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**PRELIMINARY ENGINEERING REPORT
FOR THE**

PINE LAKE OUTLET DRAIN #1689

PREPARED FOR:

**MR. JEFFREY WRIGHT
GENESEE COUNTY DRAIN COMMISSIONER
GENESEE COUNTY, MICHIGAN**

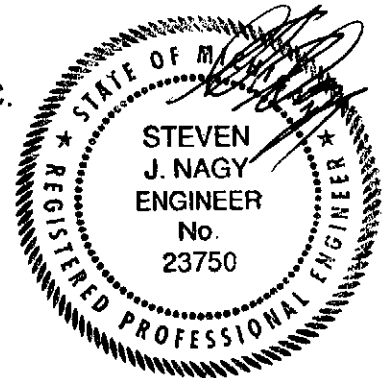
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- Site Selection Evaluation
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1. Introduction

The Pine Lake Outlet Drain #1689 is a proposed drainage outlet system for Pine Lake. There is no known existing drainage outlet system for Pine Lake. Pine Lake is currently acting as a retention system and holding all of the stormwater runoff entering the lake. The lake levels fluctuate depending on the amount of rainwater being received and the amount the water in the lake that can leave mainly by evaporation and infiltration. The purpose of this preliminary drainage study is to evaluate the runoff entering the lake and determine outlet alternatives for Pine Lake.

2. Site Location

The overall drainage area for Pine Lake is located in parts of Sections 28, 29, 32, and 33 of Fenton Township. A location map of the overall drainage area of the lake and the project location may be found in Appendix 'A' of this report. The overall drainage area is bounded roughly by Linden Road to the west, Harp drive to the north, Silver Lake to the east, and Owen road to the south. The size of the overall drainage area for Pine Lake is approximately 712+/- acres.

3. Existing Drainage Outlet

As previously mentioned, currently there is no known existing drainage outlet system for Pine Lake. The stormwater runoff entering the lake is being retained within the lake area. Evaporation is the main way for the lake levels to be lowered at this time without an outlet to another surface water drainage system.

The lake elevation for Pine Lake is approximately 10 feet higher than the lake elevation for Silver Lake to the east and Byram Lake to the west. Please see Appendix 'B' for the Existing Drainage Area map for Pine Lake. An underground connection such as a gravel or sand vein of some sort between Pine Lake and Silver Lake or Byram Lake does not appear to exist because the lake elevation for Pine Lake is consistently and significantly higher than the lake elevation for Silver Lake and Byram Lake. If a connection of this type existed then the lake elevations for a three lakes would be near the same elevations.

Byram Lake to the northwest is about 2000 feet away from Pine Lake and the highest elevation between the two (2) lakes from the Harp Drive/Whitaker Road area to Byram Lake is approximately 936 which is approximately 56 feet above the elevation of Pine Lake. Silver Lake to the southeast is

about 800 feet away from Pine Lake and the highest elevation between the two lakes from the Eleanor Street/Island View Drive area to Silver Lake is approximately 906 which is approximately 26 feet above the elevation of Pine Lake. Based on these elevation differences and horizontal distance, it appears that if some type of existing drainage outlet ever existed for Pine Lake then this connection would be between Pine Lake and Silver Lake.

A field investigation was performed to determine if a direct connection such as a storm sewer system or culvert existed between Pine Lake and Silver Lake could be found. The area along Eleanor Street, Island View Drive thru Chateau Du-Lac Condominium and along Curtwood Drive was investigated for such a connection. The road elevations vary along Eleanor Street and Island View drive to the northeast thru Chateau Du-Lac condominium and thru Curtwood drive. The lowest elevation along Island View drive is approximately 884; however, the elevation between Pine Lake and Island View near this low point is approximately 900 which is about 20 feet above the lake level for Pine Lake. The lowest elevation along the road through Chateau Du-Lac is approximately 906 and this elevation is approximately 26 feet above the lake level for Pine Lake. The lowest elevation along Curtwood drive is approximately 884 at the very northeast location of a large existing wetland/swamp area which is about 4000 feet to the northeast from Pine Lake. No direct connection was found to exist between Pine Lake and Silver Lake along these areas. Elevations throughout the Pine Lake Shoreline including along the large existing wetland/swamp area to the northeast of Pine Lake were obtained. These elevations range in value from 881.3 to 882.2 and are about 1.3 to 2.2 feet above the level of Pine Lake. The elevations obtained within the wetland confirm that the runoff from the wetland/swamp area drains to the southwest towards and into Pine Lake. It was observed through a field investigation that the flow thru the wetland/swamp area is towards Pine Lake. Also, based on the elevations obtained, if Pine Lake were to flow towards Silver Lake through the wetlands/swamp area then the elevation of Pine Lake would need to rise to an elevation of about 882. This elevation of 882 would flood several structures around the lake. At this time, only one structure located along Scenic View Drive is known to have flooded at the reported high lake level of approximately 881.5.

4. Basis of Evaluation and Design

A. Hydrology – (Stormwater Runoff/Detention)

DRAINAGE AREAS

The approximate overall drainage area used in this study was determined from Genesee County Drain Commissioner's Office two foot (2') contour maps and reviews of available plans for

existing developments within the drainage area. Field observations were also completed by Gould Engineering, Inc to verify the overall drainage area. A map of the overall drainage area may be found in Appendix 'B'. Gould Engineering, Inc. determined the overall drainage area to Pine Lake to be approximately 712 acres. Therefore, based on Genesee County Drain Commissioner's Office-SWM standards, the SCS Method was used to calculate peak runoff flows and detention routing and outlet rates for a one percent (1%) chance (100 year) storm event.

SCS METHOD

The SCS Method was used to determine the amount of storm water runoff from the drainage areas identified in this report. This hydrology method uses the characteristics of the drainage area to generate hydrographs and flows. These characteristics include hydrologic soil types (A, B, C, or D), the land use/coverage type and the time of concentration of the drainage area.

The hydrologic soils group is used to classify the existing soils of the sub-areas into different types of infiltration rates. The infiltration rates of soils can vary from having high rates of infiltration similar to gravel and sandy soils to having very low rates of infiltration similar to dense clays. The hydrologic soil groups A, B, C, and D are further described as follows.

Soil Group A - These soils have high infiltration rates and low runoff potential even when thoroughly wetted. Examples of these types of soils are sands and gravels.

Soil Group B - These soils have moderate infiltration rates when thoroughly wetted. These soils have moderately fine to moderately coarse textures and a moderate rate of water transmission.

Soil Group C - These soils have low infiltration rates when thoroughly wetted. These soils have moderately fine to fine texture and a low rate of water transmission.

Soil Group D - These soils have very low infiltration rates when thoroughly wetted and high runoff potential. Examples of these types of soils are clay soils which have high swelling potential and very low rates of water transmissions.

The land use/cover type of these soils further determine the amount of runoff from the drainage areas. The land use/cover type within the overall drainage area consists of various types of impervious surfaces such as pavements and buildings, and pervious areas such as lawns, open areas, crop land, meadows, and woods.

The overall drainage area for this study consists primarily of Soil Group B with some Soil Group C and D soils scattered throughout. The primary land uses are residential developments, the open water of Pine Lake, and wooded areas and wetland/swamps. The land uses are identified on a topographic and aerial photography map included in Appendix 'C'.

TIME OF CONCENTRATION

The time of concentration for drainage paths to Pine Lake was calculated for the inflow hydrograph to the lake for the overall drainage area. The GCDC-SWM standard of twenty (20) minutes was used as a minimum initial time of concentration for the drainage routes to the lake. This minimum initial time plus the travel time calculated to the drainage outlet for the lake determines the time of concentration.

DETENTION

The available detention within Pine Lake stores the stormwater runoff while the proposed outlets evaluated outlet a flow at a reduced rate. This reduced outflow rate is typically less than the flow that would be experienced entering the lake. The detention within Pine Lake was designed based on inflow for the 100-year storm event which is a standard of the GCDC- SWM. The outlet rate from Pine Lake and the detention within it are further discussed in each alternative.

B. Hydraulics – (storm drainage outlet)

FLOW MASTER

Haestad Method's FlowMaster program was used to evaluate and design the proposed outlet sizes for the improvement alternatives. This program utilizes Manning's Equation to calculate capacities of pipes under partially full flow and full flow conditions for the calculated outlet rates. The FlowMaster program also calculates the velocity of the water as it passes through the proposed pipes. This information is necessary in determining whether the velocities within the pipe are within the allowable range of approximately two (2) fps to ten (10) fps.

EAGLE POINT WATERSHED MODELING MODULE

The Eagle Point watershed modeling module is a computer program which is used to evaluate the detention within Pine Lake and design various lake outlet alternatives. The basis for the program is the SCS method for determining flows and Manning's equation for pipe flow and Bernoulli's equation for the hydraulic grade line. Various input data such as design weir sizes, pipe size, pipe types, lengths, and outlet elevations are input into the program. The program performs multiple calculations for routing the inflow through the lake and the outlet alternatives. The GCDC-SWM standard for enclosed drainage pipe design is to design for full pipe flow with no surcharging. The evaluation of the various design outlet alternatives are further discussed in later sections of this report.

5. Proposed Improvement Alternatives

Three (3) alternatives were evaluated in order to provide a drainage outlet for Pine Lake. Alternative 1 discusses an outlet route along Eleanor Street south to Owen Road and then east along Owen Road to Silver Lake. Alternative 2 discusses an outlet route near the intersection of Eleanor Street and Island View Drive and runs to Silver Lake from Island View Drive. Alternative 3 discusses an outlet route near end of Eleanor Street which runs to the southeast across Island View Drive to Silver Lake along an existing storm sewer outlet to Silver Lake for Island View Drive.

The possibility of a drainage outlet to the east thru the large wetland area located on the east end of Pine Lake and across the road within Château Du-Lac to Silver Lake was reviewed. A route through these wetlands would be approximately 2700 feet long from the Pine Lake to the road. This length would require an open drain along the route to be flat and have a width of as much as 60 feet to control the elevation of Pine Lake. The Michigan Department of Natural Resources and Environment (MDNRE) would require a permit for this route due to the existing wetlands. As a part of the permit process for disturbance to wetlands, the MDNRE requires a justification for the selection of this route and an evaluation of reasonable and prudent alternatives to minimize disturbance to wetlands. Due to the large drain width and the disturbance expected to the existing wetlands along this route, it was determined that this route would not be feasible or permissible by the MDNRE when compared to the Alternative routes presented in this report.

Field survey elevations have determined the elevation of Pine Lake to be approximately 880.0 in the month of July, 2010. The residents of the properties where the elevations were taken have indicated that this elevation of the lake is an acceptable elevation to be maintained. The property and building adjacent to Pine Lake with the lowest ground elevation has an elevation of approximately 881.2 near the building. The outlet structure to control the lake level for all three Alternatives is based on these elevations.

All three (3) outlet alternatives will also require new easements along parts of the proposed routes which are located outside of the existing Genesee County Road Commission road right-of-way. Some parts of the routes may require easements adjacent to the road right-of-way for maintenance due to the depth of the outlet pipe. All of the easements will be required to be dedicated to the Genesee County Drain Commissioner's office for maintenance of the proposed outlet. The following discusses each alternative in more detail:

● ALTERNATIVE 1:

The pipe outlet for Alternative 1 is a proposed 30" diameter storm sewer pipe which runs south from Pine Lake to Island View Drive between the buildings located at 5006 Island View Drive and 4520 Eleanor Street which are located at the northwest portion of the intersection of Island View Drive and Eleanor Street. From the intersection it is proposed to run this outlet pipe down the east side of Eleanor Street to the north side of Owen Road. The proposed outlet pipe turns east and runs on the north side of Owen Road and outlets to Silver Lake. The route for the outlet pipe of Alternative 1 may be found on the drawing located in Appendix 'E'. There is an existing 8" sanitary sewer and sewage pump station along with two sewer forcemain located on the north side of Owen Road between the paved road and the road right-of-way. Because of these existing utilities the proposed outlet pipe is required to be located in an easement north of the road right-of-way to avoid conflicts with the utilities.

The elevation of the intersection of Island View Drive and Eleanor Street is approximately 906 where as the proposed lake level is at approximately 880.0. There is a 26 foot difference between these elevations. Because of this large elevation difference it is proposed to jack the pipe from the lake to the intersection to avoid the deep cuts required to construct the outlet pipe in between the buildings located at 5006 Island View Drive and 4520 Eleanor Street. A deep cut excavation will occur at the intersection of Island View and along Eleanor Street for a distance towards Owen Road. Due to the deep excavation it is expected that half of Eleanor Street and the Intersection of Eleanor and Island View Drive will have to be reconstructed.

An outlet structure with a weir is proposed at the end of the 30" pipe at Pine Lake to control the lake elevation. This outlet structure is proposed to consist of a concrete box with a minimum 10 foot weir to control the high levels of Pine Lake. A drawing showing a preliminary sketch of this outlet structure may be found in Appendix 'E'. The elevation of the top of the weir is proposed at 880.0 with an approximate high lake level of approximately 880.9 for the one percent (1%) chance (100 year) storm event. The weir is not intended to control the levels of the lake below elevation 880.0 because there is not a constant source of inflow to the lake such as a creek or a river with a constant flow of water. The low levels of the lake will depend on the amount of rain the overall drainage area of the lake receives and the evaporation amounts. During drought conditions it is likely that the lake level will drop below the 880.0 elevation. Because the outlet structure will be located at Pine Lake and will likely involve disturbance to the bottom lands of Pine Lake a permit under Part 301 – Inland Lakes and Streams from the MDNRE will be required for this structure prior to construction of the outlet.

Calculations for the inflow into the lake, the weir and lake reservoir as well as the routing of the inflow through the lake and the 30" pipe outlet may be found in Appendix 'E'.

The Preliminary Opinion of Probable Construction Cost (POPCC) for Alternative 1 is \$467,000.00±. Further information related to this POPCC may be found in Section 7.

- **ALTERNATIVE 2:**

The pipe outlet for Alternative 2 is a proposed 30" diameter storm sewer pipe which runs south from Pine Lake to Eleanor Street between the buildings located at 4500 and 4492 Eleanor Street which are located northeast from the intersection of Island View Drive and Eleanor Street. It is proposed to run this outlet pipe south to Island View Drive. The proposed outlet pipe turns east and runs on the south side of Island View Drive approximately 335 feet and then turns south to outlet to Silver Lake between the buildings located at 4459 and 4469 Island View Drive. The route for the outlet pipe of Alternative 2 may be found on the drawing located in Appendix 'F'. There is an existing storm sewer along with telephone and gas utilities located on the south side of Island View Drive between the paved road and the road right-of-way. Because of these existing utilities the proposed outlet pipe may be located near the road right-of-way line such that easements along the south right-of-way may be needed for maintenance.

The elevation in between Island View Drive and Eleanor Street is approximately 906 where as the proposed lake level is at approximately 880.0. There is a 26 foot difference between these elevations. Because of this large elevation difference it is proposed to jack the pipe from the lake to Island View Drive to avoid the deep cuts required to construct the outlet pipe in between the buildings located at 4500 and 4492 Eleanor Street and west of the building located at 4490 Island View Drive. A deep cut excavation will occur along Island View Drive for approximately 335 feet until the route turns south to outlet to Silver Lake between the buildings located at 4459 and 4469 Island View Drive.

The outlet structure for Alternative 2 will be the same as Alternative 1. The outlet structure with a weir is proposed at the end of the 30" pipe at Pine Lake to control the lake elevation. This outlet structure is proposed to consist of a concrete box with a minimum 10 foot weir to control the high levels of Pine Lake. A drawing showing a preliminary sketch of this outlet structure may be found in Appendix 'E' for Alternative 1. The elevation of the top of the weir is proposed at 880.0 with an approximate high lake level of approximately 880.9 for the one percent (1%) chance (100 year) storm event. The weir is not intended to control the levels of the lake below elevation 880.0 because there is not a constant source of inflow to the lake such as a creek or a river with a constant flow of

water. The low levels of the lake will depend on the amount of rain the overall drainage area of the lake receives and the evaporation amounts. During drought conditions it is likely that the lake level will drop below the 880.0 elevation. Because the outlet structure will be located at Pine Lake and will likely involve disturbance to the bottom lands of Pine Lake, a permit under Part 301 – Inland Lakes and Streams from the MDNRE will be required for this structure prior to construction of the outlet.

Calculations for the inflow into the lake, the weir and lake reservoir as well as the routing of the inflow through the lake and weir outlet may be found in Appendix 'E' for Alternative 1. Calculations for the 30" outlet pipe of Alternative 2 may be found in Appendix 'F'.

The Preliminary Opinion of Probable Construction Cost (POPCC) for Alternative 2 is \$453,000.00±. Further information related to this POPCC may be found in Section 7.

- **ALTERNATIVE 3:**

The pipe outlet for Alternative 3 is also a proposed 30" diameter storm sewer pipe which runs south from Pine Lake to Eleanor Street between the buildings located at 4350 and 4330 Pavilion Drive which are located at the end of Eleanor Street. It is proposed to run this outlet pipe south to Island View Drive and then outlet to Silver Lake between the buildings located at 4341 and 4349 Island View Drive. The route for the outlet pipe of Alternative 3 may be found on the drawing located in Appendix 'G'. There is an existing storm sewer outlet to Silver Lake for Island View drive along this route for the proposed storm outlet for Pine Lake

The elevation in between Island View Drive and Pavilion Drive is approximately 908 where as the proposed lake level is at approximately 880.0. There is a 28 foot difference between these elevations. Because of this large elevation difference it is proposed to jack the pipe from the lake to approximately midway between Pavilion Drive and Island View Drive to avoid the deep cuts required to construct the outlet pipe.

The outlet structure for Alternative 3 will also be the same as Alternative 1. The outlet structure with a weir is proposed at the end of the 30" pipe at Pine Lake to control the lake elevation. This outlet structure is proposed to consist of a concrete box with a minimum 10 foot weir to control the high levels of Pine Lake. A drawing showing a preliminary sketch of this outlet structure may be found in Appendix 'E' for Alternative 1. The elevation of the top of the weir is proposed at 880.0 with an approximate high lake level of approximately 880.9 for the one percent (1%) chance (100 year) storm event. The weir is not intended to control the levels of the lake below elevation 880.0 because there is not a constant source of inflow to the lake such as a creek or a river with a constant flow of

water. The low levels of the lake will depend on the amount of rain the overall drainage area of the lake receives and the evaporation amounts. During drought conditions it is likely that the lake level will drop below the 880.0 elevation. Because the outlet structure will be located at Pine Lake and will likely involve disturbance to the bottom lands of Pine Lake, a permit under Part 301 – Inland Lakes and Streams from the MDNRE will be required for this structure prior to construction of the outlet.

Calculations for the inflow into the lake, the weir and lake reservoir as well as the routing of the inflow through the lake and weir outlet may be found in Appendix 'E' for Alternative 1. Calculations for the 30" outlet pipe for Alternative 3 may be found in Appendix 'G'.

The Preliminary Opinion of Probable Construction Cost (POPCC) for Alternative 3 is \$466,000.00±. Further information related to this POPCC may be found in Section 7.

6. Recommendations

The selection of the routes for each of the alternatives evaluated was based on the available access to both Pine Lake and Silver Lake and the shortest routes possible. The distance between existing buildings was a major reason for selecting the routes because many of the existing buildings along Pine Lake and Silver Lake have minimal distances in between them. For Alternative 1, the access route to Pine Lake only involves running between two existing buildings where as both Alternatives 2 and 3 involves routes between existing buildings for the routes to both Pine Lake and Silver Lake. Alternative 2 and 3 also involve longer borings for the 30" outlet pipe due to the higher ground elevations along the routes and the buildings nearby. The costs for all three alternatives are nearly the same and Alternative 1 has a slightly higher cost than the other two alternatives. Alternative 1, however, involves less construction in between existing buildings and is the recommended alternative.

7. Preliminary Opinion of Probable Construction Costs (POPCC)

• **ALTERNATIVE 1:**

Item Description	Qty	Pay Unit	Unit Price	Amount
1. Precast Concrete Outlet Weir Structure	1±	Each	\$20,000.00±	\$20,000.00±
2. 30" Sewer, C76-III	1090±	L.F.	\$120.00±	\$130,800.00±
3. 30" Sewer, C76-III with Bore & Jack Casing	200±	L.F.	\$600.00±	\$120,000.00±
4. 6' diam. Drainage Structures, Manhole	5±	Each	\$6,000.00±	\$30,000.00±
5. Drainage Structure Covers	2500±	Lb.	\$2.00±	\$5,000.00±
6. 36" Steel End Section w/Grate	1±	Each	\$1,500.00±	\$1,500.00±
7. Plain Rip Rap	20±	S.Y.	\$50.00±	\$1,000.00±
8. Compacted Sand Backfill	650±	L.F.	\$20.00±	\$13,000.00±
9. Topsoil Surface, 3"	4200±	S.Y.	\$3.00±	\$12,600.00±
10. Chemical Fertilizer Nutrients (240 Lbs/Acres)	240±	Lb.	\$2.00±	\$480.00±
11. Class A Seeding (200 Lbs/Acre)	200±	Lb.	\$5.00±	\$1,000.00±
12. Mulch (2 Tons/Acre)	2±	Ton	\$1,000.00±	\$2,000.00±
13. Road Surface Removal & Replacement	1200±	S.Y.	\$50.00±	\$60,000.00±
14. Curb and Gutter Removal & Replacement	200±	L.F.	\$25.00±	\$5,000.00±
15. Driveway Removal & Replacement, Asphalt	225±	S.Y.	\$40.00±	\$9,000.00±
16. Soil Erosion & Sedimentation Control	1±	LSum	\$3,000.00±	\$3,000.00±
17. Traffic Control	1±	LSum	\$10,000.00±	\$10,000.00±
			Total	\$424,380.00±
			Contingency 10%	\$42,438.00±
			Grand Total	\$466,818.00±

Note: The figures given for each item and the total figure of the POPCC is only a preliminary opinion based on data from similar projects as of the date of this study and are subject to change. Easement acquisitions, legal, financial, contract administration, engineering, permits, construction staking, and as-builts drawings are not included in these figures.

• **ALTERNATIVE 2:**

Item Description	Qty	Pay Unit	Unit Price	Amount
1. Precast Concrete Outlet Weir Structure	1±	Each	\$20,000.00±	\$20,000.00±
2. 30" Sewer, C76-III	555±	L.F.	\$120.00±	\$66,600.00±
3. 30" Sewer, C76-III with Bore & Jack Casing	405±	L.F.	\$600.00±	\$243,000.00±
4. 6' diam. Drainage Structures, Manhole	4±	Each	\$6,000.00±	\$24,000.00±
5. Drainage Structure Covers	2000±	Lb.	\$2.00±	\$4,000.00±
6. 36" Steel End Section w/Grate	1±	Each	\$1,500.00±	\$1,500.00±
7. Plain Rip Rap	20±	S.Y.	\$50.00±	\$1,000.00±
8. Compacted Sand Backfill	350±	L.F.	\$20.00±	\$7,000.00±
9. Topsoil Surface, 3"	2700±	S.Y.	\$3.00±	\$8,100.00±
10. Chemical Fertilizer Nutrients (240 Lbs/Acres)	170±	Lb.	\$2.00±	\$340.00±
11. Class A Seeding (200 Lbs/Acre)	140±	Lb.	\$5.00±	\$700.00±
12. Mulch (2 Tons/Acre)	1.4±	Ton	\$1,000.00±	\$1,400.00±
13. Existing Storm Sewer, Remove	130±	L.F.	\$5.00±	\$650.00±
14. Road Surface Removal & Replacement	175±	S.Y.	\$50.00±	\$8,750.00±
15. Curb and Gutter Removal & Replacement	150±	L.F.	\$25.00±	\$3,750.00±
16. Driveway Removal & Replacement, Concrete	250±	S.Y.	\$40.00±	\$10,000.00±
17. Soil Erosion & Sedimentation Control	1±	LSum	\$2,500.00±	\$2,500.00±
18. Traffic Control	1±	LSum	\$8,000.00±	\$8,000.00±
			Total	\$411,290.00±
			Contingency 10%	\$41,129.00±
			Grand Total	\$452,419.00±

Note: The figures given for each item and the total figure of the POPCC is only a preliminary opinion based on data from similar projects as of the date of this study and are subject to change. Easement acquisitions, legal, financial, contract administration, engineering, permits, construction staking, and as-builts drawings are not included in these figures.

● **ALTERNATIVE 3:**

Item Description	Qty	Pay Unit	Unit Price	Amount
1. Precast Concrete Outlet Weir Structure	1±	Each	\$20,000.00±	\$20,000.00±
2. 30" Sewer, C76-III	490±	L.F.	\$120.00±	\$58,800.00±
3. 30" Sewer, C76-III with Bore & Jack Casing	450±	L.F.	\$600.00±	\$270,000.00±
4. 6' diam. Drainage Structures, Manhole	2±	Each	\$6,000.00±	\$12,000.00±
5. 6' diam. Drainage Structures, Catch Basin	2±	Each	\$6,500.00±	\$13,000.00±
6. Drainage Structure Covers	2000±	Lb.	\$2.00±	\$4000.00±
7. 36" Steel End Section w/Grate	1±	Each	\$1,500.00±	\$1,500.00±
8. Plain Rip Rap	20±	S.Y.	\$50.00±	\$1,000.00±
9. Compacted Sand Backfill	125±	L.F.	\$20.00±	\$2,500.00±
10. Topsoil Surface, 3"	3000±	S.Y.	\$3.00±	\$9,000.00±
11. Chemical Fertilizer Nutrients (240 Lbs/Acres)	200±	Lb.	\$2.00±	\$400.00±
12. Class A Seeding (200 Lbs/Acre)	160±	Lb.	\$5.00±	\$800.00±
13. Mulch (2 Tons/Acre)	1.6±	Ton	\$1,000.00±	\$1,600.00±
14. Existing Storm Sewer, Remove	370±	L.F.	\$5.00±	\$1,850.00±
15. Road Surface Removal & Replacement	225±	S.Y.	\$50.00±	\$11,250.00±
16. Curb and Gutter Removal & Replacement	200±	S.Y.	\$25.00±	\$5,000.00±
17. Soil Erosion & Sedimentation Control	1±	LSum	\$2,500.00±	\$2,500.00±
18. Traffic Control	1±	LSum	\$8,000.00±	\$8,000.00±
			Total	\$423,200.00±
			Contingency 10%	\$42,320.00±
			Grand Total	\$465,520.00±

Note: The figures given for each item and the total figure of the POPCC is only a preliminary opinion based on data from similar projects as of the date of this study and are subject to change. Easement acquisitions, legal, financial, contract administration, engineering, permits, construction staking, and as-builts drawings are not included in these figures.

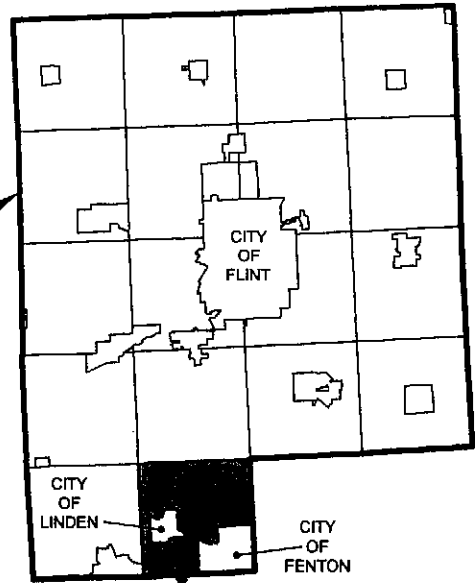
8. Appendices

Appendix 'A'

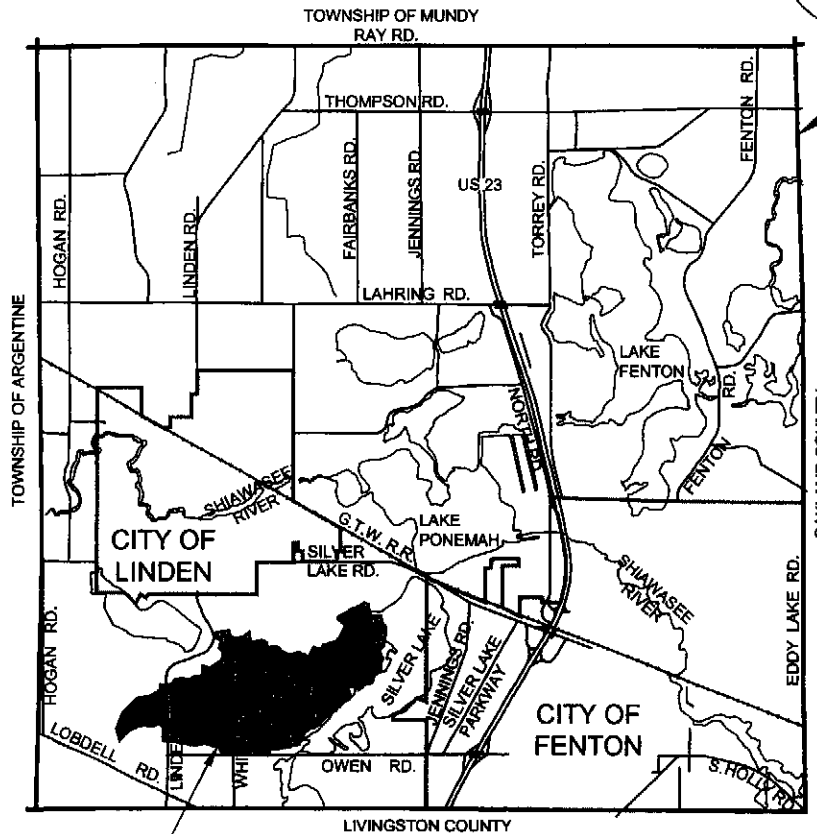
- **Location Map**



GENESEE COUNTY,
MICHIGAN



TOWNSHIP OF FENTON



APPROXIMATE
DRAINAGE AREA FOR
THE PINE LAKE OUTLET
DRAIN #1689

LOCATION MAP

APPENDIX 'A'

PRELIMINARY ENGINEERING REPORT
FOR THE
PINE LAKE OUTLET DRAIN #1689



NOT TO SCALE

DATE: AUGUST 24, 2010

	GOULD ENGINEERING, INC.	
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Appendix 'B'

- **Existing Drainage Area Map**

Appendix 'C'

- **Existing Land Use and Soils Map**

Appendix 'D'

- **Standard Charts and Values Used in Calculations**



GENESEE COUNTY DRAIN COMMISSIONER'S OFFICE

-DIVISION OF
SURFACE WATER MANAGEMENT

JEFFREY WRIGHT
COMMISSIONER

G-4608 BEECHER ROAD, FLINT, MI 48532
PHONE (810) 732-1590 FAX (810) 732-1474

Revised November 1, 2006
Effective immediately

**STORM SEWER DESIGN PARAMETERS
FOR GENESEE COUNTY**

IN AN EFFORT TO STANDARDIZE DESIGN PROCEDURES FOR STORM SEWERS AND OPEN CHANNELS IN GENESEE COUNTY, THE GENESEE COUNTY DRAIN COMMISSIONER HAS DEVELOPED THESE STANDARDS. IT IS HOPED THAT THESE STANDARDS WILL FACILITATE PLANNING FROM BOTH THE POSITION OF THE DESIGN AND REVIEWING ENGINEER.

IT IS RECOGNIZED THE DESIGN CONDITIONS VARY AND THERE IS NO SUBSTITUTE FOR THE JUDGEMENT OF AN EXPERIENCED ENGINEER. IN ALL CASES THIS JUDGEMENT SHOULD BE APPLIED.

MANY STREAMS LOCATED IN THIS COUNTY DO NOT HAVE STREAM GAGING DATA AVAILABLE OR THE PERIOD OF RECORD IS NOT OF SUFFICIENT LENGTH TO ALLOW THE DESIGN ENGINEER TO ESTIMATE FLOOD FLOWS BY USING FLOOD-FREQUENCY ANALYSIS AS DEVELOPED BY U.S.G.S. PRIOR TO DESIGN OF ANY STORM DRAIN IMPROVEMENT OR ENCLOSURE THE CONSULTANT SHALL INVESTIGATE ANY GAGING STATION, PARTIAL RECORD GAGING STATION OR CREST STAGE GAGES ON THE DESIGN BASIN FOR AVAILABLE PERTINENT DATA ON FLOOD FLOWS.

WHERE INSUFFICIENT DATA IS PRESENT TO DEVELOP BASIN HYDROLOGY BY THE ABOVE METHOD THE CONSULTANT SHALL DETERMINE FLOWS ALONG THE BASIN BY THE S.C.S. METHOD, THE RATIONAL METHOD, THE BRATER METHOD OR A COMBINATION OF ANY OF THE ABOVE NAMED METHODS. THE BASIN HYDROLOGY SHALL BE APPROVED BY THE GENESEE COUNTY DRAIN COMMISSIONER'S OFFICE PRIOR TO PROCEEDING WITH THE FINAL DESIGN OF A GIVEN PROJECT.

DESIGN PROJECTS SHALL BE DEVELOPED IN ACCORDANCE WITH THE FOLLOWING FLOOD FREQUENCIES.

- A. 100 YEAR STORM ON BASIN DEVELOPMENT PROJECT TO YEAR 2000:
1. CULVERTS OR BRIDGES CROSSING STATE HIGHWAYS OR EXPRESSWAYS WHERE THE UPSTREAM DRAINAGE AREA IS IN EXCESS OF 2 SQUARE MILES.
 2. DETENTION PONDS.
 3. DRAINAGE ENCLOSURES IN EXCESS OF 100 FEET WHERE THE UPSTREAM DRAINAGE AREA IS IN EXCESS OF 2 SQUARE MILES.

B. 50 YEAR FLOOD FLOWS WITH BASIN DEVELOPMENT TO YEAR 2000:

1. ENCLOSED STORM SEWERS IN NEW PROPOSED PLATS.

C. 25 YEAR FLOOD FLOWS WITH BASIN DEVELOPMENT TO YEAR 2000:

FOR IMPROVEMENTS IN THIS CATEGORY, THE CONSULTANT SHALL DESIGN THE STRUCTURE WITHOUT APPRECIABLY ALTERING THE FLOOD STAGE OF THE CHANNEL. THE EFFECT OF THE 100 YEAR FLOOD FLOW MUST ALSO BE SHOWN.

1. COUNTY ROAD CROSS CULVERTS AND BRIDGES.
2. OPEN CHANNEL DEVELOPMENT OR IMPROVEMENT (FLOW TO BE CONTAINED WITHIN THE CHANNEL).
3. DRAIN ENCLOSURES WHERE THE DRAINAGE AREA IS GREATER THAN 300 ACRES BUT LESS THAN 2 SQUARE MILES.

D. 10 YEAR FLOOD FLOWS WITH BASIN DEVELOPMENT TO YEAR 2000:

1. OPEN CHANNELS, CULVERTS OR DRAIN ENCLOSURES WHERE THE DRAINAGE AREA IS NOT IN EXCESS OF 300 ACRES.

FLOW ESTIMATION: HYDROLOGY

MANY DIFFERENT METHODS OF ARRIVING AT A GIVEN CFS FOR A SELECTED SPOT IN A DRAINAGE OUTLET HAVE BEEN DEVELOPED OVER THE YEARS. BECAUSE OF ITS GENERAL RECOGNITION AND WIDE USE WITHIN THE COUNTY, THE DRAIN COMMISSIONER WILL ACCEPT THE RATIONAL METHOD FOR FLOW COMPUTATION WHERE THE DRAINAGE AREA IS LESS THAN 100 ACRES. ENGINEERS ELECTING TO USE THIS METHOD FOR LARGER DRAINAGE AREA WILL BE REQUESTED TO ALSO USE AN ALTERNATE METHOD FOR COMPARISON.

THE FOLLOWING CRITERIA SHALL BE USED IN DETERMINING THE VARIABLES OF THE RATIONAL FORMULA $Q=CIA$.

1. **AREA** - THE AREA OF A BASIN OR SUB-BASIN SHALL BE DETERMINED BY USE OF 2' CONTOUR MAPS AVAILABLE AT THE COUNTY OFFICE WITH AN APPROPRIATE FIELD CHECK OR BY USE OF ESTABLISHED COUNTY DRAIN MAPS ON FILE AT G-4608 BEECHER RD.
2. **INTENSITY** - THE RAINFALL INTENSITY - DURATION FREQUENCY CURVES ATTACHED SHALL BE USED FOR STORM DRAIN DESIGN IN GENESEE COUNTY. COMPUTATION OF AN ACCURATE TIME OF CONCENTRATION IS CRITICAL TO THE USE OF THESE CURVES. FOR URBAN STORM SEWERS AT TIME OF CONCENTRATION SHALL BE THE

SUMMATION OF THE INLET TIME PLUS THE TIME OF FLOW IN THE SEWER. FOR URBANIZED AREA A MINIMUM INITIAL TIME OF 20 MINUTES SHALL BE ACCEPTABLE FOR DESIGN AND FOR AVERAGE RURAL BASINS AN INITIAL TIME OF CONCENTRATION OF 30 MINUTES WILL PRESENT AN ADEQUATE TIME FOR STORM FLOWS TO PEAK. THE FLOW TIME IN AN ENCLOSED SYSTEM SHALL BE CALCULATED BY STANDARD DESIGN CHARTS. FOR CHANNEL VELOCITY THE STANDARD MANNING EQUATION $V=1.486 R^{2/3} S^{1/2}$ SHALL BE ACCEPTED. A CHART LISTING ACCEPTED N VALUES FOR STORM SEWER DESIGN IS ENCLOSED FOR USE IN DESIGN ANALYSIS.

3. **RUNOFF COEFFICIENT** - THE BASIN DEVELOPMENT SHALL BE PROJECTED TO THE YEAR 2000 AND THE RUNOFF COEFFICIENT MUST BE DETERMINED ON THE BASIS OF THIS PROJECTED DEVELOPMENT USING THE FOLLOWING:

A	FLAT UNDEVELOPED LANDS, FARMS, NONWOODED	0.25
B	WOODLANDS & SLOPED UNDEVELOPED LAND	0.30
C	PARKS, CEMETARIES, PLAYGROUNDS, DISTURBED GROUND	0.35
D	RESIDENTIAL	0.40
E	APARTMENTS, CONDOMINIUMS OF LT. MANUFACTURER	0.50
F	COMMERICAL AND INDUSTRIAL	0.70
G	IMPERVIOUS AREAS (PARKING, ROOF, ETC..)	0.95
H	OPEN WATER	1.00

OUTLET CONDITIONS

ALL STORM SYSTEMS SHALL BE DESIGNED TO EXIT INTO AN OUTLET WITH SUFFIEICIENT CARRYING CAPACITY TO CARRY THE ADDITIONAL DESIGN FLOW.

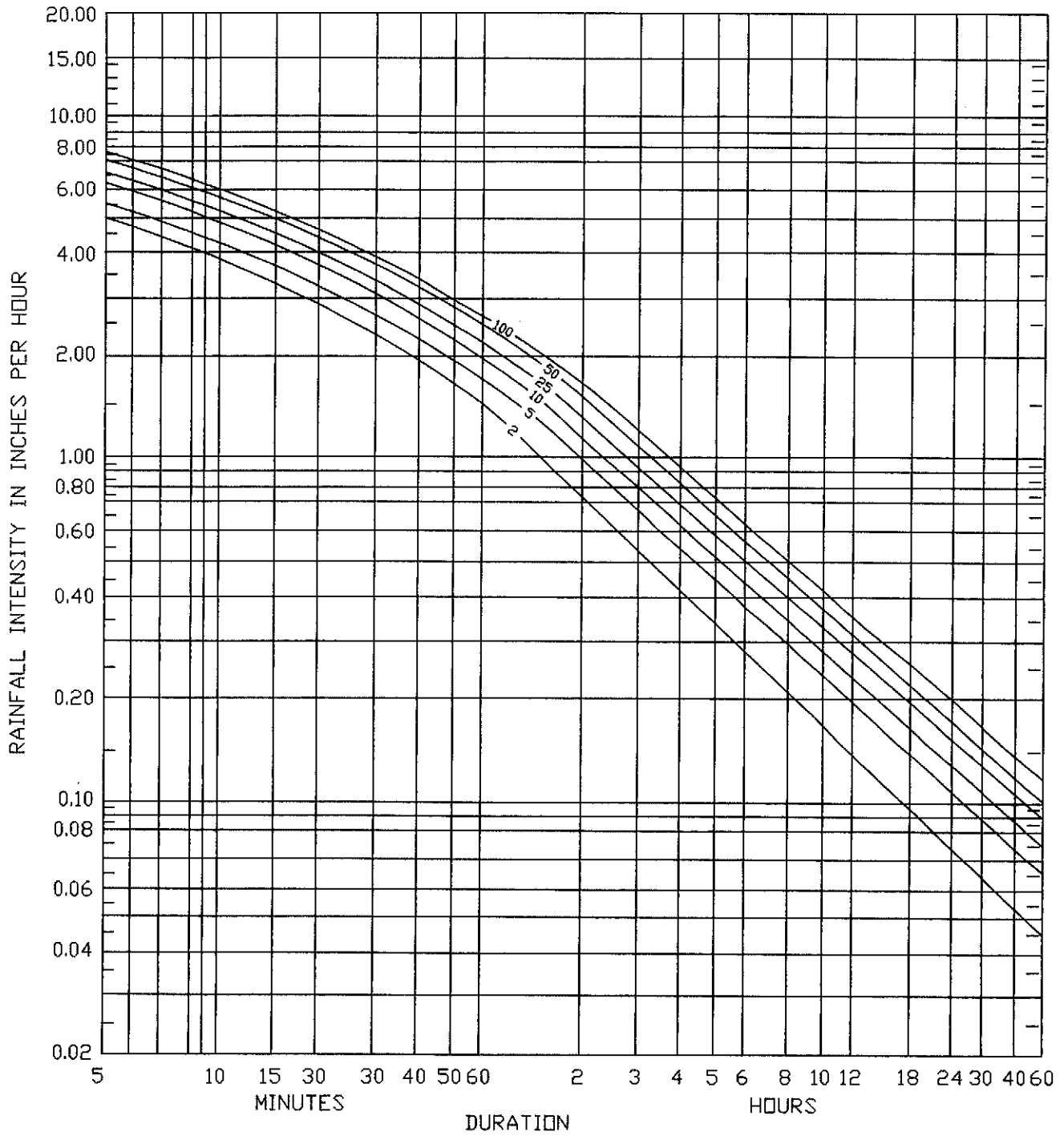
THE DESIGNER SHALL ANALYZE THIS CONDITION AND SUBMIT DATA SUBSTANTIATING HIS CONCLUSIONS. THIS INFORMATION SHALL BE SUBMITTED TO THE DRAIN COMMISSIONER ALONG WITH THE REQUIRED DESIGN FORMS.

IN THE EVENT THE DESIGNER DOES NOT HAVE SUFFICIENT CAPACITY IN THE OUTLET THE FOLLOWING CRITERIA SHALL APPLY:

1. THE SYSTEM SHALL BE DESIGNED TO OUTLET ONLY EXISTING RUNOFF. EXISTING RUNOFF SHALL CONSIST OF ALL WATER

PRESENTLY CONTRIBUTED TO THE DRAINAGE DISTRICT. THIS SHALL MEAN THE 2-YEAR STORM UNDER EXISTING CONDITIONS USING AGRICULTURAL LAND. ($C= 0.25$) ALL EXCESS SHALL BE RETAINED ON SITE FOR DURATION OF TIME NECESSARY TO PASS THE DESIGN STORM WITH DOWNSTREAM FLOODING. THE OUTLET DISCHARGE SHALL NOT EXCEED 0.2 CFS/ ACRE UNDER ANY EVENT.

2. THE TOWNSHIP SHALL PETITION THE DRAIN COMMISSIONER TO IMPROVE THE OUTLET TO THE REQUIRED SIZE TO PASS THE ADDITIONAL WATER AT THE DESIGN STORM. IN THE EVENT THIS PETITION IS NOT SUCCESSFUL CRITERIA #1 ABOVE SHALL APPLY.



RAINFALL INTENSITY - DURATION - FREQUENCY CURVES FOR FLINT, MI

Table 2-2a.—Runoff curve numbers for urban areas¹

Cover description		Curve numbers for hydrologic soil group—			
		A	B	C	D
Cover type and hydrologic condition	Average percent impervious area ²				
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.) ³ :					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%).....		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)					
		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)					
		98	98	98	98
Paved; open ditches (including right-of-way)					
		83	89	92	93
Gravel (including right-of-way)					
		76	85	89	91
Dirt (including right-of-way)					
		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ⁴ ...					
		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)					
		96	96	96	96
Urban districts:					
Commercial and business					
	85	89	92	94	95
Industrial					
	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)					
	65	77	85	90	92
1/4 acre					
	38	61	75	83	87
1/8 acre					
	30	57	72	81	86
1/2 acre					
	25	54	70	80	85
1 acre					
	20	51	68	79	84
2 acres					
	12	46	65	77	82
<i>Developing urban areas</i>					
Newly graded areas (pervious areas only, no vegetation) ⁵					
		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

¹Average runoff condition, and $I_a = 0.2S$.

²The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

³CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

⁴Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

⁵Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4, based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

Table 2-2b.—Runoff curve numbers for cultivated agricultural lands¹

Cover description			Curve numbers for hydrologic soil group—			
Cover type	Treatment ²	Hydrologic condition ³	A	B	C	D
Fallow	Bare soil	—	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
		Poor	65	73	79	81
		Good	61	70	77	80
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
	C&T + CR	Poor	60	71	78	81
		Good	58	69	77	80
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

¹Average runoff condition, and $I_n = 0.2S$.

²Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.

³Hydrologic condition is based on combination of factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes in rotations, (d) percent of residue cover on the land surface (good $\geq 20\%$), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

Table 2-2c.—Runoff curve numbers for other agricultural lands¹

Cover description		Curve numbers for hydrologic soil group—			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. ²	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. ³	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	*30	48	65	73
Woods—grass combination (orchard or tree farm). ⁵	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. ⁶	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	*30	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

¹Average runoff condition, and $I_p = 0.2S$.

² *Poor*: <50% ground cover or heavily grazed with no mulch.

Fair: 50 to 75% ground cover and not heavily grazed.

Good: >75% ground cover and lightly or only occasionally grazed.

³ *Poor*: <50% ground cover.

Fair: 50 to 75% ground cover.

Good: >75% ground cover.

⁴Actual curve number is less than 30; use CN = 30 for runoff computations.

⁵CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

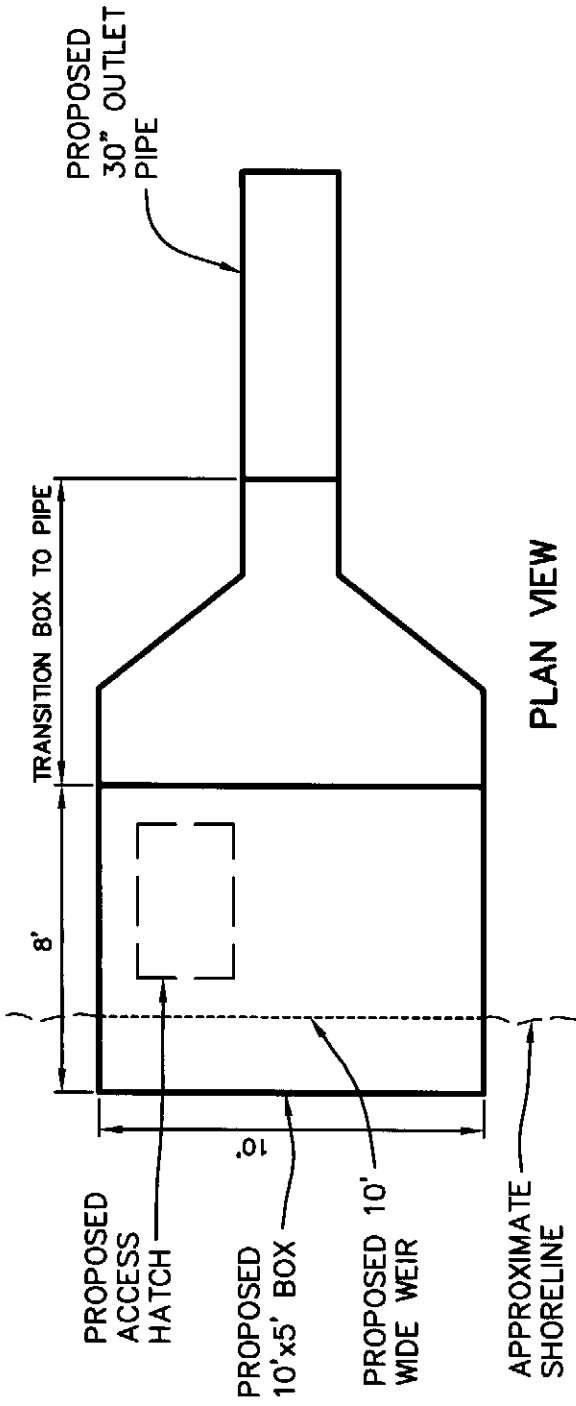
⁶ *Poor*: Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.

Fair: Woods are grazed but not burned, and some forest litter covers the soil.

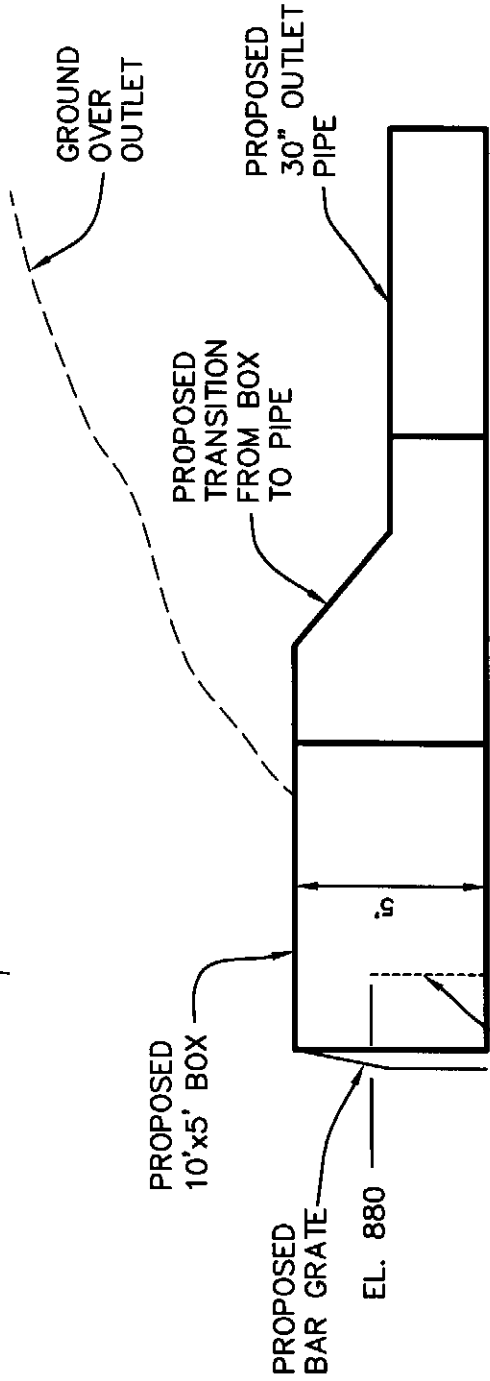
Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

Appendix 'E'

- **Plan and Profile View – Alternative 1**
- **Weir Outlet Structure Sketch**
- **Calculations – Alternative 1**



PLAN VIEW



CROSS SECTION VIEW

WEIR OUTLET STRUCTURE SKETCH

SCALE: 1"=5'

APPENDIX 'E'

PRELIMINARY ENGINEERING REPORT
FOR THE
PINE LAKE OUTLET DRAIN #1689

REVISED: SEPTEMBER 10, 2010
DATE: AUGUST 24, 2010



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Worksheet for 30" PIPE - ALT 1

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Full Flow Capacity

Input Data

Roughness Coefficient: 0.013
Channel Slope: 0.55000 %
Diameter: 30.00 in

Results

Discharge: 30.42 ft³/s
Normal Depth: 30.00 in
Flow Area: 4.91 ft²
Wetted Perimeter: 7.85 ft
Top Width: 0.00 ft
Critical Depth: 1.88 ft
Percent Full: 100.0 %
Critical Slope: 0.00657 ft/ft
Velocity: 6.20 ft/s
Velocity Head: 0.60 ft
Specific Energy: 3.10 ft
Froude Number: 0.00
Maximum Discharge: 32.72 ft³/s
Discharge Full: 30.42 ft³/s
Slope Full: 0.00550 ft/ft
Flow Type: SubCritical

GVF Input Data

Downstream Depth: 0.00 in
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 in
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 1.00 %
Downstream Velocity: Infinity ft/s

Worksheet for 30" PIPE - ALT 1

Upstream Velocity:	Infinity	ft/s
Normal Depth:	30.00	in
Critical Depth:	1.88	ft
Channel Slope:	0.55000	%
Critical Slope:	0.00657	ft/ft

OUTLET STRUCTURE REPORT

Structure Number : 1
 Type : Rectangular Weir Contracted
 Name : WEIR OUTLET

[RATING CURVE LIMIT]

Minimum Elevation = 880.00 (ft)
 Maximum Elevation = 882.00 (ft)
 Elevation Increment = 0.05 (ft)

[OUTLET STRUCTURE INFORMATION]

Crest Length = 10.00 ← (ft)
 Crest Elevation = 880.00 (ft)
 Weir Coefficient = 3.33
 Exponential = 1.50

[RECTANGULAR CONTRACTED EQUATION]

$$Q = C_w * (L - 0.2H) * H^{exp}$$

[DEFINITIONS]

Cw = Weir Coefficient
 H = Headwater depth above inlet control section invert
 L = Crest length

[MAXIMUM DISCHARGE]

Q = 90.42 (cfs)

[WEIR STAGE VS. DISCHARGE]

Elevation (ft)	Stage (ft)	Discharge (cfs)
880.00	0.00	0.00
880.05	0.05	0.37
880.10	0.10	1.05
880.15	0.15	1.93
880.20	0.20	2.97
880.25	0.25	4.14
880.30	0.30	5.44
880.35	0.35	6.85
880.40	0.40	8.36
880.45	0.45	9.96
880.50	0.50	11.66
880.55	0.55	13.43
880.60	0.60	15.29
880.65	0.65	17.22
880.70	0.70	19.23
880.75	0.75	21.30
880.80	0.80	23.45

User Name: hilerdyp
Date: 08-17-10
Project: 318-114 PINE LK PREDESIGNBASE
Time: 11:18:30
Scenario: EXISTING CONDITIONS
Page: 2

OUTLET STRUCTURE REPORT

880.85	0.85	25.65
880.90	0.90	27.92
880.95	0.95	30.25
881.00	1.00	32.63
881.05	1.05	35.08
881.10	1.10	37.57
881.15	1.15	40.12
881.20	1.20	42.72
881.25	1.25	45.37
881.30	1.30	48.07
881.35	1.35	50.82
881.40	1.40	53.62
881.45	1.45	56.46
881.50	1.50	59.34
881.55	1.55	62.27
881.60	1.60	65.24
881.65	1.65	68.25
881.70	1.70	71.30
881.75	1.75	74.39
881.80	1.80	77.52
881.85	1.85	80.69
881.90	1.90	83.90
881.95	1.95	87.14
882.00	2.00	90.42

User Name: hilerdxp
 Date: 08-17-10
 Project: 318-114 PINE LK PREDESIGNBASE
 Time: 11:19:46
 Scenario: EXISTING CONDITIONS
 Page: 1

RESERVOIR REPORT

Reservoir Number: 1
 Name: PINE LAKE RESERVOIR

[RATING CURVE LIMIT]

Minimum Elevation = 880.00 (ft)
 Maximum Elevation = 882.00 (ft)
 Elevation Increment = 0.05 (ft)

[STAGE STORAGE INFORMATION]

Storage Method: User-Defined Storage

Input Method: Area

Number	Elevation (ft)	Area (sq ft)	Ave Area (sq ft)	Volume (cu ft)	Cumulative Volume (cu ft)
1	879.90	0	0	0.00	0.00
2	880.00	6130000	3065000	306500.00	306500.00
3	882.00	6499000	6314500	12629000.00	12935500.00

[DISCHARGE INFORMATION]

Structure Number: 1
 Type: Rectangular Weir Contracted
 Name: WEIR OUTLET

[RESERVOIR STAGE STORAGE/DISCHARGE]

Elevation (ft)	Stage (ft)	Area (sq ft)	Storage (cu ft)	Discharge (cfs)
880.00	0.00	0	0.00	0.00
880.05	0.05	6139225	153480.62	0.37
880.10	0.10	6148450	460672.50	1.05
880.15	0.15	6157675	768325.62	1.93
880.20	0.20	6166900	1076440.00	2.97
880.25	0.25	6176125	1385015.62	4.14
880.30	0.30	6185350	1694052.50	5.44
880.35	0.35	6194575	2003550.62	6.85
880.40	0.40	6203800	2313510.00	8.36
880.45	0.45	6213025	2623930.62	9.96
880.50	0.50	6222250	2934812.50	11.66
880.55	0.55	6231475	3246155.62	13.43
880.60	0.60	6240700	3557960.00	15.29
880.65	0.65	6249925	3870225.62	17.22
880.70	0.70	6259150	4182952.50	19.23
880.75	0.75	6268375	4496140.62	21.30
880.80	0.80	6277600	4809790.00	23.45

RESERVOIR REPORT

880.85	0.85	6286825	5123900.62	25.65
880.90	0.90	6296050	5438472.50	27.92
880.95	0.95	6305275	5753505.62	30.25
881.00	1.00	6314500	6069000.00	32.63
881.05	1.05	6323725	6384955.62	35.08
881.10	1.10	6332950	6701372.50	37.57
881.15	1.15	6342175	7018250.62	40.12
881.20	1.20	6351400	7335590.00	42.72
881.25	1.25	6360625	7653390.62	45.37
881.30	1.30	6369850	7971652.50	48.07
881.35	1.35	6379075	8290375.62	50.82
881.40	1.40	6388300	8609560.00	53.62
881.45	1.45	6397525	8929205.62	56.46
881.50	1.50	6406750	9249312.50	59.34
881.55	1.55	6415975	9569880.62	62.27
881.60	1.60	6425200	9890910.00	65.24
881.65	1.65	6434425	10212400.62	68.25
881.70	1.70	6443650	10534352.50	71.30
881.75	1.75	6452875	10856765.62	74.39
881.80	1.80	6462100	11179640.00	77.52
881.85	1.85	6471325	11502975.62	80.69
881.90	1.90	6480550	11826772.50	83.90
881.95	1.95	6489775	12151030.62	87.14
882.00	2.00	6499000	12475750.00	90.42

Maximum Storage = 12475750.00 (cu ft)
 Maximum Discharge = 90.42 (cfs)

14	210.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
15	225.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
16	240.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
17	255.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
18	270.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
19	285.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
20	300.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
21	315.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
22	330.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
23	345.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
24	360.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
25	375.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
26	390.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
27	405.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
28	420.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
29	435.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
30	450.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
31	465.00	0.00	0.00	0.00	0.00	0.00	0.00	880.00
32	480.00	0.01	0.01	0.00	0.32	0.00	2.42	880.00
33	495.00	0.04	0.04	0.32	2.86	0.00	21.43	880.00
34	510.00	0.15	0.18	2.86	13.89	0.00	104.17	880.00
35	525.00	0.42	0.57	13.89	47.92	0.00	359.40	880.00
36	540.00	0.96	1.38	47.92	130.39	0.00	977.94	880.00
37	555.00	1.83	2.78	130.39	296.99	0.01	2227.45	880.00
38	570.00	3.06	4.89	296.99	589.48	0.01	4421.14	880.00
39	585.00	4.66	7.72	589.48	1051.08	0.02	7883.21	880.00
40	600.00	6.61	11.27	1051.08	1724.32	0.03	12932.63	880.00

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41	615.00	8.96	15.57	1724.32	2653.59	0.05	19902.28	880.01
42	630.00	11.81	20.77	2653.59	3892.62	0.07	29195.17	880.01
43	645.00	15.39	27.20	3892.62	5514.40	0.10	41358.73	880.01
44	660.00	19.99	35.37	5514.40	7622.41	0.14	57169.12	880.02
45	675.00	26.09	46.08	7622.41	10367.47	0.19	77757.42	880.03
46	690.00	35.48	61.57	10367.47	14035.06	0.26	105264.88	880.03
47	705.00	57.74	93.21	14035.06	19591.17	0.36	146936.41	880.05
48	720.00	119.56	177.30	19591.17	30175.41	0.53	226319.59	880.06
49	735.00	226.82	346.38	30175.41	50873.29	0.88	381556.26	880.09
50	750.00	370.87	597.69	50873.29	86586.03	1.59	649407.17	880.13
51	765.00	498.17	869.04	86586.03	138461.33	2.84	1038481.3	880.19
52	780.00	563.86	1062.03	138461.33	201729.96	4.68	1513009.8	880.27
53	795.00	569.81	1133.67	201729.96	269052.18	6.92	2017943.2	880.35
54	810.00	527.86	1097.67	269052.18	333934.25	9.34	2504577.0	880.43
55	825.00	457.81	985.67	333934.25	391810.85	11.68	2938669.0	880.50
56	840.00	376.26	834.08	391810.85	440326.61	13.77	3302552.9	880.56
57	855.00	314.29	690.56	440326.61	479999.03	15.55	3600109.4	880.61
58	870.00	265.74	580.03	479999.03	512841.87	17.08	3846442.1	880.65
59	885.00	226.37	492.11	512841.87	540239.43	18.39	4051933.7	880.68
60	900.00	193.96	420.33	540239.43	563184.69	19.50	4224031.4	880.71
61	915.00	168.57	362.52	563184.69	582537.22	20.46	4369182.7	880.73
62	930.00	148.09	316.66	582537.22	599031.22	21.28	4492893.8	880.75
63	945.00	131.70	279.79	599031.22	613220.58	22.01	4599319.4	880.77
64	960.00	118.68	250.38	613220.58	625563.69	22.64	4691897.5	880.78
65	975.00	107.87	226.55	625563.69	636405.87	23.20	4773218.0	880.79
66	990.00	98.73	206.60	636405.87	645987.99	23.69	4845087.6	880.81
67	1005.00	90.96	189.69	645987.99	654498.87	24.14	4908922.6	880.82
68	1020.00	84.51	175.47	654498.87	662105.69	24.54	4965976.8	880.82
69	1035.00	79.23	163.74	662105.69	668962.68	24.90	5017406.9	880.83
70	1050.00	74.71	153.94	668962.68	675190.38	25.23	5064117.1	880.84
71	1065.00	70.68	145.39	675190.38	680867.55	25.53	5106698.1	880.85
72	1080.00	67.05	137.72	680867.55	686050.36	25.81	5145571.3	880.85
73	1095.00	63.73	130.78	686050.36	690784.24	26.06	5181077.3	880.86
74	1110.00	60.87	124.60	690784.24	695117.94	26.30	5213581.8	880.86
75	1125.00	58.52	119.39	695117.94	699112.21	26.51	5243540.4	880.87
76	1140.00	56.37	114.89	699112.21	702811.43	26.71	5271286.1	880.87
77	1155.00	54.36	110.73	702811.43	706237.98	26.90	5296986.6	880.88
78	1170.00	52.44	106.80	706237.98	709407.60	27.07	5320760.1	880.88
79	1185.00	50.58	103.02	709407.60	712330.64	27.23	5342684.0	880.88
80	1200.00	48.76	99.34	712330.64	715014.60	27.37	5362814.8	880.89
81	1215.00	46.98	95.74	715014.60	717465.79	27.51	5381199.7	880.89
82	1230.00	45.25	92.23	717465.79	719691.34	27.63	5397892.3	880.89
83	1245.00	43.63	88.88	719691.34	721702.28	27.74	5412975.1	880.90
84	1260.00	42.18	85.81	721702.28	723516.43	27.83	5426582.0	880.90
85	1275.00	40.95	83.13	723516.43	725158.47	27.92	5438898.0	880.90
86	1290.00	39.95	80.90	725158.47	726656.75	28.01	5450135.7	880.90
87	1305.00	39.14	79.09	726656.75	728036.99	28.08	5460488.1	880.90
88	1320.00	38.43	77.57	728036.99	729316.72	28.15	5470086.6	880.91

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89	1335.00	37.78	76.21	729316.72	730506.63	28.22	5479011.4	880.91
90	1350.00	37.18	74.96	730506.63	731613.98	28.28	5487317.0	880.91
91	1365.00	36.62	73.80	731613.98	732644.49	28.34	5495046.2	880.91
92	1380.00	36.09	72.71	732644.49	733603.10	28.39	5502236.2	880.91
93	1395.00	35.62	71.71	733603.10	734495.56	28.44	5508930.0	880.91
94	1410.00	35.19	70.80	734495.56	735328.04	28.49	5515174.0	880.91
95	1425.00	34.78	69.97	735328.04	736104.89	28.53	5521000.7	880.91
96	1440.00	34.29	69.07	736104.89	736822.79	28.57	5526385.2	880.91
97	1455.00	33.28	67.57	736822.79	737446.55	28.60	5531063.6	880.91
98	1470.00	31.31	64.60	737446.55	737888.42	28.63	5534377.9	880.92
99	1485.00	28.01	59.32	737888.42	738011.75	28.64	5535302.9	880.92
100	1500.00	23.64	51.65	738011.75	737675.42	28.62	5532780.3	880.91
101	1515.00	18.95	42.59	737675.42	736799.45	28.57	5526210.2	880.91
102	1530.00	14.51	33.45	736799.45	735383.09	28.49	5515586.9	880.91
103	1545.00	10.73	25.23	735383.09	733484.77	28.38	5501348.7	880.91
104	1560.00	7.80	18.53	733484.77	731197.90	28.26	5484196.2	880.91
105	1575.00	5.74	13.54	731197.90	728627.88	28.12	5464920.0	880.90
106	1590.00	4.23	9.97	728627.88	725861.56	27.96	5444171.4	880.90
107	1605.00	3.11	7.34	725861.56	722955.87	27.80	5422377.5	880.90
108	1620.00	2.27	5.38	722955.87	719951.81	27.64	5399845.9	880.89
109	1635.00	1.66	3.93	719951.81	716880.82	27.48	5376812.2	880.89
110	1650.00	1.21	2.87	716880.82	713766.36	27.31	5353452.5	880.89
111	1665.00	0.88	2.09	713766.36	710625.46	27.14	5329894.5	880.88
112	1680.00	0.64	1.52	710625.46	707470.83	26.97	5306233.4	880.88
113	1695.00	0.46	1.10	707470.83	704311.51	26.80	5282537.3	880.88
114	1710.00	0.33	0.79	704311.51	701154.00	26.63	5258854.7	880.87
115	1725.00	0.23	0.56	701154.00	698003.11	26.45	5235221.7	880.87
116	1740.00	0.16	0.39	698003.11	694862.57	26.29	5211666.4	880.86
117	1755.00	0.11	0.27	694862.57	691734.97	26.12	5188208.1	880.86
118	1770.00	0.07	0.18	691734.97	688621.93	25.95	5164859.1	880.86
119	1785.00	0.04	0.10	688621.93	685524.72	25.78	5141628.7	880.85
120	1800.00	0.02	0.05	685524.72	682444.40	25.61	5118525.1	880.85
121	1815.00	0.00	0.02	682444.40	679381.73	25.45	5095553.9	880.85
122	1830.00	0.00	0.00	679381.73	676337.38	25.29	5072720.0	880.84
123	1845.00	0.00	0.00	676337.38	673311.96	25.13	5050028.2	880.84
124	1860.00	0.00	0.00	673311.96	670305.60	24.98	5027479.3	880.83
125	1875.00	0.00	0.00	670305.60	667318.18	24.82	5005072.5	880.83
126	1890.00	0.00	0.00	667318.18	664349.59	24.66	4982806.9	880.83
127	1905.00	0.00	0.00	664349.59	661399.70	24.51	4960681.5	880.82
128	1920.00	0.00	0.00	661399.70	658468.40	24.35	4938695.6	880.82
129	1935.00	0.00	0.00	658468.40	655555.57	24.20	4916848.2	880.82
130	1950.00	0.00	0.00	655555.57	652661.09	24.05	4895138.5	880.81
131	1965.00	0.00	0.00	652661.09	649784.84	23.89	4873565.5	880.81
132	1980.00	0.00	0.00	649784.84	646926.72	23.74	4852128.5	880.81
133	1995.00	0.00	0.00	646926.72	644086.61	23.59	4830826.6	880.80
134	2010.00	0.00	0.00	644086.61	641264.40	23.45	4809658.8	880.80
135	2025.00	0.00	0.00	641264.40	638459.71	23.30	4788622.6	880.80
136	2040.00	0.00	0.00	638459.71	635672.21	23.16	4767715.2	880.79

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137	2055.00	0.00	0.00	635672.21	632901.78	23.02	4746936.0	880.79
138	2070.00	0.00	0.00	632901.78	630148.33	22.88	4726284.1	880.79
139	2085.00	0.00	0.00	630148.33	627411.75	22.74	4705758.7	880.78
140	2100.00	0.00	0.00	627411.75	624691.94	22.60	4685359.0	880.78
141	2115.00	0.00	0.00	624691.94	621988.79	22.46	4665084.4	880.78
142	2130.00	0.00	0.00	621988.79	619302.20	22.32	4644933.9	880.77
143	2145.00	0.00	0.00	619302.20	616632.07	22.18	4624906.9	880.77
144	2160.00	0.00	0.00	616632.07	613978.31	22.05	4605002.6	880.77
145	2175.00	0.00	0.00	613978.31	611340.80	21.91	4585220.3	880.76
146	2190.00	0.00	0.00	611340.80	608719.45	21.78	4565559.2	880.76
147	2205.00	0.00	0.00	608719.45	606114.16	21.65	4546018.5	880.76
148	2220.00	0.00	0.00	606114.16	603524.83	21.51	4526597.6	880.75
149	2235.00	0.00	0.00	603524.83	600951.37	21.38	4507295.6	880.75

150	2250.00	0.00	0.00	600951.37	598393.57	21.25	4488111.2	880.75
151	2265.00	0.00	0.00	598393.57	595851.12	21.13	4469041.8	880.75
152	2280.00	0.00	0.00	595851.12	593323.78	21.00	4450085.0	880.74
153	2295.00	0.00	0.00	593323.78	590811.46	20.87	4431242.5	880.74
154	2310.00	0.00	0.00	590811.46	588314.09	20.75	4412511.3	880.74
155	2325.00	0.00	0.00	588314.09	585831.56	20.63	4393891.4	880.73
156	2340.00	0.00	0.00	585831.56	583363.79	20.50	4375382.2	880.73
157	2355.00	0.00	0.00	583363.79	580910.69	20.38	4356983.0	880.73
158	2370.00	0.00	0.00	580910.69	578472.17	20.26	4338693.2	880.72
159	2385.00	0.00	0.00	578472.17	576048.15	20.14	4320512.2	880.72
160	2400.00	0.00	0.00	576048.15	573638.55	20.02	4302439.3	880.72
161	2415.00	0.00	0.00	573638.55	571243.27	19.90	4284473.8	880.72
162	2430.00	0.00	0.00	571243.27	568862.23	19.78	4266615.1	880.71
163	2445.00	0.00	0.00	568862.23	566495.35	19.67	4248862.6	880.71
164	2460.00	0.00	0.00	566495.35	564142.53	19.55	4231215.6	880.71
165	2475.00	0.00	0.00	564142.53	561803.71	19.43	4213673.6	880.70
166	2490.00	0.00	0.00	561803.71	559478.79	19.32	4196235.8	880.70
167	2505.00	0.00	0.00	559478.79	557167.64	19.20	4178901.3	880.70
168	2520.00	0.00	0.00	557167.64	554869.96	19.09	4161667.9	880.70
169	2535.00	0.00	0.00	554869.96	552585.50	18.98	4144533.7	880.69
170	2550.00	0.00	0.00	552585.50	550314.19	18.87	4127498.0	880.69
171	2565.00	0.00	0.00	550314.19	548055.96	18.77	4110560.4	880.69
172	2580.00	0.00	0.00	548055.96	545810.72	18.66	4093720.3	880.69
173	2595.00	0.00	0.00	545810.72	543578.40	18.55	4076977.1	880.68
174	2610.00	0.00	0.00	543578.40	541358.93	18.44	4060330.3	880.68
175	2625.00	0.00	0.00	541358.93	539152.23	18.34	4043779.3	880.68
176	2640.00	0.00	0.00	539152.23	536958.24	18.23	4027323.5	880.68
177	2655.00	0.00	0.00	536958.24	534776.87	18.13	4010962.4	880.67
178	2670.00	0.00	0.00	534776.87	532608.05	18.02	3994695.6	880.67
179	2685.00	0.00	0.00	532608.05	530451.72	17.92	3978522.3	880.67
180	2700.00	0.00	0.00	530451.72	528307.80	17.82	3962442.1	880.66
181	2715.00	0.00	0.00	528307.80	526176.22	17.71	3946454.5	880.66
182	2730.00	0.00	0.00	526176.22	524056.90	17.61	3930558.8	880.66
183	2745.00	0.00	0.00	524056.90	521949.78	17.51	3914754.7	880.66
184	2760.00	0.00	0.00	521949.78	519854.79	17.41	3899041.5	880.65

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185	2775.00	0.00	0.00	519854.79	517771.86	17.31	3883418.8	880.65
186	2790.00	0.00	0.00	517771.86	515700.89	17.21	3867885.7	880.65
187	2805.00	0.00	0.00	515700.89	513641.59	17.11	3852440.3	880.65
188	2820.00	0.00	0.00	513641.59	511593.73	17.02	3837080.6	880.64
189	2835.00	0.00	0.00	511593.73	509557.26	16.92	3821806.4	880.64
190	2850.00	0.00	0.00	509557.26	507532.10	16.83	3806617.0	880.64
191	2865.00	0.00	0.00	507532.10	505518.19	16.74	3791511.9	880.64
192	2880.00	0.00	0.00	505518.19	503515.47	16.64	3776490.8	880.63
193	2895.00	0.00	0.00	503515.47	501523.88	16.55	3761553.2	880.63
194	2910.00	0.00	0.00	501523.88	499543.35	16.46	3746698.6	880.63
195	2925.00	0.00	0.00	499543.35	497573.83	16.37	3731926.5	880.63
196	2940.00	0.00	0.00	497573.83	495615.25	16.28	3717236.5	880.63
197	2955.00	0.00	0.00	495615.25	493667.56	16.19	3702628.1	880.62
198	2970.00	0.00	0.00	493667.56	491730.68	16.10	3688100.8	880.62
199	2985.00	0.00	0.00	491730.68	489804.57	16.01	3673654.3	880.62
200	3000.00	0.00	0.00	489804.57	487889.16	15.92	3659288.1	880.62
201	3015.00	0.00	0.00	487889.16	485984.39	15.83	3645001.7	880.61
202	3030.00	0.00	0.00	485984.39	484090.21	15.74	3630794.6	880.61
203	3045.00	0.00	0.00	484090.21	482206.55	15.65	3616666.5	880.61
204	3060.00	0.00	0.00	482206.55	480333.35	15.57	3602616.9	880.61
205	3075.00	0.00	0.00	480333.35	478470.57	15.48	3588645.4	880.60
206	3090.00	0.00	0.00	478470.57	476618.13	15.39	3574751.4	880.60
207	3105.00	0.00	0.00	476618.13	474775.99	15.31	3560934.7	880.60
208	3120.00	0.00	0.00	474775.99	472943.93	15.23	3547193.6	880.60
209	3135.00	0.00	0.00	472943.93	471121.70	15.15	3533526.3	880.60
210	3150.00	0.00	0.00	471121.70	469309.22	15.06	3519932.1	880.59
211	3165.00	0.00	0.00	469309.22	467506.43	14.98	3506410.6	880.59
212	3180.00	0.00	0.00	467506.43	465713.28	14.90	3492961.4	880.59
213	3195.00	0.00	0.00	465713.28	463929.71	14.82	3479584.0	880.59
214	3210.00	0.00	0.00	463929.71	462155.69	14.74	3466278.2	880.59
215	3225.00	0.00	0.00	462155.69	460391.14	14.67	3453043.6	880.58
216	3240.00	0.00	0.00	460391.14	458636.04	14.59	3439879.7	880.58
217	3255.00	0.00	0.00	458636.04	456890.31	14.51	3426786.2	880.58
218	3270.00	0.00	0.00	456890.31	455153.93	14.43	3413762.7	880.58
219	3285.00	0.00	0.00	455153.93	453426.82	14.35	3400808.8	880.57
220	3300.00	0.00	0.00	453426.82	451708.95	14.28	3387924.2	880.57
221	3315.00	0.00	0.00	451708.95	450000.27	14.20	3375108.5	880.57
222	3330.00	0.00	0.00	450000.27	448300.72	14.13	3362361.3	880.57
223	3345.00	0.00	0.00	448300.72	446610.25	14.05	3349682.3	880.57
224	3360.00	0.00	0.00	446610.25	444928.83	13.97	3337071.0	880.56

225	3375.00	0.00	0.00	444928.83	443256.40	13.90	3324527.2	880.56
226	3390.00	0.00	0.00	443256.40	441592.91	13.83	3312050.5	880.56
227	3405.00	0.00	0.00	441592.91	439938.31	13.75	3299640.5	880.56
228	3420.00	0.00	0.00	439938.31	438292.56	13.68	3287296.8	880.56
229	3435.00	0.00	0.00	438292.56	436655.61	13.61	3275019.1	880.55
230	3450.00	0.00	0.00	436655.61	435027.41	13.53	3262807.1	880.55
231	3465.00	0.00	0.00	435027.41	433407.92	13.46	3250660.4	880.55
232	3480.00	0.00	0.00	433407.92	431796.98	13.39	3238577.7	880.55

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233	3495.00	0.00	0.00	431796.98	430194.35	13.32	3226557.5	880.55
234	3510.00	0.00	0.00	430194.35	428599.94	13.25	3214599.0	880.54
235	3525.00	0.00	0.00	428599.94	427013.71	13.19	3202701.7	880.54
236	3540.00	0.00	0.00	427013.71	425435.60	13.12	3190865.4	880.54
237	3555.00	0.00	0.00	425435.60	423865.58	13.05	3179089.8	880.54
238	3570.00	0.00	0.00	423865.58	422303.61	12.98	3167374.5	880.54
239	3585.00	0.00	0.00	422303.61	420749.65	12.92	3155719.3	880.54
240	3600.00	0.00	0.00	420749.65	419203.65	12.85	3144123.8	880.53
241	3615.00	0.00	0.00	419203.65	417665.58	12.78	3132587.8	880.53
242	3630.00	0.00	0.00	417665.58	416135.39	12.72	3121110.8	880.53
243	3645.00	0.00	0.00	416135.39	414613.05	12.65	3109692.8	880.53
244	3660.00	0.00	0.00	414613.05	413098.51	12.59	3098333.2	880.53
245	3675.00	0.00	0.00	413098.51	411591.73	12.52	3087031.9	880.52
246	3690.00	0.00	0.00	411591.73	410092.67	12.46	3075788.5	880.52
247	3705.00	0.00	0.00	410092.67	408601.30	12.40	3064602.7	880.52
248	3720.00	0.00	0.00	408601.30	407117.57	12.33	3053474.3	880.52
249	3735.00	0.00	0.00	407117.57	405641.45	12.27	3042402.9	880.52
250	3750.00	0.00	0.00	405641.45	404172.89	12.21	3031388.3	880.52
251	3765.00	0.00	0.00	404172.89	402711.87	12.14	3020430.1	880.51
252	3780.00	0.00	0.00	402711.87	401258.33	12.08	3009528.1	880.51
253	3795.00	0.00	0.00	401258.33	399812.24	12.02	2998681.9	880.51
254	3810.00	0.00	0.00	399812.24	398373.56	11.96	2987891.4	880.51
255	3825.00	0.00	0.00	398373.56	396942.26	11.90	2977156.2	880.51
256	3840.00	0.00	0.00	396942.26	395518.30	11.84	2966476.0	880.51
257	3855.00	0.00	0.00	395518.30	394101.63	11.78	2955850.5	880.50
258	3870.00	0.00	0.00	394101.63	392692.23	11.72	2945279.6	880.50
259	3885.00	0.00	0.00	392692.23	391290.04	11.66	2934762.7	880.50
260	3900.00	0.00	0.00	391290.04	389894.88	11.60	2924298.6	880.50
261	3915.00	0.00	0.00	389894.88	388506.55	11.54	2913885.7	880.50
262	3930.00	0.00	0.00	388506.55	387125.00	11.49	2903523.7	880.49
263	3945.00	0.00	0.00	387125.00	385750.21	11.43	2893212.3	880.49
264	3960.00	0.00	0.00	385750.21	384382.15	11.37	2882951.4	880.49
265	3975.00	0.00	0.00	384382.15	383020.78	11.32	2872740.7	880.49
266	3990.00	0.00	0.00	383020.78	381666.07	11.26	2862580.0	880.49
267	4005.00	0.00	0.00	381666.07	380317.99	11.21	2852469.0	880.49
268	4020.00	0.00	0.00	380317.99	378976.50	11.15	2842407.4	880.49
269	4035.00	0.00	0.00	378976.50	377641.57	11.10	2832395.0	880.48
270	4050.00	0.00	0.00	377641.57	376313.17	11.04	2822431.6	880.48
271	4065.00	0.00	0.00	376313.17	374991.27	10.99	2812516.9	880.48
272	4080.00	0.00	0.00	374991.27	373675.84	10.94	2802650.8	880.48
273	4095.00	0.00	0.00	373675.84	372366.84	10.88	2792832.9	880.48
274	4110.00	0.00	0.00	372366.84	371064.24	10.83	2783063.0	880.48
275	4125.00	0.00	0.00	371064.24	369768.02	10.78	2773340.9	880.47
276	4140.00	0.00	0.00	369768.02	368478.13	10.72	2763666.4	880.47
277	4155.00	0.00	0.00	368478.13	367194.56	10.67	2754039.2	880.47
278	4170.00	0.00	0.00	367194.56	365917.26	10.62	2744459.1	880.47
279	4185.00	0.00	0.00	365917.26	364646.22	10.57	2734925.9	880.47
280	4200.00	0.00	0.00	364646.22	363381.39	10.51	2725439.3	880.47

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281	4215.00	0.00	0.00	363381.39	362122.74	10.46	2715999.0	880.46
282	4230.00	0.00	0.00	362122.74	360870.26	10.41	2706605.0	880.46
283	4245.00	0.00	0.00	360870.26	359623.90	10.36	2697256.9	880.46
284	4260.00	0.00	0.00	359623.90	358383.63	10.31	2687954.6	880.46
285	4275.00	0.00	0.00	358383.63	357149.44	10.26	2678697.7	880.46

286	4290.00	0.00	0.00	357149.44	355921.28	10.21	2669486.2	880.46
287	4305.00	0.00	0.00	355921.28	354699.13	10.16	2660319.7	880.46
288	4320.00	0.00	0.00	354699.13	353482.96	10.11	2651198.0	880.45
289	4335.00	0.00	0.00	353482.96	352272.73	10.06	2642120.9	880.45
290	4350.00	0.00	0.00	352272.73	351068.43	10.01	2633088.3	880.45
291	4365.00	0.00	0.00	351068.43	349870.01	9.96	2624099.8	880.45
292	4380.00	0.00	0.00	349870.01	348677.32	9.92	2615154.2	880.45
293	4395.00	0.00	0.00	348677.32	347490.16	9.87	2606250.2	880.45
294	4410.00	0.00	0.00	347490.16	346308.51	9.82	2597387.5	880.45
295	4425.00	0.00	0.00	346308.51	345132.34	9.78	2588565.9	880.44
296	4440.00	0.00	0.00	345132.34	343961.64	9.73	2579785.3	880.44
297	4455.00	0.00	0.00	343961.64	342796.37	9.69	2571045.4	880.44
298	4470.00	0.00	0.00	342796.37	341636.51	9.64	2562346.2	880.44
299	4485.00	0.00	0.00	341636.51	340482.04	9.60	2553687.3	880.44
300	4500.00	0.00	0.00	340482.04	339332.92	9.55	2545068.5	880.44
301	4515.00	0.00	0.00	339332.92	338189.14	9.51	2536489.9	880.44
302	4530.00	0.00	0.00	338189.14	337050.67	9.47	2527951.0	880.43
303	4545.00	0.00	0.00	337050.67	335917.48	9.42	2519451.7	880.43
304	4560.00	0.00	0.00	335917.48	334789.55	9.38	2510992.0	880.43
305	4575.00	0.00	0.00	334789.55	333666.86	9.33	2502571.5	880.43
306	4590.00	0.00	0.00	333666.86	332549.38	9.29	2494190.0	880.43
307	4605.00	0.00	0.00	332549.38	331437.09	9.25	2485847.5	880.43
308	4620.00	0.00	0.00	331437.09	330329.96	9.20	2477543.8	880.43
309	4635.00	0.00	0.00	330329.96	329227.97	9.16	2469278.5	880.43
310	4650.00	0.00	0.00	329227.97	328131.10	9.12	2461051.6	880.42
311	4665.00	0.00	0.00	328131.10	327039.32	9.08	2452863.0	880.42
312	4680.00	0.00	0.00	327039.32	325952.61	9.04	2444712.3	880.42
313	4695.00	0.00	0.00	325952.61	324870.94	8.99	2436599.5	880.42
314	4710.00	0.00	0.00	324870.94	323794.29	8.95	2428524.3	880.42
315	4725.00	0.00	0.00	323794.29	322722.64	8.91	2420486.6	880.42
316	4740.00	0.00	0.00	322722.64	321655.97	8.87	2412486.3	880.42
317	4755.00	0.00	0.00	321655.97	320594.25	8.83	2404523.0	880.41
318	4770.00	0.00	0.00	320594.25	319537.45	8.79	2396596.8	880.41
319	4785.00	0.00	0.00	319537.45	318485.56	8.75	2388707.3	880.41
320	4800.00	0.00	0.00	318485.56	317438.56	8.71	2380854.5	880.41
321	4815.00	0.00	0.00	317438.56	316396.41	8.66	2373038.1	880.41
322	4830.00	0.00	0.00	316396.41	315359.11	8.62	2365258.0	880.41
323	4845.00	0.00	0.00	315359.11	314326.61	8.58	2357514.0	880.41
324	4860.00	0.00	0.00	314326.61	313298.92	8.54	2349806.0	880.41
325	4875.00	0.00	0.00	313298.92	312275.99	8.50	2342133.7	880.40
326	4890.00	0.00	0.00	312275.99	311257.81	8.47	2334497.1	880.40
327	4905.00	0.00	0.00	311257.81	310244.36	8.43	2326895.9	880.40
328	4920.00	0.00	0.00	310244.36	309235.61	8.39	2319330.0	880.40

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329	4935.00	0.00	0.00	309235.61	308231.51	8.35	2311799.0	880.40
330	4950.00	0.00	0.00	308231.51	307231.91	8.31	2304301.7	880.40
331	4965.00	0.00	0.00	307231.91	306236.68	8.28	2296837.2	880.40
332	4980.00	0.00	0.00	306236.68	305245.81	8.24	2289405.4	880.40
333	4995.00	0.00	0.00	305245.81	304259.27	8.20	2282006.0	880.39
334	5010.00	0.00	0.00	304259.27	303277.05	8.17	2274639.1	880.39
335	5025.00	0.00	0.00	303277.05	302299.12	8.13	2267304.4	880.39
336	5040.00	0.00	0.00	302299.12	301325.47	8.10	2260001.8	880.39
337	5055.00	0.00	0.00	301325.47	300356.08	8.06	2252731.1	880.39
338	5070.00	0.00	0.00	300356.08	299390.93	8.03	2245492.2	880.39
339	5085.00	0.00	0.00	299390.93	298430.01	7.99	2238285.0	880.39
340	5100.00	0.00	0.00	298430.01	297473.29	7.96	2231109.3	880.39
341	5115.00	0.00	0.00	297473.29	296520.75	7.92	2223965.0	880.39
342	5130.00	0.00	0.00	296520.75	295572.38	7.89	2216852.0	880.38
343	5145.00	0.00	0.00	295572.38	294628.16	7.85	2209770.1	880.38
344	5160.00	0.00	0.00	294628.16	293688.07	7.82	2202719.2	880.38
345	5175.00	0.00	0.00	293688.07	292752.10	7.78	2195699.1	880.38
346	5190.00	0.00	0.00	292752.10	291820.21	7.75	2188709.7	880.38
347	5205.00	0.00	0.00	291820.21	290892.41	7.72	2181750.9	880.38
348	5220.00	0.00	0.00	290892.41	289968.66	7.68	2174822.6	880.38
349	5235.00	0.00	0.00	289968.66	289048.96	7.65	2167924.6	880.38
350	5250.00	0.00	0.00	289048.96	288133.28	7.61	2161056.7	880.38
351	5265.00	0.00	0.00	288133.28	287221.60	7.58	2154218.9	880.37
352	5280.00	0.00	0.00	287221.60	286313.92	7.55	2147411.0	880.37
353	5295.00	0.00	0.00	286313.92	285410.20	7.51	2140632.9	880.37
354	5310.00	0.00	0.00	285410.20	284510.44	7.48	2133884.4	880.37
355	5325.00	0.00	0.00	284510.44	283614.61	7.45	2127165.5	880.37
356	5340.00	0.00	0.00	283614.61	282722.71	7.42	2120475.9	880.37
357	5355.00	0.00	0.00	282722.71	281834.70	7.38	2113815.6	880.37
358	5370.00	0.00	0.00	281834.70	280950.58	7.35	2107184.5	880.37
359	5385.00	0.00	0.00	280950.58	280070.33	7.32	2100582.4	880.37
360	5400.00	0.00	0.00	280070.33	279193.93	7.29	2094009.1	880.36

361	5415.00	0.00	0.00	279193.93	278321.36	7.26	2087464.6	880.36
362	5430.00	0.00	0.00	278321.36	277452.61	7.22	2080946.8	880.36
363	5445.00	0.00	0.00	277452.61	276587.66	7.19	2074461.4	880.36
364	5460.00	0.00	0.00	276587.66	275726.50	7.16	2068002.4	880.36
365	5475.00	0.00	0.00	275726.50	274869.10	7.13	2061571.7	880.36
366	5490.00	0.00	0.00	274869.10	274015.45	7.10	2055169.1	880.36
367	5505.00	0.00	0.00	274015.45	273165.54	7.07	2048794.5	880.36
368	5520.00	0.00	0.00	273165.54	272319.34	7.04	2042447.9	880.36
369	5535.00	0.00	0.00	272319.34	271476.85	7.01	2036128.9	880.36
370	5550.00	0.00	0.00	271476.85	270638.05	6.97	2029837.7	880.35
371	5565.00	0.00	0.00	270638.05	269802.91	6.94	2023573.9	880.35
372	5580.00	0.00	0.00	269802.91	268971.43	6.91	2017337.6	880.35
373	5595.00	0.00	0.00	268971.43	268143.58	6.88	2011128.5	880.35
374	5610.00	0.00	0.00	268143.58	267319.36	6.85	2004946.6	880.35
375	5625.00	0.00	0.00	267319.36	266498.65	6.83	1998791.0	880.35
376	5640.00	0.00	0.00	266498.65	265681.31	6.80	1992660.8	880.35

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377	5655.00	0.00	0.00	265681.31	264867.32	6.77	1986555.7	880.35
378	5670.00	0.00	0.00	264867.32	264056.66	6.74	1980475.5	880.35
379	5685.00	0.00	0.00	264056.66	263249.30	6.71	1974420.1	880.35
380	5700.00	0.00	0.00	263249.30	262445.25	6.69	1968389.5	880.34
381	5715.00	0.00	0.00	262445.25	261644.48	6.66	1962383.5	880.34
382	5730.00	0.00	0.00	261644.48	260846.98	6.63	1956402.1	880.34
383	5745.00	0.00	0.00	260846.98	260052.74	6.61	1950445.1	880.34
384	5760.00	0.00	0.00	260052.74	259261.75	6.58	1944512.5	880.34
385	5775.00	0.00	0.00	259261.75	258473.99	6.55	1938604.1	880.34
386	5790.00	0.00	0.00	258473.99	257689.45	6.52	1932719.8	880.34
387	5805.00	0.00	0.00	257689.45	256908.11	6.50	1926859.6	880.34
388	5820.00	0.00	0.00	256908.11	256129.97	6.47	1921023.3	880.34
389	5835.00	0.00	0.00	256129.97	255355.00	6.45	1915210.8	880.34
390	5850.00	0.00	0.00	255355.00	254583.20	6.42	1909422.2	880.33
391	5865.00	0.00	0.00	254583.20	253814.56	6.39	1903657.1	880.33
392	5880.00	0.00	0.00	253814.56	253049.05	6.37	1897915.7	880.33
393	5895.00	0.00	0.00	253049.05	252286.68	6.34	1892197.6	880.33
394	5910.00	0.00	0.00	252286.68	251527.42	6.31	1886503.0	880.33
395	5925.00	0.00	0.00	251527.42	250771.26	6.29	1880831.6	880.33
396	5940.00	0.00	0.00	250771.26	250018.19	6.26	1875183.4	880.33
397	5955.00	0.00	0.00	250018.19	249268.20	6.24	1869558.3	880.33
398	5970.00	0.00	0.00	249268.20	248521.27	6.21	1863956.1	880.33
399	5985.00	0.00	0.00	248521.27	247777.40	6.19	1858376.9	880.33
400	6000.00	0.00	0.00	247777.40	247036.56	6.16	1852820.4	880.33
401	6015.00	0.00	0.00	247036.56	246298.75	6.14	1847286.6	880.32
402	6030.00	0.00	0.00	246298.75	245563.96	6.11	1841775.5	880.32
403	6045.00	0.00	0.00	245563.96	244832.16	6.09	1836286.9	880.32
404	6060.00	0.00	0.00	244832.16	244103.36	6.06	1830820.7	880.32
405	6075.00	0.00	0.00	244103.36	243377.54	6.04	1825376.8	880.32
406	6090.00	0.00	0.00	243377.54	242654.68	6.01	1819955.2	880.32
407	6105.00	0.00	0.00	242654.68	241934.78	5.99	1814555.7	880.32
408	6120.00	0.00	0.00	241934.78	241217.81	5.96	1809178.3	880.32
409	6135.00	0.00	0.00	241217.81	240503.78	5.94	1803822.9	880.32
410	6150.00	0.00	0.00	240503.78	239792.67	5.91	1798489.3	880.32
411	6165.00	0.00	0.00	239792.67	239084.45	5.89	1793177.6	880.32
412	6180.00	0.00	0.00	239084.45	238379.14	5.87	1787887.5	880.32
413	6195.00	0.00	0.00	238379.14	237676.70	5.84	1782619.1	880.31
414	6210.00	0.00	0.00	237676.70	236977.14	5.82	1777372.2	880.31
415	6225.00	0.00	0.00	236977.14	236280.43	5.79	1772146.7	880.31
416	6240.00	0.00	0.00	236280.43	235586.58	5.77	1766942.6	880.31
417	6255.00	0.00	0.00	235586.58	234895.55	5.75	1761759.7	880.31
418	6270.00	0.00	0.00	234895.55	234207.35	5.72	1756598.1	880.31
419	6285.00	0.00	0.00	234207.35	233521.96	5.70	1751457.5	880.31
420	6300.00	0.00	0.00	233521.96	232839.37	5.68	1746337.9	880.31
421	6315.00	0.00	0.00	232839.37	232159.58	5.65	1741239.2	880.31
422	6330.00	0.00	0.00	232159.58	231482.55	5.63	1736161.4	880.31
423	6345.00	0.00	0.00	231482.55	230808.30	5.61	1731104.3	880.31
424	6360.00	0.00	0.00	230808.30	230136.80	5.58	1726067.9	880.31

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425	6375.00	0.00	0.00	230136.80	229468.04	5.56	1721052.0	880.30
426	6390.00	0.00	0.00	229468.04	228802.02	5.54	1716056.7	880.30
427	6405.00	0.00	0.00	228802.02	228138.72	5.52	1711081.8	880.30
428	6420.00	0.00	0.00	228138.72	227478.13	5.49	1706127.2	880.30
429	6435.00	0.00	0.00	227478.13	226820.23	5.47	1701192.8	880.30
430	6450.00	0.00	0.00	226820.23	226165.03	5.45	1696278.6	880.30
431	6465.00	0.00	0.00	226165.03	225512.45	5.43	1691384.0	880.30
432	6480.00	0.00	0.00	225512.45	224862.37	5.41	1686508.3	880.30
433	6495.00	0.00	0.00	224862.37	224214.74	5.39	1681651.0	880.30
434	6510.00	0.00	0.00	224214.74	223569.56	5.37	1676811.9	880.30
435	6525.00	0.00	0.00	223569.56	222926.81	5.35	1671991.1	880.30
436	6540.00	0.00	0.00	222926.81	222286.48	5.33	1667188.5	880.30
437	6555.00	0.00	0.00	222286.48	221648.57	5.31	1662404.0	880.29
438	6570.00	0.00	0.00	221648.57	221013.06	5.29	1657637.6	880.29
439	6585.00	0.00	0.00	221013.06	220379.95	5.27	1652889.1	880.29
440	6600.00	0.00	0.00	220379.95	219749.22	5.25	1648158.5	880.29
441	6615.00	0.00	0.00	219749.22	219120.88	5.23	1643445.8	880.29
442	6630.00	0.00	0.00	219120.88	218494.90	5.21	1638750.8	880.29
443	6645.00	0.00	0.00	218494.90	217871.28	5.19	1634073.5	880.29
444	6660.00	0.00	0.00	217871.28	217250.02	5.17	1629413.9	880.29
445	6675.00	0.00	0.00	217250.02	216631.10	5.15	1624771.8	880.29
446	6690.00	0.00	0.00	216631.10	216014.51	5.13	1620147.3	880.29
447	6705.00	0.00	0.00	216014.51	215400.25	5.11	1615540.2	880.29
448	6720.00	0.00	0.00	215400.25	214788.30	5.09	1610950.4	880.29
449	6735.00	0.00	0.00	214788.30	214178.66	5.07	1606378.0	880.29
450	6750.00	0.00	0.00	214178.66	213571.32	5.05	1601822.8	880.29
451	6765.00	0.00	0.00	213571.32	212966.27	5.03	1597284.8	880.28
452	6780.00	0.00	0.00	212966.27	212363.50	5.01	1592763.9	880.28
453	6795.00	0.00	0.00	212363.50	211763.00	4.99	1588260.0	880.28
454	6810.00	0.00	0.00	211763.00	211164.77	4.98	1583773.1	880.28
455	6825.00	0.00	0.00	211164.77	210568.80	4.96	1579303.2	880.28
456	6840.00	0.00	0.00	210568.80	209975.07	4.94	1574850.1	880.28
457	6855.00	0.00	0.00	209975.07	209383.58	4.92	1570413.7	880.28
458	6870.00	0.00	0.00	209383.58	208794.32	4.90	1565994.2	880.28
459	6885.00	0.00	0.00	208794.32	208207.28	4.88	1561591.2	880.28
460	6900.00	0.00	0.00	208207.28	207622.46	4.86	1557204.9	880.28
461	6915.00	0.00	0.00	207622.46	207039.84	4.85	1552835.1	880.28
462	6930.00	0.00	0.00	207039.84	206459.42	4.83	1548481.8	880.28
463	6945.00	0.00	0.00	206459.42	205881.19	4.81	1544145.0	880.28
464	6960.00	0.00	0.00	205881.19	205305.13	4.79	1539824.4	880.28
465	6975.00	0.00	0.00	205305.13	204731.25	4.77	1535520.2	880.27
466	6990.00	0.00	0.00	204731.25	204159.54	4.76	1531232.2	880.27
467	7005.00	0.00	0.00	204159.54	203589.98	4.74	1526960.3	880.27
468	7020.00	0.00	0.00	203589.98	203022.56	4.72	1522704.6	880.27
469	7035.00	0.00	0.00	203022.56	202457.29	4.70	1518464.9	880.27
470	7050.00	0.00	0.00	202457.29	201894.15	4.68	1514241.2	880.27
471	7065.00	0.00	0.00	201894.15	201333.13	4.67	1510033.5	880.27
472	7080.00	0.00	0.00	201333.13	200774.23	4.65	1505841.6	880.27

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473	7095.00	0.00	0.00	200774.23	200217.43	4.63	1501665.5	880.27
474	7110.00	0.00	0.00	200217.43	199662.73	4.61	1497505.1	880.27
475	7125.00	0.00	0.00	199662.73	199110.13	4.60	1493360.4	880.27
476	7140.00	0.00	0.00	199110.13	198559.61	4.58	1489231.4	880.27
477	7155.00	0.00	0.00	198559.61	198011.16	4.56	1485118.0	880.27
478	7170.00	0.00	0.00	198011.16	197464.79	4.54	1481020.0	880.27
479	7185.00	0.00	0.00	197464.79	196920.47	4.53	1476937.5	880.26
480	7200.00	0.00	0.00	196920.47	196378.21	4.51	1472870.4	880.26
481	7215.00	0.00	0.00	196378.21	195837.99	4.49	1468818.6	880.26
482	7230.00	0.00	0.00	195837.99	195299.81	4.48	1464782.1	880.26
483	7245.00	0.00	0.00	195299.81	194763.65	4.46	1460760.9	880.26
484	7260.00	0.00	0.00	194763.65	194229.52	4.44	1456754.7	880.26
485	7275.00	0.00	0.00	194229.52	193697.41	4.43	1452763.7	880.26
486	7290.00	0.00	0.00	193697.41	193167.30	4.41	1448787.8	880.26
487	7305.00	0.00	0.00	193167.30	192639.18	4.39	1444826.8	880.26
488	7320.00	0.00	0.00	192639.18	192113.06	4.38	1440880.8	880.26
489	7335.00	0.00	0.00	192113.06	191588.93	4.36	1436949.7	880.26
490	7350.00	0.00	0.00	191588.93	191066.77	4.34	1433033.3	880.26
491	7365.00	0.00	0.00	191066.77	190546.58	4.33	1429131.8	880.26
492	7380.00	0.00	0.00	190546.58	190028.35	4.31	1425244.9	880.26
493	7395.00	0.00	0.00	190028.35	189512.07	4.29	1421372.8	880.26
494	7410.00	0.00	0.00	189512.07	188997.74	4.28	1417515.2	880.26
495	7425.00	0.00	0.00	188997.74	188485.36	4.26	1413672.1	880.25
496	7440.00	0.00	0.00	188485.36	187974.90	4.25	1409843.6	880.25

487	7455.00	0.00	0.00	187974.90	187466.37	4.23	1406029.5	880.25
498	7470.00	0.00	0.00	187466.37	186959.75	4.21	1402229.7	880.25
499	7485.00	0.00	0.00	186959.75	186455.05	4.20	1398444.3	880.25
500	7500.00	0.00	0.00	186455.05	185952.25	4.18	1394673.2	880.25
501	7515.00	0.00	0.00	185952.25	185451.34	4.17	1390916.3	880.25
502	7530.00	0.00	0.00	185451.34	184952.32	4.15	1387173.6	880.25
503	7545.00	0.00	0.00	184952.32	184455.15	4.14	1383444.7	880.25
504	7560.00	0.00	0.00	184455.15	183959.73	4.12	1379728.9	880.25
505	7575.00	0.00	0.00	183959.73	183466.00	4.11	1376025.8	880.25
506	7590.00	0.00	0.00	183466.00	182973.97	4.09	1372335.5	880.25
507	7605.00	0.00	0.00	182973.97	182483.61	4.08	1368657.7	880.25
508	7620.00	0.00	0.00	182483.61	181994.94	4.07	1364992.5	880.25
509	7635.00	0.00	0.00	181994.94	181507.94	4.05	1361339.9	880.25
510	7650.00	0.00	0.00	181507.94	181022.60	4.04	1357699.8	880.25
511	7665.00	0.00	0.00	181022.60	180538.92	4.02	1354072.1	880.24
512	7680.00	0.00	0.00	180538.92	180056.90	4.01	1350456.8	880.24
513	7695.00	0.00	0.00	180056.90	179576.53	4.00	1346853.9	880.24
514	7710.00	0.00	0.00	179576.53	179097.80	3.98	1343263.4	880.24
515	7725.00	0.00	0.00	179097.80	178620.71	3.97	1339685.1	880.24
516	7740.00	0.00	0.00	178620.71	178145.25	3.96	1336119.1	880.24
517	7755.00	0.00	0.00	178145.25	177671.42	3.94	1332565.2	880.24
518	7770.00	0.00	0.00	177671.42	177199.21	3.93	1329023.5	880.24
519	7785.00	0.00	0.00	177199.21	176728.62	3.92	1325494.0	880.24
520	7800.00	0.00	0.00	176728.62	176259.63	3.90	1321976.5	880.24

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521	7815.00	0.00	0.00	176259.63	175792.25	3.89	1318471.1	880.24
522	7830.00	0.00	0.00	175792.25	175326.47	3.87	1314977.6	880.24
523	7845.00	0.00	0.00	175326.47	174862.29	3.86	1311496.1	880.24
524	7860.00	0.00	0.00	174862.29	174399.69	3.85	1308026.5	880.24
525	7875.00	0.00	0.00	174399.69	173938.67	3.84	1304568.8	880.24
526	7890.00	0.00	0.00	173938.67	173479.24	3.82	1301122.9	880.24
527	7905.00	0.00	0.00	173479.24	173021.37	3.81	1297688.8	880.24
528	7920.00	0.00	0.00	173021.37	172565.07	3.80	1294266.5	880.24
529	7935.00	0.00	0.00	172565.07	172110.33	3.78	1290855.9	880.23
530	7950.00	0.00	0.00	172110.33	171657.15	3.77	1287456.9	880.23
531	7965.00	0.00	0.00	171657.15	171205.52	3.76	1284069.6	880.23
532	7980.00	0.00	0.00	171205.52	170755.43	3.74	1280693.8	880.23
533	7995.00	0.00	0.00	170755.43	170306.89	3.73	1277329.6	880.23
534	8010.00	0.00	0.00	170306.89	169859.88	3.72	1273977.0	880.23
535	8025.00	0.00	0.00	169859.88	169414.39	3.71	1270635.8	880.23
536	8040.00	0.00	0.00	169414.39	168970.44	3.69	1267306.0	880.23
537	8055.00	0.00	0.00	168970.44	168528.00	3.68	1263987.6	880.23
538	8070.00	0.00	0.00	168528.00	168087.07	3.67	1260680.6	880.23
539	8085.00	0.00	0.00	168087.07	167647.66	3.66	1257384.9	880.23
540	8100.00	0.00	0.00	167647.66	167209.75	3.64	1254100.4	880.23
541	8115.00	0.00	0.00	167209.75	166773.33	3.63	1250827.2	880.23
542	8130.00	0.00	0.00	166773.33	166338.41	3.62	1247565.2	880.23
543	8145.00	0.00	0.00	166338.41	165904.98	3.61	1244314.4	880.23
544	8160.00	0.00	0.00	165904.98	165473.03	3.59	1241074.7	880.23
545	8175.00	0.00	0.00	165473.03	165042.56	3.58	1237846.1	880.23
546	8190.00	0.00	0.00	165042.56	164613.56	3.57	1234628.5	880.23
547	8205.00	0.00	0.00	164613.56	164186.03	3.56	1231421.9	880.23
548	8220.00	0.00	0.00	164186.03	163759.96	3.54	1228226.3	880.22
549	8235.00	0.00	0.00	163759.96	163335.35	3.53	1225041.6	880.22
550	8250.00	0.00	0.00	163335.35	162912.19	3.52	1221867.9	880.22
551	8265.00	0.00	0.00	162912.19	162490.49	3.51	1218705.0	880.22
552	8280.00	0.00	0.00	162490.49	162070.22	3.50	1215552.9	880.22
553	8295.00	0.00	0.00	162070.22	161651.39	3.48	1212411.6	880.22
554	8310.00	0.00	0.00	161651.39	161234.00	3.47	1209281.0	880.22
555	8325.00	0.00	0.00	161234.00	160818.03	3.46	1206161.2	880.22
556	8340.00	0.00	0.00	160818.03	160403.49	3.45	1203052.0	880.22
557	8355.00	0.00	0.00	160403.49	159990.36	3.44	1199953.5	880.22
558	8370.00	0.00	0.00	159990.36	159578.65	3.43	1196865.5	880.22
559	8385.00	0.00	0.00	159578.65	159168.35	3.41	1193788.2	880.22
560	8400.00	0.00	0.00	159168.35	158759.45	3.40	1190721.4	880.22
561	8415.00	0.00	0.00	158759.45	158351.95	3.39	1187665.0	880.22
562	8430.00	0.00	0.00	158351.95	157945.84	3.38	1184619.1	880.22
563	8445.00	0.00	0.00	157945.84	157541.12	3.37	1181583.7	880.22
564	8460.00	0.00	0.00	157541.12	157137.79	3.36	1178558.6	880.22
565	8475.00	0.00	0.00	157137.79	156735.84	3.34	1175543.9	880.22
566	8490.00	0.00	0.00	156735.84	156335.27	3.33	1172539.5	880.22
567	8505.00	0.00	0.00	156335.27	155936.06	3.32	1169545.4	880.22
568	8520.00	0.00	0.00	155936.06	155538.22	3.31	1166561.5	880.21

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569	8535.00	0.00	0.00	155538.22	155141.74	3.30	1163587.8	880.21
570	8550.00	0.00	0.00	155141.74	154746.62	3.29	1160624.3	880.21
571	8565.00	0.00	0.00	154746.62	154352.85	3.28	1157671.0	880.21
572	8580.00	0.00	0.00	154352.85	153960.43	3.26	1154727.7	880.21
573	8595.00	0.00	0.00	153960.43	153569.35	3.25	1151794.5	880.21
574	8610.00	0.00	0.00	153569.35	153179.61	3.24	1148871.4	880.21
575	8625.00	0.00	0.00	153179.61	152791.20	3.23	1145958.2	880.21
576	8640.00	0.00	0.00	152791.20	152404.12	3.22	1143055.1	880.21
577	8655.00	0.00	0.00	152404.12	152018.37	3.21	1140161.8	880.21
578	8670.00	0.00	0.00	152018.37	151633.93	3.20	1137278.5	880.21
579	8685.00	0.00	0.00	151633.93	151250.81	3.19	1134405.0	880.21
580	8700.00	0.00	0.00	151250.81	150869.01	3.18	1131541.4	880.21
581	8715.00	0.00	0.00	150869.01	150488.50	3.17	1128687.5	880.21
582	8730.00	0.00	0.00	150488.50	150109.30	3.15	1125843.4	880.21
583	8745.00	0.00	0.00	150109.30	149731.40	3.14	1123009.1	880.21
584	8760.00	0.00	0.00	149731.40	149354.79	3.13	1120184.4	880.21
585	8775.00	0.00	0.00	149354.79	148979.47	3.12	1117369.5	880.21
586	8790.00	0.00	0.00	148979.47	148605.43	3.11	1114564.1	880.21
587	8805.00	0.00	0.00	148605.43	148232.68	3.10	1111768.3	880.21
588	8820.00	0.00	0.00	148232.68	147861.20	3.09	1108982.2	880.21
589	8835.00	0.00	0.00	147861.20	147490.99	3.08	1106205.5	880.20
590	8850.00	0.00	0.00	147490.99	147122.04	3.07	1103438.3	880.20
591	8865.00	0.00	0.00	147122.04	146754.36	3.06	1100680.7	880.20
592	8880.00	0.00	0.00	146754.36	146387.94	3.05	1097932.4	880.20
593	8895.00	0.00	0.00	146387.94	146022.77	3.04	1095193.6	880.20
594	8910.00	0.00	0.00	146022.77	145658.85	3.03	1092464.1	880.20
595	8925.00	0.00	0.00	145658.85	145296.18	3.02	1089743.9	880.20
596	8940.00	0.00	0.00	145296.18	144934.74	3.01	1087033.1	880.20
597	8955.00	0.00	0.00	144934.74	144574.54	3.00	1084331.6	880.20
598	8970.00	0.00	0.00	144574.54	144215.58	2.99	1081639.3	880.20
599	8985.00	0.00	0.00	144215.58	143857.84	2.98	1078956.2	880.20
600	9000.00	0.00	0.00	143857.84	143501.33	2.97	1076282.2	880.20
601	9015.00	0.00	0.00	143501.33	143145.96	2.96	1073616.8	880.20
602	9030.00	0.00	0.00	143145.96	142791.66	2.95	1070959.6	880.20
603	9045.00	0.00	0.00	142791.66	142438.44	2.94	1068310.3	880.20
604	9060.00	0.00	0.00	142438.44	142086.28	2.93	1065669.1	880.20
605	9075.00	0.00	0.00	142086.28	141735.19	2.92	1063035.8	880.20
606	9090.00	0.00	0.00	141735.19	141385.16	2.91	1060410.6	880.20
607	9105.00	0.00	0.00	141385.16	141036.20	2.90	1057793.3	880.20
608	9120.00	0.00	0.00	141036.20	140688.29	2.89	1055183.9	880.20
609	9135.00	0.00	0.00	140688.29	140341.43	2.89	1052582.4	880.20
610	9150.00	0.00	0.00	140341.43	139995.62	2.88	1049988.7	880.20
611	9165.00	0.00	0.00	139995.62	139650.86	2.87	1047403.0	880.20
612	9180.00	0.00	0.00	139650.86	139307.14	2.86	1044825.0	880.19
613	9195.00	0.00	0.00	139307.14	138964.47	2.85	1042254.9	880.19
614	9210.00	0.00	0.00	138964.47	138622.83	2.84	1039692.5	880.19
615	9225.00	0.00	0.00	138622.83	138282.22	2.83	1037137.9	880.19
616	9240.00	0.00	0.00	138282.22	137942.64	2.83	1034591.0	880.19

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617	9255.00	0.00	0.00	137942.64	137604.10	2.82	1032051.9	880.19
618	9270.00	0.00	0.00	137604.10	137266.57	2.81	1029520.4	880.19
619	9285.00	0.00	0.00	137266.57	136930.07	2.80	1026996.6	880.19
620	9300.00	0.00	0.00	136930.07	136594.59	2.79	1024480.4	880.19
621	9315.00	0.00	0.00	136594.59	136260.12	2.78	1021971.8	880.19
622	9330.00	0.00	0.00	136260.12	135926.67	2.77	1019470.8	880.19
623	9345.00	0.00	0.00	135926.67	135594.22	2.77	1016977.4	880.19
624	9360.00	0.00	0.00	135594.22	135262.78	2.76	1014491.6	880.19
625	9375.00	0.00	0.00	135262.78	134932.35	2.75	1012013.2	880.19
626	9390.00	0.00	0.00	134932.35	134602.91	2.74	1009542.4	880.19
627	9405.00	0.00	0.00	134602.91	134274.47	2.73	1007079.1	880.19
628	9420.00	0.00	0.00	134274.47	133947.03	2.72	1004623.2	880.19
629	9435.00	0.00	0.00	133947.03	133620.58	2.72	1002174.7	880.19
630	9450.00	0.00	0.00	133620.58	133295.11	2.71	999733.64	880.19
631	9465.00	0.00	0.00	133295.11	132970.63	2.70	997299.97	880.19
632	9480.00	0.00	0.00	132970.63	132647.13	2.69	994873.68	880.19

633	9495.00	0.00	0.00	132647.13	132324.61	2.68	992454.72	880.19
634	9510.00	0.00	0.00	132324.61	132003.07	2.68	990043.09	880.19
635	9525.00	0.00	0.00	132003.07	131682.50	2.67	987638.76	880.19
636	9540.00	0.00	0.00	131682.50	131362.90	2.66	985241.70	880.19
637	9555.00	0.00	0.00	131362.90	131044.27	2.65	982851.90	880.18
638	9570.00	0.00	0.00	131044.27	130726.60	2.64	980469.33	880.18
639	9585.00	0.00	0.00	130726.60	130409.89	2.64	978093.98	880.18
640	9600.00	0.00	0.00	130409.89	130094.15	2.63	975725.81	880.18
641	9615.00	0.00	0.00	130094.15	129779.36	2.62	973364.81	880.18
642	9630.00	0.00	0.00	129779.36	129465.52	2.61	971010.96	880.18
643	9645.00	0.00	0.00	129465.52	129152.63	2.60	968664.23	880.18
644	9660.00	0.00	0.00	129152.63	128840.69	2.60	966324.61	880.18
645	9675.00	0.00	0.00	128840.69	128529.69	2.59	963992.06	880.18
646	9690.00	0.00	0.00	128529.69	128219.63	2.58	961666.58	880.18
647	9705.00	0.00	0.00	128219.63	127910.51	2.57	959348.14	880.18
648	9720.00	0.00	0.00	127910.51	127602.33	2.56	957036.71	880.18
649	9735.00	0.00	0.00	127602.33	127295.08	2.56	954732.28	880.18
650	9750.00	0.00	0.00	127295.08	126988.76	2.55	952434.82	880.18
651	9765.00	0.00	0.00	126988.76	126683.37	2.54	950144.32	880.18
652	9780.00	0.00	0.00	126683.37	126378.90	2.53	947860.75	880.18
653	9795.00	0.00	0.00	126378.90	126075.35	2.53	945584.09	880.18
654	9810.00	0.00	0.00	126075.35	125772.73	2.52	943314.32	880.18
655	9825.00	0.00	0.00	125772.73	125471.01	2.51	941051.43	880.18
656	9840.00	0.00	0.00	125471.01	125170.21	2.50	938795.38	880.18
657	9855.00	0.00	0.00	125170.21	124870.33	2.50	936546.16	880.18
658	9870.00	0.00	0.00	124870.33	124571.35	2.49	934303.75	880.18
659	9885.00	0.00	0.00	124571.35	124273.27	2.48	932068.13	880.18
660	9900.00	0.00	0.00	124273.27	123976.10	2.47	929839.27	880.18
661	9915.00	0.00	0.00	123976.10	123679.82	2.47	927617.16	880.18
662	9930.00	0.00	0.00	123679.82	123384.45	2.46	925401.77	880.18
663	9945.00	0.00	0.00	123384.45	123089.96	2.45	923193.09	880.18
664	9960.00	0.00	0.00	123089.96	122796.37	2.44	920991.10	880.17

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665	9975.00	0.00	0.00	122796.37	122503.67	2.44	918795.77	880.17
666	9990.00	0.00	0.00	122503.67	122211.85	2.43	916607.08	880.17
667	10005.00	0.00	0.00	122211.85	121920.92	2.42	914425.02	880.17
668	10020.00	0.00	0.00	121920.92	121630.86	2.41	912249.56	880.17
669	10035.00	0.00	0.00	121630.86	121341.69	2.41	910080.69	880.17
670	10050.00	0.00	0.00	121341.69	121053.39	2.40	907918.39	880.17
671	10065.00	0.00	0.00	121053.39	120765.96	2.39	905762.62	880.17
672	10080.00	0.00	0.00	120765.96	120479.40	2.38	903613.39	880.17
673	10095.00	0.00	0.00	120479.40	120193.71	2.38	901470.65	880.17
674	10110.00	0.00	0.00	120193.71	119908.88	2.37	899334.41	880.17
675	10125.00	0.00	0.00	119908.88	119624.92	2.36	897204.63	880.17
676	10140.00	0.00	0.00	119624.92	119341.82	2.36	895081.29	880.17
677	10155.00	0.00	0.00	119341.82	119059.57	2.35	892964.39	880.17
678	10170.00	0.00	0.00	119059.57	118778.18	2.34	890853.89	880.17
679	10185.00	0.00	0.00	118778.18	118497.64	2.33	888749.77	880.17
680	10200.00	0.00	0.00	118497.64	118217.94	2.33	886652.03	880.17
681	10215.00	0.00	0.00	118217.94	117939.10	2.32	884560.64	880.17
682	10230.00	0.00	0.00	117939.10	117661.10	2.31	882475.57	880.17
683	10245.00	0.00	0.00	117661.10	117383.94	2.31	880396.82	880.17
684	10260.00	0.00	0.00	117383.94	117107.62	2.30	878324.36	880.17
685	10275.00	0.00	0.00	117107.62	116832.13	2.29	876258.17	880.17
686	10290.00	0.00	0.00	116832.13	116557.48	2.29	874198.24	880.17
687	10305.00	0.00	0.00	116557.48	116283.66	2.28	872144.54	880.17
688	10320.00	0.00	0.00	116283.66	116010.67	2.27	870097.05	880.17
689	10335.00	0.00	0.00	116010.67	115738.50	2.26	868055.77	880.17
690	10350.00	0.00	0.00	115738.50	115467.16	2.26	866020.66	880.17
691	10365.00	0.00	0.00	115467.16	115196.64	2.25	863991.71	880.17
692	10380.00	0.00	0.00	115196.64	114926.94	2.24	861968.90	880.17
693	10395.00	0.00	0.00	114926.94	114658.06	2.24	859952.22	880.16
694	10410.00	0.00	0.00	114658.06	114389.99	2.23	857941.64	880.16
695	10425.00	0.00	0.00	114389.99	114122.73	2.22	855937.14	880.16
696	10440.00	0.00	0.00	114122.73	113856.28	2.22	853938.72	880.16
697	10455.00	0.00	0.00	113856.28	113590.63	2.21	851946.34	880.16
698	10470.00	0.00	0.00	113590.63	113325.79	2.20	849959.99	880.16
699	10485.00	0.00	0.00	113325.79	113061.76	2.20	847979.65	880.16
700	10500.00	0.00	0.00	113061.76	112798.52	2.19	846005.31	880.16
701	10515.00	0.00	0.00	112798.52	112536.08	2.18	844036.94	880.16
702	10530.00	0.00	0.00	112536.08	112274.43	2.18	842074.53	880.16
703	10545.00	0.00	0.00	112274.43	112013.57	2.17	840118.07	880.16
704	10560.00	0.00	0.00	112013.57	111753.51	2.16	838167.52	880.16
705	10575.00	0.00	0.00	111753.51	111494.23	2.16	836222.87	880.16
706	10590.00	0.00	0.00	111494.23	111235.73	2.15	834284.12	880.16
707	10605.00	0.00	0.00	111235.73	110978.02	2.14	832351.23	880.16

708	10620.0	0.00	0.00	110978.02	110721.09	2.14	830424.19	880.16
709	10635.0	0.00	0.00	110721.09	110464.93	2.13	828502.98	880.16
710	10650.0	0.00	0.00	110464.93	110209.55	2.12	826587.59	880.16
711	10665.0	0.00	0.00	110209.55	109954.95	2.12	824678.00	880.16
712	10680.0	0.00	0.00	109954.95	109701.11	2.11	822774.18	880.16

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713	10695.0	0.00	0.00	109701.11	109448.05	2.11	820876.13	880.16
714	10710.0	0.00	0.00	109448.05	109195.74	2.10	818983.83	880.16
715	10725.0	0.00	0.00	109195.74	108944.21	2.09	817097.25	880.16
716	10740.0	0.00	0.00	108944.21	108693.43	2.09	815216.38	880.16
717	10755.0	0.00	0.00	108693.43	108443.41	2.08	813341.20	880.16
718	10770.0	0.00	0.00	108443.41	108194.15	2.07	811471.70	880.16
719	10785.0	0.00	0.00	108194.15	107945.65	2.07	809607.86	880.16
720	10800.0	0.00	0.00	107945.65	107697.89	2.06	807749.66	880.16
721	10815.0	0.00	0.00	107697.89	107450.89	2.06	805897.08	880.16
722	10830.0	0.00	0.00	107450.89	107204.63	2.05	804050.11	880.16
723	10845.0	0.00	0.00	107204.63	106959.12	2.04	802208.73	880.16
724	10860.0	0.00	0.00	106959.12	106714.35	2.04	800372.93	880.16
725	10875.0	0.00	0.00	106714.35	106470.33	2.03	798542.68	880.15
726	10890.0	0.00	0.00	106470.33	106227.04	2.02	796717.97	880.15
727	10905.0	0.00	0.00	106227.04	105984.49	2.02	794898.79	880.15
728	10920.0	0.00	0.00	105984.49	105742.67	2.01	793085.11	880.15
729	10935.0	0.00	0.00	105742.67	105501.58	2.01	791276.92	880.15
730	10950.0	0.00	0.00	105501.58	105261.23	2.00	789474.20	880.15
731	10965.0	0.00	0.00	105261.23	105021.60	1.99	787676.94	880.15
732	10980.0	0.00	0.00	105021.60	104782.69	1.99	785885.12	880.15
733	10995.0	0.00	0.00	104782.69	104544.51	1.98	784098.72	880.15
734	11010.0	0.00	0.00	104544.51	104307.05	1.98	782317.73	880.15
735	11025.0	0.00	0.00	104307.05	104070.31	1.97	780542.13	880.15
736	11040.0	0.00	0.00	104070.31	103834.29	1.96	778771.90	880.15
737	11055.0	0.00	0.00	103834.29	103598.98	1.96	777007.04	880.15
738	11070.0	0.00	0.00	103598.98	103364.38	1.95	775247.51	880.15
739	11085.0	0.00	0.00	103364.38	103130.50	1.95	773493.31	880.15
740	11100.0	0.00	0.00	103130.50	102897.32	1.94	771744.42	880.15
741	11115.0	0.00	0.00	102897.32	102664.84	1.93	770000.82	880.15
742	11130.0	0.00	0.00	102664.84	102433.07	1.93	768262.49	880.15
743	11145.0	0.00	0.00	102433.07	102201.94	1.92	766529.00	880.15
744	11160.0	0.00	0.00	102201.94	101971.41	1.92	764799.96	880.15
745	11175.0	0.00	0.00	101971.41	101741.47	1.91	763075.35	880.15
746	11190.0	0.00	0.00	101741.47	101512.11	1.91	761355.16	880.15
747	11205.0	0.00	0.00	101512.11	101283.35	1.90	759639.39	880.15
748	11220.0	0.00	0.00	101283.35	101055.17	1.90	757928.02	880.15
749	11235.0	0.00	0.00	101055.17	100827.58	1.89	756221.03	880.15
750	11250.0	0.00	0.00	100827.58	100600.57	1.89	754518.43	880.15
751	11265.0	0.00	0.00	100600.57	100374.14	1.88	752820.19	880.15
752	11280.0	0.00	0.00	100374.14	100148.29	1.88	751126.30	880.15
753	11295.0	0.00	0.00	100148.29	99923.03	1.87	749436.76	880.15
754	11310.0	0.00	0.00	99923.03	99698.34	1.87	747751.55	880.15
755	11325.0	0.00	0.00	99698.34	99474.22	1.87	746070.67	880.15
756	11340.0	0.00	0.00	99474.22	99250.69	1.86	744394.10	880.15
757	11355.0	0.00	0.00	99250.69	99027.72	1.86	742721.82	880.15
758	11370.0	0.00	0.00	99027.72	98805.33	1.85	741053.84	880.15
759	11385.0	0.00	0.00	98805.33	98583.50	1.85	739390.13	880.15
760	11400.0	0.00	0.00	98583.50	98362.25	1.84	737730.69	880.15

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761	11415.0	0.00	0.00	98362.25	98141.56	1.84	736075.50	880.14
762	11430.0	0.00	0.00	98141.56	97921.44	1.83	734424.56	880.14
763	11445.0	0.00	0.00	97921.44	97701.89	1.83	732777.86	880.14
764	11460.0	0.00	0.00	97701.89	97482.89	1.82	731135.37	880.14
765	11475.0	0.00	0.00	97482.89	97264.46	1.82	729497.10	880.14
766	11490.0	0.00	0.00	97264.46	97046.59	1.81	727863.04	880.14
767	11505.0	0.00	0.00	97046.59	96829.28	1.81	726233.16	880.14
768	11520.0	0.00	0.00	96829.28	96612.52	1.80	724607.46	880.14

769	11535.0	0.00	0.00	96612.52	96396.32	1.80	722985.93	880.14
770	11550.0	0.00	0.00	96396.32	96180.68	1.79	721368.56	880.14
771	11565.0	0.00	0.00	96180.68	95965.59	1.79	719755.34	880.14
772	11580.0	0.00	0.00	95965.59	95751.05	1.79	718146.26	880.14
773	11595.0	0.00	0.00	95751.05	95537.06	1.78	716541.30	880.14
774	11610.0	0.00	0.00	95537.06	95323.62	1.78	714940.46	880.14
775	11625.0	0.00	0.00	95323.62	95110.72	1.77	713343.72	880.14
776	11640.0	0.00	0.00	95110.72	94898.38	1.77	711751.08	880.14
777	11655.0	0.00	0.00	94898.38	94686.57	1.76	710162.52	880.14
778	11670.0	0.00	0.00	94686.57	94475.31	1.76	708578.04	880.14
779	11685.0	0.00	0.00	94475.31	94264.60	1.75	706997.62	880.14
780	11700.0	0.00	0.00	94264.60	94054.42	1.75	705421.26	880.14
781	11715.0	0.00	0.00	94054.42	93844.78	1.74	703848.94	880.14
782	11730.0	0.00	0.00	93844.78	93635.68	1.74	702280.65	880.14
783	11745.0	0.00	0.00	93635.68	93427.11	1.74	700716.38	880.14
784	11760.0	0.00	0.00	93427.11	93219.08	1.73	699156.12	880.14
785	11775.0	0.00	0.00	93219.08	93011.59	1.73	697599.87	880.14
786	11790.0	0.00	0.00	93011.59	92804.62	1.72	696047.60	880.14
787	11805.0	0.00	0.00	92804.62	92598.19	1.72	694499.32	880.14
788	11820.0	0.00	0.00	92598.19	92392.29	1.71	692955.01	880.14
789	11835.0	0.00	0.00	92392.29	92186.91	1.71	691414.66	880.14
790	11850.0	0.00	0.00	92186.91	91982.06	1.70	689878.26	880.14
791	11865.0	0.00	0.00	91982.06	91777.74	1.70	688345.80	880.14
792	11880.0	0.00	0.00	91777.74	91573.94	1.70	686817.27	880.14
793	11895.0	0.00	0.00	91573.94	91370.66	1.69	685292.66	880.14
794	11910.0	0.00	0.00	91370.66	91167.91	1.69	683771.96	880.14
795	11925.0	0.00	0.00	91167.91	90965.67	1.68	682255.16	880.14
796	11940.0	0.00	0.00	90965.67	90763.95	1.68	680742.25	880.14
797	11955.0	0.00	0.00	90763.95	90562.76	1.67	679233.22	880.14
798	11970.0	0.00	0.00	90562.76	90362.07	1.67	677728.06	880.14
799	11985.0	0.00	0.00	90362.07	90161.90	1.67	676226.76	880.14
800	12000.0	0.00	0.00	90161.90	89962.25	1.66	674729.32	880.13
801	12015.0	0.00	0.00	89962.25	89763.10	1.66	673235.71	880.13
802	12030.0	0.00	0.00	89763.10	89564.47	1.65	671745.93	880.13
803	12045.0	0.00	0.00	89564.47	89366.35	1.65	670259.97	880.13
804	12060.0	0.00	0.00	89366.35	89168.73	1.64	668777.83	880.13
805	12075.0	0.00	0.00	89168.73	88971.62	1.64	667299.48	880.13
806	12090.0	0.00	0.00	88971.62	88775.02	1.64	665824.93	880.13
807	12105.0	0.00	0.00	88775.02	88578.92	1.63	664354.16	880.13
808	12120.0	0.00	0.00	88578.92	88383.33	1.63	662887.16	880.13

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809	12135.0	0.00	0.00	88383.33	88188.23	1.62	661423.92	880.13
810	12150.0	0.00	0.00	88188.23	87993.64	1.62	659964.44	880.13
811	12165.0	0.00	0.00	87993.64	87799.54	1.62	658508.70	880.13
812	12180.0	0.00	0.00	87799.54	87605.95	1.61	657056.69	880.13
813	12195.0	0.00	0.00	87605.95	87412.85	1.61	655608.40	880.13
814	12210.0	0.00	0.00	87412.85	87220.24	1.60	654163.83	880.13
815	12225.0	0.00	0.00	87220.24	87028.13	1.60	652722.97	880.13
816	12240.0	0.00	0.00	87028.13	86836.51	1.59	651285.80	880.13
817	12255.0	0.00	0.00	86836.51	86645.38	1.59	649852.32	880.13
818	12270.0	0.00	0.00	86645.38	86454.75	1.59	648422.51	880.13
819	12285.0	0.00	0.00	86454.75	86264.60	1.58	646996.37	880.13
820	12300.0	0.00	0.00	86264.60	86074.94	1.58	645573.89	880.13
821	12315.0	0.00	0.00	86074.94	85885.77	1.57	644155.05	880.13
822	12330.0	0.00	0.00	85885.77	85697.08	1.57	642739.86	880.13
823	12345.0	0.00	0.00	85697.08	85508.87	1.57	641328.29	880.13
824	12360.0	0.00	0.00	85508.87	85321.15	1.56	639920.34	880.13
825	12375.0	0.00	0.00	85321.15	85133.91	1.56	638516.01	880.13
826	12390.0	0.00	0.00	85133.91	84947.15	1.55	637115.27	880.13
827	12405.0	0.00	0.00	84947.15	84760.87	1.55	635718.13	880.13
828	12420.0	0.00	0.00	84760.87	84575.06	1.55	634324.58	880.13
829	12435.0	0.00	0.00	84575.06	84389.74	1.54	632934.59	880.13
830	12450.0	0.00	0.00	84389.74	84204.88	1.54	631548.17	880.13
831	12465.0	0.00	0.00	84204.88	84020.51	1.53	630165.31	880.13
832	12480.0	0.00	0.00	84020.51	83836.60	1.53	628785.99	880.13
833	12495.0	0.00	0.00	83836.60	83653.17	1.53	627410.21	880.13
834	12510.0	0.00	0.00	83653.17	83470.21	1.52	626037.96	880.13
835	12525.0	0.00	0.00	83470.21	83287.71	1.52	624669.23	880.13
836	12540.0	0.00	0.00	83287.71	83105.69	1.51	623304.01	880.13
837	12555.0	0.00	0.00	83105.69	82924.13	1.51	621942.29	880.13
838	12570.0	0.00	0.00	82924.13	82743.03	1.51	620584.06	880.13
839	12585.0	0.00	0.00	82743.03	82562.41	1.50	619229.32	880.13
840	12600.0	0.00	0.00	82562.41	82382.24	1.50	617878.05	880.13
841	12615.0	0.00	0.00	82382.24	82202.54	1.50	616530.24	880.13
842	12630.0	0.00	0.00	82202.54	82023.29	1.49	615185.90	880.13
843	12645.0	0.00	0.00	82023.29	81844.51	1.49	613845.00	880.12

844	12660.0	0.00	0.00	81844.51	81666.19	1.48	612507.53	880.12
845	12675.0	0.00	0.00	81666.19	81488.32	1.48	611173.50	880.12
846	12690.0	0.00	0.00	81488.32	81310.91	1.48	609842.89	880.12
847	12705.0	0.00	0.00	81310.91	81133.95	1.47	608515.70	880.12
848	12720.0	0.00	0.00	81133.95	80957.45	1.47	607191.90	880.12
849	12735.0	0.00	0.00	80957.45	80781.40	1.47	605871.51	880.12
850	12750.0	0.00	0.00	80781.40	80605.80	1.46	604554.50	880.12
851	12765.0	0.00	0.00	80605.80	80430.66	1.46	603240.86	880.12
852	12780.0	0.00	0.00	80430.66	80255.96	1.45	601930.60	880.12
853	12795.0	0.00	0.00	80255.96	80081.71	1.45	600623.69	880.12
854	12810.0	0.00	0.00	80081.71	79907.91	1.45	599320.14	880.12
855	12825.0	0.00	0.00	79907.91	79734.55	1.44	598019.93	880.12
856	12840.0	0.00	0.00	79734.55	79561.63	1.44	596723.05	880.12

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857	12855.0	0.00	0.00	79561.63	79389.17	1.44	595429.51	880.12
858	12870.0	0.00	0.00	79389.17	79217.14	1.43	594139.27	880.12
859	12885.0	0.00	0.00	79217.14	79045.55	1.43	592852.35	880.12
860	12900.0	0.00	0.00	79045.55	78874.41	1.42	591568.73	880.12
861	12915.0	0.00	0.00	78874.41	78703.70	1.42	590288.40	880.12
862	12930.0	0.00	0.00	78703.70	78533.43	1.42	589011.35	880.12
863	12945.0	0.00	0.00	78533.43	78363.60	1.41	587737.58	880.12
864	12960.0	0.00	0.00	78363.60	78194.20	1.41	586467.08	880.12
865	12975.0	0.00	0.00	78194.20	78025.24	1.41	585199.83	880.12
866	12990.0	0.00	0.00	78025.24	77856.71	1.40	583935.84	880.12
867	13005.0	0.00	0.00	77856.71	77688.61	1.40	582675.08	880.12
868	13020.0	0.00	0.00	77688.61	77520.95	1.40	581417.56	880.12
869	13035.0	0.00	0.00	77520.95	77353.71	1.39	580163.26	880.12
870	13050.0	0.00	0.00	77353.71	77186.90	1.39	578912.19	880.12
871	13065.0	0.00	0.00	77186.90	77020.52	1.38	577664.32	880.12
872	13080.0	0.00	0.00	77020.52	76854.57	1.38	576419.65	880.12
873	13095.0	0.00	0.00	76854.57	76689.04	1.38	575178.17	880.12
874	13110.0	0.00	0.00	76689.04	76523.94	1.37	573939.87	880.12
875	13125.0	0.00	0.00	76523.94	76359.26	1.37	572704.76	880.12
876	13140.0	0.00	0.00	76359.26	76195.01	1.37	571472.81	880.12
877	13155.0	0.00	0.00	76195.01	76031.17	1.36	570244.01	880.12
878	13170.0	0.00	0.00	76031.17	75867.76	1.36	569018.38	880.12
879	13185.0	0.00	0.00	75867.76	75704.76	1.36	567795.88	880.12
880	13200.0	0.00	0.00	75704.76	75542.18	1.35	566576.52	880.12
881	13215.0	0.00	0.00	75542.18	75380.02	1.35	565360.29	880.12
882	13230.0	0.00	0.00	75380.02	75218.28	1.35	564147.17	880.12
883	13245.0	0.00	0.00	75218.28	75056.95	1.34	562937.17	880.12
884	13260.0	0.00	0.00	75056.95	74896.03	1.34	561730.27	880.12
885	13275.0	0.00	0.00	74896.03	74735.53	1.34	560526.46	880.12
886	13290.0	0.00	0.00	74735.53	74575.43	1.33	559325.75	880.12
887	13305.0	0.00	0.00	74575.43	74415.75	1.33	558128.11	880.12
888	13320.0	0.00	0.00	74415.75	74256.48	1.33	556933.54	880.12
889	13335.0	0.00	0.00	74256.48	74097.62	1.32	555742.04	880.12
890	13350.0	0.00	0.00	74097.62	73939.16	1.32	554553.59	880.12
891	13365.0	0.00	0.00	73939.16	73781.11	1.32	553368.19	880.12
892	13380.0	0.00	0.00	73781.11	73623.47	1.31	552185.83	880.11
893	13395.0	0.00	0.00	73623.47	73466.23	1.31	551006.51	880.11
894	13410.0	0.00	0.00	73466.23	73309.39	1.31	549830.21	880.11
895	13425.0	0.00	0.00	73309.39	73152.95	1.30	548656.92	880.11
896	13440.0	0.00	0.00	73152.95	72996.92	1.30	547486.65	880.11
897	13455.0	0.00	0.00	72996.92	72841.29	1.30	546319.37	880.11
898	13470.0	0.00	0.00	72841.29	72686.05	1.29	545155.09	880.11
899	13485.0	0.00	0.00	72686.05	72531.22	1.29	543993.80	880.11
900	13500.0	0.00	0.00	72531.22	72376.78	1.29	542835.48	880.11
901	13515.0	0.00	0.00	72376.78	72222.74	1.28	541680.13	880.11
902	13530.0	0.00	0.00	72222.74	72069.09	1.28	540527.75	880.11
903	13545.0	0.00	0.00	72069.09	71915.83	1.28	539378.32	880.11
904	13560.0	0.00	0.00	71915.83	71762.97	1.27	538231.84	880.11

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905	13575.0	0.00	0.00	71762.97	71610.50	1.27	537088.30	880.11
906	13590.0	0.00	0.00	71610.50	71458.43	1.27	535947.70	880.11
907	13605.0	0.00	0.00	71458.43	71306.74	1.26	534810.02	880.11
908	13620.0	0.00	0.00	71306.74	71155.44	1.26	533675.25	880.11
909	13635.0	0.00	0.00	71155.44	71004.53	1.26	532543.40	880.11
910	13650.0	0.00	0.00	71004.53	70854.01	1.25	531414.45	880.11
911	13665.0	0.00	0.00	70854.01	70703.87	1.25	530288.39	880.11
912	13680.0	0.00	0.00	70703.87	70554.12	1.25	529165.23	880.11
913	13695.0	0.00	0.00	70554.12	70404.75	1.24	528044.94	880.11
914	13710.0	0.00	0.00	70404.75	70255.76	1.24	526927.53	880.11
915	13725.0	0.00	0.00	70255.76	70107.16	1.24	525812.98	880.11
916	13740.0	0.00	0.00	70107.16	69958.94	1.23	524701.29	880.11
917	13755.0	0.00	0.00	69958.94	69811.10	1.23	523592.45	880.11
918	13770.0	0.00	0.00	69811.10	69663.63	1.23	522486.46	880.11
919	13785.0	0.00	0.00	69663.63	69516.55	1.22	521383.30	880.11
920	13800.0	0.00	0.00	69516.55	69369.84	1.22	520282.97	880.11
921	13815.0	0.00	0.00	69369.84	69223.51	1.22	519185.47	880.11
922	13830.0	0.00	0.00	69223.51	69077.56	1.21	518090.77	880.11
923	13845.0	0.00	0.00	69077.56	68931.97	1.21	516998.89	880.11
924	13860.0	0.00	0.00	68931.97	68786.77	1.21	515909.81	880.11
925	13875.0	0.00	0.00	68786.77	68641.93	1.21	514823.51	880.11
926	13890.0	0.00	0.00	68641.93	68497.47	1.20	513740.01	880.11
927	13905.0	0.00	0.00	68497.47	68353.37	1.20	512659.28	880.11
928	13920.0	0.00	0.00	68353.37	68209.65	1.20	511581.33	880.11
929	13935.0	0.00	0.00	68209.65	68066.29	1.19	510506.14	880.11
930	13950.0	0.00	0.00	68066.29	67923.30	1.19	509433.71	880.11
931	13965.0	0.00	0.00	67923.30	67780.68	1.19	508364.02	880.11
932	13980.0	0.00	0.00	67780.68	67638.43	1.18	507297.09	880.11
933	13995.0	0.00	0.00	67638.43	67496.54	1.18	506232.88	880.11
934	14010.0	0.00	0.00	67496.54	67355.01	1.18	505171.41	880.11
935	14025.0	0.00	0.00	67355.01	67213.85	1.17	504112.66	880.11
936	14040.0	0.00	0.00	67213.85	67073.04	1.17	503056.62	880.11
937	14055.0	0.00	0.00	67073.04	66932.60	1.17	502003.30	880.11
938	14070.0	0.00	0.00	66932.60	66792.52	1.17	500952.67	880.11
939	14085.0	0.00	0.00	66792.52	66652.80	1.16	499904.74	880.11
940	14100.0	0.00	0.00	66652.80	66513.44	1.16	498859.50	880.11
941	14115.0	0.00	0.00	66513.44	66374.43	1.16	497816.94	880.11
942	14130.0	0.00	0.00	66374.43	66235.79	1.15	496777.05	880.11
943	14145.0	0.00	0.00	66235.79	66097.49	1.15	495739.82	880.11
944	14160.0	0.00	0.00	66097.49	65959.55	1.15	494705.26	880.11
945	14175.0	0.00	0.00	65959.55	65821.97	1.15	493673.35	880.11
946	14190.0	0.00	0.00	65821.97	65684.74	1.14	492644.09	880.11
947	14205.0	0.00	0.00	65684.74	65547.86	1.14	491617.47	880.11
948	14220.0	0.00	0.00	65547.86	65411.33	1.14	490593.48	880.10
949	14235.0	0.00	0.00	65411.33	65275.15	1.13	489572.12	880.10
950	14250.0	0.00	0.00	65275.15	65139.32	1.13	488553.37	880.10
951	14265.0	0.00	0.00	65139.32	65003.84	1.13	487537.24	880.10
952	14280.0	0.00	0.00	65003.84	64868.70	1.12	486523.72	880.10

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953	14295.0	0.00	0.00	64868.70	64733.92	1.12	485512.79	880.10
954	14310.0	0.00	0.00	64733.92	64599.48	1.12	484504.46	880.10
955	14325.0	0.00	0.00	64599.48	64465.38	1.12	483498.71	880.10
956	14340.0	0.00	0.00	64465.38	64331.63	1.11	482495.54	880.10
957	14355.0	0.00	0.00	64331.63	64198.22	1.11	481494.95	880.10
958	14370.0	0.00	0.00	64198.22	64065.15	1.11	480496.92	880.10
959	14385.0	0.00	0.00	64065.15	63932.42	1.10	479501.45	880.10
960	14400.0	0.00	0.00	63932.42	63800.04	1.10	478508.53	880.10
961	14415.0	0.00	0.00	63800.04	63667.99	1.10	477518.17	880.10
962	14430.0	0.00	0.00	63667.99	63536.28	1.10	476530.34	880.10
963	14445.0	0.00	0.00	63536.28	63404.91	1.09	475545.04	880.10
964	14460.0	0.00	0.00	63404.91	63273.88	1.09	474562.27	880.10
965	14475.0	0.00	0.00	63273.88	63143.18	1.09	473582.02	880.10
966	14490.0	0.00	0.00	63143.18	63012.82	1.08	472604.29	880.10
967	14505.0	0.00	0.00	63012.82	62882.79	1.08	471629.06	880.10
968	14520.0	0.00	0.00	62882.79	62753.10	1.08	470656.33	880.10
969	14535.0	0.00	0.00	62753.10	62623.74	1.08	469686.10	880.10
970	14550.0	0.00	0.00	62623.74	62494.71	1.07	468718.36	880.10
971	14565.0	0.00	0.00	62494.71	62366.01	1.07	467753.10	880.10
972	14580.0	0.00	0.00	62366.01	62237.64	1.07	466790.31	880.10
973	14595.0	0.00	0.00	62237.64	62109.60	1.07	465830.00	880.10
974	14610.0	0.00	0.00	62109.60	61981.89	1.06	464872.14	880.10
975	14625.0	0.00	0.00	61981.89	61854.51	1.06	463916.75	880.10
976	14640.0	0.00	0.00	61854.51	61727.45	1.06	462963.80	880.10
977	14655.0	0.00	0.00	61727.45	61600.72	1.05	462013.30	880.10
978	14670.0	0.00	0.00	61600.72	61474.31	1.05	461065.23	880.10
979	14685.0	0.00	0.00	61474.31	61348.21	1.05	460119.44	880.10

980	14700.0	0.00	0.00	61348.21	61222.37	1.05	459175.64	880.10
981	14715.0	0.00	0.00	61222.37	61096.78	1.05	458233.71	880.10
982	14730.0	0.00	0.00	61096.78	60971.44	1.04	457293.66	880.10
983	14745.0	0.00	0.00	60971.44	60846.36	1.04	456355.48	880.10
984	14760.0	0.00	0.00	60846.36	60721.51	1.04	455419.16	880.10
985	14775.0	0.00	0.00	60721.51	60596.92	1.04	454484.70	880.10
986	14790.0	0.00	0.00	60596.92	60472.58	1.04	453552.10	880.10
987	14805.0	0.00	0.00	60472.58	60348.48	1.03	452621.35	880.10
988	14820.0	0.00	0.00	60348.48	60224.63	1.03	451692.45	880.10
989	14835.0	0.00	0.00	60224.63	60101.02	1.03	450765.39	880.10
990	14850.0	0.00	0.00	60101.02	59977.66	1.03	449840.18	880.10
991	14865.0	0.00	0.00	59977.66	59854.55	1.02	448916.81	880.10
992	14880.0	0.00	0.00	59854.55	59731.68	1.02	447995.28	880.10
993	14895.0	0.00	0.00	59731.68	59609.06	1.02	447075.57	880.10
994	14910.0	0.00	0.00	59609.06	59486.67	1.02	446157.69	880.10
995	14925.0	0.00	0.00	59486.67	59364.53	1.02	445241.64	880.10
996	14940.0	0.00	0.00	59364.53	59242.64	1.01	444327.41	880.10
997	14955.0	0.00	0.00	59242.64	59120.99	1.01	443414.99	880.10
998	14970.0	0.00	0.00	59120.99	58999.57	1.01	442504.39	880.10
999	14985.0	0.00	0.00	58999.57	58878.40	1.01	441595.59	880.10
1000	15000.0	0.00	0.00	58878.40	58757.47	1.01	440688.61	880.10

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1001	15015.0	0.00	0.00	58757.47	58636.78	1.00	439783.42	880.10
1002	15030.0	0.00	0.00	58636.78	58516.34	1.00	438880.04	880.10
1003	15045.0	0.00	0.00	58516.34	58396.13	1.00	437978.45	880.10
1004	15060.0	0.00	0.00	58396.13	58276.15	1.00	437078.65	880.10
1005	15075.0	0.00	0.00	58276.15	58156.42	1.00	436180.64	880.10
1006	15090.0	0.00	0.00	58156.42	58036.93	0.99	435284.41	880.10
1007	15105.0	0.00	0.00	58036.93	57917.67	0.99	434389.97	880.10
1008	15120.0	0.00	0.00	57917.67	57798.65	0.99	433497.30	880.10
1009	15135.0	0.00	0.00	57798.65	57679.87	0.99	432606.41	880.10
1010	15150.0	0.00	0.00	57679.87	57561.32	0.99	431717.28	880.10
1011	15165.0	0.00	0.00	57561.32	57443.01	0.98	430829.93	880.10
1012	15180.0	0.00	0.00	57443.01	57324.93	0.98	429944.33	880.09
1013	15195.0	0.00	0.00	57324.93	57207.09	0.98	429060.50	880.09
1014	15210.0	0.00	0.00	57207.09	57089.48	0.98	428178.43	880.09
1015	15225.0	0.00	0.00	57089.48	56972.10	0.98	427298.10	880.09
1016	15240.0	0.00	0.00	56972.10	56854.96	0.98	426419.53	880.09
1017	15255.0	0.00	0.00	56854.96	56738.05	0.97	425542.70	880.09
1018	15270.0	0.00	0.00	56738.05	56621.38	0.97	424667.62	880.09
1019	15285.0	0.00	0.00	56621.38	56504.93	0.97	423794.27	880.09
1020	15300.0	0.00	0.00	56504.93	56388.72	0.97	422922.66	880.09
1021	15315.0	0.00	0.00	56388.72	56272.74	0.97	422052.78	880.09
1022	15330.0	0.00	0.00	56272.74	56156.99	0.96	421184.64	880.09
1023	15345.0	0.00	0.00	56156.99	56041.47	0.96	420318.21	880.09
1024	15360.0	0.00	0.00	56041.47	55926.17	0.96	419453.51	880.09
1025	15375.0	0.00	0.00	55926.17	55811.11	0.96	418590.53	880.09
1026	15390.0	0.00	0.00	55811.11	55696.28	0.96	417729.26	880.09
1027	15405.0	0.00	0.00	55696.28	55581.67	0.95	416869.70	880.09
1028	15420.0	0.00	0.00	55581.67	55467.29	0.95	416011.85	880.09
1029	15435.0	0.00	0.00	55467.29	55353.14	0.95	415155.71	880.09
1030	15450.0	0.00	0.00	55353.14	55239.22	0.95	414301.27	880.09
1031	15465.0	0.00	0.00	55239.22	55125.52	0.95	413448.52	880.09
1032	15480.0	0.00	0.00	55125.52	55012.05	0.94	412597.47	880.09
1033	15495.0	0.00	0.00	55012.05	54898.81	0.94	411748.11	880.09
1034	15510.0	0.00	0.00	54898.81	54785.78	0.94	410900.44	880.09
1035	15525.0	0.00	0.00	54785.78	54672.99	0.94	410054.46	880.09
1036	15540.0	0.00	0.00	54672.99	54560.42	0.94	409210.15	880.09
1037	15555.0	0.00	0.00	54560.42	54448.07	0.94	408367.53	880.09
1038	15570.0	0.00	0.00	54448.07	54335.94	0.93	407526.58	880.09
1039	15585.0	0.00	0.00	54335.94	54224.04	0.93	406687.29	880.09
1040	15600.0	0.00	0.00	54224.04	54112.36	0.93	405849.68	880.09
1041	15615.0	0.00	0.00	54112.36	54000.90	0.93	405013.73	880.09
1042	15630.0	0.00	0.00	54000.90	53889.67	0.93	404179.45	880.09
1043	15645.0	0.00	0.00	53889.67	53778.65	0.92	403346.82	880.09
1044	15660.0	0.00	0.00	53778.65	53667.86	0.92	402515.84	880.09
1045	15675.0	0.00	0.00	53667.86	53557.28	0.92	401686.52	880.09
1046	15690.0	0.00	0.00	53557.28	53446.93	0.92	400858.85	880.09
1047	15705.0	0.00	0.00	53446.93	53336.79	0.92	400032.82	880.09
1048	15720.0	0.00	0.00	53336.79	53226.88	0.92	399208.43	880.09

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1049	15735.0	0.00	0.00	53226.88	53117.18	0.91	398385.68	880.09
1050	15750.0	0.00	0.00	53117.18	53007.70	0.91	397564.56	880.09
1051	15765.0	0.00	0.00	53007.70	52898.43	0.91	396745.08	880.09
1052	15780.0	0.00	0.00	52898.43	52789.39	0.91	395927.23	880.09
1053	15795.0	0.00	0.00	52789.39	52680.56	0.91	395111.00	880.09
1054	15810.0	0.00	0.00	52680.56	52571.95	0.90	394296.39	880.09
1055	15825.0	0.00	0.00	52571.95	52463.55	0.90	393483.40	880.09
1056	15840.0	0.00	0.00	52463.55	52355.37	0.90	392672.03	880.09
1057	15855.0	0.00	0.00	52355.37	52247.40	0.90	391862.27	880.09
1058	15870.0	0.00	0.00	52247.40	52139.65	0.90	391054.12	880.09
1059	15885.0	0.00	0.00	52139.65	52032.11	0.90	390247.58	880.09
1060	15900.0	0.00	0.00	52032.11	51924.79	0.89	389442.63	880.09
1061	15915.0	0.00	0.00	51924.79	51817.68	0.89	388639.29	880.09
1062	15930.0	0.00	0.00	51817.68	51710.78	0.89	387837.55	880.09
1063	15945.0	0.00	0.00	51710.78	51604.10	0.89	387037.40	880.09
1064	15960.0	0.00	0.00	51604.10	51497.62	0.89	386238.83	880.09
1065	15975.0	0.00	0.00	51497.62	51391.36	0.88	385441.86	880.09
1066	15990.0	0.00	0.00	51391.36	51285.31	0.88	384646.47	880.09
1067	16005.0	0.00	0.00	51285.31	51179.47	0.88	383852.66	880.09
1068	16020.0	0.00	0.00	51179.47	51073.84	0.88	383060.42	880.09
1069	16035.0	0.00	0.00	51073.84	50968.42	0.88	382269.77	880.09
1070	16050.0	0.00	0.00	50968.42	50863.21	0.88	381480.68	880.09
1071	16065.0	0.00	0.00	50863.21	50758.21	0.87	380693.16	880.09
1072	16080.0	0.00	0.00	50758.21	50653.42	0.87	379907.21	880.09
1073	16095.0	0.00	0.00	50653.42	50548.84	0.87	379122.81	880.09
1074	16110.0	0.00	0.00	50548.84	50444.46	0.87	378339.98	880.09
1075	16125.0	0.00	0.00	50444.46	50340.29	0.87	377558.70	880.09
1076	16140.0	0.00	0.00	50340.29	50236.33	0.87	376778.98	880.09
1077	16155.0	0.00	0.00	50236.33	50132.58	0.86	376000.80	880.09
1078	16170.0	0.00	0.00	50132.58	50029.03	0.86	375224.18	880.09
1079	16185.0	0.00	0.00	50029.03	49925.69	0.86	374449.09	880.09
1080	16200.0	0.00	0.00	49925.69	49822.55	0.86	373675.55	880.09
1081	16215.0	0.00	0.00	49822.55	49719.61	0.86	372903.54	880.09
1082	16230.0	0.00	0.00	49719.61	49616.89	0.86	372133.07	880.09
1083	16245.0	0.00	0.00	49616.89	49514.36	0.85	371364.12	880.09
1084	16260.0	0.00	0.00	49514.36	49412.04	0.85	370596.71	880.09
1085	16275.0	0.00	0.00	49412.04	49309.93	0.85	369830.82	880.09
1086	16290.0	0.00	0.00	49309.93	49208.01	0.85	369066.45	880.09
1087	16305.0	0.00	0.00	49208.01	49106.30	0.85	368303.61	880.08
1088	16320.0	0.00	0.00	49106.30	49004.79	0.85	367542.27	880.08
1089	16335.0	0.00	0.00	49004.79	48903.48	0.84	366782.46	880.08
1090	16350.0	0.00	0.00	48903.48	48802.38	0.84	366024.15	880.08
1091	16365.0	0.00	0.00	48802.38	48701.47	0.84	365267.35	880.08
1092	16380.0	0.00	0.00	48701.47	48600.77	0.84	364512.05	880.08
1093	16395.0	0.00	0.00	48600.77	48500.26	0.84	363758.25	880.08
1094	16410.0	0.00	0.00	48500.26	48399.96	0.84	363005.95	880.08
1095	16425.0	0.00	0.00	48399.96	48299.85	0.83	362255.15	880.08
1096	16440.0	0.00	0.00	48299.85	48199.95	0.83	361505.84	880.08

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1097	16455.0	0.00	0.00	48199.95	48100.24	0.83	360758.02	880.08
1098	16470.0	0.00	0.00	48100.24	48000.73	0.83	360011.68	880.08
1099	16485.0	0.00	0.00	48000.73	47901.42	0.83	359266.83	880.08
1100	16500.0	0.00	0.00	47901.42	47802.30	0.83	358523.45	880.08
1101	16515.0	0.00	0.00	47802.30	47703.38	0.82	357781.56	880.08
1102	16530.0	0.00	0.00	47703.38	47604.66	0.82	357041.14	880.08
1103	16545.0	0.00	0.00	47604.66	47506.14	0.82	356302.19	880.08
1104	16560.0	0.00	0.00	47506.14	47407.81	0.82	355564.71	880.08
1105	16575.0	0.00	0.00	47407.81	47309.68	0.82	354828.69	880.08
1106	16590.0	0.00	0.00	47309.68	47211.74	0.82	354094.14	880.08
1107	16605.0	0.00	0.00	47211.74	47113.99	0.81	353361.05	880.08
1108	16620.0	0.00	0.00	47113.99	47016.44	0.81	352629.41	880.08
1109	16635.0	0.00	0.00	47016.44	46919.09	0.81	351899.23	880.08
1110	16650.0	0.00	0.00	46919.09	46821.92	0.81	351170.50	880.08
1111	16665.0	0.00	0.00	46821.92	46724.95	0.81	350443.22	880.08
1112	16680.0	0.00	0.00	46724.95	46628.18	0.81	349717.38	880.08
1113	16695.0	0.00	0.00	46628.18	46531.59	0.80	348992.99	880.08
1114	16710.0	0.00	0.00	46531.59	46435.20	0.80	348270.03	880.08
1115	16725.0	0.00	0.00	46435.20	46339.00	0.80	347548.51	880.08

1116	16740.0	0.00	0.00	46339.00	46242.99	0.80	346828.43	880.08
1117	16755.0	0.00	0.00	46242.99	46147.17	0.80	346109.77	880.08
1118	16770.0	0.00	0.00	46147.17	46051.54	0.80	345392.55	880.08
1119	16785.0	0.00	0.00	46051.54	45956.11	0.79	344676.75	880.08
1120	16800.0	0.00	0.00	45956.11	45860.86	0.79	343962.37	880.08
1121	16815.0	0.00	0.00	45860.86	45765.80	0.79	343249.41	880.08
1122	16830.0	0.00	0.00	45765.80	45670.93	0.79	342537.87	880.08
1123	16845.0	0.00	0.00	45670.93	45576.24	0.79	341827.75	880.08
1124	16860.0	0.00	0.00	45576.24	45481.75	0.79	341119.03	880.08
1125	16875.0	0.00	0.00	45481.75	45387.44	0.79	340411.72	880.08
1126	16890.0	0.00	0.00	45387.44	45293.33	0.78	339705.82	880.08
1127	16905.0	0.00	0.00	45293.33	45199.39	0.78	339001.33	880.08
1128	16920.0	0.00	0.00	45199.39	45105.65	0.78	338298.23	880.08
1129	16935.0	0.00	0.00	45105.65	45012.09	0.78	337596.53	880.08
1130	16950.0	0.00	0.00	45012.09	44918.72	0.78	336896.22	880.08
1131	16965.0	0.00	0.00	44918.72	44825.53	0.78	336197.30	880.08
1132	16980.0	0.00	0.00	44825.53	44732.53	0.77	335499.78	880.08
1133	16995.0	0.00	0.00	44732.53	44639.71	0.77	334803.64	880.08
1134	17010.0	0.00	0.00	44639.71	44547.08	0.77	334108.88	880.08
1135	17025.0	0.00	0.00	44547.08	44454.63	0.77	333415.51	880.08
1136	17040.0	0.00	0.00	44454.63	44362.37	0.77	332723.51	880.08
1137	17055.0	0.00	0.00	44362.37	44270.29	0.77	332032.89	880.08
1138	17070.0	0.00	0.00	44270.29	44178.39	0.77	331343.64	880.08
1139	17085.0	0.00	0.00	44178.39	44086.67	0.76	330655.76	880.08
1140	17100.0	0.00	0.00	44086.67	43995.14	0.76	329969.25	880.08
1141	17115.0	0.00	0.00	43995.14	43903.79	0.76	329284.10	880.08
1142	17130.0	0.00	0.00	43903.79	43812.62	0.76	328600.31	880.08
1143	17145.0	0.00	0.00	43812.62	43721.63	0.76	327917.88	880.08
1144	17160.0	0.00	0.00	43721.63	43630.82	0.76	327236.81	880.08

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1145	17175.0	0.00	0.00	43630.82	43540.19	0.75	326557.09	880.08
1146	17190.0	0.00	0.00	43540.19	43449.74	0.75	325878.72	880.08
1147	17205.0	0.00	0.00	43449.74	43359.48	0.75	325201.71	880.08
1148	17220.0	0.00	0.00	43359.48	43269.39	0.75	324526.03	880.08
1149	17235.0	0.00	0.00	43269.39	43179.48	0.75	323851.70	880.08
1150	17250.0	0.00	0.00	43179.48	43089.75	0.75	323178.71	880.08
1151	17265.0	0.00	0.00	43089.75	43000.20	0.75	322507.06	880.08
1152	17280.0	0.00	0.00	43000.20	42910.82	0.74	321836.74	880.08
1153	17295.0	0.00	0.00	42910.82	42821.62	0.74	321167.75	880.08
1154	17310.0	0.00	0.00	42821.62	42732.60	0.74	320500.09	880.08
1155	17325.0	0.00	0.00	42732.60	42643.76	0.74	319833.76	880.08
1156	17340.0	0.00	0.00	42643.76	42555.10	0.74	319168.76	880.08
1157	17355.0	0.00	0.00	42555.10	42466.61	0.74	318505.07	880.08
1158	17370.0	0.00	0.00	42466.61	42378.29	0.74	317842.71	880.08
1159	17385.0	0.00	0.00	42378.29	42290.15	0.73	317181.66	880.08
1160	17400.0	0.00	0.00	42290.15	42202.19	0.73	316521.92	880.08
1161	17415.0	0.00	0.00	42202.19	42114.40	0.73	315863.50	880.08
1162	17430.0	0.00	0.00	42114.40	42026.79	0.73	315206.38	880.08
1163	17445.0	0.00	0.00	42026.79	41939.35	0.73	314550.57	880.08
1164	17460.0	0.00	0.00	41939.35	41852.08	0.73	313896.07	880.08
1165	17475.0	0.00	0.00	41852.08	41764.99	0.73	313242.86	880.08
1166	17490.0	0.00	0.00	41764.99	41678.07	0.72	312590.95	880.08
1167	17505.0	0.00	0.00	41678.07	41591.32	0.72	311940.34	880.08
1168	17520.0	0.00	0.00	41591.32	41504.75	0.72	311291.02	880.08
1169	17535.0	0.00	0.00	41504.75	41418.35	0.72	310642.99	880.08
1170	17550.0	0.00	0.00	41418.35	41332.12	0.72	309996.25	880.08
1171	17565.0	0.00	0.00	41332.12	41246.06	0.72	309350.80	880.08
1172	17580.0	0.00	0.00	41246.06	41160.17	0.72	308706.62	880.08
1173	17595.0	0.00	0.00	41160.17	41074.45	0.71	308063.73	880.08
1174	17610.0	0.00	0.00	41074.45	40988.90	0.71	307422.12	880.08
1175	17625.0	0.00	0.00	40988.90	40903.53	0.71	306781.78	880.07
1176	17640.0	0.00	0.00	40903.53	40818.32	0.71	306142.71	880.07
1177	17655.0	0.00	0.00	40818.32	40733.28	0.71	305504.91	880.07
1178	17670.0	0.00	0.00	40733.28	40648.41	0.71	304868.38	880.07
1179	17685.0	0.00	0.00	40648.41	40563.71	0.71	304233.12	880.07
1180	17700.0	0.00	0.00	40563.71	40479.18	0.70	303599.11	880.07
1181	17715.0	0.00	0.00	40479.18	40394.81	0.70	302966.37	880.07
1182	17730.0	0.00	0.00	40394.81	40310.62	0.70	302334.89	880.07
1183	17745.0	0.00	0.00	40310.62	40226.59	0.70	301704.66	880.07
1184	17760.0	0.00	0.00	40226.59	40142.73	0.70	301075.68	880.07
1185	17775.0	0.00	0.00	40142.73	40059.03	0.70	300447.95	880.07
1186	17790.0	0.00	0.00	40059.03	39975.50	0.70	299821.47	880.07
1187	17805.0	0.00	0.00	39975.50	39892.14	0.69	299196.24	880.07
1188	17820.0	0.00	0.00	39892.14	39808.94	0.69	298572.25	880.07
1189	17835.0	0.00	0.00	39808.94	39725.91	0.69	297949.49	880.07
1190	17850.0	0.00	0.00	39725.91	39643.04	0.69	297327.98	880.07

1191	17865.0	0.00	0.00	39643.04	39560.34	0.69	296707.70	880.07
1192	17880.0	0.00	0.00	39560.34	39477.80	0.69	296088.65	880.07

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1193	17895.0	0.00	0.00	39477.80	39395.43	0.69	295470.84	880.07
1194	17910.0	0.00	0.00	39395.43	39313.22	0.68	294854.25	880.07
1195	17925.0	0.00	0.00	39313.22	39231.17	0.68	294238.88	880.07
1196	17940.0	0.00	0.00	39231.17	39149.28	0.68	293624.74	880.07
1197	17955.0	0.00	0.00	39149.28	39067.56	0.68	293011.82	880.07
1198	17970.0	0.00	0.00	39067.56	38986.00	0.68	292400.12	880.07
1199	17985.0	0.00	0.00	38986.00	38904.61	0.68	291789.63	880.07
1200	18000.0	0.00	0.00	38904.61	38823.37	0.68	291180.36	880.07
1201	18015.0	0.00	0.00	38823.37	38742.30	0.67	290572.30	880.07
1202	18030.0	0.00	0.00	38742.30	38661.39	0.67	289965.45	880.07
1203	18045.0	0.00	0.00	38661.39	38580.63	0.67	289359.80	880.07
1204	18060.0	0.00	0.00	38580.63	38500.04	0.67	288755.35	880.07
1205	18075.0	0.00	0.00	38500.04	38419.61	0.67	288152.11	880.07
1206	18090.0	0.00	0.00	38419.61	38339.34	0.67	287550.07	880.07
1207	18105.0	0.00	0.00	38339.34	38259.23	0.67	286949.22	880.07
1208	18120.0	0.00	0.00	38259.23	38179.28	0.67	286349.57	880.07
1209	18135.0	0.00	0.00	38179.28	38099.48	0.66	285751.10	880.07
1210	18150.0	0.00	0.00	38099.48	38019.85	0.66	285153.83	880.07
1211	18165.0	0.00	0.00	38019.85	37940.37	0.66	284557.75	880.07
1212	18180.0	0.00	0.00	37940.37	37861.05	0.66	283962.85	880.07
1213	18195.0	0.00	0.00	37861.05	37781.89	0.66	283369.13	880.07
1214	18210.0	0.00	0.00	37781.89	37702.89	0.66	282776.59	880.07
1215	18225.0	0.00	0.00	37702.89	37624.04	0.66	282185.23	880.07
1216	18240.0	0.00	0.00	37624.04	37545.35	0.66	281595.04	880.07
1217	18255.0	0.00	0.00	37545.35	37466.82	0.65	281006.03	880.07
1218	18270.0	0.00	0.00	37466.82	37388.44	0.65	280418.19	880.07
1219	18285.0	0.00	0.00	37388.44	37310.22	0.65	279831.51	880.07
1220	18300.0	0.00	0.00	37310.22	37232.15	0.65	279246.00	880.07
1221	18315.0	0.00	0.00	37232.15	37154.24	0.65	278661.66	880.07
1222	18330.0	0.00	0.00	37154.24	37076.48	0.65	278078.48	880.07
1223	18345.0	0.00	0.00	37076.48	36998.88	0.65	277496.45	880.07
1224	18360.0	0.00	0.00	36998.88	36921.43	0.64	276915.58	880.07
1225	18375.0	0.00	0.00	36921.43	36844.14	0.64	276335.87	880.07
1226	18390.0	0.00	0.00	36844.14	36767.00	0.64	275757.31	880.07
1227	18405.0	0.00	0.00	36767.00	36690.01	0.64	275179.90	880.07
1228	18420.0	0.00	0.00	36690.01	36613.18	0.64	274603.63	880.07
1229	18435.0	0.00	0.00	36613.18	36536.50	0.64	274028.52	880.07
1230	18450.0	0.00	0.00	36536.50	36459.97	0.64	273454.54	880.07
1231	18465.0	0.00	0.00	36459.97	36383.59	0.64	272881.70	880.07
1232	18480.0	0.00	0.00	36383.59	36307.37	0.63	272310.01	880.07
1233	18495.0	0.00	0.00	36307.37	36231.29	0.63	271739.45	880.07
1234	18510.0	0.00	0.00	36231.29	36155.37	0.63	271170.02	880.07
1235	18525.0	0.00	0.00	36155.37	36079.60	0.63	270601.73	880.07
1236	18540.0	0.00	0.00	36079.60	36003.98	0.63	270034.56	880.07
1237	18555.0	0.00	0.00	36003.98	35928.51	0.63	269468.52	880.07
1238	18570.0	0.00	0.00	35928.51	35853.19	0.63	268903.61	880.07
1239	18585.0	0.00	0.00	35853.19	35778.02	0.63	268339.82	880.07
1240	18600.0	0.00	0.00	35778.02	35702.99	0.62	267777.15	880.07

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1241	18615.0	0.00	0.00	35702.99	35628.12	0.62	267215.59	880.07
1242	18630.0	0.00	0.00	35628.12	35553.40	0.62	266655.16	880.07
1243	18645.0	0.00	0.00	35553.40	35478.82	0.62	266095.84	880.07
1244	18660.0	0.00	0.00	35478.82	35404.40	0.62	265537.62	880.07
1245	18675.0	0.00	0.00	35404.40	35330.12	0.62	264980.52	880.07
1246	18690.0	0.00	0.00	35330.12	35255.99	0.62	264424.53	880.07
1247	18705.0	0.00	0.00	35255.99	35182.00	0.62	263869.64	880.07
1248	18720.0	0.00	0.00	35182.00	35108.17	0.61	263315.85	880.07
1249	18735.0	0.00	0.00	35108.17	35034.48	0.61	262763.17	880.07
1250	18750.0	0.00	0.00	35034.48	34960.93	0.61	262211.58	880.07
1251	18765.0	0.00	0.00	34960.93	34887.53	0.61	261661.09	880.07

1252	18780.0	0.00	0.00	34887.53	34814.28	0.61	261111.69	880.07
1253	18795.0	0.00	0.00	34814.28	34741.18	0.61	260563.38	880.07
1254	18810.0	0.00	0.00	34741.18	34668.21	0.61	260016.17	880.07
1255	18825.0	0.00	0.00	34668.21	34595.40	0.61	259470.04	880.07
1256	18840.0	0.00	0.00	34595.40	34522.73	0.61	258925.00	880.07
1257	18855.0	0.00	0.00	34522.73	34450.20	0.60	258381.04	880.07
1258	18870.0	0.00	0.00	34450.20	34377.82	0.60	257838.16	880.07
1259	18885.0	0.00	0.00	34377.82	34305.58	0.60	257296.36	880.07
1260	18900.0	0.00	0.00	34305.58	34233.48	0.60	256755.63	880.07
1261	18915.0	0.00	0.00	34233.48	34161.53	0.60	256215.98	880.07
1262	18930.0	0.00	0.00	34161.53	34089.72	0.60	255677.41	880.07
1263	18945.0	0.00	0.00	34089.72	34018.06	0.60	255139.90	880.07
1264	18960.0	0.00	0.00	34018.06	33946.53	0.60	254603.46	880.07
1265	18975.0	0.00	0.00	33946.53	33875.15	0.59	254068.09	880.07
1266	18990.0	0.00	0.00	33875.15	33803.91	0.59	253533.78	880.07
1267	19005.0	0.00	0.00	33803.91	33732.81	0.59	253000.54	880.07
1268	19020.0	0.00	0.00	33732.81	33661.86	0.59	252468.35	880.07
1269	19035.0	0.00	0.00	33661.86	33591.04	0.59	251937.22	880.07
1270	19050.0	0.00	0.00	33591.04	33520.37	0.59	251407.15	880.07
1271	19065.0	0.00	0.00	33520.37	33449.83	0.59	250878.13	880.07
1272	19080.0	0.00	0.00	33449.83	33379.44	0.59	250350.16	880.07
1273	19095.0	0.00	0.00	33379.44	33309.18	0.58	249823.24	880.07
1274	19110.0	0.00	0.00	33309.18	33239.07	0.58	249297.37	880.07
1275	19125.0	0.00	0.00	33239.07	33169.09	0.58	248772.55	880.07
1276	19140.0	0.00	0.00	33169.09	33099.25	0.58	248248.76	880.07
1277	19155.0	0.00	0.00	33099.25	33029.56	0.58	247726.02	880.07
1278	19170.0	0.00	0.00	33029.56	32960.00	0.58	247204.32	880.07
1279	19185.0	0.00	0.00	32960.00	32890.58	0.58	246683.65	880.07
1280	19200.0	0.00	0.00	32890.58	32821.29	0.58	246164.02	880.07
1281	19215.0	0.00	0.00	32821.29	32752.15	0.58	245645.42	880.07
1282	19230.0	0.00	0.00	32752.15	32683.14	0.57	245127.85	880.06
1283	19245.0	0.00	0.00	32683.14	32614.27	0.57	244611.31	880.06
1284	19260.0	0.00	0.00	32614.27	32545.53	0.57	244095.79	880.06
1285	19275.0	0.00	0.00	32545.53	32476.94	0.57	243581.30	880.06
1286	19290.0	0.00	0.00	32476.94	32408.47	0.57	243067.84	880.06
1287	19305.0	0.00	0.00	32408.47	32340.15	0.57	242555.39	880.06
1288	19320.0	0.00	0.00	32340.15	32271.96	0.57	242043.96	880.06

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1289	19335.0	0.00	0.00	32271.96	32203.91	0.57	241533.55	880.06
1290	19350.0	0.00	0.00	32203.91	32135.99	0.57	241024.15	880.06
1291	19365.0	0.00	0.00	32135.99	32068.20	0.56	240515.77	880.06
1292	19380.0	0.00	0.00	32068.20	32000.56	0.56	240008.39	880.06
1293	19395.0	0.00	0.00	32000.56	31933.04	0.56	239502.03	880.06
1294	19410.0	0.00	0.00	31933.04	31865.66	0.56	238996.66	880.06
1295	19425.0	0.00	0.00	31865.66	31798.41	0.56	238492.31	880.06
1296	19440.0	0.00	0.00	31798.41	31731.30	0.56	237988.96	880.06
1297	19455.0	0.00	0.00	31731.30	31664.32	0.56	237486.60	880.06
1298	19470.0	0.00	0.00	31664.32	31597.48	0.56	236985.25	880.06
1299	19485.0	0.00	0.00	31597.48	31530.76	0.56	236484.89	880.06
1300	19500.0	0.00	0.00	31530.76	31464.18	0.55	235985.52	880.06
1301	19515.0	0.00	0.00	31464.18	31397.73	0.55	235487.15	880.06
1302	19530.0	0.00	0.00	31397.73	31331.42	0.55	234989.77	880.06
1303	19545.0	0.00	0.00	31331.42	31265.23	0.55	234493.38	880.06
1304	19560.0	0.00	0.00	31265.23	31199.18	0.55	233997.97	880.06
1305	19575.0	0.00	0.00	31199.18	31133.26	0.55	233503.55	880.06
1306	19590.0	0.00	0.00	31133.26	31067.47	0.55	233010.11	880.06
1307	19605.0	0.00	0.00	31067.47	31001.81	0.55	232517.65	880.06
1308	19620.0	0.00	0.00	31001.81	30936.28	0.55	232026.17	880.06
1309	19635.0	0.00	0.00	30936.28	30870.88	0.54	231535.67	880.06
1310	19650.0	0.00	0.00	30870.88	30805.61	0.54	231046.14	880.06
1311	19665.0	0.00	0.00	30805.61	30740.47	0.54	230557.59	880.06
1312	19680.0	0.00	0.00	30740.47	30675.46	0.54	230070.00	880.06
1313	19695.0	0.00	0.00	30675.46	30610.58	0.54	229583.39	880.06
1314	19710.0	0.00	0.00	30610.58	30545.83	0.54	229097.74	880.06
1315	19725.0	0.00	0.00	30545.83	30481.20	0.54	228613.05	880.06
1316	19740.0	0.00	0.00	30481.20	30416.71	0.54	228129.33	880.06
1317	19755.0	0.00	0.00	30416.71	30352.34	0.54	227646.58	880.06
1318	19770.0	0.00	0.00	30352.34	30288.10	0.53	227164.78	880.06
1319	19785.0	0.00	0.00	30288.10	30223.99	0.53	226683.93	880.06
1320	19800.0	0.00	0.00	30223.99	30160.01	0.53	226204.05	880.06
1321	19815.0	0.00	0.00	30160.01	30096.15	0.53	225725.11	880.06
1322	19830.0	0.00	0.00	30096.15	30032.42	0.53	225247.13	880.06
1323	19845.0	0.00	0.00	30032.42	29968.82	0.53	224770.10	880.06
1324	19860.0	0.00	0.00	29968.82	29905.34	0.53	224294.02	880.06
1325	19875.0	0.00	0.00	29905.34	29841.99	0.53	223818.88	880.06
1326	19890.0	0.00	0.00	29841.99	29778.77	0.53	223344.69	880.06

1327	19905.0	0.00	0.00	29778.77	29715.67	0.53	222871.44	880.06
1328	19920.0	0.00	0.00	29715.67	29652.69	0.52	222399.13	880.06
1329	19935.0	0.00	0.00	29652.69	29589.84	0.52	221927.76	880.06
1330	19950.0	0.00	0.00	29589.84	29527.12	0.52	221457.33	880.06
1331	19965.0	0.00	0.00	29527.12	29464.52	0.52	220987.83	880.06
1332	19980.0	0.00	0.00	29464.52	29402.05	0.52	220519.26	880.06
1333	19995.0	0.00	0.00	29402.05	29339.70	0.52	220051.62	880.06
1334	20010.0	0.00	0.00	29339.70	29277.47	0.52	219584.92	880.06
1335	20025.0	0.00	0.00	29277.47	29215.37	0.52	219119.14	880.06
1336	20040.0	0.00	0.00	29215.37	29153.39	0.52	218654.29	880.06

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1337	20055.0	0.00	0.00	29153.39	29091.53	0.51	218190.36	880.06
1338	20070.0	0.00	0.00	29091.53	29029.80	0.51	217727.35	880.06
1339	20085.0	0.00	0.00	29029.80	28968.19	0.51	217265.27	880.06
1340	20100.0	0.00	0.00	28968.19	28906.70	0.51	216804.10	880.06
1341	20115.0	0.00	0.00	28906.70	28845.34	0.51	216343.85	880.06
1342	20130.0	0.00	0.00	28845.34	28784.09	0.51	215884.51	880.06
1343	20145.0	0.00	0.00	28784.09	28722.97	0.51	215426.08	880.06
1344	20160.0	0.00	0.00	28722.97	28661.97	0.51	214968.57	880.06
1345	20175.0	0.00	0.00	28661.97	28601.09	0.51	214511.97	880.06
1346	20190.0	0.00	0.00	28601.09	28540.33	0.51	214056.27	880.06
1347	20205.0	0.00	0.00	28540.33	28479.69	0.50	213601.48	880.06
1348	20220.0	0.00	0.00	28479.69	28419.18	0.50	213147.59	880.06
1349	20235.0	0.00	0.00	28419.18	28358.78	0.50	212694.61	880.06
1350	20250.0	0.00	0.00	28358.78	28298.50	0.50	212242.52	880.06
1351	20265.0	0.00	0.00	28298.50	28238.34	0.50	211791.34	880.06
1352	20280.0	0.00	0.00	28238.34	28178.31	0.50	211341.05	880.06
1353	20295.0	0.00	0.00	28178.31	28118.39	0.50	210891.65	880.06
1354	20310.0	0.00	0.00	28118.39	28058.59	0.50	210443.15	880.06
1355	20325.0	0.00	0.00	28058.59	27998.91	0.50	209995.54	880.06
1356	20340.0	0.00	0.00	27998.91	27939.35	0.50	209548.82	880.06
1357	20355.0	0.00	0.00	27939.35	27879.90	0.49	209102.98	880.06
1358	20370.0	0.00	0.00	27879.90	27820.58	0.49	208658.04	880.06
1359	20385.0	0.00	0.00	27820.58	27761.37	0.49	208213.97	880.06
1360	20400.0	0.00	0.00	27761.37	27702.28	0.49	207770.79	880.06
1361	20415.0	0.00	0.00	27702.28	27643.31	0.49	207328.49	880.06
1362	20430.0	0.00	0.00	27643.31	27584.45	0.49	206887.07	880.06
1363	20445.0	0.00	0.00	27584.45	27525.71	0.49	206446.53	880.06
1364	20460.0	0.00	0.00	27525.71	27467.09	0.49	206006.86	880.06
1365	20475.0	0.00	0.00	27467.09	27408.59	0.49	205568.07	880.06
1366	20490.0	0.00	0.00	27408.59	27350.20	0.49	205130.15	880.06
1367	20505.0	0.00	0.00	27350.20	27291.93	0.49	204693.09	880.06
1368	20520.0	0.00	0.00	27291.93	27233.77	0.48	204256.91	880.06
1369	20535.0	0.00	0.00	27233.77	27175.73	0.48	203821.59	880.06
1370	20550.0	0.00	0.00	27175.73	27117.80	0.48	203387.14	880.06
1371	20565.0	0.00	0.00	27117.80	27059.99	0.48	202953.55	880.06
1372	20580.0	0.00	0.00	27059.99	27002.30	0.48	202520.83	880.06
1373	20595.0	0.00	0.00	27002.30	26944.72	0.48	202088.96	880.06
1374	20610.0	0.00	0.00	26944.72	26887.25	0.48	201657.95	880.06
1375	20625.0	0.00	0.00	26887.25	26829.90	0.48	201227.80	880.06
1376	20640.0	0.00	0.00	26829.90	26772.66	0.48	200798.51	880.06
1377	20655.0	0.00	0.00	26772.66	26715.53	0.48	200370.06	880.06
1378	20670.0	0.00	0.00	26715.53	26658.52	0.47	199942.47	880.06
1379	20685.0	0.00	0.00	26658.52	26601.62	0.47	199515.73	880.06
1380	20700.0	0.00	0.00	26601.62	26544.84	0.47	199089.83	880.06
1381	20715.0	0.00	0.00	26544.84	26488.17	0.47	198664.79	880.06
1382	20730.0	0.00	0.00	26488.17	26431.61	0.47	198240.58	880.06
1383	20745.0	0.00	0.00	26431.61	26375.16	0.47	197817.22	880.06
1384	20760.0	0.00	0.00	26375.16	26318.83	0.47	197394.71	880.06

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1385	20775.0	0.00	0.00	26318.83	26262.60	0.47	196973.03	880.06
1386	20790.0	0.00	0.00	26262.60	26206.49	0.47	196552.19	880.06
1387	20805.0	0.00	0.00	26206.49	26150.49	0.47	196132.18	880.06

1388	20820.0	0.00	0.00	26150.49	26094.60	0.47	195713.01	880.06
1389	20835.0	0.00	0.00	26094.60	26038.83	0.46	195294.67	880.06
1390	20850.0	0.00	0.00	26038.83	25983.16	0.46	194877.17	880.06
1391	20865.0	0.00	0.00	25983.16	25927.60	0.46	194460.49	880.06
1392	20880.0	0.00	0.00	25927.60	25872.16	0.46	194044.65	880.06
1393	20895.0	0.00	0.00	25872.16	25816.82	0.46	193629.62	880.06
1394	20910.0	0.00	0.00	25816.82	25761.60	0.46	193215.43	880.06
1395	20925.0	0.00	0.00	25761.60	25706.48	0.46	192802.05	880.06
1396	20940.0	0.00	0.00	25706.48	25651.48	0.46	192389.50	880.06
1397	20955.0	0.00	0.00	25651.48	25596.58	0.46	191977.77	880.06
1398	20970.0	0.00	0.00	25596.58	25541.79	0.46	191566.86	880.06
1399	20985.0	0.00	0.00	25541.79	25487.11	0.46	191156.76	880.06
1400	21000.0	0.00	0.00	25487.11	25432.54	0.45	190747.48	880.06
1401	21015.0	0.00	0.00	25432.54	25378.08	0.45	190339.01	880.06
1402	21030.0	0.00	0.00	25378.08	25323.73	0.45	189931.35	880.06
1403	21045.0	0.00	0.00	25323.73	25269.48	0.45	189524.51	880.06
1404	21060.0	0.00	0.00	25269.48	25215.34	0.45	189118.47	880.06
1405	21075.0	0.00	0.00	25215.34	25161.31	0.45	188713.24	880.06
1406	21090.0	0.00	0.00	25161.31	25107.39	0.45	188308.81	880.06
1407	21105.0	0.00	0.00	25107.39	25053.58	0.45	187905.19	880.06
1408	21120.0	0.00	0.00	25053.58	24999.87	0.45	187502.37	880.06
1409	21135.0	0.00	0.00	24999.87	24946.27	0.45	187100.35	880.06
1410	21150.0	0.00	0.00	24946.27	24892.77	0.45	186699.13	880.06
1411	21165.0	0.00	0.00	24892.77	24839.38	0.44	186298.70	880.06
1412	21180.0	0.00	0.00	24839.38	24786.10	0.44	185899.08	880.06
1413	21195.0	0.00	0.00	24786.10	24732.92	0.44	185500.24	880.06
1414	21210.0	0.00	0.00	24732.92	24679.85	0.44	185102.20	880.06
1415	21225.0	0.00	0.00	24679.85	24626.89	0.44	184704.95	880.06
1416	21240.0	0.00	0.00	24626.89	24574.03	0.44	184308.49	880.06
1417	21255.0	0.00	0.00	24574.03	24521.27	0.44	183912.82	880.05
1418	21270.0	0.00	0.00	24521.27	24468.62	0.44	183517.93	880.05
1419	21285.0	0.00	0.00	24468.62	24416.07	0.44	183123.83	880.05
1420	21300.0	0.00	0.00	24416.07	24363.63	0.44	182730.51	880.05
1421	21315.0	0.00	0.00	24363.63	24311.29	0.44	182337.98	880.05
1422	21330.0	0.00	0.00	24311.29	24259.06	0.43	181946.22	880.05
1423	21345.0	0.00	0.00	24259.06	24206.93	0.43	181555.24	880.05
1424	21360.0	0.00	0.00	24206.93	24154.91	0.43	181165.04	880.05
1425	21375.0	0.00	0.00	24154.91	24102.98	0.43	180775.62	880.05
1426	21390.0	0.00	0.00	24102.98	24051.16	0.43	180386.97	880.05
1427	21405.0	0.00	0.00	24051.16	23999.45	0.43	179999.09	880.05
1428	21420.0	0.00	0.00	23999.45	23947.83	0.43	179611.98	880.05
1429	21435.0	0.00	0.00	23947.83	23896.32	0.43	179225.64	880.05
1430	21450.0	0.00	0.00	23896.32	23844.91	0.43	178840.07	880.05
1431	21465.0	0.00	0.00	23844.91	23793.61	0.43	178455.27	880.05
1432	21480.0	0.00	0.00	23793.61	23742.40	0.43	178071.23	880.05

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1433	21495.0	0.00	0.00	23742.40	23691.30	0.43	177687.95	880.05
1434	21510.0	0.00	0.00	23691.30	23640.30	0.42	177305.43	880.05
1435	21525.0	0.00	0.00	23640.30	23589.40	0.42	176923.68	880.05
1436	21540.0	0.00	0.00	23589.40	23538.60	0.42	176542.68	880.05
1437	21555.0	0.00	0.00	23538.60	23487.90	0.42	176162.44	880.05
1438	21570.0	0.00	0.00	23487.90	23437.31	0.42	175782.96	880.05
1439	21585.0	0.00	0.00	23437.31	23386.81	0.42	175404.23	880.05
1440	21600.0	0.00	0.00	23386.81	23336.41	0.42	175026.25	880.05

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FLOOD HYDROGRAPH REPORT

Hydrograph Number: 1
 Name: FLD-100 YR-SB1-EX OVERALL AREA
 Type: Computed Flood

[HYDROGRAPH INFORMATION]

Peak Flow (Qp) = 569.81 (cfs) ← INFLOW
 Time to Peak (Tp) = 795.00 (min)
 Time of Base (Tb) = 1820.44 (min)
 Volume = 152.98 (ac-ft)
 Time Step = 15.00 (min)
 Flow Multiplier = 1.00

[UNIT HYDROGRAPH INFORMATION]

Number = 1
 Type = SCS Curvilinear
 Peak Flow (Qp) = 403.92 (cfs)
 Time to Peak (Tp) = 80.00 (min)
 Time of Base (Tb) = 400.00 (min)
 Volume = 59.44 (ac-ft)
 Shape Factor = 484.00
 Time Step: = 15.00 (min)
 Excess Rain = 1.00 (in)
 Lag Time = 72.00 (min)

[BASIN INFORMATION]

[WEIGHTED WATERSHED AREA]

Description	Area	CN
<None>		
Overall Approximation	712.15	78

[TIME CONCENTRATION -- User Defined]

Time of Concentration (Tc) = 120.00 (min)

[RAINFALL DESCRIPTION]

Distribution Type = SCS II
 Total Precipitation = 4.84 (in)
 Return Period = 25 (yr)
 Storm Duration = 24.00 (hr)

[Unit Hydrograph Flow Values: Time vs. Flow]
 [The time interval is 15.00 min]

Time Interval	Time (min)	Flow (cfs)
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User Name: hilerdyp
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FLOOD HYDROGRAPH REPORT

=====

1	15.00	36.86
2	30.00	113.10
3	45.00	237.81
4	60.00	353.43
5	75.00	401.40
6	90.00	393.82
7	105.00	343.33
8	120.00	274.67
9	135.00	190.85
10	150.00	139.35
11	165.00	103.88
12	180.00	77.55
13	195.00	56.35
14	210.00	41.71
15	225.00	30.55
16	240.00	22.22
17	255.00	16.54
18	270.00	12.27
19	285.00	9.09
20	300.00	6.66
21	315.00	4.95
22	330.00	3.84
23	345.00	2.93
24	360.00	2.02
25	375.00	1.26
26	390.00	0.50
27	400.00	0.00

[Hydrograph Flow Values: Time vs. Flow]
 [TIME CONCENTRATION -- 15.00]

Time Interval	Time (min)	Incremental Rainfall (in)	Cumulative Rainfall (in)	Incremental Outflow (cfs)	Design Outflow (cfs)
31	465.00	0.03	0.61	0.00	0.00
32	480.00	0.03	0.64	0.01	0.01
33	495.00	0.04	0.68	0.03	0.04
34	510.00	0.04	0.72	0.11	0.15
35	525.00	0.04	0.76	0.27	0.42
36	540.00	0.04	0.80	0.54	0.96
37	555.00	0.05	0.85	0.87	1.83
38	570.00	0.05	0.90	1.24	3.06
39	585.00	0.06	0.96	1.60	4.66
40	600.00	0.07	1.02	1.95	6.61
41	615.00	0.08	1.11	2.35	8.96
42	630.00	0.10	1.20	2.86	11.81

User Name: hilerd xp
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FLOOD HYDROGRAPH REPORT

43	645.00	0.13	1.33	3.57	15.39
44	660.00	0.39	1.73	4.60	19.99
45	675.00	1.42	3.15	6.11	26.09
46	690.00	0.26	3.41	9.38	35.48
47	705.00	0.15	3.56	22.26	57.74
48	720.00	0.10	3.66	61.82	119.56
49	735.00	0.09	3.75	107.26	226.82
50	750.00	0.07	3.82	144.05	370.87
51	765.00	0.06	3.88	127.30	498.17
52	780.00	0.06	3.94	65.69	563.86
53	795.00	0.05	3.99	5.95	569.81
54	810.00	0.05	4.03	-41.96	527.86
55	825.00	0.04	4.07	-70.04	457.81
56	840.00	0.04	4.12	-81.55	376.26
57	855.00	0.04	4.15	-61.97	314.29
58	870.00	0.04	4.19	-48.55	265.74
59	885.00	0.03	4.22	-39.37	226.37
60	900.00	0.03	4.25	-32.42	193.96
61	915.00	0.03	4.28	-25.39	168.57
62	930.00	0.03	4.31	-20.47	148.09
63	945.00	0.03	4.34	-16.39	131.70
64	960.00	0.03	4.37	-13.02	118.68
65	975.00	0.03	4.39	-10.81	107.87
66	990.00	0.03	4.42	-9.14	98.73
67	1005.00	0.02	4.44	-7.77	90.96
68	1020.00	0.02	4.47	-6.45	84.51
69	1035.00	0.02	4.49	-5.29	79.23
70	1050.00	0.02	4.51	-4.51	74.71
71	1065.00	0.02	4.53	-4.04	70.68
72	1080.00	0.02	4.55	-3.63	67.05
73	1095.00	0.02	4.57	-3.32	63.73
74	1110.00	0.02	4.59	-2.86	60.87
75	1125.00	0.02	4.60	-2.35	58.52
76	1140.00	0.02	4.62	-2.15	56.37
77	1155.00	0.02	4.64	-2.01	54.36
78	1170.00	0.02	4.65	-1.92	52.44
79	1185.00	0.02	4.67	-1.86	50.58
80	1200.00	0.02	4.69	-1.82	48.76
81	1215.00	0.02	4.70	-1.78	46.98
82	1230.00	0.02	4.72	-1.73	45.25
83	1245.00	0.02	4.73	-1.62	43.63
84	1260.00	0.02	4.75	-1.45	42.18
85	1275.00	0.02	4.76	-1.23	40.95
86	1290.00	0.01	4.78	-0.99	39.95
87	1305.00	0.01	4.79	-0.81	39.14
88	1320.00	0.01	4.81	-0.71	38.43
89	1335.00	0.01	4.82	-0.65	37.78
90	1350.00	0.01	4.84	-0.60	37.18

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FLOOD HYDROGRAPH REPORT

91	1365.00	0.00	4.84	-0.56	36.62
92	1380.00	0.00	4.84	-0.53	36.09
93	1395.00	0.00	4.84	-0.47	35.62
94	1410.00	0.00	4.84	-0.43	35.19
95	1425.00	0.00	4.84	-0.41	34.78
96	1440.00	0.00	4.84	-0.49	34.29
97	1455.00	0.00	4.84	-1.00	33.28
98	1470.00	0.00	4.84	-1.97	31.31
99	1485.00	0.00	4.84	-3.31	28.01
100	1500.00	0.00	4.84	-4.37	23.64
101	1515.00	0.00	4.84	-4.70	18.95
102	1530.00	0.00	4.84	-4.44	14.51
103	1545.00	0.00	4.84	-3.78	10.73
104	1560.00	0.00	4.84	-2.93	7.80
105	1575.00	0.00	4.84	-2.06	5.74
106	1590.00	0.00	4.84	-1.51	4.23
107	1605.00	0.00	4.84	-1.13	3.11
108	1620.00	0.00	4.84	-0.84	2.27
109	1635.00	0.00	4.84	-0.61	1.66
110	1650.00	0.00	4.84	-0.45	1.21
111	1665.00	0.00	4.84	-0.33	0.88
112	1680.00	0.00	4.84	-0.24	0.64
113	1695.00	0.00	4.84	-0.18	0.46
114	1710.00	0.00	4.84	-0.13	0.33
115	1725.00	0.00	4.84	-0.10	0.23
116	1740.00	0.00	4.84	-0.07	0.16
117	1755.00	0.00	4.84	-0.05	0.11
118	1770.00	0.00	4.84	-0.04	0.07
119	1785.00	0.00	4.84	-0.03	0.04
120	1800.00	0.00	4.84	-0.02	0.02
121	1815.00	0.00	4.84	-0.01	0.00

User Name: hilerd xp
 Date: 08-17-10
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UNIT HYDROGRAPH REPORT

Hydrograph Number: 1
 Name: SB1-EX 100 YR
 Type: SCS Curvilinear

[UNIT HYDROGRAPH INFORMATION]

Peak Flow (Qp) = 403.92 (cfs)
 Time to Peak (Tp) = 80.00 (min)
 Time of Base (Tb) = 400.00 (min)
 Volume = 59.44 (ac-ft)
 Shape Factor = 484.00
 Time Step = 15.00 (min)
 Excess Rain = 1.00 (in)
 Storm Duration = 15.96 (min)
 Lag Time = 72.00 (min)

[BASIN INFORMATION]

[WEIGHTED WATERSHED AREA]

Description	Area	CN
<None>		
Overall Approximation	712.15	78

[TIME CONCENTRATION -- User Defined]

Time of Concentration (Tc) = 120.00 (min)

[Unit Hydrograph Flow Values: Time vs. Flow]
 [The time interval is 15.00 min]

Time Interval	Time (min)	Flow (cfs)
1	15.00	36.86
2	30.00	113.10
3	45.00	237.81
4	60.00	353.43
5	75.00	401.40
6	90.00	393.82
7	105.00	343.33
8	120.00	274.67
9	135.00	190.85
10	150.00	139.35
11	165.00	103.88
12	180.00	77.55
13	195.00	56.35
14	210.00	41.71

User Name: hilerdpx
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UNIT HYDROGRAPH REPORT

15	225.00	30.55
16	240.00	22.22
17	255.00	16.54
18	270.00	12.27
19	285.00	9.09
20	300.00	6.66
21	315.00	4.95
22	330.00	3.84
23	345.00	2.93
24	360.00	2.02
25	375.00	1.26
26	390.00	0.50

Appendix 'F'

- **Plan and Profile View – Alternative 2**
- **Calculations – Alternative 2**

Worksheet for 30" PIPE - ALT 2

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Full Flow Capacity

Input Data

Roughness Coefficient: 0.013
Channel Slope: 0.75000 %
Diameter: 30.00 in

Results

Discharge: 35.52 ft³/s
Normal Depth: 30.00 in
Flow Area: 4.91 ft²
Wetted Perimeter: 7.85 ft
Top Width: 0.00 ft
Critical Depth: 2.02 ft
Percent Full: 100.0 %
Critical Slope: 0.00768 ft/ft
Velocity: 7.24 ft/s
Velocity Head: 0.81 ft
Specific Energy: 3.31 ft
Froude Number: 0.00
Maximum Discharge: 38.21 ft³/s
Discharge Full: 35.52 ft³/s
Slope Full: 0.00750 ft/ft
Flow Type: SubCritical

GVF Input Data

Downstream Depth: 0.00 in
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 in
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 1.00 %
Downstream Velocity: Infinity ft/s

Worksheet for 30" PIPE - ALT 2

Upstream Velocity:	Infinity	ft/s
Normal Depth:	30.00	in
Critical Depth:	2.02	ft
Channel Slope:	0.75000	%
Critical Slope:	0.00768	ft/ft

Appendix 'G'

- **Plan and Profile View – Alternative 3**
- **Calculations – Alternative 3**

Worksheet for 30" PIPE - ALT 3

Project Description

Flow Element: Circular Pipe
Friction Method: Manning Formula
Solve For: Full Flow Capacity

Input Data

Roughness Coefficient: 0.013
Channel Slope: 0.75000 %
Diameter: 30.00 in

Results

Discharge: 35.52 ft³/s
Normal Depth: 30.00 in
Flow Area: 4.91 ft²
Wetted Perimeter: 7.85 ft
Top Width: 0.00 ft
Critical Depth: 2.02 ft
Percent Full: 100.0 %
Critical Slope: 0.00768 ft/ft
Velocity: 7.24 ft/s
Velocity Head: 0.81 ft
Specific Energy: 3.31 ft
Froude Number: 0.00
Maximum Discharge: 38.21 ft³/s
Discharge Full: 35.52 ft³/s
Slope Full: 0.00750 ft/ft
Flow Type: SubCritical

GVF Input Data

Downstream Depth: 0.00 in
Length: 0.00 ft
Number Of Steps: 0

GVF Output Data

Upstream Depth: 0.00 in
Profile Description:
Profile Headloss: 0.00 ft
Average End Depth Over Rise: 0.00 %
Normal Depth Over Rise: 1.00 %
Downstream Velocity: Infinity ft/s

Worksheet for 30" PIPE - ALT 3

Upstream Velocity:	Infinity	ft/s
Normal Depth:	30.00	in
Critical Depth:	2.02	ft
Channel Slope:	0.75000	%
Critical Slope:	0.00768	ft/ft