Water Resources

9379 E. San Salvador
Scottsdale, AZ 85258

PHONE 480-312-5685
FAX 480-312-5615
www.ScottsdaleAZ.gov

June 11, 2021

Boyce O'Brien
Development Manager
Stockdale Capital Partners LLC
4501 N Scottsdale Rd, Ste. 201
Scottsdale AZ 85251

Re:

- ***Subject:*** *City of Scottsdale Water Resources Department Conditional abandonment of interest in City alley/right of way (R.OW.) and interest/ownership in/of associated public sewer line*
- ***Associated Case/Plan #s:*** *25-DR-2020 (Maya Hotel), 4436-21-1 (offsite civil), 4436-21-2(Final plat)*
- ***Alley location and length:*** *North of E Shoeman Lane extending to E Indian Plaza, between N Buckboard Trail and N Saddlebag Trail, alley length approximately 180 feet.*

Dear Mr. O'Brien,

In reviewing your request for the abandonment of the current alley and public sewer on the east side of the proposed Maya Hotel site, the City of Scottsdale's Water Resources Department grants conditional approval to abandon interest in the alley and ownership of the public sewer line therein to facilitate the construction and lot combination being proposed.

The conditions of the abandonment are as follows and as further detailed in the attachments:

1. The new offsite public sewer detailed within case 25-DR-2020 and plan 4436-21-1 will ultimately be constructed to convey the flows in the sewer in the alley to be abandoned.
2. All Water Resources' comments on the conditionally approved V1 bypass submittal will be addressed and the submittal resubmitted for approval prior to obtaining permits for any construction on the site.
3. Written confirmation from the owner or owner's official representative will be provided committing to address all Water Resource's submittal comments, resubmit as required, and comply with the terms and conditions of the resubmittal. (see attachment providing this written confirmation)
4. Pending approval of resubmitted bypass plan, the temporary bypass will be installed and operational prior to any construction on the site beginning (public sewer cannot be operating within a construction site).

If you require further information, you may reach our department at 480-312-5685.

Sincerely,

SCOTTSDALE WATER
06/11/2021 3:08:05 PM

Levi Dillon, P.E
Water Resources Engineer, Sr.
Scottsdale Water

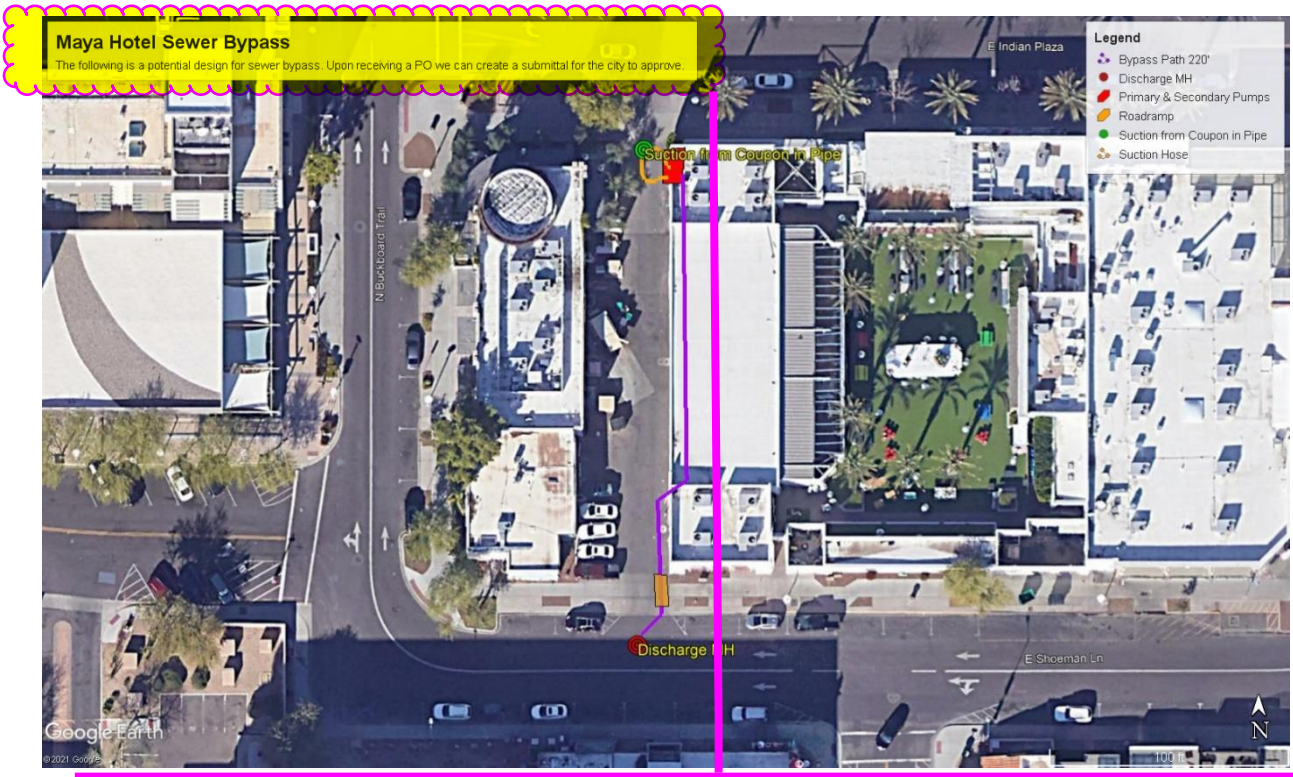
Attachments: 1) Initial submittal w/ comments from Water Resources; 2) cross-check of submittal versus bypass specification by Water Resources; 3) Written confirmation from owner/owner's representative to address all comments and resubmit for Water Resources' approval according to conditions/terms noted.

ATTACHMENT 1 ON FOLLOWING PAGES

LDillon Water Resources comments on 6/11/21 in magenta color
V1 Submittal Status: Conditional approval of the submittal is granted. Approval is for purposes of facilitating alley abandonment and is conditioned as noted and commented herein. Official re-submittal required prior to obtaining any construction permit.

date submitted to Water Resources was 6/10/21

Maya Hotel Sewer Bypass 6/2/2021



Official re-submittal from the contractor/project owner (or rep) shall be submitted to Water Resources and approved by Water Resources prior to obtaining permit for hotel foundation construction. Owner (or rep) shall agree in writing to addressing all comments/item noted (agreement to be attached here) and providing a revised submittal as designated.

Bypass will pump south and the sidewalk to MH in Shoeman will be trenched to safely allow traffic and pedestrian travel.

No Exceptions Taken
Ali Fakih
6/10/21

no, place new manhole in alley out of ROW

Casey Timmons | Project Engineer
Mobile: 623-764-7623 | ctimmons@bfcontracting.com

B&F Contracting, Inc. | 11011 N. 23rd Ave. | Phoenix, AZ 85029
Office: 623.582.1170 | Fax: 623.582.3761 |
ROC089744 | ROC111282 | www.bfcontracting.com

engineer to review future revised submittal prior to re-submittal to Water Resources

V1 Submittal

CAMELBACK ROAD

770.97'(C)

W 1/4 CORNER
SECTION 23
T2N, R4E
FD BRASS CAP IN HANDHOLE

S 89°37'37" E 2629.87'(M)
430.04'(C)

CENTER OF
SECTION 23
T2N, R4E
FD STONE IN HANDHOLE

1428.86'(C)

EAST INDIAN PLAZA
DOC. NO. 1983-082883, MCR
POCKET 8757, PAGE 190, MCR

Existing Sanitary Sewer

New manhole cannot be in ROW, place within alley to be abandoned

New MH

Pump Station or Valve

bypass shall be pumped and monitored

Provide details on any sound attenuation

Temp Sewer FM

Existing Fence

with single forcemain, what is the plan if a leak occurs in this piping, describe in operations plan

Alley

Temp Sewer FM

SEG mark-up in Teal

New MH

Place manhole within alley to be abandoned,

N 89°57'06" E 274.11'(M)

S 89°57'06" W 254.16'(M)

N 89°57'06" E 214.20'(M)

N 89°57'06" E 215.99'(M)

340.49'(C)

552.93'(C)

119.96'(C)

S 00°01'36" E

30.83'(C)

61.65'(M)

297.08'(C)

40.25'(C)

549.76'(C)

212.44'(C)

N 00°02'39" W

S 00°02'39" E 159.94'(M)

32.5' R/W

BUCKBOARD TRAIL

SADDLEBAG TRAIL

SHOEMAN LANE

N WELLS FARGO AVE

LOT 1

LOT 66
BK 86, PG 13
(NOT A PART)

LOT 67
BK 86, PG 13
(NOT A PART)

BUILDING

UNCOVERED COURTYARD AREA

OVERHANG

COVERED PATIO

PATIO

BLDG IS ON PROP. LINE

BLDG IS 0.2'E OF PROP. LINE

7 1' NMPAE

9 4' UE

15 2' UE

11 2' UE

7 4' NMPAE

10 4' UE

7 4' NMPAE

13 4' UE

7 WLE

7 WLE

FD. PK NAIL NO ID.

FD. BCF

FD. PK NAIL NO ID.

FD. PK NAIL NO ID.

FD. BCF

GRAPHIC SCALE
20 0 10 20
1 INCH= 20 FEET

N

LEGEND

APN	ASSESSOR PARCEL NUMBER
MCR	MARICOPA COUNTY RECORDS
R/W	RIGHT-OF-WAY
NMPAE	NON-MOTORIZED PUBLIC ACCESS EASEMENT
UE	UTILITY EASEMENT
WLE	WATERLINE EASEMENT
BCF	BRASS CAP FLUSH
ID.	IDENTIFICATION
BLDG.	BUILDING
PROP.	PROPERTY
U-VLT	UTILITY VAULT
WV	WATER VALVE
WMB	WATER METER BOX
WBP	WATER BACKFLOW PREVENTOR
FDC	FIRE DEPARTMENT CONNECTION
GM	GAS METER
EM	ELECTRIC METER
ET	ELECTRIC TRANSFORMER
ECB	ELECTRIC CABINET
CTR	CABLE TV RISER
LP	LIGHT POLE
EJB	ELECTRIC JUNCTION BOX
SLM	STREET LIGHT MAST

PROPERTY LINE

CENTER LINE

EASEMENT LINE AS NOTED

(S) SEWER MANHOLE

(E) ELECTRIC MANHOLE

(FO) FIBER-OPTIC MANHOLE

CONCRETE

SIGN

PROPERTY CORNER SET PK NAIL W/TAG "AWLS 45377" UNLESS OTHERWISE NOTED

PLOTTABLE SCHEDULE "B" ITEM

CURVE	ARC LENGTH	RADIUS	DELTA ANGLE	CHORD BEARING	CHORD LENGTH
C1	31.41'	20.00'	89°59'45"	N 44°57'13" E	28.28'

LINE	BEARING	DISTANCE
L1	N 89°57'06" E	32.50'
L2	N 89°57'06" E	32.50'
L3	N 89°57'06" E	71.01'
L4	S 00°01'48" E	119.96'
L5	S 89°57'06" W	71.02'
L6	N 00°01'36" W	119.96'
L7	N 89°57'06" E	20.00'
L8	N 89°57'06" E	32.50'

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
45377
DANIEL D. ARMIJO
Date Signed 03-13-20
ARIZONA, U.S.A.
Expires 12/31/2021

AW LAND SURVEYING, LLC
P.O. BOX 2170, CHANDLER, AZ 85244
(480) 244-7630 (480) 243-4287

DRAWN BY:	CHECKED BY:	DATE:	JOB NO.:	SHEET NO.
DDA	DDA	03/13/20	20-009	2 OF 2

COS Sewer Bypass Pumping
N.Buckboard Trail & E.Indian Plaza Scottsdale
Maya Hotel Sewer Bypass

Bypass Pumping System Requirements:

Project Specification Requirements for Pipe and Pump Redundancy:

Pipe: 200% Max Peak Daily Flow Rate
Pumps: 100% Addional, Fully Operable, Standby Pumps

Design Flow Rate Calculations:

Observed Max Peak Flow Rate:	Flow Rate Safety Factor:	Design Flow Rate (MGD):	Design Flow Rate (GPM):
0.144	200%	0.288	200.00

Bypass Setup Description:

Bypass Pumping Writeup:

This project has a depth of less than 17' of suction lift and the longest length is 240' of bypass. We have calculated worst case scenerio for flow in sizing primary pump. The bypass system will have 100% redundant pump connect to operate in case of primary pump failure. The project involves one setup and removal. Piping, 4" suction hose, 4" discharge hose, 4" wye, and single 6" HDPE portable pipe will be used for discharge. A temporary MH will be installed to safely access flow from the affected businesses. The suction lift will need verified. The discharge will be cored into the side of the first downstream MH on Shoeman. This will allow us to trench bypass line safely underground and keep area clear of sewer bypass. Pump watch will occur during operation of businesses. A float switch will be in auto mode for any flow that would appear and pump will activate. Additionally a remote monitor will be added to call out tech if pumps do not work. 200gpm is being used for peak flow which allows safety factor of 200% We have several brands of pump that can all handle this flow.

Suction Manhole:

Rim Elevation:	1,270.00	Feet (Ft)
Invert Elevation:	1,253.00	Feet (Ft)
Diameter of Pipe:	0.67	Feet (Ft)
Manhole Surcharge	0.00	Feet (Ft)
Subcut Excavation:	0.00	Feet (Ft)
Suction Lift:	16.33	Vertical Feet (VF)

Discharge Manhole:

Rim Elevation:	1267.00	Feet (Ft)
Suction & Discharge Rim Elevation Difference:	-3.00	Vertical Feet (VF)

Discharge Piping Information:

Discharge Pipe:	6-inch	DR26 HDPE Pipe
Number of Discharge Lines with Sufficient Capacity for the Design Flow Rate:	1.00	Each (EA)
Number of Redundant Discarge Lines:	0.00	Each (EA)
Length of Each Discharge Line:	240.00	Linear Feet (LF)

Pumping Equipment Information:

Pump Model:	4"	
Number of Pumps with Sufficient Capacity for the Design Flow Rate:	1.00	Each (EA)
Number of Redundant Pumps:	1.00	Each (EA)

Pump/Valve/Manifold Containment:

HDPE Spill Berms will be Installed Under Each Pump in the Event of Any Spills and / or Leaks of Hazardous Materials such as Fuel, Oil, or Grease.

Lateral Flow Diversion Setups:

Not Applicable, No Laterials Pump Stations are part of this Bypass.

Standby Power or Fuel Source:

Each Pump is Equiped with it's Own Fuel Storage Tank (Please See Pump Cutsheets for Respective Capacities).
Each Pump and Fuel Cube will be Replenished a Minimum of One (1) Time per Day.

Bypass Staffing Plan:

B&F will have one (1) employee on site at all times manning the pumps & inspecting the discharge pipe.
All Tools Required to Support Pump Mechanical and Pipe Integrity Challenges will be Available Onsite 24-Hours per Day.

Attachments:

1.) Design Hydraulic Calculations
2.) Pump Performance Curves
3.) Design Flow Rate Data

Additional Notes:

1.) All work will be Performed by B&F Technicians.

source? flow monitor?

two temp manholes outside of ROW, see plan markup

new temp manhole within alley

this seems to conflict with the auto monitored capability in the writeup above. City requires a staffed bypass. Auot operation and monitoring equipment can still be utilized.

ok, but describe how pipe integrity challenge would be handled and note that a pump truck will be called as necessary at the contractor's expense to facilitate any pipe repairs.

COS Sewer Bypass Pumping
N.Buckboard Trail & E.Indian Plaza Scottsdale
Maya Hotel Sewer Bypass

SUCTION PIPE CALCULATIONS FOR 4-INCH PIPE:

Pipe / Hose Size	Pipe / Hose material	Pipe / Hose ID (inches)
4"	High Pressure Hose	4

Rim to Invert Elevation:	17.00	Feet (Ft)
Inside Diameter of Pipe Under Bypass:	0.67	Feet (Ft)
Surcharge of Flow of Pipe Under Bypass:	0.00	Feet (Ft)
Suction Pit Subcut Depth:	0.00	Feet (Ft)
Total Suction Lift:	**16.33**	Vertical Feet (VF)
Total Flow Rate:	**200.00**	Gallons Per Minute (GPM)
Total Number of Pumps	**1.00**	Each (EA)
Total Flow Rate Per Pump:	**200.00**	Gallons Per Minute (GPM)
H_{ss} =	**16.33**	H_{ss} = Static Suction Lift (In Feet)
Q_1 =	**200.00**	Q_1 = Rate of Flow (In Gallons Per Minute)
L_s =	**5.00**	L_s = Length of Suction Pipe / Hose (In Feet)

isn't this 17ft? depth of manhole

SUCTION PIPE EQUIVALENT LENTHS FOR 4-INCH PIPE:

$L_{Reducer}$ =	**4.00**	4"	$L_{Reducer}$ = Equivalent Length of Reducer
$L_{Entrance}$ =	**6.00**	4"	$L_{Entrance}$ = Equivalent Length For Pipe / Hose Entrance
L_{90} =	**7.00**	4"	L_{90} = Equivalent Length of Pipe for 90° Elbow
L_{SS} =	**5.00**	4"	L_{SS} = Equivalent Length of Pipe for Suction Screen
$L_{Suction\ Equivalent}$ =	$L_s+L_{red}+L_{entrance}+L_{90}+L_{ss}$		$L_{Suction\ Equivalent}$ = TOTAL Equivalent length of Suction Piping (In Feet)
$L_{Suction\ Equivalent}$ =	**27.00**	**Feet (Ft)**	

SUCTION HAZEN-WILLIAMS EQUATION FOR PIPE AND HOSE:

$$(H_f)\ \text{HEAD LOSS} = 10.44 \times \frac{GPM^{1.85} \times L}{C^{1.85} \times D^{4.8655}}$$

EQUALS (=) **0.74** (H_f) Head Loss in Feet (Ft)

Total Flow Rate	**200.00**	Gallons Per Minute (GPM)
Pipe Length:	**27.00**	Feet (Ft)
Pipe Roughness:	**130.00**	Coefficient (C)
Pipe Inside Diameter:	**4.00**	Inches (In)

$$\text{Velocity (V)} = \frac{Q_1}{2.45 * D^2}$$

EQUALS (=) **5.10** Suction Velocity in Feet per Second (ft/s)

SUCTION PIPE TOTAL DYNAMIC SUCTION HEAD (H_s):

Hss = Static Suction Lift (In Feet):	16.33	Project Elevation Atmospheric Pressure:	32.56
4" Pioneer Pump CL Elevation:	2.90	(Hs) TOTAL Dynamic Suction Head (In	21.14
(Hf) Head Loss (In Feet):	0.74	NPSH Available:	**11.42**
(H_{vp}) Vapor Pressure of Water at Sea Level at 80°F:	1.17	0 ---------->NPHSR:	**9.00**
(Hs) TOTAL Dynamic Suction Head (In Feet):	**21.14**	NPSHA > NPSHR:	**YES**

DISCHARGE PIPE CALCULATIONS FOR 6-INCH PIPE:

Pipe / Hose Size	Pipe / Hose material	Pipe / Hose ID (inches)
6"	DR26	5.799

H_{sD} =	-3.00	H_{sd} = Static Discharge Lift (In Feet)
L_d =	240.00	L_d = Length of Discharge Pipe / Hose (In Feet)
Lfittings =	48.00	Lfittings - The Length of the Miscellaneous Fittings, Valves and Manifolds of the System.
$L_{discharge\ Equiv}$ =	$L_d+L_{reducer}+L_{90}+L_{cv}+L_{man}+$	$L_{discharge\ Equiv}$ = Total Equivalent Length of Discharge Piping (In Feet)
$L_{discharge\ Equiv}$ =	**285.00**	Feet (Ft)

DISCHARGE HAZEN-WILLIAMS EQUATION FOR 8-INCH PIPE:

$$(H_{fd})\ \text{HEAD LOSS} = 10.44 \times \frac{GPM^{1.85} \times L}{C^{1.85} \times D^{4.8655}}$$

EQUALS (=) **1.28** (H_{fd}) Head Loss in Feet (Ft)

Total Flow Rate:	**200.00**	Gallons Per Minute (GPM)
Number of Pipes:	**1.00**	Each (EA)
Flow Rate Per Pipe	**200.00**	Gallons Per Minute (GPM)
Pipe Length:	**285.00**	Feet (Ft)
Pipe Roughness:	**130.00**	Coefficient (C)
Pipe Inside Diameter:	**5.80**	Inches (In)

$$\text{Velocity (V)} = \frac{Q_1}{2.45 * D^2}$$

EQUALS (=) **2.43** Discharge Velocity in Feet per Second (ft/s)

isn't this 6"? typo

TOTAL DYNAMIC HEAD (TDH):

(Hs) TOTAL Dynamic Suction Head:	21.14	Feet (Ft)
(Hd) TOTAL Dynamic Discharge Head:	1.28	Feet (Ft)
TOTAL Dynamic Head (In Feet):	**22.41**	**TDH for 6-inch Suction Discharge Pipe System**

PRIMARY PUMP FLOW RATE SUMMARY:

As detailed on the Attached Pump curves, 1 Each Pump has the Capacity to Handle 600 Gallons per Minute

BACKUP PUMP SUMMARY:

B&F will provide one (1) Each 4" Redundant Pump.

HYDRAULIC PUMP CURVE SUMMARY:

See Attached Performance Curve for the 4" Pioneer Pump.

isn't it 4-inch suction piping?

200gpm?

Pump Data Sheet - Pioneer Pump

Company: Stockdale
Name: Maya Hotel
Date: 06/09/2021

PIONEER PUMP
PERFORMANCE THROUGH INNOVATION™

Pump:

Model:	PP44S8	Dimensions:	
Type:	Pioneer Prime	Suction:	4 in
Synch Speed:	Adjustable	Discharge:	4 in
Dia:	8.25 in		
Curve:	07663HQ		
Size:	4x4		

Fluid:

Name:	Water		
SG:	1	Vapor Pressure:	0.256 psi a
Density:	62.4 lb/ft³	Atm Pressure:	14.7 psi a
Viscosity:	1.1 cP	NPSHa:	15 ft
Temperature:	60 °F	Margin Ratio:	1

Search Criteria:

Flow:	200 US gpm	Near Miss:	---
Head:	40 ft	Static Head:	17 ft

Pump Limits:

Temperature:	---	Sphere Size:	3 in
Wkg Pressure:	---		

Motor:

Consult Pioneer Pump to select a motor for this pump.

this indicates the pump is submersible and in the manhole yet previous calls show as oon-grade pump with suction piping??

Pump Selection Warnings:

None

TDH calcs should 22ft TDH. Flow too high/pump too large??

--- Duty Point ---

Flow:	200 US gpm
Head:	40 ft
Eff:	33.5%
Power:	5.98 hp
NPSHr:	3.5 ft
Speed:	1449 rpm

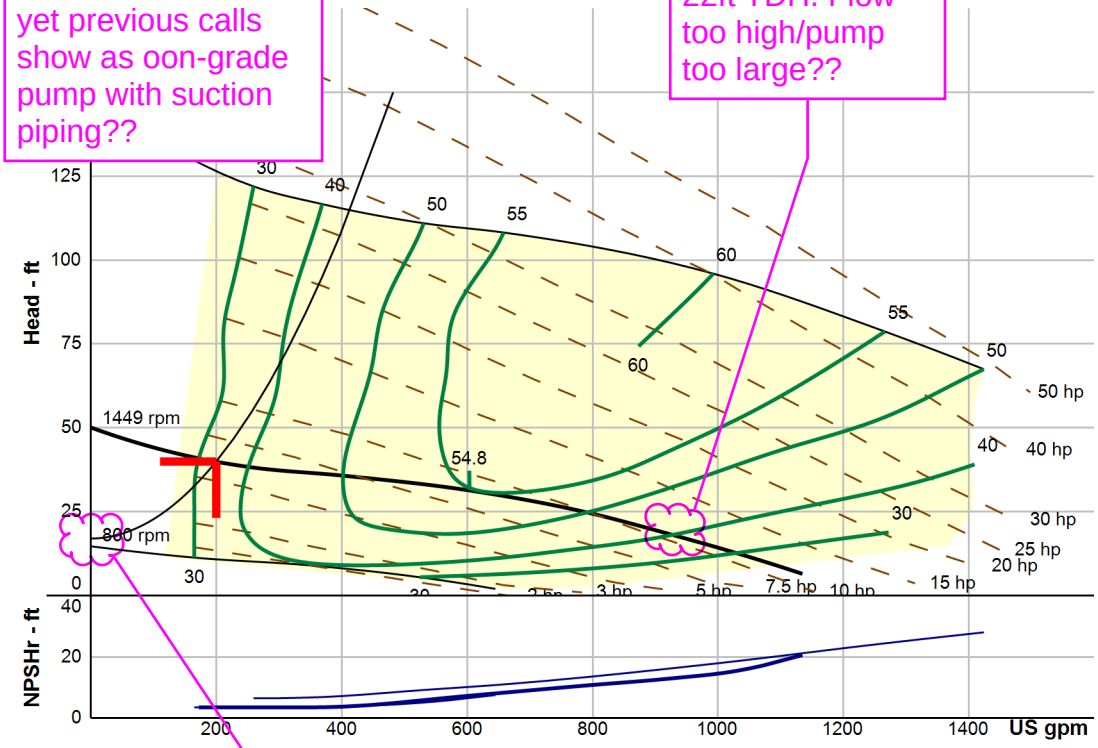
--- Design Curve ---

Shutoff Head:	50.1 ft
Shutoff dP:	21.7 psi
Min Flow:	--- US gpm

BEP: 54.8% @ 604 US gpm
NOL Power:
11.4 hp @ 1135 US gpm

--- Max Curve ---

Max Power:
48.5 hp @ 1424 US gpm



Performance Evaluation:

Flow	Speed	Head	Efficiency	Power	NPSHr
US gpm	rpm	ft	%	hp	ft
240	1449	38.7	38.6	6.06	3.5
200	1449	40	33.5	5.98	3.5
160	1449	41.5	28.5	5.9	3.5
120	1449	43.7	23.4	5.83	3.5
80	1449	---	---	---	---

this point seems to match your TDH or suction head calc but this point is the static head on the pump system. Confusing. Static head is positive only if pump is submersible

Spill Prevention & Emergency Response & Inspection Plan For Bypass Pumping

Spill Response Plan:

In the event of a Bypass System Pump failure, B&F will respond accordingly:

1. Once the failure is identified usually through watching the height of water in the suction manhole, one (1) B&F employee will immediately switch on the backup pump and proceed to prime it. The employee will begin to monitor the flow until the standby pump is primed and pumping efficiently. Once the sewage level is steady inside the suction manhole, one (1) pump watch employee will begin to diagnose the problem of the primary pump.

2. The pump monitor will check the fluid levels and then open the pump head end to look for debris that could potentially be clogging the impeller. This is typically the main problem when a pump fails as it sucks up large debris that gets stuck in the impeller of the pump leading to clogged intake. After the fluid levels have been confirmed and they have manually inspected the impeller the pump monitor will try and start the pump again. If the pump does not start again, we will stop using the pump and notify our mechanic of the problem. If the pump starts up but is having troubles priming, the suction hose will be checked for holes and the bolts tightened on the suction flange. If these bolts loosen somewhat it is very easy to have a small air leak that impedes the priming process of the pump.

3. After the problem on the pump has been identified, B & F will either attempt to fix the problem or contact the superintendent to explain the problem. If the pump cannot be fixed on site, another pump will be sent to the job site as a replacement until repairs are complete. Stockdale will be notified.

In the event of a spill, B & F will respond accordingly:

1. B & F will have one (1) employee continuously walking and monitoring the discharge HDPE portable piping and will be equipped with a company cell phone for emergency use.

2. Once the employee identifies a sewage spill, he will immediately contact the onsite Supt. In which a call to B&F Bypass Manager, Randy Campillo, Project Engineer, Casey Timmons, or Director of Rehab, Josh Onstott, and then proceed to contain the spill.

3. The B&F Bypass Manager, or Project Engineer / Manager will then notify either a Superintendent and/or Project Manager for Stockdale of the situation and mitigation required.

4. Each pumping station is equipped with the following items to be used in the event of a spill: Repair clamps, extra HDPE pipe, sandbags, buckets, rags, absorbent socks, plastic sheeting, gloves, goggles, tyvek suits, safety glasses, sodium hypochlorite (12.5%), dry granulated chlorine, liquid bleach and absorbent granules.

5. Once the employee identifies the cause of the spill he will respond accordingly to the problem at hand. If the HDPE pipe has been damaged and has a hole or tear in it from a collision, repair clamps will be installed as a temporary means of controlling the spill until it can be replaced and fused by the extra HDPE.

6. B&F wet-vac trailer to reclaim any sewage released from the affected area. If this is not sufficiently effective, B& F contact Pro-Pipe Services to bring in a Vactor-Truck for assistance in containing the spill until the HDPE pipeline is repaired.

7. Once the spill has been controlled, B & F will proceed to clean up the affected spill area with bleach to kill off the bacteria in the sewage. A water truck or water buffalo will be loaded with sodium hypochlorite (12.5%) solution and the affected area will be sprayed. B&F employees will identify any storm drains in the adjacent areas around the spill and utilize a Vactor-Truck at these areas to prevent the flow from entering the storm drain system. Berming of the storm drains will also be an option.

8. B&F will then have the appropriate onsite personnel fill out a Confidential Spill Reporting Form within 24 hours following the discovery of the spill. The form and photographs of all stages of the incident shall then be submitted to Stockdale and the City of Scottsdale. Information will be listed as follows: 1) time & date of incident, 2) duration of incident, 3) volume released (site calculations, etc.), 4) response & mitigation effort taken, 5) volume of sodium hypochlorite applied to affected area, 6) release volume reclaimed, 7) additional information as deemed appropriate by City of Scottsdale.

Spill Control Plan:

All materials and equipment necessary for spill cleanup will be kept on site. The equipment and materials shall include: fusion machines, repair clamps, extra HDPE pipe, sandbags, buckets, rags, absorbent socks, plastic sheeting, gloves, goggles, tyvek suits, safety glasses, sodium hypochlorite (12.5%) and absorbent granules. All company employees shall be trained in spill prevention techniques and hazardous materials identifications. All pumping equipment will have spill berms placed underneath them throughout pumping operations. The B&F on-site personnel will be responsible for spill containment and cleanup.

Materials Inventory

The following materials/chemicals are present at this job site. Specific chemicals are listed by name. MSDS information will be readily available on-site.

- Dry Granulated Chlorine
- Diesel
- Gasoline
- 2-Cycle Oil
- Motor Oil
- Hydraulic Fluid
- Sodium Hypochlorite (12.5%) – minimum 50 gallons on-site

a) Type of operation that will utilize the materials

All the material will be used for the diversion pumping and diversion of wastewater. All work will be done on site which will include flow diversion setup, diversion, flow management, cleaning and removal of the flow diversion system.

b) Where and how the material will be stored on the site

Most of the materials will be delivered to the job site from various locations. A fuel truck will be available to fuel the equipment and pumps. 2-Cycle oil, motor oil, hydraulic fluid, liquid bleach and granulated chlorine will be stored in their original containers and properly labeled. MSDS information will be readily available on-site.

c) Disposal of used materials

All chemical containers will be free of hazardous materials prior to disposal. Manufacturer recommendations for proper disposal will be followed for any unused materials.

Best Management Practices

The following housekeeping practices will be used to reduce the risk of chemical/sewage/wastewater spillage or other accidental exposure of materials/ chemicals to storm water runoff or public facilities.

Bypass System/Inspection Plan

- Thorough inspection of all pipes-only newer and good condition pipes will be used
- All pumps will be serviced and inspected prior to startup as well as during flow diversion operation
- Pumps and pipelines will be numbered accordingly and will correspond to how they are connected. In the event of multiple discharge lines, the pipelines will have numbers at every 100 feet increments. This will avoid any confusion if there is a break in one of the pipelines or if a pump must be shut off.
- Vacuum breakers will be connected to the hoses that will run directly to the discharge pit. If a pit is required
- Flow Diversion system will be pressure tested prior to startup. Testing will simulate normal operating pressure.
- Spill containment berms will be place under the pumps at the suction points/pits.
- Flow Diversion system will be manned 24-hours and all personnel will have cell phone.
- Implement lock out/tag out system, when pipelines or pumps are being repaired, in English and Spanish
- Plugs are to be in good condition and checked for leaks. All plugs will be monitored daily and shall have a pressure gage that is readily visible for reading the internal plug pressure. Plugs will be inflated to the manufactures recommended working pressure
- Pipelines upstream of diversion plug will be monitored 24 hours a day to check for sewer surcharges.

primary and secondary plugging required per spec

Plug Anchorage Plan

To ensure that the plug(s) being used are secured, and to prevent the plug(s) from being lost down a sewer line, a steel cable will be fastened to an existing anchorage eyelet located on the end of the plug(s). There will be a protective sleeve at any point where cable is contacting any material other than the plug and the top side anchor point. The other end of the steel cable will be secured to the pump being used or to a Jersey barrier at the suction manhole.

In the event of an Emergency Spill, Pro—Pipe Services, Inc. will be contacted for Vactor services.

Pro-Pipe 24-hour Emergency Service Line: 602-861-3944
Pro-Pipe Services, Inc.
2222 W. Grant St.
Phoenix, AZ 85009

provide regular and after hours contact

Spill Control Emergency Phone Numbers

provide titles or role/responsibility in bypass. Identify afterhours contact.

Randy Campillo	(B&F)	602-292-5115 1st
Gene De La Cerda	(B&F)	623-764-7624 2nd
Casey Timmons	(B&F)	623-764-7623
Kelyn Weaver	(B&F)	602-377-4603
Josh Onstott	(B&F)	623-238-3792
Arnold Flores	(B&F)	602-703-7403
B&F Office	(B&F)	623-582-1170

Should a spill occur the following procedure is to be followed:

a) Take immediate action to stop the overflow occurrence in order to minimize the volume released.

b) Notify City of Scottsdale

provide names and number per spec

c) Notify Stockdale

d) Contain the spill using absorbent socks, granules, rags or sandbags. Use a Vactor truck to reclaim standing sewage. Then mitigate the spill area using bleach or extra chlorinated water.

names and numbers

Lansas® PRODUCTS

Manufactured by Vanderlans & Sons, Inc.

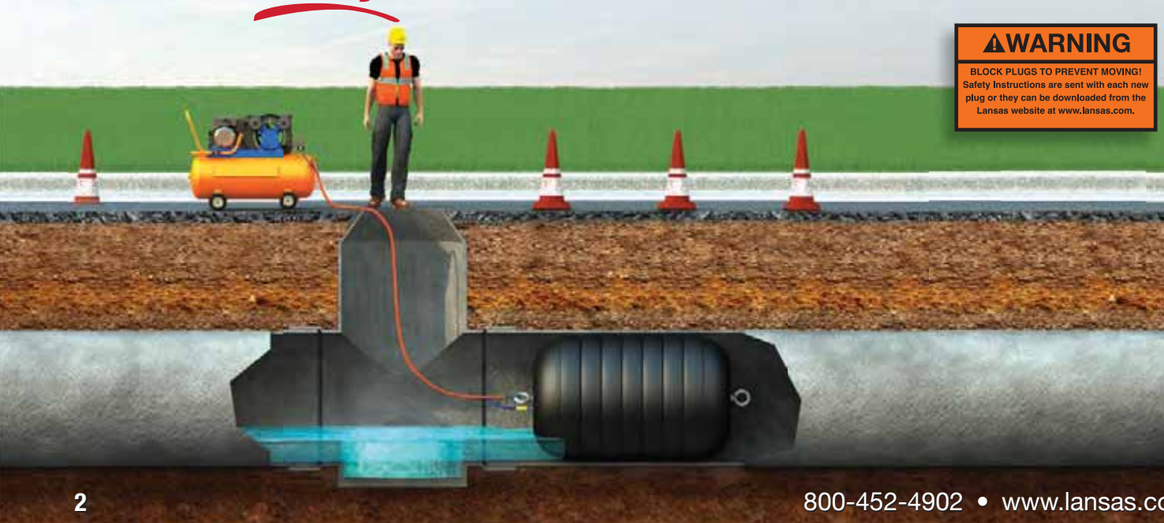
5® Line

New

5-LINE MULTI-SIZE FRONT & BACK PLUGS

The new 5-Line™ Multi-Size Front and Back Plugs are *better* in a number of ways. The most noticeable difference is in the very unique new design featuring the LANSAS proprietary "Flat-Rib"™ design which holds 60% more back pressure than standard O-ring ribbed plugs. We are using our improved reformulated rubber and laying the fabric in a way that the plugs can get the widest range of use on the market today. As with all other LANSAS products included in the 5-Line™ group, our 5-Line™ Multi-Size Front and Back plugs are equipped with the LANSAS RP2™ Rupture Protection. We trust in this design enough to back it with the 5-Line™ 5 YEAR WARRANTY. If you are looking for the most Return on Investment look no further than the LANSAS 5-Line™ where once again it shows LANSAS is BETTER BY DESIGN™ since 1955.

Custom Designs Are Always™ Available



DOMEHEAD™ FRONT & BACK PLUGS

Patent # 5,785,090 Patent # 5,379,802 Patent # 4,079,755

THE LANSAS DOMEHEAD™ is the most durable multi-size pipe plug available. The unique design of this plug is covered under two U.S. patents. The first patent relates to the 2-ply of cross biased tire cord reinforcement (more on larger sizes). This design allows for controlled expansion of the plug. As this plug inflates it gets larger in diameter and shorter in length. By changing the shape of the plug rather than stretching the rubber we are able to make contact in the pipe at a lower pressure. This gives us higher contact pressure per square inch at an overall lower inflation pressure. Contact area and pressure are everything.

The second patent covers our superior end design. The ends are reinforced with a steel "spider™" ring wrapped in fabric. The fabric extends from the spider™ into the body of the plug. This advanced design transfers the stress of the inflation through the fabric to the steel spider™ ring leaving the bond at the base plate at a more relaxed state.

RUPTURE PROTECTED DOMEHEAD™ PLUGS

LANSAS RUPTURE PROTECTED PLUGS have a built in air relief valve that will prevent the plug from being over inflated due to faulty gauges or operator error. Once the valves cracking pressure is reached the Lansas RP™ Valve will open relieving the excess pressure. The RP™ Valve will reset at, or just below the required inflation pressure for the plug.

RP™ RUPTURE PROTECTED PLUG

Features:

- Eliminate operator error
- No broken discs to be replaced
- Plug stays in service
- Valve is recessed to prevent damage
- RP™ valves now available on most Multi Size Plugs manufactured by Lansas Products
- Don't be sold by cheap imitations of the original
- Another original design by Lansas Products

LANSAS Newly Redesigned Protective Sleeves

The LANSAS Protective Sleeve now has large D-Rings in place of the typical loops you see on other manufacturer's sleeves. This simple design improvement is superior in strength and makes it much easier to restrain the sleeve using the LANSAS SMART-SECURE™ Protective Sleeve Cable Restraint System.

These D-Rings are tied into the sleeve with 2-Ply's of biased cord fabric for added strength to ensure years of reliable service.

LANSAS Protective Sleeves help protect the plug while in the pipeline saving it from damage from debris, degraded pipe, barnacles, and more while in the pipeline. Additionally, it protects the Pipe Plug, your real investment, while on harsh job sites when stored improperly or simply from being moved from spot to spot during normal use.

LANSAS Protective Sleeves often times can be repaired at the LANSAS Factory Warehouses where repairs are completed.

IMPROVED

Lansas® PRODUCTS

Manufactured by Vanderlans & Sons, Inc.

ITEM 1 IN PRICE LIST

5 LINE MULTI-SIZE PLUGS

New 5 Line

MULTI-SIZE BACK PLUG

PART NUMBER	RANGE OF USE		REQUIRED INFLATION PRESSURE	MAXIMUM BACK/TEST PRESSURE	BYPASS SIZE	PRODUCT DIMENSIONS		
	MINIMUM PIPE DIAMETER	MAXIMUM PIPE DIAMETER				LENGTH	DEFLATED DIAMETER	WEIGHT
550-816	7.4"	16.25"	30 psi	15 psi	N/A	32.0"	7.3"	14 lbs.
550-1018	9.1"	18.25"	30 psi	15 psi	N/A	35.0"	9.0"	21 lbs.
550-1224	10.6"	24.25"	30 psi	15 psi	N/A	41.5"	10.5"	30 lbs.

MULTI-SIZE FRONT PLUG

551-1018	9.1"	18.25"	30 psi	15 psi	3/4" + 1/4"	35.0"	9.0"	26 lbs.
551-1224	10.6"	24.25"	30 psi	15 psi	3/4" + 1/4"	41.5"	10.5"	37 lbs.

ITEM 2 & 4 IN PRICE LIST

MULTI-SIZE DOMEHEAD™ BACK PLUG

PART NUMBER	RANGE OF USE		REQUIRED INFLATION PRESSURE	MAXIMUM BACK/TEST PRESSURE	PRODUCT DIMENSIONS		
	MINIMUM PIPE DIAMETER	MAXIMUM PIPE DIAMETER			LENGTH	DEFLATED DIAMETER	WEIGHT
050-46	3.5"	6.25"	30 psi	15 psi	9.5"	3.5"	1 lbs.
050-610	5.3"	10.25"	30 psi	15 psi	19.7"	5.0"	4 lbs.
050-812	7.3"	12.25"	25 psi	15 psi	20.0"	7.0"	8 lbs.
050-1016	9.5"	16.25"	25 psi	15 psi	30.0"	9.30"	19 lbs.
050-1218	11.5"	18.25"	25 psi	15 psi	30.0"	11.0"	29 lbs.
050-1224	11.5"	24.25"	25 psi	15 psi	41.0"	11.0"	33 lbs.
050-1530	14.0"	30.25"	20 psi	8 psi	55.0"	13.0"	48 lbs.
050-1530RP	14.0"	30.25"	20 psi	8 psi	55.0"	13.0"	50 lbs.
050-2036	19.0"	36.25"	20 psi	8 psi	64.0"	18.5"	71 lbs.
050-2036RP	19.0"	36.25"	20 psi	8 psi	64.0"	18.5"	73 lbs
050-2448	22.0"	48.25"	15 psi	8 psi	84.0"	21.5"	102 lbs.
050-2448RP	22.0"	48.25"	15 psi	8 psi	84.0"	21.5"	104 lbs.
050-3660	34.5"	60.25"	10 psi	6 psi	84.0"	29.5"	187 lbs.
050-3660RP	34.5"	60.25"	10 psi	6 psi	84.0"	29.5"	189 lbs.
050-4278	37.0"	78.25"	10 psi	6 psi	101.0"	37.0"	314 lbs.
050-4278RP	37.0"	78.25"	10 psi	6 psi	101.0"	37.0"	316 lbs.
050-4872	46.0"	72.25"	10 psi	6 psi	84.0"	43.5"	331 lbs.
050-4872RP	46.0"	72.25"	10 psi	6 psi	84.0"	43.5"	333 lbs.
050-5496	53.0"	96.25"	10 psi	6 psi	114.0"	51.0"	496 lbs.
050-5496RP	53.0"	96.25"	10 psi	6 psi	114.0"	51.0"	498 lbs.
050-6096	58.0"	96.25"	10 psi	6 psi	110.0"	56.0"	515 lbs.
050-6096RP	58.0"	96.25"	10 psi	6 psi	110.0"	56.0"	517 lbs.

ITEM 3 & 4 IN PRICE LIST

MULTI-SIZE DOMEHEAD™ FRONT

PART NUMBER	RANGE OF USE		REQUIRED INFLATION PRESSURE	MAXIMUM BACK/TEST PRESSURE	BY-PASS SIZES	PRODUCT DIMENSIONS		
	MINIMUM PIPE DIAMETER	MAXIMUM PIPE DIAMETER				LENGTH	DEFLATED DIAMETER	WEIGHT
051-46	3.5"	6.25"	30 psi	15 psi	1/4" + 1/4"	9.5"	3.5"	2 lbs.
051-610	5.3"	10.25"	30 psi	15 psi	1/2" + 1/4"	18.0"	5.0"	7 lbs.
051-812	7.3"	12.25"	25 psi	15 psi	3/4" + 1/4"	20.0"	7.0"	10 lbs.
051-1016	9.5"	16.25"	25 psi	15 psi	3/4" + 1/4"	27.5"	9.30"	20 lbs.
051-1218	11.5"	18.25"	25 psi	15 psi	3/4" + 1/4"	28.5"	11.0"	30 lbs.
051-1224	11.5"	24.25"	25 psi	15 psi	3/4" + 1/4"	41.0"	11.0"	35 lbs.
051-1530	14.0"	30.25"	20 psi	8 psi	3/4" + 1/4"	55.0"	13.0"	50 lbs.
051-1530RP	14.0"	30.25"	20 psi	8 psi	3/4" + 1/4"	55.0"	13.0"	52 lbs.
051-2036	19.0"	36.25"	20 psi	8 psi	3/4" + 1/4"	64.0"	18.5"	73 lbs.
051-2036RP	19.0"	36.25"	20 psi	8 psi	3/4" + 1/4"	64.0"	18.5"	75 lbs.
051-2448	22.0"	48.25"	15 psi	8 psi	3/4" + 1/4"	84.0"	21.5"	105 lbs.
051-2448RP	22.0"	48.25"	15 psi	8 psi	3/4" + 1/4"	84.0"	21.5"	107 lbs.
051-3660	34.5"	60.25"	10 psi	6 psi	3/4" + 1/4"	84.0"	29.5"	190 lbs.
051-3660RP	34.5"	60.25"	10 psi	6 psi	3/4" + 1/4"	84.0"	29.5"	192 lbs.
051-4278	37.0"	78.25"	10 psi	6 psi	3/4" + 1/4"	101.0"	37.0"	318 lbs.
051-4278RP	37.0"	78.25"	10 psi	6 psi	3/4" + 1/4"	101.0"	37.0"	320 lbs.
051-4872	46.0"	72.25"	10 psi	6 psi	3/4" + 1/4"	84.0"	43.5"	335 lbs.
051-4872RP	46.0"	72.25"	10 psi	6 psi	3/4" + 1/4"	84.0"	43.5"	337 lbs.
051-5496	53.0"	96.25"	10 psi	6 psi	3/4" + 1/4"	114.0"	51.0"	501 lbs.
051-5496RP	53.0"	96.25"	10 psi	6 psi	3/4" + 1/4"	114.0"	51.0"	503 lbs.
051-6096	58.0"	96.25"	10 psi	6 psi	3/4" + 1/4"	110.0"	56.0"	520 lbs.
051-6096RP	58.0"	96.25"	10 psi	6 psi	3/4" + 1/4"	110.0"	56.0"	522 lbs.

NOTE: 10" x 16" PLUGS AND LARGER HAVE 2 INFLATION PORTS. (1) STANDARD 1/4" (F) NPT AND (1) SECONDARY 1/2" (F) NPT.

ITEM 2 & 4 IN PRICE LIST

PROTECTIVE SLEEVES

PART NUMBER	FITS PLUGS WITH NOTED PART NUMBERS	WEIGHT
069-610	050-610, 051-610	2.5 lbs.
069-610FT	093-610	2.5 lbs.
069-812	050-812, 051-812	3 lbs.
069-812FT	092-812, 094-812, 096-812	3 lbs.
059-816	550-816	5 lbs.
069-1016	050-1016, 051-1016	6 lbs.
069-1016FT	094-1016, 096-1016, 098-1016	6 lbs.
059-1018	550-1018, 551-1018	8 lbs.
069-1218	050-1218, 051-1218	10 lbs.
069-1218FT	094-1218, 096-1218, 098-1218	10 lbs.
059-1224	550-1224, 551-1224	15 lbs.
069-1224	050-1224, 051-1224	14 lbs.
069-1224FT	094-1224, 096-1224, 098-1224	14 lbs.
069-1530	050-1530, 051-1530, 094-1530S	21 lbs.
069-1530FT	094-1530H, 096-1530, 098-1530	21 lbs.
069-2036	050-2036, 051-2036, 094-2036S	28 lbs.
069-2036FT	094-2036H, 096-2036, 098-2036	28 lbs.
069-2448	050-2448, 051-2448, 094-2448, 096-2448, 098-2448	53 lbs.
069-3660	050-3660, 051-3660, 094-3660, 096-3660, 098-3660	78 lbs.
069-4278	050-4278, 051-4278, 094-4278, 096-4278, 098-4278	93 lbs.
069-4872	050-4872, 051-4872, 094-4872, 096-4872, 098-4872	89 lbs.
069-5496	050-5496, 051-5496, 094-5496, 096-5496, 098-5496	160 lbs.
069-6096	050-6096, 051-6096, 094-6096, 096-6096, 098-6096	166 lbs.

Custom sleeves always available

B & F Contracting
4111 W. Broadway
Phoenix, AZ 85043
623-582-9100 Shop 623-582-9192 FAX

PICK TICKET

DATE: 11.16.2020

ROPE KIT MONITOR PRESSURE ON SEWER PLUG

We have a fleet of sewer plugs. The attached document is Lansas because that is the majority of the fleet. We do have other brands that will meet or exceed the requirements listed. Sewer plugs are always to be monitored for leaks and thus loss of pressure.

Casey Timmons

623-764-7623

MISSION COMMUNICATIONS

Manhole Monitor™

Sewer Overflow Alarm and Tracking System

Avoid spills and high-level conditions with early notifications

Track Manhole Surcharges and Overflows

Floats tipped by surcharges and high levels signal Mission servers to initiate notifications via phone call, email, text message, fax, and pager. Secure web portals display the date, time, and duration of the events.

Simple to Install and Maintain

The Manhole Monitor is battery operated with a quick connecting antenna and float terminations for fast and easy installation. The cellular device installs in the chimney of the manhole using a versatile mounting bracket. The bracket allows the waterproof device to swivel upward during maintenance for convenient and easy removal. The unique in-ground antenna installs adjacent to the manhole. Installation can be completed with common tools and does not require manhole cover modifications or entry into the manhole. An optional "under-the-lid" mounting bracket is available for original equipment manufacturer (OEM) lid applications.

Waterproof, Self-Contained, and Safe in Sewers

The rugged, all-metal enclosure is robust and serviceable. It features a replaceable battery, isolated termination, and electronic cavities. The intrinsically safe device meets requirements for use in hazardous sewer system environments and is designed and tested to IP68 specifications.

User-Friendly

Startup is simple with a 16-character LCD that validates proper operation and displays optional advanced configuration settings. The user-accessible pushbutton switch allows navigation through the display. Alternate languages can be selected.

Reliable Communications

The advanced Manhole Monitor features fourth generation (4G) radios for reliable data transmissions. The device features fully acknowledged data payloads—unlike SMS messages. There are no radios to program, cellular contracts to set up, or software programs to buy.

Managed Service—The Complete Package

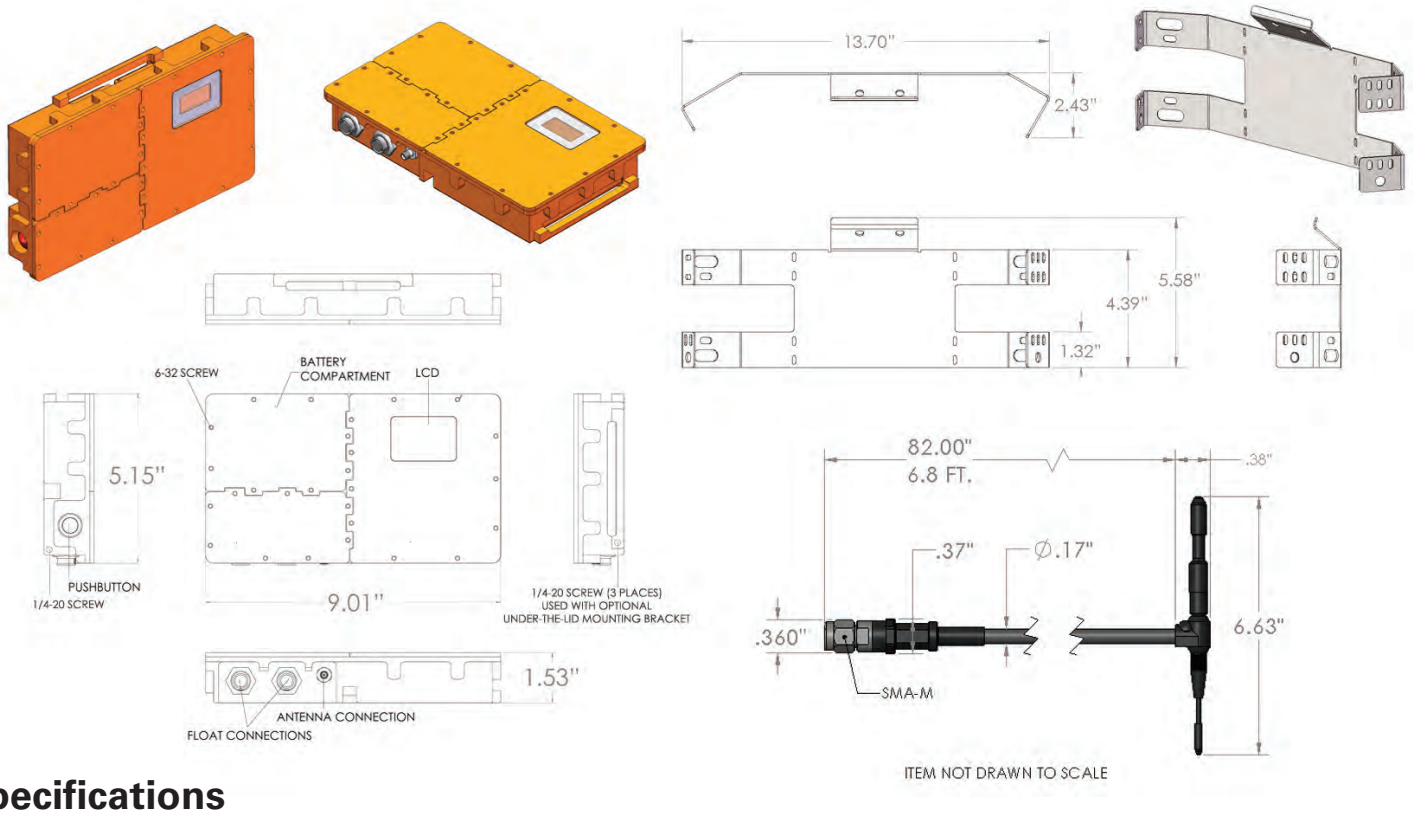
The service includes all communications, data storage, alarm call-outs, reports, and technical support. Alarm conditions are recorded and reported in real-time while device health status is transmitted daily. All data and reports can be accessed from any web-enabled device, and the data is archived forever. No engineering or programming is required.

Long Operating Life

The ultra-efficient circuitry draws minimal power from the field replaceable battery. This makes the low-power device capable of routine daily transmissions for more than five years.

- **Receive alarms and data on surcharges and overflows**
- **Fully managed service includes communications, alarm call-outs and web portals**
- **4G radio for reliable data transmission**
- **Rugged, all-metal, waterproof enclosure**
- **LCD simplifies startup and optional advanced settings**
- **High-capacity, 5-year, field replaceable battery**

Dimensions



Specifications

Enclosure:
- Solid aluminum enclosure with serviceable compartments
- Double-coated for corrosion resistance
- Polycarbonate display lens

Power:
- Replaceable 6.0 VDC lithium manganese dioxide battery
- 36.6 watt-hour capacity
- 5 year nominal lifetime

Float Inputs:
- (2) Dry contact inputs
- Alarms on state change
- Configurable debounce delay for nuisance alarm prevention
- (2) Mercury-free floats; 2 wire, 20' water resistant, safety colored cable, normally-closed, mechanically-activated, 90 degree open
- Floats terminated with molded SwitchCraft EN3 harsh environment connector with integral O-Ring and locking bayonet

Radios:
- 4G cellular modem
- Five-band UMTS/HSPA+ (800/850/AWS1700/1900/2100 MHz) and quad-band GSM/GPRS, EDGE (850/900/1800/1900 MHz)
- Triple Band CDMA2000 (800/1900MHz), 3GPP2: 1xAdvanced, EV-DO Rev.A

Antenna:
- In-ground, omnidirectional (PN RF8003)
- Water-tight SMA male (cable) to SMA female (enclosure) connection

Included Installation Hardware:
- Stainless steel, multifaceted mounting bracket
- TapCon stainless steel masonry bolts, (4) 1" x 3/4" and (2) 2" x 1/4"
- (1) 3/16" diameter masonry drill bit
- (2) Carabiners
- Tie wraps
- Asphalt sealant
- Drying agent

Physical:
- Enclosure: 9.01" L x 1.53" W x 5.15" H
- Enclosure: 3.6 lbs.
- CAD files available for enclosure and mounting bracket

Configuration and Diagnostics:
- Liquid crystal display (LCD)
- Pushbutton switch
- Device information
- Optional configuration parameters
- Language selection (English, Spanish and French)

Environment:
- Operating: -10 to 50°C
- LCD: 0 to 60°C
- Intrinsically safe, Certified Class I, II, III, Division 1 Groups D-G, T1 hazardous environments
- Independently tested for IP68 rating—water proof up to depths of 10' for four hours and 4' for 24 hours
- EU RoHS compliant

Warranty:
- Enclosure and electronics: 5 years
- Battery: 5 years based on 500 transmissions per year*
- Floats: 1 year

*Additional service plans available for higher data transmission rates.

Optional Accessories:
- Above-ground antenna (PN RF8006)
- Replacement in-ground antenna (PN RF8003)
- Pole mount antenna kit (PN RF8005)
- Replacement battery pack (PN PW8202)
- 10' Float (PN IT8503)
- 20' Float (PN IT8502)
- 30' Float (PN IT8504)
- Masonry drill bit, 3/8" x 24" (PN T8000)
- Under-the-lid mounting bracket (PN E8113)

MISSION COMMUNICATIONS
(877) 993-1911 • sales@123mc.com • 123mc.com

SGS Certified Class I, II, III, Division 1 Groups D-G, T1 and Intrinsically Safe.

Literature Code: MM-0118

ATTACHMENT 2 ON FOLLOWING PAGES

Water Resources cross check of V1 submittal versus specification, LDillon comments on 6/11/21 shown in magenta.

City of Scottsdale Sewer Bypass Pumping Plan Specification*

Last updated by COS Water Resources, LDillon, on 5/4/2021

*The process outlined and/or information herein is being provided to help ensure proper due diligence on behalf of the contractor and facilitate general oversight requirements of the City. It in no way releases the contractor from any additional due diligence responsibility not detailed or foreseen in the document.
Note: Items in red text and boxes herein are Water Resources' notes, as are any redactions.

See supplemental item 1A. Note: All supplemental items can be found in list attached to this document

1. General:

This specification covers sanitary sewer bypass pumping. Contractor is required to furnish all materials, labor, equipment, power, maintenance, etc. to implement a temporary pumping system for the purpose of diverting the existing wastewater flow around the work area until such time that construction improvements have been completed and flows can be restored. The design, installation and operation of the temporary pumping system shall be the Contractor's responsibility. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction.

2. Engineering Submittal:

The contractor shall submit to the engineer detailed plans and descriptions outlining all provisions and precautions to be taken by the Contractor regarding the handling of existing flows. This plan must be specific and complete, including such items as schedules, locations, elevations, capacities of equipment, materials and all other incidental items necessary and/or required to insure proper protection of the facilities, including protection of the access and bypass pumping locations from damage due to the discharge flows, and compliance with the requirements and permit conditions specified [redacted] No construction shall begin until all provisions and requirements have been reviewed by the Engineer.

See supplement item 2A.

3. Pumping Plans:

See supplemental item 3A

The plan shall include but not be limited to details of the following:

review items and provide in revised submittal

- Staging areas for pumps;
- Plugging method and types of plugs;
- Number, size, material, location and method of installation of suction piping;
- Number, size, material, method of installation and location of installation of discharge piping;
- Bypass pump sizes, capacity, number of each size to be on site and power requirements;
- Demonstration that the pumping system provides full (double flow) redundancy;
- Calculations of static lift, friction losses, and flow velocity (pump curves showing pump operating range shall be submitted);
- Standby power generator size, location;
- Downstream discharge plan;
- Method of protecting discharge manholes or structures from erosion and damage;
- Thrust and restraint block sizes and locations;

need more detail

See supplemental item 3B

not provided in current submmital

- Sections showing suction and discharge pipe depth, embedment, select fill and special backfill;
- Method of noise control for each pump and/or generator;
- Any temporary pipe supports and anchoring required;
- Design plans and computation for access to bypass pumping locations;
- Calculations for selection of bypass pumping pipe size;
- Schedule for installation of and maintenance of bypass pumping lines;
- Plan indicating selection location of bypass pumping line locations.

not provided in current submmital

4. Equipment:

All pumps used shall be fully automatic self-priming units that do not require the use of foot-valves or vacuum pumps in the priming system. The pumps may be electric or diesel powered. All pumps used must be constructed to allow dry running for long periods of time to accommodate the cyclical nature of wastewater flows.

See supplemental item 4A

The Contractor shall provide the necessary stop/start controls for each pump.

The Contractor shall include one stand-by pump of each size to be maintained on site. Back-up pumps shall be on-line, isolated from the primary system by a valve. Discharge Piping - In order to prevent the accidental spillage of flows all discharge systems shall be temporarily constructed of rigid pipe with positive, restrained joints. Under no circumstances will aluminum "irrigation" type piping or glued PVC pipe be allowed.

See supplemental item 5A.

5. System Description:

Bypass pumping systems shall have sufficient capacity to pump a peak flow at each bypass location. The Contractor shall provide all pipeline plugs, pumps of adequate size to handle peak flow, and temporary discharge piping to ensure that the total flow of the main can be safely diverted around the section to be constructed. Bypass pumping system will be required to be operated 24 hours per day.

see comment on suppmental item 5A

The Contractor shall have adequate standby equipment available and ready for immediate operation and use in the event of an emergency or breakdown. One standby pump for each size pump utilized shall be installed at the mainline flow bypassing locations, ready for use in the event of primary pump failure.

Bypass pumping system shall be capable of bypassing the flow around the work area and of releasing any amount of flow up to full available flow into the work area as necessary for satisfactory performances of work.

See supplemental item 5B

The Contractor shall make all arrangements for bypass pumping during the time when the main is shut down. It is essential to the operation of the existing wastewater system that there be no interruption in the flow of wastewater throughout the duration of the project. To this end, the Contractor shall provide, maintain and operate all temporary facilities such as dams, plugs, pumping equipment (both primary and back-up units as required), conduits, all necessary power, and all other labor and equipment necessary to intercept the wastewater flow before it reaches the point

where it would interfere with his work, carry it past his work and return it to the existing wastewater system downstream of his work.

The design, installation and operation of the temporary pumping system shall be the Contractor's responsibility. The bypass system shall meet the requirements of all codes and regulatory agencies having jurisdiction.

The Contractor shall provide all necessary means to safely convey the wastewater past the work area. The Contractor will not be permitted to stop or impede the main flows under any circumstances.

The Contractor shall maintain wastewater flow around the work area in a manner that will not cause surcharging of wastewater, damage to wastewater system and that will protect public and private property from damage and flooding.

will need to be provided upon install of bypass and test, describe in submittal

The Contractor shall protect water resources, wetlands and othe

6. Field Quality Control and Maintenance:

Test: The Contractor shall perform leakage and pressure tests of the bypass pumping discharge piping using clean water prior to actual operation. The Engineer will be given 24 hours' notice prior to testing.

See supplemental item 6A

Inspection: Contractor shall inspect bypass pumping system every two hours to ensure that the system is working correctly.

state in submittal

7. Maintenance Service: The Contractor shall insure that the temporary pumping system is properly maintained and a responsible operator shall be on hand at all times when pumps are operating.

Extra Materials: Spare parts for pumps and piping shall be kept on site as required. Adequate hoisting equipment for each pump and accessories shall be maintained on the site.

B&F to locate existing sewer in alley and ensure no conflicts

8. Preparation:

Contractor is responsible for locating any existing utilities in the area the Contractor selects to locate the bypass pipelines. The Contractor shall locate his bypass pipelines to minimize any disturbance to existing utilities and shall obtain approval of the pipeline locations from the City and the Engineer. All costs associated with relocating utilities and obtaining all approvals shall be paid by the Contractor.

See supplemental item 8A

9. Precautions:

During all bypass pumping operation, the Contractor shall protect the wastewater system from damage inflicted by any equipment. The Contractor shall be responsible for all physical damage to the wastewater system caused by human or mechanical failure.

need to show on resubmittal

10. Installation and Removal:

See supplemental item 10A

The Contractor shall make connections to the existing wastewater system and construct temporary bypass pumping structures only at the access location indicated on the Drawings and as may be required to provide adequate suction conduit.

Plugging or blocking of wastewater flows shall incorporate a primary and secondary plugging device. When plugging or blocking is no longer needed for performance and acceptance of work, it is to be removed in a manner that permits the wastewater flow to slowly return to normal without surge, to prevent surcharging or causing other major disturbances downstream.

When working inside manhole and trench excavations, the Contractor shall exercise caution and comply with OSHA requirements.

placement in ROW not allowed in this case

The Contractor is responsible for obtaining any approvals for placement of the temporary pipeline within City right-of-way.

11. Spill Prevention and Emergency Response Plan (refer to details below and example submittal).

provide in submittal

In addition to the relevant details presented in the example be sure to provide the following in the plan:

A. Provide all responsible contractor contact names, titles/responsibility, phone numbers, and internal contact protocol to be followed.
B. Provide relevant City contact priority and names and contact info. City contact order and information as follows:

1. Water Resources: Bill Wilson, Wastewater Collections Senior Operator, 602-316-4584, if no answer leave message and attempt next.
2. Water Resources: Arthur Faiello, Wastewater Collections Manager, 480-312-8759, if no answer leave message and attempt next.
3. Water Resources: no response/After-hours/holiday, 480-312-5650
4. Inspector during normal business hours: Applicable City inspector on permit
5. Inspection services: no response/after-hours/holiday: 602-228-2187

C. Submit a site plan showing the following:

1. installed bypass pumps and piping indicating below versus above ground piping
2. aerial background of area
3. ground contours
4. Adjacent storm drain inlets
5. Indicate potential portable berms and containment areas consistent with drainage characteristics showing how a surface discharge would be prevented from spreading and be contained for cleanup. Include details supporting how a surface discharge would be prevented from entering the storm drain system or contained within a limited reach of the system.

12. Refer to next page for supplemental requirements/guidance.

review and address applicable items in resubmittal

Bypass Pumping Plan Specification Section:		Supplemental Item to Base Sewer Bypass Pumping Specification (Last updated by COS Water Resources, LDillon, on 5/4/2021)
1	General	A. The process outlined and information required in the specificaiton is being provided to help ensure proper due diligence on behalf of the contractor and facilitate general oversight requirements of the City. It in no way releases the contractor from any additional due diligence responsibility not detailed or foreseen in the document.
2	Engineering Submittal	A. A bypass occuring prior to approved sewer pipeline plans shall also be reviewed by the City of Scottsdale Water Resources Department (with no exceptions taken on the review). Water Resources or the owner's engineer do not assume liability for the contractors plan by not taking any exceptions to the plan. Associated bypass pumping formal design plans must be submitted to the City for review and approval to obtain a ROW permit prior to any construction or contractor site mobilization related to the bypass. Any other concurrent and related requirements of the City shall be addressed prior to a ROW permit being granted.
3	Pumping Plans	A. Provide all details lsited in the submitted plan. Include a narrative and a plan/section view drawings of the arrangement(s). Additional items include the following: Equipment location shall address reasonble pedestrian access, pedestrian safety, impacted access to adjcent buildings, vehicle travel and access (including City trash and maintenance vehicles, other necessary utility access). Equipment setup shall address noise impact on specific surrounding area. B. Redundancy factor used for bypass shall be approved in writing by the Water Resource's department. Redundancy factors as low as 1.5 may be permissible. Redundancy factor shall be applicable to peak hour flow and include potential inflow and infiltration (I&I) prior to applying the redundancy factor. If measured I&I flow is not available a factor approved by Water Resources shall be utilized. In systems proposing to use only two total pumps each pump shall be able to pump the peak hour, I&I, with applicable redundancy factor applied.
4	Equipment/Control	A. Alternatively, pumps and generator/power source shall work with automated liquid level control (note that this does change the requirement for the system to be monitored directly at all times during the active bypass period agreed to). If level control is to be implemented these details (including operating levels) shall be provided in the submittal. At no time shall the level risk excessively surharging the sewer and creating a risk of sewer backup.
5	System Description	A. Or as agreed to in writing by the Water Resources Department based on business on/off hours. Water Resources may require signed letters from the impacted buisness owners verifying their operating hours. Any changes to these hours will need to be accomodated by the bypass operation and the contractor performing the bypass.
6	Field Quality Control and Maintenance/Testing/Inspection	A. Add: and City inspector and Water Resources Department
7	Maintenance Service/Extra Materials	None
8	Preparation	A. Utilities shall be positively located via potholing prior to submitting the bypass plan to ensure there is no conflict.
9	Precautions	None
10	Installation and Removal	A. All impacted or modifed portions of the existing collection system, street, or other items impacted shall be restored or repaired to pre-bypass pumping condition, unless seprate approved plans address restoration within an acceptable duration and with little risk. The City will evaluate and approve this situation as its discretion. The plans submitted with the submittal and with the formal design drawings to obtain the ROW permit shall include the necessary domolition or modification details and the subsequent restoration details.
11	Spill Prevention and Emergency Response Plan	Refer to specification and example.

2.0 proposed, this is acceptable

address in resubmittal

provide hours of operation in submittal for approval by Water Resources and signed letters from business owners agreeing only to discharge sewer during bypass operating hours.

provide operating levels , ensure sewer does not surcharge and impact upstream service lines

B&F needs to verify in revised submittal

NA all work in alley and outside of ROW

ATTACHMENT 3 ON FOLLOWING PAGES

Dillon, Levi

From: Dillon, Levi
Sent: Friday, June 11, 2021 3:56 PM
To: Boyce O'Brien
Subject: RE: Maya Interim Sewer

Boyce, I will proceed with the statement below as your confirmation….almost missed it. Letter and attachments forthcoming. -Levi

---

From: Dillon, Levi
Sent: Friday, June 11, 2021 3:38 PM
To: Boyce O'Brien <bobrien@stockdalecapital.com>; Ali Fakih <ALI@azseg.com>
Cc: Lauren Andino <Lauren@azseg.com>; Doug Mann <doug@azseg.com>
Subject: RE: Maya Interim Sewer

Understood/acknowledged, No flow monitoring required just wanted to know where flow estimate came from. 10-4 on pump, maybe there just going to burn head with a valve to keep flow rate from being too high. I will only be looking for the applicable/logical items I noted to be resolved. Resolve or provide clarification in the resubmittal. That's my expectation. I have the letter locked and loaded.-Levi

---

From: Boyce O'Brien <bobrien@stockdalecapital.com>
Sent: Friday, June 11, 2021 3:31 PM
To: Dillon, Levi <LDillon@Scottsdaleaz.gov>; Ali Fakih <ALI@azseg.com>
Cc: Lauren Andino <Lauren@azseg.com>; Doug Mann <doug@azseg.com>
Subject: RE: Maya Interim Sewer

One clarification: According to B&F, the pump is about as small as it can be for this condition and will handle everything an 8" pipe can convey. Additionally, there are only two connections, Bottled Blonde and Oasis (other than our vacant Peeps bldg). I spoke to the plumbing engineer for Bottled Blonde (Peterson, see attached email) who confirmed that the max discharge from Bottled Blonde is less than 100 gpm and the fixtures in Oasis are negligible. I have attached the plumbing plans for BB for reference.

With this in mind, it seems that flow monitoring is unwarranted. Let me know if this can be avoided; otherwise, all other comments will be addressed, as noted.

Thanks, Levi.
Boyce

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Development Manager
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4501 N Scottsdale Rd, Ste. 201
Scottsdale AZ 85251
(602) 748-8888 x307 (O)
(602) 757-9324 (M)
bobrien@stockdalecapital.com
www.stockdalecapital.com

LDillon markup: Confirmation provided by Boyce to address all items in a submittal and abide by terms and conditions.

From: Dillon, Levi <LDillon@Scottsdaleaz.gov>
Sent: Friday, June 11, 2021 2:23 PM
To: Ali Fakih <ALI@azseg.com>; Boyce O'Brien <bobrien@stockdalecapital.com>
Cc: Lauren Andino <Lauren@azseg.com>; Doug Mann <doug@azseg.com>
Subject: RE: Maya Interim Sewer

All, attached is the conditional approval of the temporary bypass sewer submittal. Approval is for purposes of facilitating alley abandonment and is conditioned as noted in the attached. Official re-submittal required prior to obtaining any construction permit. Official re-submittal from the contractor/project owner (or rep) shall be submitted to Water Resources and approved by Water Resources prior to obtaining permit for hotel foundation construction. Owner (or rep) shall agree in writing to addressing all comments/item noted and providing a revised submittal as designated.

Boyce, please review the attached and provide written email confirmation agreeing to the terms of conditional submittal approval, agreeing to address all comments noted, and to revise and resubmit the submittal in the time frame noted for Water Resources' future review and approval. Once your written email confirmation is provided, I will provide the alley abandonment letter and append all of this to it.

Thanks,

Levi C. Dillon, P.E. | *Sr. Water Resources Engineer*

SCOTTSDALE WATER

"Water Sustainability through Stewardship, Innovation and People"

Contact Info
Direct: (480) 312-5319
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Fax: (480) 312-5615
Mailing/Office Address
Water Resources Administration
9379 E. San Salvador Dr.
Scottsdale, AZ. 85258

Sending me an attachment over 5MB? Please use the link below:
https://securemail.scottsdaleaz.gov/dropbox/ldillon@scottsdaleaz.gov

From: Dillon, Levi
Sent: Thursday, June 10, 2021 4:50 PM
To: Ali Fakih <ALI@azseg.com>; Boyce O'Brien <bobrien@stockdalecapital.com>
Cc: Lauren Andino <Lauren@azseg.com>; Doug Mann <doug@azseg.com>
Subject: RE: Maya Interim Sewer

Received, thank you. I will update on status and any comments tomorrow morning.
Thanks, Levi

From: Ali Fakih <ALI@azseg.com>
Sent: Thursday, June 10, 2021 4:42 PM
To: Dillon, Levi <LDillon@Scottsdaleaz.gov>; Boyce O'Brien <bobrien@stockdalecapital.com>
Cc: Lauren Andino <Lauren@azseg.com>; Doug Mann <doug@azseg.com>
Subject: RE: Maya Interim Sewer

⚠**External Email: Please use caution if opening links or attachments!**

Yes on it.

Regards,

Ali Fakih, PhD, PE
Principal

SEG

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From: Dillon, Levi <LDillon@Scottsdaleaz.gov>
Sent: Thursday, June 10, 2021 4:41 PM
To: Ali Fakih <ALI@azseg.com>; Boyce O'Brien <bobrien@stockdalecapital.com>
Cc: Lauren Andino <Lauren@azseg.com>; Doug Mann <doug@azseg.com>
Subject: RE: Maya Interim Sewer

[EXTERNAL EMAIL]

Thanks Ali, the City's firewall won't allow me to download doc per your link. Can you send through the link in my signature below?

Thanks,

Levi C. Dillon, P.E. | *Sr. Water Resources Engineer*

SCOTTSDALE WATER

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Scottsdale, AZ. 85258

Sending me an attachment over 5MB? Please use the link below:

https://securemail.scottsdaleaz.gov/dropbox/ldillon@scottsdaleaz.gov

---

From: Ali Fakih <ALI@azseg.com>
Sent: Thursday, June 10, 2021 4:30 PM
To: Boyce O'Brien <bobrien@stockdalecapital.com>; Dillon, Levi <LDillon@Scottsdaleaz.gov>
Cc: Lauren Andino <Lauren@azseg.com>; Doug Mann <doug@azseg.com>
Subject: RE: Maya Interim Sewer

⚠External Email: Please use caution if opening links or attachments!

Levi,

We reviewed the submittal, the only exception we have is to add a new MH outside of the ROW (per our discussion). Please see below link with markup to the submittal for your review.

Maya Interim Sewer

Regards,

Ali Fakih, PhD, PE
Principal

SEG

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From: Boyce O'Brien <bobrien@stockdalecapital.com>
Sent: Wednesday, June 9, 2021 8:13 PM
To: Ali Fakih <ALI@azseg.com>; Dillon, Levi <LDillon@Scottsdaleaz.gov>
Cc: Lauren Andino <Lauren@azseg.com>
Subject: Re: Maya Interim Sewer

[EXTERNAL EMAIL]

SEG is reviewing it now (attached for reference).

Thanks,

Boyce

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From: Dillon, Levi <LDillon@Scottsdaleaz.gov>
Sent: Wednesday, June 9, 2021 6:18:59 PM
To: Ali Fakih <ALI@azseg.com>; Boyce O'Brien <bobrien@stockdalecapital.com>
Cc: Lauren Andino <Lauren@azseg.com>
Subject: RE: Maya Interim Sewer

All, any update on the B&F bypass plan? As I understood it would be sent today. Maybe under SEG review? Just checking in. Thanks, Levi

---

From: Dillon, Levi
Sent: Tuesday, June 8, 2021 5:12 PM
To: Ali Fakih <ALI@azseg.com>; Boyce O'Brien <bobrien@stockdalecapital.com>
Cc: Lauren Andino <Lauren@azseg.com>
Subject: RE: Maya Interim Sewer

Boyce/ Ali,

Boyce, on your voicemail earlier today, yes I plan to review B&F's temp bypass plan submittal and, pending all looks good, I will issue an alley abandonment approval letter this week. Regarding the attached plan please confirm the following before B&F submits:

1. The bypass line does not rely on complete demolition of the Maya Club (if so update on status and coordination and include details in submitted bypass plan)
2. The new manhole on the north end of the alley shall be within the abandoned alley and not within public ROW and will not conflict with the hotel foundation construction. (I expect bypass plan will have a similar layout as attached but with more details)
3. SEG will be reviewing the bypass for completeness/conformance with specification and example I sent and issue a "no exceptions taken" submittal review transmittal to be attached with the submitted bypass plan to me.

Thanks, Levi

From: Dillon, Levi
Sent: Thursday, May 20, 2021 10:08 AM
To: Ali Fakih <ALI@azseg.com>
Cc: Lauren Andino <Lauren@azseg.com>
Subject: RE: Maya Interim Sewer

Hi Ali/Lauren, for you guys of course!:) I'm available today up until 11:30am and then 1pm on. Not available on Friday. Go ahead and set up a meeting today for a time that works.

Just FYI and something that would concern me about the option you provided. Based on recent discussion on Maya Hotel plans the new club Maya wall and foundation/wall will tie into (or abut) the foundation for the hotel. My concern is that this construction would conflict/preclude the routing you've shown. From what I recall the club Maya construction was going to be in the same time frame as the hotel. This has to be clarified/confirmed.

Also, Water Resources requires a responsible contractor monitored temp sewer bypass as opposed to a contracted vactor truck.

FYI, I sent the attached to Boyce earlier this month (5/4). The bypass pumping plan from the contractor should first be reviewed by engineer(you) as described in the attached before submittal to the City. The submittal to the City will take the form of a plan submittal which I will then also review. Per discussions this would all be combined into the alley abandonment submittal/permit.

Thanks, Levi

From: Ali Fakih <ALI@azseg.com>
Sent: Wednesday, May 19, 2021 5:17 PM
To: Dillon, Levi <LDillon@Scottsdaleaz.gov>
Cc: Lauren Andino <Lauren@azseg.com>
Subject: FW: Maya Interim Sewer

⚠External Email: Please use caution if opening links or attachments!

Hi Levi,
I hope all is well with you, I was wondering if you have some time tomorrow or Friday to go over the attached. please let me know what works for you.

Ali

Regards,

Ali Fakih, PhD, PE
Principal

SEG

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From: Boyce O'Brien <bobrien@stockdalecapital.com>
Sent: Monday, May 17, 2021 2:58 PM

To: Ali Fakih <ALI@azseg.com>; Michael Roller <MROLLER@rainforrent.com>
Subject: Maya Interim Sewer

[EXTERNAL EMAIL]

Please review the attached and let me know if this works. Everything can be above grade and it doesn't cross a street.

Thanks,
Boyce

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