La Jolla View Reservoir Project
Environmental Impact Report

SCH No. 2018041020 - Project No. 331101

Appendix J

Waste Management Plan

February 2020

La Jolla View Reservoir Project

Waste Management Plan

December 2018 | SDD-31.08

Prepared for:

City of San Diego
Public Works Department
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Prepared by:

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
C&D	Construction and Demolition
CalRecycle	California Department of Resources Recycling and Recovery
CEQA	California Environmental Quality Act
CF	cubic feet
CIWMA	California Integrated Waste Management Act of 1989
CY	cubic yard(s)
DSD	Development Services Department (City of San Diego)
ESD	Environmental Services Department (City of San Diego)
IWMP	Integrated Waste Management Plan
LF	linear feet
LJCP	La Jolla Community Plan
MG	million-gallon
SA	surface area
SDMC	San Diego Municipal Code
SF	square foot/feet
SRRE	Source Reduction and Recycling Element
SWMC	Solid Waste Management Coordinator
WDM	Waste Diversion Measures
WMP	Waste Management Plan

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

The purpose of this Waste Management Plan (WMP) is to identify the quantity of solid waste that would be generated by the La Jolla View Reservoir Project (Project) throughout demolition, construction, and operation, and to identify measures to reduce the potential impacts associated with management of such waste.

Proper separation and diversion of recyclable waste materials is required in order to divert each material type to a recycling/reuse facility with the highest possible diversion rate. As discussed further in Section 2.0, *Regulatory Framework*, in order to comply with City of San Diego's (City's) waste reduction ordinances and the waste diversion goals established in State of California (State) Assembly Bill (AB) 341, the Project must achieve a 75 percent diversion rate during demolition and construction. The City's California Environmental Quality Act (CEQA) Significance Thresholds for solid waste identify a threshold of 1,500 tons of waste or more during construction and demolition (C&D) for direct solid waste impacts, and 60 tons of waste or more during C&D for potentially significant cumulative solid waste impacts. The City Environmental Services Department's (ESD) *2018 Certified Construction & Demolition Recycling Facility Directory* (City 2018) provides guidance on identifying recycling/reuse facility locations, accepted materials, recycling/reuse rates, and associated disposal fees and/or the value of the materials accepted for recycling/reuse.

This WMP has been prepared consistent with applicable federal, State, and local laws, regulations, and standards pertinent to the Project. Its goal is to implement an approach for managing waste that conserves landfill space, preserves environmental quality, conserves natural resources, and reduces disposal costs. Responsibility for ensuring ongoing WMP compliance would be under the direction of the Project Solid Waste Management Coordinator (SWMC), as assigned by the City of San Diego (Applicant).

1.2 PROJECT LOCATION

The Project is generally located within the 42-acre La Jolla Natural Park (a part of City Parks and Recreation Open Space), and is designated as "Parks, Open Space" under the La Jolla Community Plan (LJCP). The site is bounded by Country Club Drive, across which is located a golf course, to the west; residences off Remley Place, Brodiaea Way, and Encelia Drive to the south; additional open space to the east; and residences off Valdes Drive to the north (see Figure 1, *Regional Location,* and Figure 2, *Aerial Vicinity*). The existing La Jolla View Reservoir is located in the La Jolla Natural Park, approximately 500 feet east of Country Club Drive and 150 feet north of the Remley Place residences. The Exchange Place Reservoir is located east of the intersection of Country Club Drive and Pepita Way, outside of the park limits. Improvements also would occur along Country Club Drive between Soledad Avenue and Romero Drive.

1.3 PROJECT DESCRIPTION

1.3.1 Development Concept and Summary

The existing La Jolla View Reservoir is a 0.72-million-gallon (MG) potable water storage facility that was constructed in 1949. The existing 0.99-MG La Jolla Exchange Place Reservoir was originally constructed

in 1909 and was decommissioned in 2002. Use of the existing La Jolla View Reservoir is very limited due to higher-pressure zone and other water system changes. Water quality in the reservoir is also poor and requires supplemental chlorine treatment when in operation. In addition, the existing 16-inch diameter cast iron Muirlands Pipeline that supplies water to the existing La Jolla View Reservoir is beyond its useful life and is undersized for current water conveyance requirements.

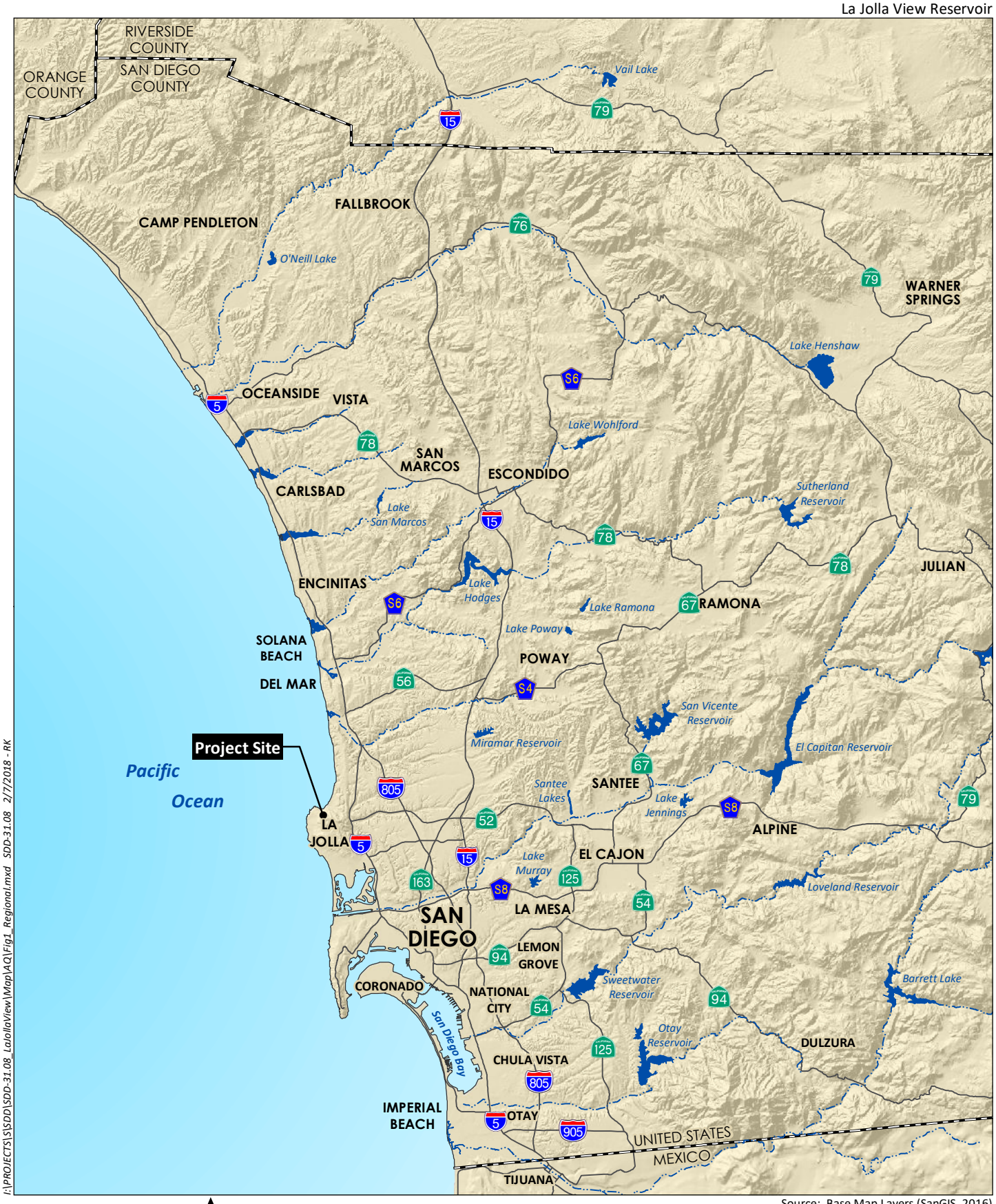
The proposed Project would replace the existing Exchange Place Reservoir and La Jolla View Reservoir with a new 3.1-million-gallon reservoir within the La Jolla Natural Park (see Figure 3, *Site Plan*). The existing La Jolla View Reservoir and the Exchange Place Pump Station would be demolished. The Exchange Place Reservoir would be partially demolished by removing the roof and upper three feet of concrete lining, and then backfilling the reservoir with soil. The proposed new reservoir would be almost entirely buried, except for reservoir access hatches and supervisory control and data acquisition equipment. The new reservoir would include an approximately 200-foot-long, 18-inch overflow pipe with an at-grade outlet and energy dissipation structure. The outlet would be situated near the head of the north-central on-site drainage. In addition, 480 linear feet (LF) of an 8-inch utility water connection to the new reservoir would be provided from the existing water main in Brodiaea Way (see Appendix A).

The Project also includes construction of approximately 2,790 LF of 30-inch pipeline. The pipeline would run from the new La Jolla View Reservoir in a general east-to-west direction through the La Jolla Natural Park to connect with the existing 16-inch Muirlands pipeline in County Club Drive. Approximately 1,050 LF of the 2,790 LF total would be replacing the 16-inch pipeline up to the existing Muirlands Pump Station. In addition, approximately 780 feet of an 8-inch pipeline would parallel the 30-inch pipeline along Country Club Drive to serve existing customers. An altitude valve vault would be located along the pipeline adjacent to Country Club Drive. The existing pipeline segment through the La Jolla Natural Park would be abandoned in place.

An existing paved access road from Encelia Drive would be reconstructed to allow access to the new reservoir site for maintenance vehicles. This road would terminate at the reservoir access hatches where two parking spaces and a paved turnaround area would be provided. The remaining portion of the existing access road to the existing La Jolla View Reservoir would be demolished, and the area would be revegetated.

1.3.2 Grading and Construction

Excavation to install the new reservoir would result in approximately 78,000 cubic yards (CY) of cut. Of this volume, approximately 22,000 CY would be permanently disposed of off-site, requiring approximately 4,500 truck trips. The remainder (56,000 CY) would be temporarily stockpiled on site, including use of a proposed temporary access road that would run from the new reservoir site to the stockpile area within La Jolla Natural Park near Country Club Drive. During stockpiling, 5,000 CY would be used to backfill the Exchange Place Reservoir. Once the reservoir is installed, the remaining stockpiled soil would be backfilled into the new reservoir location and used to cover the temporary access road. The backfilled areas would be revegetated.



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Source: Base Map Layers (SanGIS, 2016)

Regional Location

Figure 1

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0 500 Feet

Source: Aerial (SanGIS 2014)

Aerial Vicinity

Figure 2

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Source: IEC 2017

HELIX Environmental Planning

Site Plan

Figure 3

2.0 REGULATORY FRAMEWORK

2.1 STATE OF CALIFORNIA

The State Integrated Waste Management Act (CIWMA) of 1989 (AB 939), which is administered by the California Department of Resources Recycling and Recovery (CalRecycle), requires counties to develop an Integrated Waste Management Plan (IWMP) that describes local waste diversion and disposal conditions, and lays out realistic programs to achieve the waste diversion goals. IWMPs compile Source Reduction and Recycling Elements (SRREs) that are required to be prepared by each local government, including cities. SRREs analyze the local waste stream to determine where to focus diversion efforts and provide a framework to meet waste reduction mandates. The goal of the solid waste management efforts is not to increase recycling, but to decrease the amount of waste entering landfills. AB 939 required all cities and counties to divert a minimum 50 percent of all solid waste from landfill disposal.

In 2011, the State legislature enacted AB 341 (California Public Resource Code Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 also requires the provision of recycling service to commercial and residential facilities that generate 4 CY or more of solid waste per week.

2.2 CITY OF SAN DIEGO

The City has enacted codes and policies directed at the achievement of State-required diversion levels, including the Refuse and Recyclable Materials Storage Regulations (Municipal Code Chapter 14, Article 2 Division 8), Recycling Ordinance (City 2007; Municipal Code Chapter 6, Article 6, Division 7), and the Construction and Demolition Debris Deposit Ordinance (City 2008; Municipal Code Chapter 6, Article 6, Division 6). The City's Zero Waste Plan, a component of the City's Climate Action Plan, was approved and adopted by City Council on July 13, 2015. The Zero Waste Plan identifies goals and strategies to achieve 75 percent diversion by 2020, 90 percent diversion by 2035, and "zero" waste by 2040 (City 2015).

As stated in the City Development Services Department (DSD) CEQA Significance Determination Thresholds (City 2016c), implementation of these regulations and ordinances alone is not projected to achieve a 50 percent diversion rate, far below the current 75 percent diversion level targeted by the State and identified in the Zero Waste Plan for 2020. The City's ESD estimates that compliance with existing City ordinances and regulations alone achieves only an approximate 40 percent diversion rate (City 2013). Therefore, discretionary projects must undertake additional measures to comply with existing regulations. The City's Miramar Landfill is currently projected to close in 2025, further emphasizing the need to preserve landfill space.

2.2.1 City of San Diego CEQA Significance Determination Thresholds

The City's CEQA Significance Determination Thresholds establish solid waste generation thresholds for discretionary projects. Proposed projects that involve construction, demolition, and/or renovation that meet or exceed the thresholds described below are considered to have potentially significant solid waste impacts and require the preparation of a WMP.

Direct Impacts

Projects that include the construction, demolition, or renovation of 1,000,000 square feet (SF) or more of building space may generate approximately 1,500 tons of waste or more during C&D and are considered to have direct impacts on solid waste services.

Direct impacts result from the generation of large amounts of waste, which brings facilities closer to daily throughput limits, shortens facility lifespans, requires increased numbers of trucks and other equipment, and makes it difficult for the City to achieve required waste reduction levels. Waste management planning is based on a steady rate of waste generation and does not assume increased waste generation due to growth.

While all projects are required to comply with the City's waste management ordinances, direct and cumulative impacts are mitigated by the implementation of project-specific WMPs, which may reduce solid waste impacts to below a level of significance.

For projects over 1,000,000 SF, a significant direct and cumulative solid waste impact would result if the compliance with the City's ordinances and the WMP fail to reduce the impacts of such projects to below a level of significance and/or if a WMP for the project is not prepared and conceptually approved by the ESD prior to distribution of the draft environmental document for public review.

Cumulative Impacts

Projects that include the construction, demolition, and/or renovation of 40,000 SF or more of building space may generate approximately 60 tons of waste or more and are considered to have cumulative impacts on solid waste services.

While all projects are required to comply with the City's waste management ordinances, cumulative impacts are mitigated by the implementation of a project-specific WMP that reduces solid waste impacts to below a level of significance.

Although the Project would not include construction, demolition, or renovation of 1,000,000 SF or more, it would generate more than 1,500 tons of solid waste materials during demolition and construction. Therefore, without solid waste diversion measures, the Project would exceed the City's threshold for direct solid waste impacts. Because implementation of the Project without waste diversion measures would exceed direct solid waste thresholds, preparation of this WMP is required under CEQA to ensure that the Project contribution to the overall waste produced within the City would be reduced sufficiently to allow the City to comply with the waste reduction targets established in the Public Resources Code and State statutes.

2.2.2 City of San Diego Construction and Demolition Debris Deposit Ordinance

On July 1, 2008, the City's C&D Debris Deposit Ordinance went into effect (City 2008). An amendment to the ordinance and revisions to the associated C&D deposit schedule were approved by the City Council on December 10, 2013 (effective January 1, 2014) and on April 19, 2016 (effective June 22, 2016). The C&D Debris Deposit Ordinance is designed to keep C&D materials out of local landfills and ensure that materials are diverted from disposal. The ordinance creates an economic incentive to recycle C&D debris through the collection of fully refundable deposits that are returned, in whole or in part, upon proof of

the amount of C&D debris the project applicant diverted from landfill disposal. The ordinance requires that the majority of construction, demolition and remodeling projects requiring building, combination, and demolition permits pay a refundable C&D Debris Recycling Deposit and divert at least 65 percent of their debris by recycling, reusing, or donating usable materials. The deposit is held until the applicant provides receipts demonstrating that a minimum 65 percent of the material generated has been diverted from disposal in landfills.

The C&D Ordinance stipulates that projects will be required to divert 75 percent of their wastes when mixed debris facilities with a permitted daily tonnage capacity of at least 1,000 tons maintain a 75 percent diversion rate for three consecutive calendar year quarters. Greater than 75 percent diversion also may be required for a project if a higher goal is specified during discretionary permitting. Mixed debris recyclers in San Diego County currently achieve between 71 and 90 percent diversion rates at their facilities (refer to Appendix B). This is because not everything that comes through the door is usable or marketable. While there is one facility that achieves a diversion rate equal to or greater than 75 percent, the others have a diversion rate of 71 or 72 percent. For a project that would dispose of mixed debris at one of the facilities that achieves a 71 or 72 percent diversion rate, virtually all clean C&D waste from a project must be source separated and sent to a material-specific recycling facility, such as aggregate and metal recyclers, in order to achieve an overall diversion rate of 75 percent. Higher diversion rates can also be accomplished by salvage and/or on-site reuse of C&D materials. The City's C&D thresholds and deposit amounts are shown below in Table 1, *City C&D Deposit Schedule*.

Table 1
CITY C&D DEPOSIT SCHEDULE

Building Category	Deposit per SF[1]	Minimum SF Subject to Ordinance	Maximum SF Subject to Ordinance	Range of Deposits
Residential New Construction, Non-residential Alterations, Demolition	$0.40	1,000	100,000	$400-$40,000
Non-residential New Construction	$0.20	1,000	50,000	$200-$10,000
Flat Rate				
Residential Alterations	$1,000	1,000	6,999	$1,000

Source: City 2016a

[1] Deposit amounts are applied to the entire area(s) where work will be performed and are calculated based on square footage.

SF = square feet

3.0 PRE-CONSTRUCTION WASTE GENERATION AND DIVERSION: DEMOLITION, CLEARING/ GRUBBING, AND GRADING

All C&D-generated waste would be subject to compliance with the source separation and diversion requirements contained in this WMP to divert, recycle, and/or re-use these materials to the maximum degree possible. As identified in the City's *2018 Certified Construction & Demolition Recycling Facility Directory* (Appendix B), "Mixed C&D Debris" recyclers attain at most a 90 percent diversion rate, whereas "source separated" material recyclers can attain nearly 100 percent diversion rates (City 2018).

As a result, in order to achieve the highest level of waste diversion from landfills, and highest dollar value for the quality of materials, the Project would source separate (segregate) clean recyclable materials on the site by material type, to the maximum extent practicable, and divert them for recycling or reuse at City-certified facilities specializing in each material type.

3.1 DEMOLITION

Prior to initiation of the Project's construction activities, site preparation would require clearing/ grubbing, grading, and demolition of the existing structures. Clearing and grubbing would require removal of existing vegetation. The existing structures, including two reservoirs, a pump station, pipelines, fencing, and an access road would be demolished. These demolition activities are described below.

3.1.1 Structure Demolition

The existing structures include two reservoirs and associated components that are proposed to be demolished as part of the Project. Specifically, the La Jolla View Reservoir would be completely demolished, and the top three feet of the Exchange Place Reservoir would be demolished.

The existing La Jolla View Reservoir to be demolished has a footprint of 3,850 SF. The reservoir walls and roof are constructed of steel plates and the base is constructed of concrete. The associated 16-inch pipe is made of cast iron. A breakdown of the La Jolla View Reservoir demolition by component and material type is provided below.

- **Tank metal**: The tank body and roof are composed of 15,000 SF of steel plating, as provided by the Applicant. A 0.5-inch tank wall thickness was assumed. Multiplying 15,000 SF by 0.5 inches equates to 625 cubic feet (CF), which, when divided by 27 to convert to CY, amounts to 23 CY of steel.

- **Tank concrete**: The volume of concrete for the La Jolla View Reservoir to be demolished was provided by the Applicant and equals 75 CY.

- **Pipe metal**: The existing 50 LF of 16-inch cast iron pipe associated with the La Jolla View Reservoir would be demolished. A conservative one-inch pipe wall thickness was assumed. The surface area (SA) of the pipe, without the ends included, was calculated using:

  $$SA = 2*\pi*radius*length$$

  The radius of the 16-inch pipe is eight inches (2/3rds of a foot), and the length is 50 feet.

  $$SA = 2*\pi*(2/3)*50 = 209 \text{ SF}$$

  Multiplying the SA by the wall thickness of one inch (1/12th of a foot) equates to a volume of 17 CF, which, when divided by 27 to convert to CY, amounts to 0.63 CY of metal.

The Exchange Place Reservoir to be demolished has a footprint of 11,700 SF and is constructed of concrete, with a wood and metal roof. The first three feet of concrete would be demolished. The associated pump station, vaults, stairs, and landing are also constructed of concrete. The 8-inch pipe is

made of cast iron. A breakdown of the Exchange Place Reservoir demolition by component and material type is listed below.

- **Reservoir, pump station, vault, stairs, and landing concrete**: The volume of concrete for the first three feet of the La Jolla Exchange Reservoir, pump station, vault, stairs, and landing was provided by the Applicant, and equals 40 CY.

- **Roof wood**: The volume of the entire roof (wood and metal) was provided to be 6,000 CF. It was assumed that half, or 3,000 CF, is wood. 3,000 CF, divided by 27 to convert to CY, equates to 111 CY of wood. It was further assumed that approximately half of this wood would be treated, and half would be clean.

- **Roof metal**: As noted above, the volume of the entire roof (wood and metal) was provided to be 6,000 CF. As noted above, it was assumed that half, or 3,000 CF, is metal. 3,000 CF, divided by 27 to convert to CY, equates to 111 CY of metal.

- **Pipe metal**: Forty LF of 8-inch diameter cast iron pipe is associated with the Exchange Place Reservoir and would be demolished. A conservative half-inch pipe wall thickness was assumed. The surface area (SA) of the pipe, without the ends included, was calculated using:

  $$SA = 2*\pi*radius*length$$

  The radius of the 8-inch pipe is four inches (1/3rd of a foot), and the length is 40 feet.

  $$SA = 2*\pi*(1/3)*40 = 83.7 \text{ SF}$$

  Multiplying the SA by the wall thickness of one half-inch (1/24th of a foot) equates to a volume of 3.5 CF, which, when divided by 27 to convert to CY, amounts to 0.13 CY of metal.

3.1.2 Salvage

No salvage of materials from the existing structures is proposed.

3.1.3 Recycling

It is assumed that 20 percent of each material associated with structure demolition would qualify as "mixed debris." These materials would be too damaged or mixed to be source separated into clean materials. It is also assumed that eight percent of each material would qualify as "trash," to account for miscellaneous, non-recyclable materials that would be generated during structure demolition. Treated wood, in addition to approximately eight percent of demolition waste, would not be recyclable. These materials would be disposed of at the Miramar Landfill at a zero percent diversion rate. The additional 20 percent of "mixed debris" demolition materials would be disposed of at a City-approved mixed debris materials recycling facility at a minimum 71 percent diversion rate (refer also to Appendix B).

3.1.4 Access Road/Pavement Demolition

The existing Encelia Drive asphalt access road that leads from Brodiaea Way to the La Jolla View Reservoir, as well asphalt pavement associated with the Exchange Place Reservoir, would be demolished. Demolition estimates for these materials have been calculated below:

- It is assumed that the paved asphalt is three inches (1/4th of a foot) thick. The access road covers 11,700 SF and the additional paved area covers 300 SF. The total of 12,000 SF multiplied by the 0.25-foot thick asphalt, equates to 3,000 CF, which, when divided by 27 to convert to CY, comes out to 111 CY of asphalt.

Salvage

No salvage of materials from the existing access road and other pavement is proposed.

Recycling

The diversion rate for asphalt is 100 percent (see Appendix B). Therefore, the entire quantity of asphalt from the access road and paved areas would be diverted and recycled.

3.2 CLEARING AND GRUBBING

The Project impact area to vegetation was estimated at 7.21 acres (Rocks Biological Consulting 2016). On-site vegetation in the Project area is dominated by chaparral vegetation (approximately one to five feet in height, with an estimated average of three feet); chaparral and similar vegetation communities would represent 6.45 acres, or 280,962 SF, of the impact area. The site also contains occasional trees such as eucalyptus (approximately 10 to 40 feet in height, with an estimated average height of 20 feet); these trees represent 0.76 acre, or 33,105 SF. The area of the chaparral vegetation multiplied by the average vegetation height of three feet equates to 842,886 CF. The area of the trees multiplied by the average height of 20 feet equates to 662,100 CF. Therefore, the total volume of vegetation is 1,504,986 CF, which, when divided by 27 to convert to CY, amounts to 55,740 CY of vegetation.

3.2.1 Salvage

The existing vegetation is assumed to be removed and not salvaged on site.

3.2.2 Recycling

Vegetation would be processed and recycled at a target rate of 100 percent diversion at Miramar Greenery, a City-certified green waste recycling facility. The City's *2018 Certified Construction & Demolition Recycling Facility Directory* (Appendix B) states the diversion rate for clean source-separated materials shall be 100 percent. Other waste materials associated with the clearing and grubbing are anticipated to include negligible amounts of waste generated by contractors working on the site during the clearing and grubbing process.

3.3 GRADING

Grading is anticipated to require 78,000 CY of cut. Of that total, 56,000 CY would be used as fill on site; the remaining 22,000 CY would be exported and disposed of offsite.

Excavated soil is anticipated to be diverted at a rate of 100 percent to one of the facilities from the City's *2018 Certified Construction & Demolition Recycling Facility Directory* (Appendix B). Certified facilities include the following:

- Hanson Aggregates West, Miramar, 9229 Harris Plant Road, San Diego, CA 92126
- Vulcan Carol Canyon Landfill and Recycle Site, 10051 Black Mountain Road, San Diego, CA 92126
- Enniss Incorporated, 12421 Vigilante Road, Lakeside, CA 92040
- Moody's, 3210 Oceanside Boulevard, Oceanside, CA 92056
- Robertson's Ready Mix, 2094 Willow Glen Drive, El Cajon, CA 92019

Other waste materials associated with grading are anticipated to include negligible amounts of waste generated by contractors working on site during the grading process.

3.4 SUMMARY OF PRE-CONSTRUCTION DEMOLITION, CLEARING AND GRUBBING, AND GRADING WASTE GENERATION AND DIVERSION

As discussed above, the waste materials to be generated during demolition, clearing and grubbing, and grading for Project implementation would be source separated for recycling or reuse at City-certified facilities specializing in each material type, as applicable. A summary of anticipated waste generation volumes and diversion rates for pre-construction activities is provided in Table 2, *Pre-Construction Demolition, Clearing/Grubbing, and Grading Solid Waste Generation, Diversion Rates, and Facilities.* As shown in Table 2, during pre-construction the Project would generate 37,290 tons of solid waste.

3.4.1 Salvage

Demolition of the two reservoirs and associated components, access road, and other paved areas would generate salvageable materials. However, as no specific inventory of reusable items has been conducted at this preliminary stage and no salvage plan has been prepared, no salvage is proposed.

3.4.2 Recycling

Materials generated during pre-construction demolition, clearing and grubbing, and grading that are designated for recycling would be source separated on site during these activities. The City's *2018 Certified Construction & Demolition Recycling Facility Directory*, updated quarterly, states the diversion rate for these materials shall be 100 percent, except mixed C&D debris which achieves a maximum 90 percent diversion rate at the EDCO CDI Recycling and Buy Back Center (City 2018).

Table 2
PRE-CONSTRUCTION DEMOLITION, CLEARING/GRUBBING, AND GRADING
SOLID WASTE GENERATION, DIVERSION RATES, AND FACILITIES

Source of Material	Material	Volume (CY)	Tons/Unit Conversion Factor	Tons	Diversion Rate (Percent)	Facility/ Destination of Materials	Tons Diverted	Tons Disposed
Reservoirs and Associated Components	Concrete	82	1.2	98	100%	A	98	0
	Clean Wood	40	0.15	6	100%	B	6	0
	Treated Wood	40	0.15	6	0%	C	0	6
	Metal	97	0.51	50	100%	A	50	0
	Mixed Debris	72	1.19	86	71%	A	61	25
	Trash	30	0.18	5	0%	C	0	5
Access Road/Paved Areas	Asphalt	111	0.7	78	100%	A	78	0
Clearing/ Grubbing	Vegetation Debris	55,740	0.15	8,361	100%	B	8,361	0
Grading	Excavated Earth	22,000	1.3	28,600	100%	A	28,600	0
			TOTAL	**37,290**	**99.9%**	--	**37,254**	**36**

Sources: City's *2018 Certified Construction & Demolition Recycling Facility* Directory (City 2018; Appendix B), City's C&D Debris Conversion Rate Table (City 2016b; Appendix C)
Facility/Destination Key:
A. Appropriate facility on City's *2018 Certified Construction & Demolition Recycling Facility Directory*
B. Miramar Greenery, 5180 Convoy Street, San Diego, CA 92111
C. Miramar Landfill, 5180 Convoy Street, San Diego, CA 92111

Notes:

- Table information subject to field verification during pre-construction.
- The Applicant would contract with source separating recycling facilities listed in the City's *2018 Certified Construction & Demolition Recycling Facility Directory* (City 2018) with an equal or greater diversion rate to ensure diversion rates meet those estimated in this table.
- For estimation purposes, wood waste materials are split approximately 50 percent clean and 50 percent treated to conservatively account for inability to recycle treated wood.
- Total diversion rate based on the percentage of total tons of waste diverted over the total tons of waste generated.
- CY= cubic yards

4.0 CONSTRUCTION WASTE GENERATION AND DIVERSION

To estimate the quantity of waste generated during construction, the volume of each construction material to be used was calculated, then multiplied by 10 percent to account for waste generated during the construction process. A 10 percent construction waste generation rate is a very conservative figure, used here for analysis of the "worst-case" scenario based on the following reasoning:

- The cost of purchasing construction materials in excess of the quantity required is prohibitive.
- Many materials, such as piping, come prefabricated in specific sizes, such that the contractor can accurately predict and purchase the specific quantity that would be required.
- Contractors can return unused and unneeded items (such as piping) and/or utilize materials (such as concrete) on other projects.

4.1 ESTIMATED CONSTRUCTION WASTE GENERATION AND DIVERSION

A breakdown of the estimated amount of waste material from construction of the new La Jolla View Reservoir, associated pipelines, and access road/parking lot by component and material type is provided below.

- **Reservoir Concrete**: The Applicant provided that construction of the La Jolla View Reservoir would use 2,700 CY of concrete. The application of a 10 percent waste generation results in 270 CY of concrete waste.
- **Pipe Metal**: 2,790 LF of 30-inch steel pipe would be constructed. A conservative one-inch pipe wall thickness was assumed. The surface area of the pipe, without the ends included, was calculated using:

  $$SA = 2*\pi*radius*length$$

  The radius of the 30-inch pipe is 15 inches (1.25 feet), and the length is 2,790 feet.

  $$SA = 2*\pi*(1\text{-}1/4)*2{,}790 = 21{,}902 \text{ SF}$$

  Multiplying the SA by the wall thickness of one inch ($1/12^{th}$ of a foot) equates to a volume of 1,825 CF, which, when divided by 27 to convert to CY, amounts to 68 CY of steel. The application of a 10 percent waste generation results in 6.8 CY of metal waste.

An additional 200 LF of 18-inch steel pipe would be constructed. A conservative one-inch pipe wall thickness was assumed. The surface area of the pipe, without the ends included, was calculated using:

$$SA = 2*\pi*radius*length$$

The radius of the 18-inch pipe is 9 inches (0.75 foot), and the length is 200 feet.

$$SA = 2*\pi*(3/4)*200 = 942 \text{ SF}$$

Multiplying the SA by the wall thickness of one inch ($1/12^{th}$ of a foot) equates to a volume of 79 CF, which, when divided by 27 to convert to CY, amounts to 3 CY of steel. The application of a 10 percent waste generation results in 0.3 CY of metal waste.

- **Pipe PVC**: 1,260 LF of 8-inch PVC pipe would be constructed. The PVC pipes are assumed to be Schedule 80 with a half-inch wall thickness. Schedule 80 PVC with an eight-inch diameter and a half-inch wall thickness weighs eight pounds per foot (The Engineering ToolBox 2018). Multiplying 1,260 LF by eight pounds per foot results in a total weight of 10,080 pounds, or 5 tons. The application of a 10 percent waste generation factor results in 0.5 ton of industrial plastic waste.

- **Access Road/Parking Area Asphalt:** 7,400 SF of access road and parking area would be constructed as part of the Project. It is assumed that the paved asphalt areas are three inches (0.25 foot) thick. The 7,400 SF multiplied by a thickness of 0.25 feet equates to a volume of 1,850 CF, which, when divided by 27 to convert to CY, amounts to 69 CY. The application of a 10 percent waste generation results in approximately 7 CY of asphalt waste.

To account for excess reservoir and pipeline construction materials that are too damaged or mixed to be source separated into clean materials, it is assumed that 20 percent of each construction material would qualify as “mixed debris.” It is also assumed that eight percent of each material would qualify as “trash,” to account for miscellaneous, non-recyclable materials such as corrugated cardboard packaging and industrial plastic wraps and fasteners that would be generated during construction. Anticipated Project construction waste generation is shown in Table 3, *Construction Solid Waste Generation, Diversion Rates, and Facilities.*

Table 3
CONSTRUCTION SOLID WASTE GENERATION, DIVERSION RATES, AND FACILITIES

Source of Material	Material	Volume (CY)	Tons/Unit Conversion Factor	Tons	Diversion Rate (Percent)	Facility/ Destination of Materials	Tons Diverted	Tons Disposed
Reservoir and Pipelines	Concrete	194	1.2	233	100%	A	233	0
	Metal	5	0.51	2.5	100%	A	2.5	0
	Industrial Plastic (PVC)	--	--	0.5	100%	A	0.5	0
	Mixed Debris	55	1.19	65.5	71%	A	46.5	19
	Trash	22	0.18	4	0%	C	0	4
Access Road/Parking Areas	Asphalt	7	0.7	5	100%	A	5	0
			TOTAL	**310.5**	**93%**	--	**287.5**	**23**

Sources: City's *2018 Certified Construction & Demolition Recycling Facility Directory* (City 2018; Appendix B), City's C&D Debris Conversion Rate Table (City 2016b; Appendix C)
Facility/Destination Key:
A. Appropriate facility on City's *2018 Certified Construction & Demolition Recycling Facility Directory*
B. Miramar Greenery, 5180 Convoy Street, San Diego, CA 92111
C. Miramar Landfill, 5180 Convoy Street, San Diego, CA 92111

Notes:

- Table information subject to field verification during pre-construction.
- The Applicant would contract with source separating recycling facilities listed in the City's *2018 Certified Construction & Demolition Recycling Facility Directory* (City 2018) with an equal or greater diversion rate to ensure diversion rates meet those estimated in this table.
- Total diversion rate based on the percentage of total tons of waste diverted over the total tons of waste generated.
- CY= cubic yards
- The cubic yardage of Industrial Plastics was not calculated because a tons/unit conversion factor was not provided. The linear footage of PVC was provided by the Applicant, and a pounds per foot conversion factor was used to calculate the weight.

4.2 PROPOSED POST-CONSUMER CONTENT CONSTRUCTION MATERIALS

In order to further minimize waste, the Project would utilize recycled content construction materials, where feasible. Given the preliminary nature of the Project plans, a minimum target of five percent is anticipated, with verification of purchase of materials equating to this target to be provided prior to or during the pre-construction meeting. A goal of 10 percent or more has also been set. See Section 6.1, for the construction waste management, coordination, and oversight measures that would be implemented pursuant to this WMP.

5.0 OPERATIONAL WASTE GENERATION AND DIVERSION

Operation of the Project would not include components that would have the potential to generate significant long-term waste. Maintenance activities associated with the reservoir would involve weekly visits to the site for routine valve, structure, and equipment inspection. Site visits for revegetation maintenance and monitoring would occur on an as-needed basis for five years and would include activities such as replacing unhealthy or dead plants, providing supplemental water to plants, addressing erosion control needs, and weeding undesirable non-native plant species. Revegetation maintenance and monitoring would be temporary and would generate a negligible amount of waste compared to waste generated during Project demolition and construction. Diversion, reduction, and recycling measures for operational waste are therefore not necessary or required.

6.0 WASTE REDUCTION, RECYCLING, AND DIVERSION MEASURES

The Applicant is committed to waste reduction during all aspects of Project demolition, clearing and grubbing, grading, and construction, and would incorporate the Waste Diversion Measures (WDM) described below to ensure compliance with applicable solid waste disposal and waste reduction regulations and ordinances. Mandatory compliance with these measures shall be included in all Project contractor agreements, clearly reflected on Project plans, and verifiable by City ESD staff through written submittals and/or site inspections as described below.

6.1 CONSTRUCTION WASTE MANAGEMENT, COORDINATION, AND OVERSIGHT

6.1.1 Contractor Agreements and City Coordination

All WDM described herein shall be included as part of contractor agreements and clearly reflected on Project plans identifying activities required to be undertaken during demolition, clearing, grading, and construction. These measures shall also be provided in checklist format to City ESD staff prior to the initiation of any activities identified in the WMP. ESD staff shall be allowed access to the Project site, Project plans, and contractor education program meetings and materials (described below) to verify conformance with these measures.

6.1.2 Designation of a Solid Waste Management Coordinator

Prior to initiation of any construction, clearing, grubbing, or grading activities on site, the Applicant shall designate a SWMC for the property with the authority to provide guidelines and procedures for contractor(s) and staff to implement waste reduction and recycling efforts. These responsibilities shall include, but are not limited to, the following:

- Prepare a Contractor Education Program on the waste separation and diversion/disposal procedures specified in this WMP. The Contractor Education Program shall contain, at a minimum, the following information:
    - Written and visual description of each waste type required to be source separated
    - Written and graphic description of how each waste type must be treated prior to and during source separation
    - Direction on which waste types go to mixed-debris facilities
    - Direction on which waste types go to Miramar Landfill
    - Direction on materials requiring special handling, such as hazardous materials
    - Contact for designated contractor in case of questions or emergency
    - Contact at City ESD in case of questions or emergency
    - Phone number, address, and telephone contact information for each contracted hauler and disposal/diversion facility to be utilized
- Ensure the correct number and signage of bins, as specified in this WMP.
- Ensure a maximum five percent contamination by different waste types/non-recyclable materials by weight in the bins.
- Ensure no overtopping of bins occurs.
- Work with contractor(s) to refine estimated quantities of each type of material that would be recycled, reused, or disposed of as waste, then assist contractor(s) with documentation of that waste through receipts at each recycling and landfill facility identified in this WMP, or as otherwise agreed to by ESD staff.
- Issue stop work orders if procedures and standards specified in this WMP are not being followed/met.
- Coordinate with ESD and/or Mitigation Monitoring staff, including regular communication and invitations to the work site, and ensure appropriate staff members are involved at every stage.
- Ensure ESD staff attendance at the contractor education meeting and pre-construction meetings of each phase of the development.

6.1.3 Contractor Waste Management Training

The Project's SWMC or an ESD-approved contractor designee shall carry out Contractor Education Program presentations ensuring Project personnel are trained regarding content and requirements of this WMP. Prior to beginning work on any portion of the Project, each member of the team, including all workers, subcontractors, and suppliers, shall be provided with a copy of the WMP, and undergo training on proper waste management procedures applicable to the Project.

- The Project's SMWC, or ESD-approved Contractor-designee shall carry out contractor waste management training presentations for each new group or individual hired, contracted, or assigned to work on the Project.

- The SMWC and/or Contractor-designee shall ensure that each person working on the Project has completed the waste management training by maintaining a written log to be signed and dated by each trainee upon completion of the training program. Copies of this written log, along with a list of all applicable personnel, shall be provided to City ESD staff for verification during each phase of Project activities.

6.1.4 Daily Site Inspections by Contractor(s)

The Project contractor(s) shall conduct daily inspections of the construction site to ensure compliance with the requirements of this WMP and with all other applicable laws and ordinances. Daily inspections shall include verifying the availability and number of dumpsters based on amount of debris being generated, verifying trash and recycled materials dumpsters are correctly labeled, ensuring proper sorting and segregation of materials, and ensuring excess materials are properly salvaged. The Project contractor(s) shall report the results of the daily site inspections to the SWMC.

6.1.5 Regular Removal of Waste Materials

The Project contractor(s) shall ensure removal of construction waste materials in sufficient frequency to prevent over-topping of bins. The accumulation and burning of on-site grading/ land-clearing and construction waste materials shall be prohibited.

6.1.6 City Verification

The Applicant shall ensure a representative of the City's ESD attends pre-construction meetings prior to demolition, clearing, grading, and construction to ensure that the following items are verified:

- Material segregation, recycling, and reuse is occurring per the WMP;

- Soil is being transported to an appropriate facility for reuse;

- Grubbed materials are sent to a suitable green waste recycling facility;

- Contract documents have appropriate estimates and constraints to avoid "overbuying" construction materials;

- Contract documents specify methods to achieve five percent post-consumer content goal;

- Contamination levels (i.e., different waste types/non-recyclable materials) do not exceed five percent by weight;

- An appropriate diversion rate (as specified in this WMP) has been included on the deposit form;

- Contract documents specify agreements for each recyclable/reusable material type to be taken to an appropriate recycling/reuse facility, as specified in this WMP; and

6.2 CONSTRUCTION WASTE REDUCTION, DIVERSION COMPLIANCE, AND VERIFICATION

6.2.1 Identification, Separation, and Diversion of Recyclable/Reusable Materials

The Applicant shall ensure that:

- Throughout Project activities, waste materials shall be source separated on site into the appropriate bin based on materials type, according to the categories in this WMP. Materials generated during demolition, clearing, grading, and construction that would be source separated and recycled are listed below:

    - Mixed C&D (wood, dirt, concrete, metals, rock, asphalt, industrial plastics, cardboard)
    - Metals
    - Concrete/Asphalt
    - Wood
    - Industrial Plastics
    - Clean fill dirt
    - Green waste

- A separate bin for each clean waste material type to be generated during each phase of demolition, clearing, grading, and construction activity shall be provided on the site, subject to the following requirements:

    - Containers shall be clearly labeled, with a list of acceptable and unacceptable materials. The list of acceptable materials must be the same as the materials recycled at the receiving material recovery facility or recycling processor.

    - The collection containers for recyclable grading/land-clearing and construction waste shall contain no more than five percent non-recyclable materials, by weight.

    - Regular visual inspections of dumpsters and recycling bins shall be conducted to remove contaminants.

- Recycling areas shall be clearly identified with large signs. Lists of acceptable and unacceptable materials shall be posted on recycling bins and throughout the Project site and all recycled material signage shall be visible on at least two sides of haul containers.

- Recycling bins shall be placed in areas that would be readily accessible and would minimize misuse or contamination. The SWMC shall be responsible for these efforts and they shall be reviewed at pre-construction meetings and/or during contractor education meetings, if conducted separately.

- Recyclable and/or reusable waste materials collected in source-separated bins shall be diverted to recycling/reuse facilities as designated in Tables 2 and 3 of this WMP, or to another facility listed on the City's *2018 Certified Construction & Demolition Recycling Facility Directory*, should the designated facilities not be available.

6.2.2 Source Reduction Measures

Project contractors and subcontractors, in cooperation with the Project's SWMC and ESD staff, as applicable, shall coordinate to minimize the over-purchasing of construction materials to lower the amount of materials taken to recycling and disposal facilities. The Project shall minimize over-purchasing through purchase of pre-cut materials, whenever feasible. The following steps shall be undertaken:

- Detailed material estimates shall be used to reduce risk of unplanned and potentially wasteful material cuts.

- Contractor and subcontractor material purchasing agreements shall include a waste reduction provision requesting that: materials and equipment be delivered in packaging made of recyclable material; vendors reduce the amount of packaging; packaging be taken back by vendors for reuse or recycling; and vendors take back all unused product. Contracts containing this language shall be made available to ESD staff during ESD site visits for inspection.

- Post-consumer content products shall be employed in the design and construction of the new facilities with the goal of achieving five percent post-consumer content materials. Efforts to use post-consumer content may include using products manufactured with post-consumer content materials (i.e., products that were bought, used, and recycled by consumers), such as natural textiles, aggregate, or concrete. Receipts demonstrating post-consumer content shall be provided to ESD staff at or prior to the pre-construction meetings.

- Prior to submittal, final Project plans shall indicate the anticipated source and quantity of materials to be reused on site, and the source, quantity, and percentage of post-consumer content waste products anticipated to be utilized for Project construction.

- Contractors shall include the anticipated source and quantity of post-consumer content products proposed for reuse or purchase in their project bid.

- Final Project plans inclusive of the information above shall be provided to ESD for verification.

7.0 CONCLUSION

As discussed under Regulatory Framework, a project may result in a significant direct impact under the City CEQA Significance Thresholds if it generates more than 1,500 tons of solid waste materials during C&D. Projects that include the construction, demolition, and/or renovation of 40,000 SF or more of building space or generate approximately 60 tons of waste or more are considered to have potentially significant cumulative impacts on solid waste services. Further, AB 341 requires the diversion of 75 percent of solid waste and mandatory provision of recycling collection service during occupancy.

7.1 SUMMARY OF WASTE GENERATION AND DIVERSION

During pre-construction demolition, clearing/grubbing, and grading, the Project would produce 37,290 tons of excavated soils, green waste, asphalt/concrete, wood, metal, industrial plastics, and other C&D waste, and would divert 37,254 tons of these materials from the landfill, as identified in Table 2. Approximately 36 tons of solid waste material generated during pre-construction is anticipated to be disposed of as non-recyclable/non-reusable waste at Miramar Landfill, for an overall pre-construction diversion rate of 99.9 percent.

During construction, the Project would produce 310.5 tons of solid waste (metal, concrete, asphalt, industrial plastics, mixed debris, and trash), and divert 287.5 tons of solid waste materials from the landfill, as identified in Table 3. The diverted material would consist of clean, source-separated (segregated) recyclable and/or reusable material, as well as mixed debris, to be deposited at the recycling/reuse facilities identified in the City's *2018 Certified Construction & Demolition Recycling Facility Directory* (Appendix B; City 2018). Approximately 23 tons of solid waste material generated during construction is anticipated to be disposed of as non-recyclable/non-reusable waste at the Miramar Landfill, for an overall diversion rate during construction of approximately 93 percent.

With the combined pre-construction and construction phases, the Project would produce 37,600 tons of solid waste and would divert 37,541 tons. This would be an overall diversion rate during pre-construction and construction of 99.8 percent.

During operation, the Project is anticipated to generate a negligible amount of waste and would not require diversion of waste to facilities identified in the City's *2018 Certified Construction & Demolition Recycling Facility Directory* (Appendix B; City 2018) or disposal of non-recyclable/non-reusable waste at the Miramar Landfill.

7.2 COMPLIANCE WITH CITY AND STATE REGULATIONS

Project compliance with City and State regulations is addressed below.

7.2.1 State of California

Based on the quantified waste generation and diversion rates discussed above, the Project would exceed the 75 percent solid waste diversion rate for waste produced during the pre-construction and construction phases. Operation of the proposed Project would generate a negligible amount of waste. Therefore, the Project would be consistent with the requirements of AB 341.

7.2.2 City of San Diego

Based on the quantified waste generation and diversion rates discussed above, the Project would result in a less than significant impact regarding the following City thresholds related to direct solid waste impacts during construction:

- The Project's impacts would be reduced to below the City's CEQA Significance Determination Threshold (generation of more than 1,500 tons of solid waste materials that would be disposed of) for direct impacts to solid waste facilities during demolition and construction (36 + 23 = 59 tons of solid waste materials during C&D to Miramar Landfill) through compliance with the diversion measures outlined in this WMP.

- The Project would exceed the 75 percent solid waste diversion rate for waste produced during construction by achieving an overall 99.8 percent diversion rate through compliance with the diversion measures outlined in this WMP.

Regarding cumulative impacts with implementation of the diversion measures outlined in this WMP, the Project's solid waste impacts would be reduced to below the City's potentially significant solid waste impact threshold of 60 tons of waste during C&D, since approximately 59 tons are anticipated to be disposed of at the Miramar Landfill during C&D and negligible waste would be generated during operation.

Given the aforementioned, because the Project would not generate operational waste and would comply with waste diversion measures included in this Project-specific WMP, including implementation of the construction waste reduction measures described in Sections 6.1 and 6.2, the Project's direct solid waste impact would be less than significant and the Project's contribution to a cumulative solid waste impact would be less than cumulatively considerable.

8.0 REFERENCES

City of San Diego (City)

2018 *2018 Certified Construction & Demolition Recycling Facility Directory*. Environmental Services Department. January 1. https://www.sandiego.gov/sites/default/files/2018_certified_construction_demolition_recycling_facility_directory.pdf.

2016a Construction and Demolition (C&D) Debris Recycling Fact Sheet. June 29. Available at: https://www.sandiego.gov/sites/default/files/legacy/development-services/pdf/industry/infobulletin/cd_fact_sheet_6_29_16.pdf.

2016b City of San Diego Construction & Demolition C&D Debris Conversion Rate Table. June 6.

2016c California Environmental Quality Act Significance Determination Thresholds. Development Services Department. Available at: http://www.sandiego.gov/development-services/pdf/news/sdtceqa.pdf. January, as amended.

2015 City of San Diego Zero Waste Plan. July. Available at: https://www.sandiego.gov/sites/default/files/legacy/mayor/pdf/2015/ZeroWastePlan.pdf.

2013 California Environmental Quality Act: Guidelines for a Waste Management Plan. June. Available at: http://www.sandiego.gov/environmental-services/pdf/recycling/wmpguidelines.pdf.

2008 Construction and Demolition Debris Deposit Ordinance (Municipal Code Chapter 6, Article 6, Division 6). January 1.

2007 Recycling Ordinance (Municipal Code Chapter 6, Article 6, Division 7). November.

Rocks Biological Consulting

2016 La Jolla View Reservoir Replacement Project Biological Resources Report. February 5.

The Engineering Toolbox

2018 PVC and CPVC Pipes – Schedule 40 & 80. January 2018. Available from: https://www.engineeringtoolbox.com/pvc-cpvc-pipes-dimensions-d_795.html

State of California (State)

1989 California Integrated Waste Management Act of 1989. State of California Assembly Bill 939.

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Appendix A

Project Plans

LA JOLLA VIEW RESERVOIR PROJECT

CONTRACTOR'S RESPONSIBILITIES

1. PURSUANT TO SECTION 4216 OF THE CALIFORNIA GOVERNMENT CODE, AT LEAST 2 WORKING DAYS PRIOR TO EXCAVATION, YOU MUST CONTACT THE REGIONAL NOTIFICATION CENTER (e.g., UNDERGROUND SERVICE ALERT OF SOUTHERN CALIFORNIA) AND OBTAIN AN INQUIRY IDENTIFICATION NUMBER.
2. NOTIFY SDG&E AT LEAST 10 WORKING DAYS PRIOR TO EXCAVATING WITHIN 10' OF SDG&E UNDERGROUND HIGH VOLTAGE TRANSMISSION POWER LINES. (i.e., 69 KV & HIGHER)
3. EXCAVATE AROUND WATER METER BOX (CITY PROPERTY SIDE) TO DETERMINE IN ADVANCE, THE SIZE OF EACH SERVICE BEFORE TAPPING MAIN.
4. CITY FORCES, WHEN SPECIFIED OR SHOWN ON PLANS, WILL MAKE PERMANENT CUTS AND PLUGS CONNECTIONS.
5. KEEP EXISTING MAINS IN SERVICE IN LIEU OF HIGH-LINING, UNLESS OTHERWISE SPECIFIED OR SHOWN ON PLANS.
6. THE LOCATIONS OF EXISTING BUILDINGS AS SHOWN ON THE PLAN ARE APPROXIMATE.
7. KEEP STORM DRAIN INLETS FUNCTIONAL AT ALL TIMES DURING CONSTRUCTION.
8. UNLESS OTHERWISE NOTED AS PREVIOUSLY POTHOLED (PH), ELEVATIONS SHOWN ON THE PROFILE FOR EXISTING UTILITIES ARE BASED ON A SEARCH OF THE AVAILABLE RECORDED INFORMATION ONLY AND ARE SOLELY FOR THE YOUR CONVENIENCE. THE CITY DOES NOT GUARANTEE THAT IT HAS REVIEWED ALL AVAILABLE DATA. PRIOR TO EXCAVATION, YOU MUST VERIFY ALL EXISTING UTILITIES EITHER SHOWN ON THE PLANS OR MARKED IN THE FIELD IN ACCORDANCE WITH THE SPECIFICATIONS, SECTION 5-1.
9. EXISTING UTILITY CROSSING AS SHOWN ON THE PLANS ARE APPROXIMATE AND ARE NOT REPRESENTATIVE OF ACTUAL LENGTH AND LOCATION OF CONFLICT AREAS. SEE PLAN VIEW.
10. FOR COORDINATION OF THE SHUTDOWN OF TRANSMISSION MAINS (16 INCHES AND LARGER), CONTACT THE CITY'S SENIOR WATER DISTRIBUTION OPERATIONS SUPERVISOR TATYANA FIKHMAN AT tfikhman@sandiego.gov OR AT (619) 527-7465. FOR COORDINATION OF THE SHUTDOWN DISTRIBUTION MAINS (LESS THAN 16 INCHES), CONTACT THE CITY'S WATER OPERATIONS DISTRICT MANAGER BERNARD POWELL AT bpowell@sandiego.gov OR AT (619) 527-3945.

STORM WATER PROTECTION

1. THIS PROJECT IS SUBJECT TO MUNICIPAL STORM WATER PERMIT ORDER NO. R9-2010-003 NPDES NO CAG679001.
2. A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IS REQUIRED FOR THIS PROJECT.

ENVIRONMENTAL PERMITS – SEE DWG G-2

ABBREVIATIONS

ABAND	ABANDON	F, FLG	FLANGE	RE	RESIDENT ENGINEER
ABAND'D	ABANDONED	FIPT	FEMALE IRON PIPE THREAD	RED	REDUCER
ABBREV	ABBREVIATION	FO	FIBER OPTIC	RT	RIGHT
ACP	ASBESTOS CEMENT ASPHALT CONC PIPE	FRP	FIBERGLASS REINFORCED PLASTIC	R/W	RIGHT OF WAY
AHD	AHEAD	FS	FIRE SERVICE	SCH	SCHEDULE
ASSY	ASSEMBLY	GJ	GROUP JOB	SCRW	STEEL CYLINDER ROD WRAPPED
A.V.	AIR VALVE	GV	GATE VALVE	SD	STORM DRAIN/ SAN DIEGO
BK	BACK	HDPE	HIGH-DENSITY POLYETHYLENE	SDRSD	SAN DIEGO REGIONAL STANDARD DRAWING
BFV	BUTTERFLY VALVE	HORIZ	HORIZONTAL	SF	SQUARE FEET
BTWN	BETWEEN	HP	HIGH PRESSURE	SR	STATE ROUTE
CATV	CABLE TV	IE	INVERT ELEVATION	SE	SOUTHEAST
CIP	CAST IRON PIPE	IRR	IRRIGATION	S/O	SOUTH OF
℄	CENTER LINE	LJEPR	LA JOLLA EXCHANGE PLACE RESERVOIR	SQ	SQUARE
CL	CLASS	LJVR	LA JOLLA VIEW RESERVOIR	STD	STANDARD
CLSM	CONTROLLED LOW STRENGTH MATERIAL	LT	LEFT	SS	STAINLESS STEEL
CML&TC	CEMENT MORTAR LINED & TAPE COATED	MIPT	MALE IRON PIPE THREAD	STL	STEEL
CMP	CORRUGATED METAL PIPE	MJ	MECHANICAL JOINT	SW	SOUTHWEST
COND	CONDUIT	MTD	MULTIPLE TELEPHONE DUCT	SWR	SEWER
CONST	CONSTRUCTION	MTS	METROPOLITAN TRANSIT SYSTEM	SYM	SYMBOL
CONT	CONTINUED	MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	TB	THRUST BLOCK
CONTR	CONTRACTOR	NE	NORTHEAST	T&B	TOP AND BOTTOM
CP	CATHODIC PROTECTION	N/O	NORTH OF	TEL	TELEPHONE
DB	DIRECT BURIED	NTS	NOT TO SCALE	TEMP	TEMPORARY
DI, DIP	DUCTILE IRON PIPE	NW	NORTHWEST	TOP	TOP OF PIPE
DR	DRIVE, DIMENSION RATIO	OVHD	OVER HEAD	TYP	TYPICAL
DWT	DETECTIBLE WARNING TILE	PE	PLAIN END	UNK	UNKNOWN
EB	ENCASED BURIED	PED	PEDESTRIAN	VERT	VERTICAL
EL, ELEV	ELEVATION	PH	POTHOLE, PHASE	VIC	VICTAULIC
ELEC	ELECTRIC	PROP	PROPOSED	VCP	VITRIFIED CLAY PIPE
ENC	ENCASED	PVC	POLYVINYL CHLORIDE	WM	WATER METER
EX, EXIST	EXISTING	PVT	PRIVATE	WPCP	WATER POLLUTION CONTROL PLAN
E/O	EAST OF	RCP	REINFORCED CONCRETE PIPE	WTR	WATER
EW	EACH WAY	RCSC	REINFORCED CONCRETE STEEL CYLINDER	W/O	WEST OF

FIELD DATA

BENCHMARK:

ELEVATIONS SHOWN HEREON ARE IN TERMS OF THE NORTH GEODETIC VERTICAL DATUM OF 1929 (NGVD29) BASED LOCALLY UPON THE FOLLOWING CITY OF SAN DIEGO BENCHMARK.

BENCHMARK	ELEVATION
"5933	227.83'

BASIS OF BEARING:

THE BASIS OF COORDINATES FOR THIS SURVEY IS THE NORTH AMERICAN DATUM OF 1983 (NAD 83) CALIFORNIA STATE PLANE COORDINATE SYSTEM OF 1983 (CCS83) ZONE 6 (EPOCH 1991.35) BASED LOCALLY UPON THE FOLLOWING FIRST ORDER CONTROL POINTS PER RECORD OF SURVEY 14492.

STATION	NORTHINNG	EASTING	SOURCE
135	1887895.28	6251465.45	ROS 14492
136	1886718.24	6256252.24	ROS 14492

GRID BEARING BETWEEN "135 AND "136 = N 76° 11' 08" W.

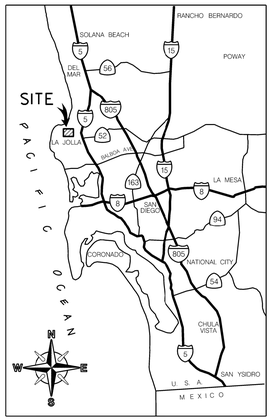
STREETS REQUIRING 12" TRENCH CAP: NONE

LIMITS OF WORK

SHEET NO.	DISCIPLINE CODE	TITLE	LIMITS	PIPE SIZE (IN)	PIPE MATERIAL	LENGTH (FT)
		PART 1 - LA JOLLA VIEW RESERVOIR				
1	G-1	COVER SHEET				
2	G-2	ENVIRONMENTAL PERMITS AND NOTES AND SEQUENCE OF WORK				
3	G-3	KEY MAP & SITE ACCESS				
4	G-4	WORK AREA LIMITS				
5	D-1	EXIST LJVR DEMOLITION PLAN				
6	C-1	ROUGH GRADING PLAN - LJVR				
7	C-2	ROUGH GRADING PLAN - LJVR				
			WATER			
8	C-3	COUNTRY CLUB DRIVE	STA 1+00.00 TO STA 9+00.00	30"	CML&TC	800.00
9	C-4	COUNTRY CLUB DRIVE	STA 9+00.00 TO STA 16+00.00	30"	CML&TC	700.00
10	C-5	COUNTRY CLUB DRIVE TO LA JOLLA NATURAL PARK	STA 16+00.00 TO STA 23+00.00	30"	CML&TC	700.00
11	C-6	LA JOLLA NATURAL PARK	STA 23+00.00 TO STA 28+86.00	30"	CML&TC/ CML&C	586.00
12	C-7	ENCELIA DRIVE	STA 40+00.00 TO STA 44+78.96	8"/4"	PVC	478.96
13	C-8	COUNTRY CLUB DRIVE	STA 60+00.00 TO STA 67+82.67	8"	PVC	782.67
14	C-9	SITE PIPING PLAN - LJVR				
15	C-10	SITE PIPING PROFILE AND ELEVATIONS				
16	C-11	FINAL GRADING PLAN - LJVR				
17	C-12	FINAL GRADING PLAN - LJVR				
18	C-13	RESERVOIR SECTIONS - LJVR				
19	C-14	RESERVOIR SITE PLAN - LJVR				
20	C-15	VALVE VAULT SITE PLAN/ DRAIN VAULT/HEADWALL SITE PLAN				
21	C-16	DETAILS 1				
22	C-17	DETAILS 2				
23	M-1	ALTITUDE VALVE VAULT PLAN/SECTION				
24	M-2	SECONDARY ACCESS SHAFT PLAN/SECTION				
25	M-3	PRIMARY ACCESS SHAFT PLAN/SECTION				
26	M-4	DETAILS 1				
27	M-5	DETAILS 2				
28	M-6	DETAILS 3				
29	M-7	DETAILS 4				
30	G-5	WATER ABANDONMENT PLAN		TOTAL WATER		4,047.63
31	G-6	STREET RESURFACING PLAN				
32	G-7	CURB RAMP PLAN				
33	G-8	CURB RAMP DETAILS 1				
34	G-9	CURB RAMP DETAILS 2				
35	G-10	HORIZ. ALIGNMENT COORDINATE INDEX REPORT 1 (NOT INCLUDED)				
36	G-11	HORIZ. ALIGNMENT COORDINATE INDEX REPORT 2 (NOT INCLUDED)				
37	S-1	STRUCTURAL GENERAL NOTES 1				
38	S-2	STRUCTURAL GENERAL NOTES 2				
39	S-3	RESERVOIR FOUNDATION PLAN				
40	S-4	RESERVOIR ROOF FRAMING PLAN				
41	S-5	RESERVOIR SECTION				
42	S-6	STRUCTURAL DETAILS 1				
43	S-7	STRUCTURAL DETAILS 2				
44	S-8	STRUCTURAL DETAILS 3				
45	S-9	STRUCTURAL DETAILS 4				
46	S-10	STRUCTURAL DETAILS 5				
47	S-11	STRUCTURAL DETAILS 6				
48	S-12	STRUCTURAL DETAILS 7				
49	S-13	STRUCTURAL DETAILS 8				
50	S-14	STRUCTURAL DETAILS 9				
51	S-15	STRUCTURAL DETAILS 10				
52	S-16	STRUCTURAL DETAILS 11				
53	E-1	STANDARD ELECTRICAL SYMBOLS AND ABBREVIATIONS				
54	E-2	ELECTRICAL SITE PLAN				
55	E-3	RESERVOIR POWER AND SIGNAL PLAN				
56	E-4	MUIRLANDS PUMP STATION AND VALVE VAULT				
57	E-5	SINGLE LINE DIAGRAM AND ELECTRICAL SCHEDULES				
58	E-6	ELECTRICAL DETAILS				
59	E-7	COMMUNICATION SYSTEMS ARCHITECTURE				
60	E-8	RESERVOIR RIO PANEL CONTROL DIAGRAM - 1				
61	E-9	RESERVOIR RIO PANEL CONTROL DIAGRAM - 2				
62	E-10	RESERVOIR RIO PANEL CONTROL DIAGRAM - 3				
63	E-11	RESERVOIR RIO PANEL CONTROL DIAGRAM - 4				
64	E-12	RESERVOIR RIO PANEL LAYOUT DIAGRAM				
65	E-13	VALVE VAULT RIO PANEL CONTROL DIAGRAM - 1				
66	E-14	VALVE VAULT RIO PANEL CONTROL DIAGRAM - 2				
67	E-15	VALVE VAULT RIO PANEL CONTROL DIAGRAM - 3				
68	E-16	VALVE VAULT RIO PANEL CONTROL DIAGRAM - 4				
69	E-17	VALVE VAULT RIO PANEL LAYOUT DIAGRAM				
70	E-18	MUIRLANDS PUMP STATION RCP PANEL LAYOUT DIAGRAM				
71	SC-1	SECURITY AND COMMUNICATION				
72	SC-2	SECURITY AND COMMUNICATION				
73	CP-1	CATHODIC PROTECTION DETAILS				
74	CP-2	CATHODIC PROTECTION DETAILS				
75	CP-3	CATHODIC PROTECTION DETAILS				

WORK TO BE DONE

CONSTRUCTION CONSISTS OF THE DEMOLITION OF THE EXISTING LA JOLLA VIEW RESERVOIR (LJVR) AND THE EXISTING LA JOLLA EXCHANGE PLACE RESERVOIR (LJEPR) AND PUMP STATION, CONSTRUCTION OF A NEW 3.1 MG LA JOLLA VIEW RESERVOIR, REPLACEMENT OF THE EXISTING MUIRLANDS PIPELINE WITH A NEW 30" STEEL WATERLINE, CONSTRUCTION OF A NEW 30" STEEL RESERVOIR INLET/OUTLET PIPELINE, ROUGH GRADING AND FINAL GRADING OF THE SITES, SITE IMPROVEMENTS AT THE RESERVOIR, ELECTRICAL IMPROVEMENTS, RE-VEGETATION OF THE DISTURBED AREAS, AND ALL OTHER WORK SHOWN ON THESE PLANS AND SPECIFICATIONS.



VICINITY MAP

NOT TO SCALE

76	L-1	TEMPORARY IRRIGATION PLAN AT RESERVOIR SITE
77	L-2	TEMPORARY IRRIGATION PLAN AT RESERVOIR SITE
78	L-3	RE-VEGETATION PLAN AT RESERVOIR SITE
79	L-4	RE-VEGETATION PLAN ATRESERVOIR SITE
80	L-5	IRRIGATION NOTES AND SUPPLEMENTAL DETAILS
		PART 2 - LA JOLLA EXCHANGE PLACE RESERVOIR
81	D-2	EXIST LJEPR DEMOLITION PLAN
82	D-3	DEMOLITION PLAN DETAILS - LJEPR
83	C-18	FINAL GRADING/PAVING PLAN - LJEPR
84	L-6	IRRIGATION PLAN & LEGEND - LJEPR
85	L-7	RE-VEGETATION PLAN - LJEPR
86	E-19	ELECTRICAL DETAILS - LJEPR
		T-1 TO T-13 TRAFFIC CONTROL PLANS

DISCIPLINE CODE

G	GENERAL
D	DEMOLITION
C	CIVIL
L	LANDSCAPE
S	STRUCTURAL
M	MECHANICAL
E	ELECTRICAL
I	INSTRUMENTATION
CP	CATHODIC PROTECTION
T	TRAFFIC CONTROL
SC	SECURITY AND COMMUNICATIONS

LEGEND

IMPROVEMENTS	STANDARD DRAWINGS	SYMBOL
TRENCH RESURFACING	SDG-107, SDG-108	
WATER MAIN & APPURTENANCES	SDW-110, SDW-148, SDW-151 (NO TB FOR 30" STEEL PIPE) FOR 16" PVC PIPE, JOINT RESTRAINT SYSTEM PER SPEC, SDW-161, SDW-162	
VALVES WITH CAPS AND WELLS	SDW-109, SDW-152, SDW-153, SDW-154, WV-05	
FIRE SERVICE CONNECTION & ASSEMBLY	SDW-109, SDW-118, SDW-148, SDW-152, SDW-153	P.L. F PROPOSED WATER
6" FIRE HYDRANT ASSEMBLY & MARKER 2-PORT UNLESS SPECIFIED AS 3-PORT	SDW-104, SDW-109, SDW-148, SDW-152, SDW-153	
1" WATER SERVICE UNLESS OTHERWISE SPECIFIED	SDW-107, SDW-134, SDW-135, SDW-136, SDW-138, SDW-148, SDW-149 SDW-150, WS-03	WM P.L. W PROPOSED WATER WM P.L. T
WATER SERVICE TRANSFER	SDW-149, SDW-150	
BLOW-OFF ASSEMBLY	SDW-106, SDW-143, SDW-144, SDW-145, SDW-146, WB-05	B.O. PROPOSED WATER
AIR & VACUUM VALVE	SDW-117, SDW-148, SDW-158, SDW-159, SDW-160	A.V.
WATER VALVE BYPASS	SDW-154	
CUTTING AND PLUGGING ABANDONED WATER MAIN	WP-03	E
ABANDON WATER LINE	WP-03	
SURVEY MONUMENT	M-10	
CUTOFF WALL	SDS-115	
WIRE TEST STATION	DETAILS 1&2 ON DWG CP-1	
PIPE SUPPORT FOR UNDERCUT SEWER MAINS OR SEWER LATERALS	SDW-161	
PIPE SUPPORT FOR UNDERCUT AC WATER MAIN	SDW-162	
HIGHLINING BY CONTRACTOR	SDW-170, SDW-171, SDW-172, SDW-173	IF APPLICABLE
PROTECTION POST	WM-04	
ENERGY DISSIPATOR	SDD-104	
HEADWALLS	SDRSD D-34	
SD CLEANOUT	SDRSD D-10	

FOR ADDITIONAL SYMBOLS SEE RESURFACING, CURB RAMP, HORIZONTAL ALIGNMENT COORDINATE AND TRAFFIC CONTROL SHEETS.

EXISTING STRUCTURES

EX WATER MAIN & VALVES
EX WATER METER/SERVICE LINE
EX FIRE HYDRANT
EX SEWER MAIN & MANHOLES
EX SEWER SERVICE LINES
EX DRAINS
EX PAVEMENT (PROFILE)
EX GROUND LINE (PROFILE)
EX GAS MAIN
EX ELEC. COND., TEL. COND., CATV — E — T — C
EX FIBER OPTIC — FO
EX FUEL LINE — F
EX RAILROAD, TROLLEY TRACKS

EX BUS STOP
EX TRAFFIC LOOP
EX TRAFFIC SIGNAL TS
EX STREET LIGHT SL
EX POWER POLE

I HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS. I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF SAN DIEGO IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME, AS ENGINEER OF WORK, OF MY RESPONSIBILITIES FOR PROJECT DESIGN.

ANDERS EGENSE RCE C040654 DATE

CONSTRUCTION SITE STORM WATER PRIORITY (INSPECTION FREQUENCY): HIGH _X_ MEDIUM ____ LOW____

AS-BUILT INFORMATION

MATERIALS	MANUFACTURER
PIPE CL 235 (WATER)	-
PIPE CL 305 (WATER)	-
STEEL PIPE	-
BUTTERFLY VALVE	-
GATE VALVE	-
FIRE HYDRANT	-
BLOWOFF / AIR VALVE	-

CONSTRUCTION CHANGE / ADDENDUM

CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

WARNING

0 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

CITY OF SAN DIEGO
PUBLIC WORKS PROJECT

PRELIMINARY — REGISTERED PROFESSIONAL ENGINEER — ANDERS K. EGENSE — No. C040654 — EXP. 12-31-2015 — CIVIL — STATE OF CALIFORNIA

G-1

PLANS FOR THE CONSTRUCTION OF LA JOLLA VIEW RESERVOIR

COVER SHEET

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 1 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

APPROVED: FOR CITY ENGINEER — DATE
ALEX GARCIA — PRINT NAME — RCE#

SUBMITTED BY: ED FORDAN, PROJECT MANAGER
CHECKED BY: ART ARVIZU, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

SEE SHEETS, CCS27 COORDINATE
SEE SHEETS, CCS83 COORDINATE

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

38056-01-D

100%

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LA JOLLA VIEW RESERVOIR PROJECT 100% SUBMITTAL

ENVIRONMENTAL PERMITS AND NOTES AND SEQUENCE OF WORK

ENVIRONMENTAL PERMITS:

ENVIRONMENTAL NOTES:

SEQUENCE OF WORK NOTES:

THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR ACCEPTANCE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS A DETAILED SEQUENCE OF WORK WHICH CORRESPONDS TO THE GENERAL CONSTRUCTION SEQUENCE DESCRIBED BELOW. THE PRIMARY INTENT OF THE GENERAL CONSTRUCTION SEQUENCE BELOW IS TO CONSTRUCT THE IMPROVEMENTS IN A MANNER WHICH MAINTAINS IN SERVICE EXISTING FACILITIES THAT ARE CRITICAL TO THE WATER DISTRIBUTION SYSTEM, MINIMIZES SHUTDOWN DURATIONS (WHEN REQUIRED), AND MINIMIZES THE IMPACT TO THE PROPERTY OWNERS AND RESIDENTS THAT SURROUND THE PROJECT SITES. NOT ALL ACTIVITIES REQUIRED TO CONSTRUCT THE IMPROVEMENTS DESCRIBED BY THE CONTRACT DOCUMENTS ARE LISTED IN THE GENERAL CONSTRUCTION SEQUENCE, HOWEVER, THIS SHALL NOT LIMIT THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL ACTIVITIES REQUIRED BY THE CONTRACT DOCUMENTS, AND ALL MAJOR CONSTRUCTION ACTIVITIES SHALL BE INCLUDED IN THE CONTRACTOR'S DETAILED SEQUENCE OF WORK. THE CONTRACTOR MAY PROPOSE MODIFICATIONS TO THE GENERAL CONSTRUCTION SEQUENCE IF IT BELIEVES THE INTENT DESCRIBED ABOVE CAN BE MET, HOWEVER THE CITY SHALL HAVE FINAL AUTHORITY TO ACCEPT, MODIFY, OR REJECT THE DETAILED SEQUENCE OF WORK PROPOSED BY THE CONTRACTOR.

THE DETAILED SEQUENCE OF WORK SHALL BE SUBMITTED WITHIN 30 CALENDAR DAYS OF THE CONTRACT AWARD (NOTICE TO PROCEED ??). NO WORK ON THE PROJECT SITES SHALL COMMENCE UNTIL THE SEQUENCE OF WORK IS ACCEPTED BY THE CITY. THE DETAILED SEQUENCE OF WORK SHALL DESCRIBE EACH SPECIFIC CONSTRUCTION ACTIVITY AND ANY ACTIONS REQUIRED BY CITY FORCES PRIOR TO THE INITIATION OF AN ACTIVITY, AND SHALL INCLUDE A SCHEDULE SHOWING START DATES, END DATES, AND REQUIRED PREDECESSOR TASKS FOR EACH ACTIVITY. THE SEQUENCE SHALL ALSO INCLUDE A DESCRIPTION OF ACTIVITIES WHICH MUST USE ENCELIA DRIVE FOR ACCESS AND THE QUANTITY AND TYPES OF EQUIPMENT WHICH WILL BE NECESSARY FOR THOSE ACTIVITIES. EXCEPT WHERE RESTRICTIONS DESCRIBED BELOW APPLY, WORK ACTIVITY IN MULTIPLE AREAS MAY OCCUR SIMULTANEOUSLY. CONTRACTOR SHALL PREPARE AND SUBMIT TO THE CITY AN UPDATED SCHEDULE EVERY TWO WEEKS.

DETAILED SEQUENCE OF WORK CRITERIA:

1. PRIOR TO THE CONTRACTOR BEGINNING WORK AT THE SITE, THE CITY SHALL TAKE OUT OF SERVICE THE EXISTING LA JOLLA EXCHANGE PLACE RESERVOIR (LJEPR), THE EXISTING LA JOLLA EXCHANGE PLACE PUMP STATION, THE EXISTING LA JOLLA VIEW RESERVOIR (LJVR), AND THE EXISTING 16-INCH LJVR INLET/OUTLET PIPE FROM THE MUIRLANDS PS CONNECTION (APPROXIMATE STATION 16+94 ALONG THE PROPOSED 30-INCH PIPELINE) TO THE EXISTING RESERVOIR.

2. THE EXISTING 16-INCH WATERLINE TO BE REPLACED IN COUNTRY CLUB DRIVE FROM STATION 1+00 TO STATION 16+94 MUST REMAIN IN SERVICE DURING HIGH DEMAND PERIODS. THE WATERLINE CAN ONLY BE TAKEN OUT OF SERVICE BETWEEN THE DATES OF NOVEMBER 1ST AND MARCH 31ST. ONCE THE 16-INCH WATERLINE HAS BEEN TAKEN OUT OF SERVICE, THE 30-INCH REPLACEMENT WATERLINE MUST BE COMPLETED, ACCEPTED BY THE CITY AND IN SERVICE BY APRIL 1ST. NO CHANGES IN CONTRACT PRICE OR DURATION SHALL BE PROVIDED DUE TO THIS RESTRICTION.

3. NO MAJOR CONSTRUCTION TRAFFIC TO AND FROM THE WORK AREAS IN THE LA JOLLA NATURAL PARK SHALL OCCUR DURING CONSTRUCTION OF 8-INCH OR THE 30-INCH PIPELINE ALONG COUNTRY CLUB DRIVE TO AVOID EXCESSIVE CONSTRUCTION TRAFFIC IMPACTS ALONG COUNTRY CLUB DRIVE.

THE SEQUENCE OF WORK SHALL PRIORITIZE CONSTRUCTION OF THE TEMPORARY ACCESS ROAD (SEE TEMPORARY CONSTRUCTION GRADING DESCRIPTION BELOW) AND UTILIZE IT TO THE GREATEST EXTENT POSSIBLE UNTIL FINAL GRADING IS BEING PERFORMED WITHIN THE LA JOLLA NATURAL PARK. CONSTRUCTION ACTIVITIES WITHIN THE PARK REQUIRING LARGE VEHICLES AND EQUIPMENT, EARTHWORK HAULAGE, MATERIAL DELIVERIES, AND/OR MULTIPLE TRIPS SHALL BE SCHEDULED SUCH THAT THE TEMPORARY ACCESS ROAD CAN BE UTILIZED FOR THOSE ACTIVITIES.

GENERAL CONSTRUCTION SEQUENCE:

I. STAKE AND INSTALL CONSTRUCTION FENCING ALONG THE LIMIT OF WORK BOUNDARY WITHIN THE LA JOLLA NATURAL PARK. THE CONTRACTOR SHALL NOT PERFORM ANY CONSTRUCTION RELATED ACTIVITIES NOR DISTURB THE AREA OUTSIDE THE LIMIT OF WORK FOR ANY REASON WITHOUT SPECIFIC, PRE-APPROVED, WRITTEN AUTHORIZATION FROM THE CITY.

2. MOVE ANTENNA MAST TO THE TEMPORARY LOCATION AT LJVR AND RE-ESTABLISH THE COMMUNICATION LINKAGES. THE MAXIMUM DURATION OF SECURITY SYSTEM OUTAGE SHALL BE IN ACCORDANCE WITH THE PLANS.

3. PERFORM DEMOLITION OF THE LJVR AND LJEPR AND PUMP STATION.

4. CONSTRUCT 30-INCH WATERLINE FROM STATION 17+67 TO APPROXIMATELY STATION 21+50, OR TO THE EASTERLY LIMIT OF WHERE THE CONTRACTOR'S PROPOSED TEMPORARY STOCKPILE WILL COVER THE PIPE ALIGNMENT. TEST WATERLINE.

5. CONSTRUCT ROUGH GRADING WITHIN LA JOLLA NATURAL PARK INCLUDING EXCAVATION FOR NEW RESERVOIR, TEMPORARY ACCESS ROAD, AND TEMPORARY STOCKPILE. SEE ACCESS NOTES ON DWG G-3 FOR MORE INFORMATION CONCERNING SITE ACCESS. SEE TEMPORARY STOCKPILE NOTES FOR MORE INFORMATION CONCERNING LOCATION AND EXTENTS OF TEMPORARY STOCKPILE.

6. PERFORM FINAL GRADING AT THE LJEPR AND PUMP STATION USING FILL MATERIAL FROM ROUGH GRADING OPERATIONS.

7. CONSTRUCT 30-INCH WATERLINE FROM STATION 16+94 TO STATION 17+67, INCLUDING ALTITUDE VALVE VAULT AND APPURTENANCES. CONSTRUCT 30-INCH WATERLINE FROM APPROXIMATELY STATION 21+50 (OR EASTERLY END POINT) TO RESERVOIR. TEST AND DISINFECT WATERLINE FROM STATION 16+94 TO RESERVOIR. COORDINATE WITH CITY FORCES TO MAKE TEMPORARY CONNECTION TO EXISTING 16-INCH WATERLINE AT STATION 16+94 TO PROVIDE WATER TO RESERVOIR SITE.

8. CONSTRUCT RESERVOIR DRAIN AND OVERFLOW PIPING AND DISCHARGE STRUCTURES.

9. CONSTRUCT NEW LJVR. FILL, TEST, AND DISINFECT NEW LJVR. CONNECT NEW LJVR TO 30-INCH INLET/OUTLET PIPE.

10. AFTER CITY ACCEPTANCE OF SUCCESSFUL RESERVOIR TESTING AND DISINFECTION, BEGIN BACKFILL OF RESERVOIR USING STOCKPILED MATERIAL. MAINTAIN TEMPORARY ACCESS ROAD IN SERVICE UNTIL STOCKPILED MATERIAL IS EXHAUSTED. GRADE FOR NEW ENCELIA DRIVE ACCESS ROAD.

11. CONSTRUCT 8-INCH WATERLINE AND ELECTRICAL EQUIPMENT IN ENCELIA DRIVE. TEST AND DISINFECT PIPELINE AND MAKE CONNECTION TO RESERVOIR WASH DOWN SYSTEM AND TO EXISTING WATERLINE IN BRODIAEA WAY.

12. PERFORM FINAL GRADING WITHIN LA JOLLA NATURAL PARK. CONSTRUCT RESERVOIR SITE IMPROVEMENTS INCLUDING ENCELIA DRIVE ACCESS ROAD PAVING AND DRAIN VAULT ACCESS PATH.

13. CONSTRUCT AND TEST ELECTRICAL, SCADA (INCLUDING FIBER OPTIC SYSTEM AND PANELS AT MUIRLANDS PUMP STATION), AND SECURITY EQUIPMENT. RELOCATE THE ANTENNA MAST TO THE PERMANENT LOCATION. COMMISSION NEW SYSTEMS AND COMMUNICATION LINKAGES. THE MAXIMUM DURATION OF THE SECURITY SYSTEM OUTAGE SHALL BE IN ACCORDANCE WITH THE PLANS.

14. CONSTRUCT TEMPORARY IRRIGATION AND INSTALL RE-VEGETATION PLANT MATERIAL WITHIN LA JOLLA NATURAL PARK.

15. CONSTRUCT 8-INCH WATERLINE IN COUNTRY CLUB DRIVE INCLUDING THE NEW TEE AND CONNECTION TO THE EXISTING 30-INCH PIPE AT STATION 60+00. TEST, DISINFECT AND PLACE THE 8-INCH WATERLINE INTO SERVICE. MOVE EXISTING WATER SERVICES AND LATERALS FROM EXISTING 16-INCH WATERLINE TO NEW 8-INCH WATERLINE. THE MAXIMUM DURATION OF WATER SERVICE OUTAGES SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.

16. AFTER THE EXISTING WATER SERVICES AND LATERALS ARE TRANSFERRED TO THE NEW 8-INCH WATERLINE, REMOVE THE EXISTING 16-INCH WATERLINE FROM SERVICE AND CONSTRUCT THE NEW 30-INCH WATERLINE IN COUNTRY CLUB DRIVE FROM STATION 1+00 TO 16+94 (SEE ABOVE FOR RESTRICTIONS ON DURATION OF 16-INCH/30-INCH WATERLINE SHUTDOWN). TEST, DISINFECT AND PLACE THE 30-INCH WATERLINE INTO SERVICE.

17. CONSTRUCT CURB RAMP IMPROVEMENTS ALONG COUNTRY CLUB DRIVE.

18. PERFORM FINAL PAVING, CONSTRUCT TEMPORARY IRRIGATION, AND INSTALL RE-VEGETATION LANDSCAPING AT THE LJEPR AND PUMP STATION.

19. CONDUCT LANDSCAPE MAINTENANCE AND MONITORING PROGRAM.

TEMPORARY CONSTRUCTION GRADING AND STOCKPILE:

THE CONTRACTOR SHALL PREPARE AND SUBMIT FOR ACCEPTANCE A PLAN FOR TEMPORARY CONSTRUCTION GRADING IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THE CRITERIA DESCRIBED BELOW. THE PRIMARY INTENT OF THE TEMPORARY GRADING PLAN IS TO MAINTAIN ONSITE THE QUANTITY OF BACKFILL REQUIRED TO PERFORM THE FINAL GRADING AFTER THE NEW LJVR CONSTRUCTION IS COMPLETED THEREBY MINIMIZING THE IMPACT TO RESIDENTS THAT SURROUND THE PROJECT SITE AND THE LARGER COMMUNITY. THE TEMPORARY CONSTRUCTION GRADING AND STOCKPILE LAYOUT SHOWN ON THE PLANS IS PROVIDED FOR THE CONTRACTOR'S INFORMATION AND REPRESENTS A CONCEPTUAL PLAN ONLY. NOT ALL ASPECTS OF A COMPLETE TEMPORARY GRADING DESIGN ARE SHOWN ON THE CONCEPT PLAN, HOWEVER, THIS SHALL NOT LIMIT THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL ACTIVITIES REQUIRED BY THE CONTRACT DOCUMENTS AND FOR COMPLIANCE WITH REGULATORY REQUIREMENTS. THE CONTRACTOR SHALL DEVELOP A DETAILED PLAN THAT DESCRIBES THE SPECIFIC APPROACH PROPOSED FOR THE EARTHWORK. THE CITY SHALL HAVE FINAL AUTHORITY TO ACCEPT, MODIFY, OR REJECT THE DETAILED PLAN PROPOSED BY THE CONTRACTOR.

THE DETAILED TEMPORARY CONSTRUCTION GRADING PLAN SHALL BE SUBMITTED WITHIN 60 CALENDAR DAYS OF THE NOTICE TO PROCEED. NO GRADING IN THE LJVR PROJECT AREA SHALL COMMENCE UNTIL THE TEMPORARY GRADING PLAN IS ACCEPTED BY THE CITY. THE PLAN SHALL INCLUDE DRAWINGS (NO SMALLER THAN 1INCH=30 FT SCALE ON D-SIZE SHEETS) SHOWING THE LIMITS AND CONTOURING OF THE TEMPORARY GRADING, STOCKPILE AND ACCESS ROAD, DETAILS AND DESCRIPTIONS OF ALL EROSION CONTROL MEASURES AND STORMWATER/DRAINAGE FEATURES (SUCH AS TEMPORARY CULVERTS), EARTHWORK VOLUME ESTIMATES, ESTIMATED VOLUMES OF MATERIAL TO BE TRANSPORTED OFFSITE FOR DISPOSAL, DESCRIPTION OF AND CALCULATIONS FOR TEMPORARY SHORING SYSTEMS (SUCH AS SOIL NAILING), SEQUENCE OF EARTHWORK CONSTRUCTION, AND DESCRIPTIONS OF THE EARTHWORK HANDLING METHODS (SUCH AS THE ESTIMATED NUMBER AND TYPES OF EARTHWORK EQUIPMENT TO BE USED). THE PLANS AND CALCULATIONS SHALL BE PREPARED UNDER THE DIRECTION OF, AND SIGNED BY, A CALIFORNIA REGISTERED CIVIL ENGINEER.

TEMPORARY CONSTRUCTION GRADING CRITERIA:

THE CONTRACTOR MUST CONSTRUCT A TEMPORARY ACCESS ROAD SIMILAR TO THE ROAD CONCEPT SHOWN ON THE PLANS AS ITS LOCATION RELATES TO THE POSITION OF THE RESERVOIR INLET/OUTLET PIPELINE. HOWEVER, THE CONTRACTOR MAY MODIFY THE LOCATION AND SIZE OF THE TEMPORARY STOCKPILE(S) AND ACCESS ROAD AS REQUIRED FOR ITS OPERATIONS IF THE FOLLOWING REQUIREMENTS ARE MET:

1. THE EXTENTS OF THE TEMPORARY STOCKPILE(S), AND THE WORKING SPACE TO CONSTRUCT IT, MUST BE WITHIN THE WORK AREA LIMIT SHOWN ON THE PLANS. DISTURBANCE OUTSIDE THE LIMIT OF WORK IS NOT PERMITTED.

2. WHERE THE STOCKPILE(S) IS CONSTRUCTED ABOVE THE NEW 30-INCH WATERLINE WITHIN THE PARK, THE TOTAL HEIGHT OF FILL ABOVE THE PIPELINE MUST NOT EXCEED 80 FEET. IF THE CONTRACTOR'S PROPOSED TEMPORARY STOCKPILE DOES EXCEED 80 FEET OF FILL OVER THE NEW 30-INCH WATERLINE, THE CONTRACTOR SHALL PROVIDE CALCULATIONS SHOWING THE MATERIAL THICKNESS OF THE 30-INCH STEEL PIPE IS ADEQUATE FOR THE PROPOSED FILL HEIGHT.

3. THE CONTRACTOR MAY USE THE AREA AT THE EXISTING LA JOLLA VIEW RESERVOIR TO STOCKPILE MATERIAL, BUT THE TOTAL HEIGHT OF THE STOCKPILED MATERIAL IN THIS AREA MUST NOT EXCEED THE FINAL GRADES AS SHOWN ON THE PLANS.

4. THE CONTRACTOR SHALL ESTIMATE THE ACTUAL QUANTITY OF BACKFILL REQUIRED TO PERFORM THE FINAL GRADING WITHIN THE PARK AND MAINTAIN ONSITE THAT QUANTITY OF MATERIAL, INCLUDING THE TEMPORARY STOCKPILE(S) AND THE TEMPORARY ACCESS ROAD. THE CONTRACTOR SHALL ENSURE THAT NO IMPORTED SOIL IS REQUIRED TO COMPLETE THE FINAL GRADING WITHIN THE PARK. THE CONTRACTOR SHALL ALSO CONSTRUCT THE TEMPORARY STOCKPILE(S) SO AS TO MINIMIZE THE TOTAL VOLUME OF EXPORTED SOIL AFTER COMPLETION OF THE FINAL GRADING.

G-2

LA JOLLA VIEW RESERVOIR
ENVIRONMENTAL PERMITS AND NOTES AND SEQUENCE OF WORK

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 2 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

CONSULTANT
Infrastructure ENGINEERING CORPORATION
14271 Danielson Street
Poway, California 92064
T 858.413.2400 F 858.413.2440
www.iecrporation.com

REGISTERED PROFESSIONAL ENGINEER ANDERS K. EGENES No. C40654 Exp. 3-31-2015 CIVIL STATE OF CALIFORNIA

APPROVED
FOR CITY ENGINEER _____ DATE _____
ALEX GARCIA
PRINT NAME RCE#

SUBMITTED BY ED FORDAN PROJECT MANAGER
CHECKED BY ART ARVIZU PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	xx/xx			

246-1692 CCS27 COORDINATE
CCS83 COORDINATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

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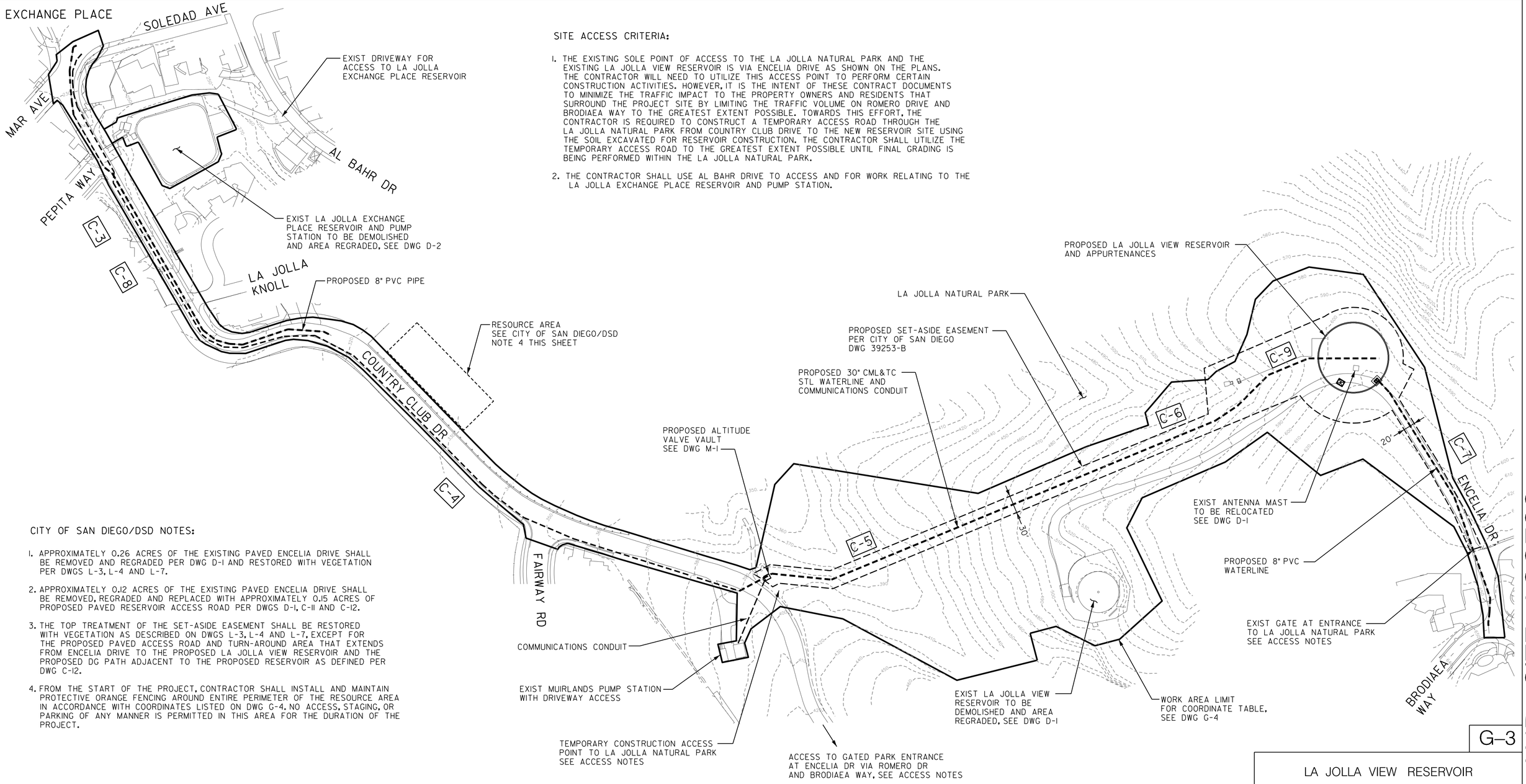
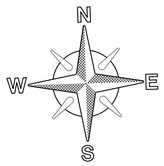


SITE ACCESS CRITERIA:

1. THE EXISTING SOLE POINT OF ACCESS TO THE LA JOLLA NATURAL PARK AND THE EXISTING LA JOLLA VIEW RESERVOIR IS VIA ENCELIA DRIVE AS SHOWN ON THE PLANS. THE CONTRACTOR WILL NEED TO UTILIZE THIS ACCESS POINT TO PERFORM CERTAIN CONSTRUCTION ACTIVITIES. HOWEVER, IT IS THE INTENT OF THESE CONTRACT DOCUMENTS TO MINIMIZE THE TRAFFIC IMPACT TO THE PROPERTY OWNERS AND RESIDENTS THAT SURROUND THE PROJECT SITE BY LIMITING THE TRAFFIC VOLUME ON ROMERO DRIVE AND BRODIAEA WAY TO THE GREATEST EXTENT POSSIBLE. TOWARDS THIS EFFORT, THE CONTRACTOR IS REQUIRED TO CONSTRUCT A TEMPORARY ACCESS ROAD THROUGH THE LA JOLLA NATURAL PARK FROM COUNTRY CLUB DRIVE TO THE NEW RESERVOIR SITE USING THE SOIL EXCAVATED FOR RESERVOIR CONSTRUCTION. THE CONTRACTOR SHALL UTILIZE THE TEMPORARY ACCESS ROAD TO THE GREATEST EXTENT POSSIBLE UNTIL FINAL GRADING IS BEING PERFORMED WITHIN THE LA JOLLA NATURAL PARK.
2. THE CONTRACTOR SHALL USE AL BAHR DRIVE TO ACCESS AND FOR WORK RELATING TO THE LA JOLLA EXCHANGE PLACE RESERVOIR AND PUMP STATION.

CITY OF SAN DIEGO/DSD NOTES:

1. APPROXIMATELY 0.26 ACRES OF THE EXISTING PAVED ENCELIA DRIVE SHALL BE REMOVED AND REGRADED PER DWG D-I AND RESTORED WITH VEGETATION PER DWGS L-3, L-4 AND L-7.
2. APPROXIMATELY 0.12 ACRES OF THE EXISTING PAVED ENCELIA DRIVE SHALL BE REMOVED, REGRADED AND REPLACED WITH APPROXIMATELY 0.15 ACRES OF PROPOSED PAVED RESERVOIR ACCESS ROAD PER DWGS D-I, C-II AND C-12.
3. THE TOP TREATMENT OF THE SET-ASIDE EASEMENT SHALL BE RESTORED WITH VEGETATION AS DESCRIBED ON DWGS L-3, L-4 AND L-7, EXCEPT FOR THE PROPOSED PAVED ACCESS ROAD AND TURN-AROUND AREA THAT EXTENDS FROM ENCELIA DRIVE TO THE PROPOSED LA JOLLA VIEW RESERVOIR AND THE PROPOSED DG PATH ADJACENT TO THE PROPOSED RESERVOIR AS DEFINED PER DWG C-12.
4. FROM THE START OF THE PROJECT, CONTRACTOR SHALL INSTALL AND MAINTAIN PROTECTIVE ORANGE FENCING AROUND ENTIRE PERIMETER OF THE RESOURCE AREA IN ACCORDANCE WITH COORDINATES LISTED ON DWG G-4. NO ACCESS, STAGING, OR PARKING OF ANY MANNER IS PERMITTED IN THIS AREA FOR THE DURATION OF THE PROJECT.



0 80 160 240

SCALE 1" = 80'

LEGEND:

- PROPOSED WATER
- C-1 WATER SHEET NO.
- WORK AREA LIMIT
- PROPOSED EASEMENT

KEY MAP AND SITE ACCESS

G-3

LA JOLLA VIEW RESERVOIR
KEY MAP AND SITE ACCESS

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 3 OF 86 SHEETS

WATER WBS S-15027
SEWER WBS NONE

CONSULTANT
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www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER ANDERS K. ECKMAN No. 60654 EXP. 3-31-2015 CIVIL STATE OF CALIFORNIA
PRELIMINARY

APPROVED:
FOR CITY ENGINEER ALEX GARCIA DATE
PRINT NAME RCE#

SUBMITTED BY: ED FORDAN PROJECT MANAGER
CHECKED BY: ART ARVIZU PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

SEE SHEETS CCS27 COORDINATE
SEE SHEETS CCS83 COORDINATE

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

38056-03-D

100% – REVISED

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COORDINATE TABLE

NO	ELEV.	NORTHING	EASTING
1	254.26	1888483.17	6249362.89
2	262.50	1888495.74	6249384.36
3	262.13	1888497.09	6249384.31
4	261.33	1888501.47	6249385.72
5	261.64	1888502.76	6249387.04
6	269.80	1888541.40	6249512.49
7	268.57	1888544.89	6249542.20
8	267.74	1888542.99	6249556.34
9	267.71	1888542.50	6249557.51
10	271.38	1888484.58	6249587.70
11	272.14	1888481.97	6249586.57
12	273.32	1888470.36	6249556.73
13	273.27	1888467.99	6249555.52
14	274.72	1888444.70	6249561.65
15	275.06	1888442.02	6249562.78
16	275.13	1888440.42	6249562.77
17	277.76	1888428.16	6249557.36
18	278.74	1888427.22	6249556.49

COORDINATE TABLE

NO	ELEV.	NORTHING	EASTING
19	282.52	1888382.55	6249475.62
20	281.47	1888382.44	6249473.92
21	276.61	1888387.07	6249462.28
22	276.08	1888387.97	6249461.26
23	272.12	1888459.76	6249421.94
24	271.81	1888460.67	6249419.48
25	267.06	1888454.35	6249402.78
26	266.15	1888455.49	6249394.23
27	266.22	1888469.66	6249394.63
28	255.47	1888459.15	6249376.69
50	389.48	1887733.29	6250461.93
51	390.12	1887736.67	6250472.30
52	351.42	1887878.32	6250504.34
53	355.23	1887913.58	6250536.57
54	464.42	1887863.13	6250850.41
55	499.42	1887942.55	6251033.93
56	508.98	1887979.29	6251140.00
57	496.35	1888000.46	6251134.64

COORDINATE TABLE

NO	ELEV.	NORTHING	EASTING
58	505.16	1888052.60	6251179.45
59	527.50	1888056.84	6251241.11
60	538.29	1888070.76	6251255.53
61	556.14	1888087.79	6251287.40
62	575.04	1888133.60	6251307.74
63	578.36	1888193.54	6251322.27
64	576.67	1888224.66	6251352.17
65	575.88	1888248.46	6251413.30
66	570.27	1888236.04	6251505.85
67	588.20	1888077.80	6251610.15
68	620.81	1887889.14	6251658.22
69	624.91	1887837.76	6251686.27
70	640.55	1887775.47	6251715.82
71	646.27	1887721.84	6251735.41
72	654.52	1887617.59	6251746.59
73	650.73	1887617.34	6251711.52
74	652.45	1887655.99	6251709.56
75	649.77	1887705.71	6251700.85

COORDINATE TABLE

NO	ELEV.	NORTHING	EASTING
76	641.40	1887762.52	6251682.37
77	634.59	1887806.59	6251659.86
78	638.88	1887921.50	6251505.15
79	635.82	1887893.77	6251433.19
80	586.44	1887967.08	6251342.41
81	575.32	1887916.55	6251270.90
82	549.49	1887855.64	6251129.40
83	546.48	1887804.33	6251103.33
84	547.16	1887679.88	6251163.40
85	504.20	1887614.85	6251091.16
86	484.17	1887603.79	6251049.18
87	487.88	1887636.68	6250983.08
88	462.24	1887624.97	6250938.82
89	450.41	1887579.13	6250950.95
90	431.57	1887544.98	6250814.26
91	414.53	1887649.55	6250620.16
92	389.43	1887670.46	6250513.62
93	399.64	1887632.69	6250463.93

COORDINATE TABLE

NO	ELEV.	NORTHING	EASTING
94	394.90	1887608.51	6250452.97
95	396.49	1887584.10	6250459.29
96	393.73	1887575.35	6250414.94
97	395.68	1887606.27	6250407.53
98	394.48	1887612.12	6250438.91
99	391.05	1887693.33	6250440.29

LEGEND:

- - - - - PROPOSED WATER
——— WORK AREA LIMIT

N E S W

0 80 160 240
SCALE 1"=80'

G-4

WORK AREA LIMITS

LA JOLLA VIEW RESERVOIR
WORK AREA LIMITS

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 4 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

APPROVED
FOR CITY ENGINEER DATE
ALEX GARCIA
PRINT NAME RCE#

SUBMITTED BY: ED FORDAN, PROJECT MANAGER
CHECKED BY: ART ARVIZU, PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

SEE SHEETS CCS27 COORDINATE
SEE SHEETS CCS83 COORDINATE

CONSULTANT
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www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER ANDERS K. EGENSE No. 40654 Exp. 3-31-2015 CIVIL STATE OF CALIFORNIA
PRELIMINARY

CONTRACTOR ________ DATE STARTED ________
INSPECTOR ________ DATE COMPLETED ________

38056-04-D

100%

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NOTES:

1. DEMOLISH EXISTING 0.72MG RESERVOIR (DIAMETER=70', HEIGHT=25'), PIPING, VALVES, VAULT, CURBS, FENCING, CONCRETE WALL, BERMS, HEADWALL, DRAIN PIPING, ASPHALT PAVING AND ALL OTHER APPURTENANCES AND SITE FEATURES. ALL TELEMETRY AND SCADA COMMUNICATION EQUIPMENT SHALL BE SALVAGED AND DELIVERED TO THE CITY OF SAN DIEGO WATER OPERATIONS DEPARTMENT.

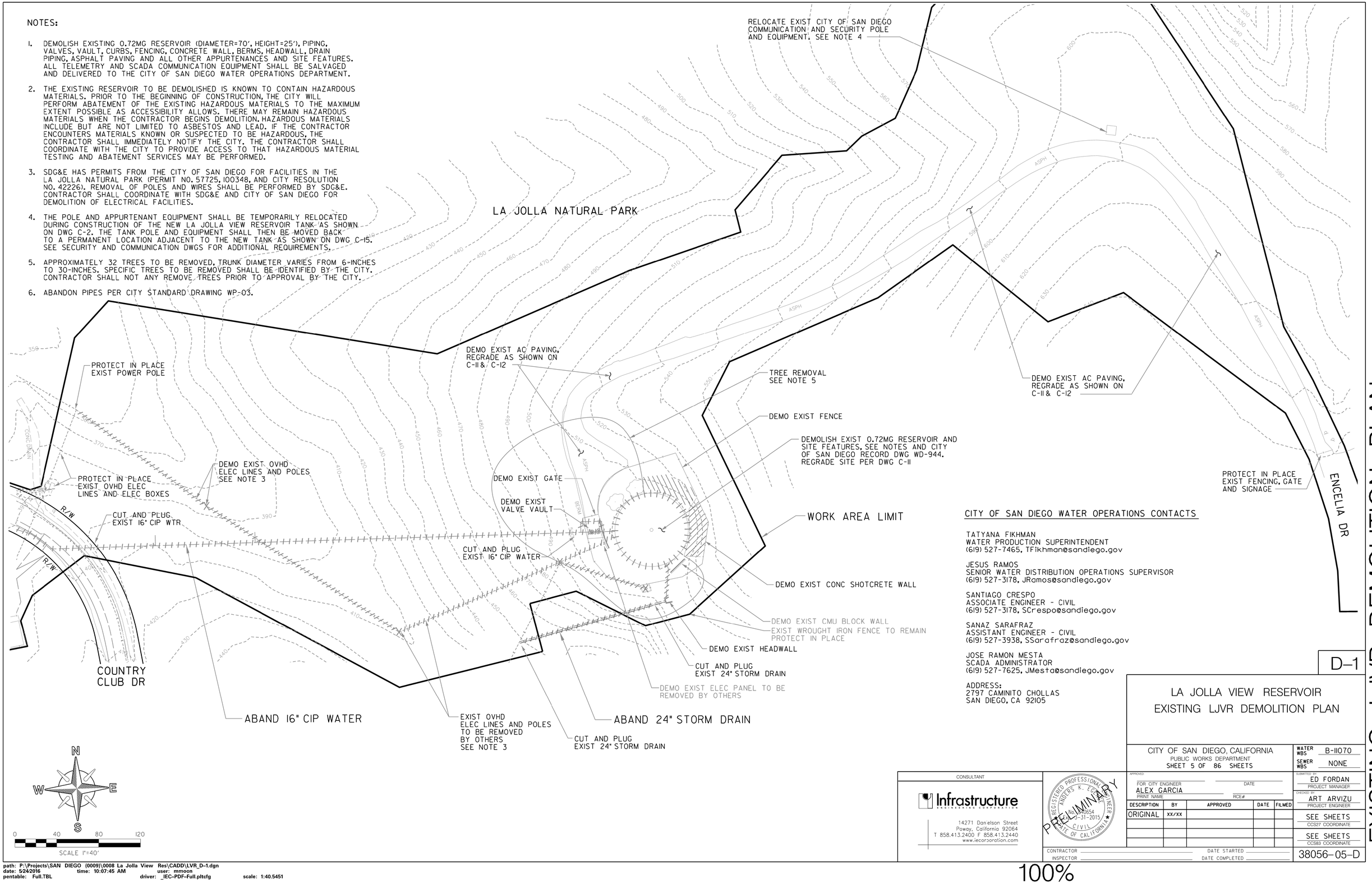
2. THE EXISTING RESERVOIR TO BE DEMOLISHED IS KNOWN TO CONTAIN HAZARDOUS MATERIALS. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE CITY WILL PERFORM ABATEMENT OF THE EXISTING HAZARDOUS MATERIALS TO THE MAXIMUM EXTENT POSSIBLE AS ACCESSIBILITY ALLOWS. THERE MAY REMAIN HAZARDOUS MATERIALS WHEN THE CONTRACTOR BEGINS DEMOLITION. HAZARDOUS MATERIALS INCLUDE BUT ARE NOT LIMITED TO ASBESTOS AND LEAD. IF THE CONTRACTOR ENCOUNTERS MATERIALS KNOWN OR SUSPECTED TO BE HAZARDOUS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY. THE CONTRACTOR SHALL COORDINATE WITH THE CITY TO PROVIDE ACCESS TO THAT HAZARDOUS MATERIAL TESTING AND ABATEMENT SERVICES MAY BE PERFORMED.

3. SDG&E HAS PERMITS FROM THE CITY OF SAN DIEGO FOR FACILITIES IN THE LA JOLLA NATURAL PARK (PERMIT NO. 57725, 100348, AND CITY RESOLUTION NO. 42226). REMOVAL OF POLES AND WIRES SHALL BE PERFORMED BY SDG&E. CONTRACTOR SHALL COORDINATE WITH SDG&E AND CITY OF SAN DIEGO FOR DEMOLITION OF ELECTRICAL FACILITIES.

4. THE POLE AND APPURTENANT EQUIPMENT SHALL BE TEMPORARILY RELOCATED DURING CONSTRUCTION OF THE NEW LA JOLLA VIEW RESERVOIR TANK AS SHOWN ON DWG C-2. THE TANK POLE AND EQUIPMENT SHALL THEN BE MOVED BACK TO A PERMANENT LOCATION ADJACENT TO THE NEW TANK AS SHOWN ON DWG C-15. SEE SECURITY AND COMMUNICATION DWGS FOR ADDITIONAL REQUIREMENTS.

5. APPROXIMATELY 32 TREES TO BE REMOVED, TRUNK DIAMETER VARIES FROM 6-INCHES TO 30-INCHES. SPECIFIC TREES TO BE REMOVED SHALL BE IDENTIFIED BY THE CITY. CONTRACTOR SHALL NOT ANY REMOVE TREES PRIOR TO APPROVAL BY THE CITY.

6. ABANDON PIPES PER CITY STANDARD DRAWING WP-03.



N
W E
S
0 40 80 120
SCALE 1"=40'

CITY OF SAN DIEGO WATER OPERATIONS CONTACTS

TATYANA FIKHMAN
WATER PRODUCTION SUPERINTENDENT
(619) 527-7465, TFikhman@sandiego.gov

JESUS RAMOS
SENIOR WATER DISTRIBUTION OPERATIONS SUPERVISOR
(619) 527-3178, JRamos@sandiego.gov

SANTIAGO CRESPO
ASSOCIATE ENGINEER - CIVIL
(619) 527-3178, SCrespo@sandiego.gov

SANAZ SARAFRAZ
ASSISTANT ENGINEER - CIVIL
(619) 527-3938, SSarafraz@sandiego.gov

JOSE RAMON MESTA
SCADA ADMINISTRATOR
(619) 527-7625, JMesta@sandiego.gov

ADDRESS:
2797 CAMINITO CHOLLAS
SAN DIEGO, CA 92105

D-1

EXISTING LJVR DEMOLITION PLAN

LA JOLLA VIEW RESERVOIR
EXISTING LJVR DEMOLITION PLAN

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 5 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

CONSULTANT
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REGISTERED PROFESSIONAL ENGINEER ANDERS K. ERICKSON No. 76654 5-31-2015 CIVIL STATE OF CALIFORNIA
PRELIMINARY

APPROVED:
FOR CITY ENGINEER ALEX GARCIA DATE
PRINT NAME RCE#

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

SUBMITTED BY: ED FORDAN PROJECT MANAGER
CHECKED BY: ART ARVIZU PROJECT ENGINEER
SEE SHEETS CCS27 COORDINATE
SEE SHEETS CCS83 COORDINATE
38056-05-D

100%

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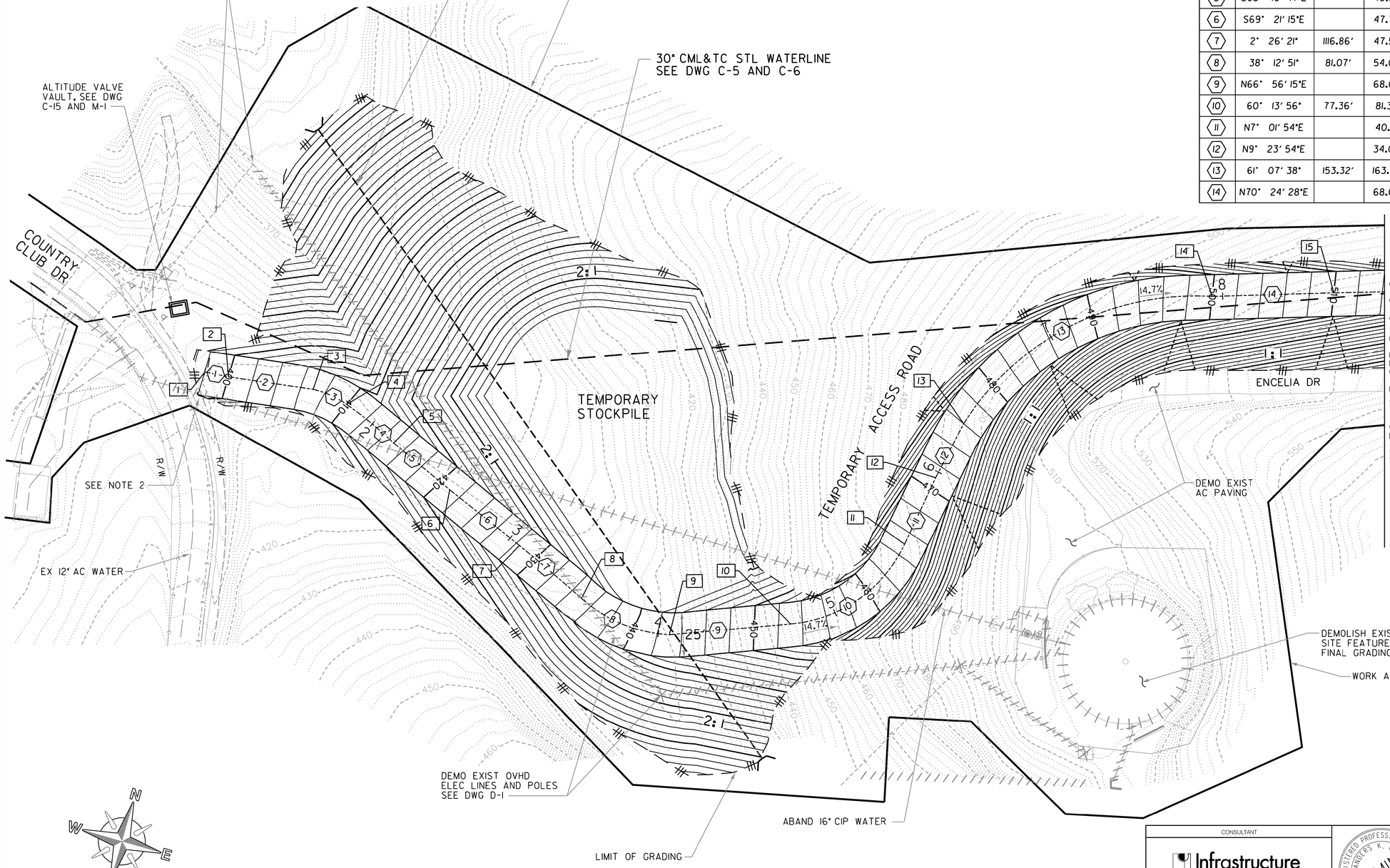

TEMP ACCESS ROAD DATA TABLE				
NO	△/BEARING	R	L	T
1	N83° 28' 44"E		13.53'	
2	N80° 30' 28"E		47.79'	
3	22° 03' 23"	53.76'	20.70'	10.48'
4	8° 48' 24"	221.06'	33.98'	17.02'
5	S68° 10' 47"E		40.82'	
6	S69° 21' 15"E		47.77'	
7	2° 26' 21"	1116.86'	47.55'	23.78'
8	38° 12' 51"	81.07'	54.07'	28.08'
9	N66° 56' 15"E		68.07'	
10	60° 13' 56"	77.36'	81.33'	44.88'
11	N7° 01' 54"E		40.91'	
12	N9° 23' 54"E		34.00'	
13	61° 07' 38"	153.32'	163.57'	90.54'
14	N70° 24' 28"E		68.06'	

TEMP ACCESS ROAD COORDINATE TABLE			
NO	STATION	NORTHING	EASTING
1	1+00.00	1887690.86	6250515.88
2	1+13.53	1887692.40	6250529.32
3	1+61.32	1887700.28	6250576.46
4	1+82.02	1887698.04	6250596.90
5	2+16.00	1887685.50	6250628.45
6	2+56.82	1887670.33	6250666.35
7	3+04.59	1887653.49	6250711.05
8	3+52.14	1887635.28	6250754.97
9	4+06.21	1887631.00	6250807.87
10	4+74.28	1887657.67	6250870.50
11	5+55.61	1887904.05	6251038.09
12	5+96.51	1887719.55	6250917.38
13	6+30.51	1887793.69	6250927.94
14	7+94.08	1887926.87	6251102.22
15	8+62.15	1887962.34	6251205.03

NOTES:

1. LIMITS SHOWN FOR TEMPORARY GRADING ARE SUGGESTED LIMITS ONLY. CONTRACTOR MAY PROPOSE ALTERNATE TEMPORARY GRADING LIMITS WITHIN ALLOWABLE WORK AREA LIMIT, HOWEVER, COSTS FOR ANY ADDITIONAL GRADING, LANDSCAPE IRRIGATION, PLANTING AND MAINTENANCE BEYOND THAT SHOWN ON THE PLANS SHALL BE THE RESPONSIBILTY OF THE CONTRACTOR.
2. CONTRACTOR SHALL TRENCH PLATE OVER EXISTING DRAINAGE CHANNEL OR PROVIDE TEMPORARY PIPING TO PRESERVE EXISTING DRAINAGE FLOW AND DIRECTION.
3. CONTRACTOR SHALL PROVIDE TEMPORARY STORM DRAIN TO PRESERVE EXISTING DRAINAGE FLOW AND DIRECTION.
4. KEYS SHALL BE CONSTRUCTED FOR PROPOSED TEMPORARY STOCKPILE PER DETAIL 1, DWG C-17. ADDITIONAL REQUIREMENTS FOR SLOPE STABILITY MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.

C-1

LA JOLLA VIEW RESERVOIR
ROUGH GRADING PLAN – LJVR

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 6 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

CONSULTANT
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REGISTERED PROFESSIONAL ENGINEER ANDERS K. EGGE No. 70654 5-31-2015 CIVIL STATE OF CALIFORNIA

PRELIMINARY

APPROVED:
FOR CITY ENGINEER _____ DATE
ALEX GARCIA
PRINT NAME RCE#

SUBMITTED BY
ED FORDAN
PROJECT MANAGER

CHECKED BY
ART ARVIZU
PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

246-1692
CCS27 COORDNATE

1886444, 6253407
CCS83 COORDNATE

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

38056-06-D

100%

ROUGH GRADING PLAN – LJVR

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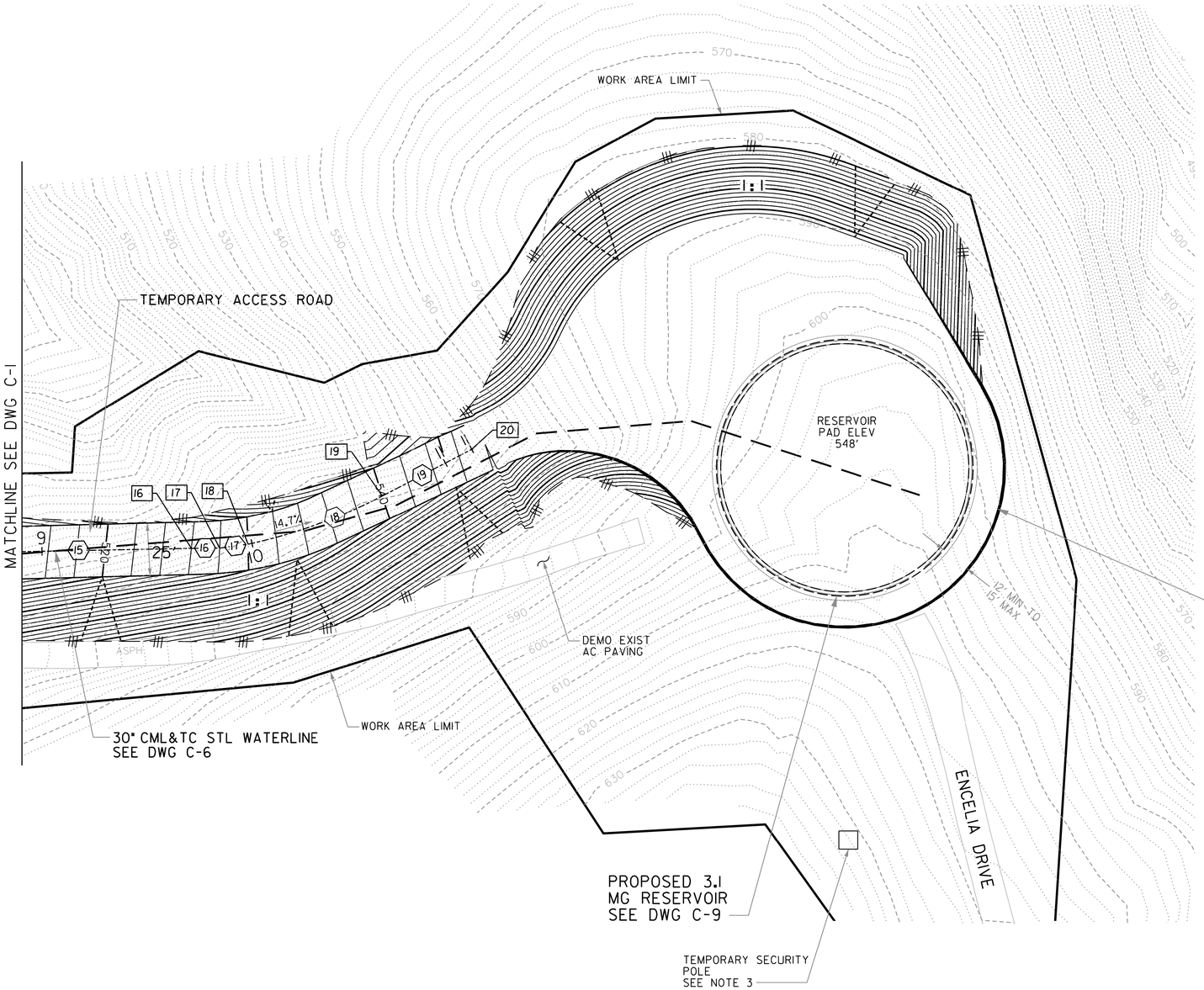

TEMP ACCESS ROAD DATA TABLE				
NO	△/BEARING	R	L	T
15	N70° 58' 00"E		108.76'	
16	N71° 34' 11"E		13.57'	
17	N64° 16' 11"E		13.65'	
18	15° 19' 14"	254.36'	68.01'	34.21'
19	N44° 35' 05"E		47.91'	

TEMP ACCESS ROAD COORDINATE TABLE			
NO	STATION	NORTHING	EASTING
16	9+70.91	1887966.63	6251217.91
17	9+84.48	1887972.56	6251230.21
18	9+98.13	1887991.52	6251258.41
19	10+66.15	1888014.08	6251283.82
20	11+14.06	1888048.20	6251317.46

NOTES:

1. CONSTRUCT PARTIAL/FULL HEIGHT VERTICAL SHORING TO CONSTRUCT ROUGH GRADE AND MAINTAIN SETBACKS FROM RESERVOIR. ALL SHORING DESIGN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR (SEE SPECIFICATIONS). CONTRACTOR SHALL PLACE SAFETY RAILING AT THE TOP OF SHORING, COORDINATE SAFETY RAIL PLACEMENT WITH TYPE OF SHORING SELECTED.
2. LIMITS SHOWN FOR TEMPORARY GRADING ARE SUGGESTED LIMITS ONLY. CONTRACTOR MAY PROPOSE ALTERNATE TEMPORARY GRADING LIMITS WITHIN ALLOWABLE WORK AREA LIMIT. HOWEVER, COSTS FOR ANY ADDITIONAL GRADING, LANDSCAPE IRRIGATION, PLANTING AND MAINTENANCE BEYOND THAT SHOWN ON THE PLANS SHALL BE THE RESPONSIBILTY OF THE CONTRACTOR.
3. THE SECURITY AND COMMUNCATION POLE AND APPURTENANT EQUIPMENT SHALL BE TEMPORARILY RELOCATED DURING CONSTRUCTION OF THE NEW LA JOLLA VIEW RESERVOIR AS SHOWN HEREIN. THE POLE AND EQUIPMENT SHALL THEN BE MOVED BACK TO A PERMANENT LOCATION ADJACENT TO THE TANK AS SHOWN ON DWG C-14. SEE SECURITY AND COMMUNICATION DWGS FOR ADDITIONAL REQUIREMENTS.
4. THE QUANTITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL PERFORM QUANTITY TAKE-OFFS FOR BIDDING PURPOSES. NO ADDITIONAL COMPENSATION WILL BE MADE SHOULD ACTUAL QUANTITIES DIFFER FROM QUANTITIES SHOWN HEREON.

TEMPORARY GRADING QUANTITIES:

CUT= 77,910 CY
FILL= 50,530 CY
NET= 27,380 CY (EXPORT)
SEE NOTE 4

ROUGH GRADING PLAN – LJVR

C-2

LA JOLLA VIEW RESERVOIR
ROUGH GRADING PLAN – LJVR

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 7 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

CONSULTANT:
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www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER ANDERS K. ERICKSON No. 76654 EXP. 3-31-2015 CIVIL STATE OF CALIFORNIA
PRELIMINARY

APPROVED FOR CITY ENGINEER ALEX GARCIA PRINT NAME — DATE — RCE#

SUBMITTED BY ED FORDAN PROJECT MANAGER
CHECKED BY ART ARVIZU PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

246-1692 CCS27 COORDINATE
1886444, 6253407 CCS83 COORDINATE

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

38056-07-D

100%

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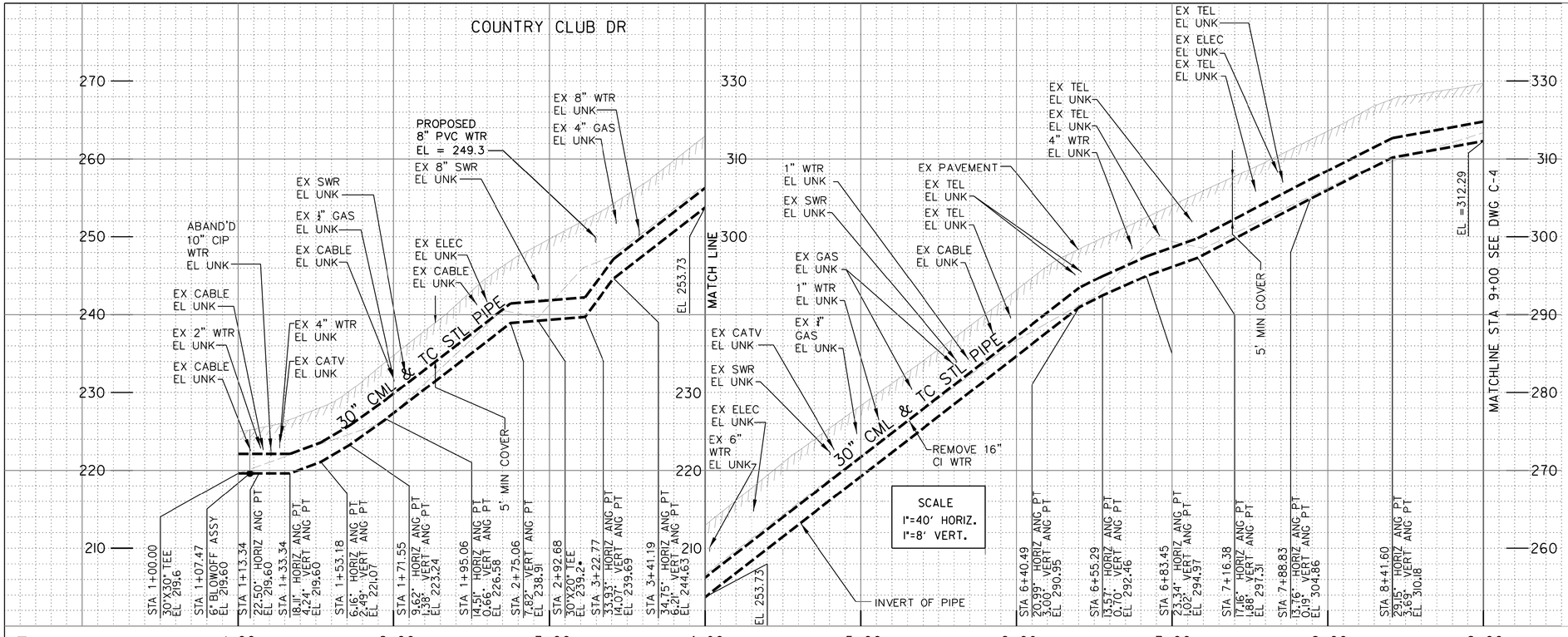
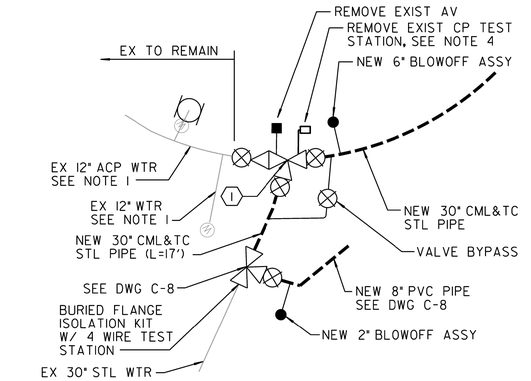
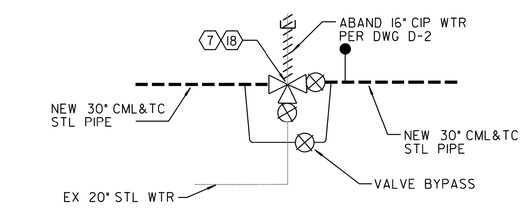
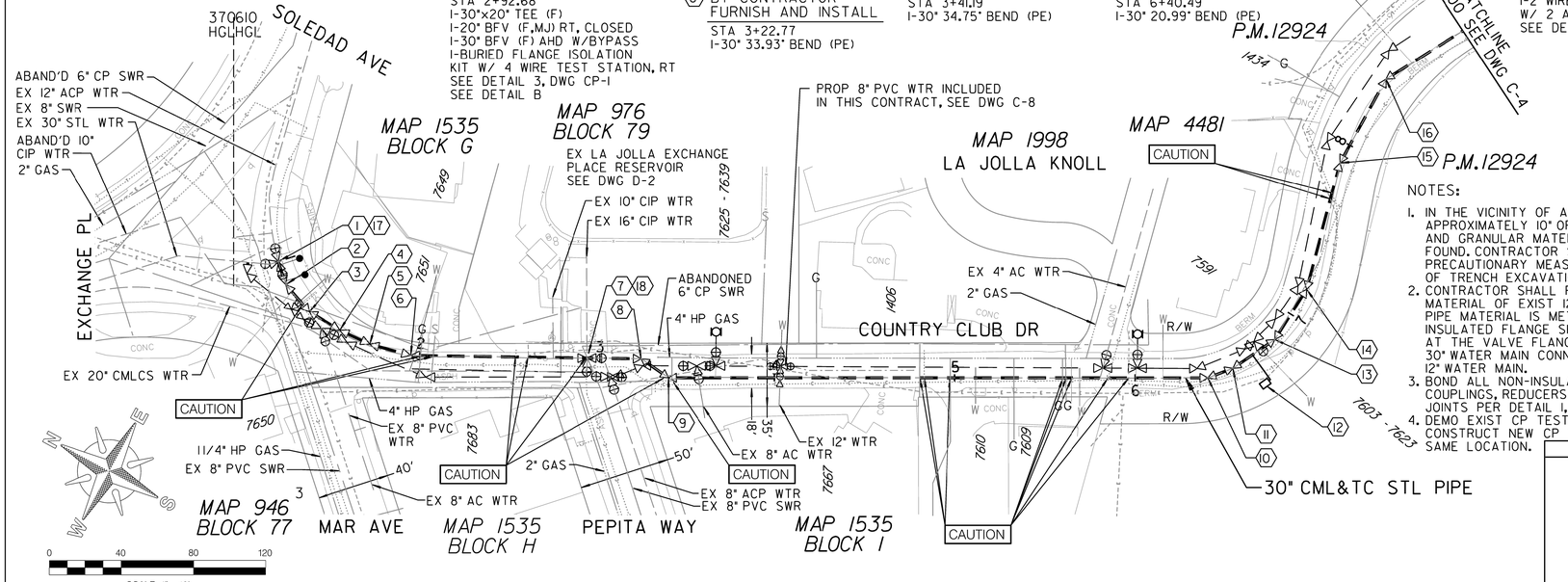




DETAIL A - COUNTRY CLUB DR & SOLEDAD AVE
NTS



DETAIL B - COUNTRY CLUB DR & LJEPR
NTS



(1) BY CONTRACTOR FURNISH AND INSTALL
STA 1+00.00
1-30"X30" TEE (F)
2-30" BFV (F) AHD, RT W/BYPASS
1-6" BLOWOFF, AHD
1-30"x12" RED (F) BK
1-12" GV (F,MJ) BK
SEE DETAIL A

(2) BY CONTRACTOR FURNISH AND INSTALL
STA 1+13.34
1-30" 22.5° BEND (PE)

(3) BY CONTRACTOR FURNISH AND INSTALL
STA 1+33.34
1-30" 18.11° BEND (PE)

(4) BY CONTRACTOR FURNISH AND INSTALL
STA 1+53.18
1-30" 6.16° BEND (PE)

(5) BY CONTRACTOR FURNISH AND INSTALL
STA 1+71.55
1-30" 9.62° BEND (PE)

(6) BY CONTRACTOR FURNISH AND INSTALL
STA 1+95.06
1-30" 14.51° BEND (PE)

(7) BY CONTRACTOR FURNISH AND INSTALL
STA 2+92.68
1-30"x20" TEE (F)
1-20" BFV (F,MJ) RT, CLOSED
1-30" BFV (F) AHD W/BYPASS
1-BURIED FLANGE ISOLATION KIT W/ 4 WIRE TEST STATION, RT
SEE DETAIL 3, DWG CP-1
SEE DETAIL B

(8) BY CONTRACTOR FURNISH AND INSTALL
STA 3+22.77
1-30" 33.93° BEND (PE)

(9) BY CONTRACTOR FURNISH AND INSTALL
STA 3+41.19
1-30" 34.75° BEND (PE)

(10) BY CONTRACTOR FURNISH AND INSTALL
STA 6+40.49
1-30" 20.99° BEND (PE)

(11) BY CONTRACTOR FURNISH AND INSTALL
STA 6+55.29
1-30" 13.57° BEND (PE)

(12) BY CONTRACTOR FURNISH AND INSTALL
STA 6+69.37
1-2 WIRE TEST STATION W/ 2 ANODES
SEE DETAIL 1, DWG CP-1

(13) BY CONTRACTOR FURNISH AND INSTALL
STA 6+83.45
1-30" 23.34° BEND (PE)

(14) BY CONTRACTOR FURNISH AND INSTALL
STA 7+16.38
1-30" 17.16° BEND (PE)

(15) BY CONTRACTOR FURNISH AND INSTALL
STA 7+88.83
1-30" 13.76° BEND (PE)

(16) BY CONTRACTOR FURNISH AND INSTALL
STA 8+41.60
1-30" 29.15° BEND (PE)

(17) BY CITY FORCES AHD OF CONTRACTOR
ISOLATE EX 30" WTR, RT
EX 12" WTR, BK
TEMP CUT AND PLUG
EX 30" WTR, 20' RT
EX 12" WTR, 20' BK
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

(18) BY CITY FORCES AHD OF CONTRACTOR
ISOLATE EX 16" WTR, RT
TEMP CUT AND PLUG
EX 16" WTR, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

NOTES:
1. IN THE VICINITY OF APPROX STA 2+90, APPROXIMATELY 10" OF SUBSURFACE CONC AND GRANULAR MATERIAL LAYERS WERE FOUND. CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES FOR STABILITY OF TRENCH EXCAVATION.
2. CONTRACTOR SHALL FIELD VERIFY PIPE MATERIAL OF EXIST 12" WATER MAIN. IF PIPE MATERIAL IS METALLIC, AN INSULATED FLANGE SHALL BE INSTALLED AT THE VALVE FLANGE WHERE THE NEW 30" WATER MAIN CONNECTS TO THE EXIST 12" WATER MAIN.
3. BOND ALL NON-INSULATING VALVES, FLANGES, COUPLINGS, REDUCERS, AND NONWELDED PIPE JOINTS PER DETAIL 1, DWG CP-2.
4. DEMO EXIST CP TEST WIRES AND BOX. CONSTRUCT NEW CP TEST STATION IN SAME LOCATION.

REFERENCE:
WATER: 3844-W, 4011-W, WD-890, 18376-2-D, 18376-3-D, 18376-8-D, 26331-16-D
SEWER: 31590-10-D, 31590-11-D, 31590-12-D, 31590-13-D
STORM DRAIN:
GAS: 15577-119225, 15585-119220, 15585-119225
ELECTRIC: 15577-119225, 15585-119225, 15585-119220
CABLE TV:
TELEPHONE: LJ0202CA, LJ0202CB, LJ0202CD
IMPROVEMENTS:
100' SCALE/FIELD BOOK:
THOMAS BROS.: 1227-F6, 1227-F7, 1227-G6, 1227-G7
HGL: 610

RETIREMENTS:
16"- CL- 800'- 1948
2 - FH ASSY - UNK

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES.

C-3

LA JOLLA VIEW RESERVOIR
COUNTRY CLUB DRIVE

PLAN & PROFILE 30" CML&TC STEEL PIPE
STA 1+00 TO STA 9+00

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 8 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

SUBMITTED BY: ED FORDAN, PROJECT MANAGER
CHECKED BY: ART ARVIZU, PROJECT ENGINEER

APPROVED
FOR CITY ENGINEER ALEX GARCIA
PRINT NAME
DATE
RCE#

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

248-1686, 246-1689
CCS27 COORDINATE

1888444, 6250407
CCS83 COORDINATE

38056-08-D

CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

CONSULTANT
Infrastructure Engineering Corporation
14271 Danielson Street
Poway, California 92064
T 858.413.2400 F 858.413.2440
www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER ANDERS K. ECKNE No. 60654 EXP. 3-31-2015 CIVIL STATE OF CALIFORNIA

PRELIMINARY

COUNTRY CLUB DRIVE

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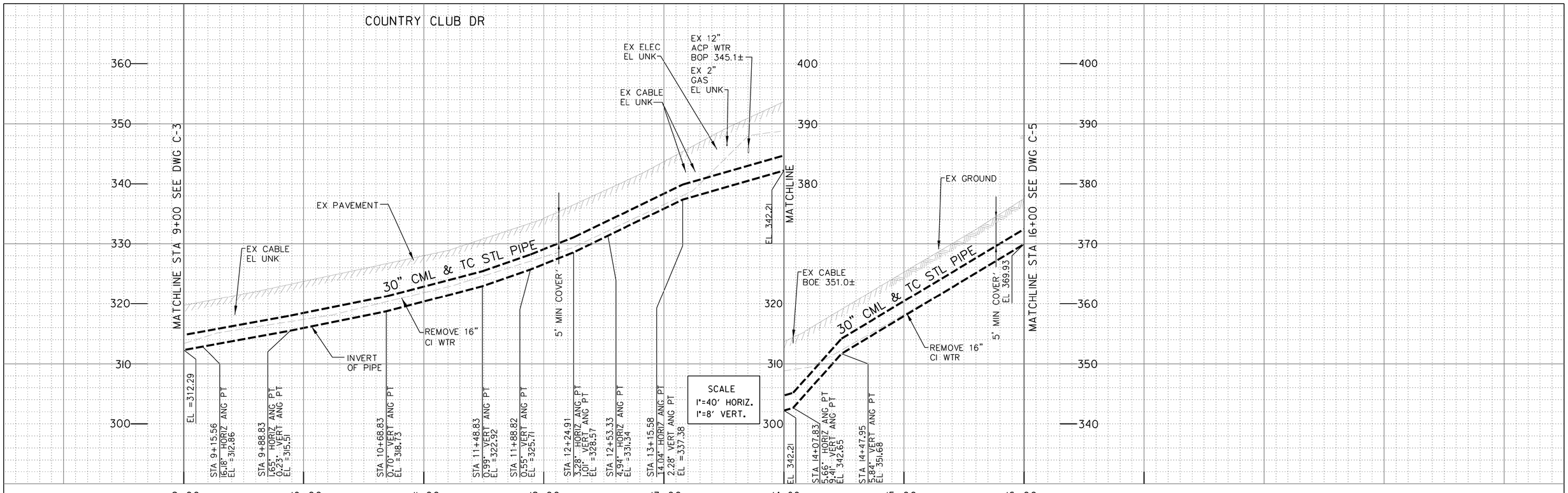
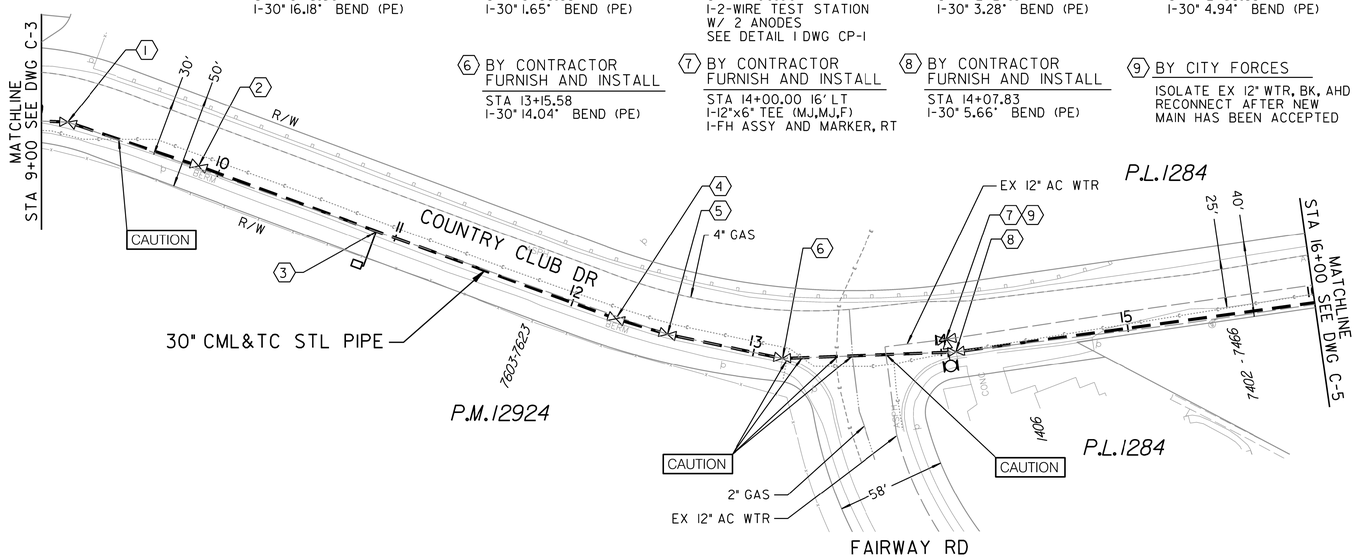




① BY CONTRACTOR FURNISH AND INSTALL
STA 9+15.56
1-30° 16.18° BEND (PE)

② BY CONTRACTOR FURNISH AND INSTALL
STA 9+88.83
1-30° 1.65° BEND (PE)

③ BY CONTRACTOR FURNISH AND INSTALL
STA 11+00.00
1-2-WIRE TEST STATION W/ 2 ANODES
SEE DETAIL 1 DWG CP-1

④ BY CONTRACTOR FURNISH AND INSTALL
STA 12+24.91
1-30° 3.28° BEND (PE)

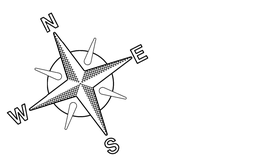
⑤ BY CONTRACTOR FURNISH AND INSTALL
STA 12+53.33
1-30° 4.94° BEND (PE)

⑥ BY CONTRACTOR FURNISH AND INSTALL
STA 13+15.58
1-30° 14.04° BEND (PE)

⑦ BY CONTRACTOR FURNISH AND INSTALL
STA 14+00.00 16' LT
1-12"x6" TEE (MJ,MJ,F)
1-FH ASSY AND MARKER, RT

⑧ BY CONTRACTOR FURNISH AND INSTALL
STA 14+07.83
1-30° 5.66° BEND (PE)

⑨ BY CITY FORCES
ISOLATE EX 12" WTR, BK, AHD
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED



0 40 80 120
SCALE 1" = 40'

REFERENCE:
WATER: 3844-W, 12929-D-D

SEWER:
STORM DRAIN:
GAS: 15585-119220, 15592-119215
ELECTRIC:
CABLE TV:
TELEPHONE:
IMPROVEMENTS:
100' SCALE/FIELD BOOK:
THOMAS BROS.:
HGL: 610

RETIREMENTS:
16"- CL- 700'- 1948

C-4

LA JOLLA VIEW RESERVOIR

COUNTRY CLUB DRIVE

PLAN & PROFILE 30" CML&TC STEEL PIPE
STA 9+00 TO STA 16+00

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 9 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

APPROVED
FOR CITY ENGINEER ALEX GARCIA
PRINT NAME
DATE
RCE#

SUBMITTED BY
ED FORDAN
PROJECT MANAGER

CHECKED
ART ARVIZU
PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

246-1689
CCS27 COORDINATE

1886444, 6250407
CCS83 COORDINATE

38056-09-D

CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

CONSULTANT
Infrastructure ENGINEERING CORPORATION
14271 Danielson Street
Poway, California 92064
T 858.413.2400 F 858.413.2440
www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER ANDRES K. EGGER No. 70654 3-31-2015 CIVIL STATE OF CALIFORNIA
PRELIMINARY

100%

COUNTRY CLUB DRIVE

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COUNTRY CLUB DR
LA JOLLA NATURAL PARK
APPROX TEMP GRADING GROUND
EX GROUND
EX GROUND TEMP GRADING GROUND
EX PAVEMENT
EX 12" ACP WTR EL UNK
EX CATV EL UNK
REMOVE 16" CI WTR
EX ELEC EL UNK
EX ELEC BOP 386.5±
EX 3" GAS BOP 388.0±
ALTITUDE VALVE VAULT
30" CML & TC STL PIPE
INVERT OF PIPE
5' MIN COVER
MATCHLINE STA 16+00 SEE DWG C-4
MATCHLINE STA 23+00 SEE DWG C-6
MATCHLINE
STA 16+12.87 5.91° VERT ANG PT EL 371.48
STA 16+22.91 30"x12" TEE EL 371.64
STA 16+32.91 7.51° VERT ANG PT EL 371.80
STA 16+83.58 7.41° VERT ANG PT EL 379.33
STA 16+93.75 30"x12" TEE EL 379.51
STA 17+03.90 45.49° HORIZ ANG PT 6.09° VERT ANG PT EL 379.70
STA 17+44.39 7.13° VERT ANG PT EL 384.76
STA 17+81.98 33.75° HORIZ ANG PT 3.26° VERT ANG PT EL 384.76
STA 18+68.45 8.71° VERT ANG PT EL 378.97
STA 18+88.45 CUTOFF WALL EL 374.73
STA 19+08.46 28.24° HORIZ ANG PT 24.34° VERT ANG PT EL 370.49
STA 19+35.47 6" BLOWOFF ASSY EL 372.51
STA 19+48.46 CUTOFF WALL EL 379.27
STA 19+88.46 7.27° VERT ANG PT EL 388.05
EL 392.17
STA 20+08.46 CUTOFF WALL EL = 395.19
STA 20+28.46 5.45° VERT ANG PT EL 402.53
STA 20+48.76 CUTOFF WALL EL = 411.84
STA 20+78.76 CUTOFF WALL EL = 425.89
EL 435.84
STA 21+08.76 CUTOFF WALL EL = 439.95
STA 21+38.76 CUTOFF WALL EL = 454.00
STA 21+48.46 9.49° VERT ANG PT EL 458.54
STA 21+68.46 CUTOFF WALL EL = 464.13
STA 21+88.46 7.30° VERT ANG PT EL 469.71
EL 486.00
5' MIN COVER
420
410
400
390
380
370
360
450
440
430
500
490
480
470
460
16+00
17+00
18+00
19+00
20+00
21+00
22+00
23+00
SCALE 1"=40' HORIZ. 1"=8' VERT.

① BY CONTRACTOR FURNISH AND INSTALL
STA 16+22.91
1-30"x12" TEE (F)
1-12" GV (F,MJ) RT

② BY CONTRACTOR FURNISH AND INSTALL
STA 16+93.85
1-30"x24" TEE (F)
1-30" BFV (F) BK
1-24" BFV (F) RT
1-24"x12" RED (F,PE) RT

③ BY CONTRACTOR FURNISH AND INSTALL
STA 17+03.90
1-30" 45.49° BEND (PE)

④ BY CONTRACTOR FURNISH AND INSTALL
STA 17+81.98
1-30" 33.75° BEND (PE)

⑤ BY CONTRACTOR FURNISH AND INSTALL
STA 18+00.00
1-2-WIRE TEST STATION W/2 ANODES
SEE DETAIL 1, DWG CP-1

⑥ BY CONTRACTOR FURNISH AND INSTALL
STA 18+85.47
1-30" 28.24° BEND (PE)

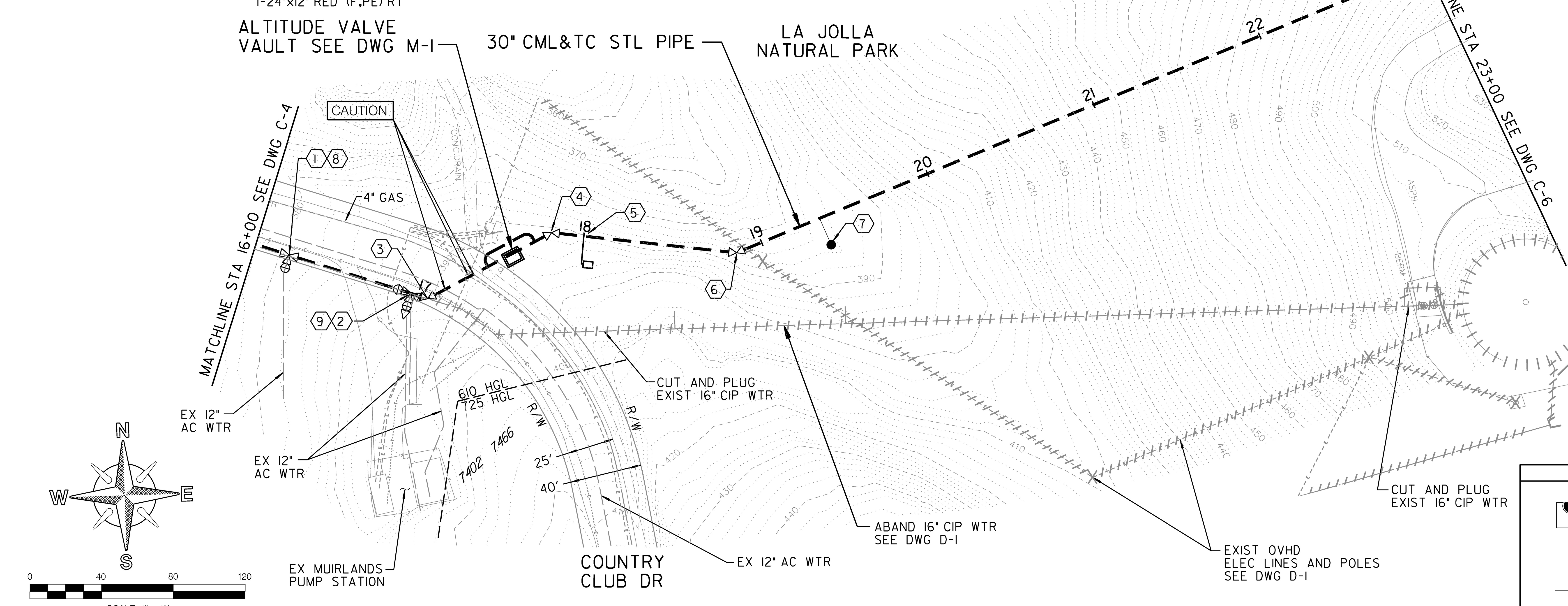
⑦ BY CITY FORCES AHD OF CONTRACTOR
STA 19+35.47
1-6" BLOWOFF

⑧ BY CITY FORCES AHD OF CONTRACTOR
STA 16+22.91
ISOLATE EX 12" WTR, RT
TEMP CUT AND PLUG
EX 12" WTR, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

⑨ BY CITY FORCES AHD OF CONTRACTOR
STA 16+93.85
ISOLATE EX 12" WTR, RT
TEMP CUT AND PLUG EX 12" WTR, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

REFERENCE:
WATER: 3844-W, 12929-0-D, 13364-0-D, 18395-3-D
SEWER:
STORM DRAIN:
GAS: 15592-119215
ELECTRIC: 15592-119215, 15600-119215, 15592-119220
CABLE TV:
TELEPHONE:
IMPROVEMENTS:
100' SCALE/FIELD BOOK:
THOMAS BROS.:
HGL: 610

RETIREMENTS:
16"- CI- 690'- 1948


ALTITUDE VALVE VAULT SEE DWG M-1
30" CML&TC STL PIPE
LA JOLLA NATURAL PARK
CAUTION
MATCHLINE STA 16+00 SEE DWG C-4
MATCHLINE STA 23+00 SEE DWG C-6
4" GAS
EX 12" AC WTR
EX 12" AC WTR
610 HGL
725 HGL
R/W
25'
40'
CUT AND PLUG EXIST 16" CIP WTR
ABAND 16" CIP WTR SEE DWG D-1
EX 12" AC WTR
EX MUIRLANDS PUMP STATION
COUNTRY CLUB DR
EXIST OVHD ELEC LINES AND POLES SEE DWG D-1
CUT AND PLUG EXIST 16" CIP WTR
18
19
20
21
22
N
S
E
W
SCALE 1"=40'
0
40
80
120

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES.

COUNTRY CLUB DRIVE\LA JOLLA NATURAL PARK

C-5

LA JOLLA VIEW RESERVOIR
COUNTRY CLUB DRIVE TO LA JOLLA NATURAL PARK
PLAN & PROFILE 30" CML&TC STEEL PIPE
STA 16+00 TO STA 23+00

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 10 OF 86 SHEETS

WATER WBS	B-11070
SEWER WBS	NONE

FOR CITY ENGINEER — DATE
ALEX GARCIA — RCE#

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

SUBMITTED BY: ED FORDAN, PROJECT MANAGER
CHECKED BY: ART ARVIZU, PROJECT ENGINEER
246-1692 CCS27 COORDINATE
1886444, 6253407 CCS83 COORDINATE
38056-10-D

CONSULTANT
Infrastructure ENGINEERING CORPORATION
14271 Danielson Street
Poway, California 92064
T 858.413.2400 F 858.413.2440
www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER ANDERS K. EGENHOFER No. 60654 EXP. 3-31-2015 CIVIL STATE OF CALIFORNIA
PRELIMINARY

CONTRACTOR — DATE STARTED
INSPECTOR — DATE COMPLETED

100%

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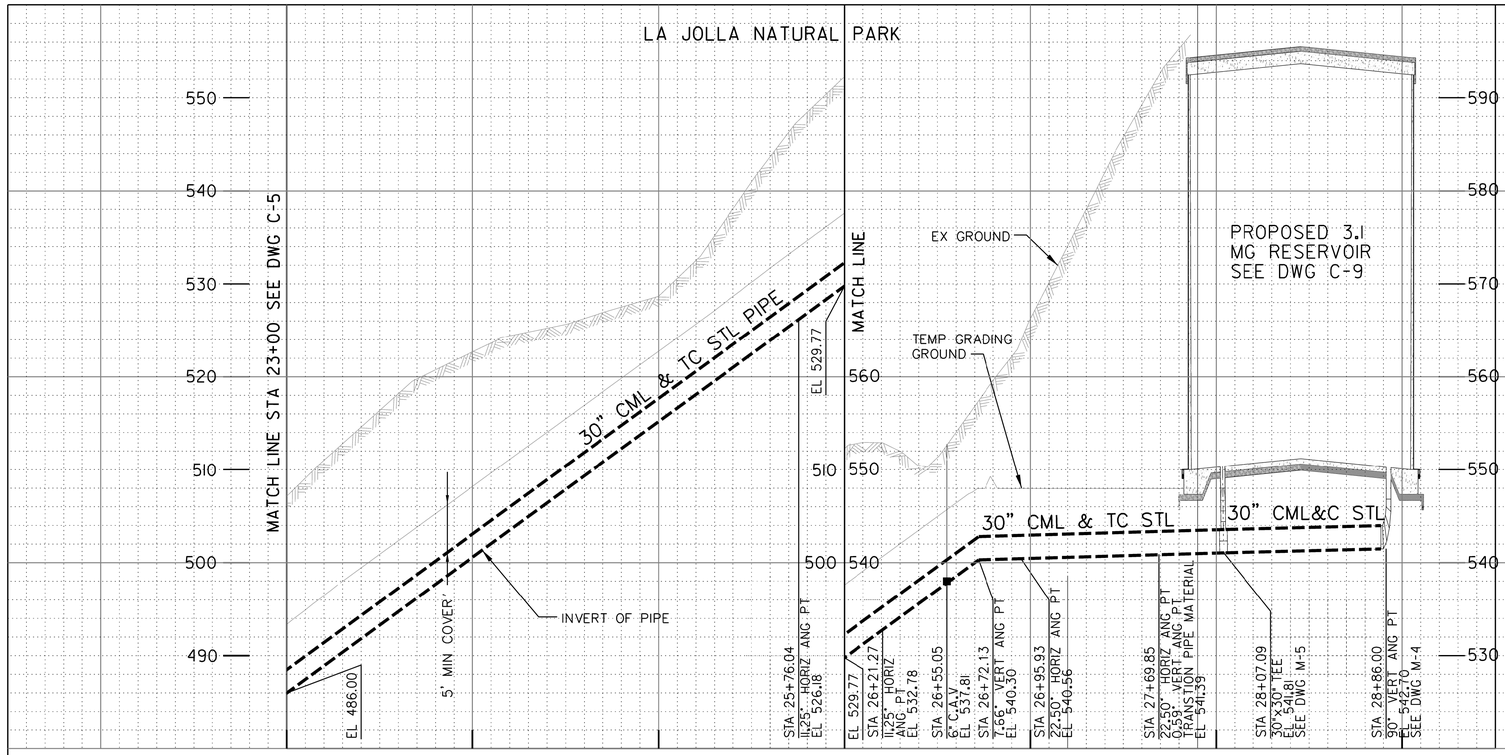

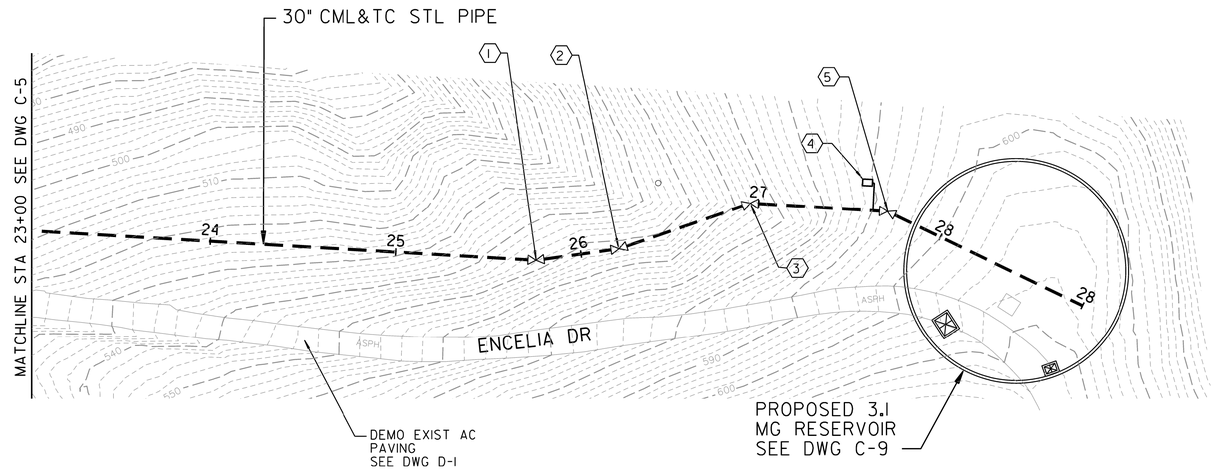

0 40 80 120

SCALE 1"=40'

SCALE
1"=40' HORIZ.
1"=8' VERT.

1 BY CONTRACTOR FURNISH AND INSTALL
STA 25+76.04
1-30" 11.25° BEND (PE)

2 BY CONTRACTOR FURNISH AND INSTALL
STA 26+21.27
1-30" 11.25° BEND (PE)

3 BY CONTRACTOR FURNISH AND INSTALL
STA 26+95.93
1-30" 22.5° BEND (PE)

4 BY CONTRACTOR FURNISH AND INSTALL
STA 27+61.54
1-2-WIRE TEST STATION
W/2 ANODES
SEE DETAIL 1, DWG CP-1

5 BY CONTRACTOR FURNISH AND INSTALL
STA 27+69.85
1-30" 22.5° BEND (PE)
1-BURIED FLANGE ISOLATION KIT AND 4 WIRE TEST STATION PER DETAIL 3, DWG CP-1

REFERENCE:
WATER:

SEWER:
STORM DRAIN:
GAS:
ELECTRIC:
CABLE TV:
TELEPHONE:
IMPROVEMENTS:
100' SCALE/FIELD BOOK:
THOMAS BROS.:
HGL: 610

C-6

LA JOLLA VIEW RESERVOIR
LA JOLLA NATURAL PARK
PLAN & PROFILE 30" CML&TC STEEL PIPE
STA 23+00 TO STA 28+86

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 11 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

SUBMITTED BY: ED FORDAN, PROJECT MANAGER
CHECKED BY: ART ARVIZU, PROJECT ENGINEER
246-1692, CCS27 COORDINATE
1886444, 6253407, CCS83 COORDINATE
38056-11-D

APPROVED
FOR CITY ENGINEER ALEX GARCIA DATE
PRINT NAME RCE#

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

CONSULTANT
Infrastructure ENGINEERING CORPORATION
14271 Danielson Street
Poway, California 92064
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www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER ANDERS K. EDMONDS No. 61654 5-31-2015 CIVIL STATE OF CALIFORNIA

PRELIMINARY

100%

LA JOLLA NATURAL PARK

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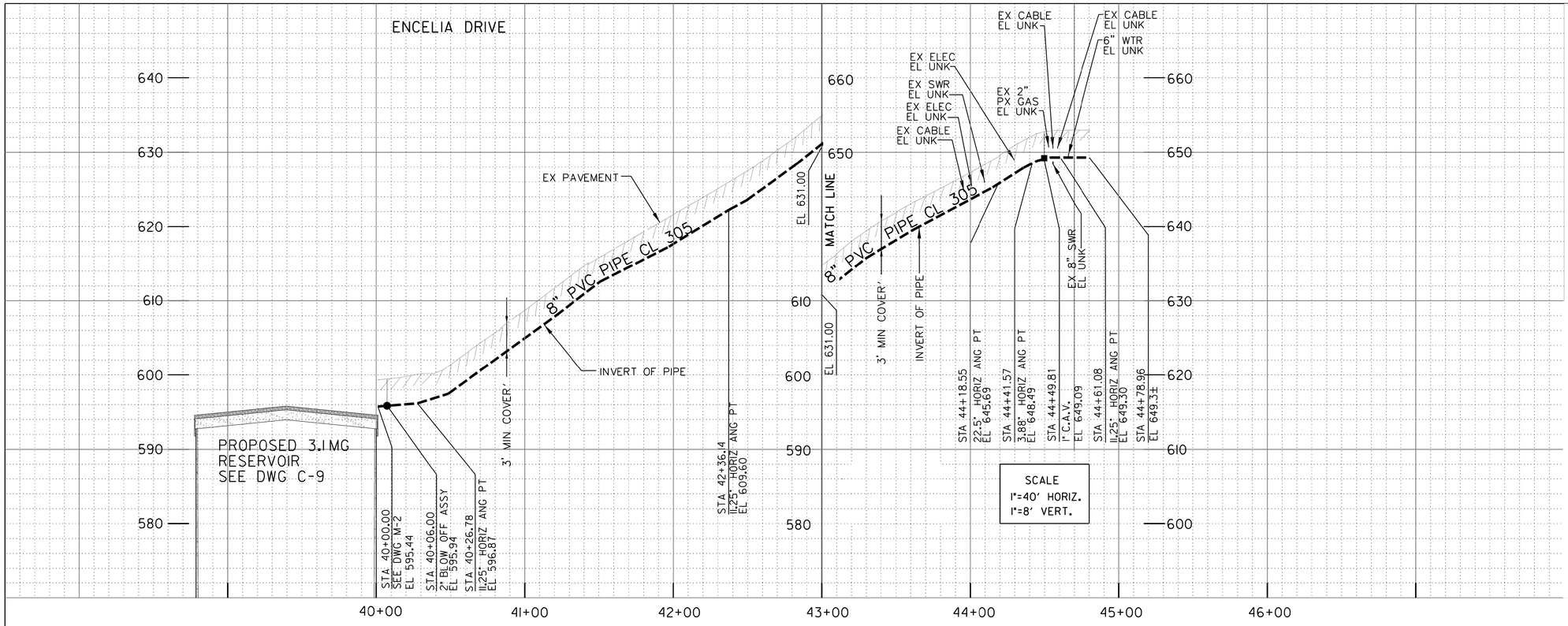
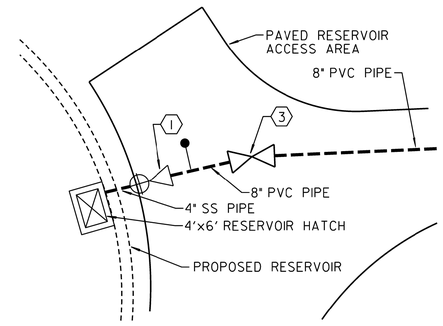
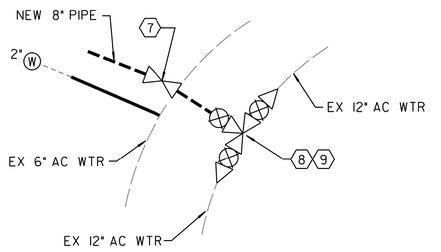
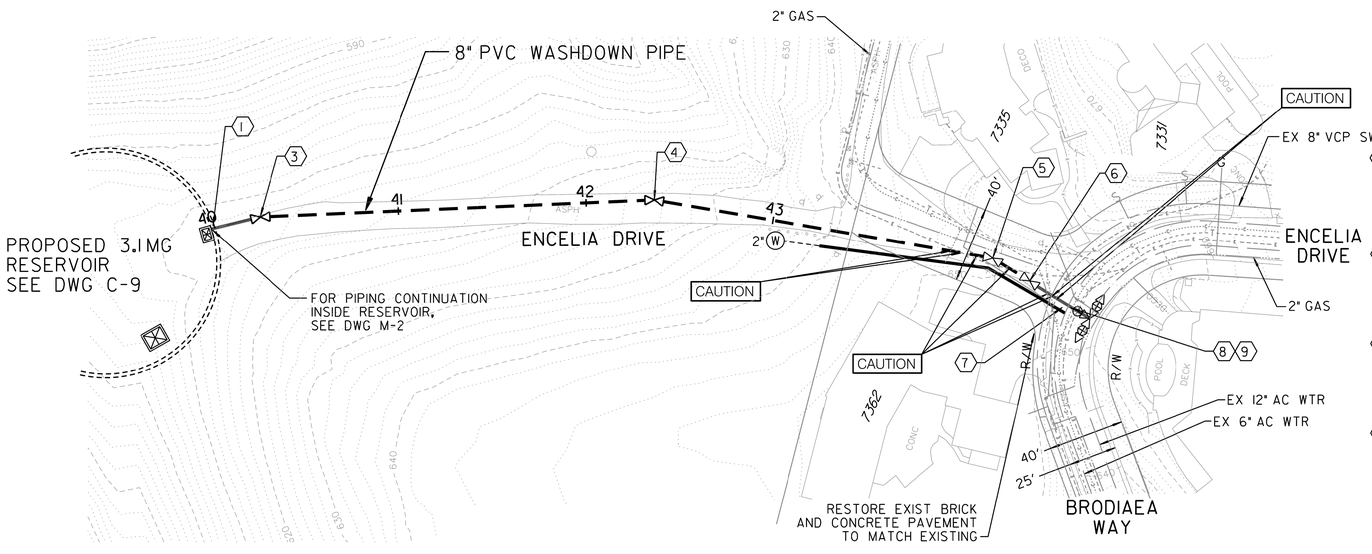




DETAIL A - ENCELIA DRIVE PROPOSED RESERVOIR
NTS



DETAIL B - ENCELIA DRIVE & BRODIAEA WAY
NTS



MAP 1975
BLOCK D

1 BY CONTRACTOR FURNISH AND INSTALL
STA 40+03.00
1-8"X4" RED (MJ, F)
1-4" GV (F)
1-BURIED FLANGE ISOLATION KIT AND 4 WIRE TEST STATION, BK
SEE DETAIL 3, DWG CP-1
SEE DETAIL A

2 BY CONTRACTOR FURNISH AND INSTALL
STA 40+06.00
1-2" BLOWOFF ASSY

3 BY CONTRACTOR FURNISH AND INSTALL
STA 40+26.78
1-8" 11.25° BEND (MJ)

4 BY CONTRACTOR FURNISH AND INSTALL
STA 42+36.14
1-8" 11.25° BEND (MJ)

5 BY CONTRACTOR FURNISH AND INSTALL
STA 44+18.55
1-8" 22.50° BEND (MJ)

6 BY CONTRACTOR FURNISH AND INSTALL
STA 44+41.57
1-8" 3.88° HIGH DEFLECTION COUPLING

7 BY CONTRACTOR FURNISH AND INSTALL
STA 44+61.08
1-8" 11.25° BEND (MJ)

8 BY CONTRACTOR FURNISH AND INSTALL
STA 44+78.96
1-12"x8" TEE (F)
2-12" GV (F,MJ) BK, LT , RT
1-8" GV (F, MJ) BK
SEE DETAIL B

9 BY CITY FORCES AHD OF CONTRACTOR
STA 44+78.96
ISOLATE EX 12" WTR, LT, RT
TEMP CUT AND PLUG EX 12" WTR, 20' LT, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

REFERENCE:
WATER: 691I-4-W, 22599-I-D

SEWER: 32883-I-D
STORM DRAIN:
GAS: I5607-II92I5
ELECTRIC: I5607-II92I5, I5607-II9220
CABLE TV:
TELEPHONE: LJ040IAB
IMPROVEMENTS:
100' SCALE/FIELD BOOK:
THOMAS BROS.:
HGL: 925

0 40 80 120
SCALE 1"=40'

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CONSULTANT
Infrastructure
14271 Danielson Street
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www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER
ANDERS K. EDSTROM
No. 60654
12-31-2015
CIVIL
STATE OF CALIFORNIA

PRELIMINARY

APPROVED:		
FOR CITY ENGINEER	DATE	
ALEX GARCIA		
PRINT NAME	RCE#	

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

C-7

LA JOLLA VIEW RESERVOIR

ENCELIA DRIVE

PLAN & PROFILE 8" PVC PIPE
STA 40+00 TO STA 44+78.96

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 12 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

SUBMITTED BY
ED FORDAN
PROJECT MANAGER

CHECKED BY
ART ARVIZU
PROJECT ENGINEER

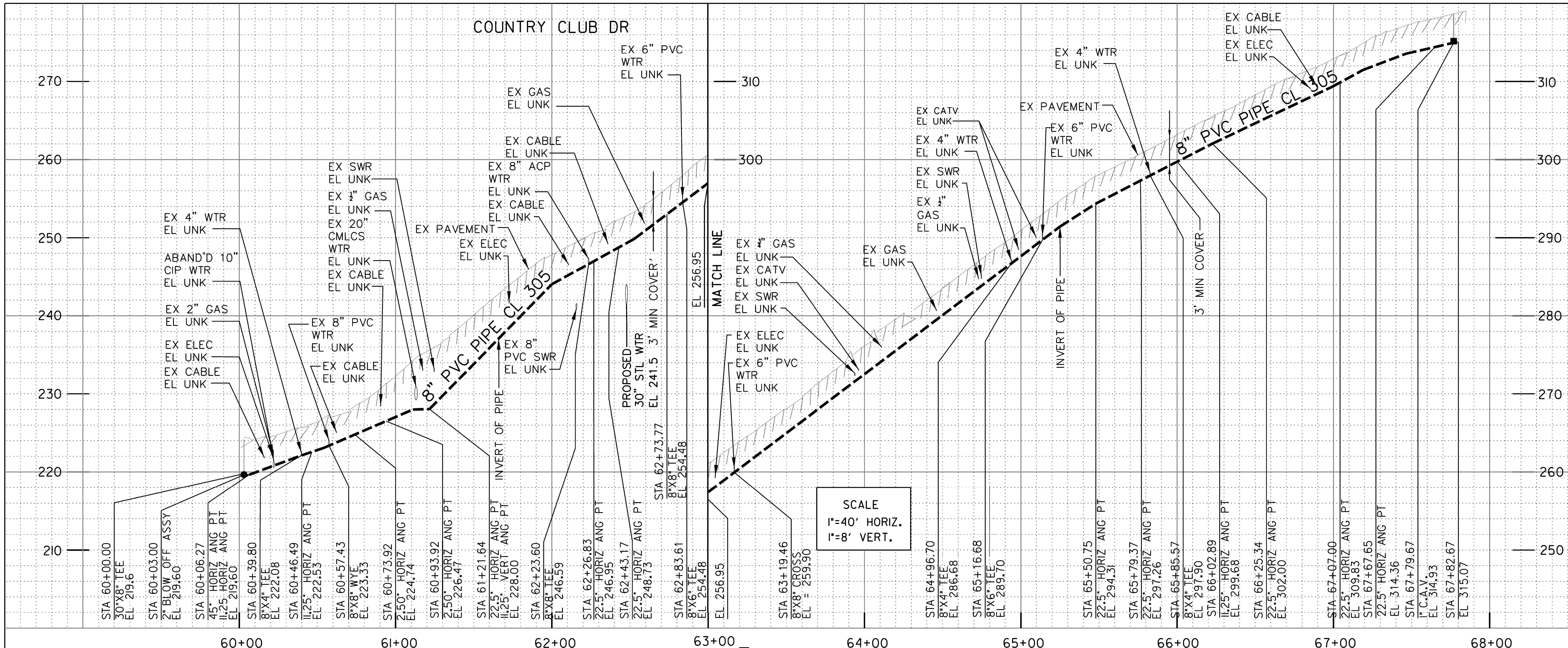
246-I692
CCS27 COORDINATE

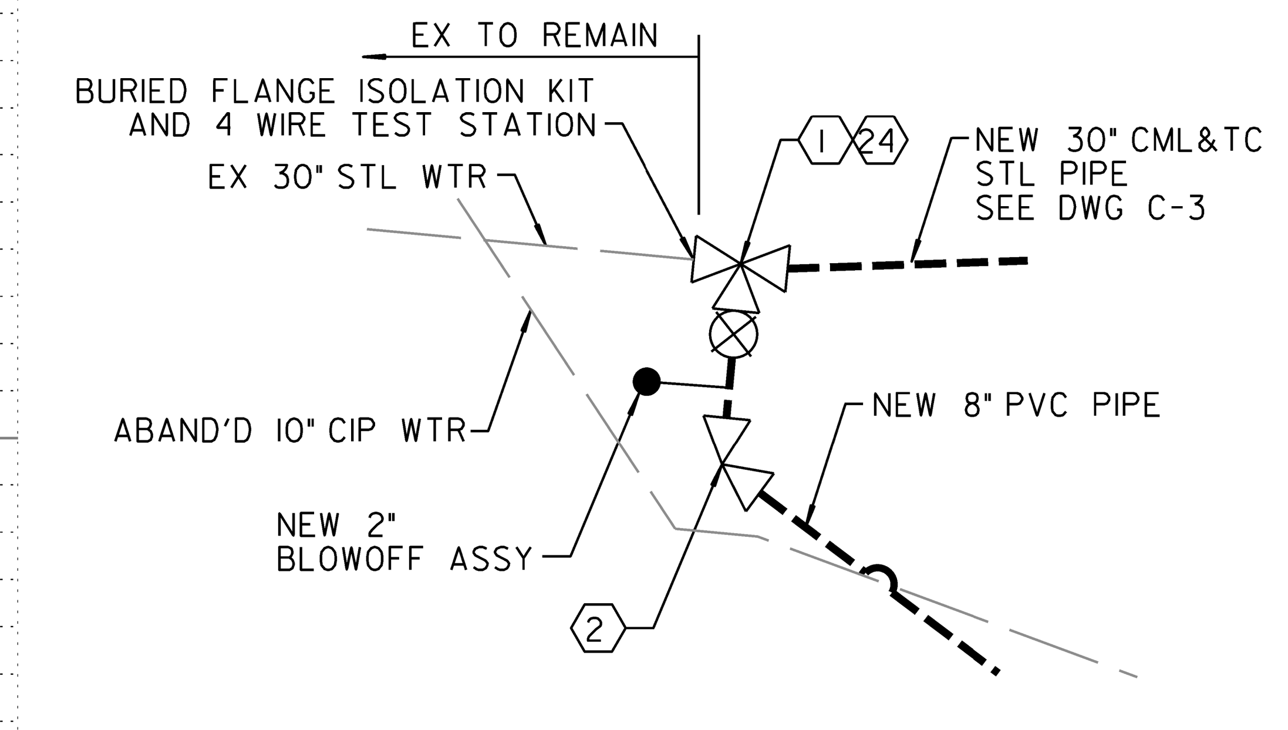
I886444, 6253407
CCS83 COORDINATE

38056-12-D

100%

ENCELIA DRIVE





DETAIL A - COUNTRY CLUB DR & EXCHANGE PLACE
NTS

NOTES:

1. IN THE VICINITY OF APPROX STA 62+10, APPROXIMATELY 10' OF SUBSURFACE CONC AND GRANULAR MATERIAL LAYERS WERE FOUND. CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES FOR STABILITY OF TRENCH EXCAVATION.

(1) BY CONTRACTOR FURNISH AND INSTALL
STA 60+00.00
1-30"X8" TEE (F)
1-BURIED FLANGE ISOLATION KIT W/ 4 WIRE TEST STATION PER DETAIL 3, DWG CP-1, RT
1-8" GV (F,MJ), AHD
1-2" BLOWOFF
SEE DETAIL A

(2) BY CONTRACTOR FURNISH AND INSTALL
STA 60+06.27
1-45° BEND (MJ,F)
1-11.25° BEND (F,MJ)
SEE DETAIL A

(3) BY CONTRACTOR FURNISH AND INSTALL
STA 60+39.80
1-8"x4" TEE (MJ,MJ,F)
1-4" GV (F,MJ) LT

(4) BY CONTRACTOR FURNISH AND INSTALL
STA 60+46.49
1-8" 11.25° BEND (MJ)

(5) BY CONTRACTOR FURNISH AND INSTALL
STA 60+57.43
1-8"x8" WYE (F)
3-8" GV (F,MJ)
BK, AHD, RT

(6) BY CONTRACTOR FURNISH AND INSTALL
STA 60+73.92
1-8" 2.50° HIGH DEF COUPLING

(7) BY CONTRACTOR FURNISH AND INSTALL
STA 60+93.92
1-8" 2.50° HIGH DEF COUPLING

(8) BY CONTRACTOR FURNISH AND INSTALL
STA 61+21.64
1-8" 22.5° BEND (MJ)

(9) BY CONTRACTOR FURNISH AND INSTALL
STA 62+23.60
1-8"x8" TEE (F)
2-8" GV (F,MJ) BK AHD
1-8" GV (F) RT
1-8" 45° BEND (F,MJ) RT

(10) BY CONTRACTOR FURNISH AND INSTALL
STA 62+26.83
1-8" 22.50° BEND (MJ)

(11) BY CONTRACTOR FURNISH AND INSTALL
STA 62+43.17
1-8" 22.50° BEND (MJ)

(12) BY CONTRACTOR FURNISH AND INSTALL
STA 62+73.41
1-8"x8" TEE (F)
3-8" GV (F,MJ)
BK, AHD, RT

(13) BY CONTRACTOR FURNISH AND INSTALL
STA 62+83.61
1-8"x6" TEE (MJ,MJ,F)
1-FH ASSY AND MARKER, LT

(14) BY CONTRACTOR FURNISH AND INSTALL
STA 63+19.46
1-8"x8" CROSS (F)
2-8" GV (F,MJ) BK, AHD
2-8" GV (F) LT, RT
1-8"x6" RED (F,MJ) RT
1-12"x8" RED (F,MJ) RT

(15) BY CONTRACTOR
STA 64+96.70
1-8"x4" TEE (F)
2-8" GV, (F,MJ) BK, AHD
1-4" GV (F,MJ) LT

(16) BY CONTRACTOR FURNISH AND INSTALL
STA 65+16.68
1-8"x6" TEE (MJ, MJ, F)
1-FH ASSY AND MARKER, LT

(17) BY CONTRACTOR
STA 65+50.75
1-8" 22.50° BEND (MJ)

(18) BY CONTRACTOR FURNISH AND INSTALL
STA 65+79.37
1-8" 22.50° BEND (MJ)

(19) BY CONTRACTOR FURNISH AND INSTALL
STA 65+85.57
1-8"x4" TEE (F)
1-4" GV (F,MJ) LT

(20) BY CONTRACTOR FURNISH AND INSTALL
STA 66+02.89
1-8" 11.25° BEND (MJ)

(21) BY CONTRACTOR FURNISH AND INSTALL
STA 66+25.34
1-8" 22.50° BEND (MJ)

(22) BY CONTRACTOR FURNISH AND INSTALL
STA 67+07.00
1-8" 22.50° BEND (MJ)

(23) BY CONTRACTOR FURNISH AND INSTALL
STA 67+67.65
1-8" 22.50° BEND (MJ)

(24) BY CONTRACTOR FURNISH AND INSTALL
STA 67+82.67
1-1" CAV
1-8" END CAP

(25) BY CITY FORCES
STA 60+00.00
ISOLATE EX 30" WTR, LT, RT
TEMP CUT AND PLUG EX 30"
WTR, 20' LT, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

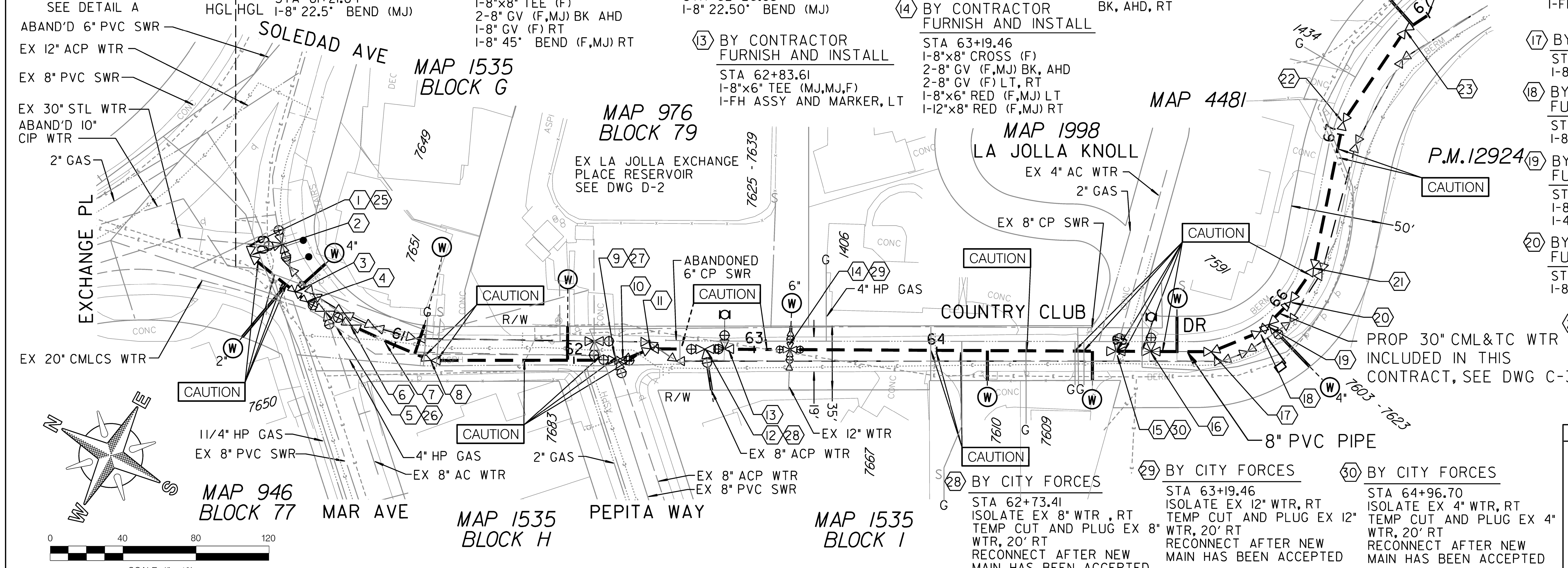
(26) BY CITY FORCES
STA 60+57.43
ISOLATE EX 8" WTR, RT
TEMP CUT AND PLUG EX 8" WTR, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

(27) BY CITY FORCES
STA 62+23.60
ISOLATE EX 8" WTR, RT
TEMP CUT AND PLUG EX 8" WTR, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

(28) BY CITY FORCES
STA 62+73.41
ISOLATE EX 8" WTR, RT
TEMP CUT AND PLUG EX 8" WTR, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

(29) BY CITY FORCES
STA 63+19.46
ISOLATE EX 12" WTR, RT
TEMP CUT AND PLUG EX 12" WTR, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED

(30) BY CITY FORCES
STA 64+96.70
ISOLATE EX 4" WTR, RT
TEMP CUT AND PLUG EX 4" WTR, 20' RT
RECONNECT AFTER NEW MAIN HAS BEEN ACCEPTED



REFERENCE:
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SEWER: 31590-10-D, 31590-11-D, 31590-12-D, 31590-13-D
STORM DRAIN:
GAS: 15577-119225, 15585-119220, 15585-119225
ELECTRIC: 15577-119225, 15585-119225, 15585-119220
CABLE TV:
TELEPHONE: LJ0202CA, LJ0202CB, LJ0202CD
IMPROVEMENTS:
100' SCALE/FIELD BOOK:
THOMAS BROS.: 1227-F6, 1227-F7, 1227-G6, 1227-G7
HGL: 610

RETIREMENTS:
1" WATER SERVICE-UNK-5-UNK
2" WATER SERVICE - UNK - 1 - UNK
4" WATER SERVICE - UNK - 2 - UNK
2 - FH ASSY

CONTRACTORS NOTE:
USE EXTREME CAUTION WHEN WORKING DUE TO LOW OVERHEAD UTILITY LINES.

C-8

LA JOLLA VIEW RESERVOIR
COUNTRY CLUB DRIVE
PLAN & PROFILE 8" PVC PIPE
STA 60+00 TO STA 67+82.67

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 13 OF 86 SHEETS

WATER WBS	B-11070
SEWER WBS	NONE
SUBMITTED BY	ED FORDAN, PROJECT MANAGER
CHECKED BY	ART ARVIZU, PROJECT ENGINEER
	248-1689, 246-1689 CCS27 COORDINATE
	1888444, 6250407 CCS83 COORDINATE
	38056-13-D

APPROVED FOR CITY ENGINEER ____ DATE ____
ALEX GARCIA
PRINT NAME ____ RCE# ____

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

CONSULTANT
Infrastructure ENGINEERING CORPORATION
14271 Danielson Street
Poway, California 92064
T 858.413.2400 F 858.413.2440
www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER ANDERS K. EGGE No. 60654 Exp. 3-31-2015 CIVIL STATE OF CALIFORNIA
PRELIMINARY

CONTRACTOR ____ DATE STARTED ____
INSPECTOR ____ DATE COMPLETED ____

COUNTRY CLUB DRIVE

100%

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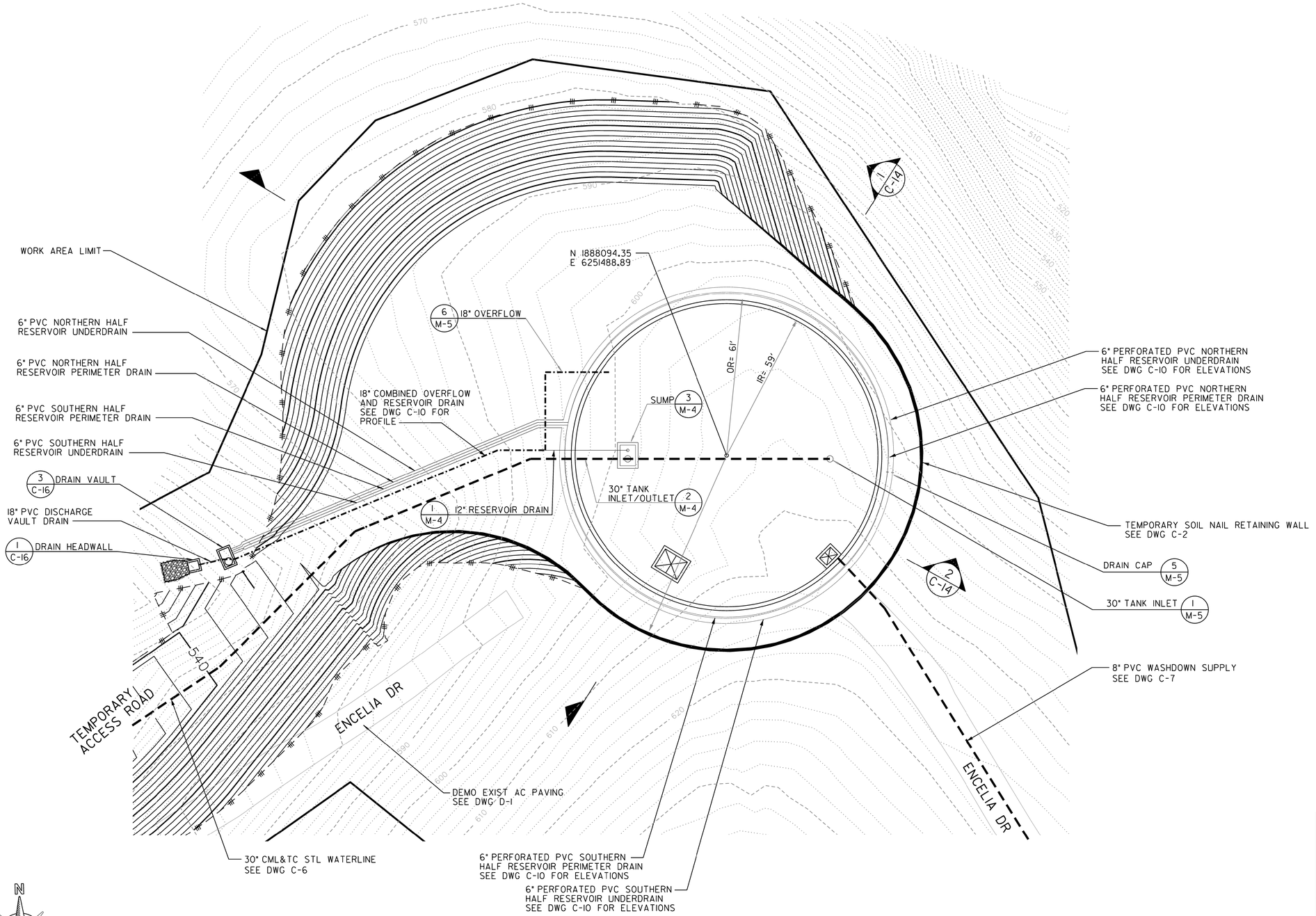

SITE PIPING PLAN – LJVR

C-9

LA JOLLA VIEW RESERVOIR

SITE PIPING PLAN – LJVR

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 14 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

APPROVED
FOR CITY ENGINEER _____ DATE _____
ALEX GARCIA
PRINT NAME RCE#

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

SUBMITTED BY
ED FORDAN
PROJECT MANAGER

CHECKED
ART ARVIZU
PROJECT ENGINEER

246-1692
CCS27 COORDINATE

1886444, 6253407
CCS83 COORDINATE

38056-14-D

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ENGINEERING CORPORATION

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REGISTERED PROFESSIONAL ENGINEER
ANDERS K. EGEN
No. 60654
5-31-2015
CIVIL
STATE OF CALIFORNIA

PRELIMINARY

100%

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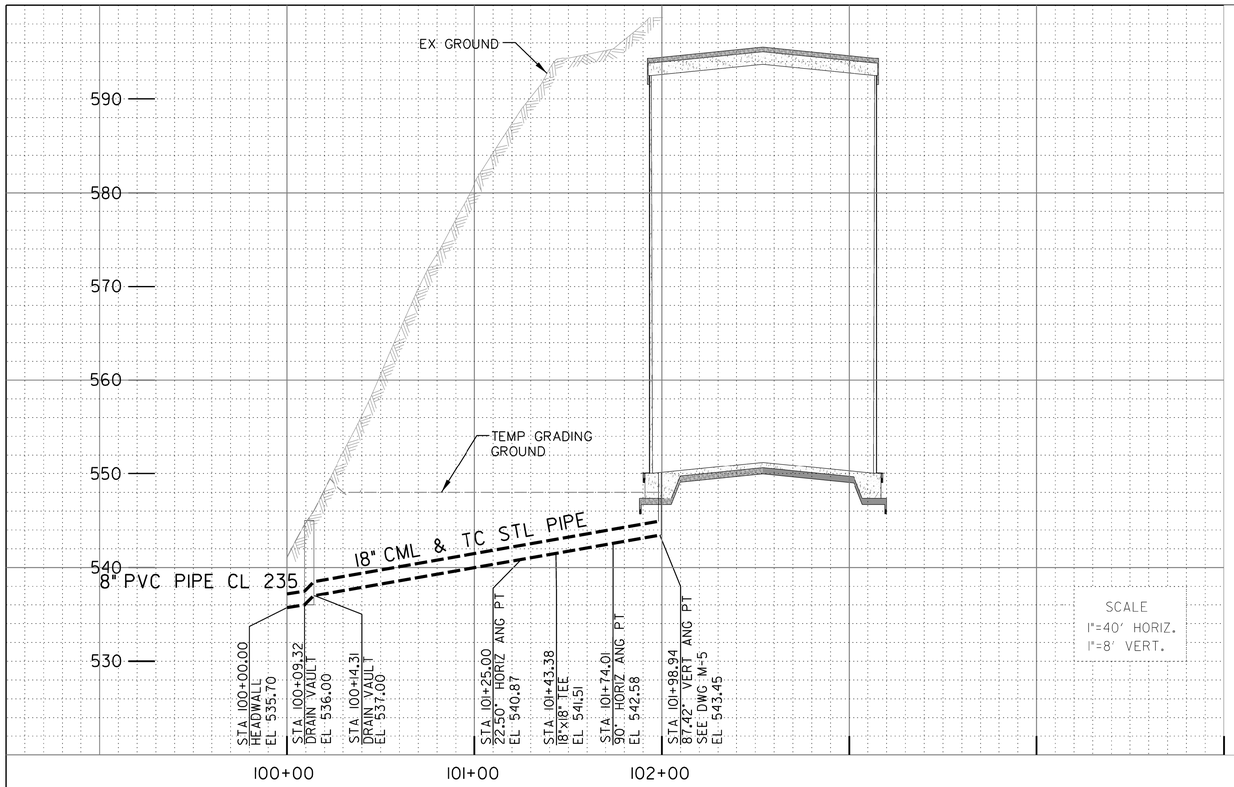
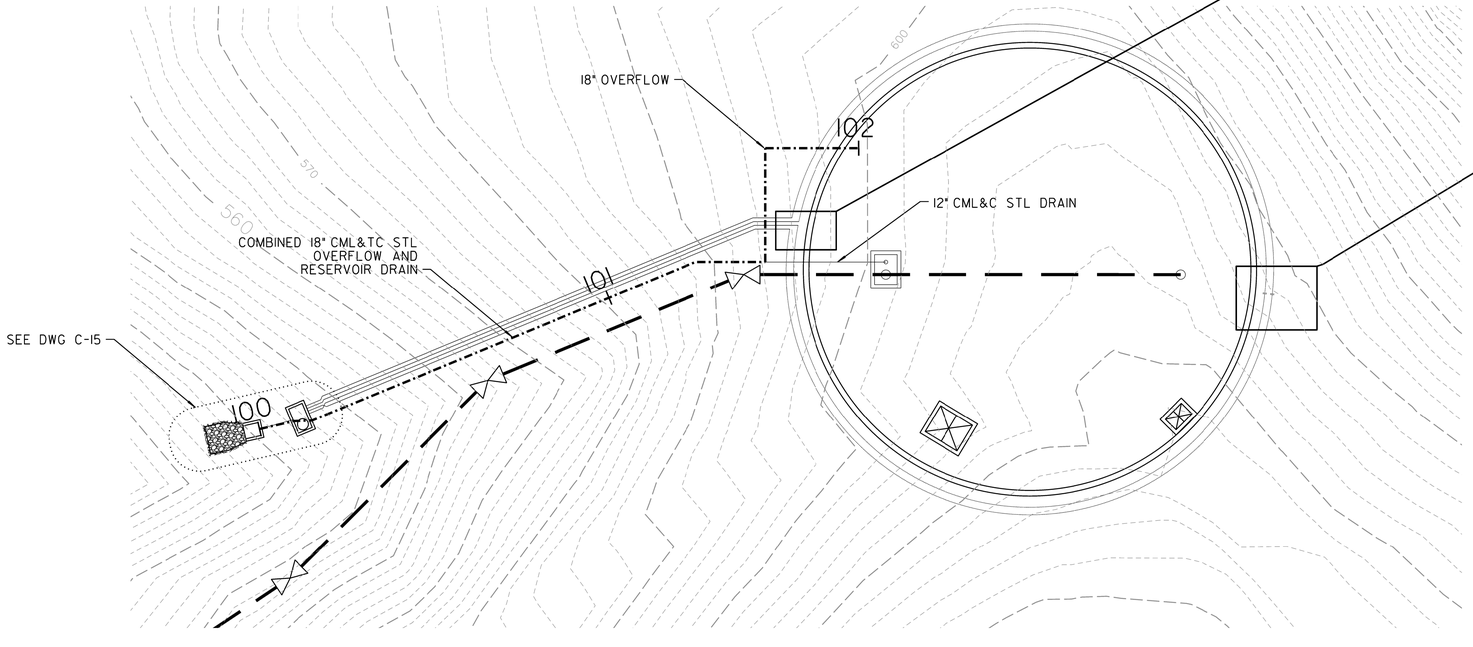
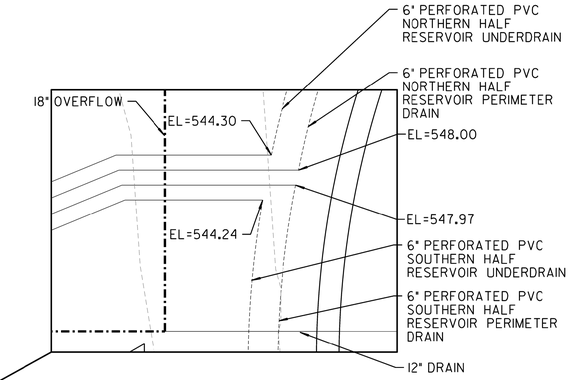
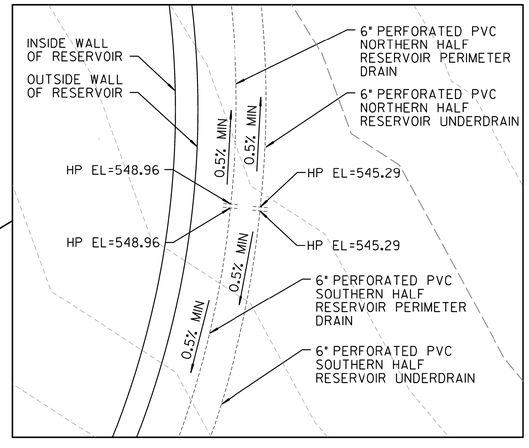


18" COMBINED OVERFLOW AND DRAIN







SITE PIPING PROFILE AND ELEVATIONS

C-10

LA JOLLA VIEW RESERVOIR

SITE PIPING PROFILE AND ELEVATIONS

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 13 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

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REGISTERED PROFESSIONAL ENGINEER ANDERS K. ECKE No. 70654 10-31-2015 CIVIL STATE OF CALIFORNIA

PRELIMINARY

APPROVED:
FOR CITY ENGINEER
ALEX GARCIA
PRINT NAME
DATE
RCE#

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

SUBMITTED BY: ED FORDAN PROJECT MANAGER
CHECKED BY: ART ARVIZU PROJECT ENGINEER
CCS27 COORDINATE
CCS83 COORDINATE
38056-13-D

100%

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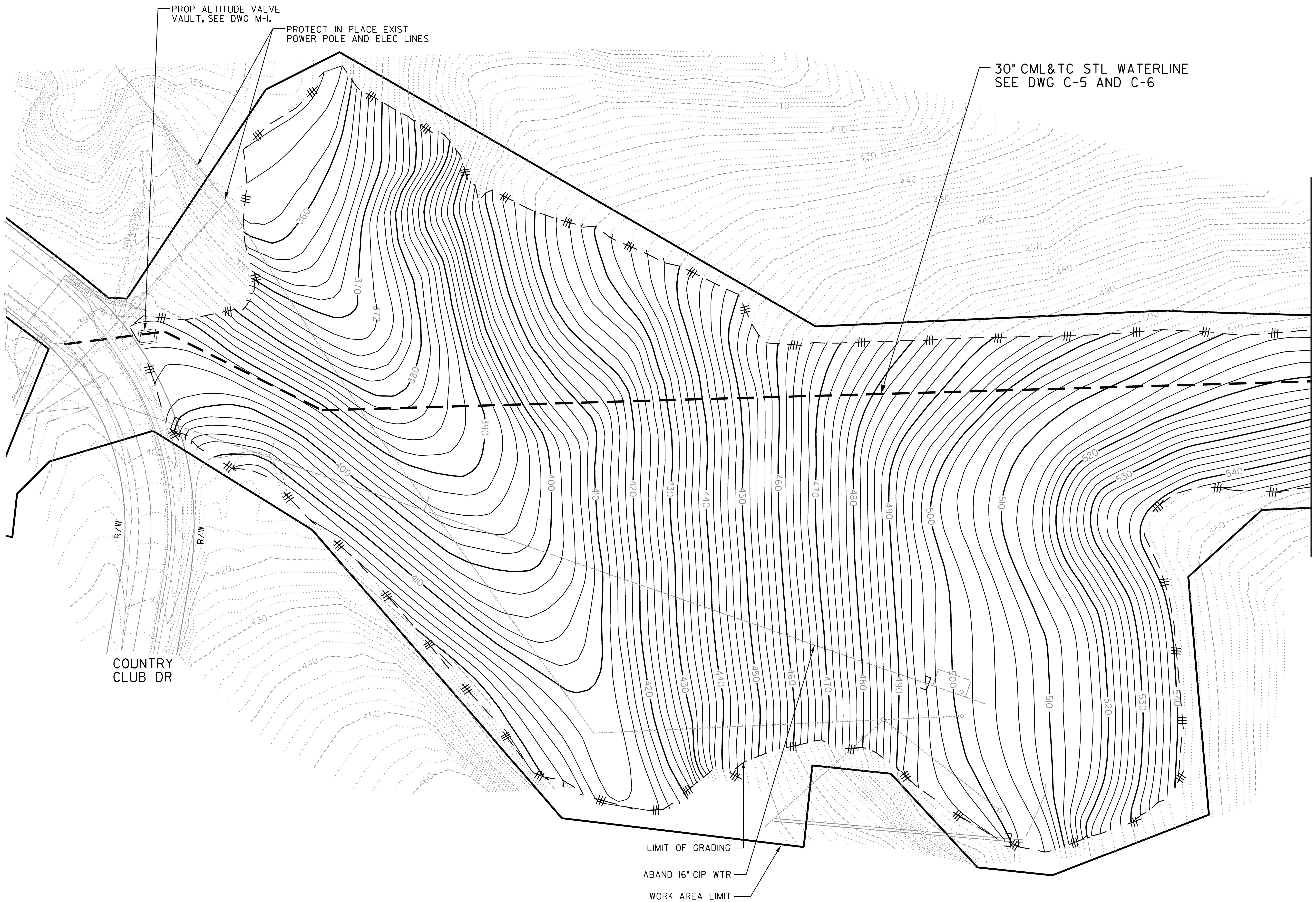

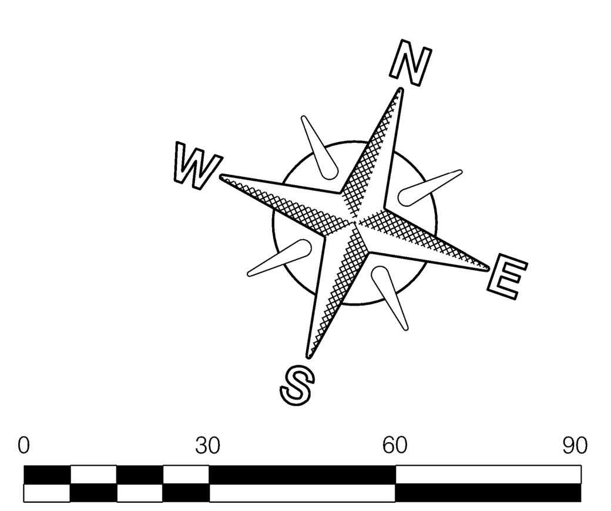

NOTES:

1. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO ORIGINAL GRADE; HOWEVER, THE ENCELIA ACCESS ROAD, THE AREA AROUND THE NEW LA JOLLA VIEW RESERVOIR, AND THE AREA AROUND THE DEMO-ED LA JOLLA VIEW RESERVOIR SHALL BE GRADED AS SHOWN HEREIN.

C-11

LA JOLLA VIEW RESERVOIR
FINAL GRADING PLAN - LJVR

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 16 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

APPROVED
FOR CITY ENGINEER DATE
ALEX GARCIA
PRINT NAME RCE#

SUBMITTED BY
ED FORDAN
PROJECT MANAGER
CHECKED BY
ART ARVIZU
PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

246-1692
CCS27 COORDINATE
1886444, 6253407
CCS83 COORDINATE
38056-16-D

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www.iecorporation.com

REGISTERED PROFESSIONAL ENGINEER
ANDERS K. EGENE
No. C40654
Exp. 3-31-2015
CIVIL
STATE OF CALIFORNIA
PRELIMINARY

CONTRACTOR DATE STARTED
INSPECTOR DATE COMPLETED

FINAL GRADING PLAN - LJVR

100%

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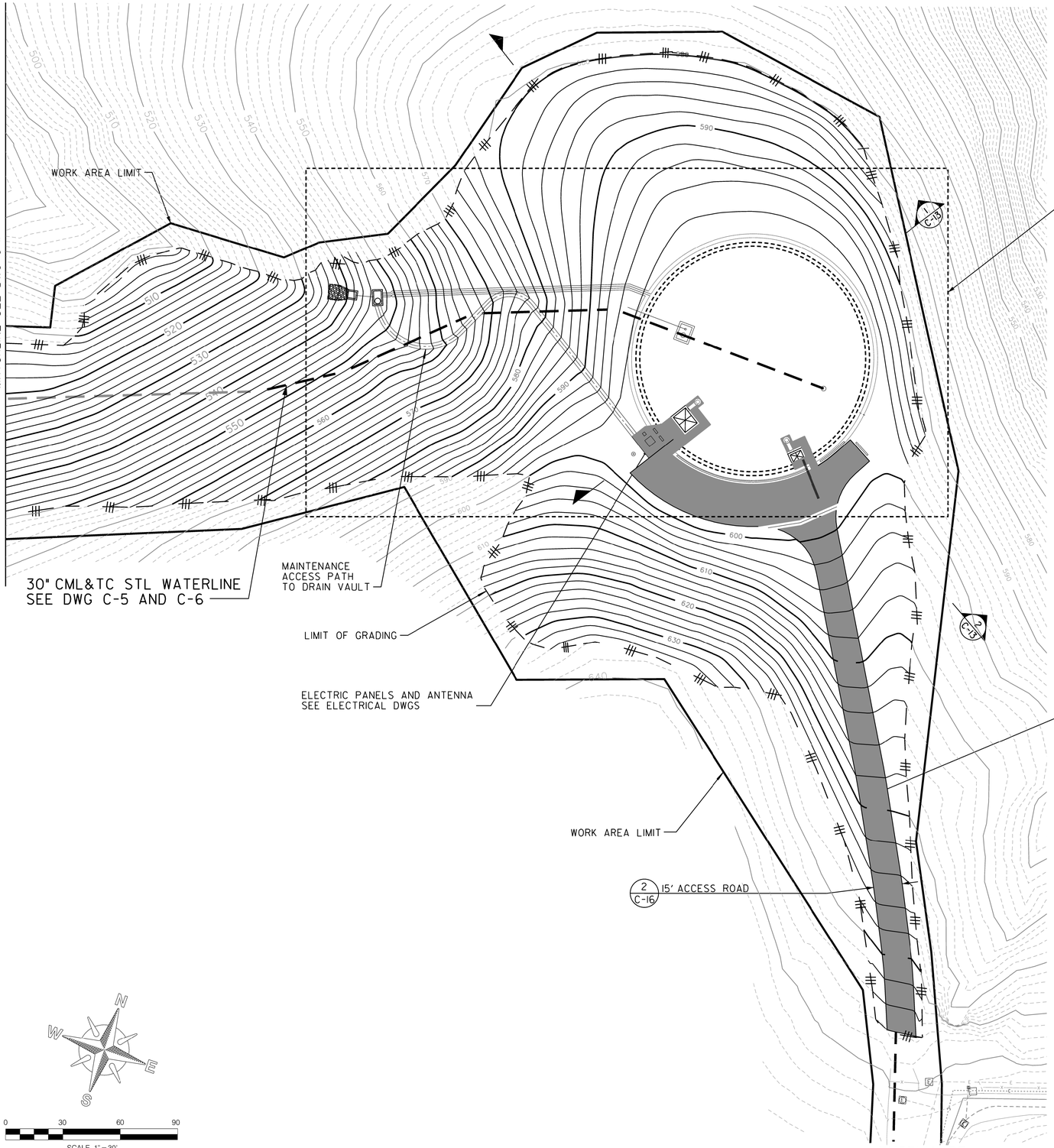

NOTES:

1. THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO ORIGINAL GRADE; HOWEVER, THE ENCELIA ACCESS ROAD, THE AREA AROUND THE NEW LA JOLLA VIEW RESERVOIR, AND THE AREA AROUND THE DEMO-ED LA JOLLA VIEW RESERVOIR SHALL BE GRADED AS SHOWN HEREIN.
2. THE QUANTITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL PERFORM QUANTITY TAKE-OFFS FOR BIDDING PURPOSES. NO ADDITIONAL COMPENSATION WILL BE MADE SHOULD ACTUAL QUANTITIES DIFFER FROM QUANTITIES SHOWN HEREON.
3. THE TOTAL LOAD ON TOP OF THE FINAL GRADE SURFACE ABOVE THE RESERVOIR SHALL BE LIMITED TO 8,000 LBS.

FINAL GRADING QUANTITIES:

CUT= 54,900 CY
FILL= 54,280 CY
NET= 620 CY (EXPORT)
SEE NOTE 2

FINAL GRADING PLAN – LJVR

C–12

LA JOLLA VIEW RESERVOIR
FINAL GRADING PLAN – LJVR

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 17 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

APPROVED
FOR CITY ENGINEER _____ DATE _____
ALEX GARCIA
PRINT NAME _____ RCE#

SUBMITTED BY
ED FORDAN
PROJECT MANAGER

CHECKED BY
ART ARVIZU
PROJECT ENGINEER

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

246-1692
CCS27 COORDINATE

1886444, 6253407
CCS83 COORDINATE

38056-17-D

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

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REGISTERED PROFESSIONAL ENGINEER
ANDERS K. EGGE
No. 70654
3-31-2015
CIVIL
STATE OF CALIFORNIA
PRELIMINARY

100%

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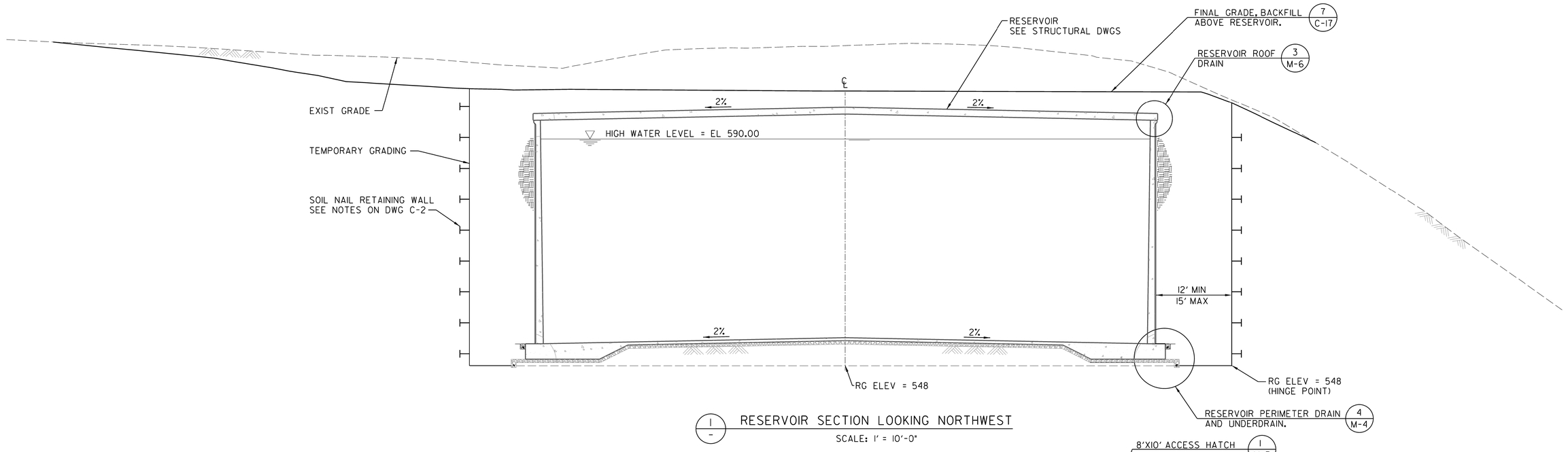
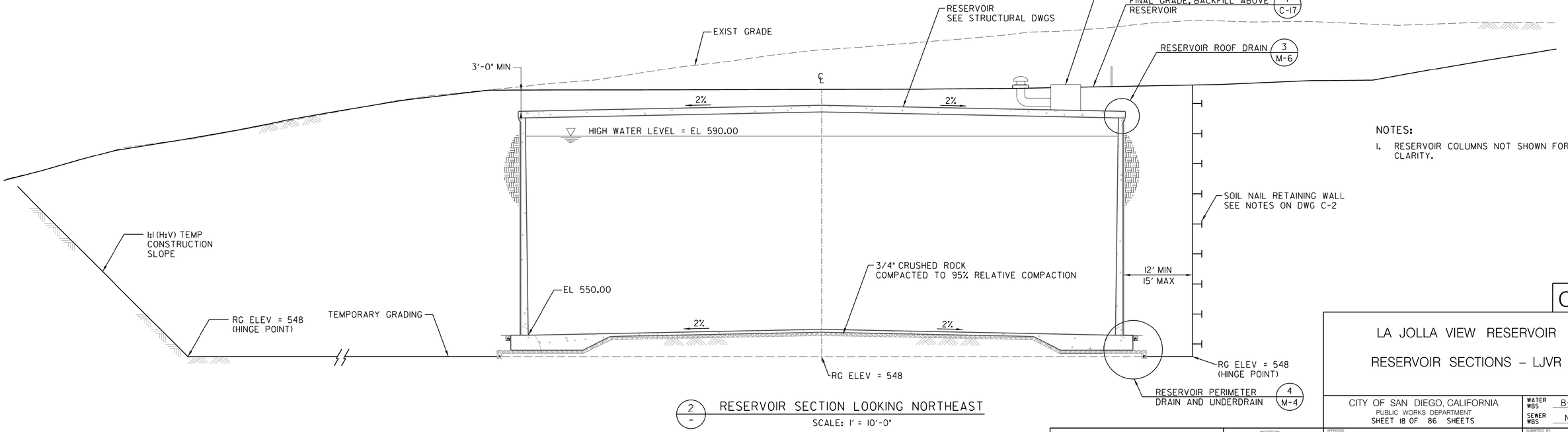


1 / - RESERVOIR SECTION LOOKING NORTHWEST

SCALE: 1' = 10'-0"



2 / - RESERVOIR SECTION LOOKING NORTHEAST

SCALE: 1' = 10'-0"

RESERVOIR SECTIONS – LJVR

C–13

LA JOLLA VIEW RESERVOIR

RESERVOIR SECTIONS – LJVR

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 18 OF 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

SUBMITTED BY: ED FORDAN, PROJECT MANAGER
CHECKED BY: ART ARVIZU, PROJECT ENGINEER

APPROVED: FOR CITY ENGINEER ALEX GARCIA, PRINT NAME, DATE, RCE#

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

CCS27 COORDINATE

CCS83 COORDINATE

CONTRACTOR
INSPECTOR
DATE STARTED
DATE COMPLETED

38056-18-D

CONSULTANT

Infrastructure ENGINEERING CORPORATION
14271 Danielson Street
Poway, California 92064
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www.iecorporation.com

ANDERS K. ECKMAN, No. 60654, REGISTERED PROFESSIONAL ENGINEER, CIVIL, STATE OF CALIFORNIA, 12-31-2015
PRELIMINARY

100%

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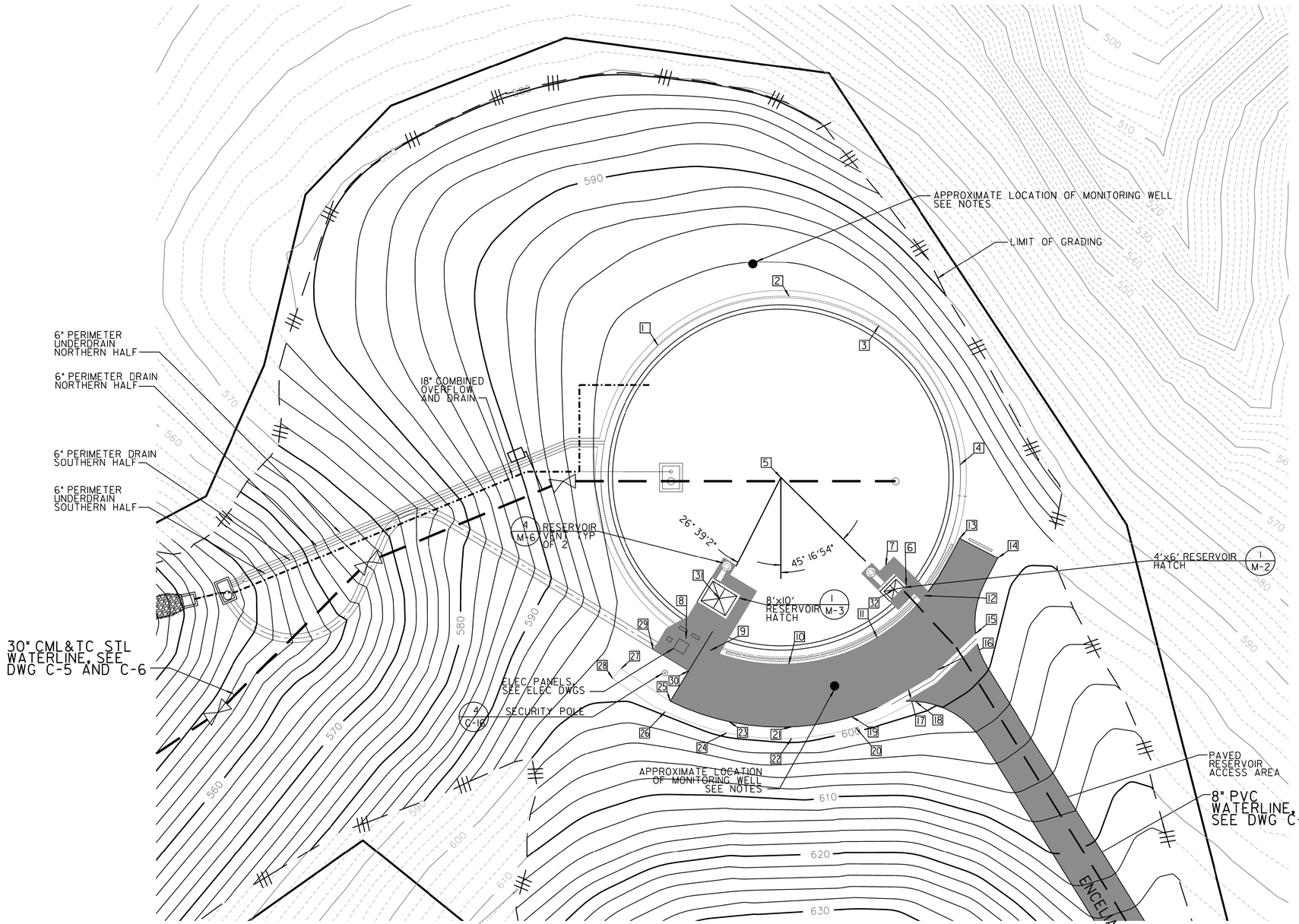
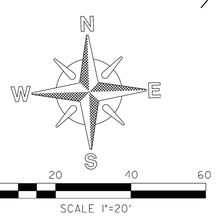


COORDINATE TABLE			
NO	ELEV.	NORTHING	EASTING
1	599.0	1888141.47	6251445.13
2	599.1	1888157.78	6251491.77
3	599.2	1888147.66	6251523.31
4	599.3	1888098.81	6251551.82
5	600.5	1888093.86	6251488.82
6	599.4	1888056.48	6251532.82
7	599.3	1888063.51	6251525.72
8	598.8	1888037.92	6251455.70
9	599.2	1888033.72	6251464.13
10	599.3	1888028.90	6251491.66
11	599.4	1888038.23	6251522.67
12	599.5	1888052.87	6251539.28
13	599.4	1888072.99	6251551.61
14	599.3	1888066.06	6251564.92
15	599.4	1888039.60	6251557.15
16	599.3	1888026.83	6251543.99
17	599.2	1888019.95	6251533.68
18	599.2	1888015.90	6251536.00
19	599.1	1888010.55	6251514.08
20	599.1	1888006.70	6251515.15
21	599.0	1888006.92	6251492.59
22	599.0	1888002.92	6251492.68
23	598.9	1888004.83	6251470.87
24	598.9	1888056.48	6251469.96
25	598.8	1888015.87	6251450.19
26	598.8	1888012.28	6251448.42
27	598.5	1888027.31	6251432.88
28	598.5	1888023.82	6251429.92
29	598.7	1888033.94	6251444.36
30	599.0	1888026.54	6251456.62
31	600.0	1888051.88	6251467.23
32	600.0	1888055.74	6251527.88

NOTES:

1. ACTUAL LOCATION OF MONITORING WELL SHALL BE AT LEAST 10 FT BUT NO MORE THAN 20 FT FROM THE OUTSIDE FACE OF THE RESERVOIR WALL, SEE SPECS.



C-14

LA JOLLA VIEW RESERVOIR
RESERVOIR SITE PLAN – LJVR

CITY OF SAN DIEGO, CALIFORNIA
PUBLIC WORKS DEPARTMENT
SHEET 0F 86 SHEETS

WATER WBS B-11070
SEWER WBS NONE

CONSULTANT
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REGISTERED PROFESSIONAL ENGINEER ANDERS K. ECKMAN No. 30654 EXP. 3-31-2015 CIVIL STATE OF CALIFORNIA

PRELIMINARY

APPROVED:
FOR CITY ENGINEER _____ DATE
ALEX GARCIA
PRINT NAME RCE#

DESCRIPTION	BY	APPROVED	DATE	FILMED
ORIGINAL	XX/XX			

CONTRACTOR _____ DATE STARTED _____
INSPECTOR _____ DATE COMPLETED _____

SUBMITTED BY: ED FORDAN, PROJECT MANAGER
CHECKED BY: ART ARVIZU, PROJECT ENGINEER
246-1692 CCS27 COORDINATE
1886444, 6253407 CCS83 COORDINATE
38056-19-D

RESERVOIR SITE PLAN – LJVR

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100%

Appendix B

2018 Certified Construction & Demolition Recycling Facility Directory

2018 Certified Construction & Demolition (C&D) Recycling Facility Directory

The City of San Diego certifies these facilities to accept the materials listed in each category. Hazardous materials are not accepted. The diversion rate for these materials shall be considered 100 percent, except mixed C&D debris, which updates quarterly. The City is not responsible for changes in facility information. Please call ahead to confirm details such as accepted materials, days and hours of operation, limitations on vehicle types and cost. For more information visit: www.recyclingworks.com.

The Miramar Landfill and other landfills do not recycle mixed C&D debris. *To receive recycling credit:* *A. The mixed C&D facility and transfer station receipts have to be coded as C&D debris and have a project address or permit number on the receipt.* *B. You must notify weighmaster that your load is subject to the City of San Diego C&D Ordinance.*	Mixed C&D Debris	Asphalt/Concrete	Brick/Block/Rock	Building Materials for Reuse	Cardboard	Carpet	Carpet Padding	Ceiling Tile	Ceramic Tile/Porcelain	Clean Fill Dirt	Clean Wood/Green Waste	Drywall	Industrial Plastics	Lamps/Light Fixtures	Metal	Mixed Inerts	Styrofoam Blocks
EDCO Recovery & Transfer 3660 Dalbergia St., San Diego, CA 92113 619-234-7774 | www.edcodisposal.com/public-disposal	71%											•					
EDCO Station Transfer Station & Buy Back Center 8184 Commercial St., La Mesa, CA 91942 619-466-3355 | www.edcodisposal.com/public-disposal	71%				•							•			•		
EDCO CDI Recycling & Buy Back Center 224 S. Las Posas Rd., San Marcos, CA 92078 760-744-2700 | www.edcodisposal.com/public-disposal	90%				•										•		
Escondido Resource Recovery 1044 W. Washington Ave., Escondido 760-745-3203 | www.edcodisposal.com/public-disposal	71%																
Fallbrook Transfer Station & Buy Back Center 550 W. Aviation Rd., Fallbrook, CA 92028 760-728-6114 | www.edcodisposal.com/public-disposal	71%				•										•		
Otay C&D/Inert Debris Processing Facility 1700 Maxwell Rd., Chula Vista, CA 91913 619-421-3773 | www.sd.disposal.com	72%																
Ramona Transfer Station & Buy Back Center 324 Maple St., Ramona, CA 92065 760-789-0516 | www.edcodisposal.com/public-disposal	71%				•										•		
SANCO Resource Recovery & Buy Back Center 6750 Federal Blvd, Lemon Grove, CA 91945 619-287-5696 | www.edcodisposal.com/public-disposal	71%				•										•		
All American Recycling 10805 Kenney St., Santee, CA 92071 619-508-1155 (Must call for appointment)						•											
Allan Company 6733 Consolidated Way, San Diego, CA 92121 858-578-9300 | www.allancompany.com/facilities.htm					•										•		
Allan Company Miramar Recycling 5165 Convoy St., San Diego, CA 92111 858-268-8971 | www.allancompany.com/facilities.htm					•										•		
AMS 4674 Cardin St., San Diego, CA 92111 858-541-1977 | www.a-m-s.com								•									

The Miramar Landfill and other landfills do not recycle mixed C&D debris. *To receive recycling credit:* *A. The mixed C&D facility and transfer station receipts have to be coded as C&D debris and have a project address or permit number on the receipt.* *B. You must notify weighmaster that your load is subject to the City of San Diego C&D Ordinance.*	Mixed C&D Debris	Asphalt/Concrete	Brick/Block/Rock	Building Materials for Reuse	Cardboard	Carpet	Carpet Padding	Ceiling Tile	Ceramic Tile/Porcelain	Clean Fill Dirt	Clean Wood/Green Waste	Drywall	Industrial Plastics	Lamps/Light Fixtures	Metal	Mixed Inerts	Styrofoam Blocks
Armstrong World Industries, Inc. 300 S. Myrida St., Pensacola, FL 32505 877-276-7876 (Press 1, Then 8) www.armSt.rong.com/commceilingsna								•									
Cactus Recycling 8710 Avenida De La Fuente, San Diego, CA 92154 619-661-1283 | www.cactusrecycling.com					•								•		•		•
DFS Flooring 10178 Willow Creek Rd., San Diego, CA 92131 858-630-5200 | www.dfsflooring.com						•	•										
Duco Metals 220 Bingham Drive Suite 100, San Marcos, CA 92069 760-747-6330 | www.ducometals.com															•		
Enniss Incorporated 12421 Vigilante Rd., Lakeside, CA 92040 619-443-9024 | www.ennissinc.com		•	•						•	•							
Escondido Sand and Gravel 500 N. Tulip St., Escondido, CA 92025 760-432-4690 | www.weirasphalt.com/esg		•															
Habitat for Humanity Restore 10222 San Diego Mission Rd., San Diego, CA 92108 619-516-5267 | www.sdhfh.org/reSt.ore.php				•													
Hanson Aggregates West. – Lakeside Plant 12560 Highway 67, Lakeside, CA 92040 858-547-2141		•															
Hanson Aggregates West. – Miramar 9229 Harris Plant Rd., San Diego, CA 92126 858-974-3849		•								•							
HVAC Exchange 2675 Faivre St., Chula Vista, CA 91911 619-423-1855 | www.thehvacexchange.com															•		
IMS Recycling Services 2740 Boston Ave., San Diego, CA 92113 619-423-1564 | www.imsrecyclingservices.com					•								•				
IMS Recycling Services 2697 Main St., San Diego, CA 92113 619-231-2521 | www.imsrecyclingservices.com													•		•		
Inland Pacific Resource Recovery 12650 Slaughterhouse Canyon Rd., Lakeside, CA 92040 619-390-1418											•						
Lamp Disposal Solutions 1405 30th St., San Diego, CA 92154 858-569-1807 | www.lampdisposalsolutions.com														•			
Los Angeles Fiber Company 4920 S. Boyle Ave., Vernon, CA 90058 323-589-5637 | www.lafiber.com						•	•										
Miramar Greenery, City of San Diego 5180 Convoy St., San Diego, CA 92111 858-694-7000 | www.sandiego.gov/environmental-services/miramar/greenery.shtml											•						

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Moody's 3210 Oceanside Blvd., Oceanside, CA 92056 760-433-3316		•								•						•	
Otay Valley Rock, LLC 2041 Heritage Rd., Chula Vista, CA 91913 619-591-4717 | www.otayrock.com		•															
Reclaimed Aggregates Chula ViSt.a 855 Energy Way, Chula Vista, CA 91913 619-656-1836		•														•	
Reconstruction Warehouse 3650 Hancock St.., San Diego, CA 92110 619-795-7326 | www.recowarehouse.com				•													
Robertson's Ready Mix 2094 Willow Glen Dr., El Cajon, CA 92019 619-593-1856		•								•						•	
Romero General Construction Corp. 8354 Nelson Way, Escondido, CA 92026 760-749-9312 | www.romerogc.com/crushing/nelsonway.htm		•															
SA Recycling 3055 Commercial St.., San Diego, CA 92113 619-238-6740 | www.sarecycling.com															•		
SA Recycling 1211 S. 32nd St.., San Diego, CA 92113 619-234-6691 | www.sarecycling.com															•		
Universal Waste Disposal 8051 Wing Avenue, El Cajon, CA 92020 619-438-1093 | www.universalwaSt.edisposal.com														•			
Vulcan Carol Canyon Landfill and Recycle Site 10051 Black Mountain Rd., San Diego, CA 92126 858-530-9465 | www.vulcanmaterials.com		•	•							•						•	
Vulcan Otay Asphalt Recycle Center 7522 Paseo de la Fuente, San Diego, CA 92154 619-571-1945 | www.vulcanmaterials.com		•															

Appendix C

2016 City of San Diego C&D Debris Conversion Rate Table

CITY OF SAN DIEGO

Construction & Demolition (C&D) Debris Conversion Rate Table

This worksheet lists materials typically generated from a constructionor demolition project and provides formulas for converting common units (i.e. cubic yards, square feet, and board feet) to tons. It is a tool that should be used for preparing your Waste Mangement Form - Part I, which requires that quantities be provided in tons.

Note: Weigh receipts are required for your refund request.

Step 1: Enter the estimated quantity for each applicable material in Column I, based on units

Step 2: Multiply by Tons/Unit figure listed in Column II. Enter the result for each material in Column III.

If using Excel version, column III will automatically calculate tons.

Step 3: Enter quantities for each separated material from Column III on this worksheet into the corresponding section of your Waste Management Form - Part I.

		Column I			Column II		Column III
Category	**Material**	**Volume**	**Unit**		**Tons/Unit**		**Tons**
Asphalt/Concrete	Asphalt (broken)		cy	x	0.70	=	
	Concrete (broken)		cy	x	1.20	=	
	Concrete (solid slab)		cy	x	1.30	=	
Brick/Masonry/Tile	Brick (broken)		cy	x	0.70	=	
	Brick (whole, palletized)		cy	x	1.51	=	
	Masonry Brick (broken)		cy	x	0.60	=	
	Tile		sq ft	x	0.00175	=	
Building Materials (doors, windows, cabinets, etc.)			cy	x	0.15	=	
Cardboard (flat)			cy	x	0.05	=	
Carpet	By square foot		sq ft	x	0.0005	=	
	By cubic yard		cy	x	0.30	=	
Carpet Padding/Foam			sq ft	x	0.000125	=	
Ceiling Tiles	Whole (palletized)		sq ft	x	0.0003	=	
	Loose		cy	x	0.09	=	
Drywall (new or used)	1/2" (by square foot)		sq ft	x	0.0008	=	
	5/8" (by square foot)		sq ft	x	0.00105	=	
	Demo/used (by cubic yd)		cy	x	0.25	=	
Earth	Loose/Dry		cy	x	1.20	=	
	Excavated/Wet		cy	x	1.30	=	
	Sand (loose)		cy	x	1.20	=	
Landscape Debris (brush, trees, etc)			cy	x	0.15	=	
Mixed Debris	Construction		cy	x	0.18	=	
	Demolition		cy	x	1.19	=	
Scrap metal			cy	x	0.51	=	
Shingles, asphalt			cy	x	0.22	=	
Stone (crushed)			cy	x	2.35	=	
Unpainted Wood & Pallets	By board foot		bd ft	x	0.001375	=	
	By cubic yard		cy	x	0.15	=	
Garbage/Trash			cy	x	0.18	=	
Other (estimated weight)			cy	x	estimate	=	
			cy	x	estimate	=	
			cy	x	estimate	=	
					Total All		