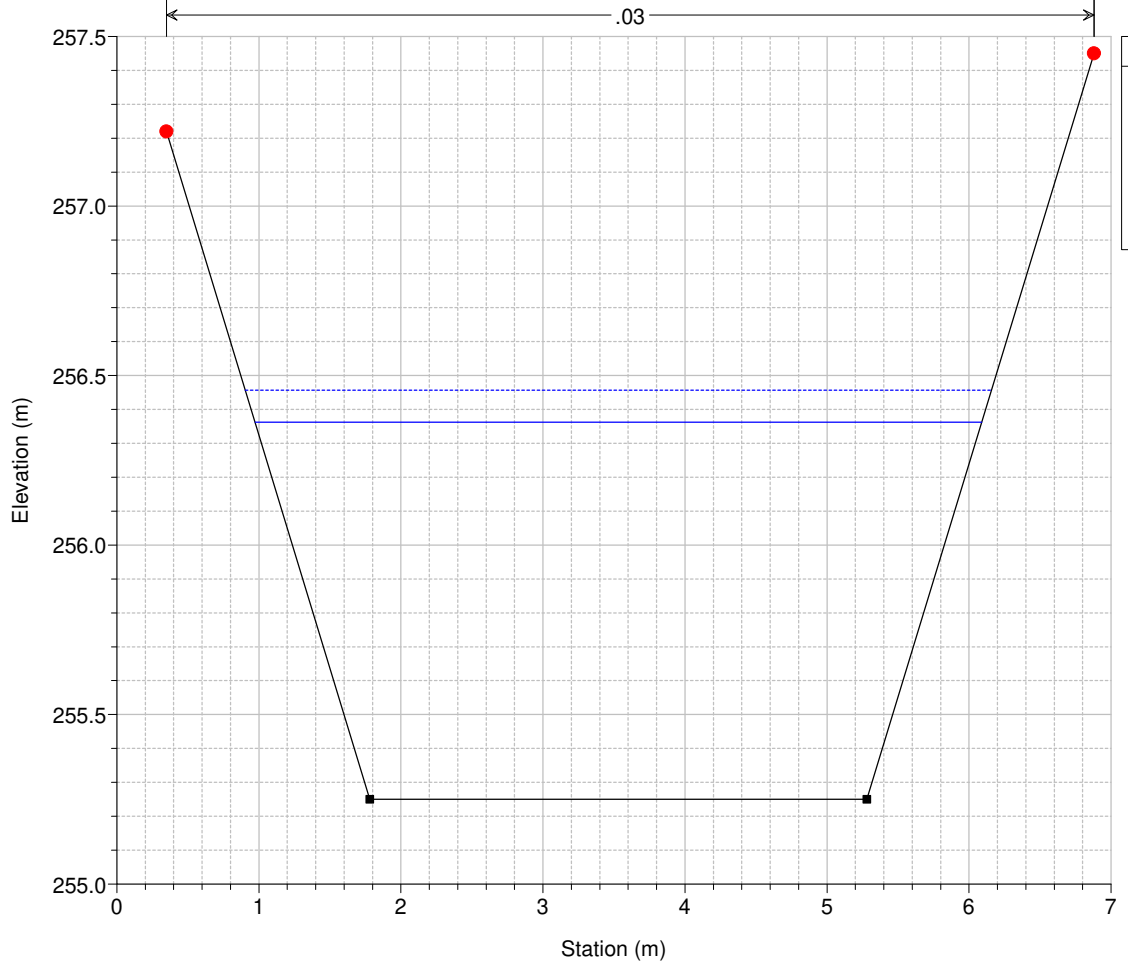




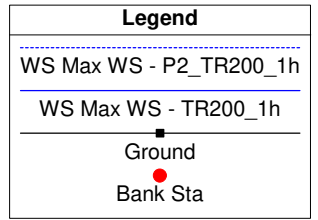
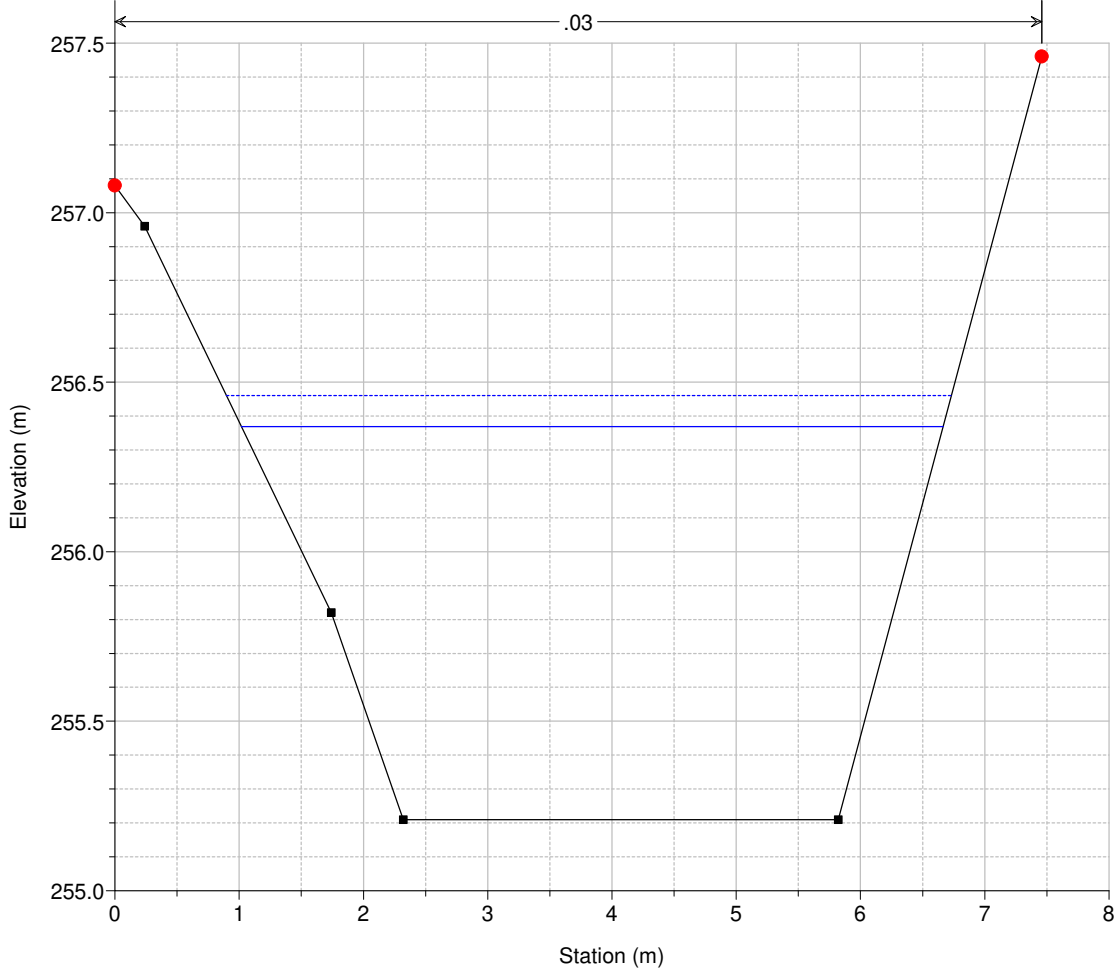
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4604.5 ril A020 (2022)



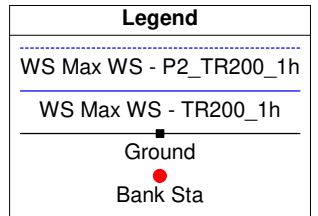
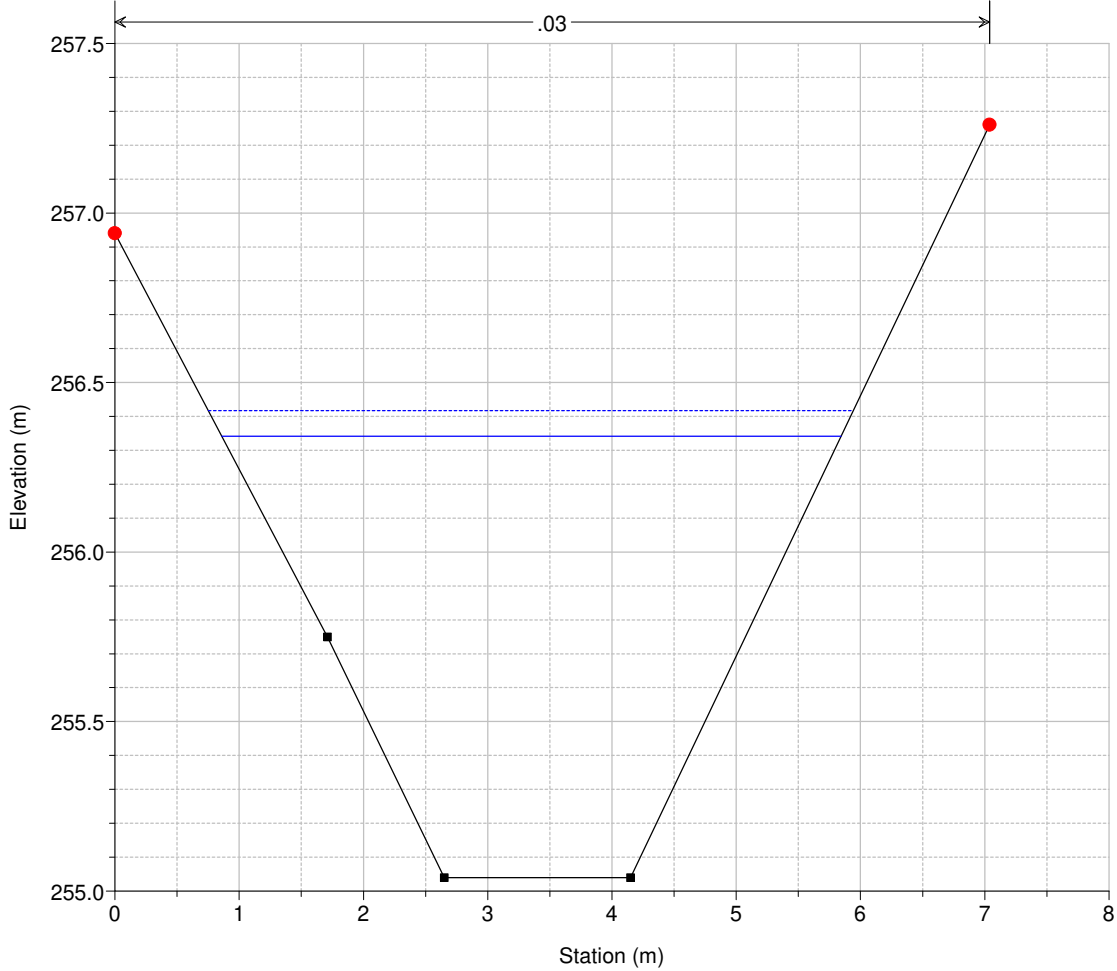
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4604 (sez_ril_SE_04_2015)- da modello SELLINA_5



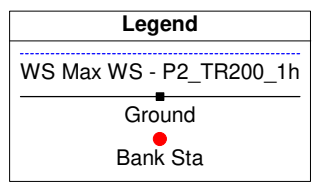
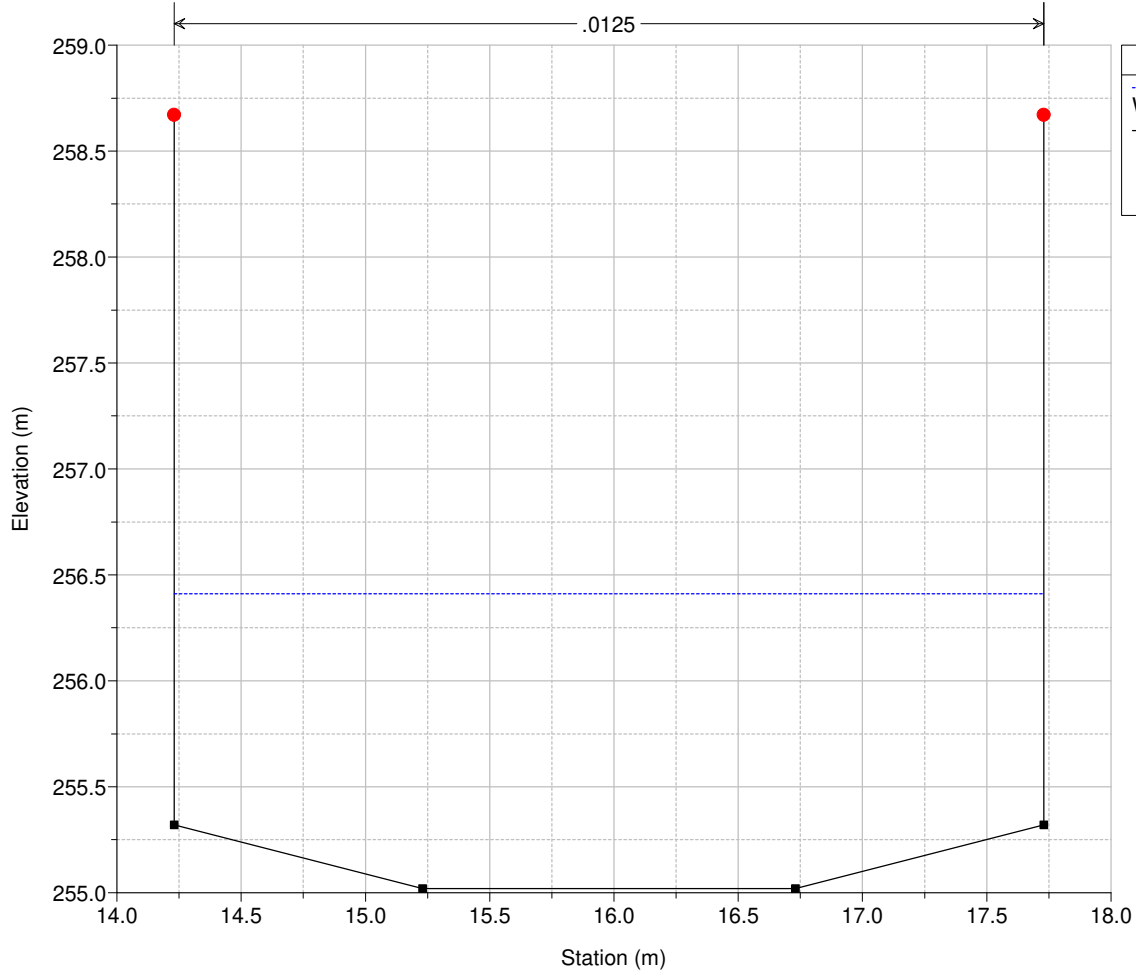
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4603 (sez_ril_SE_03_2015)- da modello SELLINA_5



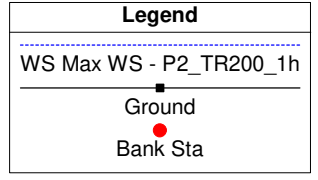
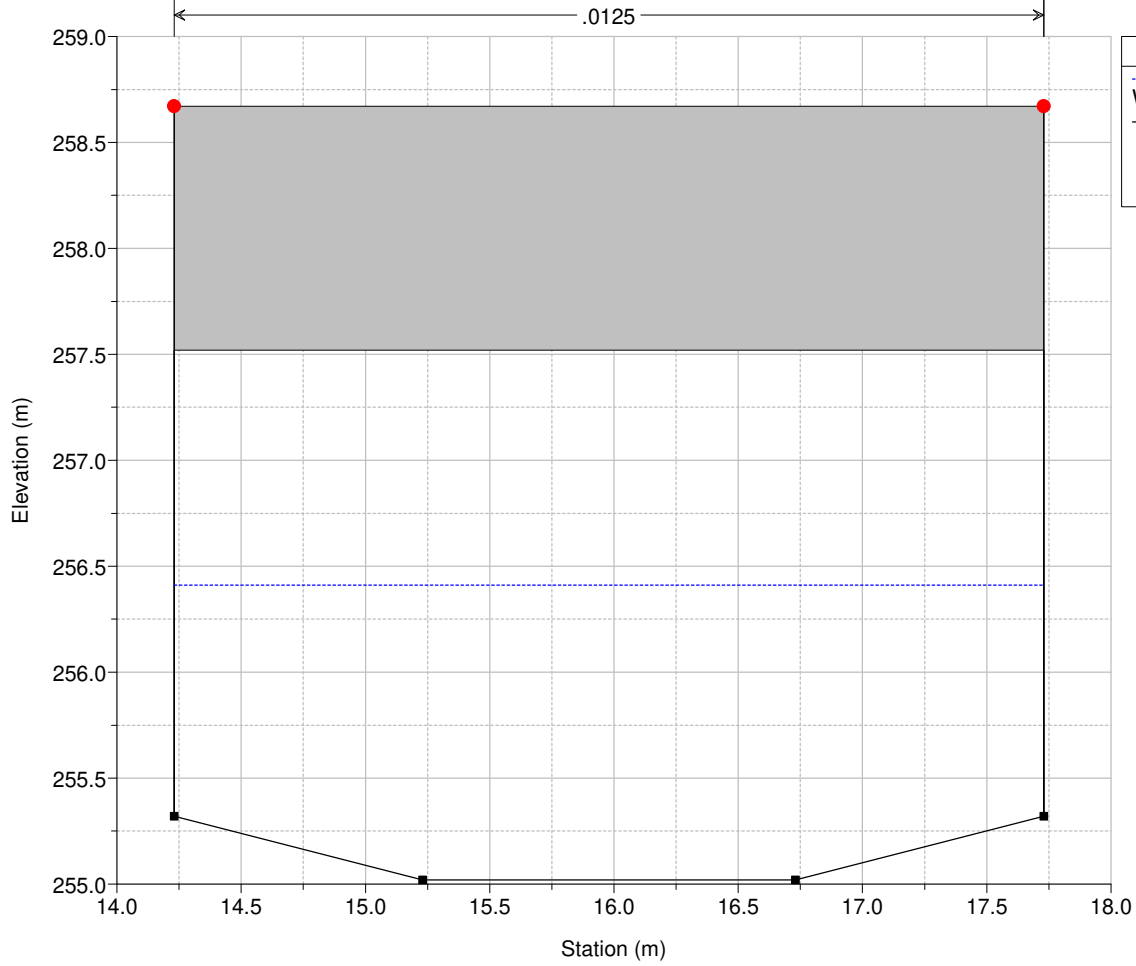
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4602 (sez_ril_SE_02_2015)- da modello SELLINA_5



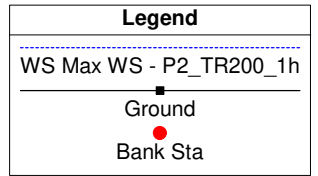
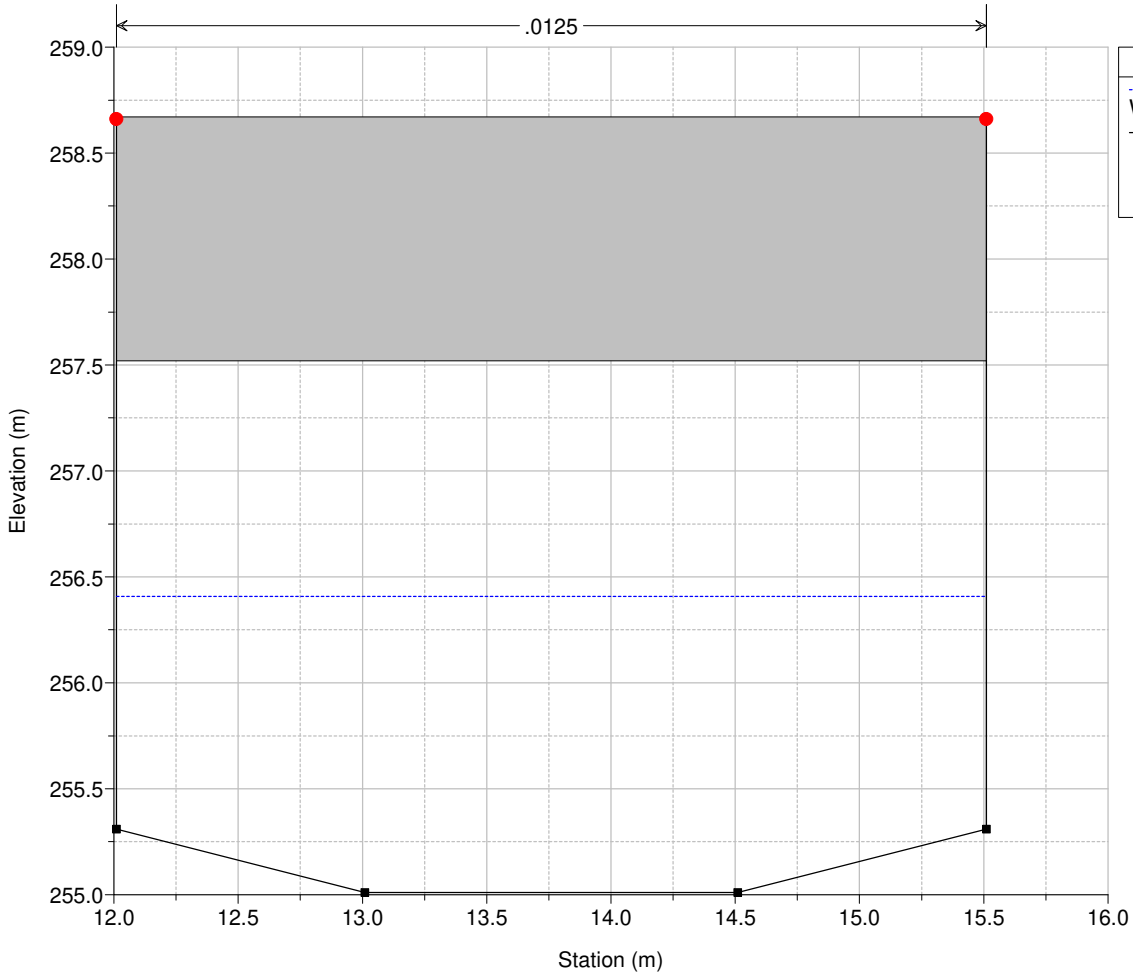
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4600 ril A021 (2022)



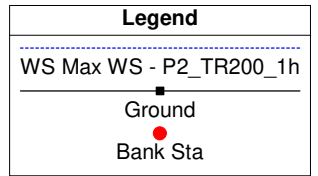
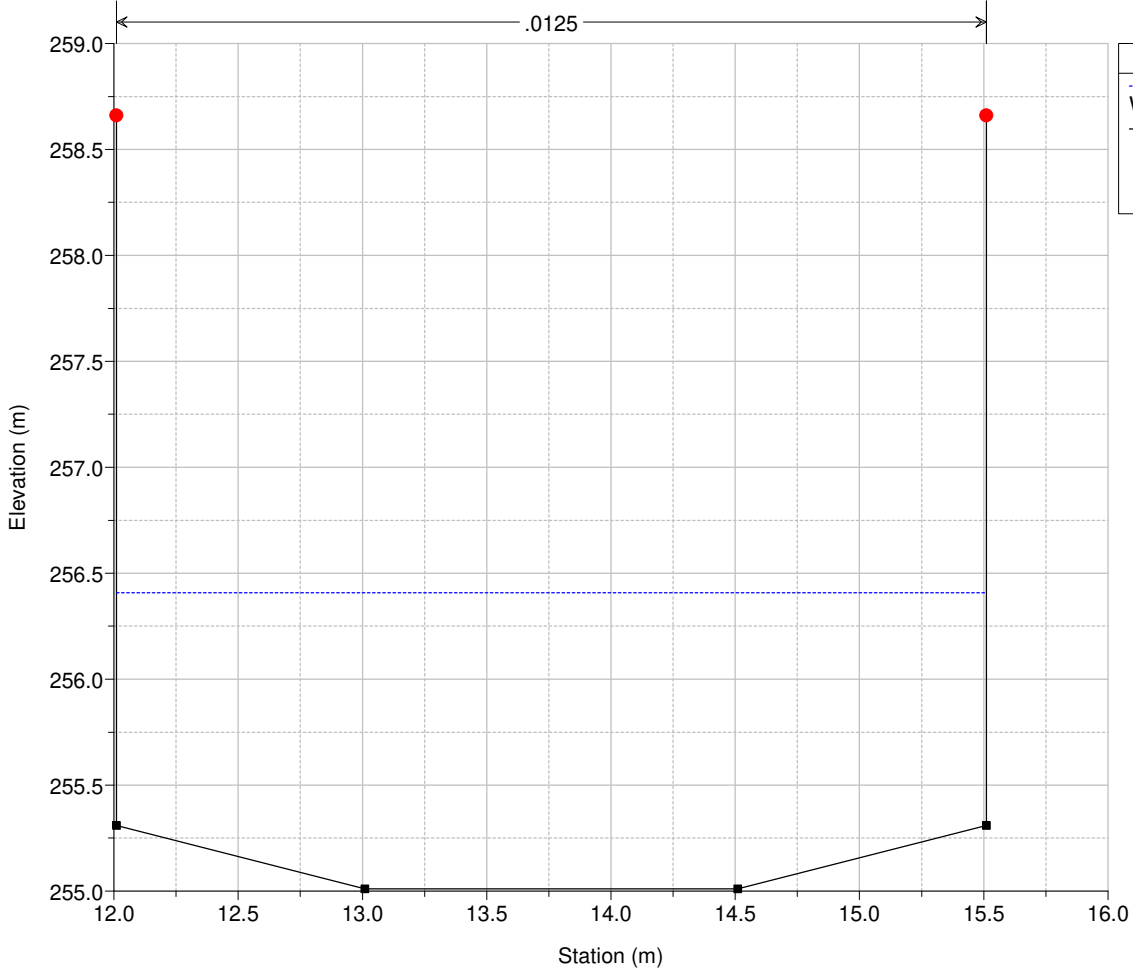
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4595 BR



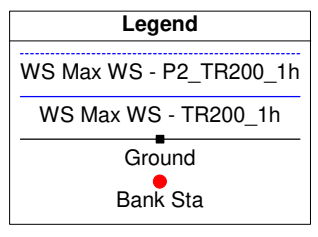
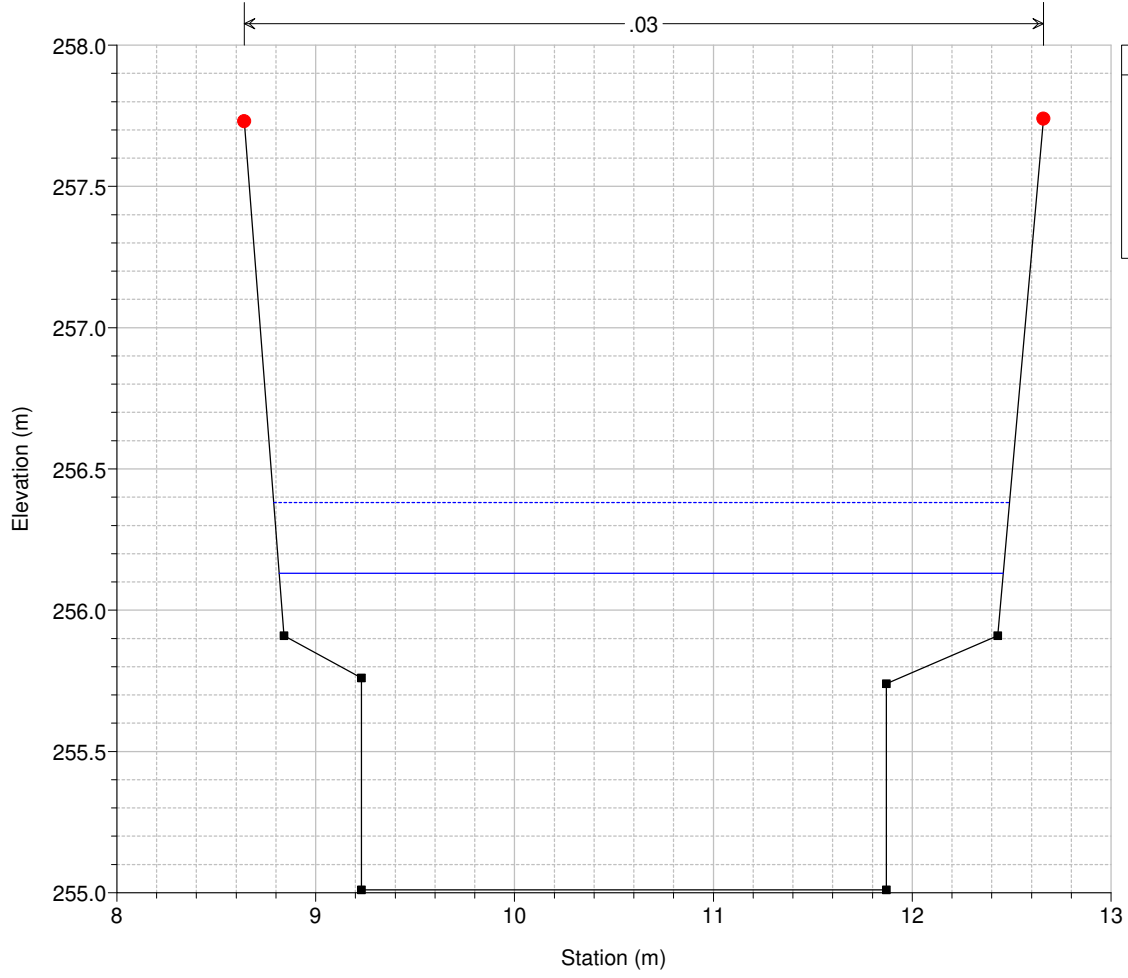
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4595 BR



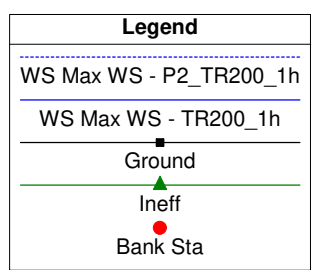
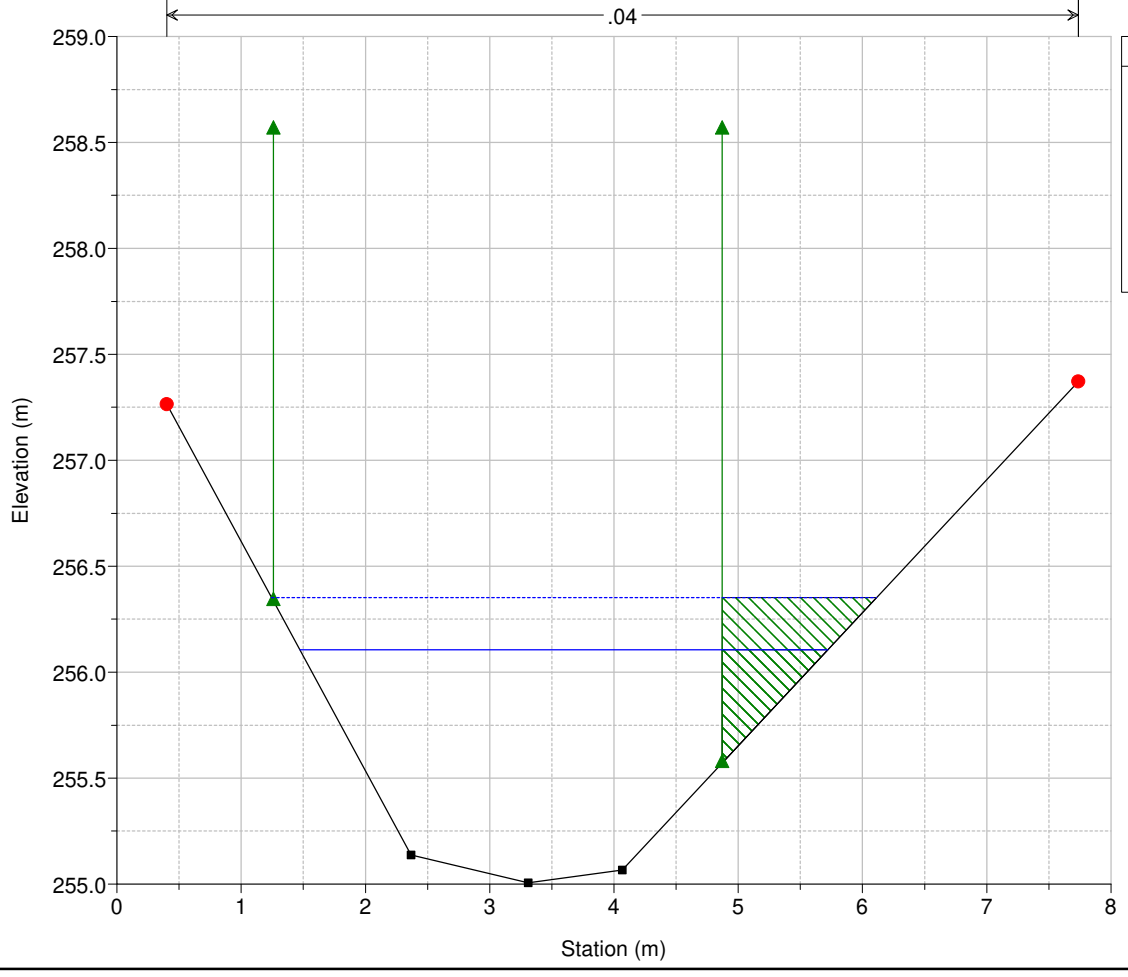
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4590 ril A022 (2022)



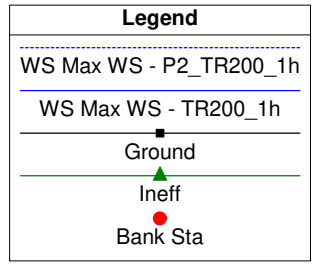
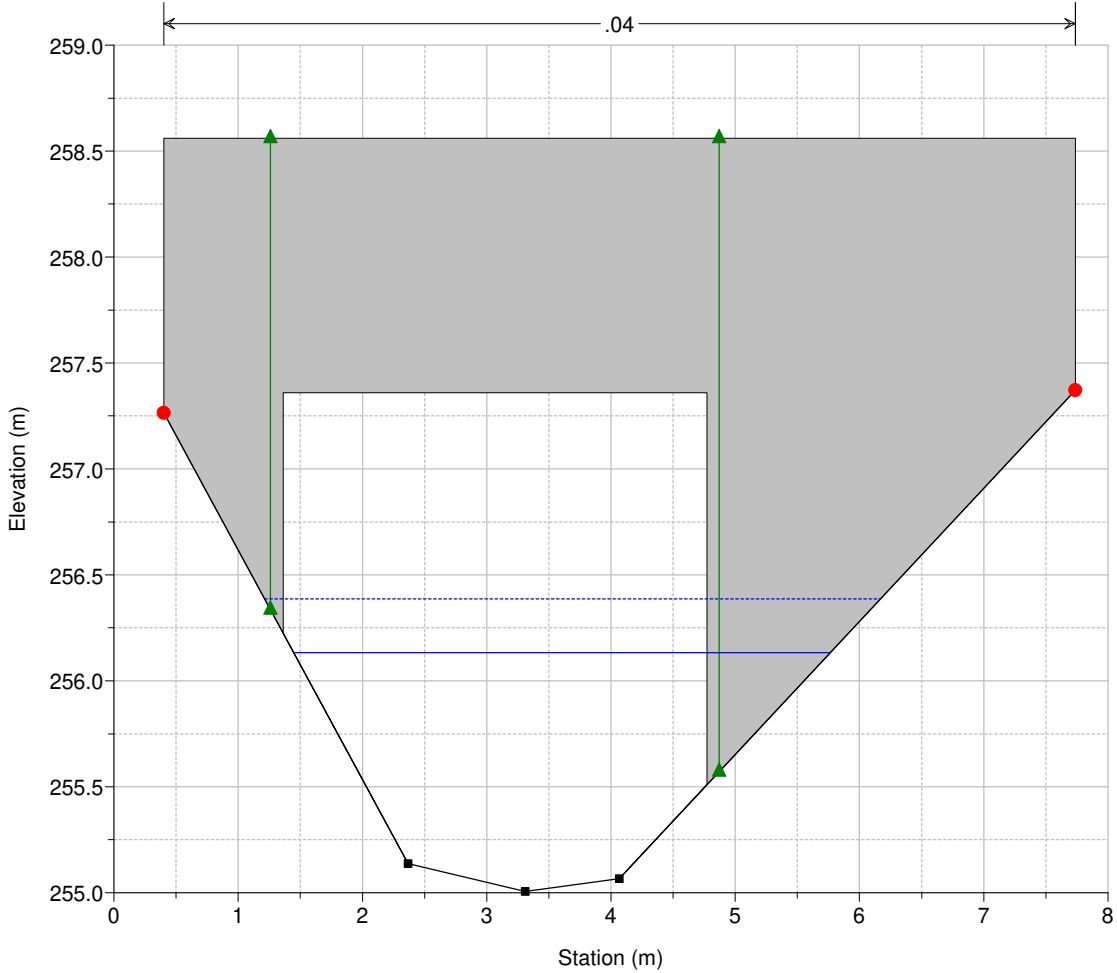
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4548 ril A024 (2022)



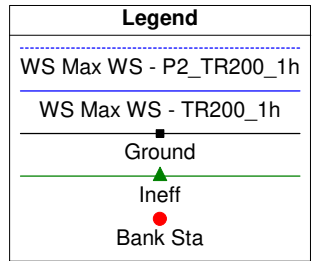
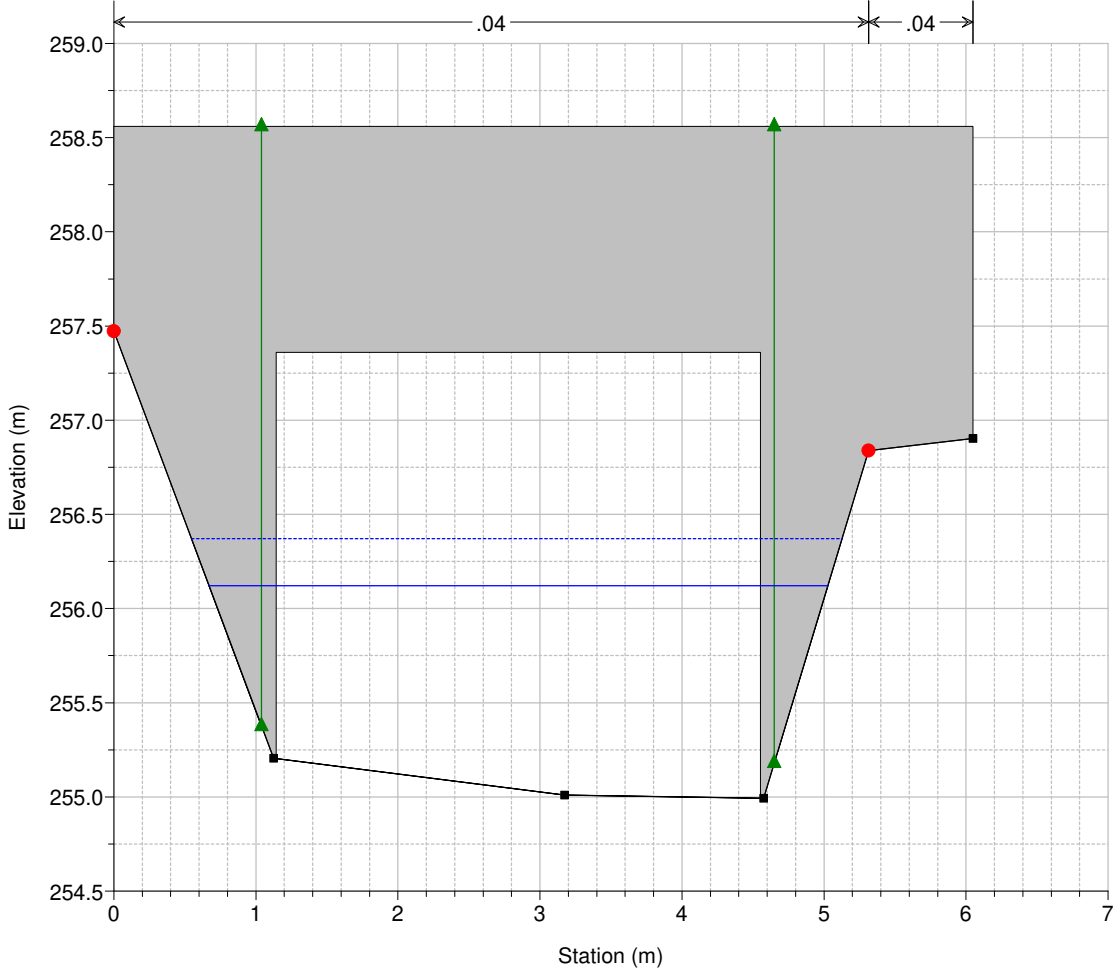
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4547 (sez_ril_SE_11) duplicata x inserimento strutture- da modello SE

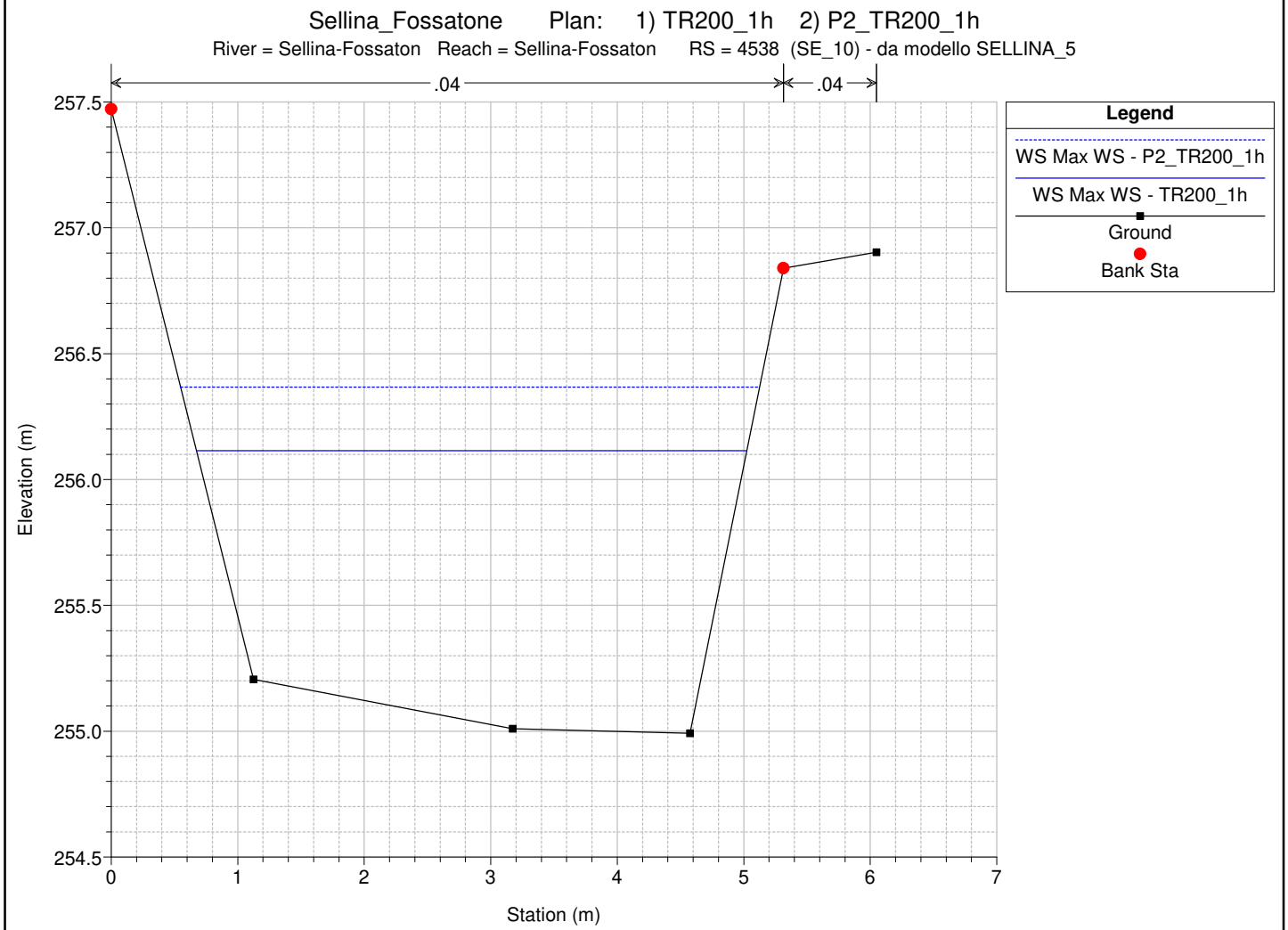
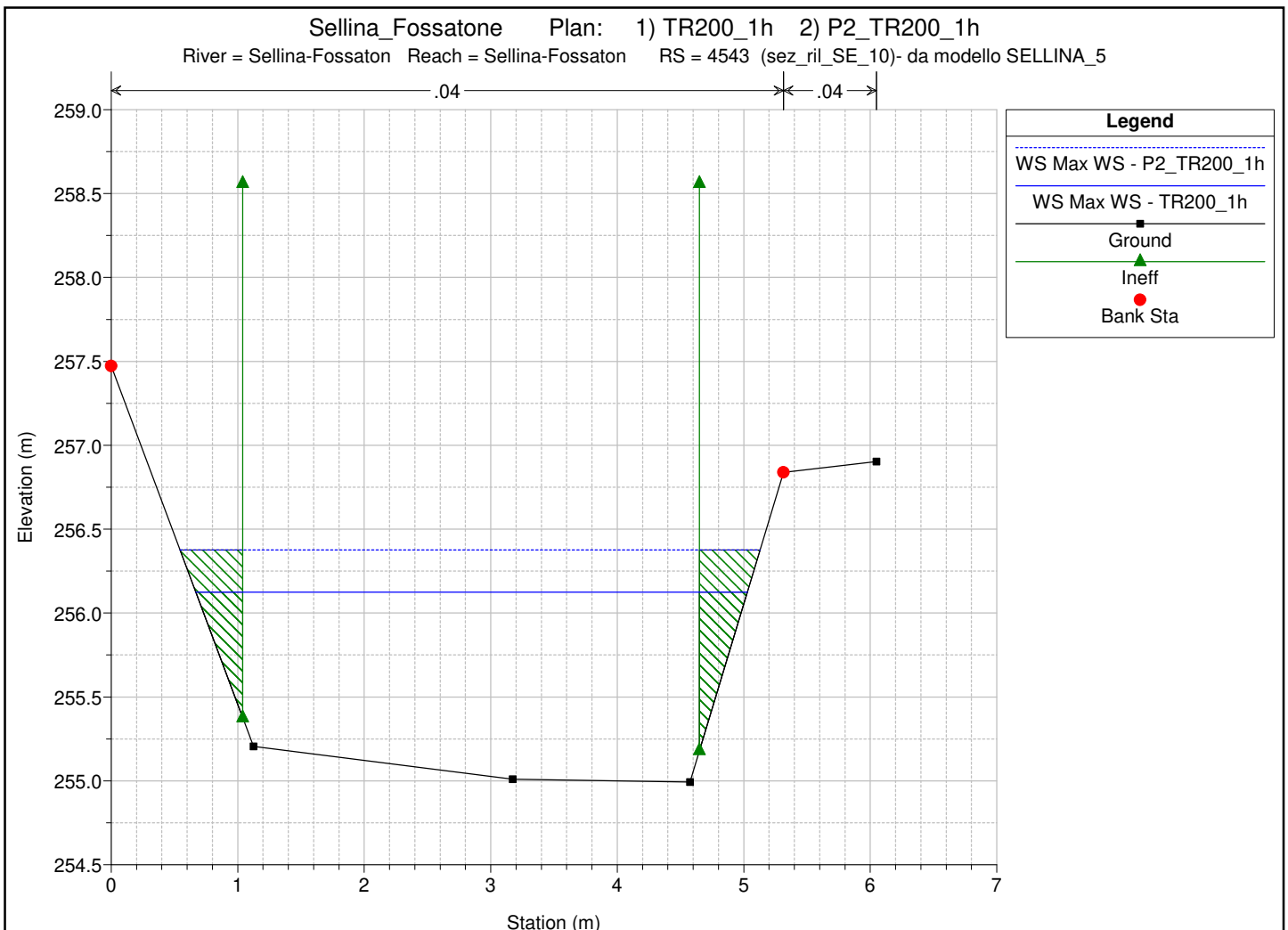


Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4545 BR Ferrovia Firenze Roma

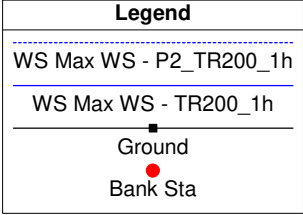
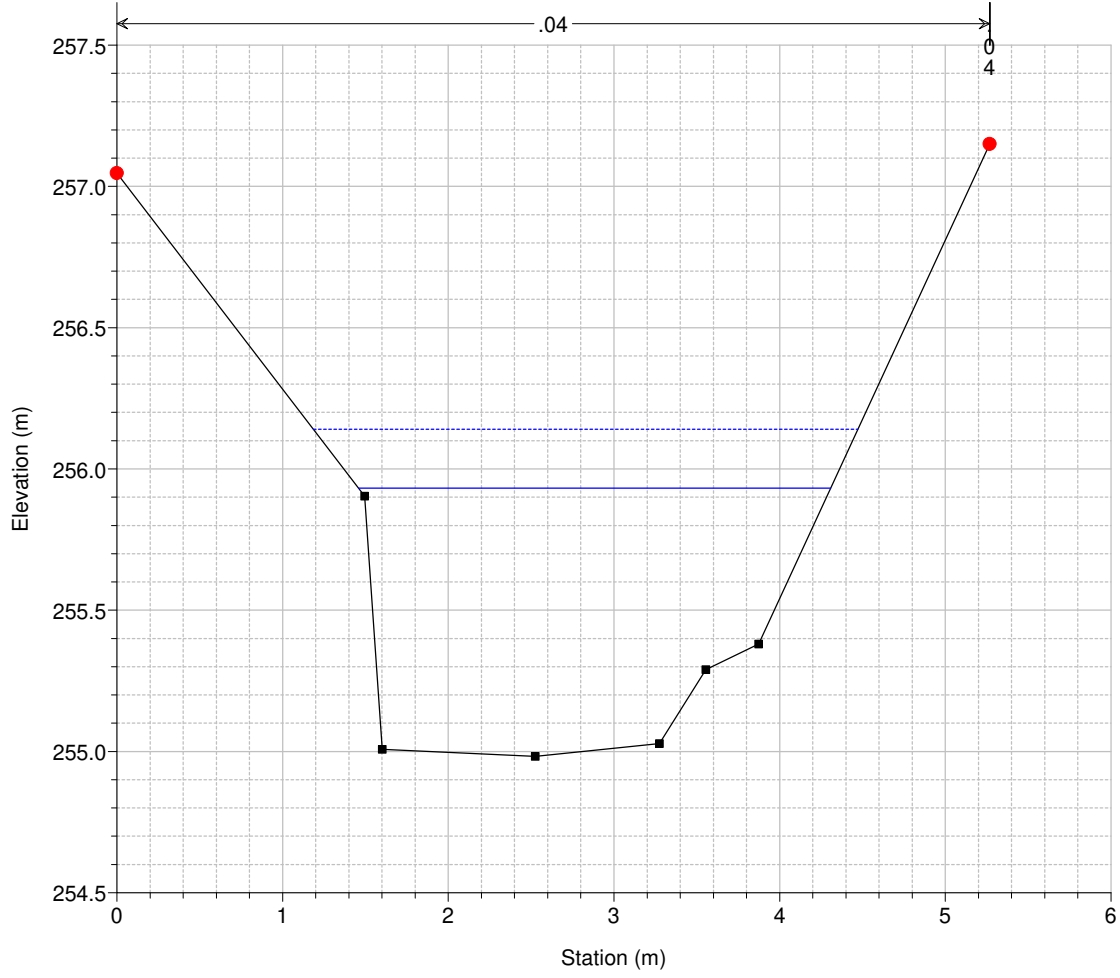


Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4545 BR Ferrovia Firenze Roma

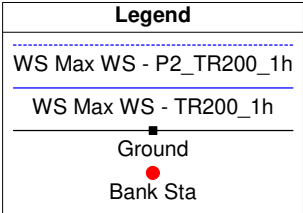
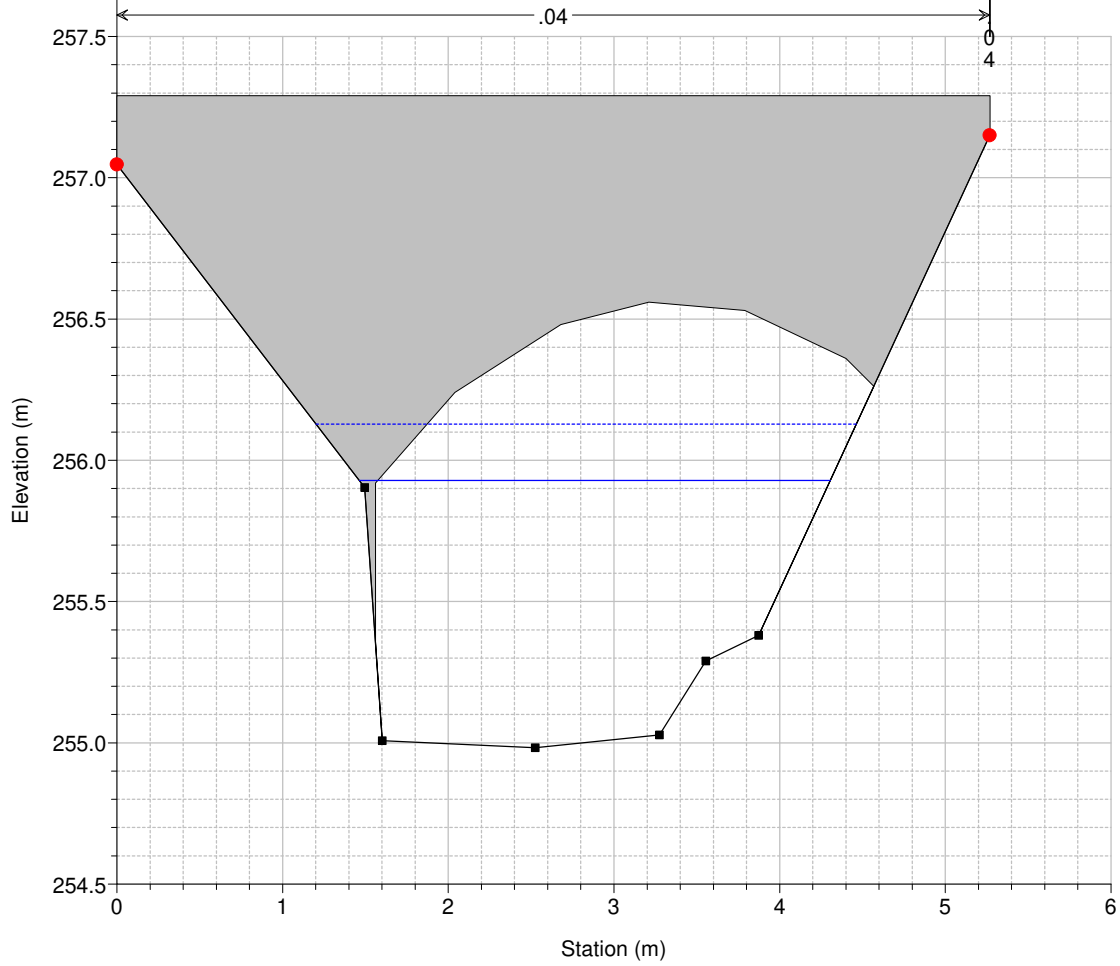




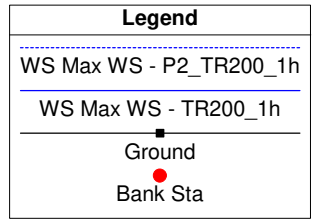
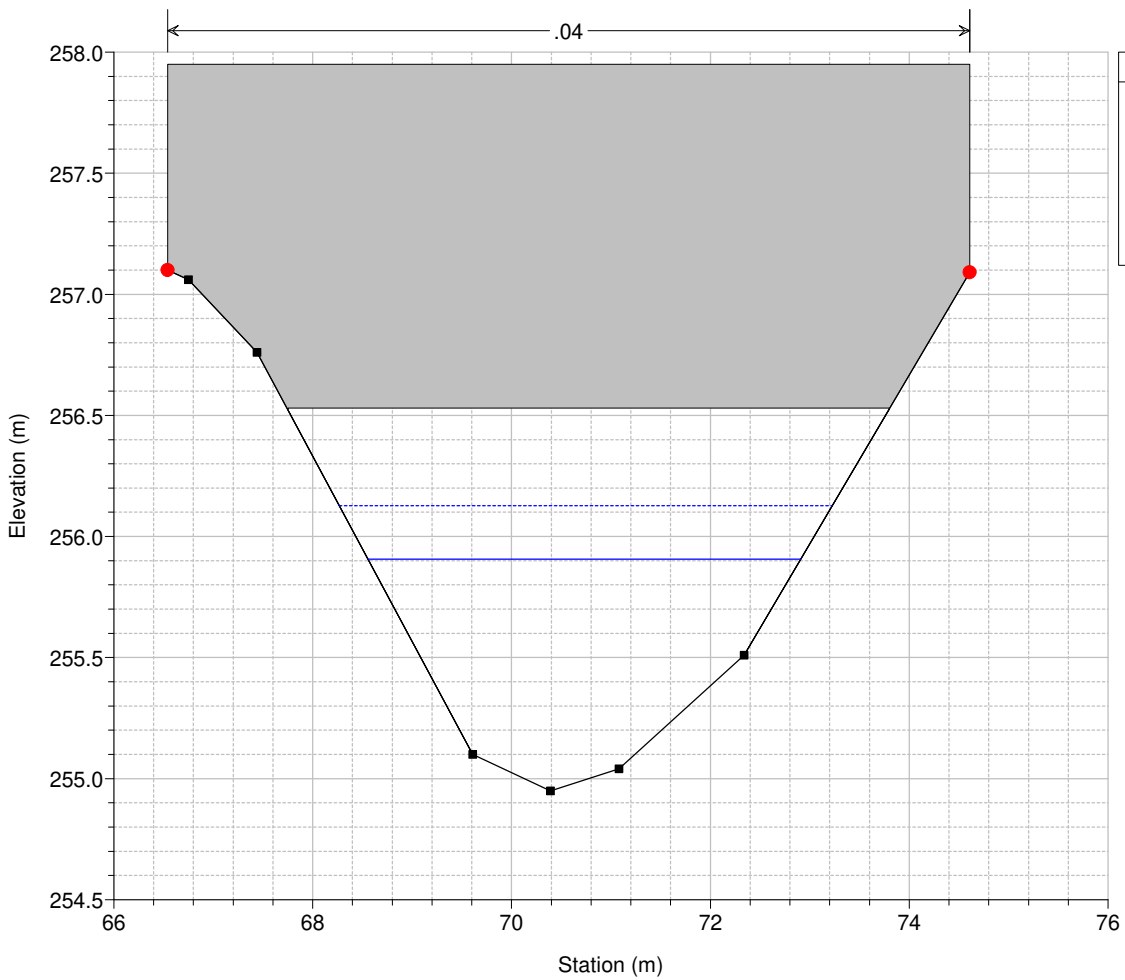
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4512 C189 - (SE_09)- da modello SELLINA_5



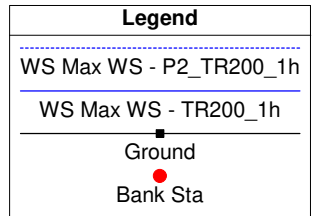
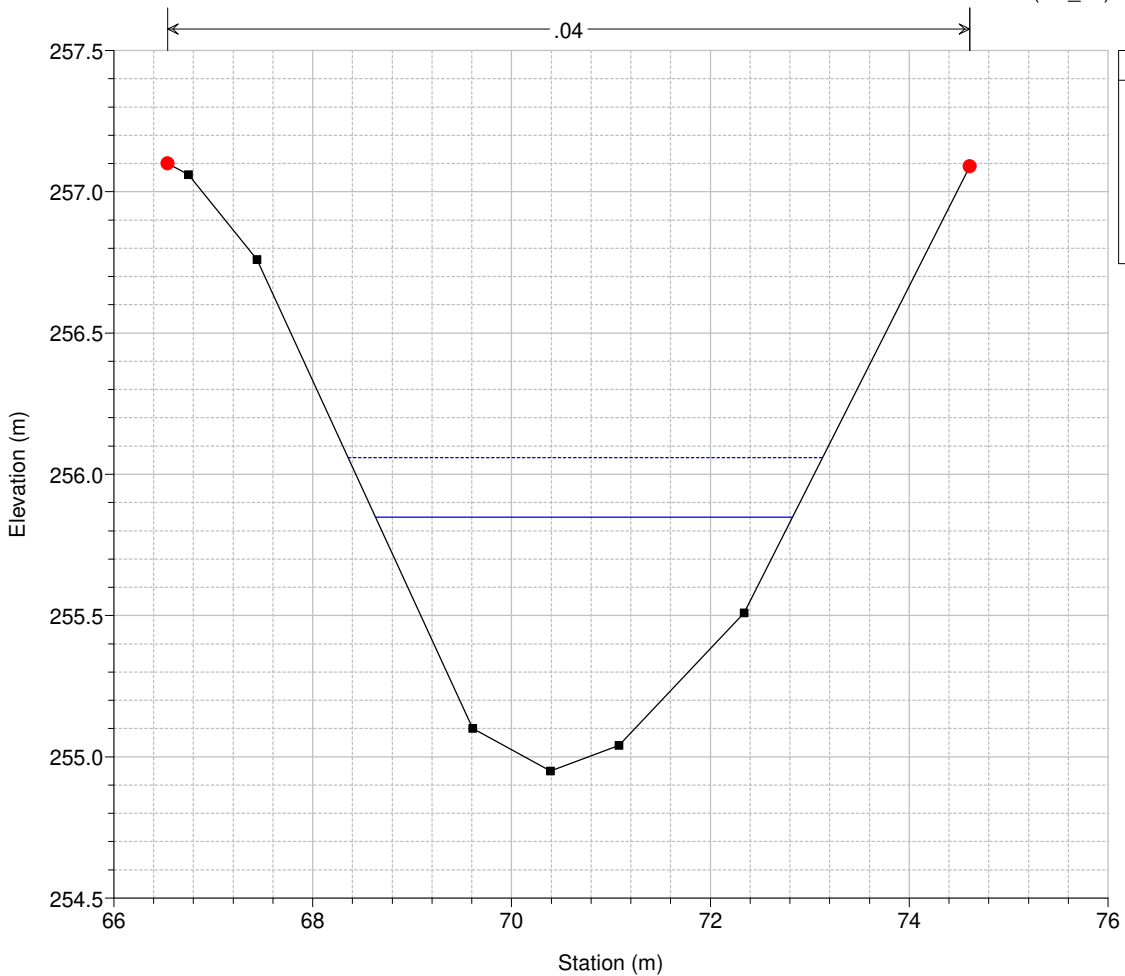
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4500 BR Via Padre Teodosio



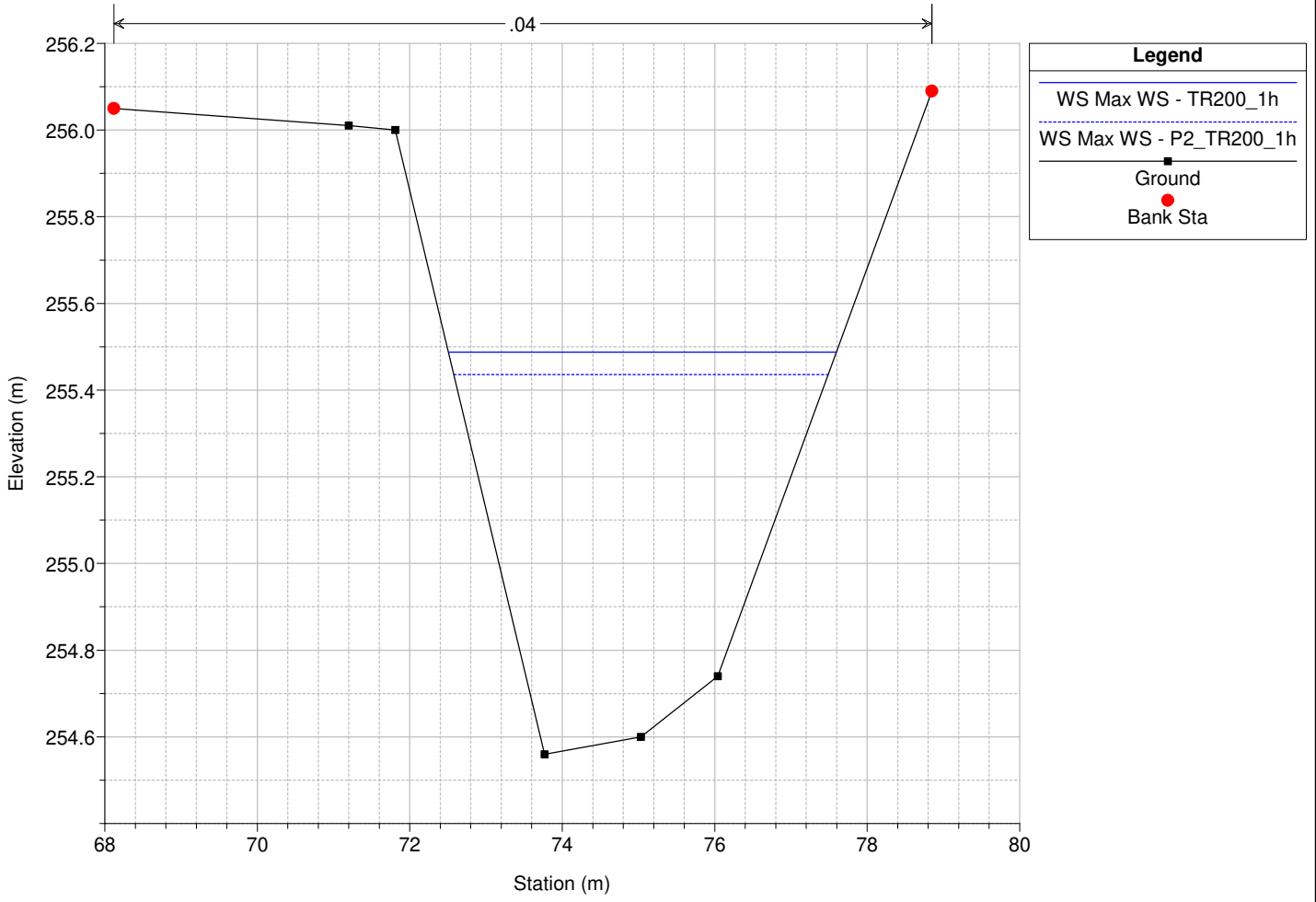
Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4500 BR Via Padre Teodosio



Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
 River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4497 C190 - (SE_08)



Sellina_Fossatone Plan: 1) TR200_1h 2) P2_TR200_1h
River = Sellina-Fossaton Reach = Sellina-Fossaton RS = 4429 C191 - (SE_07)



| River | Reach | River Sta | Profile | Plan | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|------------------|------------------|-----------|---------|-------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Sellina-Fossaton | Sellina-Fossaton | 6542 | Max WS | TR200_1h | 37.00 | 281.02 | 282.70 | 282.93 | 283.77 | 0.033713 | 4.58 | 8.08 | 6.00 | 1.26 |
| Sellina-Fossaton | Sellina-Fossaton | 6555 | Max WS | P2_TR200_1h | 37.00 | 281.02 | 282.70 | 282.93 | 283.77 | 0.033634 | 4.58 | 8.08 | 6.00 | 1.26 |
| Sellina-Fossaton | Sellina-Fossaton | 6554 | Max WS | TR200_1h | 37.01 | 280.98 | 282.67 | 282.91 | 283.76 | 0.034703 | 4.63 | 7.99 | 6.00 | 1.28 |
| Sellina-Fossaton | Sellina-Fossaton | 6554 | Max WS | P2_TR200_1h | 37.00 | 280.98 | 282.67 | 282.91 | 283.76 | 0.034630 | 4.63 | 7.99 | 6.00 | 1.28 |
| Sellina-Fossaton | Sellina-Fossaton | 6549 | | Lat Struct | | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 6548 | | Lat Struct | | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 6542.2 | Max WS | TR200_1h | 32.90 | 280.55 | 282.29 | 282.44 | 283.18 | 0.027974 | 4.17 | 7.90 | 6.15 | 1.17 |
| Sellina-Fossaton | Sellina-Fossaton | 6542.2 | Max WS | P2_TR200_1h | 32.89 | 280.55 | 282.30 | 282.44 | 283.18 | 0.027803 | 4.16 | 7.91 | 6.15 | 1.17 |
| Sellina-Fossaton | Sellina-Fossaton | 6491 | Max WS | TR200_1h | 36.22 | 278.65 | 280.92 | 280.92 | 281.68 | 0.020120 | 3.84 | 9.42 | 6.21 | 1.00 |
| Sellina-Fossaton | Sellina-Fossaton | 6491 | Max WS | P2_TR200_1h | 36.23 | 278.65 | 280.97 | 280.92 | 281.68 | 0.018374 | 3.72 | 9.74 | 6.26 | 0.95 |
| Sellina-Fossaton | Sellina-Fossaton | 6423 | Max WS | TR200_1h | 32.02 | 276.97 | 279.28 | 279.13 | 280.36 | 0.055673 | 4.62 | 6.93 | 1.55 | 0.97 |
| Sellina-Fossaton | Sellina-Fossaton | 6423 | Max WS | P2_TR200_1h | 31.08 | 276.97 | 279.36 | 279.11 | 280.37 | 0.061707 | 4.44 | 6.99 | | 0.92 |
| Sellina-Fossaton | Sellina-Fossaton | 6410 | Max WS | TR200_1h | 32.02 | 276.74 | 279.00 | 278.90 | 279.98 | 0.033867 | 4.38 | 7.31 | 2.86 | 0.93 |
| Sellina-Fossaton | Sellina-Fossaton | 6410 | Max WS | P2_TR200_1h | 31.06 | 276.74 | 279.07 | 278.88 | 279.95 | 0.031098 | 4.14 | 7.50 | 2.51 | 0.87 |
| Sellina-Fossaton | Sellina-Fossaton | 6409.9 | | Lat Struct | | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 6409.8 | | Lat Struct | | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 6407 | Max WS | TR200_1h | 31.59 | 276.39 | 278.85 | 278.82 | 279.65 | 0.022775 | 3.94 | 8.01 | 4.78 | 0.97 |
| Sellina-Fossaton | Sellina-Fossaton | 6407 | Max WS | P2_TR200_1h | 30.72 | 276.39 | 278.86 | 278.79 | 279.60 | 0.021231 | 3.82 | 8.05 | 4.78 | 0.94 |
| Sellina-Fossaton | Sellina-Fossaton | 6332 | Max WS | TR200_1h | 28.57 | 275.37 | 277.62 | 277.49 | 278.07 | 0.014679 | 2.97 | 9.63 | 7.88 | 0.86 |
| Sellina-Fossaton | Sellina-Fossaton | 6332 | Max WS | P2_TR200_1h | 28.01 | 275.37 | 277.60 | 277.48 | 278.05 | 0.014751 | 2.95 | 9.48 | 7.86 | 0.86 |
| Sellina-Fossaton | Sellina-Fossaton | 6160 | Max WS | TR200_1h | 21.59 | 272.83 | 274.84 | 274.79 | 275.36 | 0.020214 | 3.19 | 6.77 | 5.83 | 0.95 |
| Sellina-Fossaton | Sellina-Fossaton | 6160 | Max WS | P2_TR200_1h | 20.93 | 272.83 | 274.85 | 274.75 | 275.33 | 0.018777 | 3.08 | 6.80 | 5.83 | 0.91 |
| Sellina-Fossaton | Sellina-Fossaton | 6149 | | Lat Struct | | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 6148 | | Lat Struct | | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 5971 | Max WS | TR200_1h | 13.33 | 270.00 | 271.78 | 271.58 | 272.10 | 0.014883 | 2.49 | 5.35 | 5.34 | 0.80 |
| Sellina-Fossaton | Sellina-Fossaton | 5971 | Max WS | P2_TR200_1h | 12.90 | 270.00 | 271.74 | 271.55 | 272.06 | 0.015516 | 2.50 | 5.16 | 5.34 | 0.81 |
| Sellina-Fossaton | Sellina-Fossaton | 5904 | Max WS | P2_TR200_1h | 11.01 | 269.02 | 271.20 | 270.46 | 271.29 | 0.003150 | 1.37 | 8.05 | 5.80 | 0.37 |
| Sellina-Fossaton | Sellina-Fossaton | 5898 | Max WS | P2_TR200_1h | 10.20 | 268.98 | 270.71 | 270.25 | 271.05 | 0.048039 | 2.58 | 3.96 | 4.33 | 0.63 |
| Sellina-Fossaton | Sellina-Fossaton | 5893 | Max WS | P2_TR200_1h | 10.20 | 268.94 | 270.60 | 270.09 | 270.93 | 0.046971 | 2.55 | 4.00 | 4.26 | 0.63 |
| Sellina-Fossaton | Sellina-Fossaton | 5882 | Max WS | P2_TR200_1h | 9.89 | 268.81 | 270.52 | 270.03 | 270.71 | 0.008139 | 1.89 | 5.23 | 5.16 | 0.60 |
| Sellina-Fossaton | Sellina-Fossaton | 5859 | Max WS | TR200_1h | 11.08 | 268.67 | 270.39 | 270.13 | 270.69 | 0.014974 | 2.45 | 4.52 | 4.13 | 0.75 |
| Sellina-Fossaton | Sellina-Fossaton | 5859 | Max WS | P2_TR200_1h | 9.87 | 268.67 | 270.22 | 270.02 | 270.55 | 0.017725 | 2.55 | 3.86 | 3.76 | 0.80 |
| Sellina-Fossaton | Sellina-Fossaton | 5844.81 | Max WS | P2_TR200_1h | 9.87 | 268.47 | 269.97 | 269.82 | 270.30 | 0.017841 | 2.55 | 3.87 | 4.01 | 0.83 |
| Sellina-Fossaton | Sellina-Fossaton | 5813.40 | Max WS | P2_TR200_1h | 9.87 | 268.03 | 269.45 | 269.30 | 269.75 | 0.015148 | 2.43 | 4.06 | 4.19 | 0.79 |
| Sellina-Fossaton | Sellina-Fossaton | 5770 | Max WS | P2_TR200_1h | 9.88 | 267.41 | 269.02 | 268.52 | 269.17 | 0.005706 | 1.74 | 5.68 | 4.37 | 0.49 |
| Sellina-Fossaton | Sellina-Fossaton | 5762 | Max WS | P2_TR200_1h | 9.88 | 267.31 | 268.97 | 268.39 | 269.10 | 0.004844 | 1.64 | 6.03 | 4.40 | 0.45 |
| Sellina-Fossaton | Sellina-Fossaton | 5732 | Max WS | TR200_1h | 10.52 | 267.21 | 268.71 | 268.51 | 268.99 | 0.012905 | 2.34 | 4.49 | 4.70 | 0.76 |
| Sellina-Fossaton | Sellina-Fossaton | 5732 | Max WS | P2_TR200_1h | 9.87 | 267.21 | 268.66 | 268.46 | 268.93 | 0.013175 | 2.31 | 4.27 | 4.69 | 0.77 |
| Sellina-Fossaton | Sellina-Fossaton | 5650 | Max WS | TR200_1h | 10.35 | 266.36 | 267.77 | 267.46 | 267.99 | 0.008735 | 2.07 | 5.01 | 4.63 | 0.63 |
| Sellina-Fossaton | Sellina-Fossaton | 5650 | Max WS | P2_TR200_1h | 9.82 | 266.36 | 267.70 | 267.43 | 267.93 | 0.009373 | 2.09 | 4.70 | 4.58 | 0.66 |
| Sellina-Fossaton | Sellina-Fossaton | 5577 | Max WS | TR200_1h | 9.18 | 265.44 | 266.89 | 266.65 | 267.17 | 0.015785 | 2.35 | 3.91 | 3.90 | 0.75 |
| Sellina-Fossaton | Sellina-Fossaton | 5577 | Max WS | P2_TR200_1h | 8.11 | 265.44 | 266.78 | 266.51 | 267.05 | 0.016370 | 2.33 | 3.49 | 3.62 | 0.76 |
| Sellina-Fossaton | Sellina-Fossaton | 4621 | Max WS | TR200_1h | 6.19 | 262.20 | 263.46 | 263.29 | 263.71 | 0.014765 | 2.24 | 2.76 | 3.13 | 0.76 |
| Sellina-Fossaton | Sellina-Fossaton | 4621 | Max WS | P2_TR200_1h | 5.46 | 262.20 | 263.38 | 263.22 | 263.62 | 0.014462 | 2.16 | 2.53 | 3.04 | 0.75 |
| Sellina-Fossaton | Sellina-Fossaton | 4620.9 | | Lat Struct | | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4620.8 | | Lat Struct | | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4620 | Max WS | TR200_1h | 6.19 | 261.50 | 262.57 | 262.56 | 262.91 | 0.023155 | 2.61 | 2.37 | 3.34 | 0.99 |
| Sellina-Fossaton | Sellina-Fossaton | 4620 | Max WS | P2_TR200_1h | 5.46 | 261.50 | 262.51 | 262.49 | 262.83 | 0.021987 | 2.48 | 2.20 | 3.23 | 0.96 |
| Sellina-Fossaton | Sellina-Fossaton | 4619 | Max WS | TR200_1h | 6.19 | 261.01 | 261.96 | 261.72 | 262.08 | 0.006765 | 1.50 | 4.11 | 6.09 | 0.58 |
| Sellina-Fossaton | Sellina-Fossaton | 4619 | Max WS | P2_TR200_1h | 5.46 | 261.01 | 261.90 | 261.68 | 262.01 | 0.006816 | 1.45 | 3.75 | 5.90 | 0.58 |
| Sellina-Fossaton | Sellina-Fossaton | 4618 | Max WS | TR200_1h | 6.19 | 260.28 | 261.32 | 261.02 | 261.42 | 0.005590 | 1.43 | 4.33 | 5.93 | 0.53 |
| Sellina-Fossaton | Sellina-Fossaton | 4618 | Max WS | P2_TR200_1h | 5.46 | 260.28 | 261.23 | 260.97 | 261.34 | 0.006097 | 1.42 | 3.84 | 5.66 | 0.55 |
| Sellina-Fossaton | Sellina-Fossaton | 4617 | Max WS | TR200_1h | 6.19 | 260.32 | 261.20 | 260.96 | 261.35 | 0.008907 | 1.73 | 3.58 | 4.44 | 0.61 |
| Sellina-Fossaton | Sellina-Fossaton | 4617 | Max WS | P2_TR200_1h | 5.45 | 260.32 | 261.12 | 260.91 | 261.27 | 0.009055 | 1.67 | 3.27 | 4.40 | 0.62 |
| Sellina-Fossaton | Sellina-Fossaton | 4616 | Max WS | TR200_1h | 6.19 | 259.45 | 260.41 | 260.15 | 260.57 | 0.009474 | 1.79 | 3.46 | 3.88 | 0.60 |
| Sellina-Fossaton | Sellina-Fossaton | 4616 | Max WS | P2_TR200_1h | 5.45 | 259.45 | 260.33 | 260.10 | 260.48 | 0.009476 | 1.72 | 3.17 | 3.86 | 0.61 |
| Sellina-Fossaton | Sellina-Fossaton | 4615 | Max WS | TR200_1h | 6.19 | 258.10 | 259.06 | 258.85 | 259.24 | 0.010243 | 1.86 | 3.33 | 3.98 | 0.65 |
| Sellina-Fossaton | Sellina-Fossaton | 4615 | Max WS | P2_TR200_1h | 5.46 | 258.10 | 258.96 | 258.80 | 259.14 | 0.011610 | 1.87 | 2.92 | 3.96 | 0.69 |
| Sellina-Fossaton | Sellina-Fossaton | 4614 | Max WS | TR200_1h | 6.19 | 257.75 | 258.88 | 258.40 | 258.96 | 0.003326 | 1.22 | 5.06 | 5.20 | 0.40 |
| Sellina-Fossaton | Sellina-Fossaton | 4614 | Max WS | P2_TR200_1h | 5.45 | 257.75 | 258.57 | 258.36 | 258.70 | 0.007671 | 1.56 | 3.50 | 4.97 | 0.59 |
| Sellina-Fossaton | Sellina-Fossaton | 4613.7 | Max WS | TR200_1h | 6.19 | 257.74 | 258.90 | 258.28 | 258.95 | 0.002540 | 1.08 | 5.75 | 5.00 | 0.32 |
| Sellina-Fossaton | Sellina-Fossaton | 4613.7 | Max WS | P2_TR200_1h | 5.45 | 257.74 | 258.59 | 258.24 | 258.68 | 0.004835 | 1.28 | 4.25 | 5.00 | 0.44 |
| Sellina-Fossaton | Sellina-Fossaton | 4613.5 | | Bridge | | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4613.3 | Max WS | TR200_1h | 6.19 | 257.71 | 258.88 | 258.25 | 258.94 | 0.002422 | 1.06 | 5.85 | 5.00 | 0.31 |
| Sellina-Fossaton | Sellina-Fossaton | 4613.3 | Max WS | P2_TR200_1h | 5.45 | 257.71 | 258.55 | 258.20 | 258.64 | 0.004924 | 1.29 | 4.22 | 5.00 | 0.45 |

HEC-RAS Locations: User Defined Profile: Max WS (Continued)

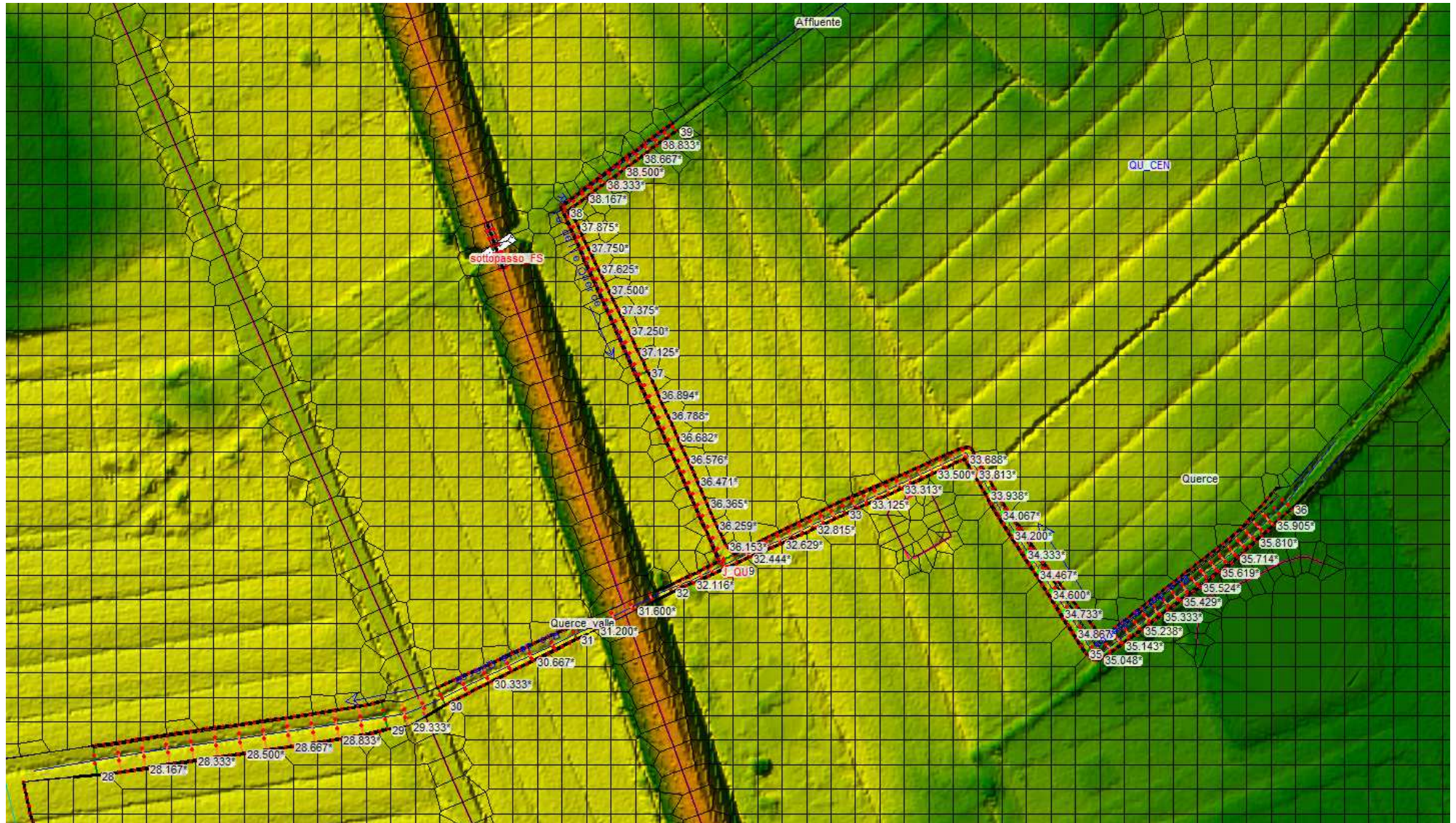
| River | Reach | River Sta | Profile | Plan | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|------------------|------------------|-----------|---------|-------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Sellina-Fossaton | Sellina-Fossaton | 4613.09 | | | | | | | | | | | | |
| | | | | | Lat Struct | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4613.08 | | | | | | | | | | | | |
| | | | | | Lat Struct | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4613 | Max WS | TR200_1h | 6.19 | 257.70 | 258.86 | 258.30 | 258.93 | 0.002921 | 1.17 | 5.30 | 4.87 | 0.36 |
| Sellina-Fossaton | Sellina-Fossaton | 4613 | Max WS | P2_TR200_1h | 5.46 | 257.70 | 258.52 | 258.26 | 258.63 | 0.006742 | 1.49 | 3.66 | 4.75 | 0.54 |
| Sellina-Fossaton | Sellina-Fossaton | 4612 | Max WS | TR200_1h | 6.19 | 257.26 | 258.76 | 257.89 | 258.81 | 0.001891 | 0.96 | 6.48 | 5.49 | 0.28 |
| Sellina-Fossaton | Sellina-Fossaton | 4612 | Max WS | P2_TR200_1h | 5.46 | 257.26 | 258.21 | 257.84 | 258.30 | 0.005428 | 1.39 | 3.91 | 4.32 | 0.47 |
| Sellina-Fossaton | Sellina-Fossaton | 4611 | Max WS | TR200_1h | 5.26 | 257.09 | 258.73 | 257.71 | 258.76 | 0.000971 | 0.78 | 7.32 | 9.17 | 0.20 |
| Sellina-Fossaton | Sellina-Fossaton | 4611 | Max WS | P2_TR200_1h | 5.45 | 257.09 | 257.60 | 257.73 | 258.07 | 0.050621 | 3.02 | 1.80 | 3.99 | 1.44 |
| Sellina-Fossaton | Sellina-Fossaton | 4610.5 | Max WS | P2_TR200_1h | 5.45 | 257.03 | 257.47 | 257.74 | 258.46 | 0.013764 | 4.40 | 1.24 | 3.50 | 2.36 |
| Sellina-Fossaton | Sellina-Fossaton | 4609.5 | Max WS | P2_TR200_1h | 5.46 | 256.47 | 257.03 | 257.19 | 257.58 | 0.005585 | 3.27 | 1.67 | 3.50 | 1.52 |
| Sellina-Fossaton | Sellina-Fossaton | 4607 | Max WS | TR200_1h | 3.32 | 256.58 | 257.41 | 257.28 | 257.55 | 0.011644 | 1.67 | 1.98 | 3.57 | 0.72 |
| Sellina-Fossaton | Sellina-Fossaton | 4607 | Max WS | P2_TR200_1h | 5.46 | 256.43 | 256.99 | 257.03 | 257.32 | 0.016876 | 2.54 | 2.15 | 4.15 | 1.12 |
| Sellina-Fossaton | Sellina-Fossaton | 4606 | Max WS | TR200_1h | 3.32 | 256.43 | 257.17 | 257.10 | 257.34 | 0.015134 | 1.82 | 1.83 | 3.62 | 0.82 |
| Sellina-Fossaton | Sellina-Fossaton | 4606 | Max WS | P2_TR200_1h | 5.46 | 256.10 | 256.77 | 256.71 | 256.99 | 0.009681 | 2.11 | 2.59 | 4.27 | 0.86 |
| Sellina-Fossaton | Sellina-Fossaton | 4605 | Max WS | TR200_1h | 3.32 | 256.02 | 256.70 | 256.66 | 256.87 | 0.017937 | 1.87 | 1.78 | 3.95 | 0.89 |
| Sellina-Fossaton | Sellina-Fossaton | 4605 | Max WS | P2_TR200_1h | 5.46 | 255.76 | 256.52 | 256.37 | 256.69 | 0.006519 | 1.84 | 2.96 | 4.37 | 0.71 |
| Sellina-Fossaton | Sellina-Fossaton | 4604.5 | Max WS | P2_TR200_1h | 5.45 | 255.52 | 256.46 | 256.12 | 256.56 | 0.002923 | 1.39 | 3.93 | 4.86 | 0.49 |
| Sellina-Fossaton | Sellina-Fossaton | 4604 | Max WS | TR200_1h | 3.32 | 255.25 | 256.36 | 255.93 | 256.42 | 0.003385 | 1.06 | 3.12 | 4.27 | 0.40 |
| Sellina-Fossaton | Sellina-Fossaton | 4604 | Max WS | P2_TR200_1h | 5.45 | 255.25 | 256.46 | 255.85 | 256.51 | 0.001262 | 1.03 | 5.28 | 5.25 | 0.33 |
| Sellina-Fossaton | Sellina-Fossaton | 4603 | Max WS | TR200_1h | 3.32 | 255.21 | 256.37 | 255.91 | 256.41 | 0.002237 | 0.87 | 3.80 | 5.24 | 0.33 |
| Sellina-Fossaton | Sellina-Fossaton | 4603 | Max WS | P2_TR200_1h | 5.45 | 255.21 | 256.46 | 255.81 | 256.51 | 0.001034 | 0.95 | 5.76 | 5.83 | 0.30 |
| Sellina-Fossaton | Sellina-Fossaton | 4602 | Max WS | TR200_1h | 3.32 | 255.04 | 256.34 | 255.81 | 256.38 | 0.002129 | 0.88 | 3.78 | 4.92 | 0.32 |
| Sellina-Fossaton | Sellina-Fossaton | 4602 | Max WS | P2_TR200_1h | 5.45 | 255.04 | 256.42 | 255.90 | 256.49 | 0.001872 | 1.19 | 4.58 | 5.19 | 0.40 |
| Sellina-Fossaton | Sellina-Fossaton | 4600 | Max WS | P2_TR200_1h | 5.45 | 255.02 | 256.41 | 255.74 | 256.48 | 0.000305 | 1.19 | 4.57 | 3.50 | 0.33 |
| Sellina-Fossaton | Sellina-Fossaton | 4590 | Max WS | P2_TR200_1h | 5.46 | 255.01 | 256.41 | 255.73 | 256.48 | 0.000300 | 1.19 | 4.59 | 3.50 | 0.33 |
| Sellina-Fossaton | Sellina-Fossaton | 4548* | Max WS | TR200_1h | 3.32 | 255.01 | 256.13 | 255.69 | 256.19 | 0.003226 | 1.04 | 3.18 | 4.31 | 0.39 |
| Sellina-Fossaton | Sellina-Fossaton | 4548* | Max WS | P2_TR200_1h | 5.45 | 255.01 | 256.38 | 255.79 | 256.47 | 0.002540 | 1.31 | 4.17 | 3.70 | 0.39 |
| Sellina-Fossaton | Sellina-Fossaton | 4547 | Max WS | TR200_1h | 3.32 | 255.01 | 256.11 | 255.68 | 256.17 | 0.003384 | 1.16 | 2.85 | 4.25 | 0.41 |
| Sellina-Fossaton | Sellina-Fossaton | 4547 | Max WS | P2_TR200_1h | 5.45 | 255.01 | 256.35 | 255.89 | 256.46 | 0.004189 | 1.47 | 3.71 | 4.87 | 0.46 |
| Sellina-Fossaton | Sellina-Fossaton | 4545 | | | Bridge | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4543 | Max WS | TR200_1h | 3.32 | 254.99 | 256.12 | 255.51 | 256.16 | 0.001234 | 0.87 | 3.81 | 4.36 | 0.27 |
| Sellina-Fossaton | Sellina-Fossaton | 4543 | Max WS | P2_TR200_1h | 5.46 | 254.99 | 256.38 | 255.69 | 256.44 | 0.001639 | 1.16 | 4.71 | 4.58 | 0.32 |
| Sellina-Fossaton | Sellina-Fossaton | 4540.9 | | | Lat Struct | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4540.8 | | | Lat Struct | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4538 | Max WS | TR200_1h | 3.32 | 254.99 | 256.11 | 255.51 | 256.15 | 0.001645 | 0.81 | 4.08 | 4.35 | 0.27 |
| Sellina-Fossaton | Sellina-Fossaton | 4538 | Max WS | P2_TR200_1h | 5.46 | 254.99 | 256.37 | 255.68 | 256.42 | 0.002231 | 1.05 | 5.21 | 4.58 | 0.31 |
| Sellina-Fossaton | Sellina-Fossaton | 4512 | Max WS | TR200_1h | 3.32 | 254.98 | 255.93 | 255.67 | 256.05 | 0.009007 | 1.55 | 2.14 | 2.85 | 0.57 |
| Sellina-Fossaton | Sellina-Fossaton | 4512 | Max WS | P2_TR200_1h | 5.46 | 254.98 | 256.14 | 255.89 | 256.34 | 0.012286 | 1.96 | 2.78 | 3.29 | 0.68 |
| Sellina-Fossaton | Sellina-Fossaton | 4500 | | | Bridge | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4497 | Max WS | TR200_1h | 3.32 | 254.95 | 255.85 | 255.64 | 255.95 | 0.007374 | 1.38 | 2.40 | 4.20 | 0.58 |
| Sellina-Fossaton | Sellina-Fossaton | 4497 | Max WS | P2_TR200_1h | 5.46 | 254.95 | 256.06 | 255.83 | 256.19 | 0.007981 | 1.63 | 3.35 | 4.77 | 0.62 |
| Sellina-Fossaton | Sellina-Fossaton | 4489 | | | Lat Struct | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4488 | | | Lat Struct | | | | | | | | | |
| Sellina-Fossaton | Sellina-Fossaton | 4429 | Max WS | TR200_1h | 3.32 | 254.56 | 255.49 | 255.16 | 255.54 | 0.003846 | 1.06 | 3.14 | 5.09 | 0.43 |
| Sellina-Fossaton | Sellina-Fossaton | 4429 | Max WS | P2_TR200_1h | 5.45 | 254.56 | 255.44 | 255.34 | 255.62 | 0.013200 | 1.90 | 2.88 | 4.91 | 0.79 |

| River | Reach | River Sta | Profile | Plan | Q US (m3/s) | Q Leaving Total (m3/s) | Q DS (m3/s) | Q Weir (m3/s) | Q Gates (m3/s) | Wt Top Wtdh (m) | Weir Max Depth (m) | Weir Avg Depth (m) | Min El Weir Flow (m) | E.G. US. (m) | W.S. US. (m) | E.G. DS (m) | W.S. DS (m) |
|------------------|------------------|-----------|---------|-------------|----------------|---------------------------|----------------|------------------|-------------------|--------------------|-----------------------|-----------------------|-------------------------|-----------------|-----------------|----------------|----------------|
| Sellina-Fossaton | Sellina-Fossaton | 6549 | Max WS | TR200_1h | 37.01 | 3.91 | 32.02 | 3.91 | | 130.68 | 1.18 | 0.56 | 279.28 | 283.76 | 282.66 | 280.37 | 279.30 |
| Sellina-Fossaton | Sellina-Fossaton | 6549 | Max WS | P2_TR200_1h | 37.00 | 4.35 | 31.06 | 4.35 | | 130.68 | 1.18 | 0.61 | 279.28 | 283.75 | 282.66 | 280.37 | 279.38 |
| Sellina-Fossaton | Sellina-Fossaton | 6548 | Max WS | TR200_1h | 37.01 | -0.22 | 32.02 | -0.22 | | 72.31 | 0.49 | 0.29 | 279.61 | 283.76 | 282.66 | 280.37 | 279.30 |
| Sellina-Fossaton | Sellina-Fossaton | 6548 | Max WS | P2_TR200_1h | 37.00 | -0.13 | 31.06 | -0.13 | | 77.33 | 0.50 | 0.28 | 279.61 | 283.76 | 282.66 | 280.37 | 279.39 |
| Sellina-Fossaton | Sellina-Fossaton | 6409.9 | Max WS | TR200_1h | 32.02 | 5.55 | 21.59 | 5.55 | | 249.62 | 0.83 | 0.24 | 274.36 | 279.97 | 279.00 | 275.36 | 274.84 |
| Sellina-Fossaton | Sellina-Fossaton | 6409.9 | Max WS | P2_TR200_1h | 31.06 | 5.49 | 20.93 | 5.49 | | 254.71 | 0.86 | 0.25 | 274.36 | 279.94 | 279.07 | 275.33 | 274.85 |
| Sellina-Fossaton | Sellina-Fossaton | 6409.8 | Max WS | TR200_1h | 32.02 | 3.33 | 21.59 | 3.33 | | 256.16 | 0.65 | 0.39 | 274.82 | 279.97 | 279.00 | 275.36 | 274.84 |
| Sellina-Fossaton | Sellina-Fossaton | 6409.8 | Max WS | P2_TR200_1h | 31.06 | 3.73 | 20.93 | 3.73 | | 256.16 | 0.70 | 0.39 | 274.82 | 279.94 | 279.07 | 275.33 | 274.85 |
| Sellina-Fossaton | Sellina-Fossaton | 6149 | Max WS | TR200_1h | 21.59 | 9.37 | 11.08 | 9.37 | | 301.08 | 0.48 | 0.22 | 270.27 | 275.36 | 274.84 | 270.69 | 270.39 |
| Sellina-Fossaton | Sellina-Fossaton | 6149 | Max WS | P2_TR200_1h | 20.93 | 7.27 | 12.90 | 7.27 | | 188.67 | 0.48 | 0.25 | 271.62 | 275.33 | 274.84 | 272.06 | 271.74 |
| Sellina-Fossaton | Sellina-Fossaton | 6148 | Max WS | TR200_1h | 21.59 | 0.14 | 11.08 | 0.14 | | 230.30 | 0.41 | 0.12 | 270.40 | 275.36 | 274.84 | 270.69 | 270.39 |
| Sellina-Fossaton | Sellina-Fossaton | 6148 | Max WS | P2_TR200_1h | 20.93 | 0.76 | 12.90 | 0.76 | | 119.49 | 0.14 | 0.07 | 271.60 | 275.33 | 274.84 | 272.06 | 271.74 |
| Sellina-Fossaton | Sellina-Fossaton | 5970 | Max WS | P2_TR200_1h | 12.90 | -3.53 | 10.20 | -3.53 | | 74.59 | 0.73 | 0.35 | 270.55 | 272.06 | 271.74 | 271.05 | 270.72 |
| Sellina-Fossaton | Sellina-Fossaton | 5969 | Max WS | P2_TR200_1h | 12.90 | 2.12 | 10.20 | 2.12 | | 72.59 | 0.46 | 0.21 | 270.47 | 272.06 | 271.74 | 271.06 | 270.73 |
| Sellina-Fossaton | Sellina-Fossaton | 5891 | Max WS | P2_TR200_1h | 10.20 | 0.34 | 9.88 | 0.34 | | 23.44 | 0.15 | 0.05 | 269.44 | 270.93 | 270.60 | 269.18 | 269.02 |
| Sellina-Fossaton | Sellina-Fossaton | 5890 | Max WS | P2_TR200_1h | 10.20 | -0.06 | 9.88 | -0.06 | | 12.69 | 0.12 | 0.06 | 269.48 | 270.93 | 270.60 | 269.18 | 269.02 |
| Sellina-Fossaton | Sellina-Fossaton | 5761 | Max WS | P2_TR200_1h | 9.88 | 3.61 | 5.46 | 3.61 | | 187.45 | 0.14 | 0.05 | 263.52 | 269.10 | 268.97 | 263.62 | 263.39 |
| Sellina-Fossaton | Sellina-Fossaton | 5760 | Max WS | P2_TR200_1h | 9.88 | 0.02 | 9.82 | 0.02 | | 17.79 | 0.05 | 0.02 | 267.65 | 269.10 | 268.97 | 267.93 | 267.70 |
| Sellina-Fossaton | Sellina-Fossaton | 5648 | Max WS | P2_TR200_1h | 9.82 | 0.79 | 5.46 | 0.79 | | 48.60 | 0.06 | 0.05 | 263.49 | 267.92 | 267.70 | 263.62 | 263.39 |
| Sellina-Fossaton | Sellina-Fossaton | 4620.9 | Max WS | TR200_1h | 6.19 | 0.00 | 6.19 | 0.00 | | | | | 259.56 | 263.71 | 263.46 | 258.95 | 258.89 |
| Sellina-Fossaton | Sellina-Fossaton | 4620.9 | Max WS | P2_TR200_1h | 5.46 | 0.00 | 5.45 | 0.00 | | | | | 259.56 | 263.62 | 263.38 | 258.68 | 258.59 |
| Sellina-Fossaton | Sellina-Fossaton | 4620.8 | Max WS | TR200_1h | 6.19 | 0.00 | 6.19 | 0.00 | | | | | 259.56 | 263.71 | 263.46 | 258.95 | 258.89 |
| Sellina-Fossaton | Sellina-Fossaton | 4620.8 | Max WS | P2_TR200_1h | 5.46 | 0.00 | 5.45 | 0.00 | | | | | 259.56 | 263.62 | 263.38 | 258.68 | 258.59 |
| Sellina-Fossaton | Sellina-Fossaton | 4613.09 | Max WS | TR200_1h | 6.19 | 1.62 | 3.32 | 1.62 | | 33.04 | 0.20 | 0.10 | 258.55 | 258.94 | 258.88 | 258.77 | 258.70 |
| Sellina-Fossaton | Sellina-Fossaton | 4613.09 | Max WS | P2_TR200_1h | 5.45 | 0.00 | 5.45 | 0.00 | | | | | 258.59 | 258.64 | 258.55 | 258.07 | 257.61 |
| Sellina-Fossaton | Sellina-Fossaton | 4613.08 | Max WS | TR200_1h | 6.19 | 1.24 | 3.32 | 1.24 | | 31.08 | 0.15 | 0.09 | 258.59 | 258.94 | 258.88 | 258.77 | 258.70 |
| Sellina-Fossaton | Sellina-Fossaton | 4613.08 | Max WS | P2_TR200_1h | 5.45 | 0.00 | 5.45 | 0.00 | | | | | 258.62 | 258.64 | 258.55 | 258.07 | 257.61 |
| Sellina-Fossaton | Sellina-Fossaton | 4540.9 | Max WS | TR200_1h | 3.32 | 0.00 | 3.32 | 0.00 | | | | | 256.90 | 256.16 | 256.12 | 256.06 | 255.93 |
| Sellina-Fossaton | Sellina-Fossaton | 4540.9 | Max WS | P2_TR200_1h | 5.46 | 0.00 | 5.46 | 0.00 | | | | | 256.90 | 256.44 | 256.38 | 256.34 | 256.14 |
| Sellina-Fossaton | Sellina-Fossaton | 4540.8 | Max WS | TR200_1h | 3.32 | 0.00 | 3.32 | 0.00 | | | | | 257.05 | 256.16 | 256.12 | 256.06 | 255.93 |
| Sellina-Fossaton | Sellina-Fossaton | 4540.8 | Max WS | P2_TR200_1h | 5.46 | 0.00 | 5.46 | 0.00 | | | | | 257.05 | 256.44 | 256.38 | 256.34 | 256.14 |
| Sellina-Fossaton | Sellina-Fossaton | 4489 | Max WS | TR200_1h | 3.32 | 0.40 | 2.88 | 0.40 | | 66.96 | 0.14 | 0.07 | 255.31 | 255.95 | 255.85 | 255.46 | 255.45 |
| Sellina-Fossaton | Sellina-Fossaton | 4489 | Max WS | P2_TR200_1h | 5.46 | 0.00 | 5.46 | 0.00 | | | | | 255.31 | 256.19 | 256.06 | 254.67 | 254.55 |
| Sellina-Fossaton | Sellina-Fossaton | 4488 | Max WS | TR200_1h | 3.32 | 0.00 | 2.88 | 0.00 | | 23.37 | 0.06 | 0.03 | 255.39 | 255.94 | 255.85 | 255.46 | 255.45 |
| Sellina-Fossaton | Sellina-Fossaton | 4488 | Max WS | P2_TR200_1h | 5.46 | 0.00 | 5.46 | 0.00 | | | | | 255.39 | 256.19 | 256.06 | 254.67 | 254.55 |

RIO DELLE QUERCE
Affluente in destra (AV43922)

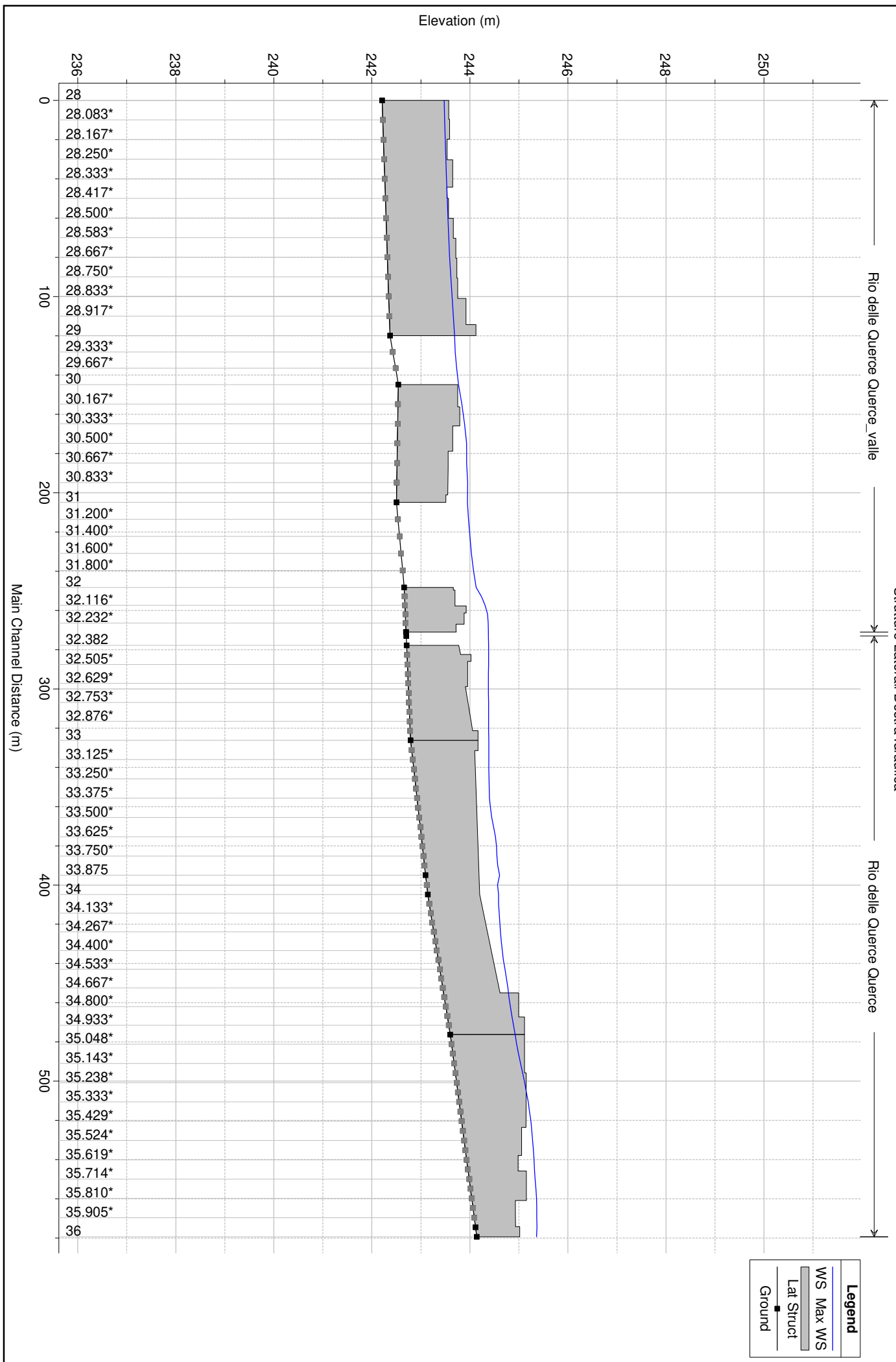
Stato
Attuale

Planimetria Stato Attuale

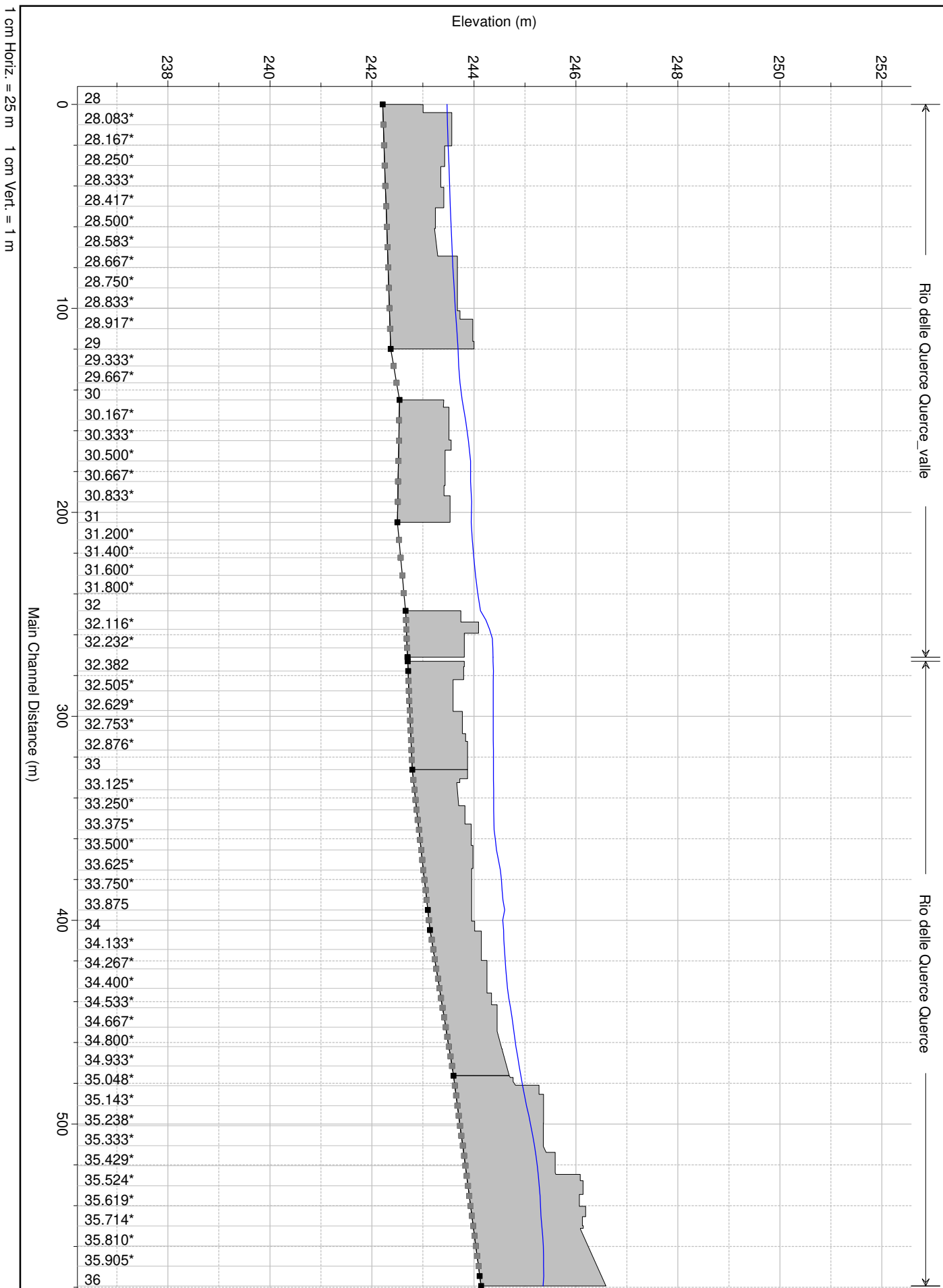


RIO
delle
QUERCE

Rio delle Querce Plan: TR200_30min
 Strutture Laterali Destra Idraulica



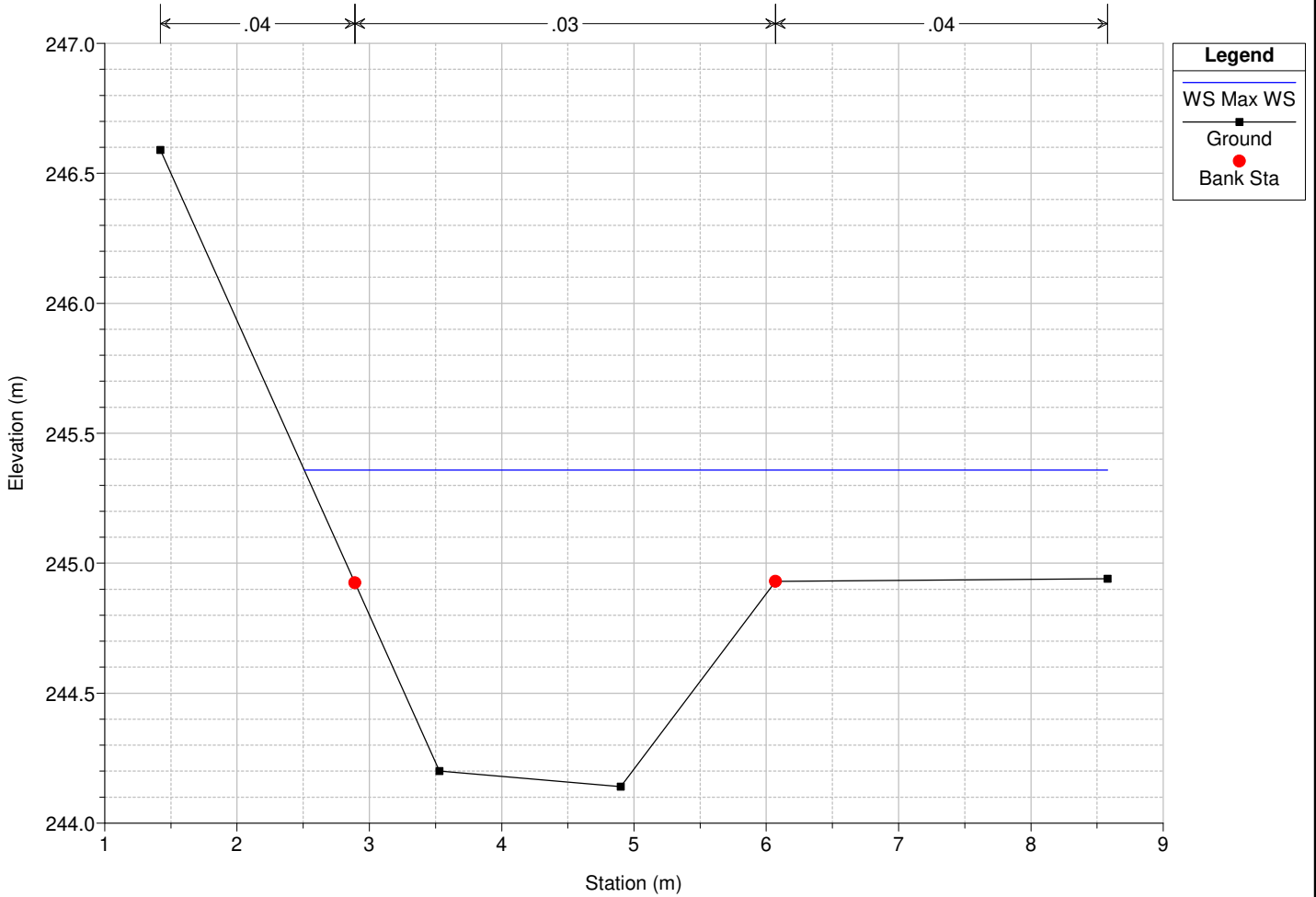
Rio_delle_Querce Plan: TR200_30min
Strutture Laterali Sinistra Idraulica



| |
|---------------|
| Legend |
| WS Max WS |
| Lat Struct |
| Ground |

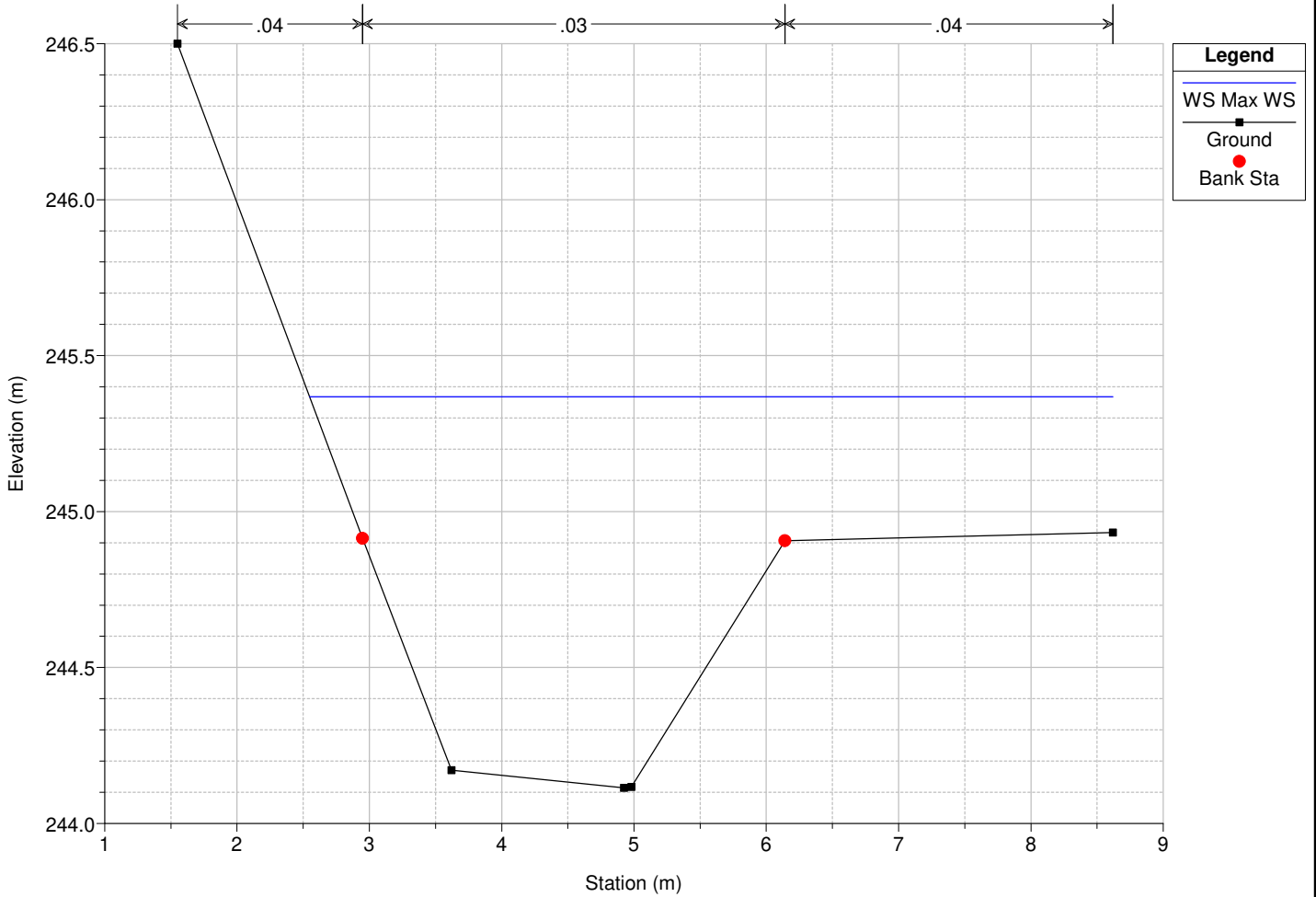
Rio_delle_Querce Plan: TR200_30min

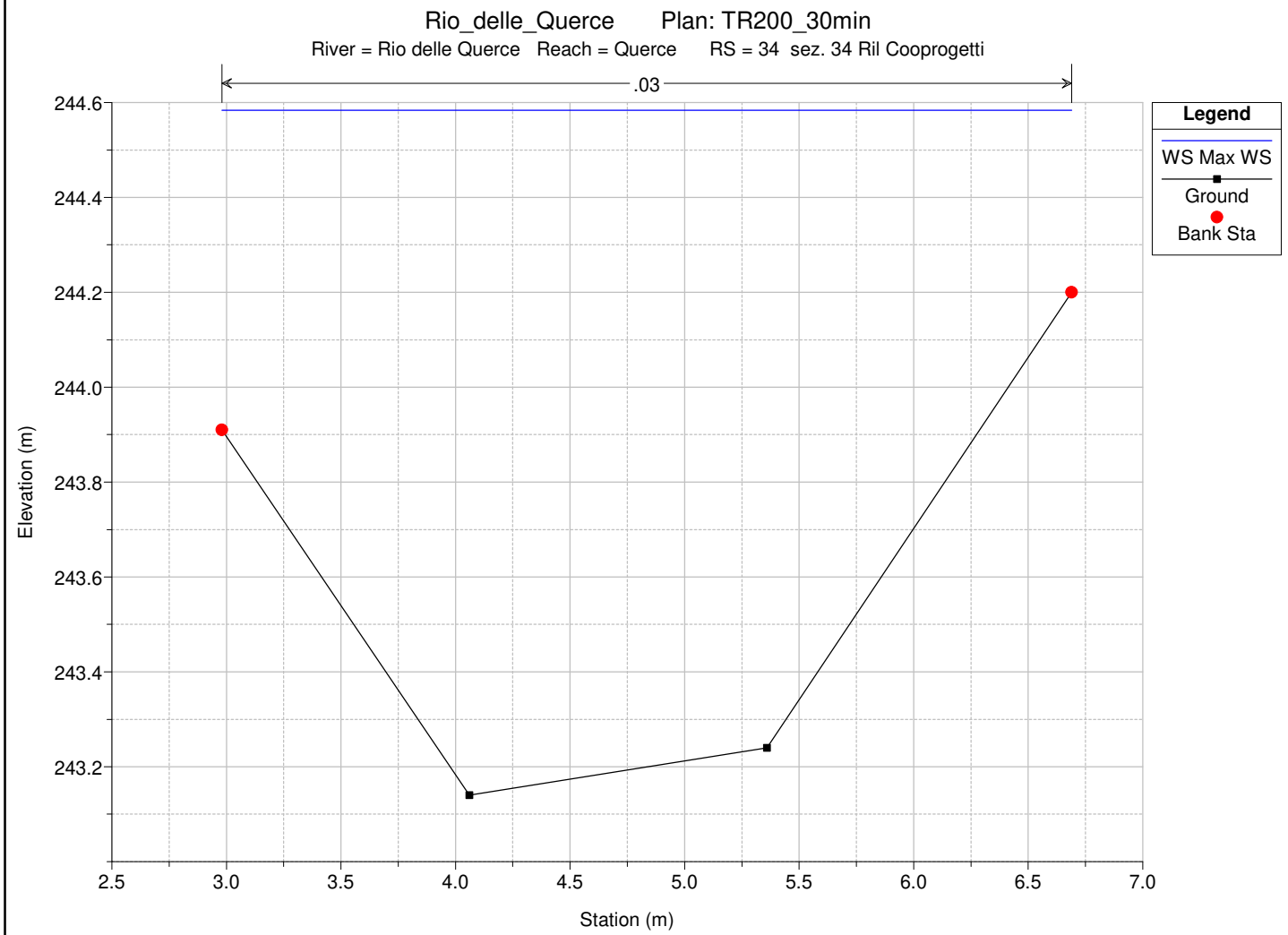
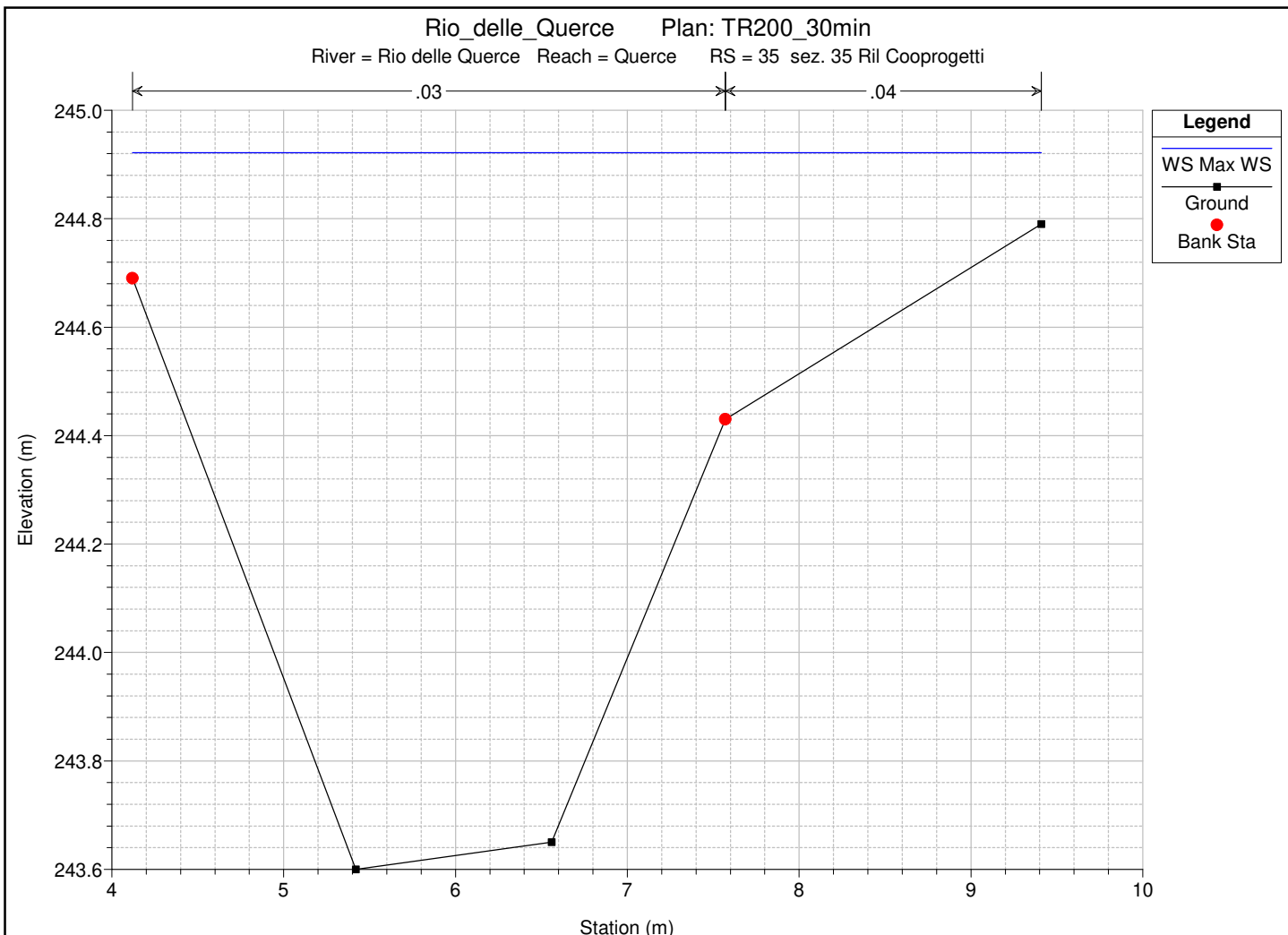
River = Rio delle Querce Reach = Querce RS = 36 sez. 36 Ril Cooproggetti



Rio_delle_Querce Plan: TR200_30min

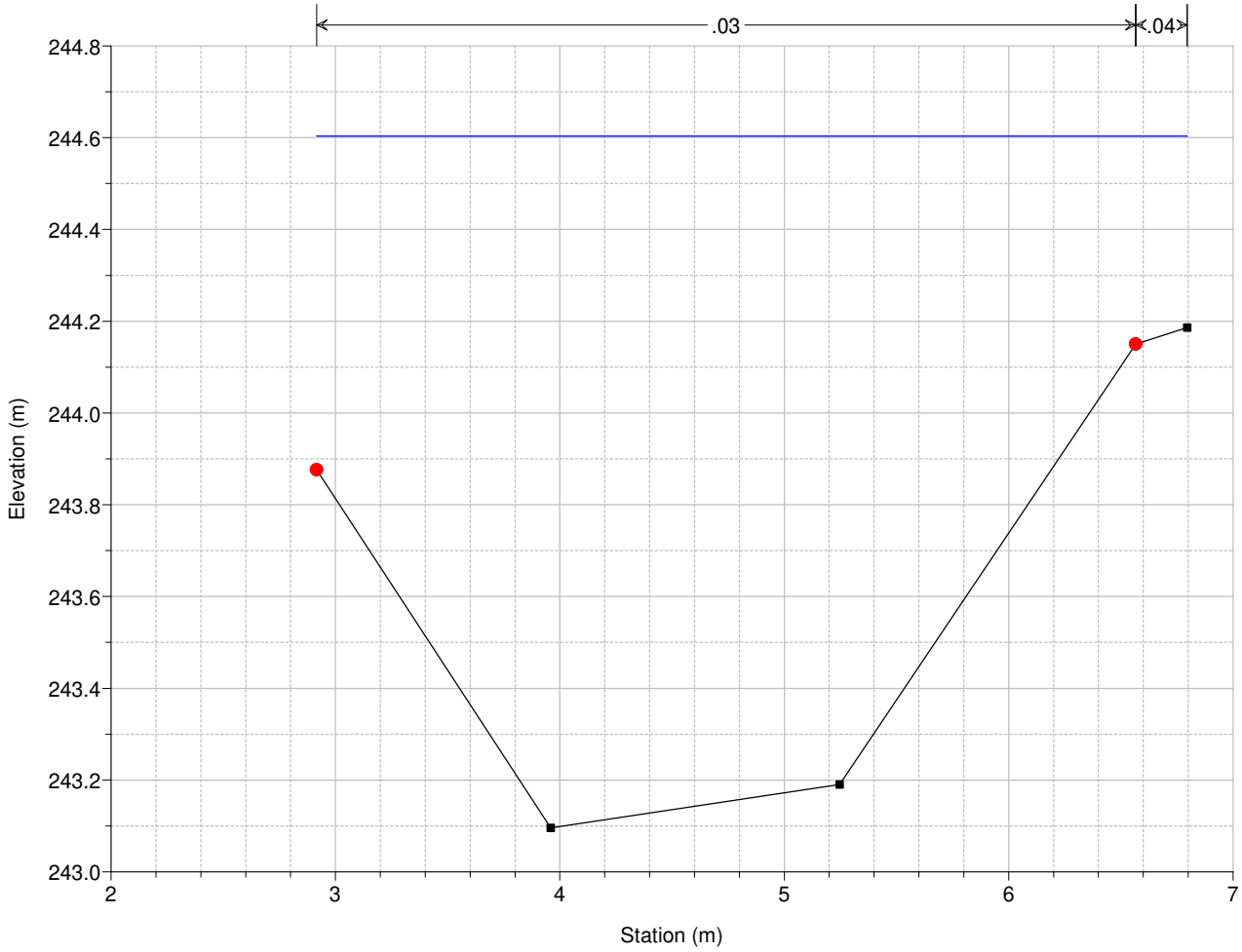
River = Rio delle Querce Reach = Querce RS = 35.952 Interpolata per idrogramma laterale distribuito QUERCE4





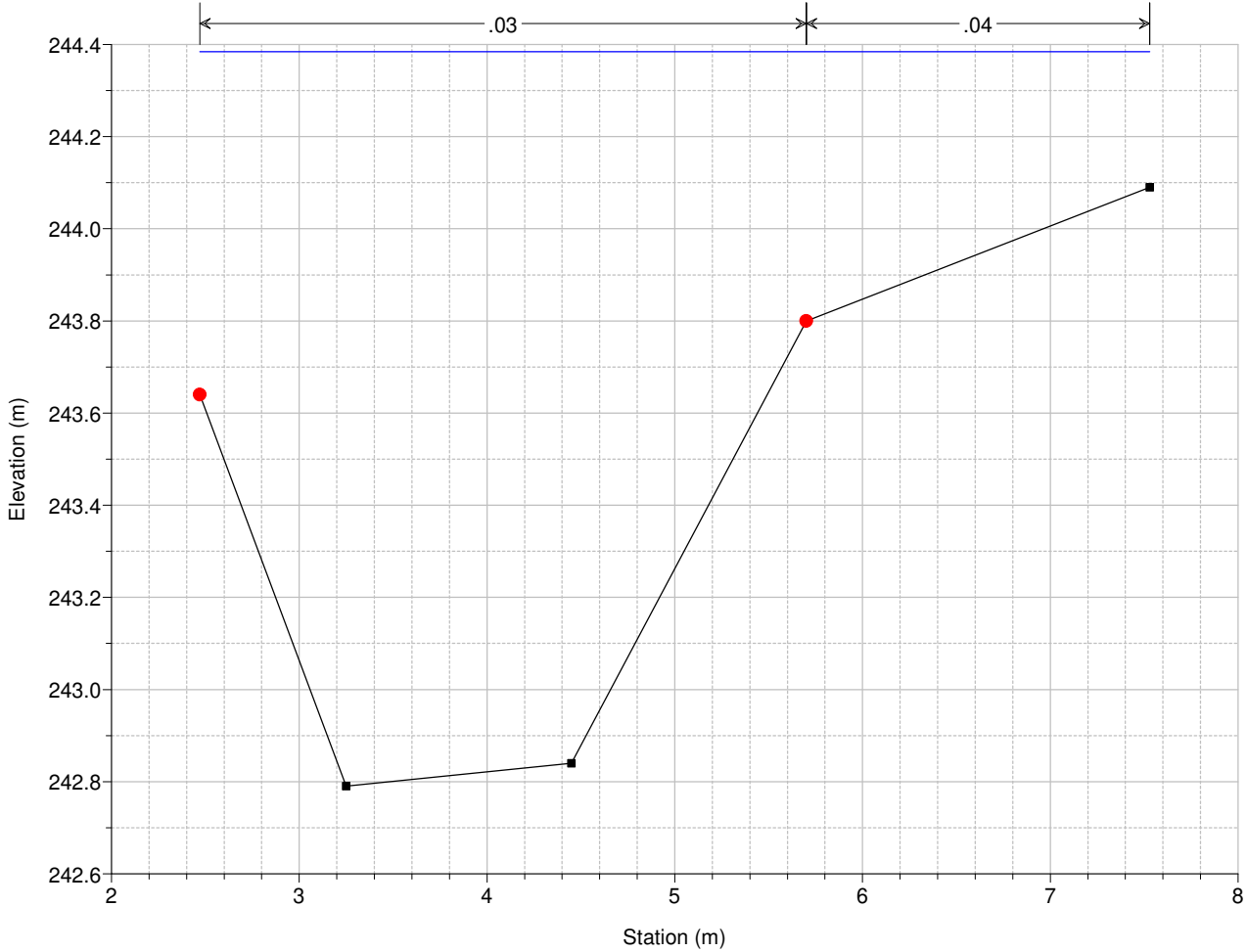
Rio_delle_Querce Plan: TR200_30min

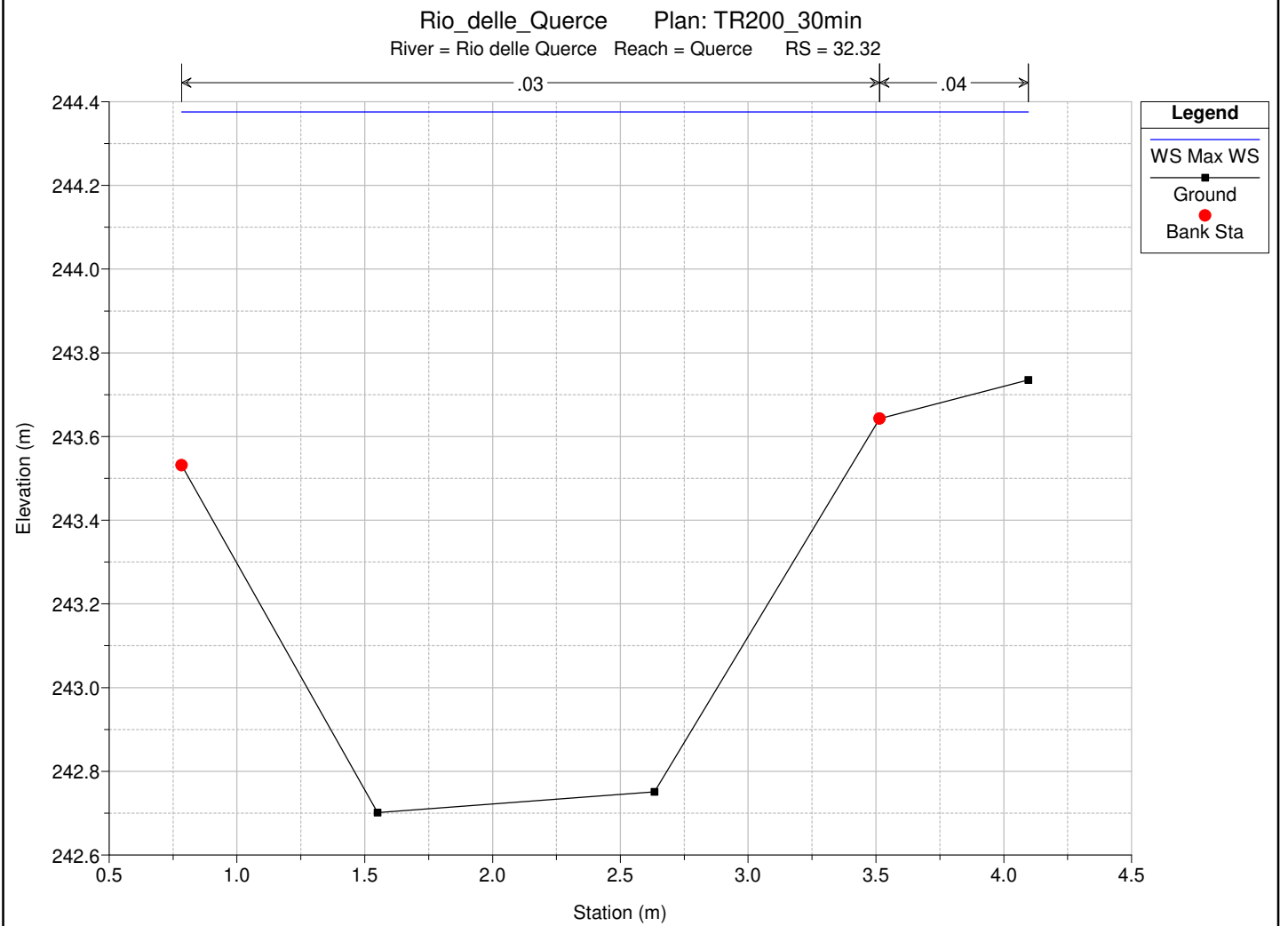
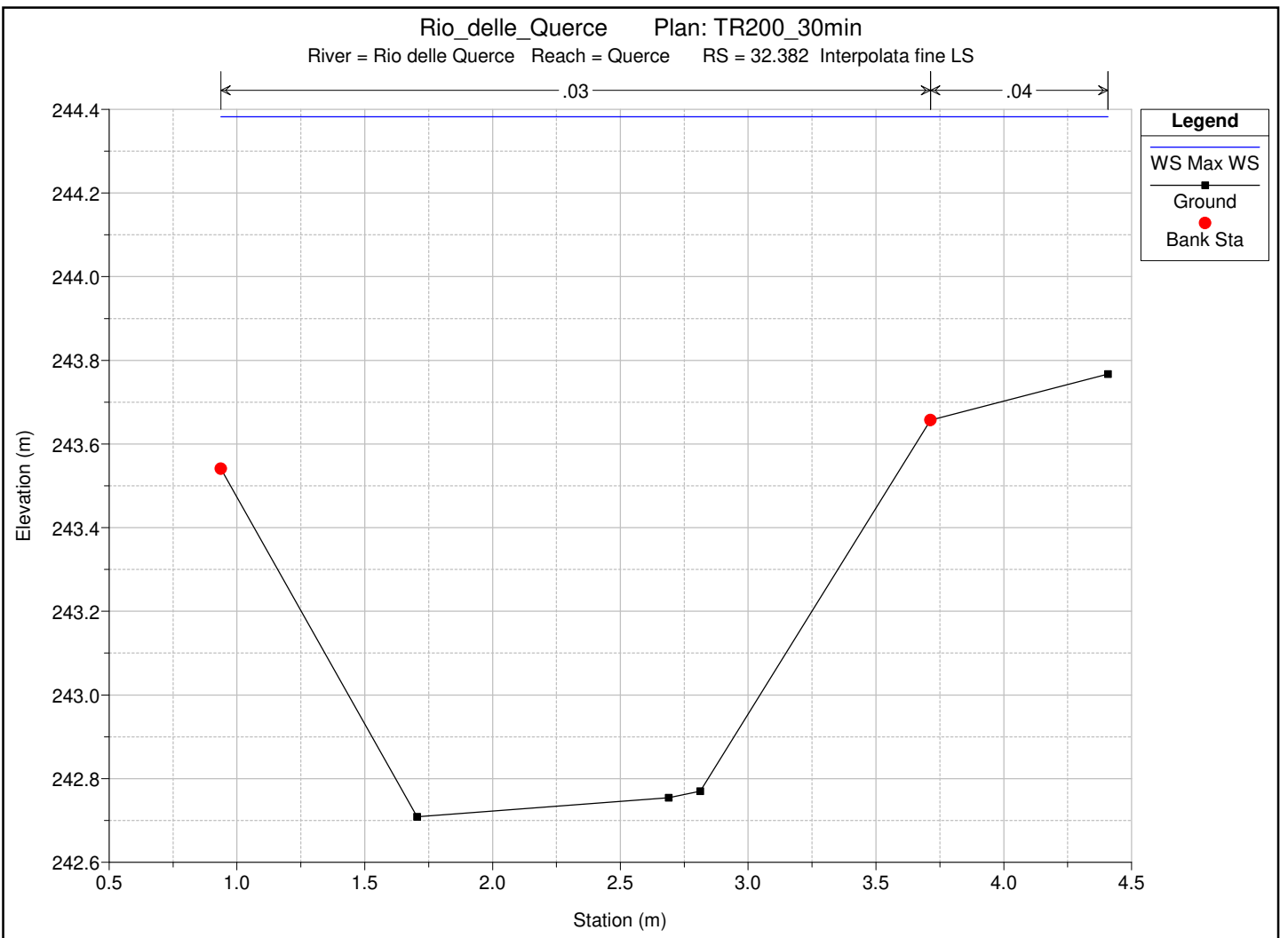
River = Rio delle Querce Reach = Querce RS = 33.875 Interpolata per idrogramma laterale QUERCE3



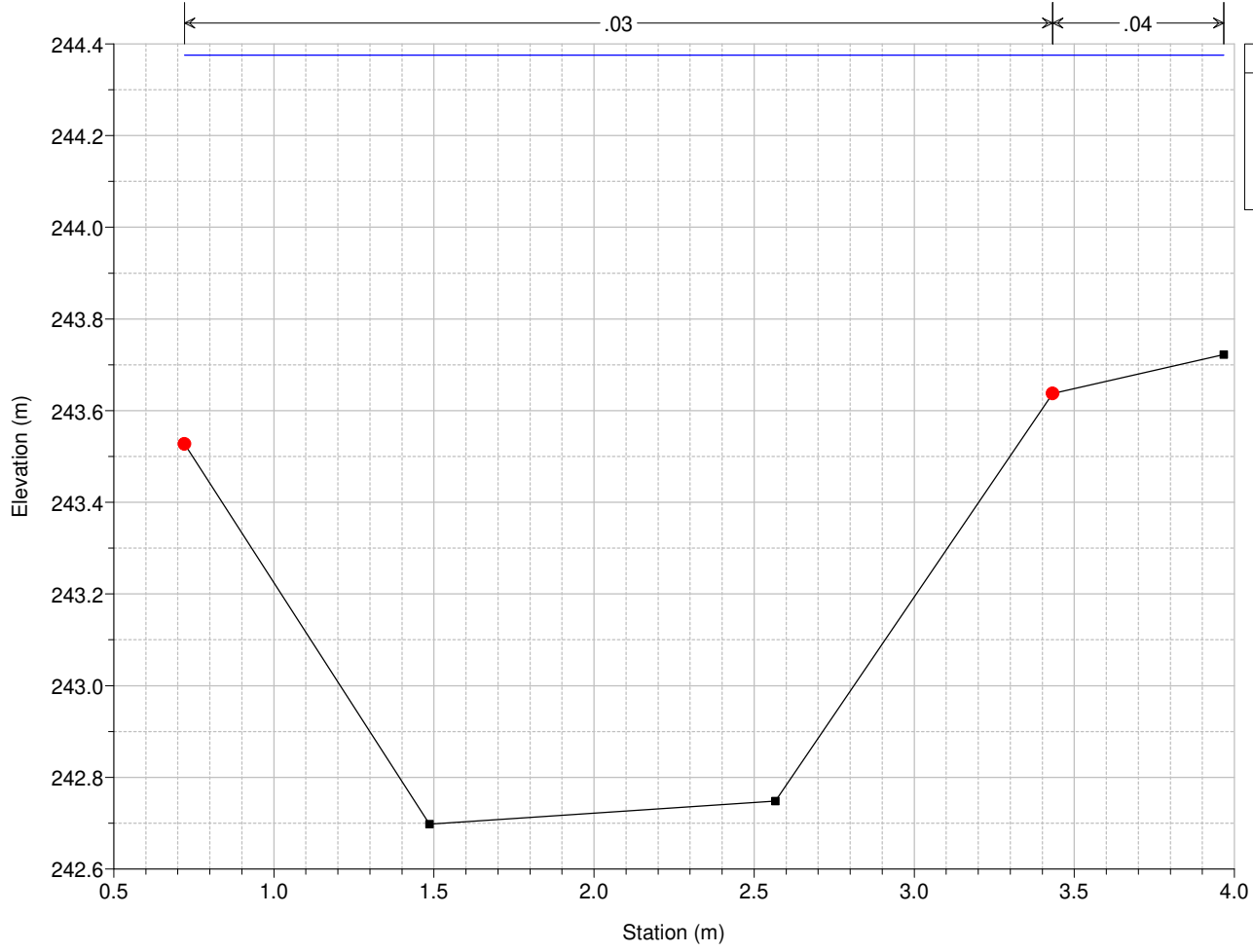
Rio_delle_Querce Plan: TR200_30min

River = Rio delle Querce Reach = Querce RS = 33 sez. 33 Ril Cooproggetti





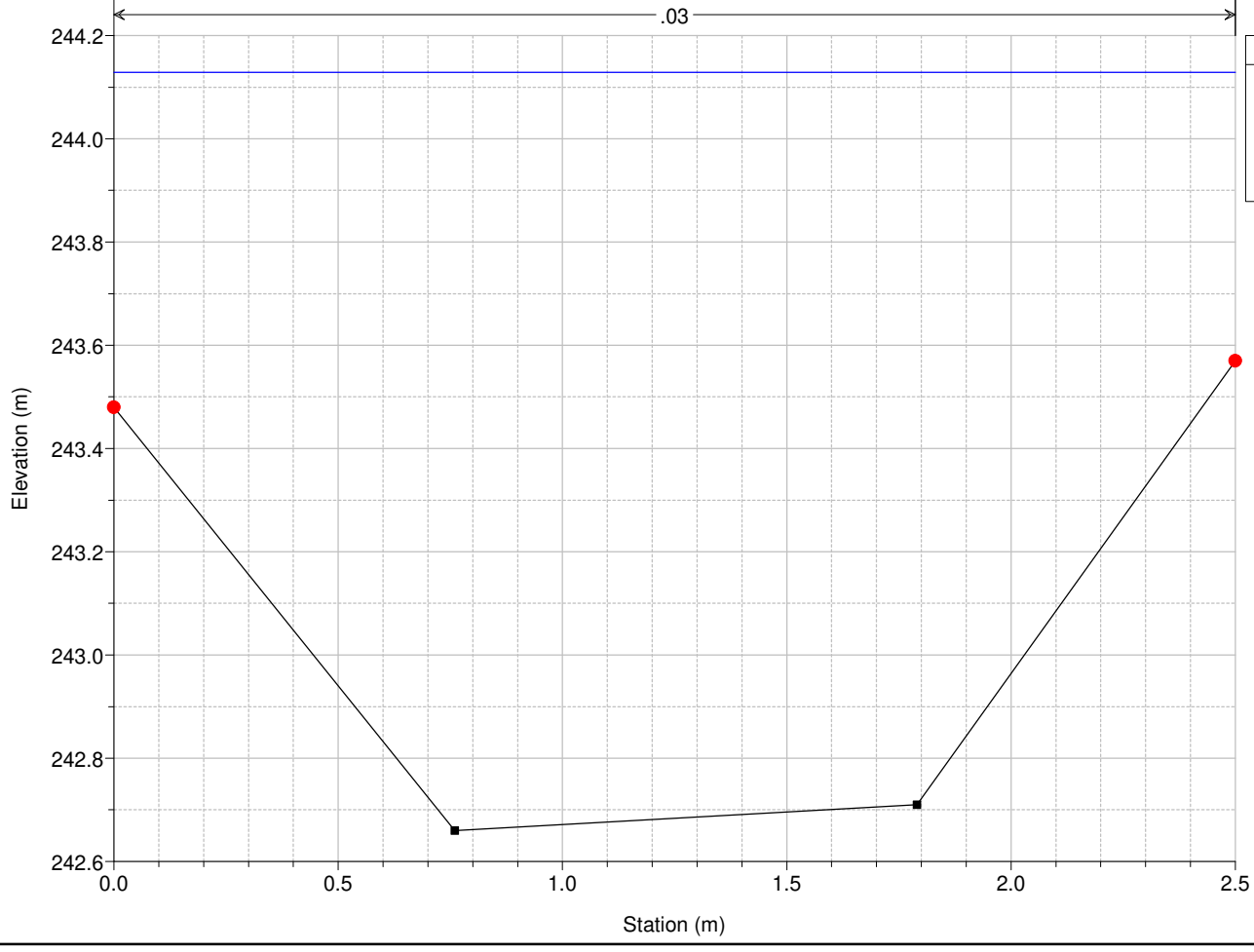
Rio_delle_Querce Plan: TR200_30min
River = Rio delle Querce Reach = Querce_valle RS = 32.29



Legend

- WS Max WS
- Ground
- Bank Sta

Rio_delle_Querce Plan: TR200_30min
River = Rio delle Querce Reach = Querce_valle RS = 32 sez. 32 Ril Cooprogetti

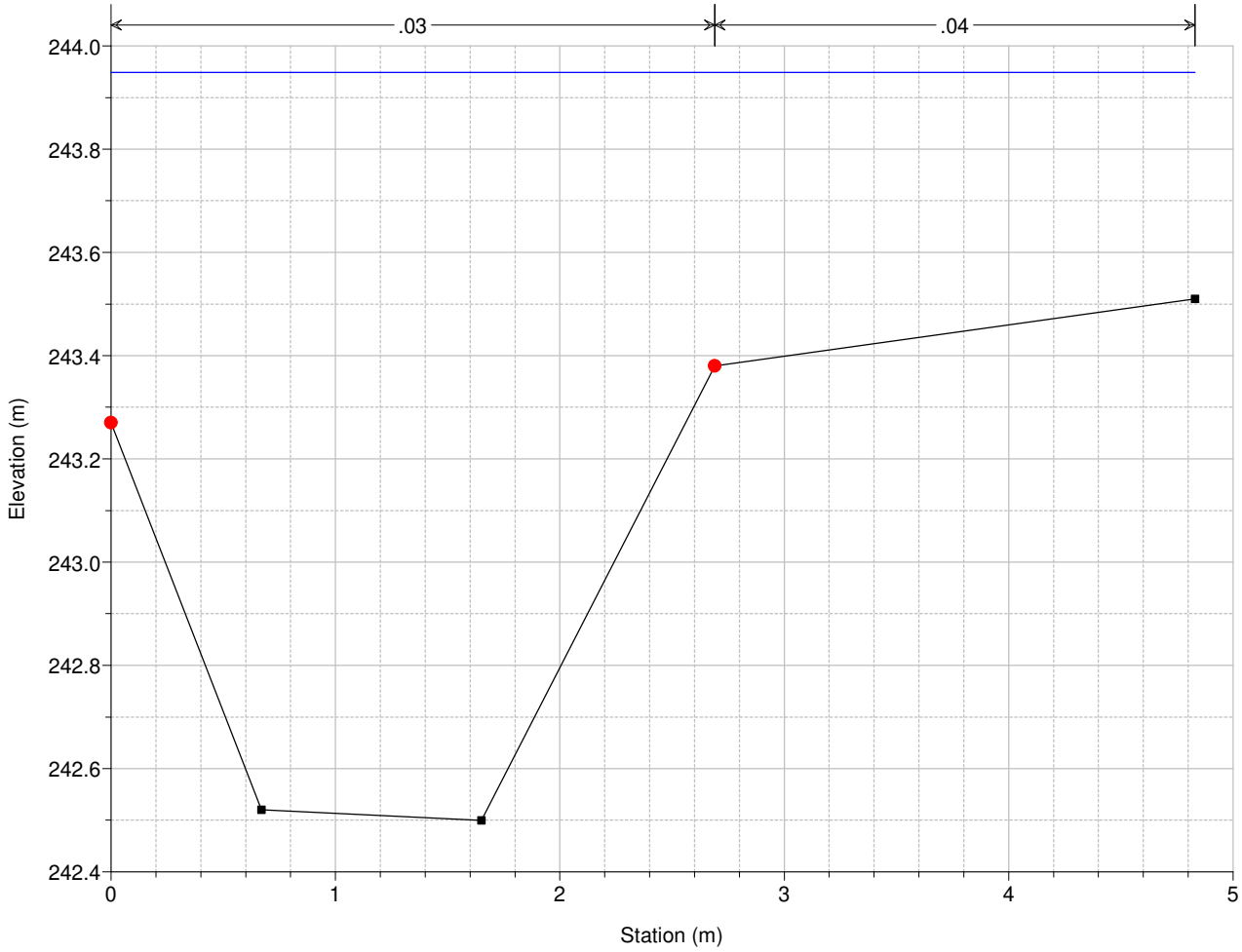


Legend

- WS Max WS
- Ground
- Bank Sta

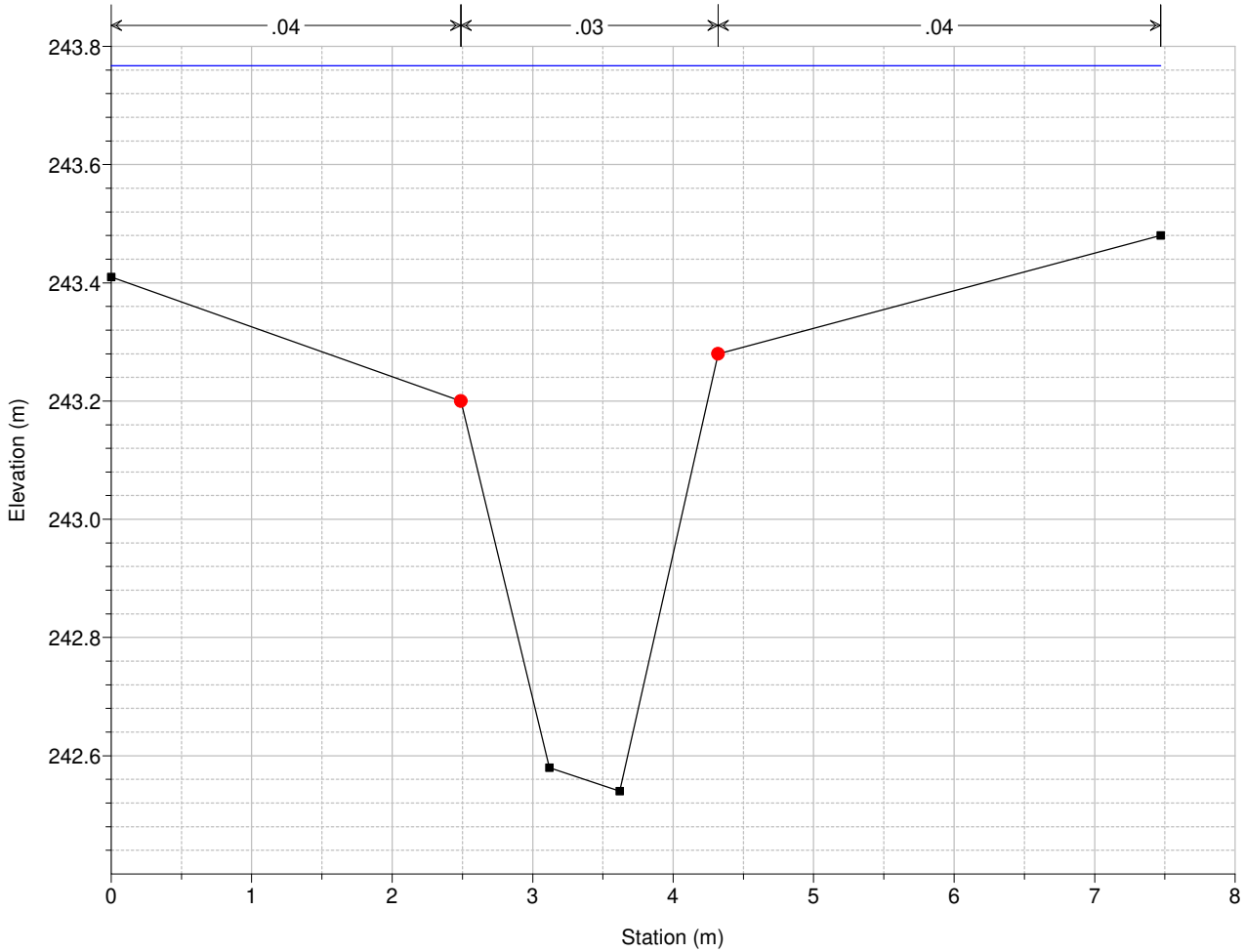
Rio_delle_Querce Plan: TR200_30min

River = Rio delle Querce Reach = Querce_valle RS = 31 sez. 31 Ril Coopprogetti



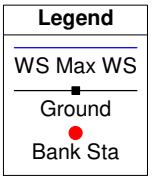
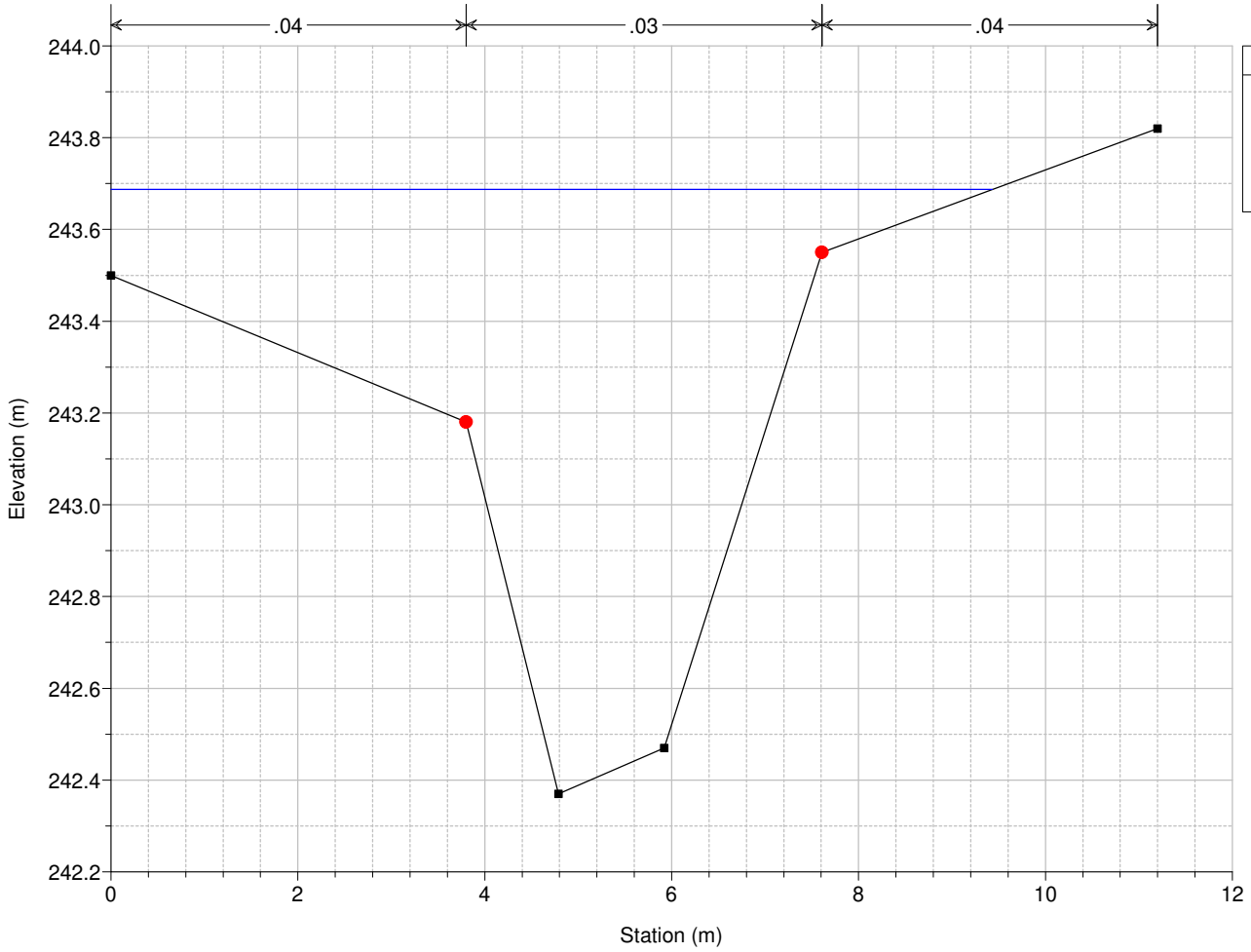
Rio_delle_Querce Plan: TR200_30min

River = Rio delle Querce Reach = Querce_valle RS = 30 sez. 30 Ril Coopprogetti



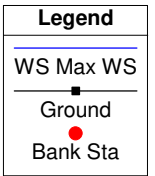
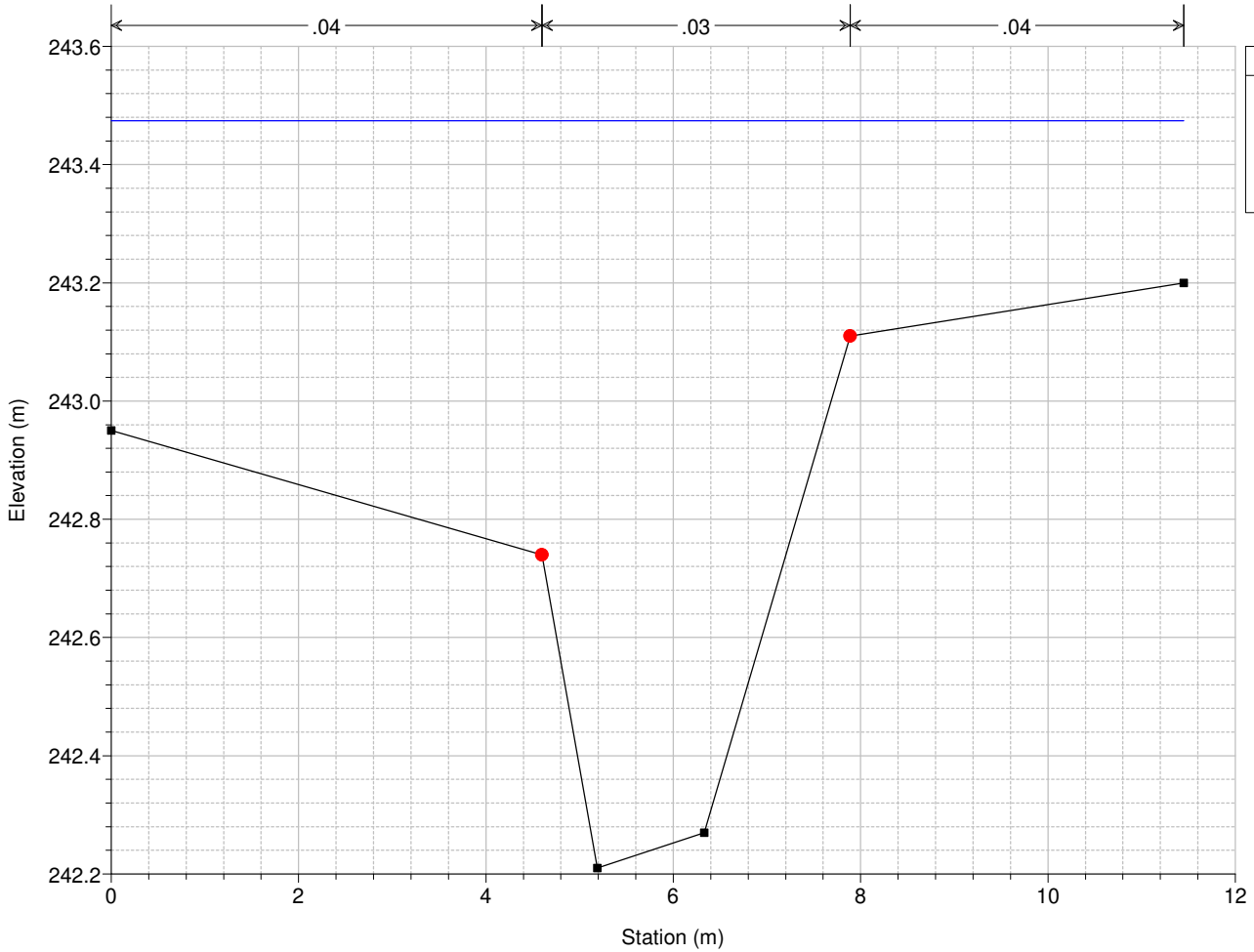
Rio_delle_Querce Plan: TR200_30min

River = Rio delle Querce Reach = Querce_valle RS = 29 sez. 29 Ril Coopprogetti



Rio_delle_Querce Plan: TR200_30min

River = Rio delle Querce Reach = Querce_valle RS = 28 sez. 28 Ril Coopprogetti



| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|--------------|-----------|---------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Querce | 36 | Max WS | 4.03 | 244.14 | 245.36 | 244.97 | 245.42 | 0.001472 | 1.13 | 4.24 | 6.07 | 0.36 |
| Querce | 35.999 | | Lat Struct | | | | | | | | | |
| Querce | 35.998 | | Lat Struct | | | | | | | | | |
| Querce | 35.952 | Max WS | 3.74 | 244.11 | 245.37 | 244.87 | 245.41 | 0.001124 | 1.01 | 4.42 | 6.07 | 0.32 |
| Querce | 35 | Max WS | 8.62 | 243.60 | 244.92 | 244.84 | 245.20 | 0.007218 | 2.39 | 3.95 | 5.29 | 0.77 |
| Querce | 34.999 | | Lat Struct | | | | | | | | | |
| Querce | 34.998 | | Lat Struct | | | | | | | | | |
| Querce | 34 | Max WS | 6.93 | 243.14 | 244.58 | 244.18 | 244.73 | 0.003641 | 1.69 | 4.10 | 3.71 | 0.51 |
| Querce | 33.875 | Max WS | 6.46 | 243.10 | 244.60 | 244.11 | 244.72 | 0.002467 | 1.50 | 4.38 | 3.88 | 0.44 |
| Querce | 33 | Max WS | 4.79 | 242.79 | 244.38 | 243.70 | 244.44 | 0.001226 | 1.07 | 4.93 | 5.06 | 0.30 |
| Querce | 32.999 | | Lat Struct | | | | | | | | | |
| Querce | 32.998 | | Lat Struct | | | | | | | | | |
| Querce | 32.382 | Max WS | 3.75 | 242.71 | 244.38 | 243.56 | 244.42 | 0.000915 | 0.93 | 4.31 | 3.47 | 0.25 |
| Querce | 32.32 | Max WS | 3.13 | 242.70 | 244.38 | 243.48 | 244.41 | 0.000673 | 0.79 | 4.19 | 3.31 | 0.21 |
| Querce_valle | 32.29 | Max WS | 4.06 | 242.70 | 244.38 | 243.59 | 244.43 | 0.001153 | 1.04 | 4.15 | 3.25 | 0.28 |
| Querce_valle | 32.289 | | Lat Struct | | | | | | | | | |
| Querce_valle | 32.288 | | Lat Struct | | | | | | | | | |
| Querce_valle | 32 | Max WS | 6.96 | 242.66 | 244.13 | 243.85 | 244.40 | 0.008312 | 2.33 | 2.99 | 2.50 | 0.68 |
| Querce_valle | 31 | Max WS | 6.13 | 242.50 | 243.95 | 243.64 | 244.07 | 0.003413 | 1.66 | 4.24 | 4.83 | 0.49 |
| Querce_valle | 30.999 | | Lat Struct | | | | | | | | | |
| Querce_valle | 30.998 | | Lat Struct | | | | | | | | | |
| Querce_valle | 30 | Max WS | 6.05 | 242.54 | 243.77 | 243.69 | 243.92 | 0.005943 | 2.08 | 4.13 | 7.47 | 0.68 |
| Querce_valle | 29 | Max WS | 6.01 | 242.37 | 243.69 | 243.43 | 243.79 | 0.002726 | 1.48 | 4.92 | 9.43 | 0.50 |
| Querce_valle | 28.999 | | Lat Struct | | | | | | | | | |
| Querce_valle | 28.998 | | Lat Struct | | | | | | | | | |
| Querce_valle | 28 | Max WS | 5.76 | 242.21 | 243.47 | 243.12 | 243.52 | 0.001301 | 1.09 | 7.25 | 11.45 | 0.35 |

| Reach | River Sta | Profile | Q US (m3/s) | Q Leaving Total (m3/s) | Q DS (m3/s) | Q Weir (m3/s) | Q Gates (m3/s) | Wr Top Width (m) | Weir Max Depth (m) | Weir Avg Depth (m) | Min El Weir Flow (m) | E.G. US. (m) | W.S. US. (m) | E.G. DS (m) | W.S. DS (m) |
|--------------|-----------|---------|----------------|---------------------------|----------------|------------------|-------------------|---------------------|-----------------------|-----------------------|-------------------------|-----------------|-----------------|----------------|----------------|
| Querce | 35.999 | Max WS | 4.03 | 2.45 | 8.62 | 2.45 | | 73.18 | 0.44 | 0.24 | 244.93 | 245.42 | 245.36 | 245.20 | 244.92 |
| Querce | 35.998 | Max WS | 4.03 | -0.09 | 8.62 | -0.09 | | 7.04 | 0.23 | 0.19 | 244.69 | 245.42 | 245.36 | 245.20 | 244.92 |
| Querce | 34.999 | Max WS | 8.62 | 2.42 | 4.79 | 2.42 | | 131.57 | 0.42 | 0.30 | 244.10 | 245.20 | 244.92 | 244.44 | 244.38 |
| Querce | 34.998 | Max WS | 8.62 | 3.25 | 4.79 | 3.25 | | 147.08 | 0.72 | 0.47 | 243.66 | 245.20 | 244.92 | 244.44 | 244.38 |
| Querce | 32.999 | Max WS | 4.79 | 1.75 | 3.75 | 1.75 | | 48.59 | 0.61 | 0.40 | 243.77 | 244.44 | 244.38 | 244.42 | 244.38 |
| Querce | 32.998 | Max WS | 4.79 | 1.72 | 3.13 | 1.72 | | 53.03 | 0.79 | 0.62 | 243.59 | 244.44 | 244.38 | 244.41 | 244.38 |
| Querce_valle | 32.289 | Max WS | 4.06 | -1.02 | 6.96 | -1.02 | | 22.68 | 0.68 | 0.58 | 243.66 | 244.43 | 244.38 | 244.40 | 244.13 |
| Querce_valle | 32.288 | Max WS | 4.06 | -0.36 | 6.96 | -0.36 | | 22.70 | 0.56 | 0.45 | 243.74 | 244.43 | 244.38 | 244.40 | 244.13 |
| Querce_valle | 30.999 | Max WS | 6.13 | -0.16 | 6.05 | -0.16 | | 59.71 | 0.44 | 0.27 | 243.51 | 244.07 | 243.95 | 243.92 | 243.77 |
| Querce_valle | 30.998 | Max WS | 6.13 | -1.17 | 6.05 | -1.17 | | 60.11 | 0.53 | 0.43 | 243.40 | 244.07 | 243.95 | 243.92 | 243.77 |
| Querce_valle | 28.999 | Max WS | 6.01 | 0.00 | 5.76 | 0.00 | | 3.89 | 0.01 | 0.00 | 243.53 | 243.79 | 243.69 | 243.52 | 243.47 |
| Querce_valle | 28.998 | Max WS | 6.01 | 0.45 | 5.76 | 0.45 | | 57.99 | 0.52 | 0.22 | 242.95 | 243.79 | 243.69 | 243.52 | 243.47 |

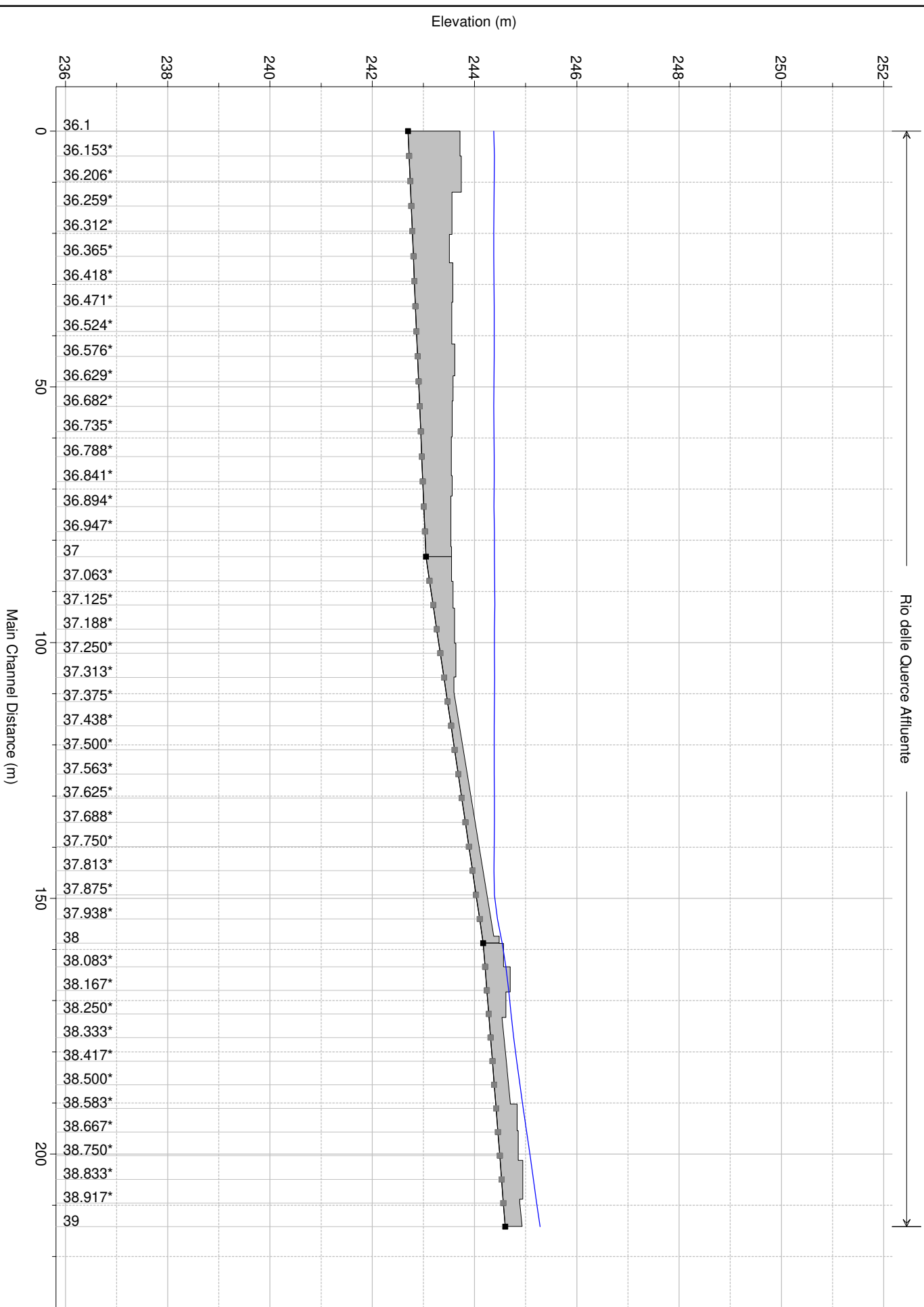
Affluente
in
destra
(AV43922)

Rio_delle_Querce Plan: TR200_30min
 Strutture Laterali Destra Idrraulica

Rio delle Querce Affluente

Legend

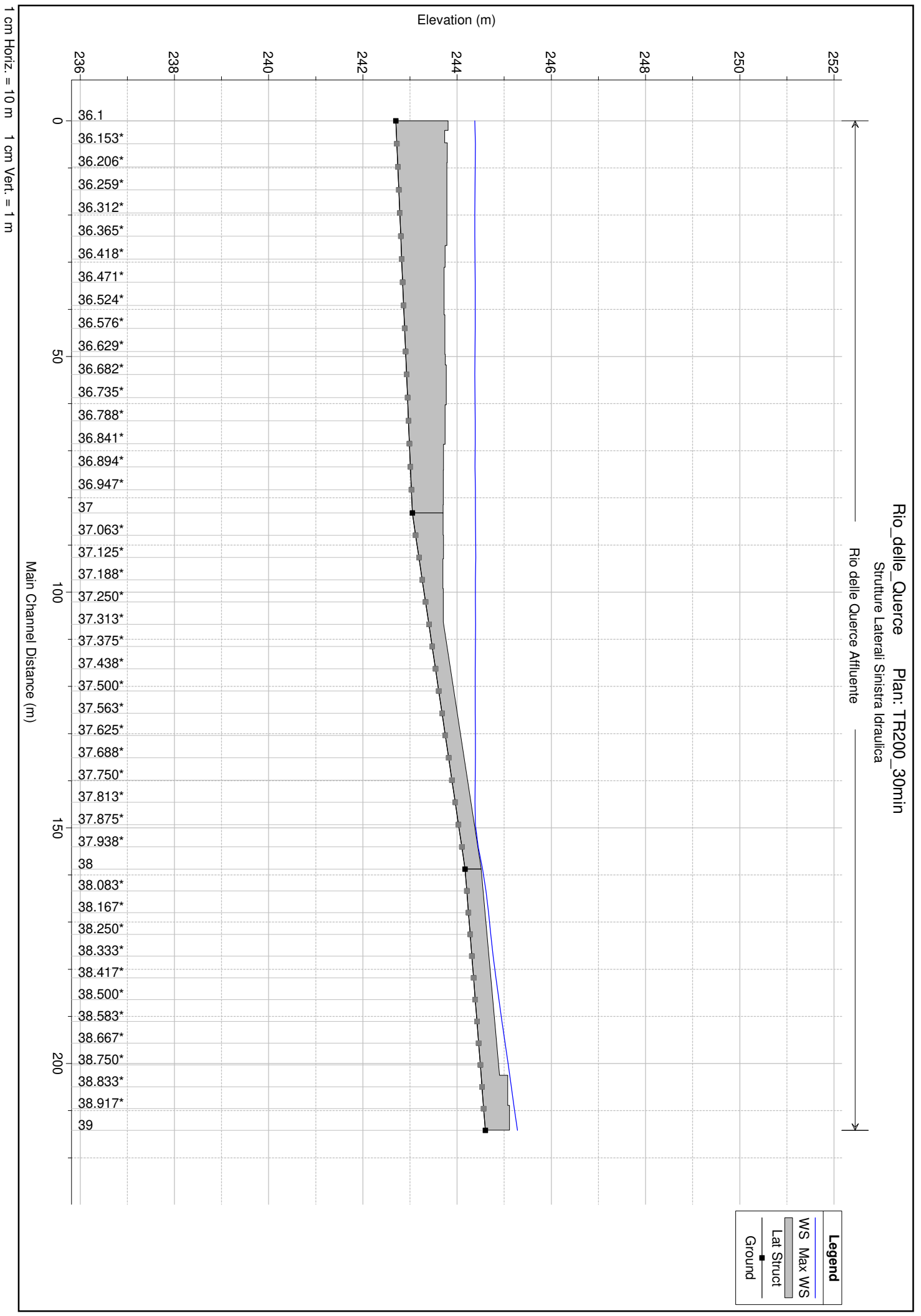
- WS Max WS
- Lat Struct
- Ground



1 cm Horiz. = 10 m 1 cm Vert. = 1 m

Rio_delle_Querce Plan: TR200_30min
 Strutture Laterali Sinistra Idraulica

Rio delle Querce Affluente

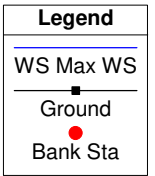
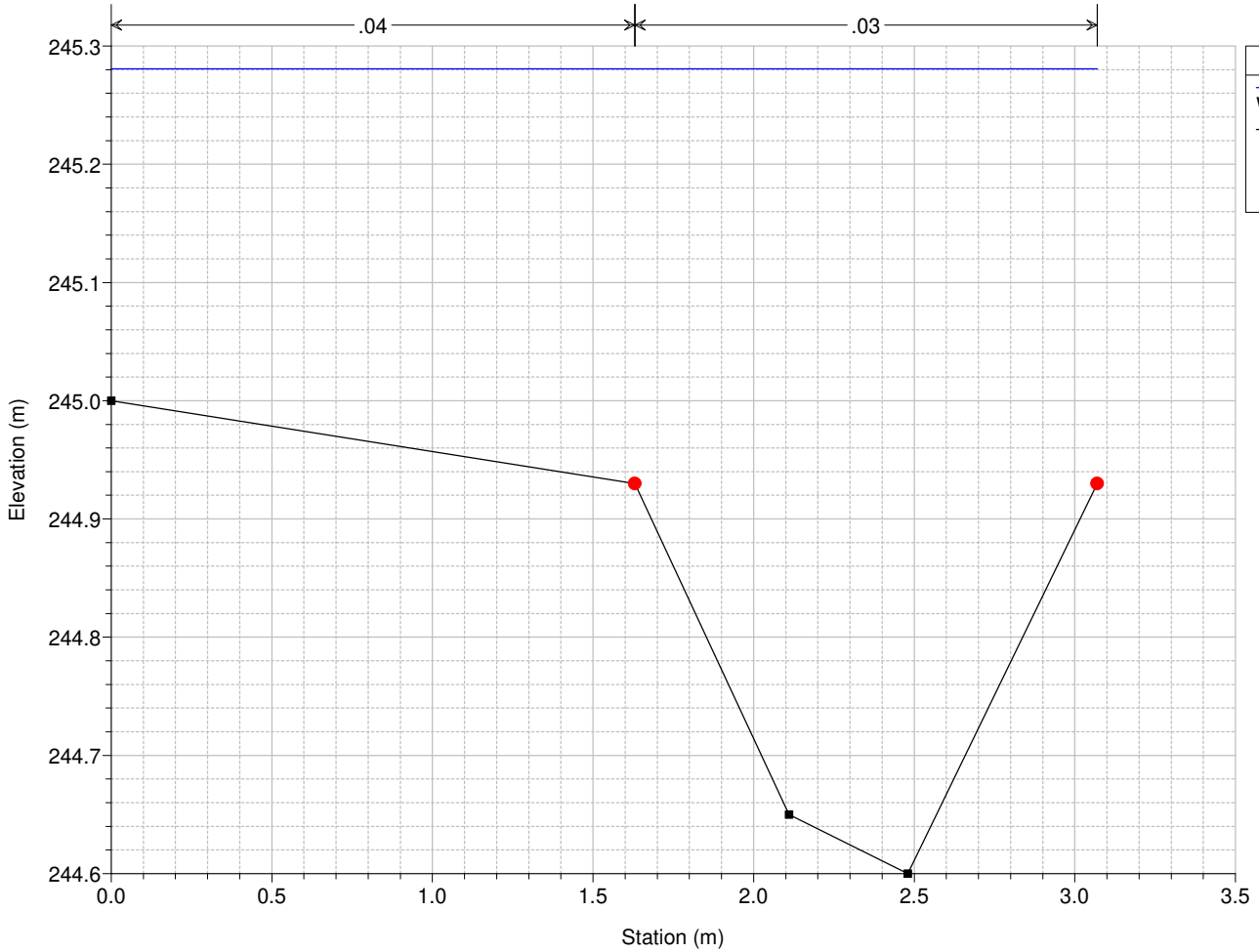


Legend

- WS Max WS
- Lat Struct
- Ground

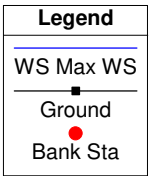
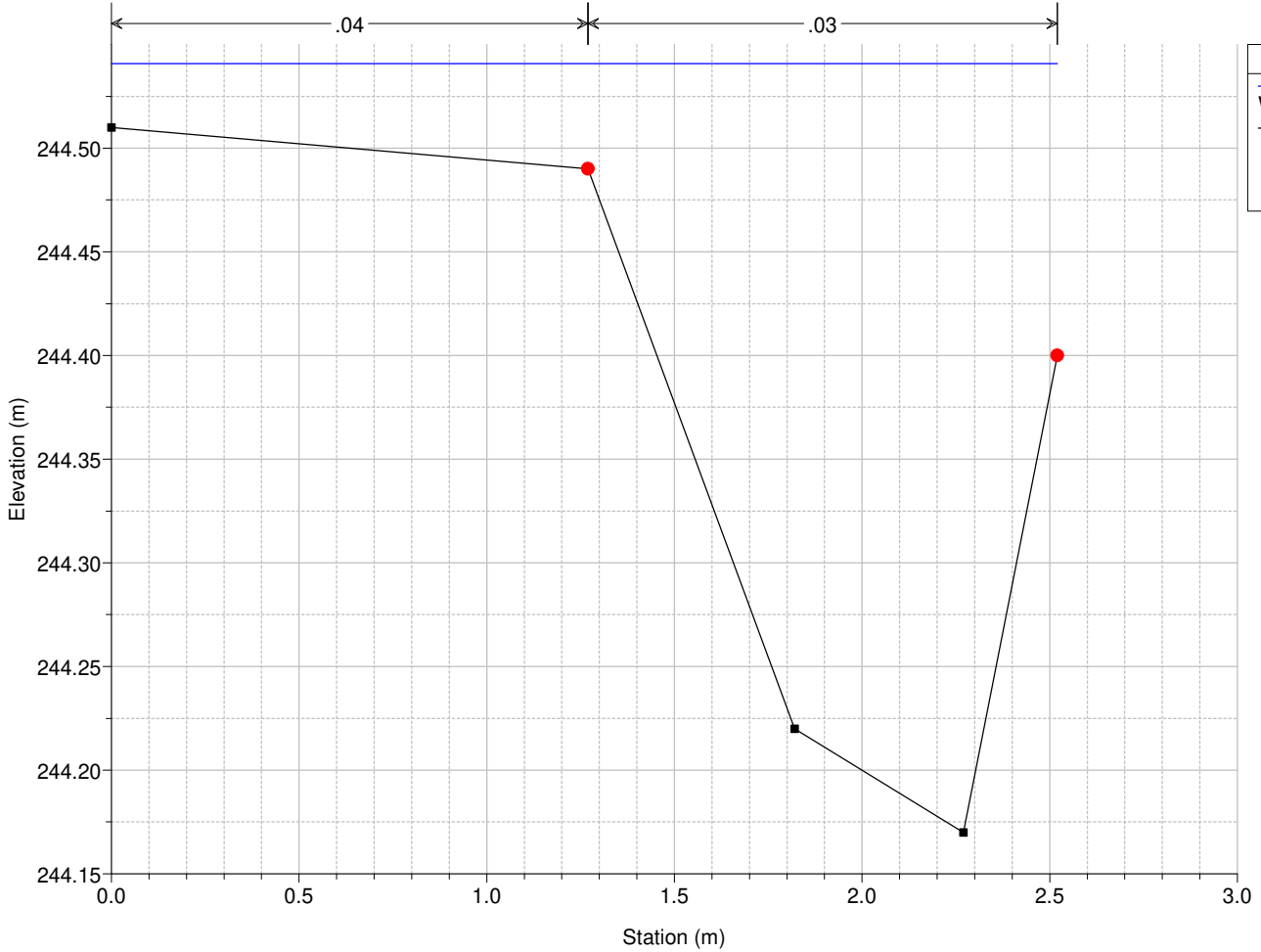
Rio_delle_Querce Plan: TR200_30min

River = Rio delle Querce Reach = Affluente RS = 39 sez. 39 Ril Coopprogetti



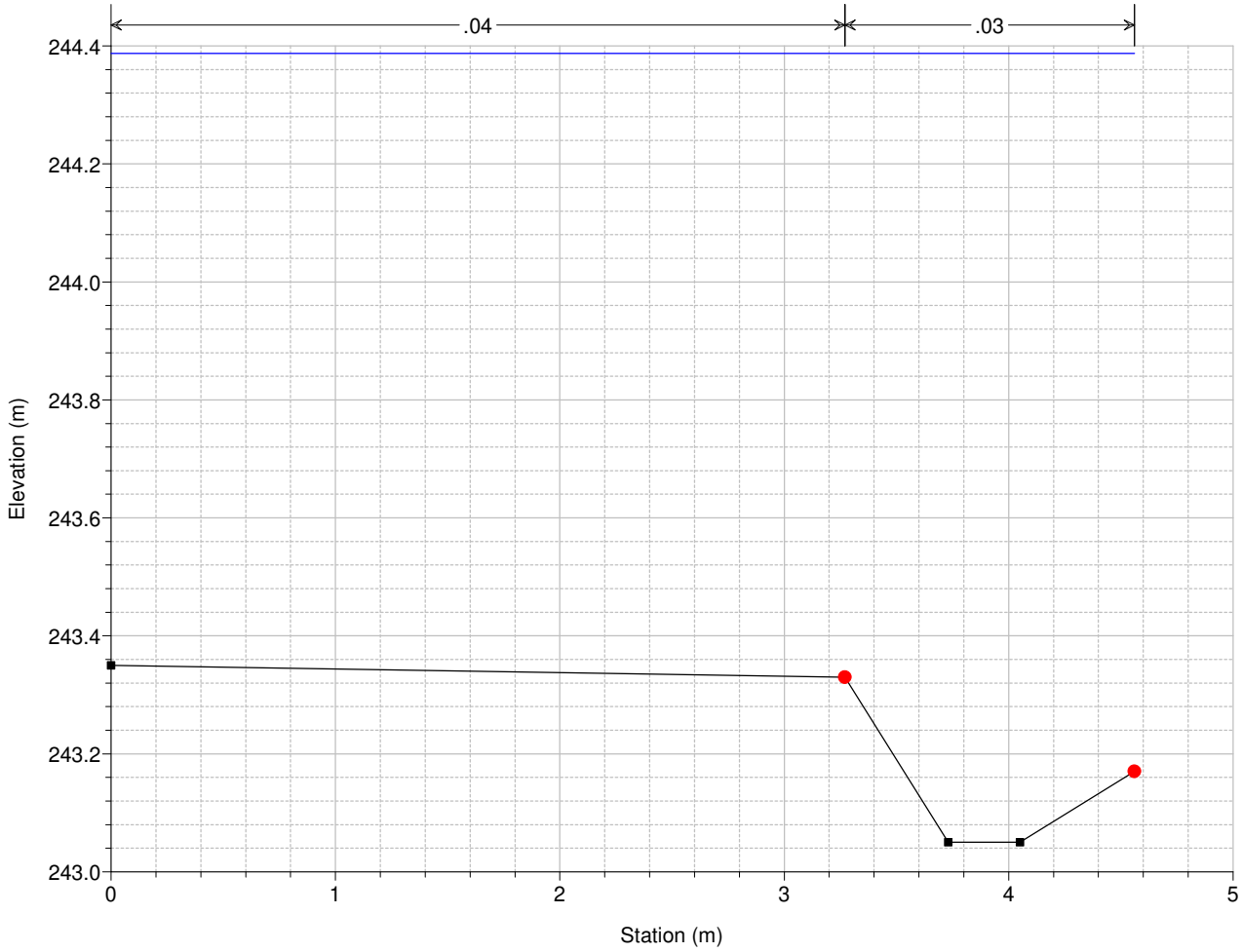
Rio_delle_Querce Plan: TR200_30min

River = Rio delle Querce Reach = Affluente RS = 38 sez. 38 Ril Coopprogetti



Rio_delle_Querce Plan: TR200_30min

River = Rio delle Querce Reach = Affluente RS = 37 sez. 37 Ril Coopprogetti

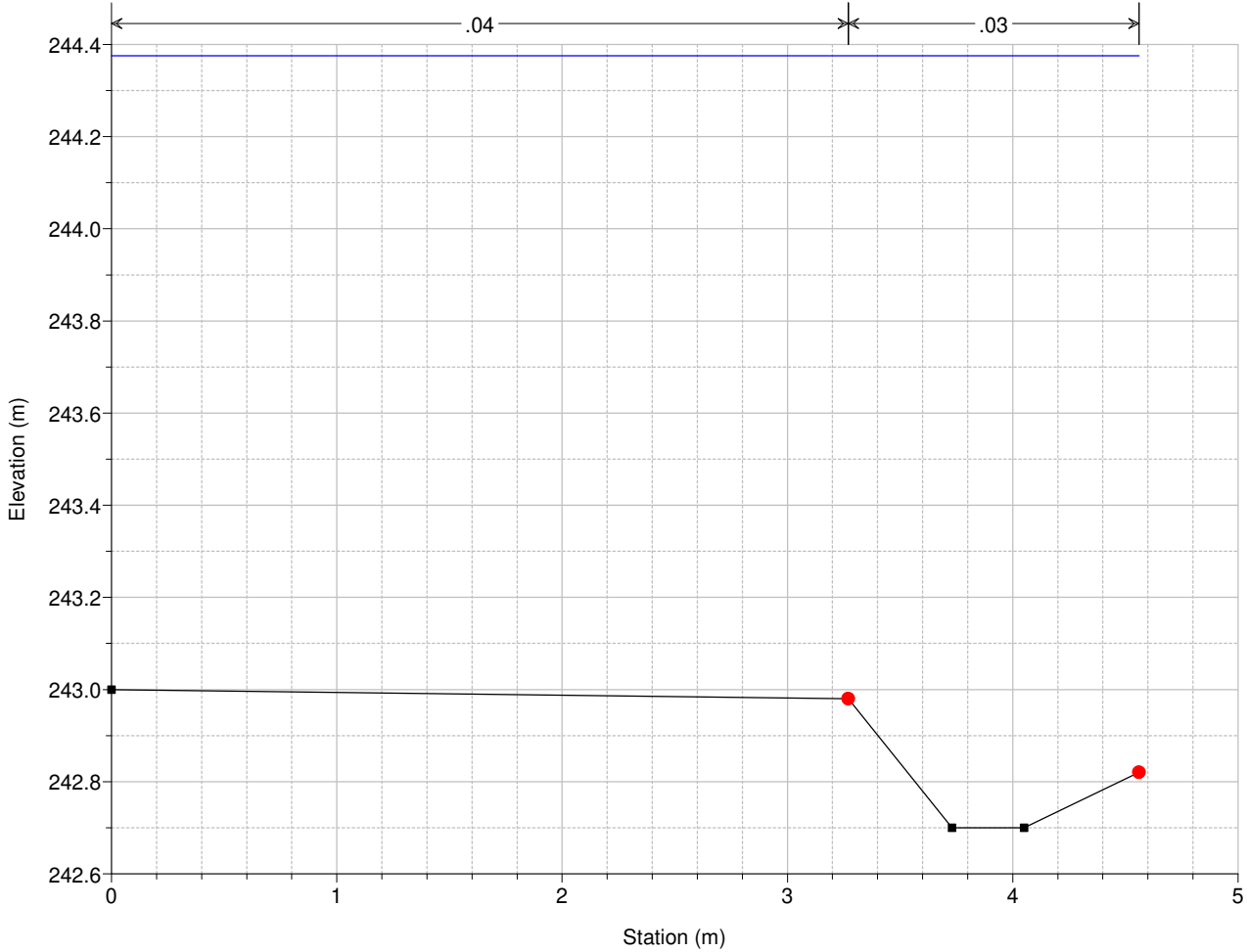


Legend

- WS Max WS
- Ground
- Bank Sta

Rio_delle_Querce Plan: TR200_30min

River = Rio delle Querce Reach = Affluente RS = 36.1 COPIA sez. 37 Ril Coopprogetti fondo aggiustato



Legend

- WS Max WS
- Ground
- Bank Sta

HEC-RAS Plan: TR200_30min River: Rio delle Querce Reach: Affluente Profile: Max WS

| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|-----------|-----------|---------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Affluente | 39 | Max WS | 2.38 | 244.60 | 245.28 | 245.29 | 245.48 | 0.014852 | 2.21 | 1.30 | 3.07 | 0.96 |
| Affluente | 38.999 | | Lat Struct | | | | | | | | | |
| Affluente | 38.998 | | Lat Struct | | | | | | | | | |
| Affluente | 38 | Max WS | 0.55 | 244.17 | 244.54 | 244.57 | 244.67 | 0.019563 | 1.64 | 0.37 | 2.52 | 1.03 |
| Affluente | 37.999 | | Lat Struct | | | | | | | | | |
| Affluente | 37.998 | | Lat Struct | | | | | | | | | |
| Affluente | 37 | Max WS | 0.80 | 243.05 | 244.39 | 243.45 | 244.39 | 0.000050 | 0.17 | 5.06 | 4.56 | 0.05 |
| Affluente | 36.999 | | Lat Struct | | | | | | | | | |
| Affluente | 36.998 | | Lat Struct | | | | | | | | | |
| Affluente | 36.1 | Max WS | 0.94 | 242.70 | 244.38 | 243.12 | 244.38 | 0.000032 | 0.15 | 6.60 | 4.56 | 0.04 |

HEC-RAS Plan: TR200_30min River: Rio delle Querce Reach: Affluente Profile: Max WS

| Reach | River Sta | Profile | Q US (m3/s) | Q Leaving Total (m3/s) | Q DS (m3/s) | Q Weir (m3/s) | Q Gates (m3/s) | Wr Top Wdth (m) | Weir Max Depth (m) | Weir Avg Depth (m) | Min El Weir Flow (m) | E.G. US. (m) | W.S. US. (m) | E.G. DS (m) | W.S. DS (m) |
|-----------|-----------|---------|----------------|---------------------------|----------------|------------------|-------------------|--------------------|-----------------------|-----------------------|-------------------------|-----------------|-----------------|----------------|----------------|
| Affluente | 38.999 | Max WS | 2.38 | 0.97 | 0.55 | 0.97 | | 50.44 | 0.35 | 0.19 | 244.48 | 245.48 | 245.28 | 244.67 | 244.54 |
| Affluente | 38.998 | Max WS | 2.38 | 0.60 | 0.55 | 0.60 | | 55.55 | 0.22 | 0.11 | 244.51 | 245.48 | 245.28 | 244.67 | 244.54 |
| Affluente | 37.999 | Max WS | 0.55 | 5.53 | 0.80 | 5.53 | | 76.43 | 0.84 | 0.54 | 243.55 | 244.67 | 244.54 | 244.39 | 244.39 |
| Affluente | 37.998 | Max WS | 0.55 | -0.10 | 0.80 | -0.10 | | 73.77 | 0.70 | 0.42 | 243.70 | 244.67 | 244.54 | 244.39 | 244.39 |
| Affluente | 36.999 | Max WS | 0.80 | 8.65 | 0.94 | 8.65 | | 83.18 | 0.87 | 0.80 | 243.51 | 244.39 | 244.39 | 244.38 | 244.38 |
| Affluente | 36.998 | Max WS | 0.80 | 2.71 | 0.94 | 2.71 | | 83.52 | 0.68 | 0.63 | 243.70 | 244.39 | 244.39 | 244.38 | 244.38 |

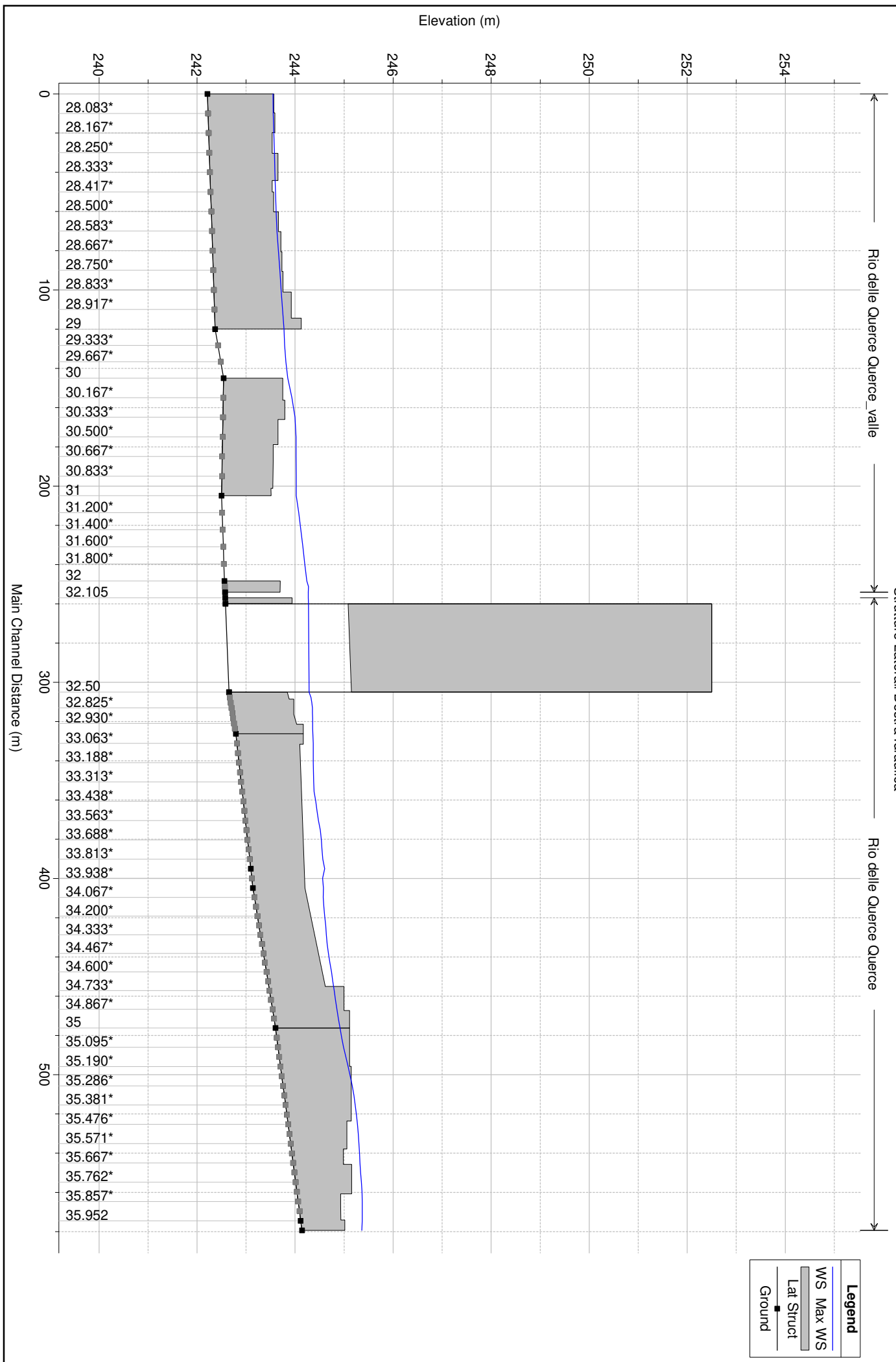
Stato
di
Progetto

Planimetria Stato di Progetto



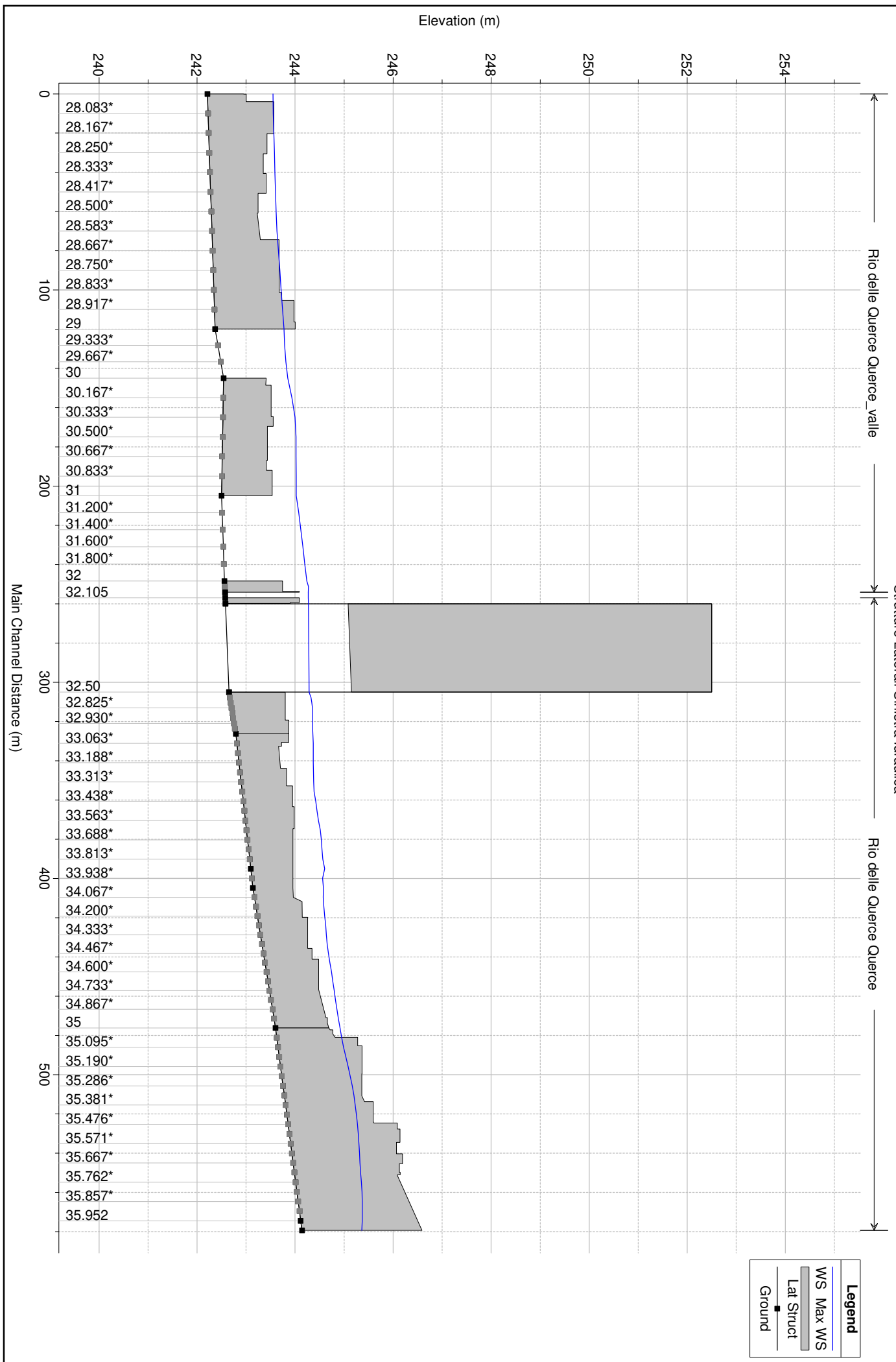
RIO
delle
QUERCE

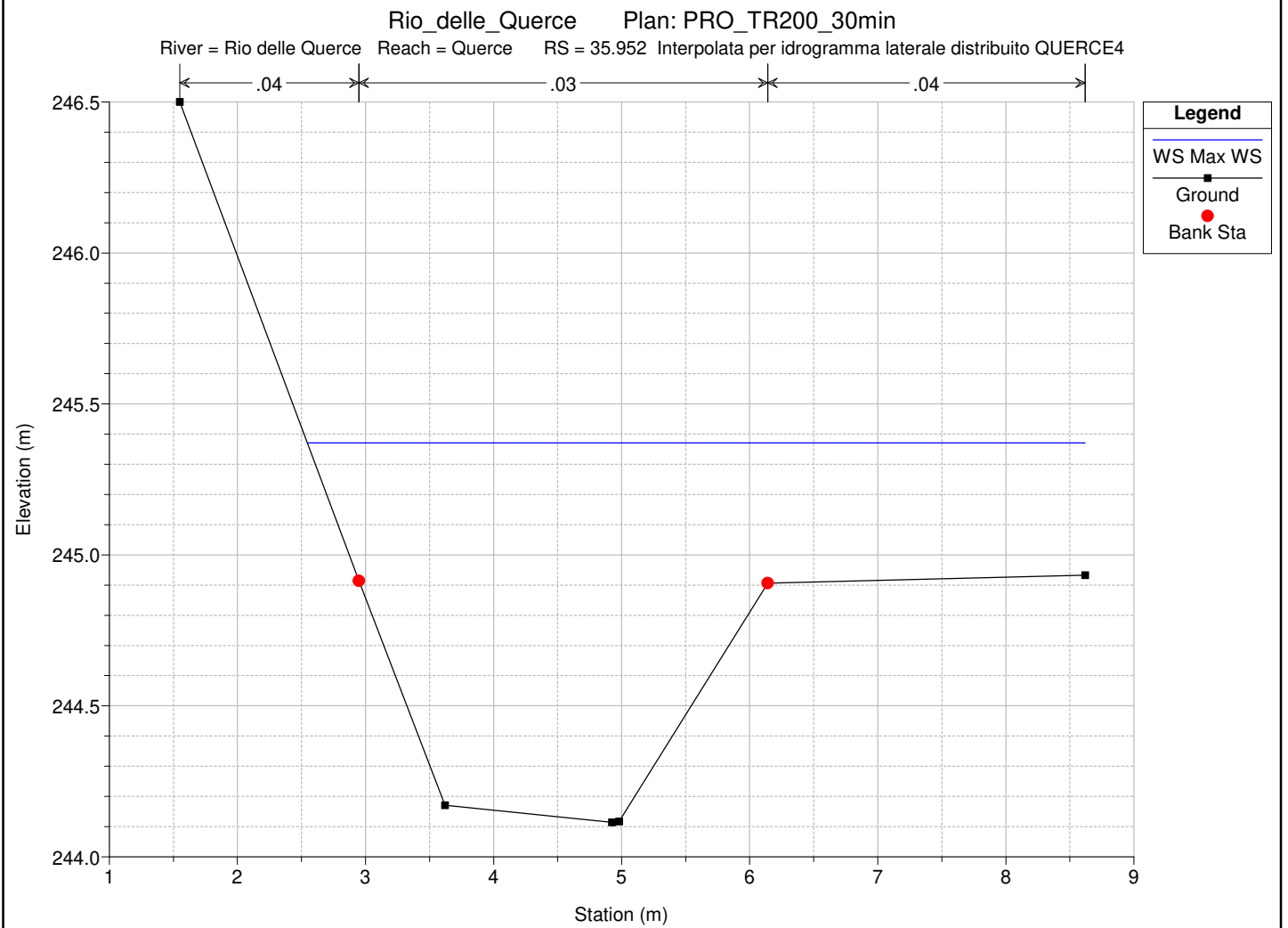
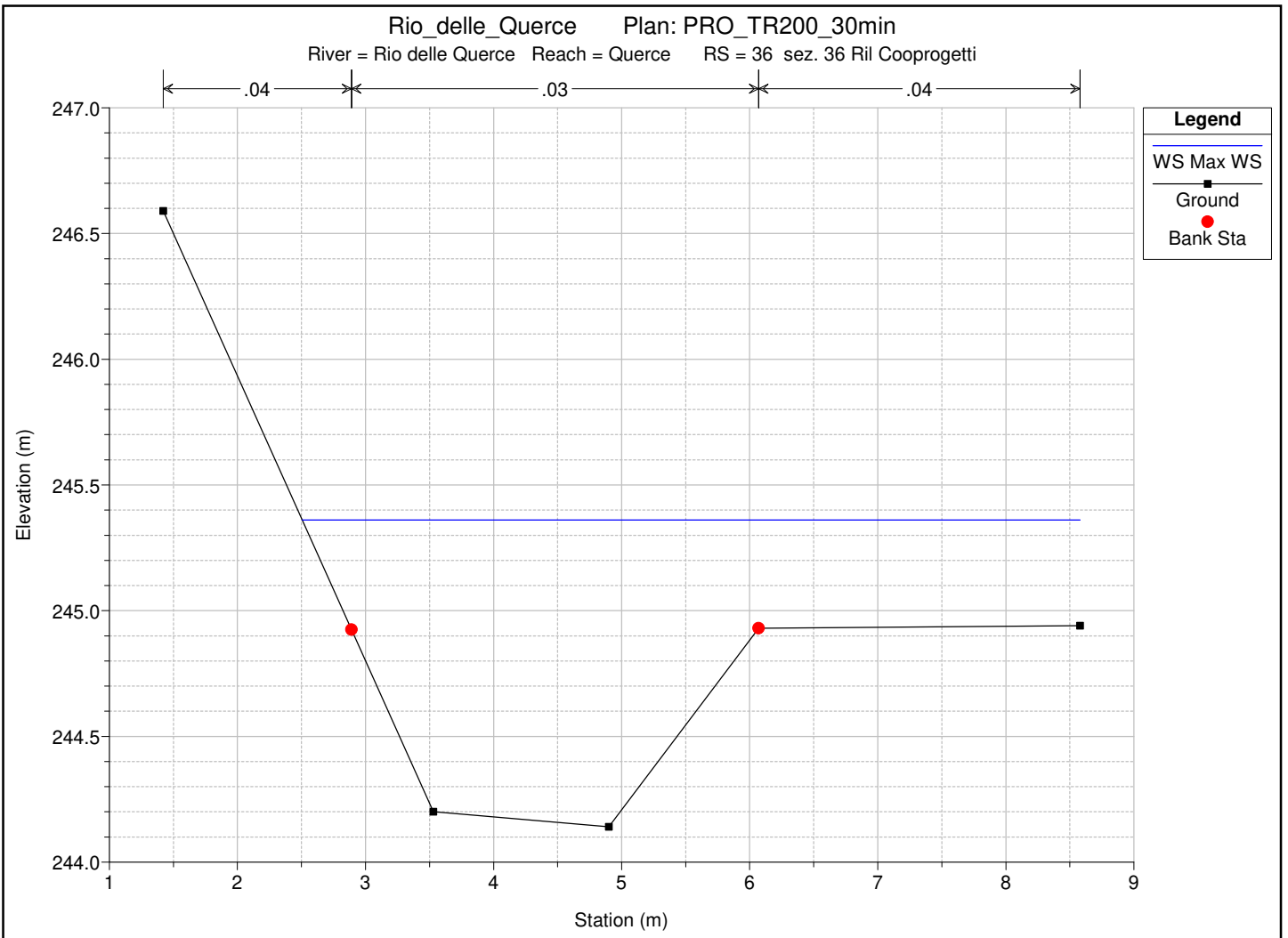
Rio_delle_Querce Plan: PRO_TR200_30min
 Strutture Laterali Destra Idraulica

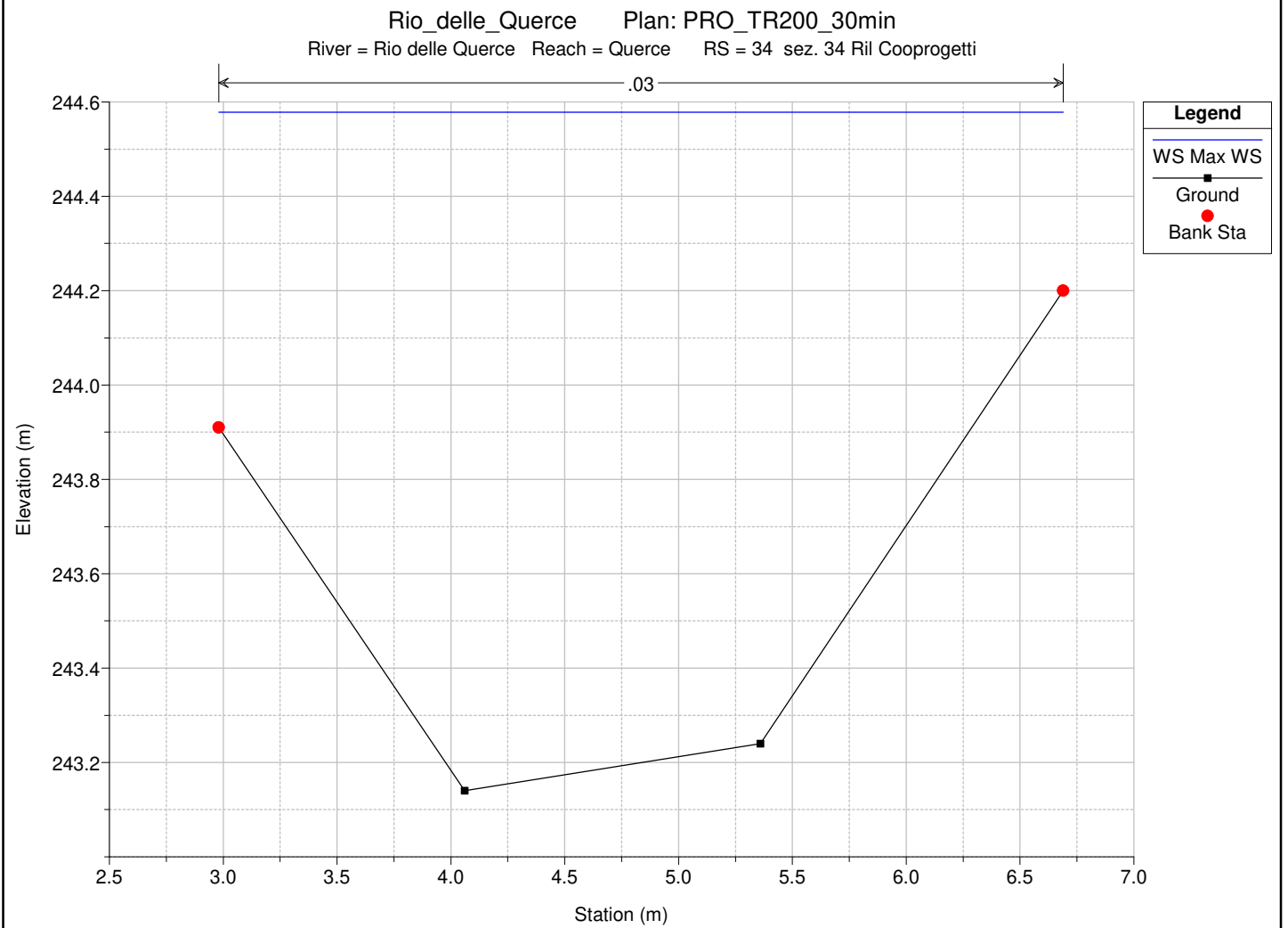
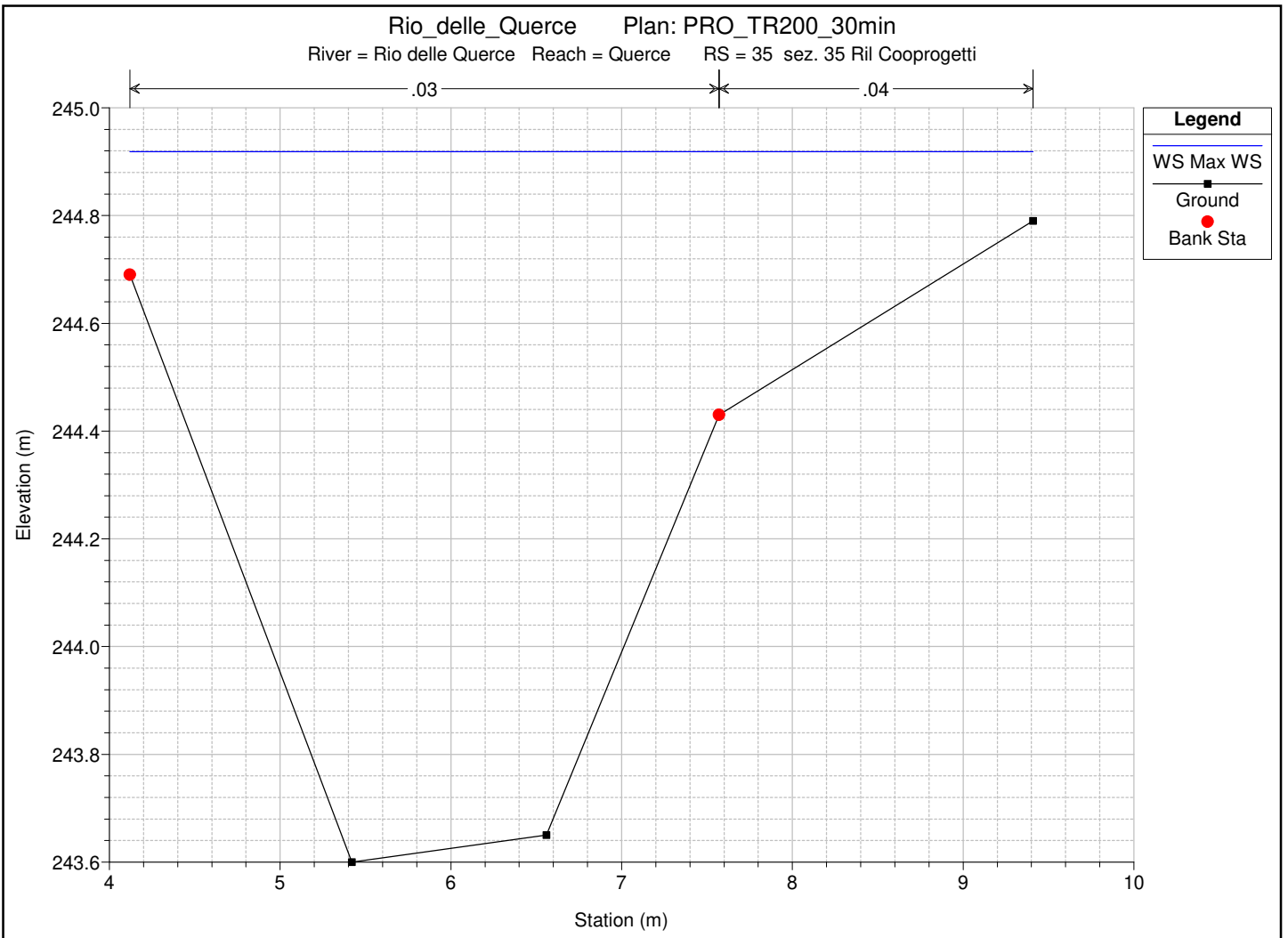


1 cm Horiz. = 25 m 1 cm Vert. = 1 m

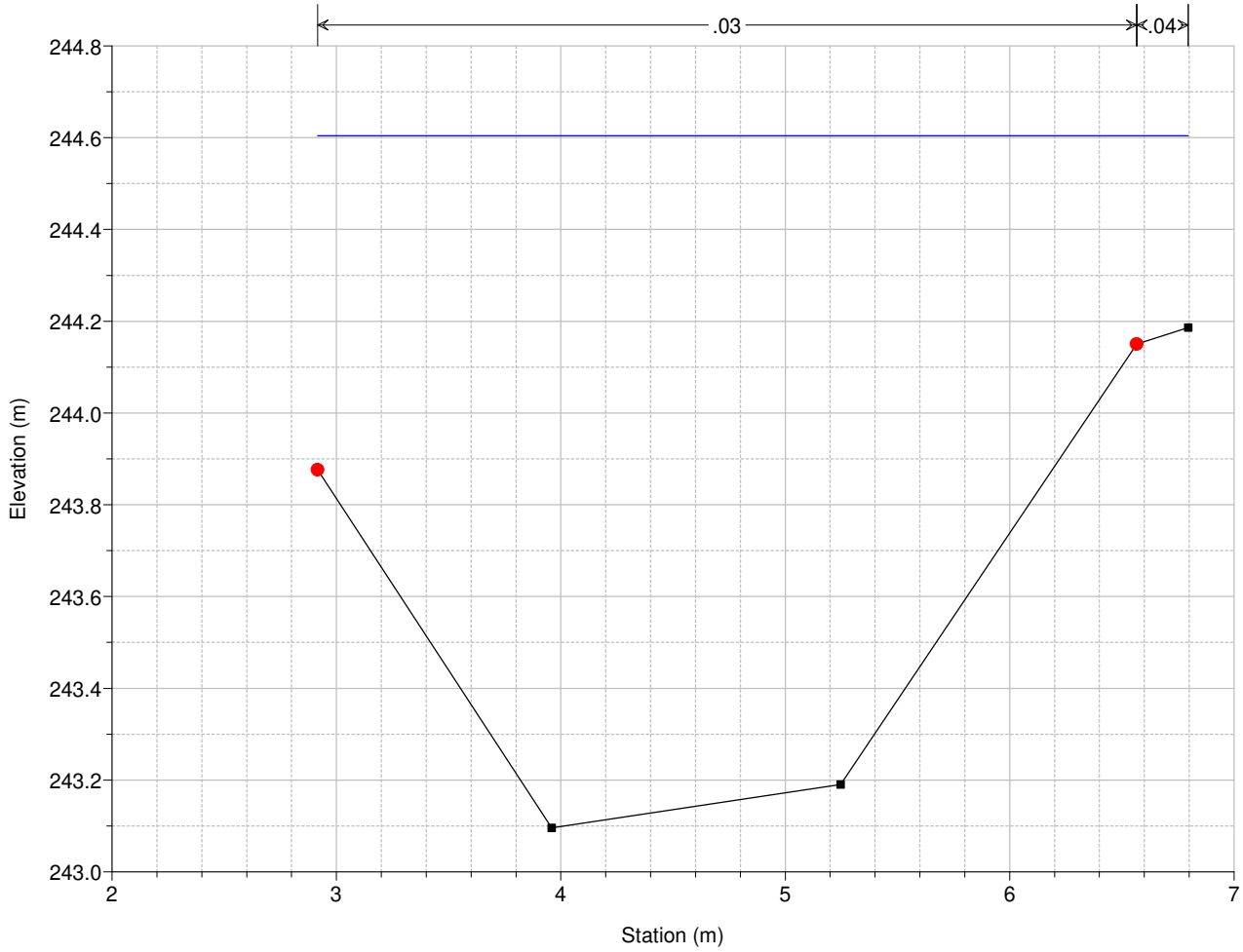
Rio_delle_Querce Plan: PRO_TR200_30min
 Strutture Laterali Sinistra Idraulica



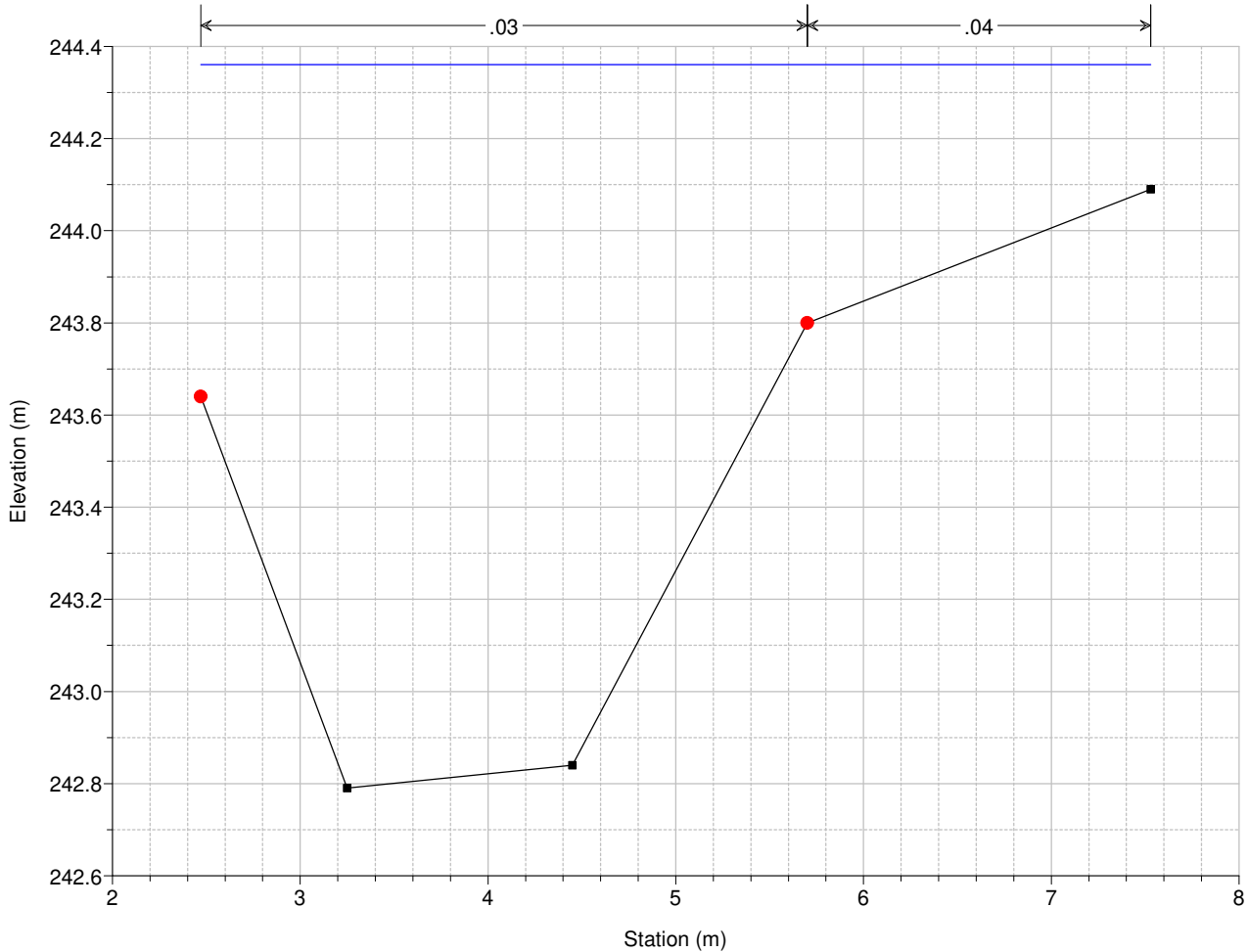




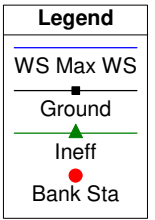
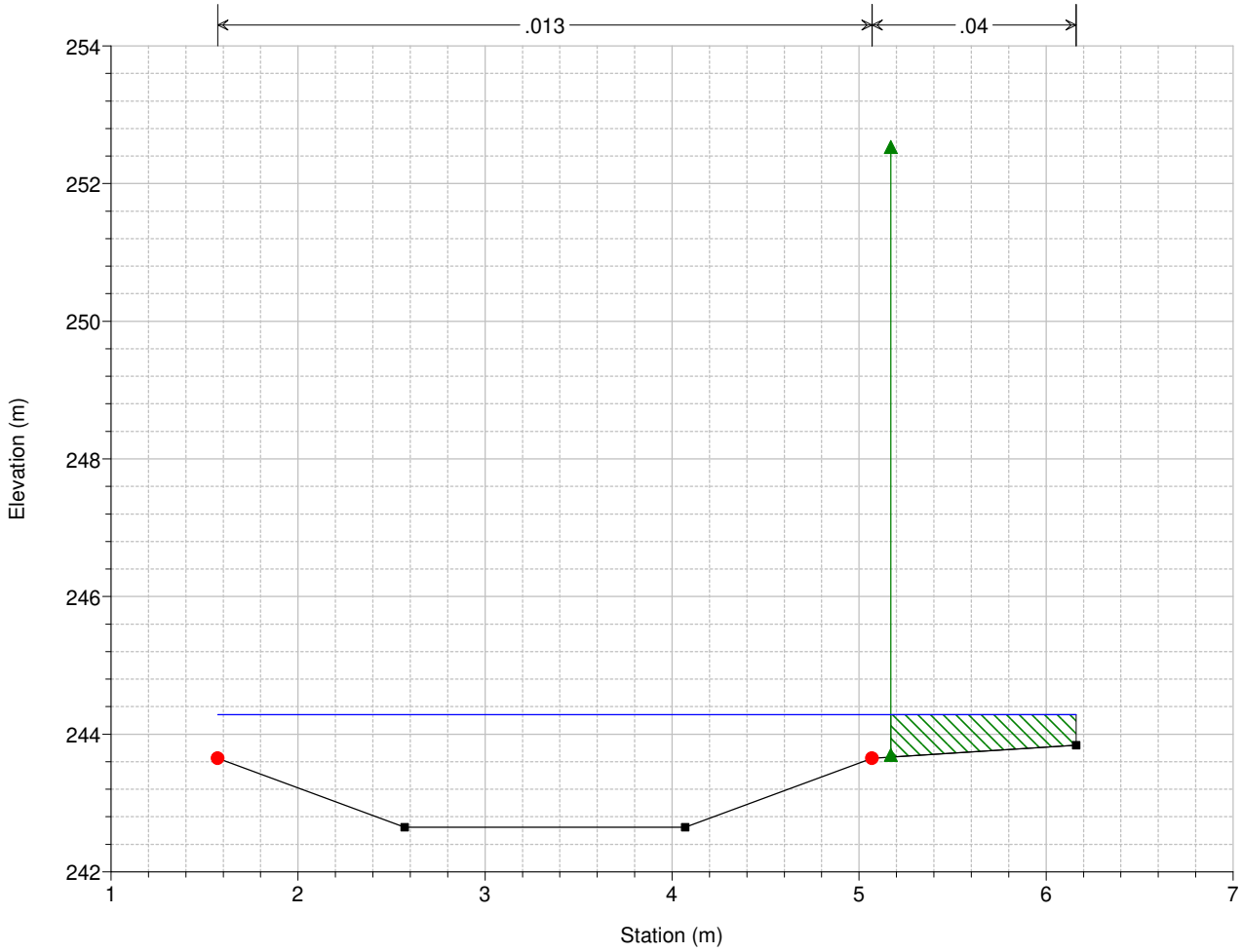
Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Querce RS = 33.875 Interpolata per idrogramma laterale QUERCE3



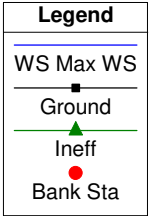
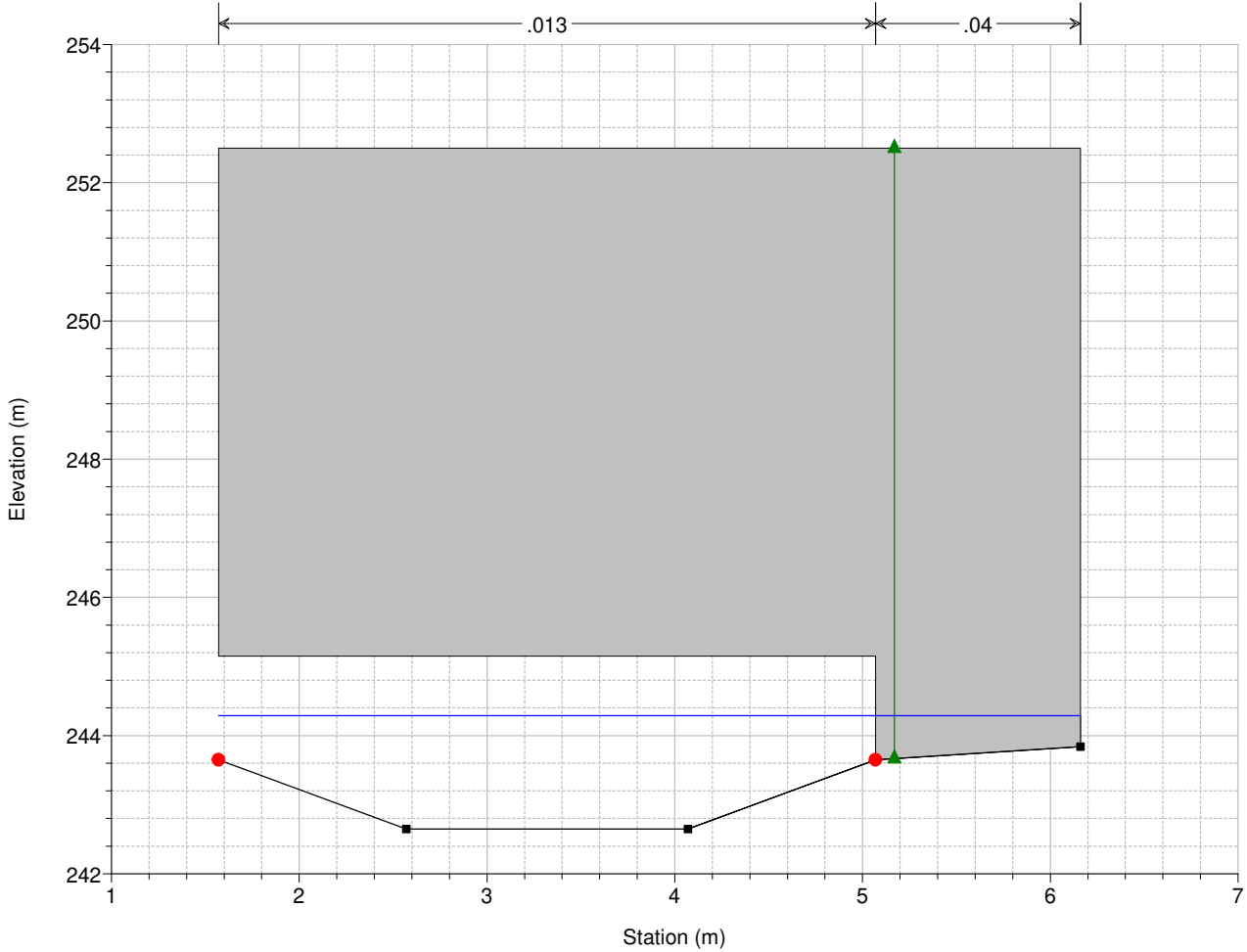
Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Querce RS = 33 sez. 33 Ril Cooproggetti



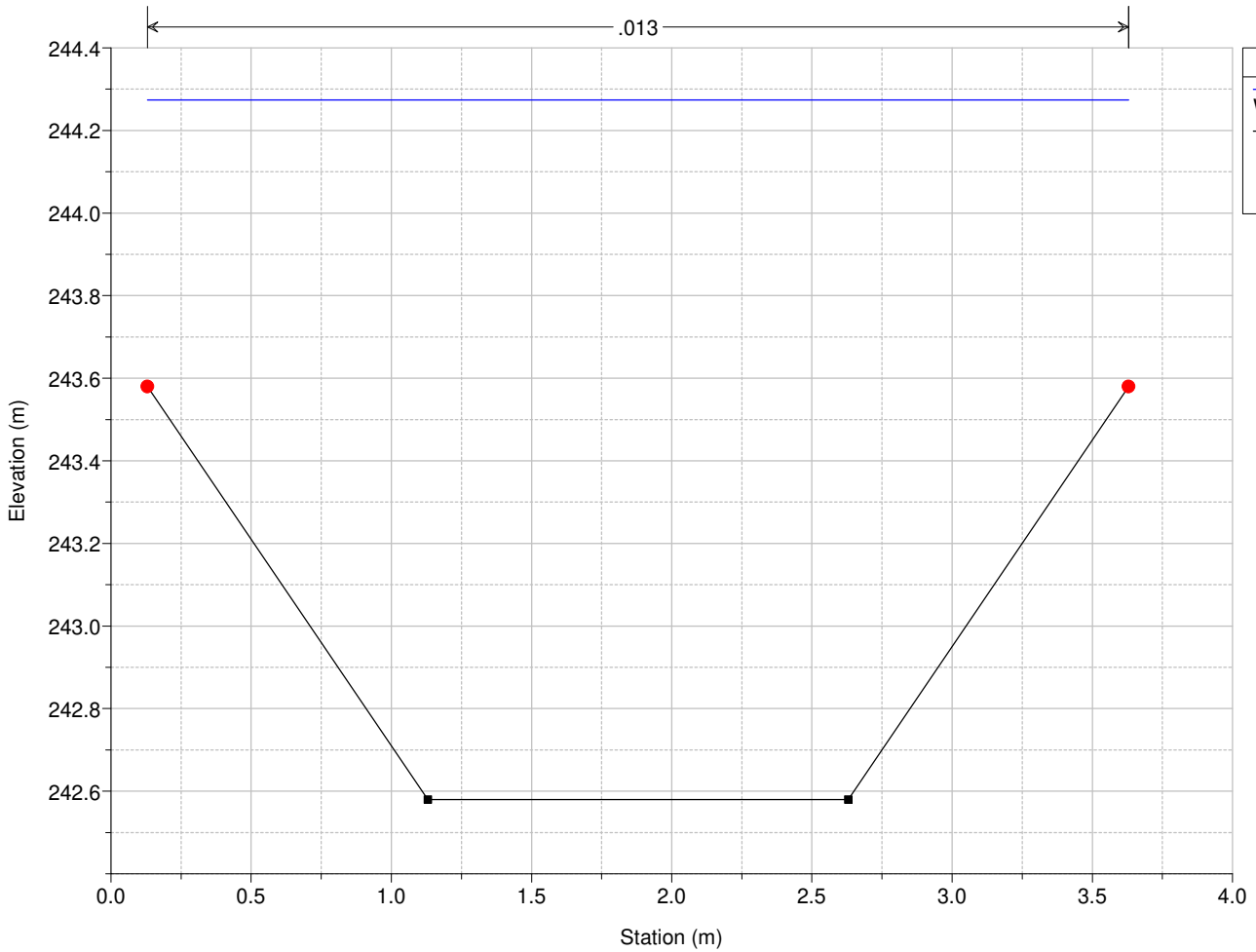
Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Querce RS = 32.72



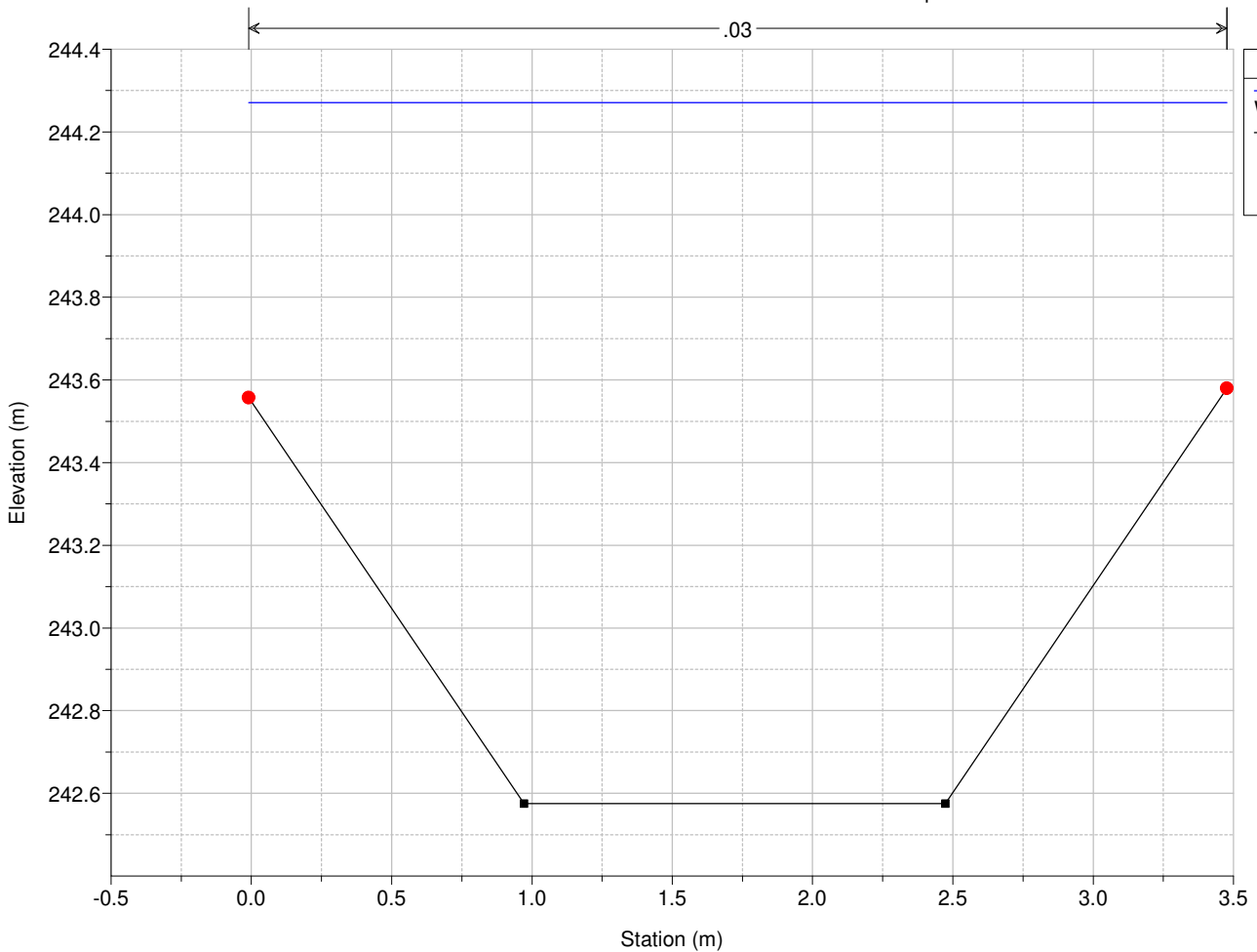
Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Querce RS = 32.50 BR



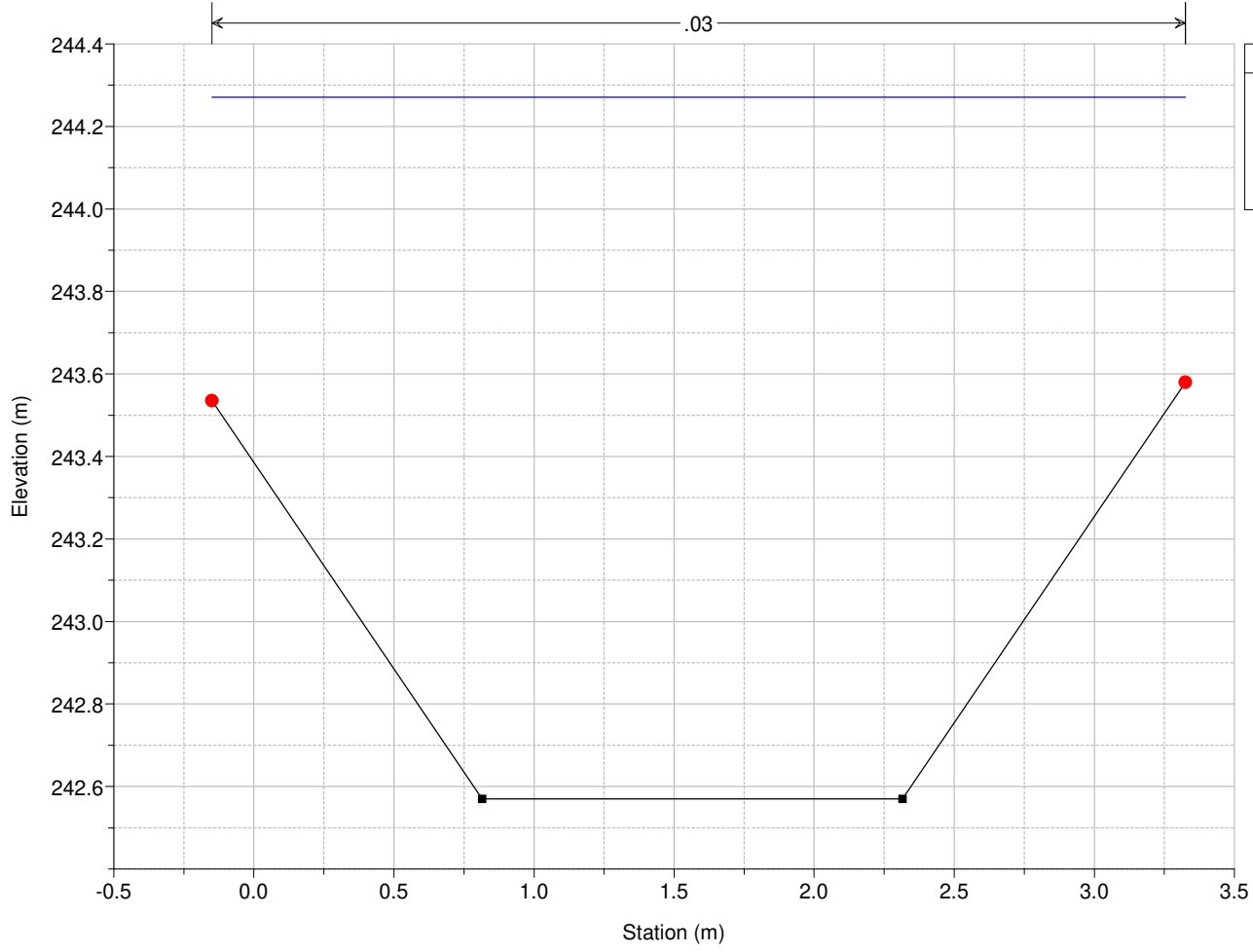
Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Querce RS = 32.14



Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Querce RS = 32.105 Inerpolata monte J



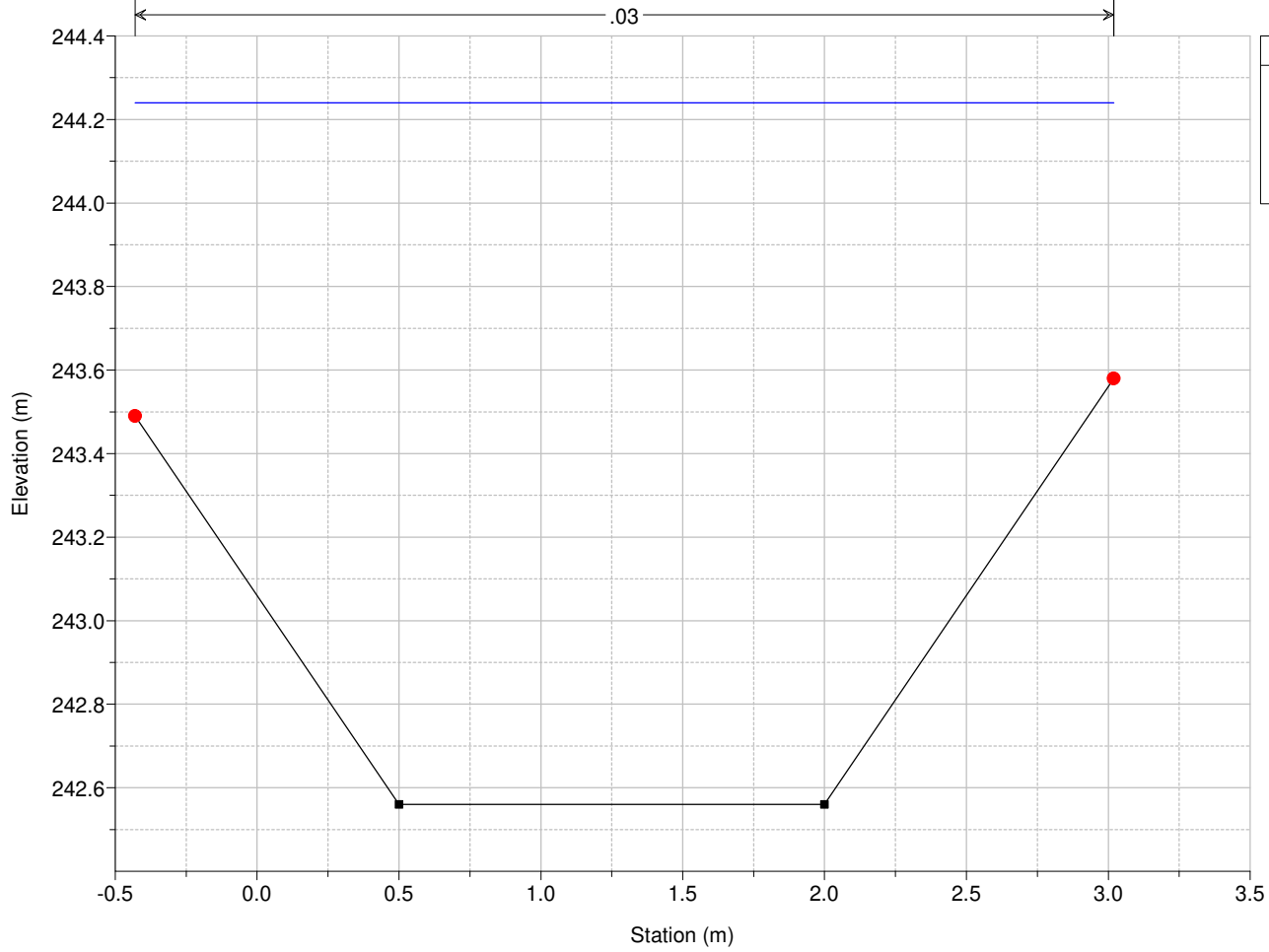
Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Querce_valle RS = 32.070 Inerpolata valle J



Legend

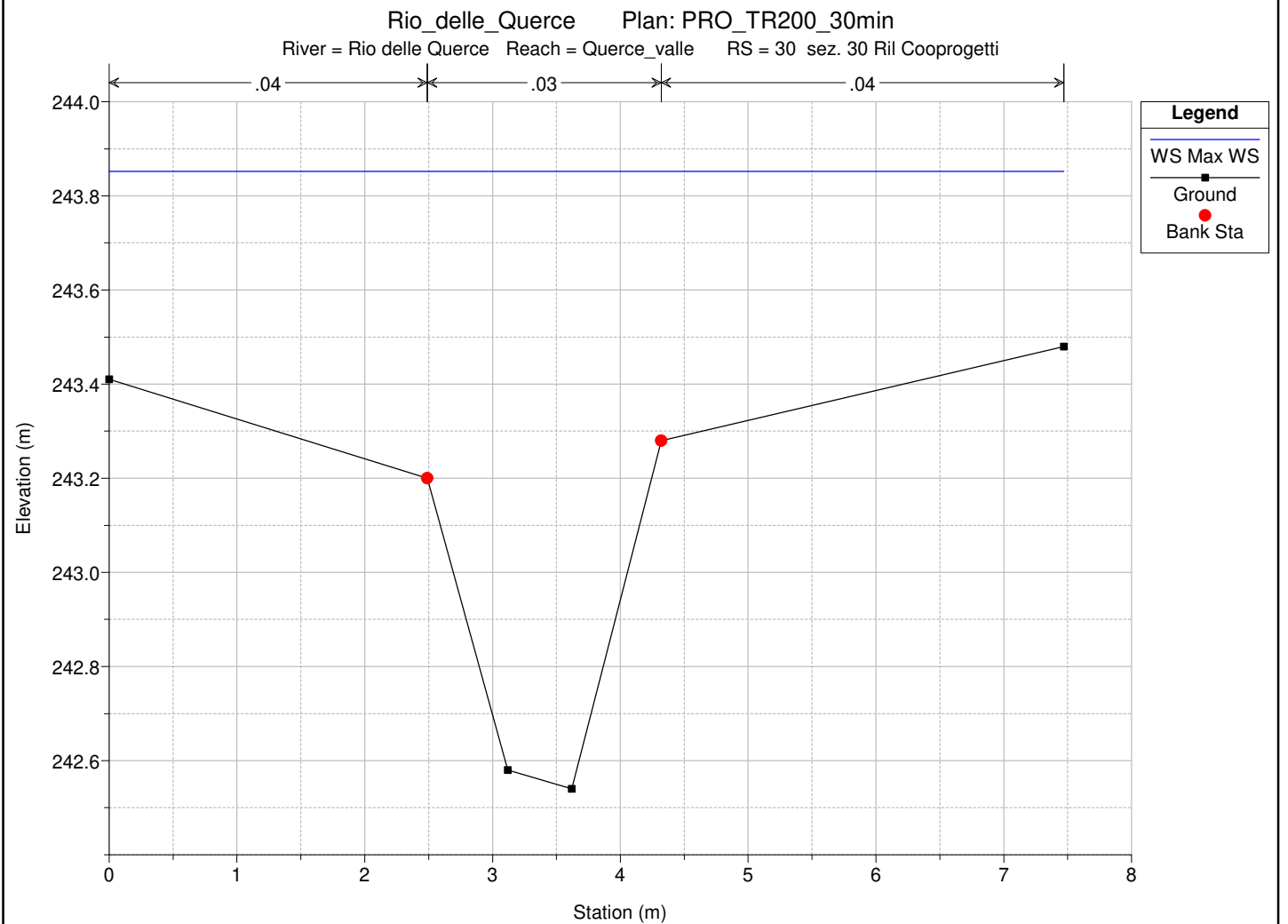
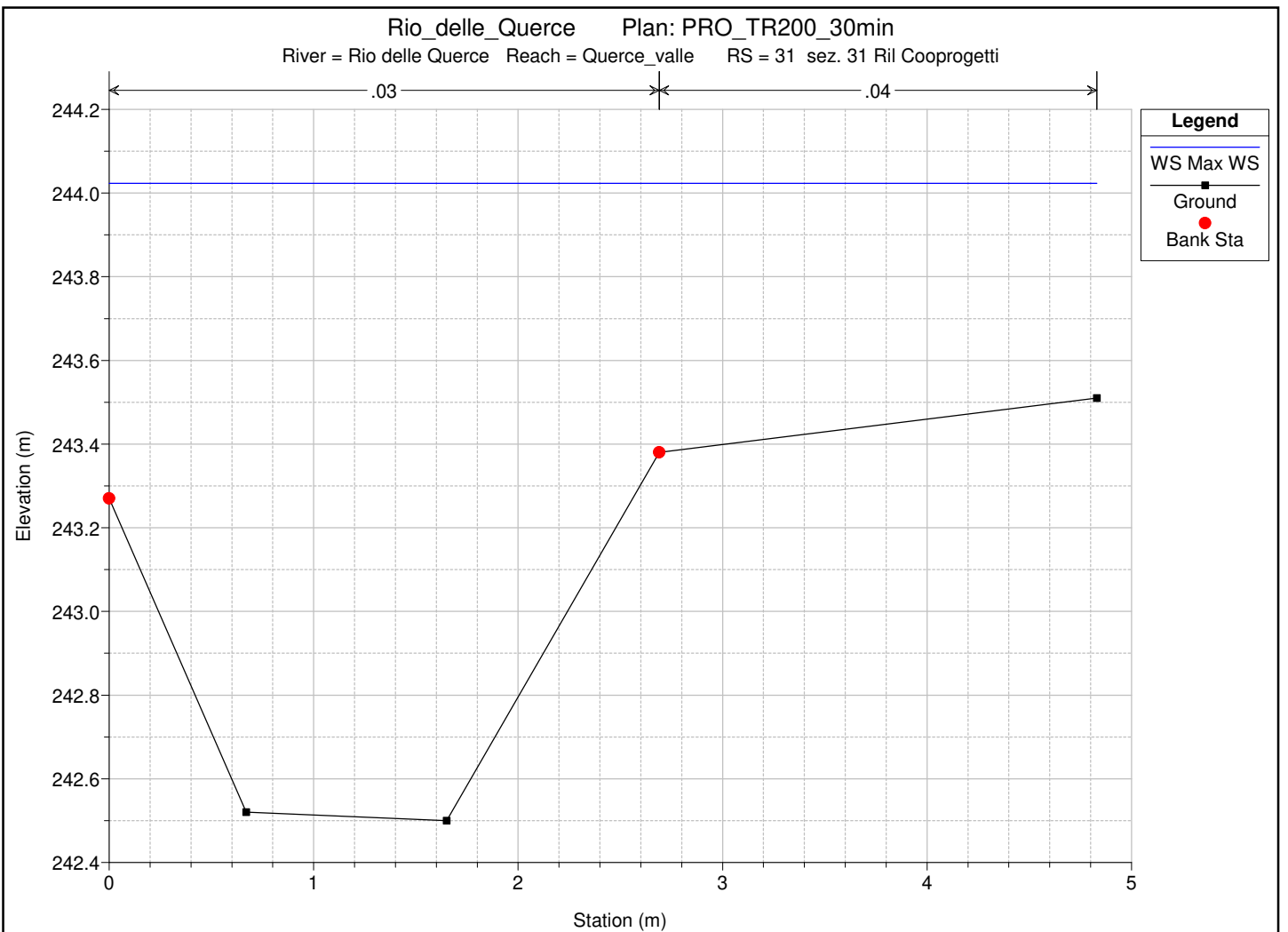
- WS Max WS
- Ground
- Bank Sta

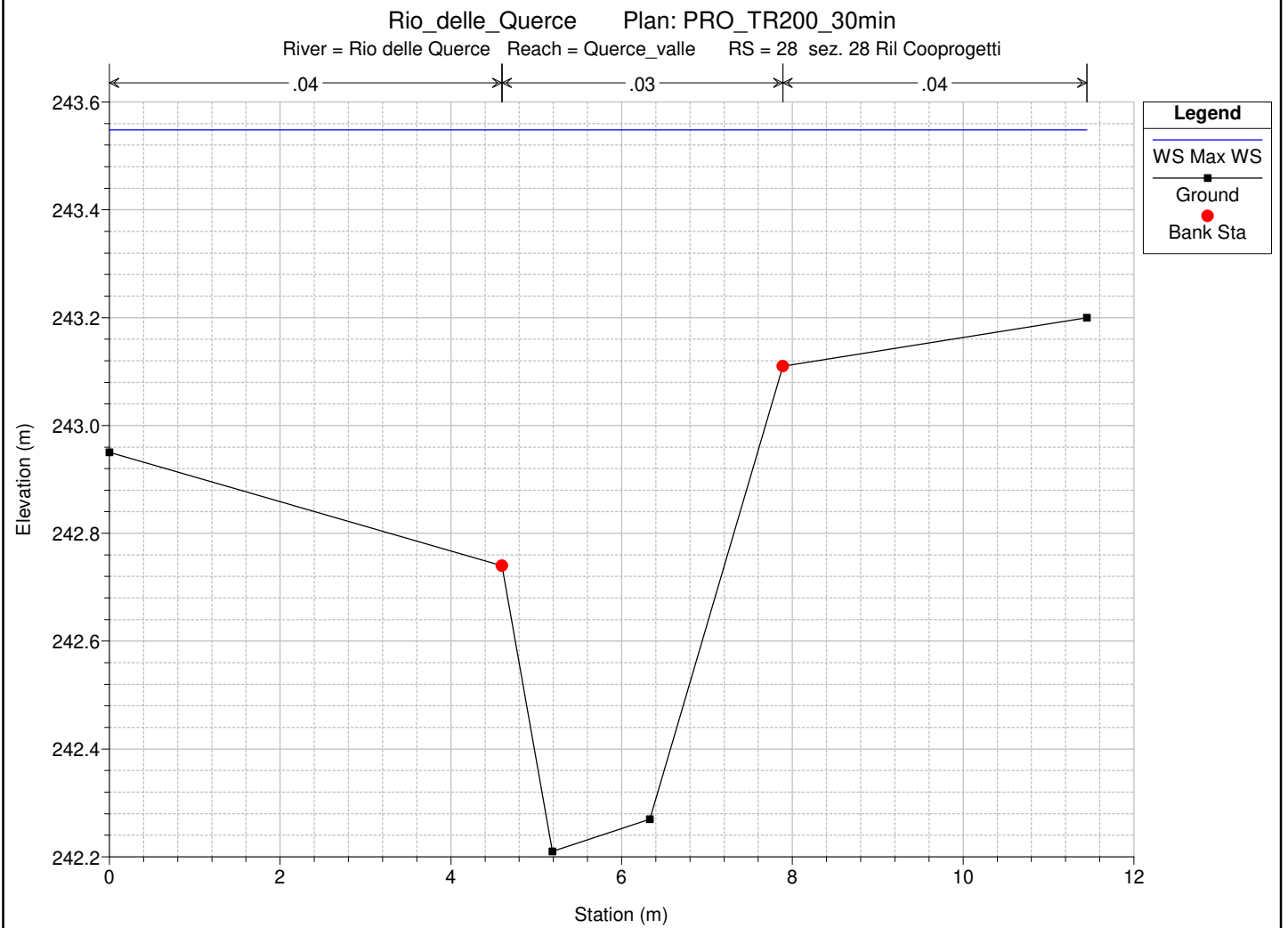
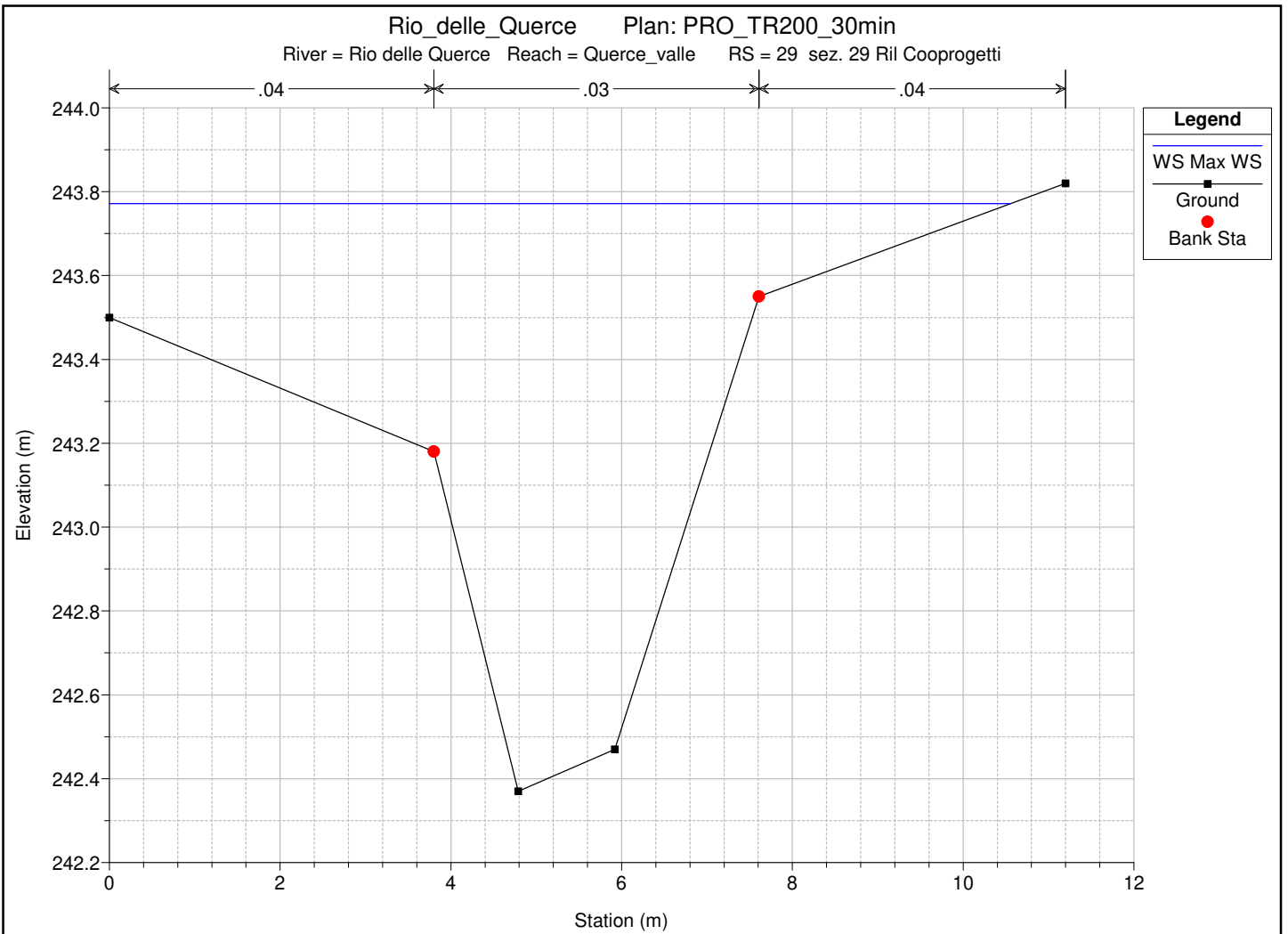
Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Querce_valle RS = 32 sez. 32 Ril Cooproggetti_PRO



Legend

- WS Max WS
- Ground
- Bank Sta





| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|--------------|-----------|---------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Querce | 36 | Max WS | 4.03 | 244.14 | 245.36 | 244.97 | 245.42 | 0.001454 | 1.12 | 4.26 | 6.07 | 0.36 |
| Querce | 35.999 | | Lat Struct | | | | | | | | | |
| Querce | 35.998 | | Lat Struct | | | | | | | | | |
| Querce | 35.952 | Max WS | 3.74 | 244.11 | 245.37 | 244.87 | 245.42 | 0.001107 | 1.00 | 4.44 | 6.07 | 0.32 |
| Querce | 35 | Max WS | 8.54 | 243.60 | 244.92 | 244.84 | 245.19 | 0.007180 | 2.38 | 3.93 | 5.29 | 0.77 |
| Querce | 34.999 | | Lat Struct | | | | | | | | | |
| Querce | 34.998 | | Lat Struct | | | | | | | | | |
| Querce | 34 | Max WS | 6.87 | 243.14 | 244.58 | 244.18 | 244.72 | 0.003625 | 1.68 | 4.08 | 3.71 | 0.51 |
| Querce | 33.875 | Max WS | 6.54 | 243.10 | 244.60 | 244.11 | 244.72 | 0.002527 | 1.52 | 4.38 | 3.88 | 0.45 |
| Querce | 33 | Max WS | 5.63 | 242.79 | 244.36 | 243.78 | 244.44 | 0.001803 | 1.29 | 4.81 | 5.06 | 0.37 |
| Querce | 32.99 | | Lat Struct | | | | | | | | | |
| Querce | 32.98 | | Lat Struct | | | | | | | | | |
| Querce | 32.72 | Max WS | 7.07 | 242.65 | 244.28 | 243.68 | 244.40 | 0.000403 | 1.49 | 4.78 | 4.59 | 0.41 |
| Querce | 32.50 | | Bridge | | | | | | | | | |
| Querce | 32.14 | Max WS | 7.07 | 242.58 | 244.27 | 243.61 | 244.38 | 0.000424 | 1.44 | 4.93 | 3.50 | 0.39 |
| Querce | 32.13 | | Lat Struct | | | | | | | | | |
| Querce | 32.12 | | Lat Struct | | | | | | | | | |
| Querce | 32.105 | Max WS | 6.93 | 242.58 | 244.27 | 243.60 | 244.37 | 0.002170 | 1.41 | 4.93 | 3.49 | 0.38 |
| Querce_valle | 32.070 | Max WS | 8.14 | 242.57 | 244.27 | 243.68 | 244.41 | 0.002979 | 1.65 | 4.93 | 3.48 | 0.44 |
| Querce_valle | 32.069 | | Lat Struct | | | | | | | | | |
| Querce_valle | 32.068 | | Lat Struct | | | | | | | | | |
| Querce_valle | 32 | Max WS | 8.87 | 242.56 | 244.24 | 243.71 | 244.41 | 0.003719 | 1.83 | 4.84 | 3.45 | 0.49 |
| Querce_valle | 31 | Max WS | 7.39 | 242.50 | 244.02 | 243.72 | 244.18 | 0.003991 | 1.85 | 4.60 | 4.83 | 0.53 |
| Querce_valle | 30.999 | | Lat Struct | | | | | | | | | |
| Querce_valle | 30.998 | | Lat Struct | | | | | | | | | |
| Querce_valle | 30 | Max WS | 7.62 | 242.54 | 243.85 | 243.77 | 244.03 | 0.006315 | 2.27 | 4.76 | 7.47 | 0.71 |
| Querce_valle | 29 | Max WS | 7.60 | 242.37 | 243.77 | 243.55 | 243.89 | 0.002998 | 1.65 | 5.77 | 10.56 | 0.53 |
| Querce_valle | 28.999 | | Lat Struct | | | | | | | | | |
| Querce_valle | 28.998 | | Lat Struct | | | | | | | | | |
| Querce_valle | 28 | Max WS | 6.74 | 242.21 | 243.55 | 243.18 | 243.60 | 0.001302 | 1.15 | 8.10 | 11.45 | 0.36 |

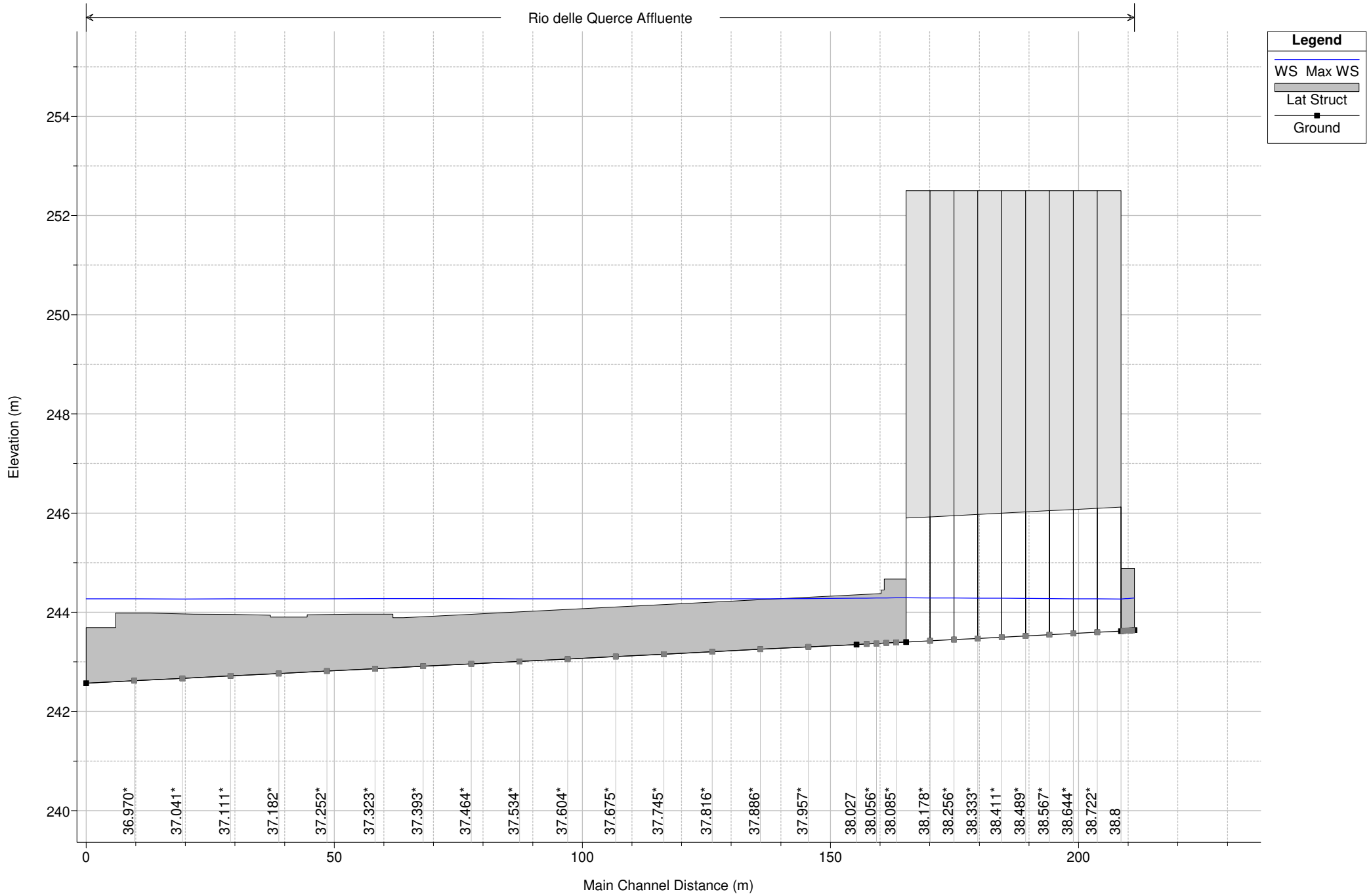
| Reach | River Sta | Profile | Q US (m3/s) | Q Leaving Total (m3/s) | Q DS (m3/s) | Q Weir (m3/s) | Q Gates (m3/s) | Wr Top Width (m) | Weir Max Depth (m) | Weir Avg Depth (m) | Min El Weir Flow (m) | E.G. US. (m) | W.S. US. (m) | E.G. DS (m) | W.S. DS (m) |
|--------------|-----------|---------|----------------|---------------------------|----------------|------------------|-------------------|---------------------|-----------------------|-----------------------|-------------------------|-----------------|-----------------|----------------|----------------|
| Querce | 35.999 | Max WS | 4.03 | 2.53 | 8.54 | 2.53 | | 83.08 | 0.44 | 0.22 | 244.93 | 245.42 | 245.36 | 245.19 | 244.92 |
| Querce | 35.998 | Max WS | 4.03 | -0.07 | 8.54 | -0.07 | | 7.04 | 0.23 | 0.18 | 244.69 | 245.42 | 245.36 | 245.19 | 244.92 |
| Querce | 34.999 | Max WS | 8.54 | 2.39 | 5.63 | 2.39 | | 131.57 | 0.42 | 0.29 | 244.10 | 245.19 | 244.92 | 244.44 | 244.36 |
| Querce | 34.998 | Max WS | 8.54 | 4.92 | 5.63 | 4.92 | | 147.08 | 0.71 | 0.47 | 243.66 | 245.19 | 244.92 | 244.44 | 244.36 |
| Querce | 32.99 | Max WS | 5.63 | -0.22 | 7.07 | -0.22 | | 21.47 | 0.52 | 0.35 | 243.84 | 244.44 | 244.36 | 244.40 | 244.28 |
| Querce | 32.98 | Max WS | 5.63 | 0.70 | 7.07 | 0.70 | | 21.04 | 0.56 | 0.53 | 243.80 | 244.44 | 244.36 | 244.40 | 244.28 |
| Querce | 32.13 | Max WS | 7.07 | 0.10 | 6.93 | 0.10 | | 2.85 | 0.34 | 0.34 | 243.94 | 244.38 | 244.27 | 244.37 | 244.27 |
| Querce | 32.12 | Max WS | 7.07 | 0.07 | 6.93 | 0.07 | | 2.93 | 0.37 | 0.21 | 243.90 | 244.38 | 244.27 | 244.37 | 244.27 |
| Querce_valle | 32.069 | Max WS | 8.14 | 0.22 | 8.87 | 0.22 | | 5.87 | 0.58 | 0.57 | 243.69 | 244.41 | 244.27 | 244.41 | 244.24 |
| Querce_valle | 32.068 | Max WS | 8.14 | 0.40 | 8.87 | 0.40 | | 5.72 | 0.53 | 0.49 | 243.74 | 244.41 | 244.27 | 244.41 | 244.24 |
| Querce_valle | 30.999 | Max WS | 7.39 | 0.23 | 7.62 | 0.23 | | 59.71 | 0.52 | 0.35 | 243.51 | 244.18 | 244.02 | 244.03 | 243.85 |
| Querce_valle | 30.998 | Max WS | 7.39 | -0.40 | 7.62 | -0.40 | | 60.11 | 0.61 | 0.52 | 243.40 | 244.18 | 244.02 | 244.03 | 243.85 |
| Querce_valle | 28.999 | Max WS | 7.60 | 0.01 | 6.74 | 0.01 | | 36.61 | 0.07 | 0.04 | 243.53 | 243.89 | 243.77 | 243.60 | 243.55 |
| Querce_valle | 28.998 | Max WS | 7.60 | 1.16 | 6.74 | 1.16 | | 102.38 | 0.60 | 0.17 | 242.95 | 243.89 | 243.77 | 243.60 | 243.55 |

Affluente
in
destra
(AV43922)

Rio_delle_Querce Plan: PRO_TR200_30min

Strutture Lateralì Destra Idraulica

Rio delle Querce Affluente



Legend

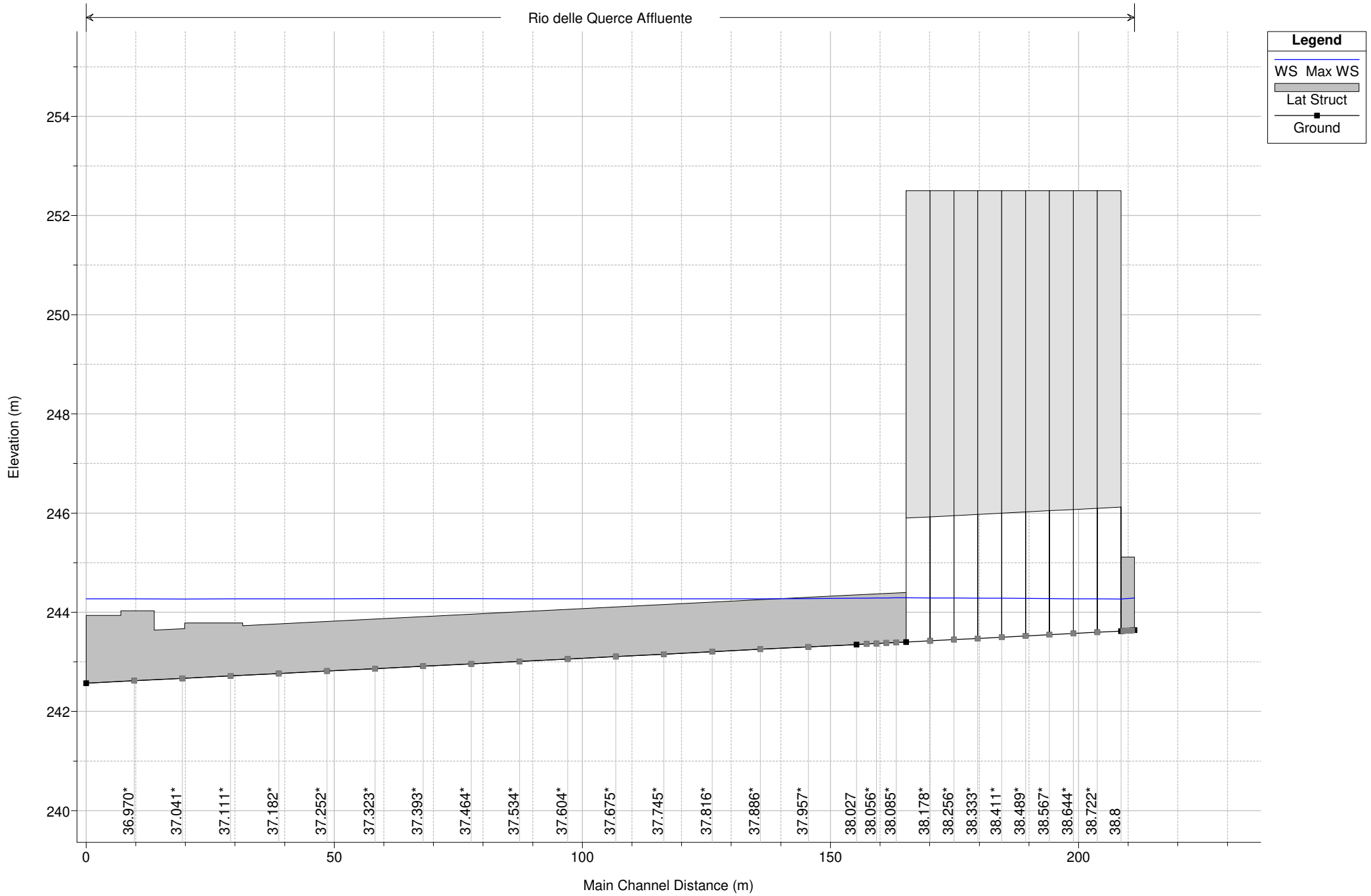
- WS Max WS
- Lat Struct
- Ground

1 cm Horiz. = 10 m 1 cm Vert. = 1 m

Rio_delle_Querce Plan: PRO_TR200_30min

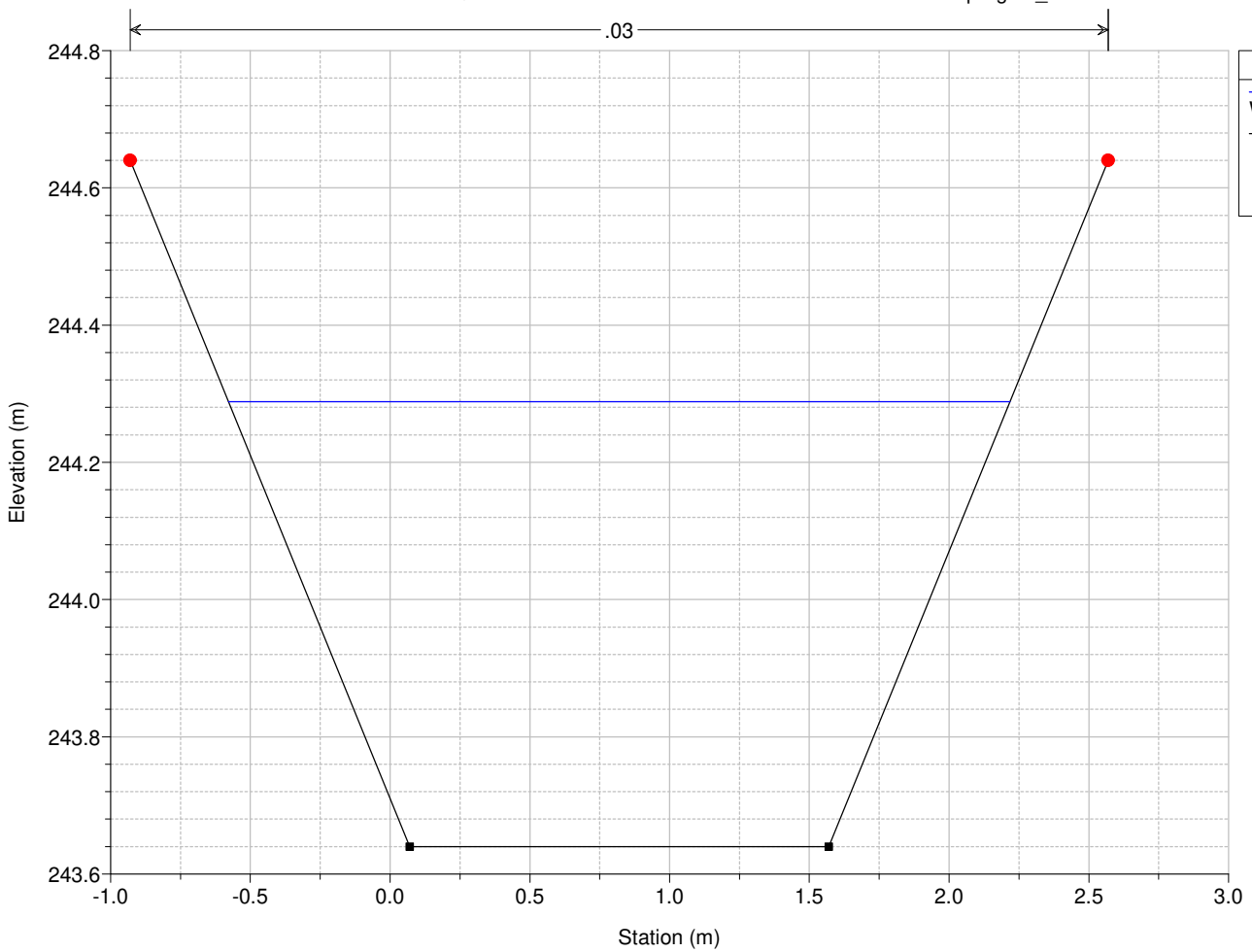
Strutture Lateral Sinistra Idraulica

Rio delle Querce Affluente



1 cm Horiz. = 10 m 1 cm Vert. = 1 m

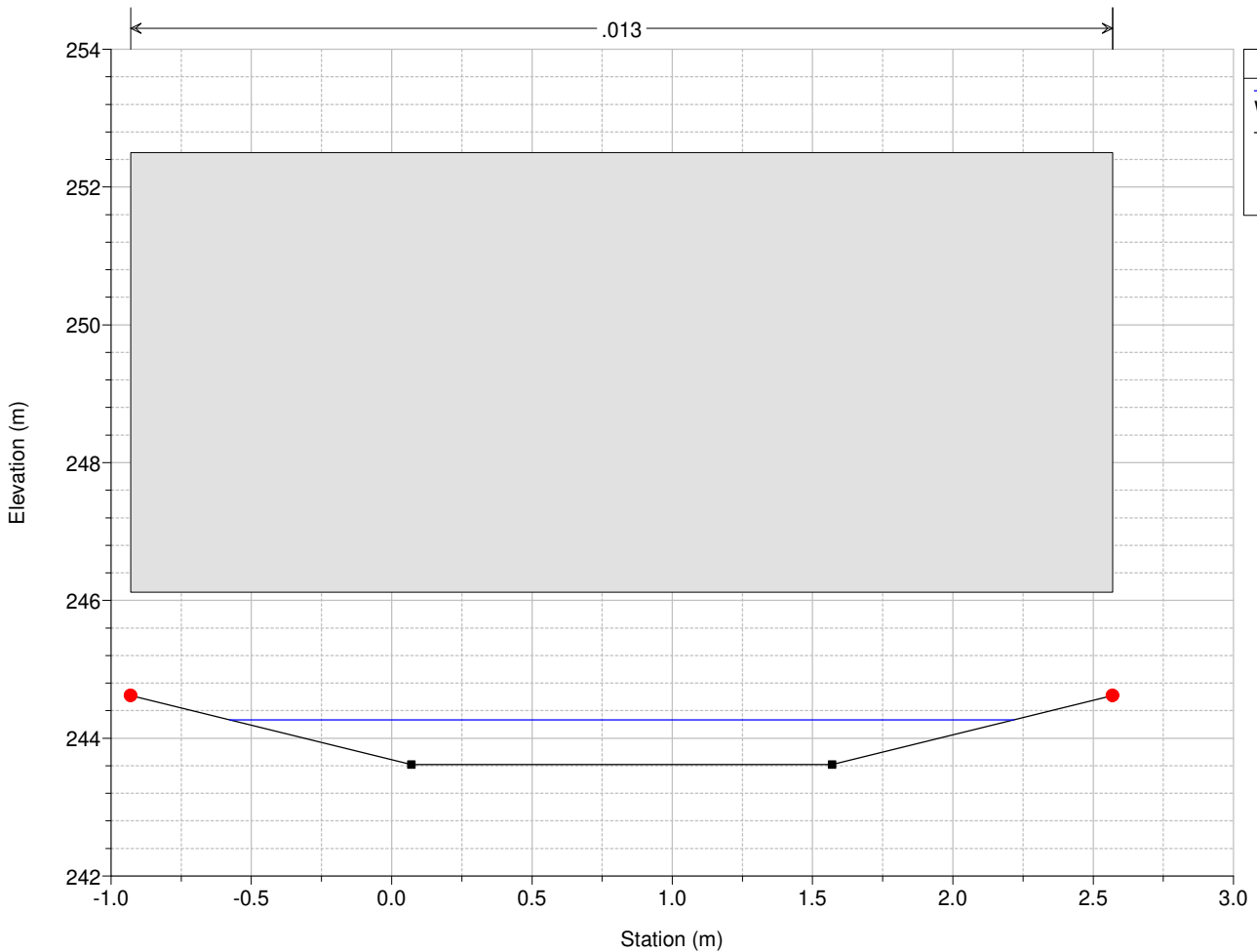
Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Affluente RS = 39 sez. 39 Ril Cooprogetti_PRO



Legend

- WS Max WS
- Ground
- Bank Sta

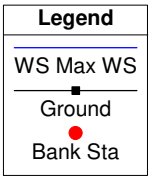
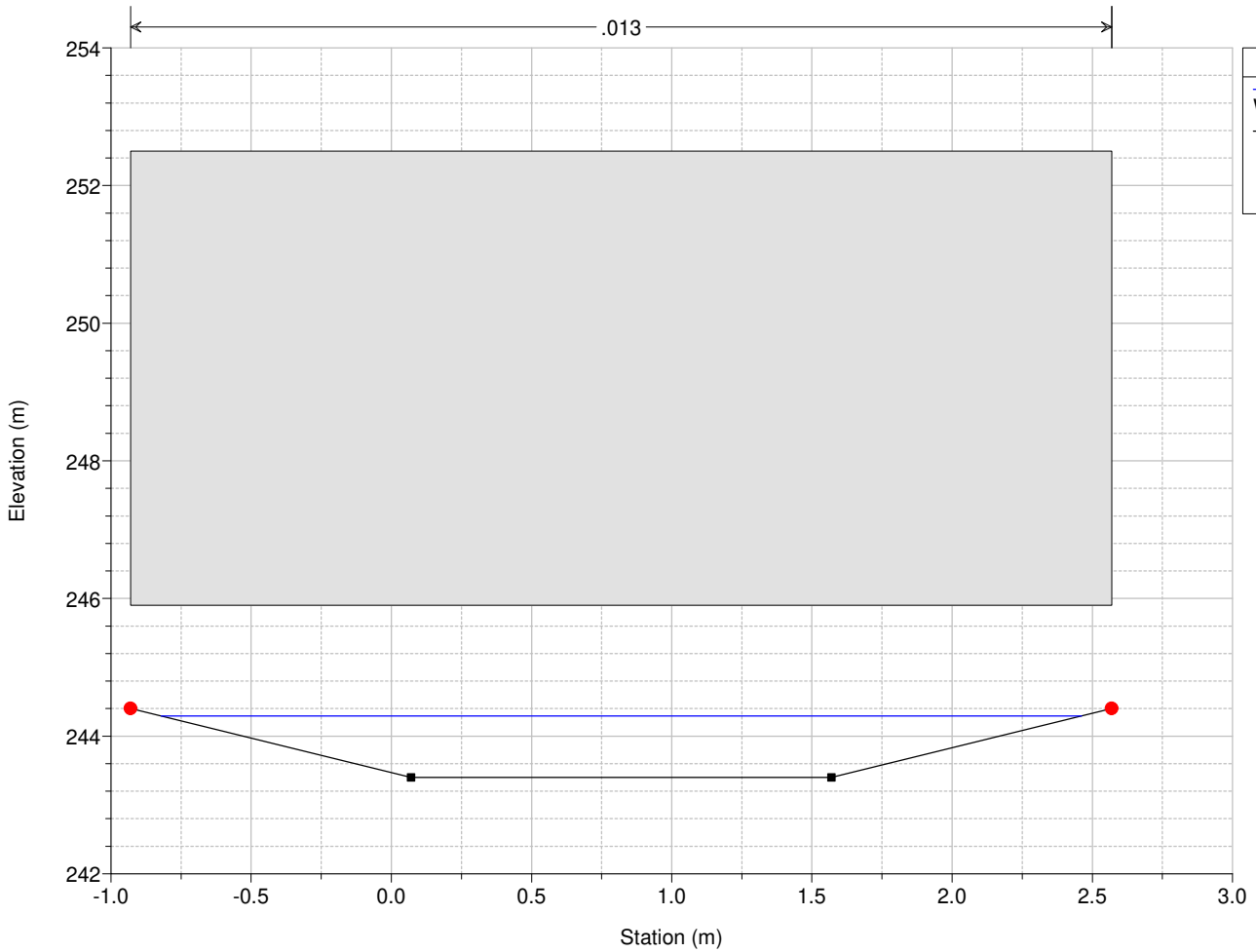
Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Affluente RS = 38.8



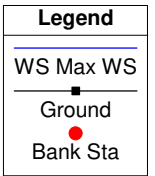
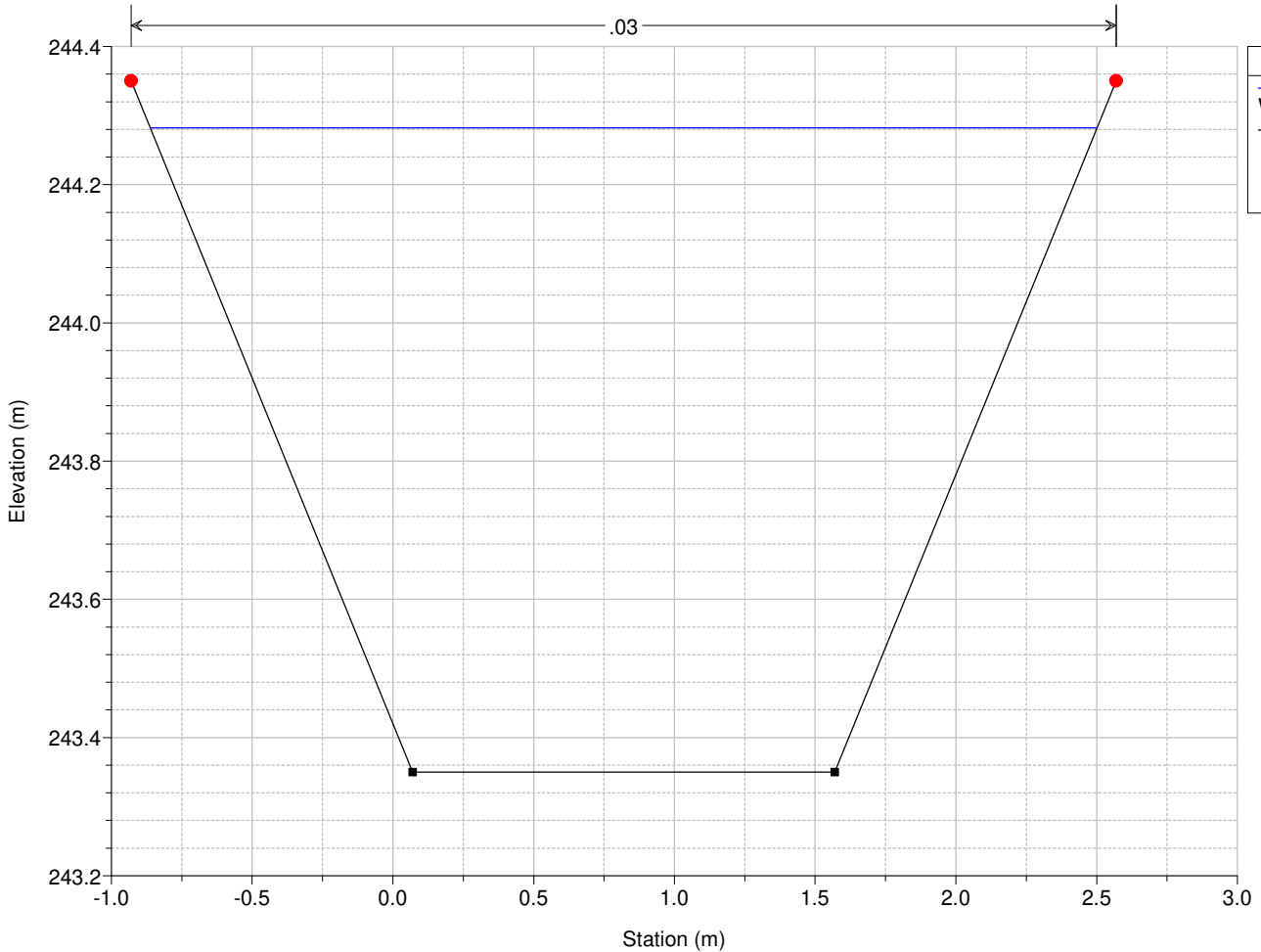
Legend

- WS Max WS
- Ground
- Bank Sta

Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Affluente RS = 38.1

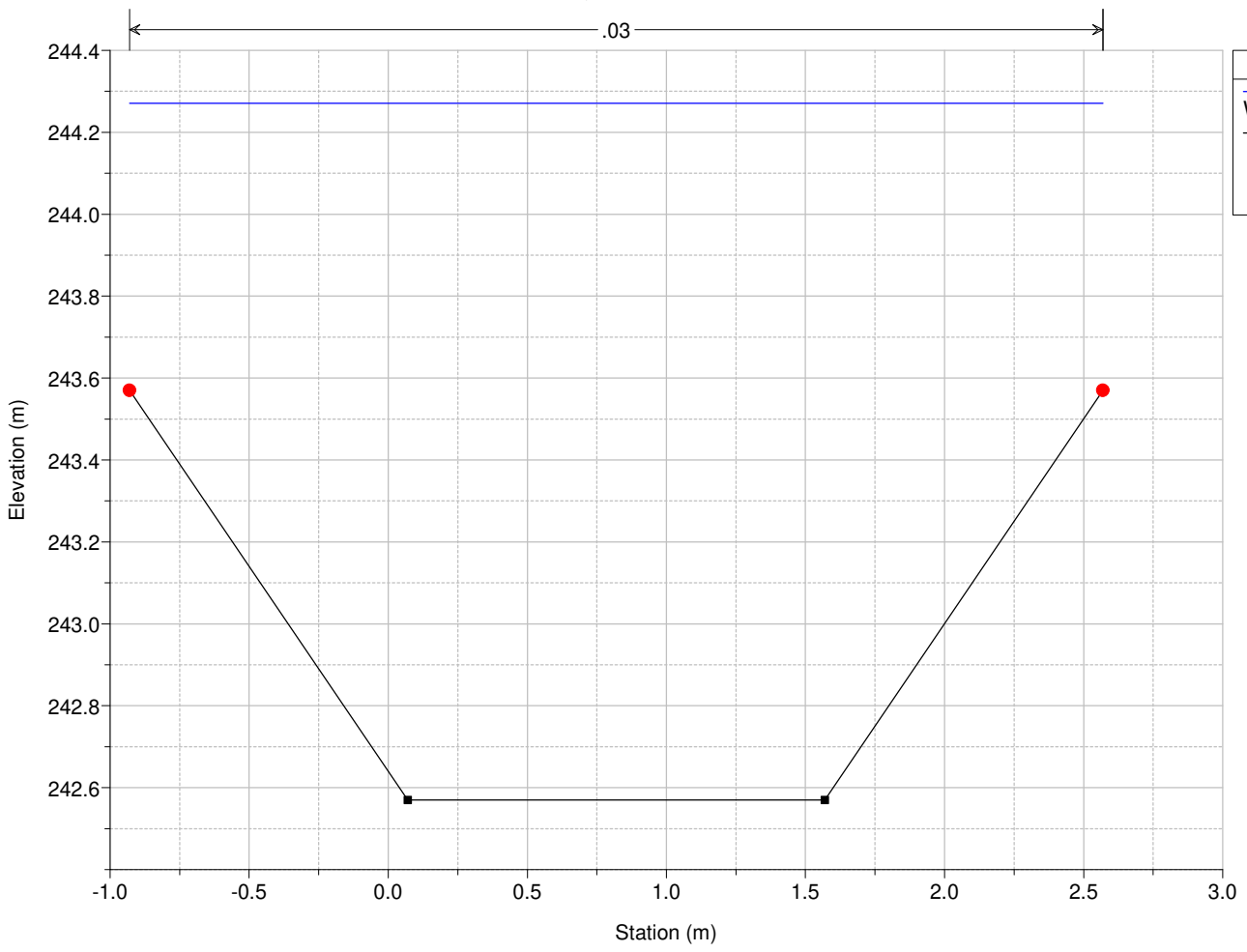


Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Affluente RS = 38.027 Interpolata a 10m dal tombino



Rio_delle_Querce Plan: PRO_TR200_30min
River = Rio delle Querce Reach = Affluente RS = 36.9

.03



HEC-RAS Plan: PRO_TR200_30min River: Rio delle Querce Reach: Affluente Profile: Max WS

| Reach | River Sta | Profile | Q Total (m3/s) | Min Ch El (m) | W.S. Elev (m) | Crit W.S. (m) | E.G. Elev (m) | E.G. Slope (m/m) | Vel Chnl (m/s) | Flow Area (m2) | Top Width (m) | Froude # Chl |
|-----------|-----------|---------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Affluente | 39 | Max WS | 2.36 | 243.64 | 244.29 | 244.19 | 244.43 | 0.008271 | 1.69 | 1.39 | 2.80 | 0.77 |
| Affluente | 38.999 | | Lat Struct | | | | | | | | | |
| Affluente | 38.998 | | Lat Struct | | | | | | | | | |
| Affluente | 38.8 | Max WS | 2.35 | 243.62 | 244.27 | 244.18 | 244.41 | 0.001552 | 1.69 | 1.39 | 2.80 | 0.77 |
| Affluente | 38.1 | Max WS | 1.93 | 243.40 | 244.29 | 243.89 | 244.33 | 0.000323 | 0.91 | 2.13 | 3.28 | 0.36 |
| Affluente | 38.099 | | Lat Struct | | | | | | | | | |
| Affluente | 38.098 | | Lat Struct | | | | | | | | | |
| Affluente | 38.027 | Max WS | 1.94 | 243.35 | 244.28 | 243.84 | 244.32 | 0.001466 | 0.85 | 2.27 | 3.36 | 0.33 |
| Affluente | 36.9 | Max WS | 1.21 | 242.57 | 244.27 | 242.94 | 244.27 | 0.000065 | 0.24 | 4.95 | 3.50 | 0.07 |

HEC-RAS Plan: PRO_TR200_30min River: Rio delle Querce Reach: Affluente Profile: Max WS

| Reach | River Sta | Profile | Q US (m3/s) | Q Leaving Total (m3/s) | Q DS (m3/s) | Q Weir (m3/s) | Q Gates (m3/s) | Wr Top Wdth (m) | Weir Max Depth (m) | Weir Avg Depth (m) | Min El Weir Flow (m) | E.G. US. (m) | W.S. US. (m) | E.G. DS (m) | W.S. DS (m) |
|-----------|-----------|---------|----------------|---------------------------|----------------|------------------|-------------------|--------------------|-----------------------|-----------------------|-------------------------|-----------------|-----------------|----------------|----------------|
| Affluente | 38.999 | Max WS | 2.36 | 0.00 | 2.35 | 0.00 | | | | | 244.88 | 244.43 | 244.29 | 244.41 | 244.27 |
| Affluente | 38.998 | Max WS | 2.36 | 0.00 | 2.35 | 0.00 | | | | | 245.11 | 244.43 | 244.29 | 244.41 | 244.27 |
| Affluente | 38.099 | Max WS | 1.93 | 4.05 | 1.21 | 4.05 | | 139.91 | 0.58 | 0.26 | 243.69 | 244.33 | 244.29 | 244.27 | 244.27 |
| Affluente | 38.098 | Max WS | 1.93 | 4.94 | 1.21 | 4.94 | | 139.77 | 0.63 | 0.31 | 243.64 | 244.33 | 244.29 | 244.27 | 244.27 |