


NUMBER		NOT REQ'D	NOT DONE	SATISFIED			
					WASTEWATER REPORT		
					REVIEW #		
	ITEMS				BY		DATE
					Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)		

Preliminary Wastewater Information

1	Preliminary wastewater information required with the following submittals: <ul style="list-style-type: none"> General Plan Amendment Rezone PAD Application 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.A
2	Is the project phased? If <u>Yes</u> a Master Wastewater Report is required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.A
3	Format: Memorandum	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4	Signed and sealed by AZ PE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5	Project Description: <ul style="list-style-type: none"> Project Name Report Type (Preliminary Wastewater Information) Project Location (Major Cross Streets, Section Township & Range) Project Area (Acre) If residential - Number of Dwelling Units (DU) and DU/Acre 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6	Identify Sewer Service Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7	Discuss the conceptual location and size of the existing and proposed sewer mains within and adjacent to the site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.A
8	Identify wastewater treatment facility that will serve the site.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.A Refer to the 2007 Integrated Water Master Plan Figures 6-7 & 6-8.
9	Discuss wastewater treatment plant capacity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.A

COG Wastewater Treatment Facility	Plant Capacity* (MGD)	Current Plant Treatment** (MGD)
157 th Ave	4.0	3.3
Corgett	0.8	0.34
Rainbow Valley	0.8	0.24

*Plant Capacity from the 2007 Integrated Water Master Plan - Table 6-10
 **Current (2014) Plant Treatment from the 2016 Integrated Water Master Plan - Section 4.2.1



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

10	Wastewater Generation Rate <ul style="list-style-type: none"> Average Day Max Day = Peaking factor x Ave Day 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2 (Average Day) & 6.3.1.J (Max Day)
11	Discuss any scheduled improvements to be constructed at the facility prior to construction of the proposed project.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.A
12	Sewer System Exhibit including: <ul style="list-style-type: none"> Project Site Street Names North Arrow Existing Sewer Mains Conceptual Proposed Sewer Mains Proposed Connections to Existing System 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.A

Master Wastewater Report

1	A Master Wastewater Report is required for each project which will be designed and constructed in a phased succession.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B The Master Wastewater Report is provided with a rezone or PAD application.
2	The Master Report shall follow the Outline provided at the end of Chapter 6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Outline is at the end of Chapter 6 (Pages 26 to 28)
3	<u>Title Page:</u> <ul style="list-style-type: none"> Project Name Location Type of Report (Master Wastewater Report) Engineer's Seal & Signature Date Consulting Firm, Name, Address, and Phone Number 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
4	Table of Contents - Sealed and signed by a P.E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.11.1.A.2
INTRODUCTION					
5	Project Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
6	Report Type (Master Wastewater Report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
7	Project Description (Size, Area)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

8	General Land Use Proposed for Project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2007 Integrated Water Master Plan - Figure 2-2 Land Use should coincide with Table 6.3-2 Wastewater Generation Factors
9	Identify Sewer Service Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	State whether the project is within the City of Goodyear sewer service area, or within a private utility company service area. Identify the sewer provider.
10	Summarize on a parcel by parcel basis: <u>Residential</u> <ul style="list-style-type: none"> Number of Dwelling Units (DU) Unit density (DU/Acre) <u>Commercial/Industrial</u> <ul style="list-style-type: none"> Acres 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
11	Project Location (Major Cross Streets, Section Township & Range)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Description of the location of the project and a vicinity map shall be provided.
12	Topographic Conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
13	Project Phasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B
PROJECTED WASTEWATER FLOW					
16	Summarize Wastewater Generation Factors (include reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2
17	Summarize Peaking Factors (include reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.J.1.a - Peaking Factor = 1,000 gpdu (Residential sewer lines) 6.3.1.J.2.b - Peaking Factor = 2.89 (sewer mains)
18	Provide Flow Projection Calculations Summary (Avg Flow, Peak Flow) <ul style="list-style-type: none"> Summarize Flow Projections by Phase Include Full Calculations in the Appendix 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2 (Average Day) & 6.3.1.J (Max Day) Avg Flow = gal per dwelling unit (DU) x No. of DU Peak Flow = Avg Flow x Peaking factor
EXISTING SEWER SYSTEM					
19	<u>Collection Mains</u> <ul style="list-style-type: none"> Discuss the location and size of the existing sewer collection mains adjacent to the site Discuss the location and size of any proposed sewer collection mains adjacent to the site Show there is adequate capacity to serve the proposed development 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3 Verify that the master plan is consistent with the 2007 Integrated Water Master Plan (Figures 6-7 & 6-8) or other master plans for the area i.e. West Goodyear Central Planning Area (WGCPA) Figure 5.



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED	WASTEWATER REPORT			
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

20	<u>Wastewater Treatment Plant (WWTP)</u> <ul style="list-style-type: none"> Identify the WWTP that will serve the site Discuss any scheduled improvements to be constructed at the WWTP. Discuss WWTP Capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1B.3.b – Only need to include WWTP information if the property will be rezoned, or PAD significantly alters sewer main alignments as shown in the 2007 Integrated Water Master Plan - Figures 6-7 & 6-8. <table border="1" style="margin-top: 10px; width: 100%;"> <thead> <tr> <th>COG Wastewater Treatment Facility</th> <th>Plant Capacity* (MGD)</th> </tr> </thead> <tbody> <tr> <td>157th Ave</td> <td>4.0</td> </tr> <tr> <td>Corgett</td> <td>0.8</td> </tr> <tr> <td>Rainbow Valley</td> <td>0.8</td> </tr> </tbody> </table> *Plant Capacity from the 2007 Integrated Water Master Plan - Table 6-10	COG Wastewater Treatment Facility	Plant Capacity* (MGD)	157 th Ave	4.0	Corgett	0.8	Rainbow Valley	0.8
COG Wastewater Treatment Facility	Plant Capacity* (MGD)												
157 th Ave	4.0												
Corgett	0.8												
Rainbow Valley	0.8												
21	<u>Lift Stations</u> <ul style="list-style-type: none"> Identify any existing lift stations that will serve the site Discuss existing wet well and pump capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3								
22	<u>System Improvements</u> <ul style="list-style-type: none"> Identify any required improvements within the existing system to serve the project 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3								
23	<u>Force Main</u> <ul style="list-style-type: none"> Discuss existing force main capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3								
SYSTEM IMPROVEMENTS													
24	Summarize Design Criteria for each phase (include reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline								
25	<ul style="list-style-type: none"> Wastewater Generation Rate <ul style="list-style-type: none"> Average Day Max Day = peaking factor x Ave Day 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2 (Average Day) & 6.3.1.J (Max Day) 6.3.1.J.1.a - Peaking Factor = 1,000 gpd (Residential sewer lines) 6.3.1.J.2.b - Peaking Factor = 2.89 (sewer mains)								
26	<ul style="list-style-type: none"> Manning's n 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3.d (Manning's n = 0.013)								
27	<ul style="list-style-type: none"> Pipe Capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2								
28	<ul style="list-style-type: none"> d/D ratio 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.B.1 (d/D ratio = 0.65 for wet weather flow)								
29	<ul style="list-style-type: none"> Velocity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.B.1 & Table 6.3-1 <ul style="list-style-type: none"> 10 inch and smaller: V = 2ft/s min and 9 ft/s max Larger than 10 inches: V=2.5 ft/s min and 10 ft/s max 								



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

					<ul style="list-style-type: none"> 6.4.3.A (Force Main velocity between 4 and 6 ft/s)
30	<ul style="list-style-type: none"> Slope 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-1
31	<ul style="list-style-type: none"> Minimum Cover 				6.3.1.F <ul style="list-style-type: none"> Private service = 4 feet from finished ground at the property line or easement line Trunks, mains, or branches = 6 feet from finished grade to the top of the sewer line Additional criteria required for sewers crossing floodplain
32	<ul style="list-style-type: none"> Invert Drop Through Manhole 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.G & 6.3.2.D
33	Lift Stations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.4.2.B Discuss if lift stations required to serve the development. Discuss lift station pumping requirements
34	Force Mains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.4.3
35	Discuss connection to existing system (Verify invert depth is adequate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3
SEWER MODEL/CALCULATIONS					
36	Discuss setup of sewer model/calculations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3.f - Provide offsite sewer capacity calculations including all areas upstream and downstream of the development to the next 15-inch diameter or larger sewer.
37	Discuss Assumptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
38	Discuss Modeling Software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
39	Summarize Average Flow Analysis (Include results in the Appendix)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
40	Summarize Peak Flow Analysis (Include results in the Appendix)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
41	Discuss System Phasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the sewer collection phasing can adequately convey the proposed flows from each phase.
CONCLUSION					
42	Project Summary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
43	Project Phasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
REFERENCES					
44	List references cited in report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EXHIBITS					
45	Vicinity & Location Map	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.4.b.



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

	<ul style="list-style-type: none"> Existing streets Proposed streets Existing parcels surrounding the project to a distance of at least one mile from the exterior boundaries of the project 				
46	Sewer System Exhibit (Include all on-site and off-site facilities) <ul style="list-style-type: none"> Existing Pipes Proposed Pipes Contour Lines Street Names Parcel Boundaries WWTP, Lift Stations, Force Mains 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3 - It is understood that plans are conceptual in this stage, and it is customary to show a general layout within a property rather than a detailed layout through a street system 6.2.1.B.3.f - Show and label sewer sub-basin for all areas upstream and downstream of the development to the next 15-inch diameter or larger sewer 6.2.1.B.4.a(1) - Show all proposed on-site and off-site facilities including interceptors, lift stations, force mains. 6.2.1.B.4.a.(2) Proposed street locations, parcel boundaries, and proposed lots 6.2.1.B.4.a. (3)- Contour lines (2 foot intervals) Color code Pipe diameters
47	Manhole Id Exhibit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
48	Pipe Id Exhibit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
49	Phasing Exhibit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exhibit showing the proposed sewer system improvements for each project phase
APPENDICES					
50	All reports shall include both Average Day Demand & Max Day Demand scenarios	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
51	Average Day Scenario -Manhole Report <ul style="list-style-type: none"> Label, Elevation (Rim) (ft), Elevation (Invert) (ft), Flow (Total In) (gpd), Flow (Total Out) (gpd), Hydraulic Grade Line (In) (ft), Hydraulic Grade Line (Out) (ft) - Pipe Report <ul style="list-style-type: none"> Label, Start Node, Invert (Start) (ft), Stop Node, Invert (Stop) (ft), Length (ft), Slope 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

	<p>(ft/ft), Diameter (in), Manning's n, Flow (gpd), Velocity (ft/s), Capacity (Full Flow) (gpd), d/D (%) (less than 0.65)</p> <ul style="list-style-type: none"> - Outfall Report <ul style="list-style-type: none"> • Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Boundary Condition, Hydraulic Grade (ft), Flow (Total Out) (gpd) - Pump Report (Required for projects with lift stations) <ul style="list-style-type: none"> • Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Flow, Hydraulic Grade Upstream (ft), Hydraulic Grade Downstream (ft) - Force Main Report (Required for projects with lift stations) <ul style="list-style-type: none"> • Label, Start Node, Stop Node, Length (ft), Diameter (in), Friction Factor, Flow (gpm), Velocity (ft/s) - Wet Well Report (Required for projects with lift stations) <ul style="list-style-type: none"> • Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Area, Depth (ft), Hydraulic Grade 				
52	<p>Max Day Scenario</p> <ul style="list-style-type: none"> -Manhole Report <ul style="list-style-type: none"> • Label, Elevation (Rim) (ft), Elevation (Invert) (ft), Flow (Total In) (gpd), Flow (Total Out) (gpd), Hydraulic Grade Line (In) (ft), Hydraulic Grade Line (Out) (ft) - Pipe Report <ul style="list-style-type: none"> • Label, Start Node, Invert (Start) (ft), Stop Node, Invert (Stop) (ft), Length (ft), Slope (ft/ft), Diameter (in), Manning's n, Flow (gpd), Velocity (ft/s), Capacity (Full Flow) (gpd), d/D (%) (less than 0.65) - Outfall Report <ul style="list-style-type: none"> • Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Boundary Condition, Hydraulic Grade (ft), Flow (Total Out) (gpd) - Pump Report (Required for projects with lift stations) <ul style="list-style-type: none"> • Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Flow, Hydraulic Grade Upstream (ft), Hydraulic Grade Downstream (ft) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

<ul style="list-style-type: none"> - Force Main Report (Required for projects with lift stations) <ul style="list-style-type: none"> • Label, Start Node, Stop Node, Length (ft), Diameter (in), Friction Factor, Flow (gpm), Velocity (ft/s) - Wet Well Report (Required for projects with lift stations) <ul style="list-style-type: none"> Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Area, Depth (ft), Hydraulic Grade 	
--	--

Preliminary Wastewater Report

1	A Preliminary Water Report is required for each project at the site plan or preliminary plat application.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.C
2	Preliminary Wastewater Report shall be consistent with the approved Master Wastewater Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.C.3.a- If a Master Wastewater Report was previously approved for the development the Preliminary Wastewater Report shall follow the same development protocol as identified in the Master Wastewater Report. However it will provide specific sewer flow and infrastructure needs to the phase of development being submitted.
3	The Preliminary Report shall follow the Outline provided at the end of Chapter 6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Outline is at the end of Chapter 6 (Pages 26 to 28)
4	<u>Title Page:</u> <ul style="list-style-type: none"> • Project Name • Location • Type of Report (Preliminary Wastewater Report) • Engineer's Seal & Signature • Date • Consulting Firm, Name, Address, and Phone Number 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
5	Table of Contents - Sealed and signed by a P.E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.11.1.A.2

INTRODUCTION					
6	Project Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
7	Report Type (Preliminary Wastewater Report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
8	Project Description (Size, Area)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
9	General Land Use Proposed for Project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2007 Integrated Water Master Plan - Figure 2-2 Land Use should coincide with Table 6.3-2 Wastewater Generation Factors



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED	REVIEW #				
					BY		DATE		
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)				

10	Identify Sewer Service Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	State whether the project is within the City of Goodyear sewer service area, or within a private utility company service area. Identify the sewer provider.
11	Summarize on a parcel by parcel basis: <u>Residential</u> <ul style="list-style-type: none"> Number of Dwelling Units (DU) Unit density (DU/Acre) <u>Commercial/Industrial</u> <ul style="list-style-type: none"> Acres 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
12	Project Location (Major Cross Streets, Section Township & Range)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Description of the location of the project and a vicinity map shall be provided.
13	Topographic Conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
14	Project Phasing				6.2.1.B
PROJECTED WASTEWATER FLOW					
15	Summarize Wastewater Generation Factors (include reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2
16	Summarize Peaking Factors (include reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.J.1.a - Peaking Factor = 1,000 gpdu (Residential sewer lines) 6.3.1.J.2.b - Peaking Factor = 2.89 (sewer mains)
17	Provide Flow Projection Calculations Summary (Avg Flow, Peak Flow) <ul style="list-style-type: none"> Summarize Flow Projections by Phase Include Full Calculations in the Appendix 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2 (Average Day) & 6.3.1.J (Max Day) Avg Flow = gal per dwelling unit (DU) x No. of DU Peak Flow = Avg Flow x Peaking factor
EXISTING SEWER SYSTEM					
18	<u>Collection Mains</u> <ul style="list-style-type: none"> Discuss the location and size of the existing sewer collection mains adjacent to the site Discuss the location and size of any proposed sewer collection mains adjacent to the site Show there is adequate capacity to serve the proposed development 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3 Verify that the master plan is consistent with the 2007 Integrated Water Master Plan (Figures 6-7 & 6-8) or other master plans for the area i.e. West Goodyear Central Planning Area (WGCPA) Figure 5.
19	<u>Wastewater Treatment Plant (WWTP)</u> <ul style="list-style-type: none"> Identify the WWTP that will serve the site 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1B.3.b – Only need to include WWTP information if the property will be rezoned, or PAD significantly alters sewer main alignments as



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

	<ul style="list-style-type: none"> Discuss any scheduled improvements to be constructed at the WWTP. Discuss WWTP Capacity 				<p>shown in the 2007 Integrated Water Master Plan - Figures 6-7 & 6-8.</p> <table border="1"> <thead> <tr> <th>COG Wastewater Treatment Facility</th> <th>Plant Capacity* (MGD)</th> </tr> </thead> <tbody> <tr> <td>157th Ave</td> <td>4.0</td> </tr> <tr> <td>Corgett</td> <td>0.8</td> </tr> <tr> <td>Rainbow Valley</td> <td>0.8</td> </tr> </tbody> </table> <p>*Plant Capacity from the 2007 Integrated Water Master Plan - Table 6-10</p>	COG Wastewater Treatment Facility	Plant Capacity* (MGD)	157 th Ave	4.0	Corgett	0.8	Rainbow Valley	0.8
COG Wastewater Treatment Facility	Plant Capacity* (MGD)												
157 th Ave	4.0												
Corgett	0.8												
Rainbow Valley	0.8												
20	<u>Lift Stations</u> <ul style="list-style-type: none"> Identify any existing lift stations that will serve the site Discuss existing wet well and pump capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3								
21	<u>System Improvements</u> <ul style="list-style-type: none"> Identify any required improvements within the existing system to serve the project 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3								
22	<u>Force Main</u> <ul style="list-style-type: none"> Discuss existing force main capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3								
SYSTEM IMPROVEMENTS													
23	Summarize Design Criteria for each phase (include reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline								
24	<ul style="list-style-type: none"> Wastewater Generation Rate <ul style="list-style-type: none"> Average Day Max Day = Peaking factor x Ave Day 				Table 6.3-2 (Average Day) & 6.3.1.J (Max Day) 6.3.1.J.1.a - Peaking Factor = 1,000 gpdu (Residential sewer lines) 6.3.1.J.2.b - Peaking Factor = 2.89 (sewer mains)								
25	<ul style="list-style-type: none"> Manning's n 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3.d (Manning's n = 0.013)								
26	<ul style="list-style-type: none"> Pipe Capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2								
27	<ul style="list-style-type: none"> d/D ratio 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.B.1 (d/D ratio = 0.65 for wet weather flow)								
28	<ul style="list-style-type: none"> Velocity 				6.3.1.B.1 & Table 6.3-1 <ul style="list-style-type: none"> 10 inch and smaller: V = 2ft/s min and 9 ft/s max Larger than 10 inches: V=2.5 ft/s min and 10 ft/s max 6.4.3.A (Force Main velocity between 4 and 6 ft/s) 								



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

29	<ul style="list-style-type: none"> Slope 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-1
30	<ul style="list-style-type: none"> Minimum Cover 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.F <ul style="list-style-type: none"> Private service = 4 feet from finished ground at the property line or easement line Trunks, mains, or branches = 6 feet from finished grade to the top of the sewer line Additional criteria required for sewers crossing floodplain
31	<ul style="list-style-type: none"> Invert Drop Through Manhole 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.G & 6.3.2.D
32	Lift Stations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.4.2.B Discuss if lift stations required to serve the development. Discuss lift station pumping requirements
33	Force Mains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.4.3
34	Discuss connection to existing system (Verify invert depth is adequate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3
SEWER MODEL/CALCULATIONS					
35	Discuss setup of sewer model/calculations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3.f - Provide offsite sewer capacity calculations including all areas upstream and downstream of the development to the next 15-inch diameter or larger sewer.
36	Discuss Assumptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
37	Discuss Modeling Software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
38	Average Flow Analysis (Include results in the Appendix)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
39	Peak Flow Analysis (Include results in the Appendix)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
40	Discuss System Phasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the sewer collection phasing can adequately convey the proposed flows from each phase.
CONCLUSION					
41	Project Summary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
42	Project Phasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
REFERENCES					
43	List references cited in report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EXHIBITS					
44	Vicinity & Location Map <ul style="list-style-type: none"> Existing streets Proposed streets 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.4.b.



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

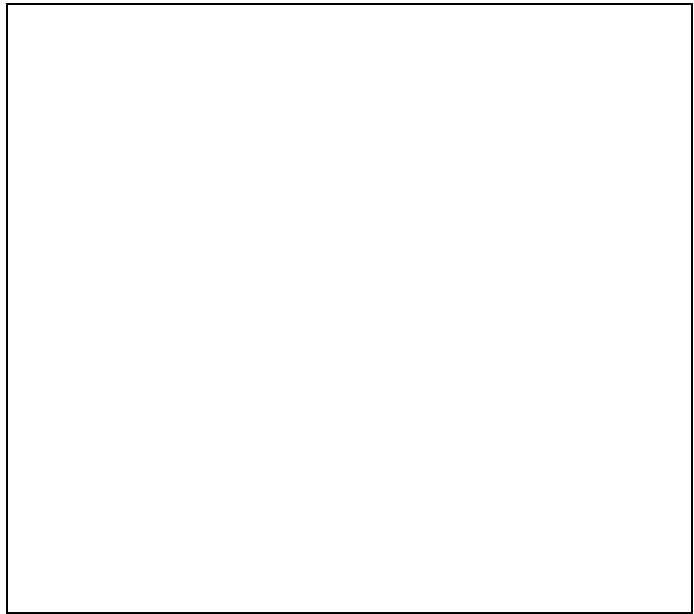
	<ul style="list-style-type: none"> Existing parcels surrounding the project to a distance of at least one mile from the exterior boundaries of the project 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
45	Sewer System Exhibit (Include all on-site and off-site facilities) <ul style="list-style-type: none"> Existing Pipes Proposed Pipes Contour Lines Street Names Parcel Boundaries WWTP, Lift Stations, Force Mains 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>6.2.1.B.3 - It is understood that plans are conceptual in this stage, and it is customary to show a general layout within a property rather than a detailed layout through a street system</p> <p>6.2.1.B.3.f - Show and label sewer sub-basin for all areas upstream and downstream of the development to the next 15-inch diameter or larger sewer</p> <p>6.2.1.B.4.a(1) - Show all proposed on-site and off-site facilities including interceptors, lift stations, force mains.</p> <p>6.2.1.B.4.a.(2) Proposed street locations, parcel boundaries, and proposed lots</p> <p>6.2.1.B.4.a. (3)- Contour lines (2 foot intervals)</p> <p>Color code Pipe diameters</p>
46	Manhole Id Exhibit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
47	Pipe Id Exhibit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
48	Phasing Exhibit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exhibit showing the proposed sewer system improvements for each project phase
APPENDICES					
49	All reports shall include both Average Day Demand & Max Day Demand scenarios	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
50	Average Day Scenario -Manhole Report <ul style="list-style-type: none"> Label, Elevation (Rim) (ft), Elevation (Invert) (ft), Flow (Total In) (gpd), Flow (Total Out) (gpd), Hydraulic Grade Line (In) (ft), Hydraulic Grade Line (Out) (ft) - Pipe Report <ul style="list-style-type: none"> Label, Start Node, Invert (Start) (ft), Stop Node, Invert (Stop) (ft), Length (ft), Slope (ft/ft), Diameter (in), Manning's n, Flow (gpd), Velocity (ft/s), Capacity (Full Flow) (gpd), d/D (%) (less than 0.65) 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

- Outfall Report
 - Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Boundary Condition, Hydraulic Grade (ft), Flow (Total Out) (gpd)
- Pump Report (Required for projects with lift stations)
 - Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Flow, Hydraulic Grade Upstream (ft), Hydraulic Grade Downstream (ft)
- Force Main Report (Required for projects with lift stations)
 - Label, Start Node, Stop Node, Length (ft), Diameter (in), Friction Factor, Flow (gpm), Velocity (ft/s)
- Wet Well Report (Required for projects with lift stations)
 - Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Area, Depth (ft), Hydraulic Grade



- 51 Max Day Scenario
- Manhole Report
 - Label, Elevation (Rim) (ft), Elevation (Invert) (ft), Flow (Total In) (gpd), Flow (Total Out) (gpd), Hydraulic Grade Line (In) (ft), Hydraulic Grade Line (Out) (ft)
 - Pipe Report
 - Label, Start Node, Invert (Start) (ft), Stop Node, Invert (Stop) (ft), Length (ft), Slope (ft/ft), Diameter (in), Manning's n, Flow (gpd), Velocity (ft/s), Capacity (Full Flow) (gpd), d/D (%) (less than 0.65)
 - Outfall Report
 - Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Boundary Condition, Hydraulic Grade (ft), Flow (Total Out) (gpd)
 - Pump Report (Required for projects with lift stations)
 - Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Flow, Hydraulic Grade Upstream (ft), Hydraulic Grade Downstream (ft)
 - Force Main Report (Required for projects with lift stations)

Chapter 6 outline



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

<ul style="list-style-type: none"> Label, Start Node, Stop Node, Length (ft), Diameter (in), Friction Factor, Flow (gpm), Velocity (ft/s) <p>- Wet Well Report (Required for projects with lift stations)</p> <p>Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Area, Depth (ft), Hydraulic Grade</p>	
--	--

Final Wastewater Report

1	A Final Wastewater Report is required at construction plan submittal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.D
2	Final Wastewater Report shall be consistent with the approved Master Wastewater Report and Preliminary Wastewater Report				6.2.1.D- If a Master Wastewater Report was previously approved for the development the Final Wastewater Report shall follow the same development protocol as identified in the Master Wastewater Report. However it will provide a document that finalizes the wastewater system design according to all applicable comments and changes made during the site plan / preplat and construction review process.
3	The Final Report shall follow the Outline provided at the end of Chapter 6.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Outline is at the end of Chapter 6 (Pages 26 to 28)
4	<u>Title Page:</u> <ul style="list-style-type: none"> Project Name Location Type of Report (Final Wastewater Report) Engineer's Seal & Signature Date Consulting Firm, Name, Address, and Phone Number 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
5	Table of Contents - Sealed and signed by a P.E.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.11.1.A.2
INTRODUCTION					
6	Project Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
7	Report Type (Final Wastewater Report)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
8	Project Description (Size, Area)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
9	General Land Use Proposed for Project	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2007 Integrated Water Master Plan - Figure 2-2 Land Use should coincide with Table 6.3-2 Wastewater Generation Factors
10	Identify Sewer Service Provider	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	State whether the project is within the City of Goodyear sewer service area, or within a private



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

					utility company service area. Identify the sewer provider.
11	Summarize on a parcel by parcel basis: <u>Residential</u> <ul style="list-style-type: none"> Number of Dwelling Units (DU) Unit density (DU/Acre) <u>Commercial/Industrial</u> <ul style="list-style-type: none"> Acres 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
12	Project Location (Major Cross Streets, Section Township & Range)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Description of the location of the project and a vicinity map shall be provided.
13	Topographic Conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
14	Project Phasing				6.2.1.B
PROJECTED WASTEWATER FLOW					
15	Summarize Wastewater Generation Factors (include reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2
16	Summarize Peaking Factors (include reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.J.1.a - Peaking Factor = 1,000 gpdu (Residential sewer lines) 6.3.1.J.2.b - Peaking Factor = 2.89 (sewer mains)
17	Provide Flow Projection Calculations Summary (Avg Flow, Peak Flow) <ul style="list-style-type: none"> Summarize Flow Projections by Phase Include Full Calculations in the Appendix 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2 (Average Day) & 6.3.1.J (Max Day) Avg Flow = gal per dwelling unit (DU) x No. of DU Peak Flow = Avg Flow x Peaking factor
EXISTING SEWER SYSTEM					
18	<u>Collection Mains</u> <ul style="list-style-type: none"> Discuss the location and size of the existing sewer collection mains adjacent to the site Discuss the location and size of any proposed sewer collection mains adjacent to the site Show there is adequate capacity to serve the proposed development 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3 Verify that the master plan is consistent with the 2007 Integrated Water Master Plan (Figures 6-7 & 6-8) or other master plans for the area i.e. West Goodyear Central Planning Area (WGCPA) Figure 5.
19	<u>Wastewater Treatment Plant (WWTP)</u> <ul style="list-style-type: none"> Identify the WWTP that will serve the site Discuss any scheduled improvements to be constructed at the WWTP. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1B.3.b – Only need to include WWTP information if the property will be rezoned, or PAD significantly alters sewer main alignments as shown in the 2007 Integrated Water Master Plan - Figures 6-7 & 6-8.



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

	<ul style="list-style-type: none"> Discuss WWTP Capacity 				<table border="1"> <thead> <tr> <th>COG Wastewater Treatment Facility</th> <th>Plant Capacity* (MGD)</th> </tr> </thead> <tbody> <tr> <td>157th Ave</td> <td>4.0</td> </tr> <tr> <td>Corgett</td> <td>0.8</td> </tr> <tr> <td>Rainbow Valley</td> <td>0.8</td> </tr> </tbody> </table> <p>*Plant Capacity from the 2007 Integrated Water Master Plan - Table 6-10</p>	COG Wastewater Treatment Facility	Plant Capacity* (MGD)	157 th Ave	4.0	Corgett	0.8	Rainbow Valley	0.8
COG Wastewater Treatment Facility	Plant Capacity* (MGD)												
157 th Ave	4.0												
Corgett	0.8												
Rainbow Valley	0.8												
20	<u>Lift Stations</u> <ul style="list-style-type: none"> Identify any existing lift stations that will serve the site Discuss existing wet well and pump capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3								
21	<u>System Improvements</u> <ul style="list-style-type: none"> Identify any required improvements within the existing system to serve the project 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3								
22	<u>Force Main</u> <ul style="list-style-type: none"> Discuss existing force main capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3								
SYSTEM IMPROVEMENTS													
23	Summarize Design Criteria for each phase (include reference)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline								
24	<ul style="list-style-type: none"> Wastewater Generation Rate <ul style="list-style-type: none"> Average Day Max Day = Peaking factor x Ave Day 				Table 6.3-2 (Average Day) & 6.3.1.J (Max Day) 6.3.1.J.1.a - Peaking Factor = 1,000 gpdu (Residential sewer lines) 6.3.1.J.2.b - Peaking Factor = 2.89 (sewer mains)								
25	<ul style="list-style-type: none"> Manning's n 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3.d (Manning's n = 0.013)								
26	<ul style="list-style-type: none"> Pipe Capacity 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-2								
27	<ul style="list-style-type: none"> d/D ratio 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.B.1 (d/D ratio = 0.65 for wet weather flow)								
28	<ul style="list-style-type: none"> Velocity 				6.3.1.B.1 & Table 6.3-1 <ul style="list-style-type: none"> 10 inch and smaller: V = 2ft/s min and 9 ft/s max Larger than 10 inches: V=2.5 ft/s min and 10 ft/s max 6.4.3.A (Force Main velocity between 4 and 6 ft/s) 								
29	<ul style="list-style-type: none"> Slope 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Table 6.3-1								
30	<ul style="list-style-type: none"> Minimum Cover 				6.3.1.F								



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

					<ul style="list-style-type: none"> Private service = 4 feet from finished ground at the property line or easement line Trunks, mains, or branches = 6 feet from finished grade to the top of the sewer line Additional criteria required for sewers crossing floodplain
31	<ul style="list-style-type: none"> Invert Drop Through Manhole 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.3.1.G & 6.3.2.D
32	Lift Stations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.4.2.B Discuss if lift stations required to serve the development. Discuss lift station pumping requirements
33	Force Mains	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.4.3
34	Discuss connection to existing system (Verify invert depth is adequate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3
SEWER MODEL/CALCULATIONS					
35	Discuss setup of sewer model/calculations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.3.f - Provide offsite sewer capacity calculations including all areas upstream and downstream of the development to the next 15-inch diameter or larger sewer.
36	Discuss Assumptions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
37	Discuss Modeling Software	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
38	Average Flow Analysis (Include results in the Appendix)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
39	Peak Flow Analysis (Include results in the Appendix)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
40	Discuss System Phasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure that the sewer collection phasing can adequately convey the proposed flows from each phase.
CONCLUSION					
41	Project Summary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
42	Project Phasing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
REFERENCES					
43	List references cited in report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
EXHIBITS					
44	Vicinity & Location Map <ul style="list-style-type: none"> Existing streets Proposed streets Existing parcels surrounding the project to a distance of at least one mile 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.2.1.B.4.b.



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED	REVIEW #				
					BY		DATE		
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)				


	from the exterior boundaries of the project				
45	<p>Sewer System Exhibit (Include all on-site and off-site facilities)</p> <ul style="list-style-type: none"> Existing Pipes Proposed Pipes Contour Lines Street Names Parcel Boundaries WWTP, Lift Stations, Force Mains 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>6.2.1.B.3 - It is understood that plans are conceptual in this stage, and it is customary to show a general layout within a property rather than a detailed layout through a street system</p> <p>6.2.1.B.3.f - Show and label sewer sub-basin for all areas upstream and downstream of the development to the next 15-inch diameter or larger sewer</p> <p>6.2.1.B.4.a(1) - Show all proposed on-site and off-site facilities including interceptors, lift stations, force mains.</p> <p>6.2.1.B.4.a.(2) Proposed street locations, parcel boundaries, and proposed lots</p> <p>6.2.1.B.4.a. (3)- Contour lines (2 foot intervals)</p> <p>Color code Pipe diameters</p>
46	Manhole Id Exhibit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
47	Pipe Id Exhibit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
48	Phasing Exhibit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exhibit showing the proposed sewer system improvements for each project phase
APPENDICES					
49	All reports shall include both Average Day Demand & Max Day Demand scenarios	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline
50	<p>Average Day Scenario</p> <p>-Manhole Report</p> <ul style="list-style-type: none"> Label, Elevation (Rim) (ft), Elevation (Invert) (ft), Flow (Total In) (gpd), Flow (Total Out) (gpd), Hydraulic Grade Line (In) (ft), Hydraulic Grade Line (Out) (ft) <p>- Pipe Report</p> <ul style="list-style-type: none"> Label, Start Node, Invert (Start) (ft), Stop Node, Invert (Stop) (ft), Length (ft), Slope (ft/ft), Diameter (in), Manning's n, Flow (gpd), Velocity (ft/s), Capacity (Full Flow) (gpd), d/D (%) (less than 0.65) <p>- Outfall Report</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline



WASTEWATER REPORT

NUMBER		NOT REQ'D	NOT DONE	SATISFIED				
					REVIEW #			
					BY		DATE	
	ITEMS				Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)			

	<ul style="list-style-type: none"> Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Boundary Condition, Hydraulic Grade (ft), Flow (Total Out) (gpd) <p>- Pump Report (Required for projects with lift stations)</p> <ul style="list-style-type: none"> Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Flow, Hydraulic Grade Upstream (ft), Hydraulic Grade Downstream (ft) <p>- Force Main Report (Required for projects with lift stations)</p> <ul style="list-style-type: none"> Label, Start Node, Stop Node, Length (ft), Diameter (in), Friction Factor, Flow (gpm), Velocity (ft/s) <p>- Wet Well Report (Required for projects with lift stations)</p> <ul style="list-style-type: none"> Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Area, Depth (ft), Hydraulic Grade 				
51	<p>Max Day Scenario</p> <p>-Manhole Report</p> <ul style="list-style-type: none"> Label, Elevation (Rim) (ft), Elevation (Invert) (ft), Flow (Total In) (gpd), Flow (Total Out) (gpd), Hydraulic Grade Line (In) (ft), Hydraulic Grade Line (Out) (ft) <p>- Pipe Report</p> <ul style="list-style-type: none"> Label, Start Node, Invert (Start) (ft), Stop Node, Invert (Stop) (ft), Length (ft), Slope (ft/ft), Diameter (in), Manning's n, Flow (gpd), Velocity (ft/s), Capacity (Full Flow) (gpd), d/D (%) (less than 0.65) <p>- Outfall Report</p> <ul style="list-style-type: none"> Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Boundary Condition, Hydraulic Grade (ft), Flow (Total Out) (gpd) <p>- Pump Report (Required for projects with lift stations)</p> <ul style="list-style-type: none"> Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Flow, Hydraulic Grade Upstream (ft), Hydraulic Grade Downstream (ft) <p>- Force Main Report (Required for projects with lift stations)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 6 outline

NUMBER		NOT REQ'D	NOT DONE	SATISFIED					
					WASTEWATER REPORT				
					REVIEW #				
	ITEMS				BY			DATE	
	Location in City of Goodyear Engineering Design Standards & Policy Manual (2017 Edition)								

- | |
|--|
| <ul style="list-style-type: none"> Label, Start Node, Stop Node, Length (ft), Diameter (in), Friction Factor, Flow (gpm), Velocity (ft/s) <p>- Wet Well Report (Required for projects with lift stations)</p> <p>Label, Elevation (Ground) (ft), Elevation (Invert) (ft), Area, Depth (ft), Hydraulic Grade</p> |
|--|

--