

3.0 PROJECT DESCRIPTION

The purpose of this project description is to describe the proposed development plan in a way that is meaningful to the public, reviewing agencies, and decision-makers. The project description contains the following: (1) the project location, (2) project proponent/owners, (3) a statement of the project objectives, and (4) a general description of the project's physical characteristics.

3.1 PROJECT LOCATION

The proposed project is located in the unincorporated community of Oak Park. Oak Park is located in southeastern Ventura County, California. The project's regional location is shown on Figure 1 (Figures are located at the end of each respective EIR section). The existing and proposed alternative replacement tank sites are located within Rancho Simi Recreation and Park District (RSRPD) land. Two alternative new tank sites are currently proposed and are identified as A7 and A8. Alternative tank site A7 is located nearly due north of the intersection of Kanan Road and Churchwood Street on the side of the ridge facing into Oak Canyon Community Park above the archery range. Alternative tank site A8 is located east of Doubletree Road/Sunnycrest Drive toward Palo Comado Canyon with tentative street address is 6900 ½ Doubletree Road, Oak Park, Ventura County, California. Figure 2 shows the locations of the proposed alternative tank sites, alternative pipeline routes and related infrastructure.

The existing tank which will be demolished as part of the proposed project, is located at the western terminus of Conifer Street in Oak Park. The street address of the site is 101 ½ Conifer Circle, Oak Park, Ventura County, California.

There are five alternative routes for proposed pipelines associated with the two alternate tank locations. The potential pipeline routes are identified as A, B, C, D, and E as shown on Figure 2.

3.2 PROJECT PROPONENT, PROPERTY OWNERS AND ASSESSOR PARCEL NUMBER

The Project Proponent is:

Triunfo Sanitation District
1001 Partridge Drive, Suite 150
Ventura, California 93003-0704
Contact: Mr. Mark Capron, Project Manager
(805) 658-4606
email: markcapron@vrsd.com

The property owner for both the A7 and A8 tank sites and pipeline routes within public open space is:

Rancho Simi Recreation and Park District
1692 Sycamore Drive
Simi Valley, CA 93065

The Assessor's Parcel Number(s) for the A7 and A8 sites are as follows:

685-010-143 and 801-010-118

Some portion of the pipeline routes are within County of Ventura, public road rights-of way.

3.3 PROJECT OBJECTIVES AND NEED

TSD owns and operates the Oak Park Water Service (OPWS) which operates and maintains the potable water distribution system in the Oak Park Community. The system consists of six pressure zones. Previous studies for OPWS (1996 Oak Park Water Service Operations Plan and 1998 Reliability Study) prepared by Boyle Engineering identified the need for replacement of some of the system facilities including water storage improvements to enhance the reliability of the system. Most of the recommended improvements have been implemented. Replacing the 41-year old, 1-million gallon Conifer Tank is the most important remaining reliability improvement.

The replacement tank is required to provide fire flow, supply interruption storage, and daily demand leveling storage for the Conifer Zone within the OPWS service area. The Conifer Zone requires fire flow storage of 720,000 gallons. Average demand in the Conifer Zone is 800,000 gallons per day. Without the new and larger tank, there are times when Oak Park would be completely out of water (including fire fighting water) less than 20 hours after an unexpected interruption of supply from the Calleguas Municipal Water District.

The existing Conifer Tank is sited on an old landslide and lacks a foundation suitable for seismic upgrade. Therefore, an alternative site is being pursued. Also, a larger reservoir than the existing Conifer Tank would bring total water storage in the District closer to locally adopted standards.

3.4 PROJECT COMPONENTS

TSD proposes to construct and operate a single 2 to 2.4 MG tank at either the proposed A7 site or the A8 site (Figure 2). Tank access road improvements and pipeline construction are also proposed. The existing 1.0 MG tank located at the western terminus of Conifer Street would be demolished.

Based on options investigated prior to, during and after publication of the 2005 Initial Study for the Conifer Tank Replacement Project, the search for the best alternative replacement tank site was narrowed to two locations (A7 and A8). Belowground tanks at either site are alternatives considered herein. The tank options are identified as “A7B” and “A8B”. Each location also has options for the associated pipeline. Thus, there are technically five preferred alternatives under consideration.

All five alternatives are technically acceptable. Geotechnical investigations by boring and trenching found both tank sites to have good foundations. Both sites are hydraulically acceptable. Any of the five alternatives will provide adequate water system reliability, acceptable water quality, and good regulation of daily flows. The costs vary among the alternatives, but in some cases higher costs come with higher values. Some alternatives permanently alter a larger area of the environment.

Summary Tables 3-1 and 3-2 are provided for ease of comparison between Site A7 and A8. A more complete description of characteristics for each of the tank options is shown on Tables 3-3, and 3-4. Figures 3 and 4 show the preliminary site plans for the tank alternatives. More characteristics for the five pipeline options are shown on Tables 3-5 through 3-9.

The possible pipeline route segments are identified as A, B, C, D or E. Either Pipeline A or Pipeline B is necessary for a tank at Site A7. Either Pipeline C, Pipeline D, or Pipeline E is necessary for a tank at Site A8. Four of the pipeline alternatives, A, B, C, and E, provide a flow-through tank for significantly better reliability and fresher water. Pipeline D is not flow-through, and therefore is a lower reliability arrangement. For Pipeline D, the water volume in the tank would vary from 2 million gallons in the morning to as low as 800,000 gallons some evenings. A flow-through tank (any of the other pipeline alternatives) could maintain water quality while staying nearly full throughout the day. It is no simple matter to increase the size of tank at A8 to make up for the inefficiency of a fill-draw arrangement. Oversizing a fill-draw tank, relative to the number of customers, causes water quality issues.

The list of pipeline alternatives and associated characteristics is provided in Tables 3-5 through 3-9 along with characteristics of each alternative. Figures 5 through 9 show the five pipeline alternatives.

Further details of the project alternatives are described as follows.

3.5 PROJECT CONSTRUCTION DETAILS

3.5.1 Proposed Water Tank

At either location, the proposed buried tank would be constructed of concrete, would be between 110 and 120 feet in diameter, and 29 and 34 feet deep, providing between 2.0 and 2.4 million gallons of usable storage.

Table 3-1. Site A7 Tank and Pipeline Summary

| Alt. | Site, Tank, and In-Road Pipe Description | Reliability, Geology, Economics | Viewshed and Traffic Disrupting Construction Time | Relative Cost ¹ (2006\$) |
|----------|--|--|--|-------------------------------------|
| Tank A7B | Fully buried tank, in Rock Ridge Open Space, above the Oak Canyon Community Park archery range. Access is from Kanan Road. | Essentially the same in all categories as for Site A8. More details in following matrix. A concrete tank's life-cycle value is ~\$300,000 more than a steel tank's life-cycle value. | The tank won't be visible, excepting surrounding 3-strand barbed wire fence. The cut/fill scar will take some years to grow back to natural appearance. A new asphalt paved access and pipeline, in the existing fire road, will scar the hill above Kanan Road. The site is visible from trails in both RSRPD and the National Recreation Area. | 4.1M |
| Pipe A | 1,900 feet of pipeline in Kanan Road. | Essentially A, B, C, and E are the same. | Four months of construction in public roads. Note the estimated cost does not include the value of the existing Calleguas pipe. | 3.1M |
| Pipe B | 4,900 feet of new pipeline in Kanan Road. | | Seven months of construction in public roads. | 4.2M |

In order to compare relative costs, add the cost of a tank alternative to the cost of an associated pipe alternative. For example, potentially the lowest relative cost for a tank at Site A7 is the \$4.1M of Tank A7B + the \$3.1M of Pipe A = \$7.2M, if Calleguas transfers their pipe at no charge.

1 A total project cost including past and future engineering and environmental documentation. Actual project cost will vary depending on the cost of energy, materials, and labor at the time of construction.

Table 3-2. Site A8 Tank and Pipeline Summary

| Alt. | Site, Tank, and In-Road Pipe Description | Reliability, Geology, Economics | Viewshed and Traffic Disrupting Construction Time | Relative Cost ¹ (2006\$) |
|----------|--|--|---|-------------------------------------|
| Tank A8B | Buried tank with gravel roof hidden behind a low berm, in open space saddle 600' from Doubletree Road. | Essentially the same in all categories as for Site A7. More details in following matrix. A concrete tank's life-cycle value is ~\$300,000 more than a steel tank's life-cycle value. | The tank won't be visible from the trail, excepting a surrounding 3-strand barbed wire fence. The cut/fill scar will take some years to grow back to match the background hill. The existing fire road will be gravel. The site is visible from trails in both RSRPD and the National Recreation Area. The tank roof will be visible from elevated areas. | 3.8M |
| Pipe C | 2,900 feet of new pipe in Doubletree and Kanan Roads. | Essentially A, B, C, and E are the same. | Five months of construction in public roads. | 2.5M |
| Pipe D | 1,900 feet of pipeline in Kanan Road. | Less reliable. See details. | Four months of construction in public roads. Note the estimated cost does not include the value of the existing Calleguas pipe. | 2.0M |
| Pipe E | 4,750 feet of new pipe in Doubletree, Sunnycrest, and Kanan Roads. | Essentially A, B, C, and E are the same. | Six months of construction in public roads. | 3.0M |

In order to compare relative costs, add the cost of a tank alternative to the cost of an associated pipe alternative. For example, the lowest, but most reliable relative cost for a tank at Site A8 is the \$3.8M of Tank A8B + the \$2.5M of Pipe C = \$6.3M.

1 A total project cost including past and future engineering and environmental documentation. Actual project cost will vary depending on the cost of energy, materials, and labor at the time of construction.

Table 3-3. A7B Alternative Characteristics

| Alternative | Site and Tank Description | Reliability | Geology | Estimated Cut & Fill Volumes and Import/Export | Estimated Total Affected Area ¹ | Construction Requirements |
|---|--|---|--|---|--|---|
| <p>A7B (concrete)</p> <p style="text-align: center;">Figure 3</p> | <p>Mostly buried tank, in Rock Ridge Open Space, above the Oak Canyon Community Park archery range, hills on three sides, over the ridge from Churchwood. Access is from Kanan Road.</p> | <p>Good. Flow-thru tank can be kept nearly full, but location may be west of a major line break, leaving eastern parts of Oak Park without water in an emergency. The A7 location could supply the Lindero Zone for day-to-day operation. But this does not increase reliability more than the A8 site. The Savoy Tank currently provides the operational and emergency storage for the Lindero Zone. Recent earthquake experience suggests a slightly higher, but not quantified, reliability for a buried tank.</p> | <p>Excellent. Bedrock planes dip into slope.</p> | <p>Cut (c.y.) 29,000 Fill (c.y.) 29,000 (balanced onsite) Concrete: 1,400 c.y. (156 truck loads) Aggregate Base: 650 c.y. (43 truck loads) Pavement: 220 c.y. (17 truck loads) Miscellaneous material (6 truck loads) Total truck loads - 220</p> | <p>Temporary 4 acres Permanent 0.64 acres</p> | <p>Major Equipment: Crane - 1 Bulldozer - 1 Scraper - 2 Backhoe/excavator - 1 Construction Personnel - An average of five workers with multi-week peaks of 10 workers would be required for tank construction Construction Duration: 12 months</p> |

Table 3-4. A8B Alternative Characteristics

| Alternative | Site and Tank Description | Reliability | Geology | Estimated Cut & Fill Volumes and Import/Export | Estimated Total Affected Area ¹ | Construction Requirements |
|-----------------------------------|--|--|---|---|--|--|
| A8B (concrete) Figure 4 | Buried (95 %) tank with gravel roof hidden behind a low berm, in open space saddle 600 feet from Doubletree Road along hiking trail/fire road leading to National Recreation Area. | Good to best, depending on the pipeline alternative. Far east end is highest reliability location. Recent earthquake experience suggests a slightly higher, but not quantified, reliability for a buried tank. | Excellent. Shallow bedrock on relatively flat area. | Cut (c.y.) 26,000 Fill (c.y.) 26,000 (balanced onsite) Concrete: 1,400 c.y. (156 truck loads) Aggregate Base: 380 c.y. (5 truck loads) Pavement: 11 c.y. (1 truck loads) Miscellaneous material (6 truck loads) Total truck loads - 170 | Temporary 3 acres Permanent 0.3 acres | Major Equipment: Crane - 1 Bulldozer - 1 Scraper - 1 Backhoe/excavator - 1 Construction Personnel - An average of five workers with multi-week peaks of 10 workers would be required for tank construction Construction Duration: 12 months |

Table 3-6. Pipeline B Characteristics

| Alternative | Pipeline Description | Reliability | Estimated Cut & Fill Volumes and Import/Export | Construction Requirements |
|--|---|---|---|--|
| <p style="text-align: center;">B</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Figure 6</p> | <p>Associated with the A7 site - Approximately 4,200 feet of new 16-inch diameter pipe is proposed to be located within the open space between Benedict Court and Churchwood Drive and extended through Oak Canyon Community Park. Approximately 3,200 feet of 12- to 16-inch diameter pipe would be installed in Kanan Road from near Water Oak to Deerhill Road. Within a decade, 1,900 feet of aging 10-inch pipeline in Kanan Road from Deerhill Road to Smoketree Avenue would be replaced with 16- to 12-inch pipe to improve hydraulics. Excavations in Kanan Road near southwest corner of Kanan Road and Lindero Canyon Road, in Kanan Road across from Bowfield Street, at Kanan Road and North Oak Hills Drive, and in Kanan Road south of Deerhill Road would also be required as part of this alternative to accommodate necessary appurtenances (e.g., valves, meters, etc.).</p> | <p>Very good. Flow-thru tank can be kept nearly full, but location is not furthest from supply. The A7 location could supply the Lindero Zone for day-to-day operation. But this does not increase reliability more than the A8 site. The Savoy Tank currently provides the operational and emergency storage for the Lindero Zone.</p> | <p>Total export soil: 3,600 c.y. (240 truck loads export)</p> <p>Total import: Slurry- 1,300 c.y. Sand - 1,200 c.y. Pavement - 330 c.y. Pipe - 9,300 l.f. (250 truck loads import)</p> <p>Total truck loads: 490</p> | <p>Major Equipment: Backhoe/excavator - 1 Roller - 1 Track-mounted drill rig or horizontal auger/drill unit - 1</p> <p>Construction Personnel - An average of five workers with multi-week peaks of 10 workers would be required for pipeline construction</p> <p>Construction Duration: 7 months in public roads and 6 months outside of public roads</p> |

Table 3-7. Pipeline C Characteristics

| Alternative | Pipeline Description | Reliability | Estimated Cut & Fill Volumes and Import/Export | Construction Requirements |
|--|--|---|---|--|
| <p style="text-align: center;">C</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Figure 7</p> | <p>Associated with Site A8 - Proposed new pipe would include 2,200 feet in the trail/fire road between Kanan Road and Doubletree Road, 1,000 feet in Doubletree Road, and 700 feet in the trail/fire road east of Doubletree Road. Within a decade, 1,900 feet of aging 10-inch pipeline in Kanan Road from Deerhill Road to Smoketree Avenue would be replaced with 16-inch pipe to improve hydraulics. Excavations in Kanan Road near southwest corner of Kanan Road and Lindero Canyon Road, in Kanan Road across from Bowfield Street, at Kanan Road and North Oak Hills Drive, and in Kanan Road south of Deerhill Road would also be required as part of this alternative to accommodate necessary appurtenances (e.g., valves, meters, etc.).</p> | <p>Best. Flow-thru tank can be kept nearly full and far east end is highest reliability location.</p> | <p>Total export soil: 2,500 c.y. (170 truck loads export)</p> <p>Total import: Slurry- 900 c.y. Sand - 1,300 c.y. Pavement - 220 c.y. Pipe - 5,890 l.f. (210 truck loads import)</p> <p>Total truck loads: 380</p> | <p>Major Equipment: Backhoe/excavator - 1 Roller - 1 Track-mounted drill rig or horizontal auger/drill unit - 1</p> <p>Construction Personnel - An average of five workers with multi-week peaks of 10 workers would be required for pipeline construction</p> <p>Construction Duration: 5 months in public roads and 5 months outside of public roads</p> |

Table 3-8. Pipeline D Characteristics

| Alternative | Pipeline Description | Reliability | Estimated Cut & Fill Volumes and Import/Export | Construction Requirements |
|--|--|--|--|--|
| <p style="text-align: center;">D</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Figure 8</p> | <p>Associated with Site A8 - Requires transferring 3,900 feet of existing pipeline owned by Calleguas Municipal Water District to the OPWS. Within a decade, 1,900 feet of aging 10-inch pipeline in Kanan Road from Deerhill Road to Smoketree Avenue would be replaced with 12-16-inch pipe to improve hydraulics. Excavations in Kanan Road near southwest corner of Kanan Road and Lindero Canyon Road, in Kanan Road across from Bowfield Street, at Kanan Road and North Oak Hills Drive, and in Kanan Road south of Deerhill Road would also be required as part of this alternative to accommodate necessary appurtenances (e.g., valves, meters, etc.).</p> | <p>Good. Fill and draw tank reduces minimum stored volume, far east end is highest reliability location.</p> | <p>Total export soil: 1,100 c.y. (70 truck loads) Total import: Slurry- 550 c.y. Sand - 450 c.y. Pavement - 150 c.y. Pipe - 2,090 l.f. (100 truck loads import) Total truck loads: 170</p> | <p>Major Equipment: Backhoe/excavator - 1 Roller - 1 Track-mounted drill rig or horizontal auger/drill unit - 1 Construction Personnel - An average of five workers with multi-week peaks of 10 workers would be required for pipeline construction Construction Duration: 4 months in public roads and 2 months outside of public roads</p> |

Table 3-9. Pipeline E Characteristics

| Alternative | Pipeline Description | Reliability | Estimated Cut & Fill Volumes and Import/Export | Construction Requirements |
|--|--|---|--|--|
| <p>E</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Figure 9</p> | <p>Associated with Site A8 - Proposed new pipe includes 4,200 feet in Doubletree Road and Sunnycrest Drive, and 810 feet in trail/fire road east of Doubletree Road. Eventually, 550 feet of aging 10-inch pipeline in Kanan Road from Sunnycrest Drive to Smoketree Avenue would be replaced with 12-inch pipeline to improve hydraulics. Excavations in Kanan Road near southwest corner of Kanan Road and Lindero Canyon Road, in Kanan Road across from Bowfield Street, at Kanan Road and North Oak Hills Drive, and in Kanan Road south of Deerhill Road would also be required as part of this alternative to accommodate necessary appurtenances (e.g., valves, meters, etc.).</p> | <p>Best. Flow-thru tank can be kept nearly full and far east end is highest reliability location.</p> | <p>Total export soil: 2,900 c.y. (190 truck loads)</p> <p>Total import: Slurry- 1,400 c.y. Sand - 1,200 c.y. Pavement - 350 c.y. Pipe - 5,560 l.f. (270 truck loads import)</p> <p>Total truck loads: 460</p> | <p>Major Equipment: Backhoe/excavator - 1 Roller - 1</p> <p>Track-mounted drill rig or horizontal auger/drill unit - 1</p> <p>Construction Personnel - An average of five workers with multi-week peaks of 10 workers would be required for pipeline construction</p> <p>Construction Duration: 6 months in public roads and 3 months outside of public roads</p> |

Tank Alternative A7B would be completely buried with earth, with native grass vegetation over the top. To reduce the weight of the soil above the roof, “geofoam” (large Styrofoam blocks) or cellular concrete may be used for a portion of the fill. The only portions of the tank which would be exposed to view are the entry hatch and the air vent. The hatch lid would be nearly flat steel or aluminum, surrounded by a concrete curb.

The A8B tank better matches the existing elevation and topography (e.g., requires less cut and fill than A7B). It would have an exposed roof, which would be covered with tan-colored gravel roofing. The upper foot of the tank walls would also be exposed, but largely concealed by a surrounding berm.

Both sites would have an access hatch, valve vault, and equipment room for a water freshener unit, electrical, instruments and communications. Both sites will have an air vent and 12-foot high, pole-mounted motion-activated lights. The air vent would be a “U”-shaped pipe or mushroom-shaped metal structure, enclosed in a security structure extending at most 4 feet above grade, and at most 3-feet in diameter.

The proposed site plan for Tank Alternative A7B is shown as Figure 3. It has a high water elevation between 1,335 and 1,345 feet.

The proposed site plan for Tank Alternative A8B is shown as Figure 4. It has a high water elevation between 1,270 and 1,275 feet.

The buried tanks would be surrounded by a short fence to prevent large animals, vehicles, and people from triggering the lights and alarms. The fence would use posts and barbed wire similar to the fencing used to demark the boundary of the National Recreation Area and would have “no trespassing” signs every 40 feet. The fence will enclose the outline of the tank and associated below-grade structures.

The primary security will be state-of-the-art structural features and unobtrusive intrusion detection and recording devices on the fence and light poles. As indicated above, the District plans fencing, motion-activated night lighting and an audio warning for security and safety purposes. The audio warning will be a voice starting at 60 dBA. Should the intruder not depart, the volume will increase up to 75 dBA. The motion activated lighting and warning will not be triggered by passer’s by, but only by people or large animals intruding within the fenced area. The bulbs will be shielded to limit direct view of the bulbs to the area within 20 feet of the fence. The lighting should turn on less than a few hours a year, as District personnel generally avoid working on tanks at night.

Electricity (3-phase, 480-volt) will be provided to the site for lighting, power outlets, communications, security and the operation of water quality improving equipment. No potentially hazardous substances will be stored or used at the site.

An overflow pipe would discharge to the natural drainage. This pipe would be used rarely, if ever, in the event the altitude valve fails to function properly.

Site A8 with Pipelines D and E, would have an at-grade meter vault and electrical cabinet near (within 100 feet) the tank. The electrical cabinet would be less than 6 feet high and less than 4 feet by 2 feet in length and width. Site A8, Pipeline C and Site A7 with either Pipeline A or B has meter vaults and electrical cabinets near Kanan Road.

3.5.1.1 Tank Access Road Improvements

For Site A7, the proposed road improvements from Kanan Road to the tank include widening the existing 6-10 feet wide dirt access road/trail (that begins on Kanan Road immediately north of Steeplechase Street and extends northeast to an existing fire road where the tank site will be located). It will be a paved 12-foot wide road for a length of about 2,000 feet. The slope of the access road for Site A7 requires pavement for all weather access. A temporary, 1 to 2-foot wide, by-pass trail will be established so that trail users can remain safely out of the construction zone.

For Site A8, the proposed access road improvements from Doubletree Road to the tank include widening the existing 6-10 feet wide dirt access road/trail to a gravel all-weather 10-foot wide road about 800 feet long. A temporary by-pass trail will be established so that trail users can remain safely out of the construction zone. Upon completion of construction the trail will follow the tank access road alignment (slightly different from the existing trail alignment) to a point where it would transition to the existing alignment just east of the proposed tank.

3.5.1.2 Water Quality Improvement

Each alternative also includes a water quality improvement station to reduce the nitrification² potential of the water and boost the disinfectant residual of the water. The station would be housed in an underground vault. The top of a vault will be less than 6 inches above grade. The vault top is proposed to be a little higher than grade to keep dirt and water from sheeting over the top. The vault for the A8 buried tank would likely have the top level with the top of the tank (or lower). A tank at Site A7 would have one station that would benefit not just the Confer Zone, but most of the Oak Park Water System. A tank at Site A8 would require stations not only at the new tank but also at the existing Deerhill and Savoy Tanks. Stations at the existing Deerhill and Savoy Tanks would be located within the existing paved areas of the tank sites. At the Savoy Tank, an above-grade building would be constructed. At the Deerhill Tank it is anticipated that the new building will be on top of the tank on the uphill side. This location is not visible to most of Oak Park. It will be visible from a relatively few unpopulated areas that are as high as the tank roof but not screened by the hill behind the tank.

Salts, such as sodium chloride or potassium chloride, would be stored on site (likely 55 gallon drum) and would be used to produce the hypochlorite solution through an onsite

² Nitrification is a process in which the chemistry of chloraminated water changes, resulting in rapid loss of disinfectant residual, and therefore greater risks of bacterial contamination.

electrolysis process. The facility will include metering and controls equipment, small pumps and storage vessels for the salt, in addition to electrolytic equipment.

3.5.1.3 Associated System Connection and Metering Improvements

Site A8 will require excavation of a portion of northbound Kanan Road near Deerhill Drive, adjacent to the existing Kanan turnout. This excavation may involve a new meter location for the Lindero Feeder as well as a second connection to the Conifer Zone piping.

Site A7 will require excavation in Kanan Road at the pipe connection point and also at the new meter connection for the Lindero Feeder. The meter location may be on the new pipe, or it may be near the intersection of Kanan Road and Lindero Canyon Road. The new meter location may also be further west on Kanan Road, possibly within the City of Thousand Oaks.

3.5.2 Proposed Pipeline Alternatives

Pipeline Alternative A requires an outlet pipe installed at an elevation that is lower than the tank; therefore, to install this line a deep trench (to 25 feet deep) of about 400 feet in length³ would be required or a trenchless technology such as horizontal directional drilling could be used.⁴ The inlet pipeline within the open space would be installed to a depth of 5 feet and would require a trench width of about 3.5 feet, except at the ridge. The outlet pipe must stay below hydraulic grade and will be in a trench up to 20 feet deep and 5 feet wide where passing over the ridge.

Pipeline Alternatives A and B have a connection to the Lindero Feeder requiring a temporary shutdown (approximately 8 hours) of pipeline operations while tees and valves are installed. For pipeline Alternative A, a normally-closed bypass valve would usually be installed. The valve would be opened to bypass the new tank during maintenance or emergency operations. For pipeline Alternatives A and B a centralized water quality improvement facility would be constructed either near the tank or at the outlet pipeline near Kanan Road.

For pipeline Alternative A the existing three CMWD turnouts within the OPWS would be replaced with a single new facility in the vicinity of where the feeder enters Oak Park at Lindero Canyon Road (at the southwest corner of the intersection of Kanan Road and Lindero Canyon Road.) The turnout facility would be housed within an underground facility on the side of the road potentially at the shopping center on the south side of Kanan Road, just west of Lindero Canyon Road. Above grade facilities at the turnout would consist of one or more electrical

3 Earth volumes for this trench were included in the cut/fill estimate for tank site A7 in Table 3-3.

4 Horizontal Directional Drilling. The HDD pipeline installation would be accomplished using an engine-powered rod loader drill and self contained drilling fluid system. Construction of entry and exit pits along the pipeline alignment would also be required. Pipe would be pulled through the bore hole created by the drilling process. Drilling fluids would be captured in an on-site vessel and recirculated. Typically the drilling fluid is a bentonite clay mixture. Once the fluid entrains too much soil it would be hauled off-site for proper disposal. Soils excavated from pits would also be hauled off-site as necessary.

cabinets housing power and telemetry equipment and two ventilation pipes. The cabinets would be about 5-feet high, 4 feet wide and 2 feet deep.

All pipeline alternatives require a pressure-reducing valve (PRV)⁵ to be constructed in Kanan Road at Oak Hill Road as shown on Figures 5 through 9. The Oak Hills and Kanan Road construction will be installed over existing pipelines and may cross the entire width of Kanan Road, within the Kanan Road right of way. The PRV construction would have an above-grade component. It is proposed that conventional trenching across Kanan Road be implemented for this purpose. However, if this is not economical, the connecting pipeline would be installed by boring under the street. Alternative E also requires reconstruction of a former PRV on Sunnycrest Drive.

For Alternatives A and B, new turnouts would be required as shown on Figures 5 and 6. For Alternative A the turnout would be located on the southwest corner of Kanan and Lindero Canyon Roads. For Alternative B, the turnout would be located on the north side of Kanan Road between the proposed tank access road and Benedict Court.

In all pipe alternatives, the new pipeline diameter will be 12 to 20-inches and will be constructed of polyvinyl chloride (PVC), high-density polyethylene (HDPE), ductile iron, or cement mortar-lined and coated welded steel. It is anticipated that the trench width for pipe installation will be less than 5 feet and the disturbance corridor approximately 20 feet. Pipeline construction will be accomplished using conventional trenching with some lengths of directional drilling and it is anticipated that any rock encountered can be ripped by excavator. Per the County of Ventura requirements, any trench, or connections to existing pipes under pavement will be slurry backfilled. A typical trench detail is provided in the appendix to this report.

3.5.3 Existing Tank Site

The existing Conifer Tank will be removed and the pipeline to the site will be plugged permanently at an existing valve near Conifer Circle. The abandoned pipe may be left for future power/communications wires or would be filled with concrete slurry.

There are two cell phone companies with associated antennae at the existing tank site. The three antennae currently supported by the tank could be moved to one or two new poles disguised as trees. Once the tank demolition is complete, the District could give the site, and cellular company rental income, to RSRPD.

Because of the potential continued cell phone use, the District plans no regrading or revegetation of the site. The tank foundation concrete will be removed and road base material filled to level with the perimeter asphalt. The perimeter fence and the gate at the bottom of the

5 A PRV is an assembly of valves that allow flow under certain pressures, and looks like a backflow preventer that can typically be seen in front of industrial buildings.

access road will remain as is. Potholes in the existing asphalt will be patched with hot mix and cracks will be filled with asphalt after the tank demolition.

The cellular service providers will be responsible for the design and installation of new structural mounts for their systems. This will need to be accomplished prior to the removal of the existing tank. Any necessary environmental review for the cellular service work will be the responsibility of the service providers. However, the potential for new mounts at the Conifer Tank site are considered in this document from a cumulative impact perspective. In the event that the RSRPD determines that the cell towers are to be removed, the District will restore the site to its original condition as required by RSRPD.

The demolition of the existing tank is expected to be accomplished in approximately one month after the new tank is on line and will require the following equipment:

- 1 crane,
- 1 backhoe,
- 1 dumpster, and
- 1 flatbed trailer.

It is anticipated that five truck trips will be required to take out the tank shell and any miscellaneous materials (two trips per day).

Additional site restoration, if required, is anticipated to require the following equipment:

- 1 backhoe or frontend loader,
- 1 dumpster

An estimated 4 truck trips would be required for removal of asphalt and other materials from the site as well as import of new landscaping materials.

3.5.4 Other Construction Considerations

The tank and pipeline will be constructed following American Waterworks Association (AWWA) standards (D115 "Circular Prestressed Concrete Water Tanks with Circumferential Tendons"). Fire Flow requirements will be provided pursuant to Ventura County Fire Protection District, Fire Prevention Standard 14.5.2.

Additionally, the new tank and pipeline development will be consistent with the findings of the geotechnical studies prepared for the project, the results of which shall be used to refine the design. These are "Geotechnical Study, Conifer Tank Replacement Project, Site A-7, Oak Park, California, Fugro, October 2006", and "Geotechnical Study, Conifer Tank Replacement Project, Site A-8, Oak Park, California, Fugro, November 2006".

It is anticipated that the contractor for the construction work will be from Los Angeles, Ventura, Santa Barbara, or San Luis Obispo Counties. Concrete and aggregate can come from

various locations such as, Saticoy, Sun Valley, Moorpark, Oxnard, Ventura, or Grimes Canyon near Fillmore.

3.5.5 Construction Schedule

TSD anticipates that construction activities would commence early in 2008 and be completed a year after starting. Construction would occur Monday through Saturday for approximately 8 hours per day during the hours of 7:00 a.m. to 5:00 p.m. (the particular hours of construction would likely vary from day to day within this range).

3.6 PROJECT OPERATION

Operation of the new facilities would include activities described as follows. The day-to-day activities include water quality sampling, and checking on the condition of the security features. Every two years, the tank interior is inspected by a diver. An underwater vacuum cleaning and replacement of corrosion prevention anodes may be part of the inspection. Every few years, valves are overhauled and control system components updated. The access road will need new surfacing periodically. Other occasional activities are removal of graffiti and other vandalism repairs. No new employees would be required to perform these tasks, as the project involves the replacement of an existing tank.

The District expects to own the tank site and obtain easements for the access road and pipelines.

3.7 REQUIRED DISCRETIONARY APPROVALS AND RELATED ACTIONS

The following discretionary approvals are associated with the proposed project:

- The project proponent/lead agency TSD will need to certify the CEQA environmental document (EIR); and
- The TSD will need to select a tank replacement alternative and approve the project.

The only agencies that are presently known to have ministerial approval authority over the project include the County of Ventura Transportation Department for issuance of a road encroachment permit, Ventura County Watershed Protection District for a permit to cross Medea Creek (Pipeline Alternative B only), the City of Thousand Oaks (Pipeline Alternative A only) and Rancho Simi Recreation and Park District (RSRPD) for location of the tank and pipelines in jurisdictional open space.

3.8 PRIMARY BENEFICIARIES

The primary beneficiaries of the proposed project are TSD and its customers. Benefits include improved water supply reliability and mitigation of a potential hazard associated with the seismic design standards deficiency of the existing Conifer Tank.

3.9 MITIGATION MEASURES INCORPORATED INTO THE PROJECT

The mitigation measures identified below were developed through the Initial Study Process and are hereby incorporated into the proposed project alternatives. The measures apply to both tank alternatives A7B and A8B in combination with any of the pipeline alternatives unless specifically stated otherwise.

3.9.1 Air Quality

AQ1 During construction, the contractor shall implement an Emissions Reduction and Fugitive Dust Control Program. The program shall include:

- Water trucks will spray exposed soils as needed to keep dust to a minimum.
- To prevent excessive amounts of dust, dust producing operations will cease during high wind events. (high wind events are defined as wind of such velocity as to cause fugitive dust from within the site to blow off-site.)
- Streets will be swept at the end of the day if visible soil material is carried over adjacent roads.
- On-site vehicular traffic will be limited to no more than 15 mph.
- All trucks importing fill to the site will use tarpaulins to cover the load.
- All excavated material will be sufficiently watered to prevent excessive amounts of dust.
- All material being moved will be watered or covered.
- Minimize equipment idling time.
- Maintain equipment engines in good condition and proper tune per manufacturer's specification.
- Use alternatively fueled (e.g., compressed natural gas, liquefied natural gas, biodiesel, or electric) construction equipment, if feasible.

3.9.2 Biological Resources

Measure BIO1 is applicable to the A8 tank site only.

BIO-1 Should the A8 site be selected, the tank shall be re-located such that the disturbance footprint would avoid all Braunton's milkvetch plants. A botanical survey shall be completed within one week of the initiation of any project-related ground disturbance to identify all Braunton's milkvetch plants in the immediate

area. Any Braunton's milkvetch plants located within 50 feet of any project component (including earthwork, access roads, stockpile and staging areas, off-street parking areas) shall be protected in place with temporary chain-link fencing. In the unlikely event Braunton's milkvetch appears in the relocated tank footprint prior to construction, these plants may be removed and the following measures shall be implemented:

- The top 12 inches of soil within the construction footprint shall be salvaged and stockpiled as a Braunton's milkvetch seed bank, and re-spread in the immediate project area following the completion of construction;
- Areas where top soil is re-spread may not be compacted;
- If fruit are present, seed shall be collected from Braunton's milkvetch plants to be removed and properly stored, and sown within the top soil salvage re-spreading area.

BIO2: Protected trees removed as a result of project construction shall be replaced on a cross-sectional basis as required by the County Tree Protection Guidelines, meaning the trunk cross-sectional area is estimated for trees to be removed and an equivalent number of trees must be planted to provide the same cross-sectional area. Alternatively, smaller existing onsite trees shall be transplanted. Replacement trees shall be planted within the tank site, when feasible.

Measure BIO4 is applicable to the A7 tank site and the Alternative B pipeline alignment.

BIO4: Surveys for rufous-crowned sparrow and sage sparrow shall be conducted at the A7 Tank Site and alternative B pipeline alignment by a qualified biologist. If these species are determined to be present, construction activities shall be prohibited within 200 feet of occupied habitat during the breeding season, and habitat removed (sage scrub) shall be replaced in the project area. Potential replacement areas include above the buried tank and weedy areas west of the A7 Tank Site.

BIO5: If construction would occur during the breeding season (March 15 to September 1), a breeding bird survey shall be conducted prior to construction by a qualified biologist and shall encompass all areas of potential disturbance. Any active nests found shall be avoided during construction and monitored by a qualified biologist to ensure project activities do not result in nest abandonment. Nests may be removed when the young have fledged, or the nest has been abandoned.

3.9.3 Visual Resources

V1 The District shall prepare and implement a construction "good housekeeping" plan, which will include at a minimum, designation of specific areas for materials and equipment storage, screening of stationary equipment and stockpiles from

public views wherever feasible, and site restoration measures developed to minimized the adverse visual impacts of the project and promote public and worker safety.

Mitigation measure V2 applies only to all pipeline alternatives.

- V2** Aboveground components of turnout facilities and pressure reducing valves shall be minimized in size to the extent practical and will be colored to blend in with the existing surroundings. Landscape plantings should also be incorporated to minimize the visual impact of these facilities as viewed from Kanan Road (and other view corridors as practical).
- V3** Landscaping comprised of native species shall be established at the tank site as soon as practicably possible after completion of construction. The objective of this landscaping will be to return the vegetative condition of the site to a condition that resembles the adjacent open space landscape to the maximum extent practicable and minimize the visual impact of any aboveground structures. Surface color for all aboveground structures will be an earth tone selected to visual blend with the surrounding landscape to the extent feasible. A biologist/natural landscape specialist shall be retained by the District to work with the design team in generating and implementing a landscaping plan appropriate for the project site.
- V4** Road improvements and any new drainage features shall be constructed of materials that are visually compatible, to the maximum extent practical, with the existing surrounding environment and designed to create the least amount of environmental disturbance while maintaining its function.

3.9.4 Paleontological Resources

- PR1** The District shall implement a paleontological monitoring program comprised of at least the following elements:
- a) A qualified, Ventura County-approved paleontologist shall be retained by the District to monitor initial grading/excavation activities within the tanks sites and road/pipeline routes except those within the right-of-way of existing paved roads to determine if continued monitoring is warranted, and if so, to develop a monitoring schedule.
 - b) If fossils are encountered, the paleontologist will salvage scientifically significant fossil remains.
 - c) The paleontologist shall have the power to temporarily halt or divert grading efforts to allow evaluation and any necessary salvage of exposed fossils which are determined as potentially significant.

- d) All fossils collected shall be identified. These remains shall be donated to an institution with research and/or educational interest in the materials and a retrievable storage system such as the Los Angeles County Museum of Natural History.
- e) Locations of recorded fossil localities are confidential and are to be released on a “need to know” basis only to reduce unauthorized collecting activities.
- f) A final report summarizing findings, including an itemized inventory and contextual stratigraphic data, shall accompany the fossils to the designated repository with a copy also retained by the District.

3.9.5 Cultural Resources

Measure CR1 applies the A8 site.

CR1 A professional archaeologist shall be retained to monitor vegetation clearance within the project’s new tank site area. If no cultural resources are identified following brush clearance, no further archaeological monitoring at this location will be warranted. This measure is subject to the provisions of a and b below.

- a) The archaeologist shall have the authority to temporarily halt or redirect project construction in the event that potentially significant cultural resources are exposed. Based on monitoring observations and the actual extent of project disturbance, the lead archaeologist shall have the authority to refine the monitoring requirements as appropriate (i.e., change to spot checks, reduce or increase the area to be monitored) in consultation with the lead agency (i.e., District).
- b) A monitoring report shall be prepared upon completion of construction and provided to the lead agency and to the SCCIC. The report shall include locations monitored, the results of monitoring and a conclusion on whether the project resulted in any significant impacts to cultural resources.

Measures CR2 and CR3 apply to Pipeline Alternative E only.

CR2 A professional archaeologist shall be retained to monitor all work within the vicinity of CA-VEN-125 and other areas as shown in Figure 4 of Conejo’s Phase I Report (2005). Provisions a and b listed above also apply.

CR3 The open space area at Sunny Meadows (CA-VEN-125) shall not be used as the staging area.

Measures CR4 and CR5 apply to Pipeline Alternatives A, B, C or D only.

CR4 All earth disturbing work associated with Pipeline Alternatives A, B, C or D shall be limited to the area disturbed during installation of the existing pipeline(s) and infrastructure, or proposed project infrastructure shall be realigned to avoid CA-VEN-294.

If avoidance of CA-VEN-294 is not feasible then measures CR5 and CR6 shall be required prior to project implementation.

CR5 An Extended Phase I subsurface testing program should be conducted within the project's proposed impact areas within CA-VEN-294 to determine if any intact portions of this prehistoric site and/or burials occur. Dependent on the results of the investigation the need or lack thereof for additional Phase II excavation and/or construction monitoring shall be determined.

CR6 A Chumash consultant should be retained to monitor any archaeological excavations within CA-VEN-294.

CR7 In the event that cultural resources are unearthed during project construction, all earth disturbing work within the vicinity of the find must be temporarily suspended or redirected until an archaeologist has evaluated the nature and significance of the find. After the find has been appropriately mitigated, work in the area may resume. A Chumash representative should monitor any mitigation work associated with prehistoric cultural material.

CR8 If human remains are unearthed, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98.

3.9.6 Energy Resources

ER1 The District shall use the most energy efficient models of pumps and equipment for the Conifer Tank Replacement Project that can reasonably accomplish the intended use.

ER2 The District shall incorporate the use of alternative energy sources to the extent feasible to power energy-using components of the proposed facilities.

3.9.7 Seismic Hazards

- S1** Prior to tank and pipeline construction, the appropriate geotechnical report shall be finalized and expanded as needed to address the specific tank type and pipeline alignment alternative selected. The recommendations of the finalized plan shall be incorporated into the project design and implementation phases.

3.9.8 Hydraulic Hazards

- H1** Runoff volume and velocity calculations shall be conducted for the selected tank and pipeline alternative. The project design shall incorporate proper site stabilization and drainage infrastructure, based upon the results of the aforementioned calculations that would minimize or eliminate runoff and associated erosion hazards from the project. Site drainage and stabilization measures will include at a minimum but shall not be limited to: appropriate use of run-off energy dissipation techniques and prompt establishment of vegetative ground cover in areas disturbed by the project. Additionally, an assessment of the increased runoff potential of the selected site and project design with respect to the adequacy of downstream flood conveyance capacity to accommodate the additional flow shall be conducted if the A7 site is selected, and if necessary, runoff detention shall be provided at the site to ensure proper drainage and avoidance of flooding effects. A copy of the grading and drainage plan for the project will be submitted to the Ventura County Public Works Water Resources and Development Department Development and Inspection Services for their review. Any additional disturbance resulting from erosion or flood control measures will require additional environmental review to assess the potential for significant secondary impacts associated with this mitigation measure.

3.9.9 Noise

Construction Noise

- N1** Noise-generating construction activities shall be limited to the hours between 7:00 am and 5:00 pm, Monday through Friday. No construction shall occur on State Holidays.
- N2** Any stationary equipment that may be used at the site that generates a noise level of 65 dBA or more shall be shielded to reduce noise.
- N3** The District shall notify all adjacent residents at least two weeks prior to project construction of the construction schedule including beginning and end dates and, days and hours of construction. Similar notification shall be posted at all public parks and open space located adjacent to construction.

- N4** The District shall ensure that contractors use appropriate truck routes for material delivery and spoils disposal that will result minimize noise impacts on sensitive receptors from heavy-duty trucks.
- N5** Provide impact noise producing equipment, i.e. jackhammers and pavement breaker(s), if they are used, with noise attenuating shields, shrouds or portable barriers or enclosures, to reduce operating noise.
- N6** For construction along a construction corridor, install moveable paneled noise shields or barriers at noise sensitive receptor sites. Noise control shields shall be made of panels featuring a solid panel with a weather-protected, sound-absorptive material on the construction-activity side of the noise shield. Provide readily removable and moveable noise shields so that they may be repositioned, as necessary, to provide greater noise abatement along a construction corridor as the construction process moves. This is only required for areas adjacent to noise sensitive receptors such as residences, schools, hospitals, etc.

Operational Noise

- N7** Noise producing equipment shall not result in an increase of above 3 dBA over ambient as a result of operation of project facilities at noise sensitive locations (e.g., public open space, residential uses). A noise consultant shall be retained by the District to take ambient nighttime noise measurements at noise sensitive land uses at locations where noise producing equipment will be installed prior to operation of project infrastructure. Upon operation of project equipment, nighttime noise measurements shall be taken again for comparison purposes. If noise levels exceed 3 dBA above ambient, corrective noise reduction measures (e.g., further insulation of noise producing equipment or installation of different models of equipment) shall be made until the reference threshold has been met.

3.9.10 Transportation

- T1** The District will obtain appropriate encroachment permits and shall develop a Traffic Management Plan to mitigate any potential disruptions to vehicle, pedestrian and bicycle movements, as well as property access during construction within road rights of way and should include, but not necessarily be limited to the following:
- Use of a flagger at the tank access driveway;
 - Maintain two-way traffic at all times, where feasible;
 - Provide safety measures to separate motorists from the construction workers and the work zone;
 - Ensure access for emergency vehicles at all times;
 - Provide access to adjacent residences and businesses to the extent feasible;
 - Open lanes as soon as possible to restore normal traffic patterns;

- Provide advance notification of the construction Project to residences and business in the affected area;
 - Notify the public during construction, using methods such as large electronic monitoring signs, notification to impacted residents, appropriate detour signs, and notifications to schools and emergency providers;
 - Provide an information hotline to be manned during business hours;
 - Provide a designated traffic control coordinator to ensure compliance with the Traffic Control Plan;
 - Identify temporary pedestrian detours where sidewalks are encroached on by construction activities;
 - Reopen bicycle lanes and pedestrian facilities as soon as possible to minimize disruption to bicycle traffic;
 - During construction, cover open trenches with metal plates at the end of the work day;
 - After construction, restore the roads to their pre-construction condition;
 - Ensure that truck loads are covered, and
 - Inspect and maintain truck safety equipment.
- T2** During hauling operations, proper precautions shall be taken to protect all pavements, curb and gutter, sidewalks and drainage structures from damage. Any portion damaged by the Project's operations, shall be replaced in accordance with current Standard Construction Details and/or in a manner acceptable to the County Transportation Department or Designee.
- T3** The District will ensure that the fire access roads remain passable to fire protection vehicles during the course of project construction.
- T4** Upon completion of the project, any fire access roads used for the purposes of project construction shall be returned to their pre-project condition or better with respect to fire protection vehicular access. The District shall obtain pre-project photos of the fire roads to be effected by construction to ensure an accurate record for comparison with post-project restored road conditions which shall also be photo-documented.
- T5** The District shall coordinate with the County of Ventura so that that pipeline installation does not conflict with County roadway projects.
- T6** All construction within county right-of-way shall conform to County Road Standards. Installation of pipe, trenching and backfill within the County right-of-way shall be in accordance with Section 306 of the "Greenbook" Standard Specifications for Public Works Construction.
- T7** In accordance with County policy, any trenching that is conducted in a roadway that has been rehabilitated within the last five years from the construction date will require that the full width overlay is provided after trenching is completed.

- T8** The District shall repair any project-related damage due to traffic generated to Kanan Road, Sunnycrest Drive, Deerhill Road Doubletree Road, Oak Hill Drive, Medea Creek Land and other roads in the project area up to and including a new overlay as determined by the Ventura County Transportation Department.
- T9** Temporary video detection shall be provided for any signalized intersection where detection loops will be cut by project contractor operations.
- T10** A traffic control plan shall be submitted for any detour, road closures, or partial road closures on County roads. The traffic control plan shall be approved by the Ventura County Transportation Department 48 hours prior to the actual closure.
- T11** Project construction truck trips shall avoid using the U.S. Highway 101/Kanan Road Northbound Ramps intersection and the southbound Ramps intersection during the peak periods of 7:00-9:30 AM and after 4:00 PM to the extent feasible.

3.9.11 Solid Waste Management

SWM1 The District shall recycle all construction waste to the extent practicable.

3.9.12 Recreation

- R1a** During the tank and associated facilities construction period at the A7 and A8 tank sites, TSD shall designate a safe, temporary trail route around the project construction zone. The temporary trail around A7 may be only two feet wide, with fire truck access through the construction site in an emergency. At A8, the trail will accommodate National Park Service pickup trucks. This temporary route shall be abandoned and returned to its pre-project condition within 30 days after the completion of project construction and the original trail route re-established.
- R2** TSD will attempt to work with Calleguas Municipal Water District in an effort to remove the existing abandoned Calleguas Municipal Water District tank located on the eastern ridge of Cheeseboro Canyon and associated pump station located in Palo Comado Canyon prior to construction of a tank at the A8 alternative site.

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Figure 1 Regional Location Map 8.5 x 11

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Figure 2 Conifer Tank Alternatives Site Location Map 11x 17

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Figure 3 Tank Alternative A7B 11 x 17

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Figure 4 Tank Alternative A8B 11x17

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Figure 5 Pipeline Alternative A 11 x 17

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Figure 6 Pipeline Alternative B 11 x 17

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Figure 7 Pipeline Alternative C 11 x 17

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Figure 8 Pipeline Alternative D 11 x 17

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Figure 9 Pipeline Alternative E

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