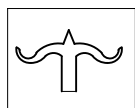


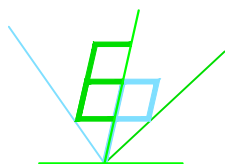
TAV. n°

U



VILLA MOCENIGO

Abano Terme - Padova



STUDIO TECNICO DI INGEGNERIA

DR. ING. ENRICO PRUNOTTO

VIA TRIESTE, 12 - 35121 PADOVA
TEL. 347/5637798 - P.I. 02673730285

RELAZIONE GENERALE

**VALUTAZIONE COMPATIBILITA' IDRAULICA
AI SENSI DELLA D.G.R. 1322/06**

DATA: Ottobre 2023

PREMESSA

La Valutazione di Compatibilità Idraulica redatta nel presente elaborato tiene conto di quanto approvato dalla Giunta Regionale con Delibera n. 1322 del 17.10.2006 e delle Linee Guida predisposte dal Commissario Delegato per l'emergenza concernente gli eccezionali eventi meteorologici del 26 settembre 2007 che hanno colpito parte del territorio della Regione Veneto.

La presente relazione tiene conto anche delle indicazioni dei Piani Stralcio per l'Assetto Idrogeologico (PAI) del bacini idrografici dei fiumi Isonzo, Tagliamento, Piave e Brenta-Bacchiglione e non si sostituisce la Valutazione di Compatibilità Idraulica redatta ai sensi del PGRA.

CLASSIFICAZIONE DELL'INTERVENTO

Lo studio idraulico riguarda un Piano di Recupero che riguarda Villa Mocenigo e l'area ad essa pertinente nel Comune di Abano Terme (PD), lungo la via Giusti, in corrispondenza della recente rotonda a servizio della strada "Direttissima per Abano Terme".

Il DGR 1322 del 10 maggio 2006 della Regione Veneto prevede una classificazione degli interventi di trasformazione delle superfici in modo tale da definire delle soglie di analisi per la redazione della valutazione di compatibilità idraulica.

Nel caso specifico l'estensione della superficie interessata dal Piano di Recupero è pari a 3,3028 ha e l'operazione rientra nella seguente classe di intervento:

significativa impermeabilizzazione potenziale

dal momento che, secondo la definizione della normativa, si tratta di un *intervento su superfici comprese fra 1 e 10 ha.*

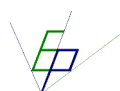
In questo caso la norma prevede che vadano dimensionati i tiranti idrici ammessi nell'invaso e le luci di scarico in modo tale da garantire la conservazione della portata massima defluente dall'area di trasformazione ai valori precedenti l'impermeabilizzazione.

A tal proposito si precisa che si adatterà un coefficiente udometrico pari a 10 l/s ha come richiesto dal Consorzio di Bonifica Bacchiglione, pur esistendo già nell'area la maggior parte dei fabbricati su cui il Piano di Recupero interviene. In altri termini il dimensionamento dell'invaso è notevolmente sovradimensionato rispetto a quanto

richiesto dalla normativa regionale vigente.

INDIVIDUAZIONE CATASTALE

Il lotto di terreno è individuato al fg. 13 mapp. 24 e 27 del Catasto Terreni del Comune di Abano Terme (PD).



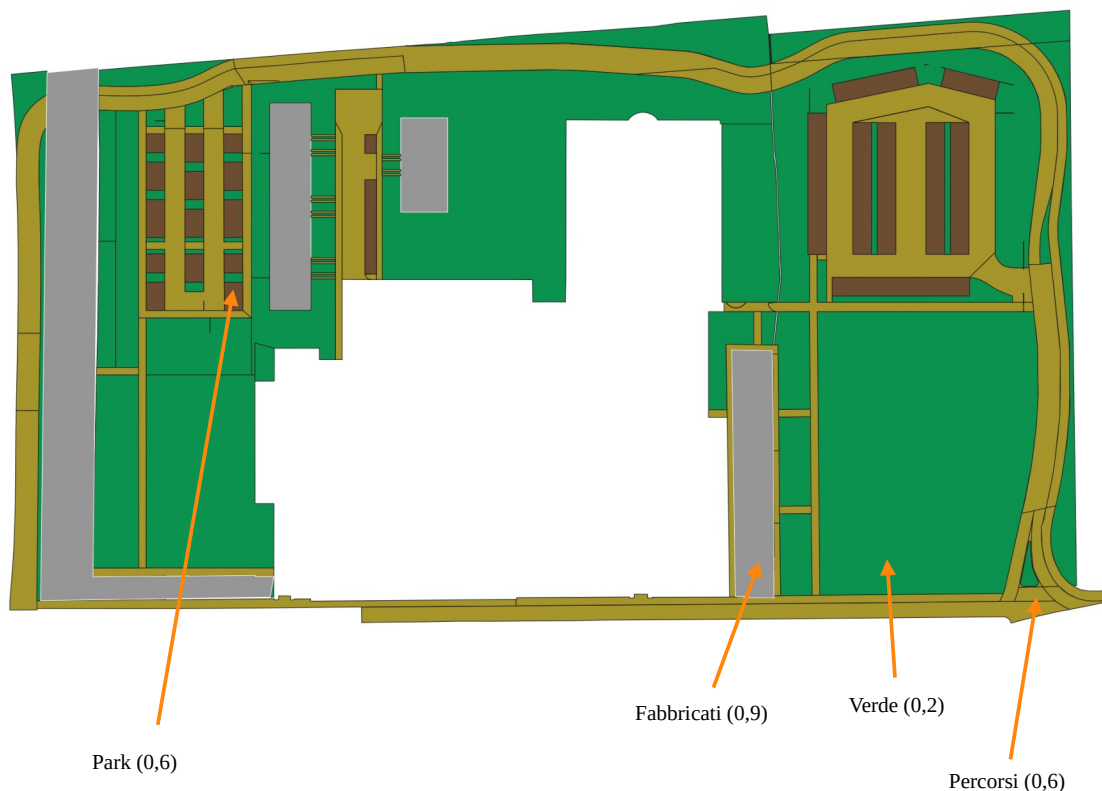
ANALISI DEL TERRITORIO

L'intervento, come detto, viene realizzato in un lotto che si presenta già edificato e prevede la sistemazione dei fabbricati esistenti e la realizzazione di due nuovi corpi in sostituzione di volumi che vengono demoliti.

Di seguito si riportano i parametri di impermeabilità del suolo che caratterizzano il terreno post operam, come descritti anche nell'immagine sotto riportata, estratta da una elaborazione su base GIS del territorio:

Superficie impermeabile:	S 3.644 mq	ϕ 0,900
Superficie semidrenante:	S 11.447 mq	ϕ 0,600
Superficie a Verde:	S 17.939 mq	ϕ 0,200
Totale Superficie:	S 33.030 mq	ϕ_m 0,416

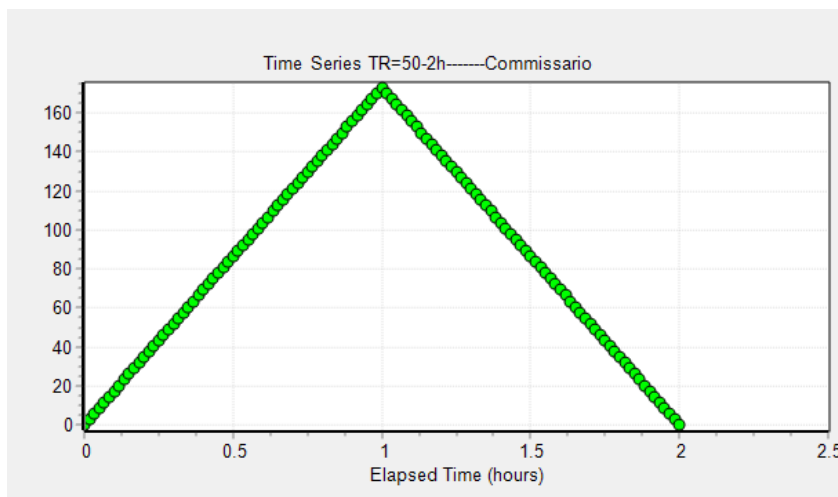
Il lotto presenta nella condizione ante operam un coefficiente di impermeabilizzazione sostanzialmente analogo a quello di progetto.



VALUTAZIONE COMPATIBILITA' IDRAULICA

La verifica dei tiranti idrici e della portata in uscita dal lotto è stata eseguita mediante un modello idraulico costruito su base SWMM.

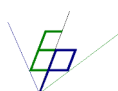
Sono state eseguite varie simulazioni utilizzando durate di pioggia diverse al fine di determinare il tempo di pioggia più gravoso, avendo adottato uno ietogramma a forma triangolare che rappresenta un evento meteorico con TR=50, di cui si riporta di seguito il grafico.



Le equazioni di probabilità pluviometrica adottate per la costruzione dello ietogramma sono quelle a tre parametri riportate nelle linee guida delle "Valutazione di compatibilità idraulica" realizzate dal Commissario Delegato per gli eventi meteorologici del 26/09/2007 per la zona di Padova e la precipitazione più gravosa è risultata essere quella con durata pari a 2 ore.

L'invaso è stato ottenuto e simulato mediante la posa di uno scatolare con elementi aventi dimensioni 210x110 cm per una lunghezza pari a 390 mt, al quale vanno aggiunti i volumi di acqua che vengono invasati dalle condotte di drenaggio in PVC con diametro pari a 50 cm, come da elaborato grafico allegato alla presente relazione.

Di seguito si riportano degli estratti grafici ricavati dal modello idraulico, i tiranti d'acqua che si impostano nel bacino di invaso e il grafico delle portate in uscita dal manufatto di laminazione.



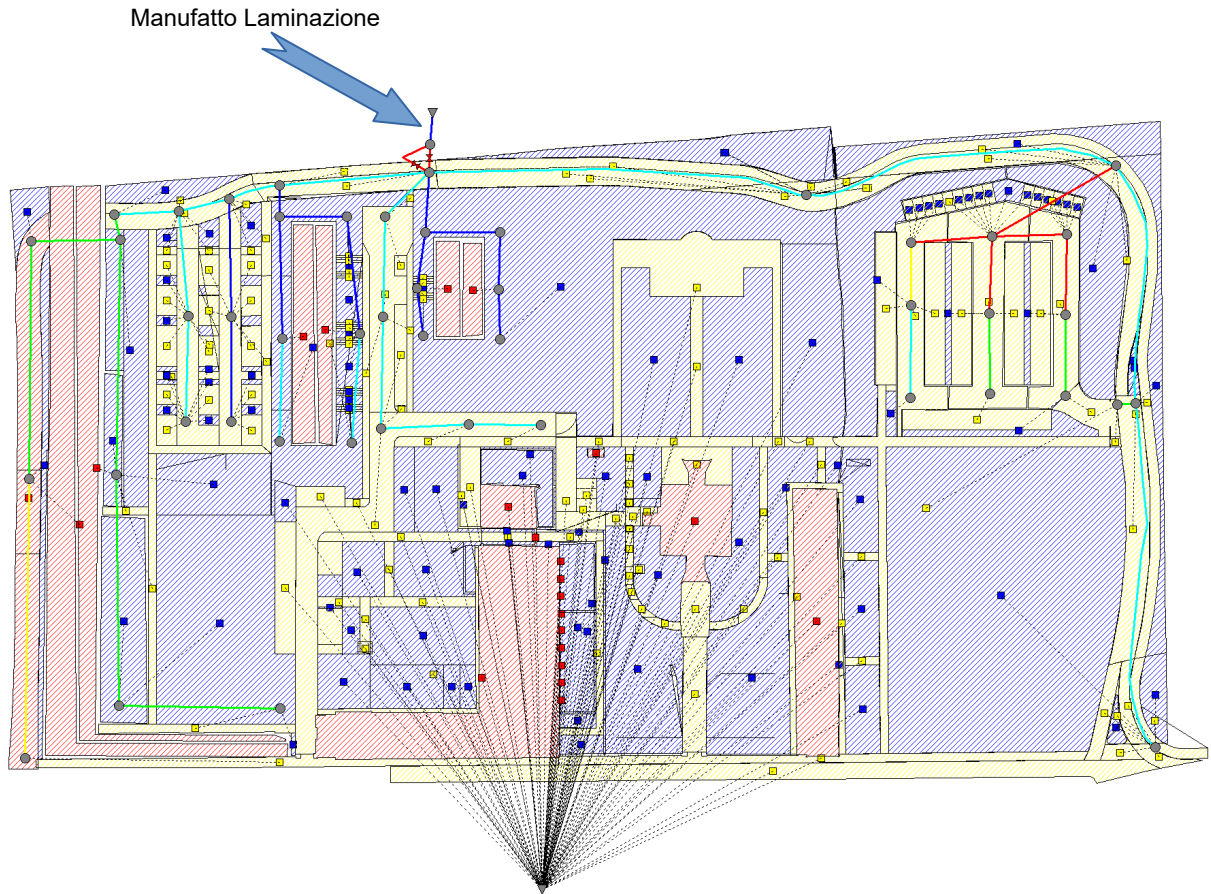


Fig. 1 - Modello Idraulico dell'intero Piano che riguarda Villa Mocenigo

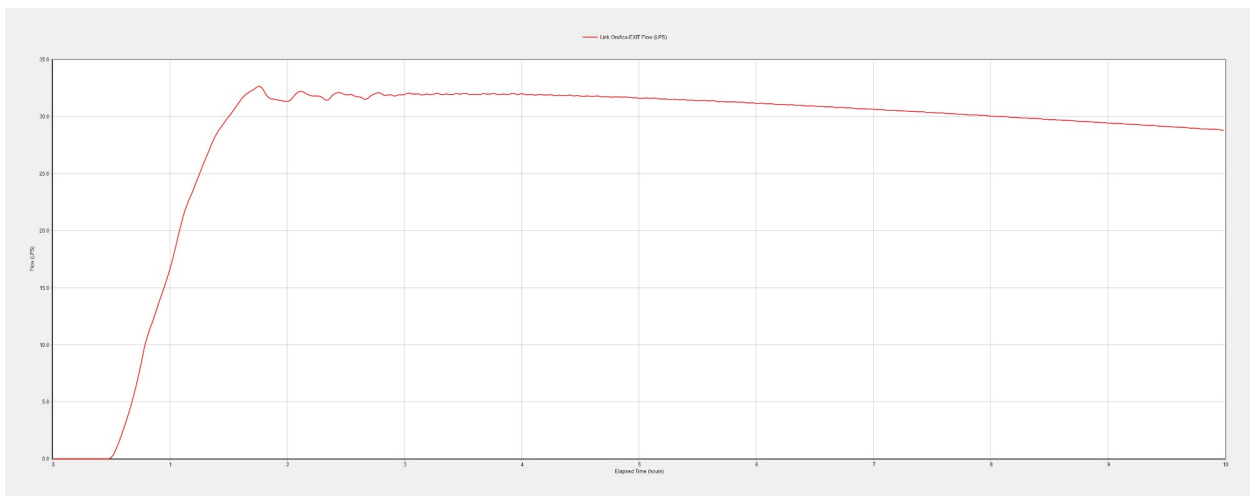
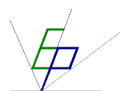


Fig. 2 – Portata in uscita dall'area di intervento



La portata in uscita dal manufatto di laminazione è per l'intero periodo considerato inferiore a 33 l/s e pertanto congruente con il limite di 10 l/s per ha.

Lo stramazzo di sicurezza ha una soglia di lunghezza 200 cm garantisce una portata di sfioro più che adeguata a quella prodotta dal lotto.

PIANO STRALCIO PER L'ASSETTO IDROGEOLOGICO (PAI)

L'area in cui ricade l'intervento non è compresa in quelle con "pericolosità idraulica".

CONCLUSIONI

L'intervento oggetto di studio rientra tra quelli definiti dal DGR 1322/06 come "**significativa impermeabilizzazione potenziale**", trattandosi di un piano di recupero con estensione di circa 3,3 ha.

La modellazione idraulica ha interessato l'intero intervento edilizio, ma si è svolto lo studio idraulico sulle porzioni di superficie che riguardano il Piano di Recupero, adottando un coefficiente udometrico specifico pari a 10 l/s ha.

Per quanto sopra si dovrà prevedere la realizzazione di un invaso complessivo di circa 1.420 mc ottenuto mediante una condotta scatolare di dimensioni 210x110 cm con sviluppo lineare pari a 392 mt (circa 815 mc) e le condotte di drenaggio in PVC con diametri pari a 50 cm (sviluppo 810 mt e invaso 605 mc). Il sistema di raccolta e invaso è descritto nella planimetria allegata.

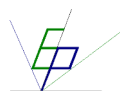
La portata massima in uscita dal manufatto di laminazione è inferiore a 33 l/s, come evidenzia il grafico in figura 2.

ing. Enrico Prunotto



ESTRATTO DELLE LINEE GUIDA PER LA VALUTAZIONE DI COMPATIBILITA' IDRAULICA

Commissario Delegato per l'emergenza concernente gli eccezionali eventi
meteorologici del 26 settembre 2009 che hanno colpito parte del territorio
della Regione Veneto



Ordinanza n.2 Disposizioni inerenti l'efficacia dei titoli abilitativi relativi ad interventi edilizi non ancora avviati	
Quando si applica	Per tutti gli interventi edilizi approvati, e già in possesso del titolo abilitativo rilasciato, <u>la cui costruzione non è ancora stata avviata</u>
Ordinanza n.3 Disposizioni inerenti il rilascio di titoli abilitativi sotto il profilo edilizio ed urbanistico	
Quando si applica	Per tutti i <u>nuovi</u> interventi edilizi soggetti al rilascio di titolo abilitativi, secondo i campi d'applicazione sotto riportati
Ordinanza n.4 Disposizioni inerenti gli allacciamenti alla rete di fognatura pubblica	
Quando si applica	<u>Esclusivamente</u> per gli interventi edilizi rientranti nelle Ordinanze nr. 2 e nr.3
Campi d'applicazione Ordinanze (V = volume; S = superficie) (VCI = Valutazione di Compatibilità Idraulica)	V < 1000 mc: non è richiesta alcuna valutazione idraulica
	1000 < V < 2000 mc necessaria la redazione della VCI, che andrà trasmessa al Comune senza il parere del Consorzio
	V > 2000 mc: necessaria la redazione della VCI con il parere del Consorzio di Bonifica competente
	S < 200 mq: non è richiesta alcuna valutazione idraulica
	200 < S < 1000 mq: necessaria la redazione della VCI, che andrà trasmessa al Comune senza il parere del Consorzio
	S > 1000 mq: necessaria la redazione della VCI con il parere del Consorzio di Bonifica competente

A seguito delle ordinanze commissariali, per i comuni interessati, risulta necessario rivedere come segue la classificazione degli interventi indicata nella DGRV 1322/08 e s.m.i.. Per ogni classe d'intervento viene suggerito un criterio di dimensionamento da adottare per l'individuazione del volume d'invaso da realizzare al fine di limitare la portata scaricata ai ricettori finali (fognature bianche o miste, corpi idrici superficiali).

Riferimento	Classificazione intervento	Soglie dimensionali	Criteri da adottare
Ordinanze	Trascurabile impermeabilizzazione potenziale	$S^* < 200 \text{ mq}$	0
	Modesta impermeabilizzazione	$200 \text{ mq} < S^* < 1.000 \text{ mq}$	1
D.G.R. 1322/06	Modesta impermeabilizzazione potenziale	$1.000 \text{ mq} < S < 10.000 \text{ mq}$	1
	Significativa impermeabilizzazione potenziale	$10.000 \text{ mq} < S < 100.000 \text{ mq}$	2
		$S > 100.000 \text{ mq}$ e $\Phi < 0,3$	2
	Marcata impermeabilizzazione potenziale	$S > 100.000 \text{ mq}$ e $\Phi > 0,3$	3

Classe 1 - Trascurabile impermeabilizzazione potenziale

È sufficiente adottare buoni criteri costruttivi per ridurre le superfici impermeabili, quali le superfici dei parcheggi, tetti verdi ecc.

Classe 2 - Modesta impermeabilizzazione

È opportuno sovradimensionare la rete rispetto alle sole esigenze di trasporto della portata di picco realizzando volumi compensativi cui affidare funzioni di laminazione delle piene, in questi casi è opportuno che le luci di scarico non eccedano le dimensioni di un diametro di 200 mm.

Classe 3 - Modesta impermeabilizzazione potenziale

Oltre al dimensionamento dei volumi compensativi cui affidare funzioni di laminazione delle piene è opportuno che le luci di scarico non eccedano le dimensioni di un diametro di 200 mm e che i tiranti idrici ammessi nell'invaso non eccedano il metro.

Classe 4 - Significativa impermeabilizzazione potenziale

Andranno dimensionati i tiranti idrici ammessi nell'invaso e le luci di scarico in modo da garantire la conservazione della portata massima defluente dall'area in trasformazione ai valori precedenti l'impermeabilizzazione.

Classe 5 - Marcata impermeabilizzazione potenziale

È richiesta la presentazione di uno studio di dettaglio molto approfondito.

4 Il dimensionamento dei dispositivi di compensazione

Gli interventi appartenenti alla Classe 1, essendo caratterizzati da ridotte dimensioni, non possono incidere significativamente sul regime delle acque. Per tali interventi,

MODELLO IDRAULICO



 WARNING 04: minimum elevation drop used for Conduit SC11

 Analysis Options

Flow Units LPS
 Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES
 Ponding Allowed YES
 Water Quality NO
 Infiltration Method CURVE_NUMBER
 Flow Routing Method DYNWAVE
 Surge Method EXTRAN
 Starting Date 10/07/2008 00:00:00
 Ending Date 10/07/2008 10:00:00
 Antecedent Dry Days 4.0
 Report Time Step 00:01:00
 Wet Time Step 00:01:00
 Dry Time Step 00:01:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	0.737	172.839
Evaporation Loss	0.000	0.000
Infiltration Loss	0.228	53.556
Surface Runoff	0.500	117.409
Final Storage	0.008	1.883
Continuity Error (%)	-0.005	

*****	Volume	Volume
Flow Routing Continuity	hectare-m	10 ⁶ ltr
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.500	5.002
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.261	2.610
Flooding Loss	0.039	0.386
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume ...	0.000	0.000
Final Stored Volume	0.200	2.000
Continuity Error (%)	0.116	

 Highest Continuity Errors

 Node W25 (41.42%)
 Node LAM7 (30.52%)
 Node W21 (27.63%)
 Node LAM6 (26.42%)
 Node LAM8 (24.15%)

 Time-Step Critical Elements

 Link 39 (99.17%)



Highest Flow Instability Indexes

Link C46 (4)

Most Frequent Nonconverging Nodes

Node LAM13 (0.14%)
Node Exit1 (0.14%)
Node Exit-LAM (0.14%)

Routing Time Step Summary

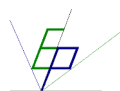
Minimum Time Step : 0.03 sec
Average Time Step : 0.53 sec
Maximum Time Step : 5.00 sec
% of Time in Steady State : 0.00
Average Iterations per Step : 2.01
% of Steps Not Converging : 0.14
Time Step Frequencies :
5.000 - 3.155 sec : 0.40 %
3.155 - 1.991 sec : 0.43 %
1.991 - 1.256 sec : 0.01 %
1.256 - 0.792 sec : 0.39 %
0.792 - 0.500 sec : 98.77 %

Subcatchment Runoff Summary

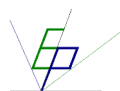
Subcatchment	Total Total Precip Runoff mm mm	Total Total Runoff mm 10^6 ltr	Total Peak Evap Runoff mm LPS	Total Runoff Coeff mm	Imperv Runoff mm	Perv Runoff mm
1	172.84 154.26	0.00 0.00	0.00 0.40	18.58 0.892	103.71	50.54
2	172.84 85.03	0.00 0.00	0.00 0.66	87.38 0.492	0.00	85.03
3	172.84 154.25	0.00 0.00	0.00 1.04	18.58 0.892	103.71	50.54
4	172.84 154.25	0.00 0.00	0.00 1.10	18.58 0.892	103.71	50.54
5	172.84 154.25	0.00 0.00	0.00 1.28	18.58 0.892	103.71	50.54
6	172.84 154.25	0.00 0.00	0.00 1.36	18.58 0.892	103.71	50.54
7	172.84 87.04	0.00 0.00	0.00 0.14	85.73 0.504	0.00	87.04
8	172.84 86.68	0.00 0.00	0.00 0.22	86.04 0.502	0.00	86.68
9	172.84 86.64	0.00 0.00	0.00 0.23	86.08 0.501	0.00	86.64
10	172.84 86.02	0.00 0.00	0.00 1.19	86.59 0.498	0.00	86.02
11	172.84 154.26	0.00 0.00	0.00 0.40	18.58 0.892	103.71	50.54
12	172.84 83.26	0.00 0.01	0.00 3.25	88.78 0.482	0.00	83.26
13	172.84 81.31	0.00 0.03	0.00 6.11	90.39 0.470	0.00	81.31
14	172.84 77.16	0.00 0.12	0.00 15.62	91.18 0.446	0.00	77.16
15	172.84 154.26	0.00 0.00	0.00 0.35	18.58 0.892	103.71	50.54
16	172.84 154.26	0.00 0.00	0.00 0.41	18.58 0.892	103.71	50.54



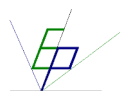
17	172.84	0.00	0.00	86.66	0.00	85.93
	85.93	0.00	0.70	0.497		
18	172.84	0.00	0.00	86.59	0.00	86.02
	86.02	0.00	1.19	0.498		
19	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
20	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.56	0.497		
21	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	5.50	0.892		
22	172.84	0.00	0.00	91.18	0.00	70.92
	70.92	0.28	28.61	0.410		
23	172.84	0.00	0.00	85.66	0.00	87.12
	87.12	0.00	0.06	0.504		
24	172.84	0.00	0.00	87.66	0.00	84.67
	84.67	0.00	0.99	0.490		
26	172.84	0.00	0.00	91.18	0.00	78.59
	78.59	0.22	33.31	0.455		
27	172.84	0.00	0.00	87.65	0.00	84.69
	84.69	0.00	0.99	0.490		
28	172.84	0.00	0.00	87.59	0.00	84.76
	84.76	0.00	0.72	0.490		
29	172.84	0.00	0.00	91.18	0.00	0.00
	0.00	0.00	0.00	0.000		
30	172.84	0.00	0.00	91.18	0.00	78.43
	78.43	0.01	2.20	0.454		
31	172.84	0.00	0.00	89.61	0.00	82.23
	82.23	0.02	3.52	0.476		
32	172.84	0.00	0.00	89.43	0.00	82.46
	82.46	0.01	2.96	0.477		
33	172.84	0.00	0.00	85.97	0.00	86.77
	86.77	0.00	0.13	0.502		
34	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	4.29	0.892		
35	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.65	0.892		
36	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.17	0.892		
37	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	2.52	0.892		
38	172.84	0.00	0.00	86.66	0.00	85.93
	85.93	0.02	4.37	0.497		
39	172.84	0.00	0.00	86.79	0.00	85.77
	85.77	0.00	0.62	0.496		
40	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.48	0.892		
41	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.25	0.892		
42	172.84	0.00	0.00	88.33	0.00	83.82
	83.82	0.01	1.91	0.485		
43	172.84	0.00	0.00	85.83	0.00	86.93
	86.93	0.00	0.10	0.503		
44	172.84	0.00	0.00	85.82	0.00	86.94
	86.94	0.00	0.09	0.503		
45	172.84	0.00	0.00	86.91	0.00	85.62
	85.62	0.00	0.34	0.495		
46	172.84	0.00	0.00	85.83	0.00	86.93
	86.93	0.00	0.09	0.503		
47	172.84	0.00	0.00	85.83	0.00	86.93
	86.93	0.00	0.09	0.503		
48	172.84	0.00	0.00	85.83	0.00	86.93
	86.93	0.00	0.10	0.503		
49	172.84	0.00	0.00	85.83	0.00	86.93
	86.93	0.00	0.09	0.503		
50	172.84	0.00	0.00	86.91	0.00	85.62
	85.62	0.00	0.34	0.495		
51	172.84	0.00	0.00	88.34	0.00	83.80
	83.80	0.01	1.27	0.485		
52	172.84	0.00	0.00	86.91	0.00	85.62
	85.62	0.00	0.34	0.495		
53	172.84	0.00	0.00	88.34	0.00	83.80
	83.80	0.01	1.27	0.485		
54	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	4.58	0.892		
55	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.01	3.94	0.892		
56	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.02	6.81	0.892		
57	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.68	0.892		



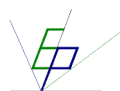
58	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	1.66	0.892		
59	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.04	10.95	0.892		
60	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.10	26.92	0.892		
61	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.93	0.892		
62	172.84	0.00	0.00	87.74	0.00	84.57
	84.57	0.00	1.02	0.489		
63	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	6.78	0.892		
64	172.84	0.00	0.00	86.57	0.00	86.05
	86.05	0.00	0.13	0.498		
65	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.00	1.03	0.892		
66	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
67	172.84	0.00	0.00	86.22	0.00	86.48
	86.48	0.00	0.27	0.500		
68	172.84	0.00	0.00	86.22	0.00	86.48
	86.48	0.00	0.27	0.500		
69	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
70	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
71	172.84	0.00	0.00	86.65	0.00	85.94
	85.94	0.00	0.56	0.497		
72	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
73	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	1.55	0.892		
74	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	2.07	0.892		
75	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.00	1.03	0.892		
76	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	1.55	0.892		
77	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.00	1.03	0.892		
78	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	1.55	0.892		
79	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	1.55	0.892		
80	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	1.55	0.892		
81	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	1.55	0.892		
82	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	1.54	0.892		
83	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	1.55	0.892		
84	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	2.06	0.892		
85	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.00	1.03	0.892		
86	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	4.16	0.892		
87	172.84	0.00	0.00	90.51	0.00	81.17
	81.17	0.03	5.19	0.470		
88	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	2.44	0.892		
89	172.84	0.00	0.00	87.33	0.00	85.09
	85.09	0.00	0.64	0.492		
90	172.84	0.00	0.00	90.01	0.00	81.75
	81.75	0.03	5.71	0.473		
91	172.84	0.00	0.00	88.64	0.00	83.44
	83.44	0.01	2.08	0.483		
92	172.84	0.00	0.00	87.17	0.00	85.30
	85.30	0.02	6.24	0.494		
93	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.01	3.15	0.892		
94	172.84	0.00	0.00	89.23	0.00	82.70
	82.70	0.01	2.83	0.478		
95	172.84	0.00	0.00	87.97	0.00	84.28
	84.28	0.02	4.77	0.488		
96	172.84	0.00	0.00	89.58	0.00	82.27
	82.27	0.02	3.06	0.476		
97	172.84	0.00	0.00	89.67	0.00	82.16
	82.16	0.01	2.68	0.475		



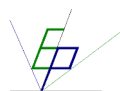
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99	172.84	0.00	0.00	87.39	0.00	85.02
	85.02	0.00	0.88	0.492		
100	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	1.14	0.892		
101	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	2.86	0.892		
102	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.44	0.892		
103	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.17	0.892		
104	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.61	0.892		
105	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.12	0.892		
106	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.02	5.51	0.892		
107	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	2.67	0.892		
108	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	1.64	0.892		
109	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	3.74	0.892		
110	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	2.72	0.892		
111	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.11	31.06	0.892		
112	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	1.32	0.892		
113	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.01	3.38	0.892		
114	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.27	0.892		
115	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.05	14.65	0.892		
116	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.32	0.892		
117	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.02	4.55	0.892		
118	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.04	11.00	0.892		
119	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	5.10	0.892		
120	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.03	7.20	0.892		
121	172.84	0.00	0.00	87.18	0.00	85.29
	85.29	0.00	0.59	0.493		
122	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
123	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
124	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
125	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
126	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
127	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
128	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
129	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
130	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
131	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
132	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
133	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
134	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
135	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
136	172.84	0.00	0.00	86.65	0.00	85.95
	85.95	0.00	0.28	0.497		
137	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.03	7.55	0.892		



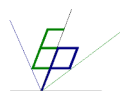
138	172.84	0.00	0.00	86.35	0.00	86.32
	86.32	0.00	0.53	0.499		
139	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.03	7.71	0.892		
140	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.03	7.20	0.892		
141	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.03	7.20	0.892		
142	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.03	7.20	0.892		
143	172.84	0.00	0.00	91.18	0.00	80.24
	80.24	0.05	8.18	0.464		
144	172.84	0.00	0.00	91.18	0.00	80.24
	80.24	0.05	8.18	0.464		
145	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.09	25.55	0.892		
146	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	4.28	0.892		
147	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.02	6.47	0.892		
148	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.03	8.14	0.892		
149	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.05	13.84	0.892		
150	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	4.49	0.892		
151	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.01	2.87	0.892		
152	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.03	8.89	0.892		
153	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.04	10.90	0.892		
154	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	4.69	0.892		
155	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	3.88	0.892		
156	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.03	9.03	0.892		
157	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	1.23	0.892		
158	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.48	0.892		
159	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	6.88	0.892		
160	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.05	13.11	0.892		
161	172.84	0.00	0.00	89.59	0.00	82.26
	82.26	0.02	3.50	0.476		
162	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	1.86	0.892		
163	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.02	6.85	0.892		
164	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.01	2.49	0.892		
165	172.84	0.00	0.00	85.93	0.00	86.81
	86.81	0.00	0.41	0.502		
166	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	4.28	0.892		
167	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.68	0.892		
168	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	3.95	0.892		
169	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	1.63	0.892		
170	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.32	0.892		
171	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.69	0.892		
172	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.72	0.892		
173	172.84	0.00	0.00	89.11	0.00	82.85
	82.85	0.02	3.54	0.479		
174a	172.84	0.00	0.00	87.53	0.00	84.84
	84.84	0.02	4.69	0.491		
175	172.84	0.00	0.00	85.80	0.00	86.96
	86.96	0.00	0.18	0.503		
176a	172.84	0.00	0.00	91.18	0.00	78.42
	78.42	0.05	6.88	0.454		
176b	172.84	0.00	0.00	85.56	0.00	87.23
	87.23	0.01	3.27	0.505		



177	172.84	0.00	0.00	89.56	0.00	82.30
	82.30	0.03	5.65	0.476		
178	172.84	0.00	0.00	91.18	0.00	80.17
	80.17	0.05	8.84	0.464		
179	172.84	0.00	0.00	18.58	103.71	50.53
	154.24	0.02	4.83	0.892		
180	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	1.67	0.892		
181	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.01	4.13	0.892		
182	172.84	0.00	0.00	87.62	0.00	84.73
	84.73	0.00	0.97	0.490		
183	172.84	0.00	0.00	88.11	0.00	84.11
	84.11	0.01	2.65	0.487		
184	172.84	0.00	0.00	87.26	0.00	85.18
	85.18	0.02	5.34	0.493		
185	172.84	0.00	0.00	88.26	0.00	83.91
	83.91	0.04	8.68	0.485		
186	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	4.08	0.892		
187	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.71	0.892		
188	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.71	0.892		
189	172.84	0.00	0.00	85.85	0.00	86.90
	86.90	0.00	0.99	0.503		
190	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.55	0.892		
191	172.84	0.00	0.00	86.03	0.00	86.70
	86.70	0.00	0.14	0.502		
192	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.02	0.892		
193	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	1.29	0.892		
194	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	1.71	0.892		
195	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.04	0.892		
196	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.42	0.892		
197	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.75	0.892		
198	172.84	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.000		
199	172.84	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.000		
200	172.84	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.000		
201	172.84	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.000		
202	172.84	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.000		
203	172.84	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.000		
204	172.84	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.000		
205	172.84	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.000		
206	172.84	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.000		
207	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.32	0.892		
208	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.36	0.892		
209	172.84	0.00	0.00	85.84	0.00	86.92
	86.92	0.00	0.34	0.503		
210	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	2.58	0.892		
211	172.84	0.00	0.00	85.84	0.00	86.92
	86.92	0.00	0.83	0.503		
212	172.84	0.00	0.00	0.00	172.84	0.00
	172.84	0.14	36.73	1.000		
213	172.84	0.00	0.00	87.80	0.00	84.49
	84.49	0.01	1.84	0.489		
214	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	3.24	0.892		
215	172.84	0.00	0.00	86.04	0.00	86.68
	86.68	0.00	0.07	0.502		
216	172.84	0.00	0.00	86.04	0.00	86.68
	86.68	0.00	0.07	0.502		



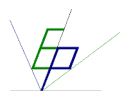
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	86.01	0.00	0.27	0.498		
220	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.40	0.892		
221	172.84	0.00	0.00	86.05	0.00	86.67
	86.67	0.00	0.15	0.501		
222a	172.84	0.00	0.00	0.00	172.83	0.00
	172.83	0.18	49.26	1.000		
222b	172.84	0.00	0.00	0.00	172.83	0.00
	172.83	0.18	49.26	1.000		
223	172.84	0.00	0.00	0.00	172.85	0.00
	172.85	0.24	65.98	1.000		
224	172.84	0.00	0.00	0.00	172.85	0.00
	172.85	0.02	6.42	1.000		
225	172.84	0.00	0.00	0.00	172.85	0.00
	172.85	0.00	0.13	1.000		
226	172.84	0.00	0.00	0.00	172.85	0.00
	172.85	0.06	17.22	1.000		
227a	172.84	0.00	0.00	0.00	172.84	0.00
	172.84	0.05	13.16	1.000		
227b	172.84	0.00	0.00	0.00	172.84	0.00
	172.84	0.05	13.16	1.000		
228	172.84	0.00	0.00	86.86	0.00	85.68
	85.68	0.00	0.49	0.496		
229	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.02	4.61	0.892		
230	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.01	3.08	0.892		
231a	172.84	0.00	0.00	91.18	0.00	70.54
	70.54	0.05	4.65	0.408		
231b	172.84	0.00	0.00	91.18	0.00	80.40
	80.40	0.05	9.07	0.465		
232	172.84	0.00	0.00	87.02	0.00	85.49
	85.49	0.01	2.32	0.495		
233c	172.84	0.00	0.00	34.59	103.69	34.47
	138.15	0.05	14.12	0.799		
233b	172.84	0.00	0.00	34.75	103.67	34.26
	137.93	0.08	19.71	0.798		
233a	172.84	0.00	0.00	34.60	103.68	34.45
	138.13	0.06	14.66	0.799		
236	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.01	2.80	0.892		
237	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.04	10.78	0.892		
238	172.84	0.00	0.00	18.60	103.71	50.52
	154.22	0.06	16.08	0.892		
239	172.84	0.00	0.00	86.67	0.00	85.92
	85.92	0.00	0.71	0.497		
240	172.84	0.00	0.00	18.59	103.71	50.52
	154.23	0.10	28.56	0.892		
241	172.84	0.00	0.00	88.50	0.00	83.61
	83.61	0.04	8.34	0.484		
242	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.02	4.94	0.892		
243	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.48	0.892		
244	172.84	0.00	0.00	18.58	103.71	50.54
	154.25	0.00	0.25	0.892		
245	172.84	0.00	0.00	18.59	103.71	50.53
	154.24	0.01	3.94	0.892		
246	172.84	0.00	0.00	0.00	172.85	0.00
	172.85	0.00	0.36	1.000		
247	172.84	0.00	0.00	87.91	0.00	84.36
	84.36	0.01	1.91	0.488		
248	172.84	0.00	0.00	88.71	0.00	83.35
	83.35	0.04	9.91	0.482		
249	172.84	0.00	0.00	88.77	0.00	83.27
	83.27	0.06	13.69	0.482		
250	172.84	0.00	0.00	88.14	0.00	84.06
	84.06	0.01	2.68	0.486		
251	172.84	0.00	0.00	90.25	0.00	81.48
	81.48	0.06	10.92	0.471		
252	172.84	0.00	0.00	89.93	0.00	81.85
	81.85	0.06	11.26	0.474		
253	172.84	0.00	0.00	0.00	172.85	0.00
	172.85	0.11	31.18	1.000		
254a	172.84	0.00	0.00	0.00	172.85	0.00
	172.85	0.03	7.10	1.000		
254b	172.84	0.00	0.00	0.00	172.85	0.00
	172.85	0.03	7.10	1.000		



255	172.84	0.00	0.00	18.60	103.71	50.51
	154.22	0.06	16.33	0.892		
256	172.84	0.00	0.00	18.60	103.71	50.51
	154.22	0.12	33.69	0.892		
257	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
258	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
259	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
260	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
261	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
262	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
263	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
264	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
265	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
266	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
267	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
268	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.14	0.892		
269	172.84	0.00	0.00	85.82	0.00	86.94
	86.94	0.00	0.09	0.503		
270	172.84	0.00	0.00	86.91	0.00	85.63
	85.63	0.00	0.33	0.495		
271	172.84	0.00	0.00	85.84	0.00	86.92
	86.92	0.00	0.10	0.503		
272	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.10	0.892		
273	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.11	0.892		
274	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.11	0.892		
275	172.84	0.00	0.00	18.58	103.71	50.54
	154.26	0.00	0.10	0.892		

Node Depth Summary

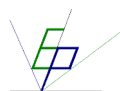
Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
LAM1	JUNCTION	0.81	0.93	2.94	0 01:46	0.93
LAM2	JUNCTION	0.81	0.93	2.93	0 01:45	0.93
LAM3	JUNCTION	0.81	0.93	2.93	0 01:45	0.93
LAM4	JUNCTION	0.81	0.93	2.93	0 01:45	0.93
LAM5	JUNCTION	0.81	0.93	2.93	0 01:45	0.93
LAM6	JUNCTION	0.81	0.93	2.93	0 01:44	0.93
LAM7	JUNCTION	0.81	0.92	2.92	0 01:42	0.92
LAM8	JUNCTION	0.80	0.91	2.92	0 02:31	0.91
LAM9	JUNCTION	0.80	0.92	2.93	0 02:55	0.91
LAM10	JUNCTION	0.75	0.87	2.93	0 01:42	0.87
LAM11	JUNCTION	0.77	0.87	2.93	0 01:42	0.87
LAM12	JUNCTION	0.77	0.87	2.93	0 01:42	0.87
LAM13	JUNCTION	0.82	0.90	2.91	0 01:40	0.90
LAM-EXIT2	JUNCTION	0.15	0.15	2.05	0 01:45	0.15
W1	JUNCTION	0.35	0.44	2.94	0 01:46	0.44
W2	JUNCTION	0.34	0.43	2.94	0 01:46	0.43
W3	JUNCTION	0.33	0.42	2.94	0 01:46	0.42
W4	JUNCTION	0.35	0.44	2.94	0 01:46	0.44
W5	JUNCTION	0.34	0.43	2.94	0 01:46	0.43
W6	JUNCTION	0.33	0.43	2.95	0 01:46	0.43
W7	JUNCTION	0.32	0.42	2.95	0 01:46	0.42
W12	JUNCTION	0.33	0.43	2.94	0 01:45	0.43
W11	JUNCTION	0.34	0.44	2.94	0 01:46	0.44
W14	JUNCTION	0.32	0.43	2.94	0 01:46	0.43
W13	JUNCTION	0.33	0.43	2.93	0 01:45	0.43
W20	JUNCTION	0.32	0.41	2.91	0 02:49	0.41
W21	JUNCTION	0.32	0.40	2.91	0 02:42	0.40



W22	JUNCTION	0.31	0.40	2.92	0	02:38	0.40
W23	JUNCTION	0.31	0.41	2.92	0	03:25	0.41
W24	JUNCTION	0.31	0.39	2.91	0	03:31	0.39
W25	JUNCTION	0.33	0.42	2.92	0	02:40	0.42
W51	JUNCTION	0.33	0.43	2.93	0	01:45	0.43
W52	JUNCTION	0.32	0.42	2.93	0	01:45	0.42
W53	JUNCTION	0.31	0.41	2.93	0	01:46	0.41
W54	JUNCTION	0.33	0.42	2.93	0	01:45	0.42
W55	JUNCTION	0.32	0.42	2.94	0	01:45	0.42
W56	JUNCTION	0.31	0.41	2.94	0	01:45	0.41
W32	JUNCTION	0.76	0.88	2.93	0	01:42	0.88
W31	JUNCTION	0.75	0.87	2.93	0	01:42	0.87
W34	JUNCTION	0.78	0.90	2.93	0	01:42	0.90
W33	JUNCTION	0.76	0.88	2.93	0	01:42	0.88
W36	JUNCTION	0.78	0.90	2.93	0	01:42	0.90
W35	JUNCTION	0.76	0.88	2.93	0	01:42	0.88
W40	JUNCTION	0.30	0.40	2.94	0	01:46	0.40
W41	JUNCTION	0.31	0.41	2.94	0	01:45	0.41
W42	JUNCTION	0.32	0.42	2.94	0	01:45	0.42
W43	JUNCTION	0.33	0.42	2.93	0	01:45	0.42
W44	JUNCTION	0.34	0.43	2.93	0	01:45	0.43
Exit1	OUTFALL	0.00	0.00	3.00	0	00:00	0.00
Exit-LAM	OUTFALL	0.05	0.05	1.85	0	01:45	0.05

Node Inflow Summary

Node	Type	Maximum Flow		Time of Max Occurrence	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr
		Lateral Inflow LPS	Total Inflow LPS			
LAM1	JUNCTION	2.65	181.14	0 01:06	0.0112	0.854
LAM2	JUNCTION	11.93	231.51	0 01:08	0.0438	1.04
LAM3	JUNCTION	2.94	242.74	0 01:08	0.0122	1.09
LAM4	JUNCTION	4.69	236.30	0 01:09	0.0165	1.25
LAM5	JUNCTION	8.14	307.97	0 01:07	0.0287	2.02
LAM6	JUNCTION	72.68	287.67	0 01:09	0.298	1.47
LAM7	JUNCTION	44.68	346.76	0 01:48	0.206	1.53
LAM8	JUNCTION	34.54	380.09	0 01:46	0.132	1.49
LAM9	JUNCTION	35.35	139.56	0 02:35	0.34	0.787
LAM10	JUNCTION	0.59	4.21	0 01:11	0.00226	0.00385
LAM11	JUNCTION	7.55	7.55	0 01:02	0.0268	0.0277
LAM12	JUNCTION	6.30	6.30	0 01:06	0.0249	0.0255
LAM13	JUNCTION	14.92	359.86	0 01:52	0.0525	0.435
LAM-EXIT2	JUNCTION	0.00	32.66	0 01:45	0	1.01
W1	JUNCTION	9.91	179.24	0 01:06	0.0448	0.865
W2	JUNCTION	1.84	100.26	0 01:03	0.00755	0.422
W3	JUNCTION	89.28	99.70	0 01:03	0.334	0.406
W4	JUNCTION	10.95	10.95	0 01:01	0.0385	0.0511
W5	JUNCTION	61.48	74.02	0 01:07	0.249	0.425



W6	JUNCTION	22.50	25.08	0	01:49	0.162	0.182
			2.354				
W7	JUNCTION	4.40	4.40	0	01:02	0.0155	0.0188
			7.758				
W12	JUNCTION	11.78	11.78	0	01:02	0.0423	0.0464
			3.613				
W11	JUNCTION	33.54	45.23	0	01:02	0.119	0.168
			2.263				
W14	JUNCTION	3.02	3.02	0	01:03	0.0111	0.015
			12.129				
W13	JUNCTION	12.74	15.69	0	01:02	0.046	0.0643
			6.870				
W20	JUNCTION	0.00	75.28	0	01:46	0	0.346
			24.079				
W21	JUNCTION	13.16	27.01	0	01:41	0.0484	0.141
			38.172				
W22	JUNCTION	13.69	18.94	0	01:48	0.0622	0.078
			34.884				
W23	JUNCTION	1.00	33.04	0	02:05	0.00384	0.174
			31.372				
W24	JUNCTION	15.53	26.42	0	01:51	0.0633	0.149
			34.317				
W25	JUNCTION	6.21	12.77	0	01:51	0.0228	0.0518
			70.715				
W51	JUNCTION	0.00	40.76	0	01:48	0	0.276
			0.964				
W52	JUNCTION	7.67	7.76	0	01:01	0.0282	0.0319
			3.901				
W53	JUNCTION	0.17	0.94	0	01:19	0.00061	0.00213
			37.992				
W54	JUNCTION	0.00	35.88	0	01:47	0	0.248
			0.591				
W55	JUNCTION	7.10	35.87	0	01:39	0.0259	0.25
			0.458				
W56	JUNCTION	33.31	33.31	0	01:41	0.224	0.224
			0.246				
W32	JUNCTION	1.12	32.30	0	01:10	0.00407	0.157
			2.839				
W31	JUNCTION	30.73	31.52	0	01:12	0.156	0.158
			2.599				
W34	JUNCTION	6.46	108.51	0	01:09	0.0253	0.449
			1.879				
W33	JUNCTION	34.76	42.23	0	01:04	0.133	0.16
			2.594				
W36	JUNCTION	4.19	33.90	0	01:11	0.016	0.12
			3.505				
W35	JUNCTION	22.19	28.48	0	01:05	0.0843	0.109
			3.876				
W40	JUNCTION	2.44	2.44	0	01:02	0.0086	0.0118
			9.648				
W41	JUNCTION	1.67	5.00	0	02:42	0.00588	0.0261
			8.284				
W42	JUNCTION	37.10	41.04	0	01:03	0.132	0.165
			1.275				
W43	JUNCTION	23.42	64.34	0	01:03	0.0833	0.253
			0.875				
W44	JUNCTION	0.90	65.21	0	01:03	0.00317	0.259
			1.176				
Exit1	OUTFALL	339.04	339.04	0	01:04	1.6	1.6
			0.000				
Exit-LAM	OUTFALL	0.00	32.66	0	01:45	0	1.01
			0.000				

Node Surcharge Summary

Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
LAM13	JUNCTION	9.76	0.400	0.000
W32	JUNCTION	8.84	0.377	0.523
W31	JUNCTION	8.83	0.367	0.533
W34	JUNCTION	8.85	0.397	0.513
W33	JUNCTION	8.83	0.377	0.523
W36	JUNCTION	8.86	0.397	0.503



Node Flooding Summary

Flooding refers to all water that overflows a node, whether it ponds or not.

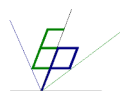
Node	Hours Flooded	Maximum Rate LPS	Time of Max Occurrence days hr:min	Total Flood Volume 10 ⁶ ltr	Maximum Pondered Depth Meters
LAM13	0.56	359.86	0 01:52	0.386	0.000

Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10 ⁶ ltr
Exit1	99.97	43.10	339.04	1.605
Exit-LAM	99.17	29.77	32.66	1.005
System	99.57	72.88	359.10	2.610

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
SC1	CONDUIT	177.02	0 01:08	0.22	0.15	0.84
SC2	CONDUIT	224.56	0 01:08	0.28	0.14	0.85
SC3	CONDUIT	231.65	0 01:09	0.29	0.26	0.85
SC4	CONDUIT	208.40	0 01:07	0.28	0.24	0.85
SC5	CONDUIT	252.37	0 01:48	0.34	0.72	0.84
SC6	CONDUIT	281.93	0 01:48	0.30	0.87	0.84
SC7	CONDUIT	327.65	0 01:51	0.32	1.12	0.83
SC8	CONDUIT	142.56	0 02:33	0.09	0.31	0.83
SC10	CONDUIT	32.20	0 01:10	0.33	0.22	1.00
SC11	CONDUIT	34.66	0 01:09	0.35	1.81	1.00
SC12	CONDUIT	107.79	0 01:12	1.63	0.61	1.00
C1	CONDUIT	10.61	0 01:04	0.16	0.13	0.87
C2	CONDUIT	99.05	0 01:03	0.70	1.48	0.85
C3	CONDUIT	99.88	0 01:04	0.75	0.91	0.87
C4	CONDUIT	4.49	0 01:05	0.13	0.05	0.85
C5	CONDUIT	30.35	0 01:49	0.18	0.47	0.86
C6	CONDUIT	74.20	0 01:08	0.55	1.17	0.87
C7	CONDUIT	179.23	0 01:06	1.43	1.08	0.86
C10	CONDUIT	11.75	0 01:03	0.17	0.14	0.86
C11	CONDUIT	45.21	0 01:03	0.77	0.59	0.86
C12	CONDUIT	3.16	0 01:48	0.08	0.04	0.86
C13	CONDUIT	15.62	0 01:04	0.50	0.30	0.87
C20	CONDUIT	11.99	0 01:31	0.16	0.49	0.79
C21	CONDUIT	21.86	0 01:48	0.28	0.89	0.80
C22	CONDUIT	11.17	0 01:51	0.11	0.32	0.80
C23	CONDUIT	21.91	0 01:53	0.26	0.89	0.79
C24	CONDUIT	32.93	0 02:05	0.26	1.34	0.81
C25	CONDUIT	75.28	0 01:46	0.48	6.86	0.81
C30	CONDUIT	0.79	0 01:19	0.07	0.01	0.84
C31	CONDUIT	7.59	0 01:02	0.24	0.05	0.86
C32	CONDUIT	33.21	0 01:41	0.46	0.23	0.82
C33	CONDUIT	35.88	0 01:47	0.56	0.25	0.84
C34	CONDUIT	37.17	0 01:48	0.57	0.31	0.86
C35	CONDUIT	42.72	0 01:48	0.81	0.34	0.88
C40	CONDUIT	31.22	0 01:10	0.36	0.28	1.00
C41	CONDUIT	3.66	0 01:11	0.03	0.00	0.87
C42	CONDUIT	41.43	0 01:10	0.46	0.27	1.00
C43	CONDUIT	7.55	0 01:02	0.19	0.01	0.87
C44	CONDUIT	29.81	0 01:11	0.33	0.19	1.00



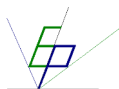
C45	CONDUIT	6.47	0	01:14	0.13	0.01	0.87
C46	CONDUIT	357.17	0	01:52	1.92	0.23	0.91
C50	CONDUIT	2.47	0	01:05	0.06	0.02	0.80
C51	CONDUIT	5.00	0	02:42	0.09	0.05	0.82
C52	CONDUIT	41.03	0	01:03	0.48	0.41	0.84
C53	CONDUIT	64.32	0	01:03	0.79	0.59	0.86
C54	CONDUIT	65.22	0	01:03	0.96	0.64	0.88
39	CONDUIT	32.66	0	01:45	3.20	0.02	0.10
Orefice-EXIT	ORIFICE	32.66	0	01:45			1.00
Weir-EXIT	WEIR	0.00	0	00:00			0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	-----		Fraction of			Time in Flow Class				Inlet Ctrl
		Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd		
SC1	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00
SC2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
SC3	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.01	0.00
SC4	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
SC5	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
SC6	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.01	0.00
SC7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01	0.00
SC8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
SC10	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.01	0.00
SC11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
SC12	1.00	0.00	0.00	0.00	0.94	0.06	0.00	0.00	0.00	0.00	0.00
C1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C2	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C3	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C7	1.00	0.01	0.01	0.00	0.86	0.00	0.13	0.00	0.00	0.00	0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01	0.00
C11	1.00	0.00	0.00	0.00	0.87	0.00	0.12	0.00	0.00	0.00	0.00
C12	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01	0.00
C13	1.00	0.00	0.00	0.00	0.88	0.00	0.11	0.00	0.00	0.00	0.00
C20	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.00	0.00	0.00
C21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C22	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01	0.00
C23	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C24	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C25	1.00	0.01	0.03	0.00	0.89	0.00	0.07	0.00	0.00	0.00	0.00
C30	1.00	0.00	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00
C31	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C32	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00	0.00	0.00
C33	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C34	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.01	0.00
C35	1.00	0.01	0.00	0.00	0.88	0.00	0.00	0.12	0.00	0.00	0.00
C40	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C41	1.00	0.00	0.11	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00
C42	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C43	1.00	0.00	0.03	0.00	0.97	0.00	0.00	0.00	0.00	0.09	0.00
C44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01	0.00
C45	1.00	0.00	0.04	0.00	0.96	0.00	0.00	0.00	0.00	0.08	0.00
C46	1.00	0.00	0.02	0.00	0.88	0.00	0.09	0.00	0.00	0.00	0.00
C50	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C51	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.01	0.00
C52	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C53	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
C54	1.00	0.00	0.00	0.00	0.87	0.00	0.00	0.12	0.00	0.00	0.00
39	1.00	0.06	0.00	0.00	0.00	0.94	0.00	0.00	0.00	0.00	0.00

Conduit Surge Summary

Conduit	-----		Hours		Hours	
	Both Ends	Hours Full Upstream	-----	Above Full Normal Flow	Capacity Limited	
SC7		0.01	0.01	0.01	0.10	0.01








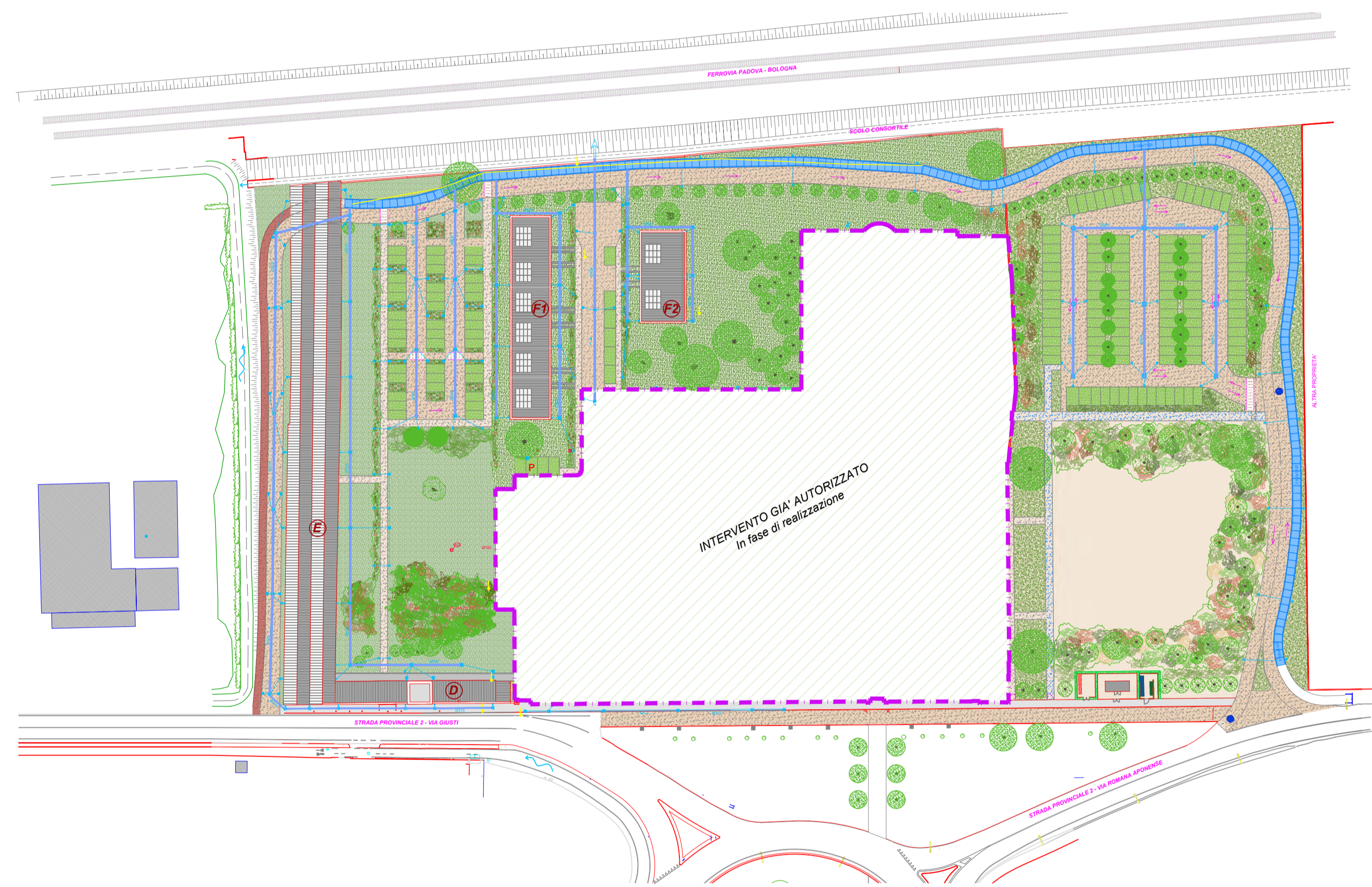
SC10	8.84	8.84	8.85	0.01	0.01
SC11	8.85	8.86	8.85	0.78	0.27
SC12	8.85	8.85	8.87	0.01	0.01
C2	0.01	0.01	0.01	0.69	0.01
C6	0.01	0.01	0.01	0.48	0.01
C7	0.01	0.01	0.01	0.28	0.01
C24	0.01	0.01	0.01	0.56	0.01
C25	0.01	0.01	0.01	1.15	0.01
C40	8.83	8.83	8.84	0.01	0.01
C41	0.01	0.01	8.83	0.01	0.01
C42	8.83	8.83	8.85	0.01	0.01
C43	0.01	0.01	8.83	0.01	0.01
C44	8.83	8.83	8.86	0.01	0.01
C45	0.01	0.01	8.83	0.01	0.01
C46	0.01	0.01	9.76	0.01	0.01

Analysis begun on: Mon Oct 23 12:38:14 2023
Analysis ended on: Mon Oct 23 12:38:17 2023
Total elapsed time: 00:00:03



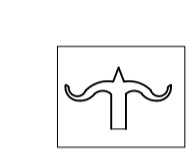
LEGENDA

	Elementi Scatolari CLS 210x110 cm
	Condotte Rete Bianca PVC
	Caditoie
	Pluviali
	Ispezione

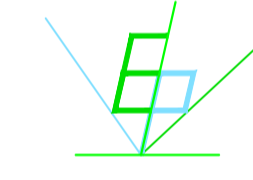


TAV. n°

U



VILLA MOCENIGO
Abano Terme - Padova



STUDIO TECNICO DI INGEGNERIA
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**RETE ACQUE BIANCHE
E INVASO LAMINAZIONE**

VALUTAZIONE COMPATIBILITA' IDRAULICA
AI SENSI DELLA D.G.R. 1322/06

SCALA: 1:100

DATA: Ottobre 2023