5. UTILITIES

5.1 STORMWATER TREATMENT
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5.5 RECYCLED WATER
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5.7 JOINT TRENCH
5.8 EXISTING SOILS AND GEOTECHNICAL MITIGATIONS

CONSISTENCY WITH ENTITLEMENT DOCUMENTS

The Utility systems included as part of this Sub-Phase Application are generally consistent with previous entitlement documents and the Treasure Island/Yerba Buena Island Master Utility Plans, which have been approved by applicable City Agencies. Further information regarding phasing and interim utility improvements will be provided as part of improvement plan submittals.
5.1 STORMWATER TREATMENT

Stormwater treatment for all watershed areas within this Sub-Phase will be provided by centralized treatment which treats stormwater from the entire watershed including private parcels, city rights-of-way and TICD controlled property. The Stormwater Garden will provide private on-site treatment areas. Private vertical development and TIDA controlled property will not be required to implement any stormwater treatment measures on their parcels because the stormwater treatment is provided in designated off-parcel centralized treatment areas as approved by the SFPUC.

Centralized stormwater treatment areas shown are conceptual only and will be further documented in the Project’s Preliminary and Final Stormwater Control Plans. The Preliminary Stormwater Control Plan is included in this application as Appendix G. The centralized treatment facilities will consist of a “treatment train” strategy in an urban park setting. The treatment train will consist of a swirl separator, a forebay, a vegetated swale, extended detention, and dispersed biotreatment areas. Landscaping will be selected for stormwater treatment, biological habitat benefits and aesthetics, while providing screening of the structural elements (primarily, the pump discharge location and the bioretention outlet structure).
5.2 STORM DRAIN

The proposed storm drain mains within the Sub-Phase area will be located primarily in the street right-of-ways. Storm drain piping that cross through parks connecting to proposed storm drain outfalls will be within easements. An interim storm drain main will be constructed outside of the Sub-Phase area parallel to, and outside of, the Fourth Street right of way to allow for it to remain in service while that portion of Fourth Street is improved at a later time. The approved SD MUP shows Second Street draining to Avenue H and Avenue J to Fourth Street. However these streets are not within this phase, therefore Second Street is proposed to drain down Avenue G toward the Clipper Cove outfall.

Existing storm drain mains will be demolished and removed as needed to construct the Sub-Phase infrastructure however interim storm drain improvements will be constructed where needed to provide drainage to areas affected by the Sub-Phase area improvements. Two permanent outfalls will be constructed for the new storm drain system.

Treatment pump stations will be constructed near:

- Clipper Cove Avenue, perpendicular to proposed Avenue E
- Fourth Street and Avenue G

Treatment pump stations will pump pre-treatment stormwater flows to a centralized bioretention area located in an open space area designated for stormwater treatment.

A storm drain lift station is proposed near the intersection of Avenue F and Fourth Street.
5.3 SANITARY SEWER

The proposed sanitary sewer (SS) system will serve the sewer demands for the development and provide service for existing buildings to remain in operation. The existing SS mains and laterals within the Sub-Phase will be demolished however interim sanitary sewer improvements will be constructed where needed to provide continued sewer services to buildings that connect to sewer infrastructure removed within the Sub-Phase area.

Proposed lift stations will be located at the following locations:
- Intersection of proposed California Ave and proposed Avenue E
- Intersection of proposed Fourth Street and proposed Avenue F

A proposed pump station will be located at:
- Intersection of proposed Second Street and proposed Avenue G

The pump station and lift stations will be designed per SFPUC access and layout requirements.

A new force main will be constructed in California Avenue between Avenue C and Avenue G and in Second Street from Avenue G to Eastside Avenue. This force main will connect to the permanent force main near the corner of Avenue C and California Avenue and connect to the interim force main located along Eastern Shoreline Park at the easterly most line of the Sub-Phase area. The interim force main along Clipper Cove and Eastern Shoreline Park within the Sub-Phase boundary will be demolished and removed after the new force main is constructed and operational.
The proposed low pressure water (LPW) system will serve the potable water demands and the fire flow demands for the development. LPW includes fire protection on TI.

The existing LPW mains within the Sub-Phase will be demolished. LPW facilities will be located within public right-of-way to allow for access and maintenance of facilities unless an alternative design is approved by SFPUC under the Subdivision Regulations for Treasure Island and Yerba Buena Island. In every location where a SFPUC low pressure water main is located outside the public right-of-way, an easement will be dedicated for that low pressure water main. The SFPUC will only consent to such water main easement if the SFPUC determines that the proposed alignment and easement are appropriate based on the SFPUC policy.
5.5 RECYCLED WATER

The proposed recycled water (RW) system will be used on Treasure Island primarily for irrigation and toilet flushing.

The layout of the proposed RW system is generally within the proposed street right-of-way. Treasure Island has several different street sections, and RW mains will typically be located under street parking and occasionally under bulb-outs.

The City currently does not have an existing RW system to supply the Project with recycled water. The proposed RW Treatment Facility is subject to future negotiation and agreement between the SFPUC and TIDA.

Since the recycled water supply will not be available during the first phases of project development, the RW system will be served from interim connections to the new LPW system. A backflow device will be installed at each connection point to prevent backflow from the RW system to the LPW system.