

INSPECTION PHONE: (949) 635-1800 ext. 6102 Inspection office shall be notified at least two (2) work days prior to commencing permitted use. Failure to obtain inspection shall void this permit.	City of Rancho Santa Margarita  ENCROACHMENT PERMIT APPLICATION	Public Works Department 22112 El Paseo Rancho Santa Margarita, CA 92688
		Tract /PM No.
		Permit No: EP 16-10
		Effective Date: 02/18/2016
		Expiration Date: 04/18/2016

Applicant: RON JACOBSON
Contact: COLIN WALKER Email: COLIN@BOUDREAUIPIPELINE.COM Phone-Day: (951)493-6780
Description of Work: CROSSING ON PLANO TRABUCO TO CONNECT THE FOLLOWING SERVICES: WATER, RECLAIMED WATER & STORM DRAIN.
PER ATTACHED PRECISE GRADING PLANS FOR TRACT NO. 17805 SHEETS 1-15 (GP 15-01)
Location of Work: 21522 PLANO TRABUCO ROAD
Estimated Start Date: FEBRUARY 22, 2016 Estimated Completion Date: APRIL 22, 2016

INDEMNIFICATION

This Encroachment Permit, if granted, is made on the express condition that the City shall be free from any and all liability resulting from its issuance as provided for in Rancho Santa Margarita Municipal Code Sec. 11.07.040 and the Indemnity and Hold Harmless Agreement attached hereto.

Applicant Signature [Signature] Name: RON JACOBS Title: CFO Date: 02/16/16
(See attached signature requirements) [Signature] President

FOR CITY USE ONLY

		FEE DESCRIPTION	FEE AMOUNT
Street Improvement?	Storm Drain	Encroachment Permit Fee:	\$ 55.00
Sewer/Water Improvement?	Domestic and reclaimed water	Inspection Fee:	\$ 1,292.50
Other Improvements:	DW approach	Plan Check Fee:	\$
Requirements Checked Are Applicable			TOTAL DUE: \$ 1,347.50

- ☒ All traffic control per MUTCD. and attached TC plan.
- ☒ Asphalt concrete shall be saw cut prior to replacement
- ☒ 90% compaction, verified by tests, is required in dirt excavated area.

- ☒ Replace existing striping as directed by City Inspector
- ☒ Replacement AC pavement to be existing section plus 1" over sand slurry backfill, "T" cut 1' min. on both sides.
- ☒ Longitudinal trenches over 50' in length shall be cold planed to a 1" depth by 10' wide and machine capped.
- ☒ Trenches exceeding five feet in depth require shoring plans and a permit from the California Division of Industrial Safety.

- ☒ Portland cement concrete shall be saw cut and removed to existing control joints.

- ☒ Trench backfill shall be 1 1/2 sand slurry unless otherwise directed by City Engineer.

- ☒ Trench plates and temporary AC to be on site prior to start of work.

Bond Description	Bond No.	Amount
Faithful Performance:	PB03010402599	\$28,683.28
Labor and Materials:		
Monumentation:	PB03010402597	\$11,500.00
Sewer- Faithful Performance:		
Water- Faithful Performance:		

IF APPLICABLE, BONDS SHALL BE HELD FOR A PERIOD OF ONE (1) YEAR AFTER FINAL INSPECTION FOR WARRANTY PURPOSES. A REQUEST MAY BE MADE TO REDUCE THE WARRANTY BOND FROM THE ORIGINAL BOND AMOUNT, TO BE EVALUATED ON A CASE-BY-CASE BASIS.

Contractor: Boudrea Pipeline Corporation

License Number: 791842

Class: C34 C36 A

Contact Person: Colin Walker

Telephone Number: (951) 493-6780

Comments: Work hours are restricted to between 7:00 am to 3:30 pm

All traffic control devices shall be removed from view between the hours of 3:30 pm and 7:00 am

THIS IS YOUR PERMIT WHEN SIGNED BY THE ENGINEERING DIVISION

Permit and approved plans shall be maintained on job site. Permittee shall comply with regulations on reverse side of permit and attachments. Call Underground Service Alert (USA) at 1-800-422-4133 at least 48 hours prior to excavating. This permit shall be non-transferable. Void if not started in 90 days and continued to completion. ANY WORK DONE WITHOUT PROPER INSPECTION WILL BE SUBJECT TO REJECTION.

Insurance Documents: ☒ Submitted ☒ Approved Construction Plans: ☒ Submitted ☐ Reviewed ☐ N/A

Traffic Control by Registered Traffic Engineer: ☒ MUTCD ☒ Submitted ☒ Reviewed ☐ N/A

Shoring Plans by Registered Civil Engineer: ☒ Submitted ☐ Reviewed ☒ N/A

Public Works Approval: [Signature]

Date: 2-18-16

STANDARD PROVISIONS

1. Should any damage or injury to City property occur as a result of the exercise of the rights herein granted, Permittee shall immediately, upon the written demand of City, restore such property to the condition of same on the date of the occurrence of said damage or injury at Permittee's sole cost or expense. The question as to whether or not any such damage or injury has been caused to the property shall be determined by the City Engineer or designee and that determination shall be final. In the event repair by City is necessary; Permittee shall pay and/or reimburse the City the full cost of such repairs.
2. The City reserves the right to perform any work upon any portion or all of the area covered by this Permit, or to do any other work necessary at any time. Such work may be performed without incurring any liability of any nature whatsoever to the Permittee. It is further understood and agreed that the City reserves unto itself the rights of ingress over all or any portion of the subject area.
3. Neither this Permit nor any of the rights herein granted shall be assigned without the prior written approval of the City. Permit is void upon expiration date. A new fee will be assessed thereafter.
4. By acceptance of this Permit, Permittee acknowledges and assumes all responsibility for compliance with requirements of other regulatory agencies including but not limited to zoning regulations applicable ordinances and laws of the City, County of Orange, the State of California or others having regulatory control over the use granted herein.
5. All underground work requires "Injury Identification Number" From Underground Service Alert Regional Notification Center (Ref – Government Code, Section 42165 and 4217). Call 1-800-422-4133.
6. A copy of this Permit and approved plans, if applicable, shall be maintained at the site of work and be shown to any authorized representative of the City, or other regulatory governing agency upon request.
7. No work shall be performed within the City right of ways without the full knowledge of City Engineer or designee, who shall be given not less than two work days advance notice of the initiation of permitted use. Failure of Permittee to obtain inspection shall void this permit and necessitate reapplication by Permittee.

Permittee further agrees that all operations within City right of ways are subject to the operations of City and other authorized persons and under the control and to the satisfaction of City Engineer or designee.
8. This Permit may be immediately revoked for reasons determined by the City Engineer or designee including violation of Permit provisions or other applicable rules and regulations, or the creation of a nuisance after notice given by the City Engineer or designee. In the event of such revocation, Permittee shall immediately cease all operations and restore City right of ways as directed by City Engineer or designee.
9. Any construction performed on City property shall be in accordance with Orange County Resources and Development Management Department's Standard Plans and established criterion and as modified by the City Engineer. Any deviation must be specifically detailed and highlighted on plans in a manner meeting the approval of the City Engineer or designee.
10. No uses other than that as stated on this Permit shall be exercised. Public right of way shall not be used for administrative operations or storage of equipment, materials, supplies, etc. All administrative and storage areas shall have the written approval of the property owner. This Permit shall include any attached Special Provisions.
11. Permittee agrees that if any tank, pipe, conduit, duct, tunnel or other installation of any nature or kind placed in the public right of way for which the Permit is issued which shall at any time in the future interfere with the use, repair, improvement, widening or change of grade of the highway, the Permittee, within ten (10) days after the receipt of a written notice from the City to do so, shall at its own sole expense either relocate or remove such installations, subject to the approval of the City Engineer.
12. Permittee agrees to comply with all City's NPDES requirements (Chapter 5.10 - Water Quality Control Municipal Code). If de-watering operation within the public right of way is necessary, proper measures must be taken to prevent the transport of debris into the storm drain system. Permittee agrees to include a direct discharge into the catch basin via a hose or other method which bypasses the street surface. If this method is not feasible, placement of proper BMPs preventing any debris collected from the street surface and entering into the catch basin will be required.
13. No permit shall be approved for encroachment onto any property owned by the City for any purpose whatsoever unless the applicant provides proof of insurance coverage for bodily injury and property damage in a form and in an amount acceptable to the City Manager. In fixing the form and amount of such insurance requirement, the City Manager shall take into consideration the nature and extent of the proposed encroachment. The City Manager may waive the requirements of this section if he/she determines that the proposed encroachment will not constitute any significant possibility of City liability (Municipal Code Sec. 11.07.270 – Liability Insurance Required). The minimum insurance established pursuant to this section is listed in the Indemnity and Hold Harmless Agreement attached hereto.

INSPECTOR'S REPORT

Date Work Started _____ Inspector _____
 Date Completed _____ Inspector _____

ESTIMATE OF STREET REPAIRS

(If the encroachment will disrupt/damage the street or sidewalk, complete the following)

Street Restoration: ☐ By Permittee ☐ By City Task Order # _____
 A.C. Pavement _____ sq. ft. Concrete Pavement _____ sq. ft. Sidewalk _____ sq. ft.
 Curb Ramp _____ ea. Driveway _____ sq. ft. Curb & Gutter _____ l.f.
 Curb drain _____ ea. Asphalt, Concrete & Soil Removal _____ sq. ft.
 Tree Removal _____ ea. Tree Planting _____ ea. Monument _____ ea.
 Other _____

INSPECTION RECORD

Date	Hours	Inspector	Description
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Comments: _____

COMPLETION REPORT

Final Inspection Date: _____ Inspector _____
 Total Inspection Hours Signature of Inspector: _____

ADDITIONAL FEES:**NOTES**

Plan Check	_____	_____
Inspection	_____	_____
Reconstruction	_____	_____
Other	_____	_____

TOTAL _____ Billing Date: _____ By: _____

☐ Completed Date _____ By _____
☐ Void Reason _____
☐ Deposit Released Date _____



**STATEMENT OF INTENT TO COMPLY WITH MINIMUM
STORMWATER PERMIT REQUIREMENTS**

Stormwater Program – City of Rancho Santa Margarita Encroachment Permit


Permit Number: EP 16-10 Date: 2/16/2016
Applicant: RON JACOBSON
Project Address: 21522 PLANO TRABUCA
Property Owner: WILLIAM LYONS
Contractor: BOUDREAU PIPELINE CORPORATION
Contractor's Address: 463 N. SMITH AVE CORONA, CA 92880 Phone: (951)493-6780

The National Pollutant discharge Elimination System (NPDES) is an element of the Clean Water Act that applies to the protection of receiving waters. Under NPDES Municipal Separate Storm Sewer Systems (MS4s) permits from the San Diego Regional Water Quality Control Board (RWQCB), certain activities are subject to RWQCB enforcement. To meet the standards of the Orange County MS4 Permit, Order No. R9-2009-002/NPDES No. CAS0108740(MS4 Permit), the City of Rancho Santa Margarita has adopted minimum standards for stormwater runoff from construction activities and utility maintenance projects.

These minimum standards include requirements for erosion control, sediment control, and construction activity control to be implemented at each site. At a minimum, the activity associated with the project identified above shall be conducted in such a manner that:

- Sediments from disturbed soils shall be retained on site to the maximum extent practicable through the use of non-structural and/or structural sediment controls; and
 - Erosion of disturbed soil shall be minimized to the maximum extent practicable through the use of soil stabilization materials and procedures; and
 - All construction wastes shall be properly disposed of in such a way that no wastes are either directly or indirectly discharged to the storm drain; and
 - All concrete trucks will wash out to a contained area to prevent the discharge of concrete truck rinse water from entering the storm drain.
- ☐ Expected dewatering of vault or underground structure
- Provide proof of active dewatering permit
 - If de-watering operation within the public right of way is necessary, proper measures must be taken to prevent the transport of debris into the storm drain system. Permittee agrees to include a direct discharge (that does not contain any illegal discharge) into the catch basin via a hose or other method which bypasses the street surface. If this method is not feasible, placement of proper BMPs preventing any debris collected from the street surface and entering into the catch basin will be required.
 - If Permittee fails to install the necessary BMP's as required by the MS4 Permit the City will install all necessary BMP's and the Permittee will be responsible for reimbursing the City for all costs associated with making the project site comply with the MS4 Permit within 30 days.

I have read and understand the requirements listed above and certify that I will comply with the minimum requirements above.

Signature: 
Print Name: RON JACOBSON
Date: FEBRUARY 16, 2016

Title: CFO
Alan Brudney - President

FOR CITY USE ONLY

Proof of active dewatering permit obtained ☐

Active through _____
Date

INDEMNITY AND INSURANCE REQUIREMENTS**Indemnity and Hold Harmless Agreement for Encroachment Permits**

RESPONSIBILITY FOR DAMAGES: The Applicant agrees to and shall indemnify, defend, and hold the City of Rancho Santa Margarita, its officers, agents, employees, and representatives ("Indemnitees"), harmless from and against any and all loss, damage, liability, claim, demand, suit, cost, and expense whatsoever, including reasonable attorneys' fees, regardless of the merit or outcome of any such claim or suit arising from or in any manner connected with the issuance of the encroachment permit, and/or the installation, construction, maintenance, use, or operation of the work contemplated in the application for the encroachment permit, regardless of whether the Indemnitees reviewed and approved any plans or inspected any work or improvement, including the encroachment, and regardless of whether such maintenance, repair, replacement, or condition was affected or caused by the Indemnitees, except as provided by law.

INSURANCE: This permit shall not be effective for any purpose unless and until the Applicant obtains and files with the City of Rancho Santa Margarita, as the grantor of the permit, proof of an insurance policy which shall have commercial general liability limits in the amount of no less than one million dollars (\$1,000,000.00) per occurrence, two million dollars (\$2,000,000.00) in the general aggregate. The insurance required herein shall be provided by an authorized insurance company by the State of California and having a minimum A.M. Best's Guide Rating of A-, Class VII or better, unless such requirements are waived in writing by the City Manager or her designee due to unique circumstances. The City of Rancho Santa Margarita, its officers, agents and employees shall be expressly listed as additional insured under this insurance policy and the policy shall provide coverage for bodily injury and property damage. The Applicant shall be responsible to keep this insurance policy in full force and effect until final completion of the work contemplated in the application for the encroachment permit. The cost of any and all premiums for this insurance policy shall be borne by the Applicant. In the event of claims against the policy, the Applicant shall be responsible for payment of any deductible amounts. A Certificate of Insurance and endorsements shall be provided to the City Engineer and shall verify that the insurance coverage may not be cancelled without thirty (30) days written notice to the City Engineer.

STATEMENT OF ACCEPTANCE OF THE CONDITIONS FOR ISSUANCE OF THE ENCROACHMENT PERMIT: I have read and understand each of the conditions set forth for issuance of this Encroachment Permit and on behalf of Boudreau Pipeline Corp., and being duly authorized to do so I accept the encroachment permit subject to these conditions.

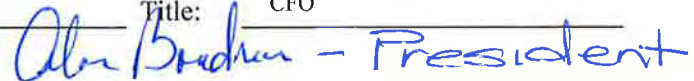
Signature:



Print Name:

RON JACOBSON

Title: CFO

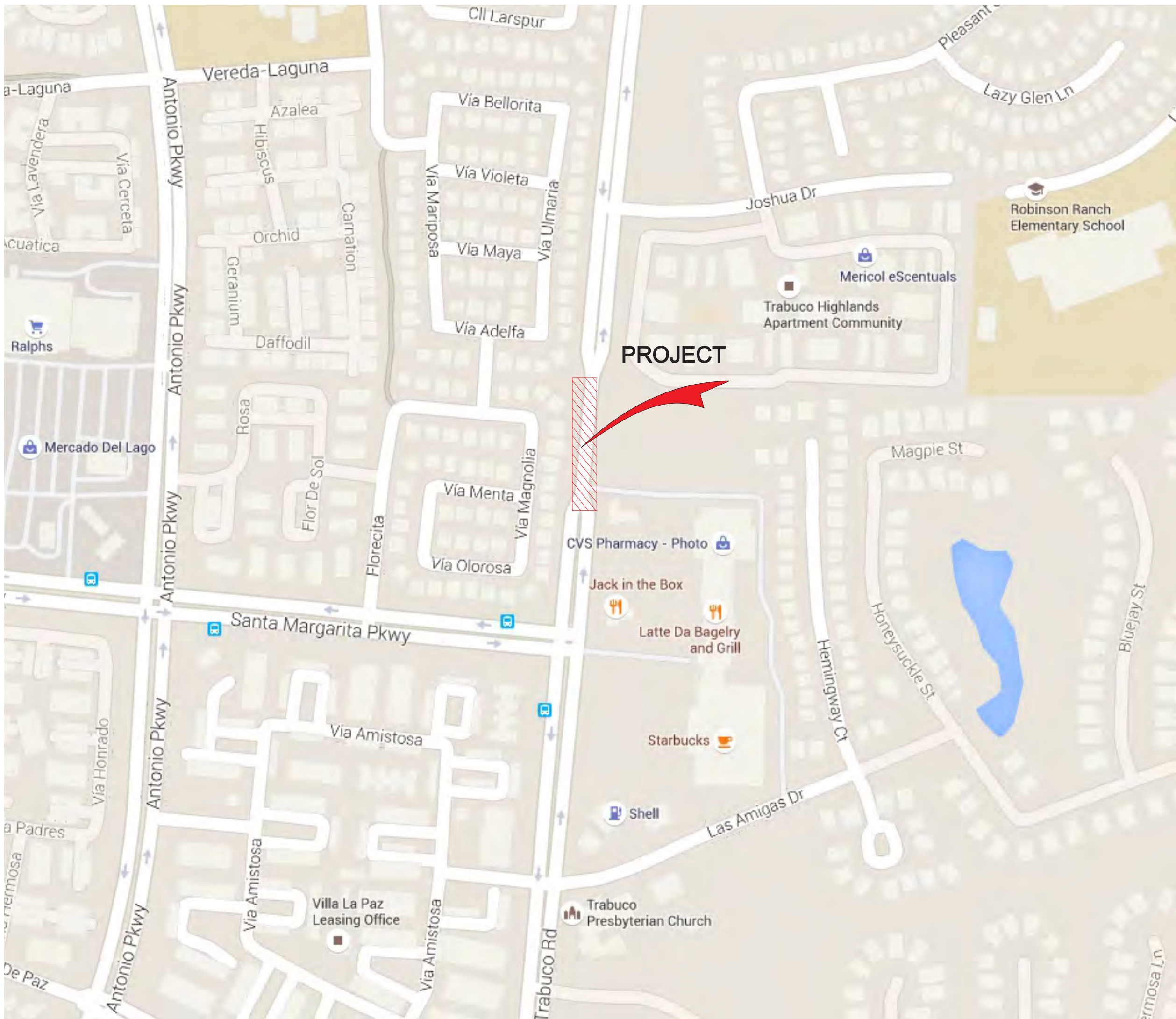


Date:

FEBRUARY 16, 2016

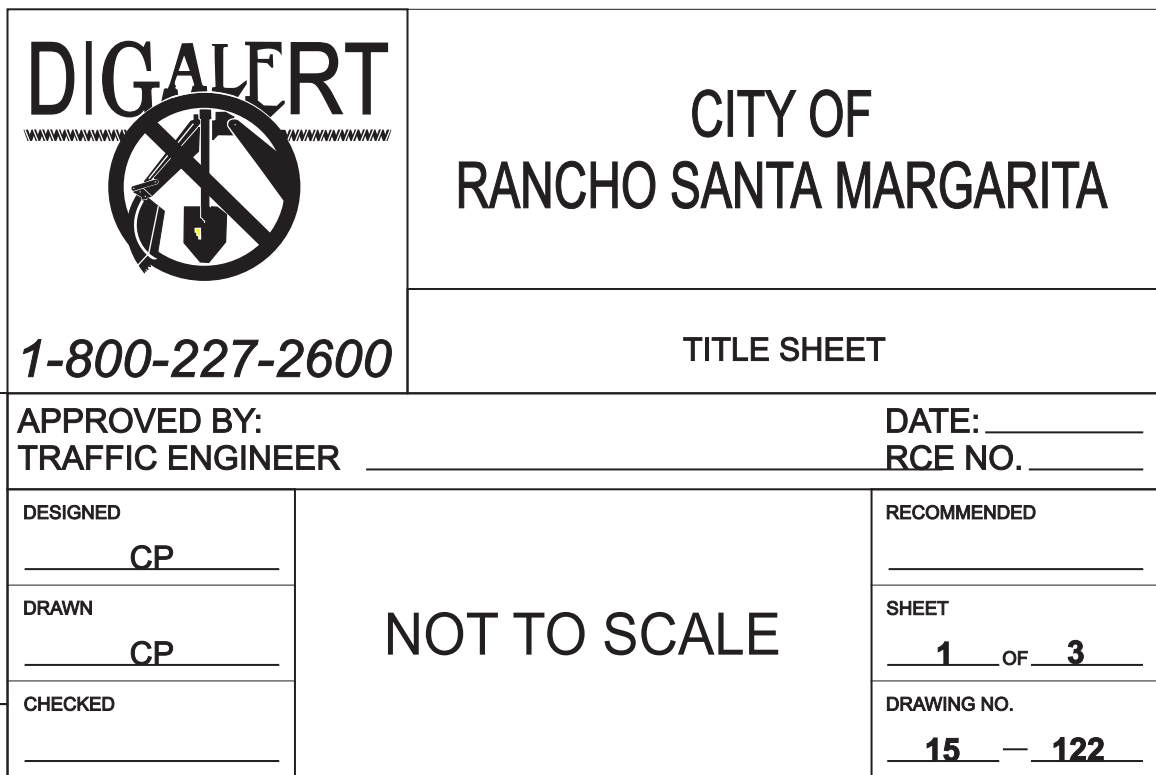
1. All traffic control devices shall conform to the latest edition of California Manual on Uniform Traffic Control Devices (CA MUTCD), and the Standard Specifications for Public Works latest edition.
2. The City Engineer or his representative has the authority to initiate field changes to assure public safety.
3. All traffic control devices shall be removed from view when not in use.
4. Work hours shall be restricted between 7:00 A.M. TO 3:30 P.M. Unless approved otherwise.
5. Trenches must be back filled or plated during non-working hours.
6. Pedestrian controls shall be provided as shown on the plans.
7. Temporary "NO PARKING" signs will be posted 24 hours prior to commencing work.
8. Access to driveways will be maintained at all times unless other arrangements are made.
9. The contractor shall replace within 72 hours, all traffic signal loop detectors damaged during construction.
10. All striping removed or damaged, will be replaced by the contractor within 24 hours (or replaced with temporary tape).
11. All workers shall be equipped with an class three vest (or a reflective vest at night). All flaggers shall also be equipped with a hard hat, C28 "Stop/Slow" paddle and shall be trained in the proper fundamentals of flagging traffic.
12. Any work that disturbs normal traffic signal operations shall be coordinated with the Traffic Division, 48 hours prior to beginning of construction.
13. The contractor shall maintain all traffic control devices 24 hours per day and 7 days a week.
14. A minimum of twelve (12) foot travel lanes must be maintained unless otherwise approved by Public Works.
15. A solar powered flashing arrow board shall be required on all arterial street closures.

1. THIS PROJECT IS EXPECTED TO TAKE APPROXIMATELY 5 DAYS.
2. WORK PERFORMED IS FOR WATER IMPROVEMENTS.
3. WORK HOURS WILL BE FROM 7:00 A.M. TO 3:30 P.M.
4. TWENTY FOUR HOUR CONTACT FOR THIS PROJECT WILL BE:
BRIAN SNOWBALL (909) 921-7104



- THE APPLICATION OF THE SPECIFICATION FOR THE WORKSITE TRAFFIC CONTROL SHALL CONFORM TO THE STATE OF CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), CHAPTER 6 OF THE 2014 EDITION, THE WORK AREA TRAFFIC CONTROL HANDBOOK (WATCH MANUAL), LATEST EDITION, CALTRANS SPECIFICATIONS AND STANDARD PLANS, AND THE CITY OF RANCHO SANTA MARGARITA STANDARDS LATEST EDITIONS.
2. THE NAME AND PHONE NUMBER (24-HOUR AVAILABILITY) OF THE CONTRACTOR'S SAFETY COORDINATOR AND TRAFFIC CONTROL DEVICE MAINTENANCE INSPECTOR SHALL BE PROVIDED TO THE CITY INSPECTOR. ANY CHANGE IN THE ASSIGNED PERSONNEL OR PHONE NUMBER SHALL BE REPORTED IMMEDIATELY TO THE INSPECTOR. THE CONTRACTORS SAFETY COORDINATOR AND/OR TRAFFIC CONTROL DEVICE MAINTENANCE INSPECTOR SHALL MAKE PERIODIC INSPECTIONS OF TRAFFIC CONTROL DEVICES THROUGHTOUT THE DAY AND NIGHT TO INSURE THAT CONTROLS ARE PROPERLY LOCATED AND IN GOOD REPAIR. THE ABOVE PERSONNEL SHALL HAVE THE WORKSITE TRAFFIC CONTROL PLANS ON SITE AND AVAILABLE AT ALL TIMES.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR PERFORMING WORK FOR THE PROJECT TO INSTALL AND MAINTAIN THE TRAFFIC CONTROL DEVICES AS SHOWN HEREIN, AS WELL AS ANY SUCH ADDITIONAL TRAFFIC CONTROL DEVICES AS MAY BE REQUIRED BY THE CITY. THE TRAFFIC CONTROL PLAN INSTALLED SHALL PROVIDE FOR SAFE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH AND AROUND THE WORK AREA AND PROVIDE MAXIMUM PROTECTION AND SAFETY TO CONSTRUCTION WORKERS.
4. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN THEIR PROPER POSITION AT ALL TIMES AND SHALL BE REPAIRED, REPLACED, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY.
5. THE CITY OF RANCHO SANTA MARGARITA HAS THE RIGHT TO OBSERVE THE TRAFFIC CONTROL IN USE AND TO MAKE ANY CHANGES DEEMED NECESSARY BY FIELD CONDITIONS. ANY CHANGES SHALL SUPERSEDE THESE PLANS AND WILL BE DONE SOLELY AT THE CONTRACTORS EXPENSE.
6. ORANGE COLORED ENGINEERING GRADE REFLECTIVE OR BRIGHTER SHEETING SHALL BE USED AS THE BACKGROUND FOR ALL CONSTRUCTION MAINTENANCE WORK ZONE AND WARNING SIGNS USED WITHIN THE WORKSITE TRAFFIC CONTROL AREA. IF NOT SPECIFIED BY THE STANDARDS LISTED IN NOTE 1 ON THIS PLAN.
7. ALL TEMPORARY TRAFFIC CONTROL DEVICES SHALL BE REMOVED FOLLOWING THE COMPLETION OF THE CONSTRUCTION PHASE. THE PERMANENT TRAFFIC CONTROL DEVICES SHALL BE RESTORED BY THE CONTRACTOR AS OPERATIONS REVERT BACK TO THE DEVICES' INTENDED USE.
8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ACCESS TO ALL PUBLIC AND PRIVATE DRIVEWAYS IN THE CONSTRUCTION AREA NOT RELATED TO THE SPECIFIC PROJECT. CONTRACTOR IS TO NOTIFY NEIGHBORING BUSINESSES 72-HOURS IN ADVANCE OF CONSTRUCTION.
9. ALL NECESSARY ENCROACHMENTS PERMITS SHALL BE OBTAINED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
10. ALL CONFLICTING SIGNS SHALL BE COVERED.
11. THE CONTRACTOR SHALL REMOVE ANY EXCESS AND/OR CONFLICTING STRIPING AND PAVEMENT MARKERS AS NECESSARY BY GRINDING.
12. THE CONTRACTOR SHALL PLATE OPEN TRENCHES AT THE END OF EACH WORK DAY PER CALTRANS STEEL PLATE BRIDGING UTILITY PROVISIONS TR-0157.

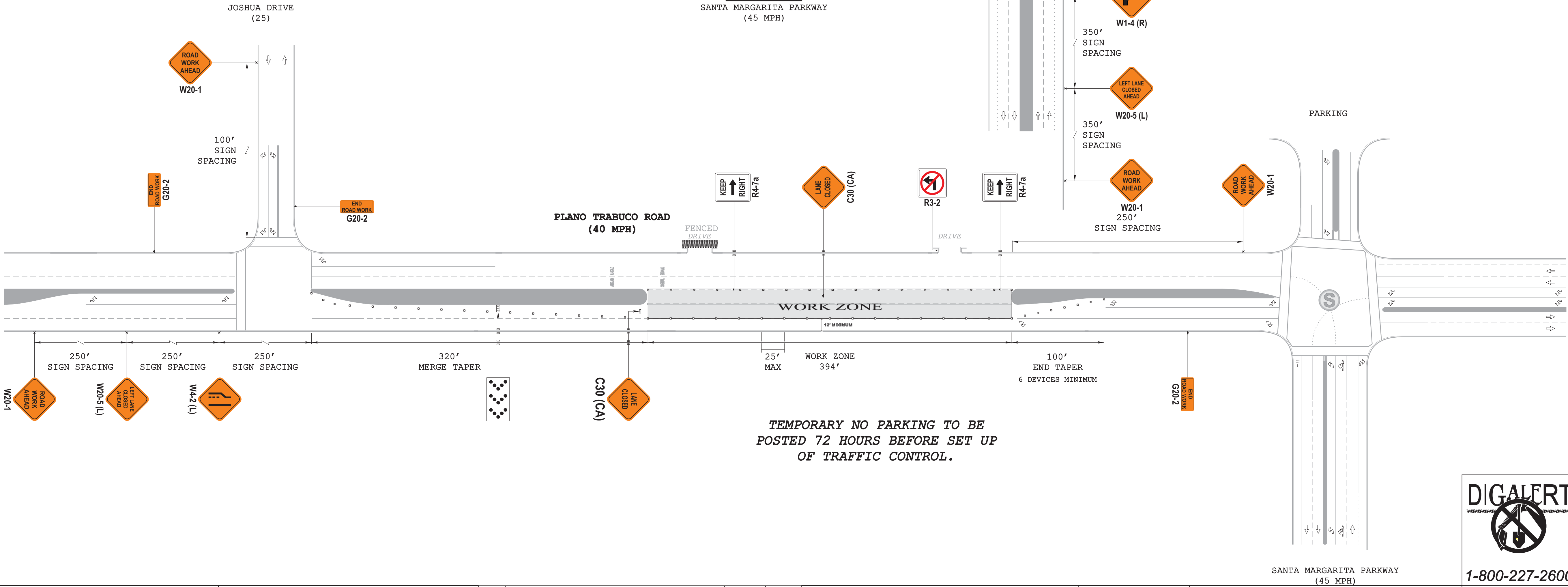
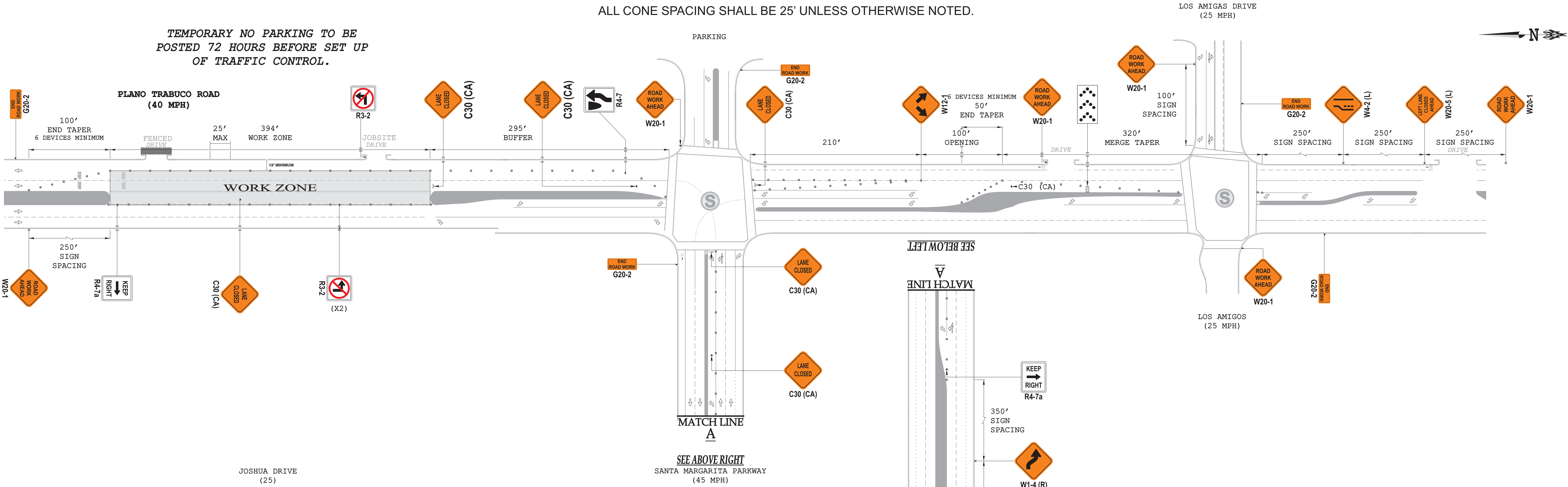
SHEET NUMBER	DESCRIPTION
1.	TITLE SHEET
2.	<p>A. TEMPORARY TRAFFIC CONTROL PLANS MERGING NORTHBOUND NUMBER ONE LANE INTO NUMBER TWO LANE ON PLANO TRABUCO ROAD BETWEEN SANTA MARGARITA PARKWAY AND JOSHUA DRIVE.</p> <p>B. TEMPORARY TRAFFIC CONTROL PLANS MERGING NORTHBOUND NUMBER TWO LANE INTO NUMBER ONE LANE ON PLANO TRABUCO ROAD BETWEEN SANTA MARGARITA PARKWAY AND JOSHUA DRIVE.</p>
3.	<p>TEMPORARY TRAFFIC CONTROL PLANS MERGING THE NUMBER ONE SOUTHBOUND LANE INTO THE NUMBER TWO LANE BETWEEN SANTA MARGARITA PARKWAY AND JOSHUA DRIVE.</p>



LOCATION MAP

[illegible]

SEE PAGE ONE FOR CONTRACTOR NOTES.
ALL CONE SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.




TEMPORARY NO PARKING TO BE
POSTED 72 HOURS BEFORE SET UP
OF TRAFFIC CONTROL.

PROJECT NAME: TRACT # 17805		REVIEW BY CITY STAFF		CITY OF RANCHO SANTA MARGARITA DEPARTMENT OF PUBLIC WORKS		SEAL		TPR TRAFFIC SOLUTIONS 10763 POPLAR AVE FONTANA, CA 92337 t: (855) 326-5953 f: (909) 350-8950 Calif. Contractors Lic. 787313 C31 / D42 Toll free: 866-537-1260		APPROVED BY: TRAFFIC ENGINEER		DATE: RCE NO.	
PRIME CONTRACTOR: KANA SUBSURFACE ENGINEERING		OFFICE ENGINEERING DIVISION MANAGER		ENGINEER, TRAFFIC DIVISION		DATE		APPROVED BY:		DESIGNED CP		RECOMMENDED	
PHONE: (909) 204-5970		DATE: 10-16-2015		TPR'S LICENCE # 787313 C31/D42		BRANCH INLAND EMPIRE		SPECIAL DISTRICTS		DRAWN CP		SHEET 2 OF 3	
NOTES:		ORIGINAL		NO.		DESCRIPTION OF REVISION		DATE		CITY APPROVED		DRAWING NO. 15 — 122	

ALL CONE SPACING SHALL BE 25' UNLESS OTHERWISE NOTED.



PROJECT NAME: TRACT # 17805		REVIEW BY CITY STAFF								CITY OF RANCHO SANTA MARGARITA DEPARTMENT OF PUBLIC WORKS		SEAL		 TPR TRAFFIC SOLUTIONS 10763 POPLAR AVE FONTANA, CA 92337 t: (855) 326-5953 f: (909) 350-8950 Calif. Contractors Lic. 787313 C31 / D42 Toll free: 866-537-1260		APPROVED BY: _____ DATE: _____ TRAFFIC ENGINEER _____ RCE NO. _____	
PRIME CONTRACTOR: KANA SUBSURFACE ENGINEERING		OFFICE _____ INITIAL _____ DATE _____												DESIGNED _____ CP _____		RECOMMENDED _____	
		ENGINEERING DIVISION MANAGER _____												DRAWN _____ CP _____		SHEET _____ 3 OF 3	
		LAND DEVELOPMENT _____														DRAWING NO. _____ 15 - 122	
		PLANNING _____															
PHONE: _____		DATE: 10-16-2015		TPR'S LICENSE # 787313 C31/D42		BRANCH INLAND EMPIRE		TRANSPORTATION _____									
(909) 204-5970		NOTES: _____		ORIGINAL				PARKS AND COMMUNITY SERVICES _____									
								SPECIAL DISTRICTS _____									
								STORM WATER MANAGEMENT PRGM _____									
								NO. _____		DESCRIPTION OF REVISION _____		DATE _____		CITY APPROVED _____			

CITY OF RANCHO SANTA MARGARITA GRADING NOTES :

- ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF RANCHO SANTA MARGARITA GRADING ORDINANCE, THE CITY ENGINEER AND ANY SPECIAL REQUIREMENTS OF THE PERMIT.
- NO GRADING SHALL BE STARTED WITHOUT FIRST NOTIFYING THE CITY ENGINEER 48 HOURS PRIOR TO COMMENCEMENT OF WORK.
- PRIOR TO ANY CLEARING, BRUSHING, OR DEMOLITION, APPROVAL MUST BE OBTAINED FROM THE CITY BUILDING OFFICIAL.
- THE PERMITTEE OR HIS/HER AGENT SHALL NOTIFY THE CITY ENGINEER WHEN THE GRADING OPERATION IS READY FOR EACH OF THE FOLLOWING INSPECTIONS.
 - INITIAL INSPECTION. WHEN THE PERMITTEE IS READY TO BEGIN WORK, BUT NOT LESS THAN 48 HOURS BEFORE ANY GRADING OR BRUSHING IS STARTED.
 - TOE INSPECTION. AFTER THE NATURAL GROUND IS EXPOSED AND PREPARED TO RECEIVE FILL, BUT BEFORE FILL IS PLACED.
 - EXCAVATION INSPECTION. AFTER THE EXCAVATION IS STARTED, BUT BEFORE THE VERTICAL DEPTH OF THE EXCAVATION EXCEEDS 10 FEET.
 - FILL INSPECTION. AFTER THE FILL PLACEMENT IS STARTED, BUT BEFORE THE VERTICAL HEIGHT OF THE FILL EXCEEDS 10 FEET.
 - DRAINAGE DEVICE INSPECTION. AFTER FORMING OF TERRACE DRAINS, DOWNDRAINS OR AFTER PLACEMENT OF PIPE SUBDRAINS, BUT BEFORE ANY CONCRETE OR FILTER MATERIAL IS PLACED.
 - ROUGH GRADING. WHEN ROUGH GRADING HAS BEEN COMPLETED, THIS INSPECTION MAY BE CALLED FOR AT THE COMPLETION OF ROUGH GRADING WITHOUT THE NECESSITY OF THE CITY ENGINEER HAVING PREVIOUSLY REVIEWED AND APPROVED THE REPORTS.
 - FINAL. WHEN ALL WORK, INCLUDING INSTALLATION OF ALL DRAINAGE STRUCTURES AND OTHER PROTECTIVE DEVICES HAS BEEN COMPLETED AND THE AS-GRADED PLAN, PROFESSIONAL CERTIFICATIONS AND THE REQUIRED REPORTS HAVE BEEN SUBMITTED.
- CUT SLOPES SHALL BE NO LONGER THAN 2 HORIZONTAL TO 1 VERTICAL.
- FILL SLOPES SHALL BE NO STEEPER THAN 2 HORIZONTAL TO 1 VERTICAL AND SHALL HAVE NOT LESS THAN 90% COMPACTION UP TO THE FINISHED SURFACE.
- FILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM RELATIVE COMPACTION OF 90%. TESTING SHALL BE IN ACCORDANCE WITH ASTM TEST METHODS D1556, D2937, D2922 AND D3017.
- AREAS TO RECEIVE FILL SHALL BE PROPERLY PREPARED AND APPROVED BY THE CITY INSPECTOR AND SOILS ENGINEER PRIOR TO PLACING OF FILL.
- FILLS SHALL BE BENCHED INTO COMPETENT MATERIAL AS PER DETAIL ON PLAN.
- ALL EXISTING FILLS SHALL BE APPROVED BY THE CITY ENGINEER OR REMOVED BEFORE ANY ADDITIONAL FILLS ARE ADDED.
- FILL AREAS SHALL BE CLEARED OF ALL VEGETATION AND DEBRIS, SCARIFIED TO DEPTH OF 12" AND INSPECTED BY THE CITY INSPECTOR AND THE SOIL TESTING AGENCY PRIOR TO THE PLACING OF FILL.
- ANY EXISTING IRRIGATION LINES AND CISTERNS SHALL BE REMOVED OR CRUSHED IN PLACE AND BACKFILLED, AND APPROVED BY THE CITY ENGINEER AND SOILS ENGINEER.
- ALL SLOPES IN EXCESS OF FIVE (5) FEET IN HEIGHT (MEASURED VERTICALLY) SHALL BE PLANTED AND IRRIGATED TO THE SATISFACTION OF THE CITY ENGINEER. THIS WORK SHALL COMMENCE IMMEDIATELY AFTER ROUGH GRADE APPROVAL OR AT A TIME DIRECTED BY THE CITY ENGINEER.
- THE STOCKPILING OF EXCESS MATERIAL SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO EXCAVATION.
- DESIGN ENGINEER, AFTER ROUGH GRADE COMPLETION, SHALL CERTIFY THAT PAD ELEVATIONS ARE AS PER THE APPROVED GRADING PLAN OR APPROVED REVISED GRADING PLAN, IF CHANGES TO OBTAIN DIRT BALANCE ARE MADE DURING GRADING OPERATION.
- ALL TRENCH BACKFILLS SHALL BE TESTED AND CERTIFIED BY THE SIGHT SOILS ENGINEER PER THE GRADING CODE.
- THE ENGINEERING GEOLOGIST AND SOILS ENGINEER SHALL, AFTER CLEARING AND PRIOR TO THE PLACEMENT OF FILL CANYONS, INSPECT EACH CANYON FOR AREAS OF ADVERSE STABILITY AND TO DETERMINE THE PRESENCE OR ABSENCE OF SUB-SURFACE WATER OR SPRING FLOW. IF NEEDED, DRAINS WILL BE DESIGNED AND CONSTRUCTED PRIOR TO THE PLACEMENT OF FILL IN EACH RESPECTIVE CANYON.
- SUBDRAIN OUTLETS SHALL BE COMPLETED AT THE BEGINNING OF THE SUBDRAIN CONSTRUCTION.
- THE EXACT LOCATION OF THE SUBDRAINS SHALL BE SURVEYED IN THE FIELD FOR LINE AND GRADE.
- ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY AN ENGINEERING GEOLOGIST TO DETERMINE IF ANY SLOPE STABILITY PROBLEM EXISTS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL RECOMMEND NECESSARY TREATMENT TO THE CITY ENGINEER FOR APPROVAL.
- WHERE SUPPORT OR BUTTRESSING OF CUT AND NATURAL SLOPES IS DETERMINED TO BE NECESSARY BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER, THE SOILS ENGINEER WILL SUBMIT DESIGN LOCATIONS AND CALCULATIONS TO THE CITY ENGINEER PRIOR TO THE CONSTRUCTION. THE ENGINEERING GEOLOGIST AND SOILS ENGINEER WILL INSPECT THE STABILITY OF THE SLOPE AND ADJACENT STRUCTURES UPON COMPLETION.
- WHEN CUT PADS ARE BROUGHT TO NEAR GRADE THE ENGINEERING GEOLOGIST SHALL DETERMINE IF THE BEDROCK IS EXTENSIVELY FRACTURED OR FAULTED AND WILL READILY TRANSMIT WATER. IF CONSIDERED NECESSARY BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER, A COMPACTED FILL BLANKET WILL BE PLACED.
- THE ENGINEERING GEOLOGIST SHALL PERFORM PERIODIC INSPECTIONS, SUBMIT A COMPLETE REPORT AND MAP UPON COMPLETION OF THE ROUGH GRADING.
- THE FINAL COMPACTION REPORT AND CERTIFICATION FROM THE SOILS ENGINEER SHALL CONTAIN THE TYPE OF FIELD-TESTING PERFORMED, EACH TEST SHALL BE IDENTIFIED WITH THE METHODS OF OBTAINING THE IN-PLACE DENSITY, WHETHER SAND CONE OR DRIVE RING, AND SHALL BE SO NOTED FOR EACH TEST. SUFFICIENT MAXIMUM DENSITY DETERMINATIONS SHALL BE PERFORMED TO VERIFY THE ACCURACY OF THE MAXIMUM DENSITY CURVES USED BY THE FIELD TECHNICIAN.
- THE SOILS ENGINEER AND ENGINEERING GEOLOGIST SHALL BE PERFORM SUFFICIENT TESTS AND INSPECTIONS AND BE AVAILABLE DURING GRADING AND CONSTRUCTION TO VERIFY COMPLIANCE WITH THE PLANS, SPECIFICATION, AND CODE WITHIN THEIR PURVIEW.
- THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR THE QUALITY OF HIS WORK AND SHALL SUBMIT A STATEMENT OF COMPLIANCE WITH THE APPROVED GRADING PLANS PRIOR TO FINAL APPROVAL.
- DUST SHALL BE CONTROLLED BY WATERING.
- SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.
- THE LOCATION AND PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE PERMITTEE.
- APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING THE GRADING PROJECT.
- ALL CONCRETE AND GUNITE SHALL BE TREATED WITH A MOISTURE LOSS RETARDANT FOR CURING.
- ANY WATER WELLS SHALL BE ABANDONED IN COMPLIANCE WITH SPECIFICATIONS APPROVED BY THE CITY BUILDING OFFICIAL.
- ANY OIL WELLS SHALL BE ABANDONED IN COMPLIANCE WITH THE ORANGE COUNTY OIL CODE TO THE APPROVAL OF THE CITY BUILDING OFFICIAL.
- ANY EXISTING GEOSPILLS AND SEPTIC TANKS SHALL BE ABANDONED IN COMPLIANCE WITH THE UNIFORM PLUMBING CODE TO THE APPROVAL OF THE CITY BUILDING OFFICIAL.
- PRIOR TO FINAL APPROVAL, THE DESIGN CIVIL ENGINEER SHALL CERTIFY TO THE CITY ENGINEER THE NUMBER OF YARDS OF CUT, FILL AND IMPORT MOVED DURING THE GRADING OPERATION.
- THE PERMITTEE SHALL COMPLY WITH THE GRADING CODE REQUIREMENTS WHEN AN EXCESS OF 5,000 CUBIC YARDS OF EARTH IS MOVED ON PUBLIC ROADWAYS FROM THE SITE OF EARTH GRADING OPERATION.
- SLOPES SHALL NOT EXCEED 10 FEET IN HEIGHT UNLESS APPROVED BY THE CITY PLANNING COMMISSION.

PRECISE GRADING PLANS FOR TRACT NO. 17805 CITY OF RANCHO SANTA MARGARITA

CITY OF RANCHO SANTA MARGARITA GRADING NOTES :
Cont.

- ALL PUBLIC ROADWAYS MUST BE CLEANED DAILY OF ALL DIRT, MUD AND DEBRIS DEPOSITED ON THEM AS A RESULT OF THE GRADING OPERATION. CLEANING IS TO BE COMPLETED TO THE SATISFACTION OF THE CITY ENGINEER.
- ALL CONSTRUCTION VEHICLES OR EQUIPMENT, FIXED OR MOBILE, OPERATED WITHIN 1,000 FEET OF DWELLING SHALL BE EQUIPPED WITH PROPERLY OPERATING AND MAINTAINED MUFFLERS.
- ALL OPERATIONS SHALL COMPLY WITH ORANGE COUNTY CODIFIED ORDINANCES, DIVISION 6 (NOISE CONTROL).
- STOCKPILING AND/OR VEHICLE STAGING AREAS SHALL BE LOCATED AS FAR AS PRACTICABLE FROM DWELLINGS AND WITHIN THE LIMITS OF THE GRADING PERMIT.
- GRADING OPERATIONS INCLUDING MAINTENANCE OF EQUIPMENT WITHIN 1 1/2 MILES OF HUMAN OCCUPANCY SHALL NOT BE CONDUCTED BETWEEN THE HOURS OF 8 P.M.-7 A.M. DAILY, OR ON A SUNDAY, OR ON A FEDERAL HOLIDAY.
- SEDIMENT FROM AREAS DISTURBED BY CONSTRUCTION SHALL BE RETAINED ON SITE USING STRUCTURAL DRAINAGE CONTROLS TO THE MAXIMUM EXTENT PRACTICABLE.
- STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO MINIMIZE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND.
- CONSTRUCTION-RELATED MATERIALS, WASTES, SPILLS OR RESIDES SHALL BE RETAINED ON SITE TO MINIMIZE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTY BY WIND OR RUNOFF.
- RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT CONSTRUCTION SITES UNLESS TREATED TO REMOVE SEDIMENT AND OTHER POLLUTANTS.
- ALL CONSTRUCTION CONTRACTOR AND SUBCONTRACTOR PERSONNEL ARE TO BE MADE AWARE OF THE REQUIRED BEST MANAGEMENT PRACTICES AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS.
- AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED IN TRASH OR RECYCLE BINS.
- CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT AN ANTICIPATED STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OF MATERIAL OTHER THAN STORMWATER ARE ALLOWED ONLY WHEN NECESSARY FOR PERFORMANCE AND COMPLETION OF CONSTRUCTION PRACTICES AND WHERE THEY DO NOT CAUSE OR CONTRIBUTE TO A VIOLATION OF ANY WATER QUALITY STANDARD; CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION OR NUISANCE; OR CONTAIN A HAZARDOUS SUBSTANCE IN A QUANTITY REPORTABLE UNDER FEDERAL REGULATIONS 40 CFR PARTS 117 AND 302.

GENERAL NOTES:

- ALL WORK DETAILED ON THESE PLANS SHALL BE CONSTRUCTED IN ACCORDANCE WITH "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (LATEST EDITION AND SUPPLEMENTS), THE CALIFORNIA BUILDING CODE (FOR EXCAVATION AND GRADING), AMERICAN PUBLIC WORKS ASSOCIATION (APWA) STANDARD PLANS, CALIFORNIA BUILDING CODE (CBC) (LATEST EDITION IDENTIFIED BY ARCHITECT OF RECORD) AND CITY OF RANCHO SANTA MARGARITA STANDARD PLANS.
- IF AT ANY TIME DURING THE GRADING AND EXCAVATION OPERATIONS, UNFAVORABLE SOILS CONDITIONS ARE ENCOUNTERED, THE SOILS ENGINEER SHALL BE NOTIFIED AND THE WORK SHALL STOP UNTIL APPROVED CORRECTIVE MEASURES ARE OBTAINED.
- ALL GRADES AND CONTOURS INDICATED ON THE PLANS ARE TO FINISHED SURFACE, AND NOT ROUGH GRADES. CONTRACTOR SHALL SUBTRACT THE STRUCTURAL THICKNESS OF PAVEMENTS AND TOP-SOILS THICKNESS IN LANDSCAPED AREAS, TO OBTAIN DESIRED ROUGH GRADES.
- TEMPORARY EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED PER APPLICABLE AGENCY REQUIREMENTS, THROUGHOUT DURATION OF CONSTRUCTION.
- ALL GRADING SLOPES SHALL BE PLANTED AND SPRINKLERED.
- STANDARD 12" HIGH BERM IS REQUIRED AT TOP OF ALL GRADED SLOPES.
- NO FILL TO BE PLACED, UNTIL THE GEOTECHNICAL ENGINEER HAS INSPECTED AND APPROVED THE BOTTOM EXCAVATION PER GEOTECHNICAL NOTES HEREON.
- DURING CONSTRUCTION ALL CONCENTRATED DRAINAGE MUST BE CONDUCTED TO THE STREET VIA APPROVED NON-EROSIVE DEVICES OR TO EXISTING STORM DRAIN SYSTEM.
- ALL DEBRIS AND FOREIGN MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT APPROVED DISPOSAL SITES. THE CONTRACTOR SHALL OBTAIN NECESSARY PERMITS FOR THE TRANSPORTATION OF MATERIAL TO AND FROM THE SITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE HIRING OF A LICENSED LAND SURVEYOR TO PERFORM STAKING FOR IMPROVEMENTS SHOWN ON THESE PLANS.
- STRAIGHT GRADE SHALL BE MAINTAINED BETWEEN CONTOUR LINES AND SPOT ELEVATIONS UNLESS OTHERWISE SHOWN ON THE PLANS.
- DIMENSIONS TO PIPELINES ARE TO CENTERLINE UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE IN FEET OR DECIMAL THEREOF.
- ALL CURB DIMENSIONS AND RADII ARE TO BOTTOM OF CURB FACE.
- CONTRACTOR SHALL CONTACT UNDERGROUND SERVICE ALERT (USA) AT (800-422-4133) PRIOR TO ANY EXCAVATION.
- CONTRACTOR SHALL COORDINATE REMOVAL OR RELOCATION OF ANY PUBLIC UTILITY LINES WITH THEIR RESPECTIVE OWNERS. SEPARATE PERMITS MAYBE REQUIRED.
- THE CONTRACTOR SHALL REPLACE ALL EXISTING IMPROVEMENTS DAMAGED DURING CONSTRUCTION AT HIS OWN EXPENSE AND TO THE SATISFACTION OF THE OWNER. MATCH EXISTING MATERIALS, SURFACE TREATMENT, AND COLORS. SAME SHALL APPLY TO PERMANENT UTILITY TRENCH RESURFACING.
- STORM DRAINAGE SYSTEMS SHOWN ON THESE PLANS HAVE BEEN DESIGNED FOR THE FINAL SITE CONDITION AT COMPLETION OF THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ADEQUATE DRAINAGE OF THE SITE, DURING INTERIM CONDITIONS OF CONSTRUCTION.
- CUT AND FILL SLOPES SHALL BE NO STEEPER THAN TWO HORIZONTAL TO ONE VERTICAL.
- ANY TEMPORARY STOCKPILING OF EXCESS MATERIAL ON SITE SHALL BE APPROVED BY THE OWNER AND THE CONSTRUCTION MANAGER, INCLUDING PROTECTION AND EROSION CONTROL, PRIOR TO EXCAVATION.
- SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE DURING THE CONSTRUCTION PERIOD.
- CONTRACTORS ARE RESPONSIBLE FOR LOCATION AND PROTECTING UTILITIES.
- NO PAINT, PLASTER, CEMENT, SOIL, MORTAR OR OTHER RESIDUAL SHALL NOT BE ALLOWED TO ENTER STREETS, CURBS, GUTTERS OR STORM DRAINS. ALL MATERIAL AND WASTE SHALL BE REMOVED FROM THE SITE.
- CONTRACTOR SHALL COORDINATE UTILITY CONNECTIONS WITH RESPECTIVE OWNERS AND UTILITY COMPANIES. SEPARATE PERMITS AND FEES MAY BE REQUIRED.

NOTICE TO CONTRACTORS:

- PRIOR TOP COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL JOIN CONDITIONS FOR GRADING AND DRAINAGE WORK. IF CONDITIONS DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND SHALL NOT BEGIN CONSTRUCTION UNTIL THE CHANGED CONDITIONS HAVE BEEN EVALUATED BY THE ENGINEER.
- THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND UTILITY INFORMATION SHOWN ON THESE PLANS HAVE BEEN OBTAINED FROM A REVIEW OF AVAILABLE RECORD DATA. NO REPRESENTATION IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SAID UTILITY INFORMATION. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO PROTECT THE UTILITY LINES SHOWN AND ANY OTHER LINES NOT OF RECORD OR NOT SHOWN ON THESE PLANS.
- THE CONTRACTOR FURTHER SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND SHALL NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL DEFEND INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
- THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PLANS, THE SOILS AND/OR GEOLOGY REPORTS, AND THE SITE CONDITIONS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS AND SPECIFICATIONS PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR THE ENGINEER, PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND NOT TO THE EXPENSE OF THE OWNER OR ENGINEER.
- ALL CHANGES TO THE CONSTRUCTION DOCUMENTS FOR THIS PROJECT SHALL BE DONE IN WRITING REVIEWED AND APPROVED BY THE ENGINEER OF RECORD AND DSA PRIOR TO BEGINNING WORK. THE ENGINEER SHALL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES OR USES OF THE CONSTRUCTION DOCUMENTS.
- SHOULD CONFLICTING INFORMATION BE FOUND ON THE PLANS THE CONTRACTOR SHALL NOTIFY THE PROJECT ARCHITECT OR ENGINEER BEFORE PROCEEDING WITH THE WORK IN QUESTION.
- THE CONTRACTOR SHALL OBTAIN AN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.) PERMIT FROM THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY PRIOR TO THE CONSTRUCTION OF TRENCHES OR EXCAVATIONS WITH ARE 5 FEET OR DEEPER WHERE A PERSON IS REQUIRED TO DESCEND.
- NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
- NO CONSTRUCTION MATERIAL SHALL BE STAGED OR STORED WITHIN THE PUBLIC RIGHT-OF-WAY.

STORMWATER POLLUTION CONTROL:

- TEMPORARY EROSION CONTROL SHALL BE INSTALLED AT ALL TIMES DURING CONSTRUCTION. BEST MANAGEMENT PRACTICES (BMPs) TO BE INSTALLED MAINTAINED, PREPARED, AS REQUIRED BY THE CURRENT GENERAL CONTRACTOR. PERMIT & PROJECT STORM WATER POLLUTION PREVENTION PLANS (SWPPP) TO BE PROVIDED TO CONTRACTOR BY ENGINEER.
- ADJUST, REPAIR, AND MAINTAIN ON-SITE BMPs TO SATISFACTION OF THE PROJECT QUALIFIED SWPPP PRACTITIONER (QSP).
- GROUND WATERING SHALL BE REQUIRED DURING CONSTRUCTION, PURSUANT TO SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT (SCAQMD) RULE 403.
- ENGINES MUST BE MAINTAINED IN GOOD CONDITION ACCORDING TO MANUFACTURERS' SPECIFICATIONS. BOTH GRADING AND CONSTRUCTION ACTIVITIES ARE TO BE SCHEDULED TO EVEN OUT EMISSION PEAKS.
- THE SITE SHALL BE FENCED TO REDUCE WIND-BLOWN DUST. CONSTRUCTION MATERIALS NOT STORED BEHIND THE TEMPORARY FENCES SHALL BE COVERED. ALL STORED SOILS AND SAND SHALL BE COVERED OR TREATED WITH SOIL BINDERS, WHETHER INSIDE OR OUTSIDE THE TEMPORARY WALL. ALL DEBRIS SHALL BE CLEANED UP DAILY AND PUT IN A DUMPSTER WHICH SHALL HAVE A LID AND THE LID SHALL BE SECURED AT THE END OF THE DAY.
- EVERY REASONABLE PRECAUTION SHALL BE TAKEN TO MINIMIZE FUGITIVE DUST EMISSIONS FROM WRECKING, EXCAVATION, GRADING, CLEARING OF LAND AND SOLID WASTE DISPOSAL OPERATIONS.
- TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED TO THE SATISFACTION OF THE INSPECTOR. THEY SHALL BE RELOCATED OR MODIFIED AS AND WHEN THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
- ALL LOOSE SOIL AND DEBRIS SHALL BE REMOVED FROM THE STREET AREAS UPON STARTING OPERATIONS AND PERIODICALLY THEREAFTER DIRECTED BY THE INSPECTOR.

- WHEN THE INSPECTOR SO DIRECTS, A 12-INCH BERM SHALL BE MAINTAINED ALONG THE TOP OF THE SLOPE OF THOSE FILLS, ON WHICH GRADING IS NOT IN PROGRESS.
- STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON. NECESSARY MATERIAL SHALL BE AVAILABLE ON SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR ANY DAMAGED EROSION CONTROL MEASURES WHEN RAIN IS IMMINENT, OR WHEN THE INSPECTOR OF RECORD SO ORDERS.
- PLACEMENT OF DEVICES TO REDUCE EROSION DAMAGE WITHIN THE PROJECT MUST BE SHOWN AND UPDATED ON STORM WATER POLLUTION PREVENTION PLAN.
- VELOCITY CHECK DAMS SHALL BE PROVIDED IN ALL UNPAVED GRADED CHANNELS AT THE INTERVALS INDICATED BELOW:

GRADE OF CHANNEL	INTERVAL BETWEEN CHECK DAMS
LESS THAN 3% TO 6% OVER 6%	100 FEET
LESS THAN 3%	50 FEET
3% TO 6% OVER 6%	25 FEET
- AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING BASINS, AND ALL GRADED SLOPE.
- SURFACE PROTECTION MEASURES DAMAGED DURING A RAINSTORM SHALL ALSO BE IMMEDIATELY REPAIRED.
- THE FACES OF CUT AND FILL SLOPES SHALL BE PREPARED AND MAINTAINED TO CONTROL AGAINST EROSION. EROSION PROTECTION SHALL BE EFFECTIVE PLANTING OF ALL SLOPES IN EXCESS OF FIVE (5) FEET HIGH UNLESS OTHERWISE APPROVED BY THE GEOTECHNICAL ENGINEER. PLANTED SLOPES EXCEEDING FIFTEEN (15) FEET HIGH MAY REQUIRE AN ADEQUATE SPRINKLER SYSTEM, AS DETERMINED BY THE ENGINEER. THE SLOPE PROTECTION SHALL BE INSTALLED AS SOON AS PRACTICABLE AND PRIOR TO CALLING FOR FINAL INSPECTION.
- FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF SLOPE AT THE CONCLUSION OF EACH DAY.
- PROVIDE A PLASTIC COVER OVER THE SLOPE. PLACE GRAVEL BAGS ON TOP OF PLASTIC TO PREVENT THE PLASTIC COVER FROM MOVING, AS DIRECTED BY THE INSPECTOR OF RECORD.

ACCESSIBILITY NOTES:

- CALIFORNIA ACCESS COMPLIANCE, TITLE 24 CCR
- WALKS AND SIDEWALK SURFACE CROSS SLOPES SHALL NOT EXCESS 1/4" PER FOOT (2% GRADIENT) (SEC. 11338.7.1.3)
 - WHEN THE SLOPE IN THE DIRECTION OF TRAVEL OF ANY WALK EXCEEDS 1:20 (5% GRADIENT) IT SHALL COMPLY WITH THE PROVISIONS OF SECTION 11338.5 AS A PEDESTRIAN RAMP (SEC. 11338.7.3)
 - WALK AND SIDEWALK SURFACE WITH A SLOPE OF LESS THAN 6% GRADIENT SHALL BE AT LEAST AS SLIP-RESISTANT AS THAT DESCRIBED AS A MEDIUM SALTED FINISH. (SEC. 11338.7.1.1)
 - WALK AND SIDEWALK SURFACES WITH A SLOPE OF 6% OR MORE GRADIENT SHALL BE SLIP-RESISTANT. (SEC. 11338.7.1.2)
 - ALL WALKS WITH CONTINUOUS GRADIENTS SHALL HAVE LEVEL AREAS AT LEAST 5' IN LENGTH AT INTERVALS OF AT LEAST EVERY 400'. (SEC. 11338.7.6)
 - WALKS SHALL BE PROVIDED WITH A LEVEL AREA NOT LESS THAN 60" X 60" AT A DOOR OR GATE THAT SWINGS TOWARD THE WALK, AND NOT LESS THAN 48" WIDE X 44" DEEP AT A DOOR OR GATE THAT SWINGS AWAY FROM THE WALK. (SEC. 11338.7.5)
 - WALKS AND SIDEWALKS SHALL HAVE A CONTINUOUS COMMON SURFACE, NOT INTERRUPTED BY STEPS OR BY ABRUPT CHANGES IN LEVEL EXCEEDING 1/2", AND SHALL BE A MINIMUM OF 48" WIDE. (SEC. 11338.7.11)
 - WHEN ABRUPT CHANGES IN LEVEL NOT EXCEEDING 1/2" OCCUR, THEY SHALL BE IDENTIFIED BY A SLOPE NOT GREATER THAN 1 UNIT VERTICAL TO 2 UNITS HORIZONTAL (50%), EXCEPT THAT LEVEL CHANGES NOT EXCEEDING 1/4" MAY BE VERTICAL (SEC. 11338.7.4 AND FIGURE 11B-5E (C) AND (D))
 - ABRUPT CHANGES IN LEVEL ALONG ANY ACCESSIBLE ROUTE EXCEEDING 1/2" SHALL COMPLY WITH THE REQUIREMENTS FOR CURB RAMPS. (SEC. 11338.7.4)
 - WALKS SHALL EXTEND A MINIMUM OF 24" TO THE SIDE OF THE STRIKE EDGE OF A DOOR OR GATE THAT SWINGS TOWARD THE WALL (SEC. 11338.7.5)
 - WALKS, SIDEWALKS, AND PEDESTRIAN WAYS SHALL BE FREE OF GRATINGS WHEREVER POSSIBLE. GRID OPENING IN GRATINGS SHALL BE 1/2" WIDE MAX IN THE DIRECTION OF TRAFFIC FLOW. ELONGATED OPENINGS, IF PROVIDED SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL (SEC. 1023.2 AND FIG. 11B-7B (A) AND 11338.7.2)
 - ABRUPT CHANGES IN LEVEL, 4" OR MORE, EXCEPT BETWEEN A WALK OR A SIDEWALK AND ADJACENT STREETS OR DRIVEWAYS SHALL BE IDENTIFIED BY A 6" HIGH CURVES ABOVE WALK SURFACE
 - PROVIDE SIGNS DISPLAYING THE INTERNATIONAL SYMBOL OF ACCESSIBILITY AT VERY PRIMARY PUBLIC ENTRANCE AND AT EVERY MAJOR JUNCTION ALONG OR LEADING TO AN ACCESSIBLE ROUTE OF TRAVEL. SIGNS SHALL INDICATE THE DIRECTION TO ACCESSIBLE BUILDING ENTRANCES AND SHALL COMPLY WITH SECTION 1117B.5 (SEC. 1127B.3)

ASSESSORS PARCEL NUMBER:

833-731-01

EXISTING LAND USE:

VACANT LAND.

PROPOSED LAND USE:

36 SINGLE FAMILY CONDOMINIUMS.

SOILS ENGINEER CERTIFICATE

THIS GRADING AND RETAINING WALL PLAN HAS BEEN REVIEWED BY THE UNDERSIGNED AND FOUND TO BE IN CONFORMANCE WITH THE RECOMMENDATIONS AND SPECIFICATIONS OUTLINED IN THE SOILS REPORT PREPARED FOR THIS DEVELOPMENT.

COMPANY: PETRA GEOTECHNICAL, INC.
3190 AIRPORT LOOP, SUITE J1
COSTA MESA, CA. 92626
PHONE: (714) 449-8921 DATE: 1/21/16
ENGINEER: S. J. JAFFROUDI GEO02024

APPROVED BY:

NAME: E. (MAX) MAXIMOUS, P.E. DATE: 1/26/16
PUBLIC WORKS DIRECTOR/CITY ENGINEER
Recommend Approval By:
NAME: S. J. JAFFROUDI DATE: 1/21/2016



VICINITY MAP

NO SCALE

UTILITY PURVEYORS:

GAS: SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC: SOUTHERN CALIFORNIA EDISON COMPANY
TELEPHONE: GENERAL TELEPHONE
CABLE TV: TIME WARNER

FLOOD DATA:

THIS PROJECT IS IN ZONE X OF FEMA PANEL 06059C0339J
DATED 12/03/2009.

EARTHWORK QUANTITIES

CUT	FILL
raw cut	raw fill
3.5% overex *	overex replace
15,750 CY	140 CY
0.15 subs *	445 CY
less 3.5% shrinkage *	total fill
550 CY	11,005 CY
net cut	15,200 CY

Rough Grade Export: 4,195 CY
Vio Storage Export: 1,570 CY
Total Site Export: 5,765 CY

Notes:
* assumes overex to 18 inches below bottom of footings per soils report
* assumes 0.15 subsidence per soils report
* Approx. additional export for Water Quality Storage System: 1,570 CY"

NOTE: Projects generating a net Export in excess of 5,000 CY over public roads must meet the requirements of RSM Municipal Code, Section 10.12.260.

LEGEND

EXISTING	PROPOSED	DESCRIPTION	DESCRIPTION
FG (FG ELEV)	FG	FINISHED GRADE	INDICATES STEP IN FOUNDATION
FL (FL ELEV)	FL	FLOW LINE	FIRE HYDRANT
FS (FS ELEV)	FS	FINISHED SURFACE	SURFACE FLOW
TC (TC ELEV)	TC	TOP OF CURB	DOWNSPOUT LOCATION (CONNECT TO AREA DRAIN)
OF	OF	CURB FACE	PAD ELEVATION
GB	GB	GRADE BREAK	RETAINING WALL
LA	LA	LANDSCAPE AREA	LANDSCAPE AREA DRAINS
HP	HP	HIGH POINT	PATIO AREA DRAIN
FF	FF	FINISHED FLOOR	BASE OF STEP
OF	OF	GARAGE FLOOR	TOP OF STEP
RT	RT	TOP OF RETAINING	DECKED FOOTING
RS	RS	RISER(S)	PROTECT IN PLACE
BS	BS	BASE OF STEP	TOP OF FOOTING
TS	TS	TOP OF STEP	TOP OF WALL
DF	DF	DECKED FOOTING	TOP OF PLASTER
(PP)	(PP)	PROTECT IN PLACE	
TF	TF	TOP OF FOOTING	
TW	TW	TOP OF WALL	
TP	TP	TOP OF PLASTER	

SHEET INDEX:

DESCRIPTION	SHEET #
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DETAILS, CONSTRUCTION NOTES AND QUANTITIES	2
PRECISE GRADING PLANS	3-4
STORM DRAIN PLANS	5-6
STORM DRAIN PROFILES	7
STORM DRAIN DETAILS	8-9
EROSION CONTROL PLAN	10
ROUGH GRADING PLAN	11-12
MODEL SITE	13
RETAINING WALL PLAN	14
SIGNING AND STRIPING PLAN	15

GP 15-01

NO.	BY	INT	REVISIONS	R'APP'D	APP'D	DATE
9						
8						
7						
6						
5						
4						
3						
2						
1						

WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED

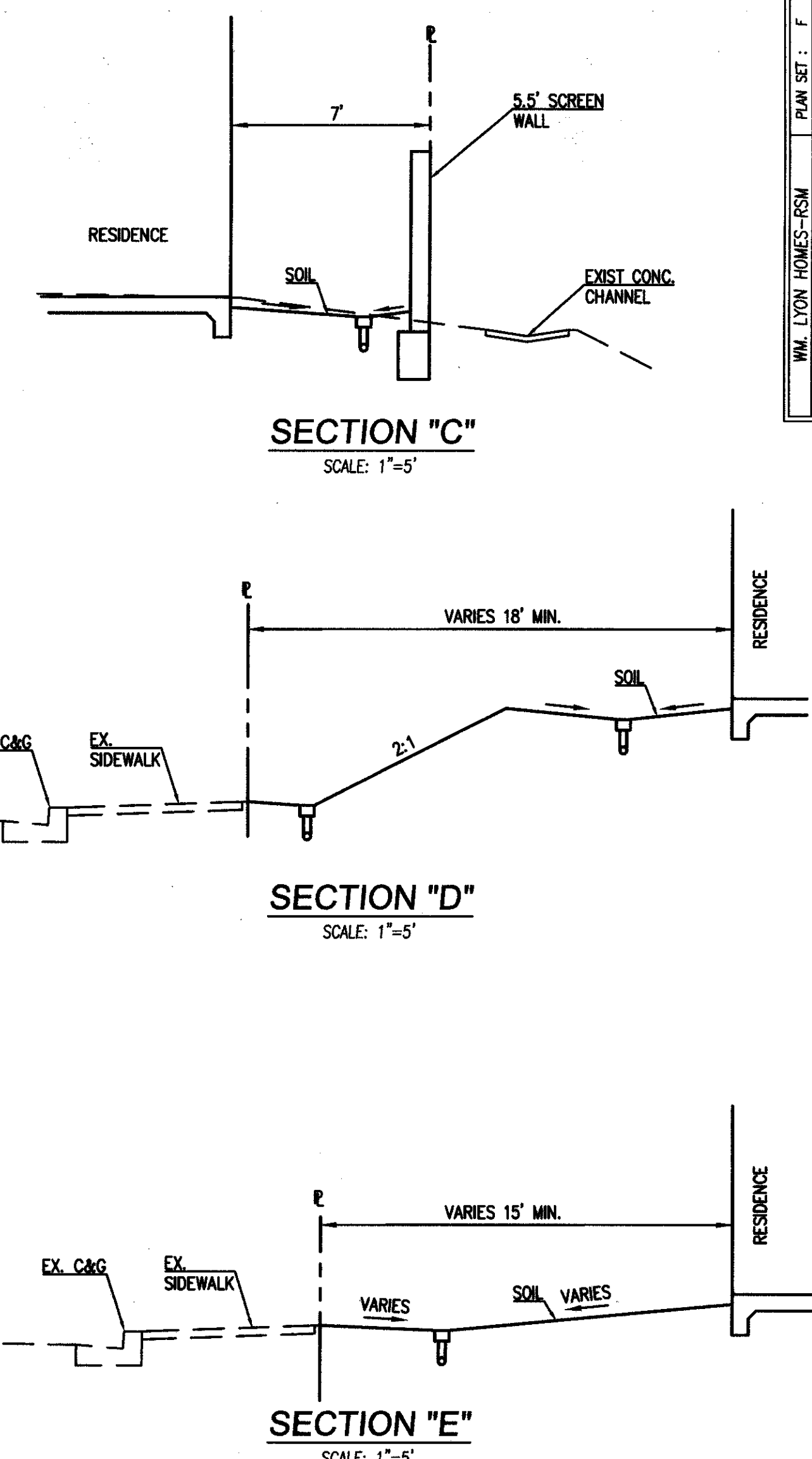
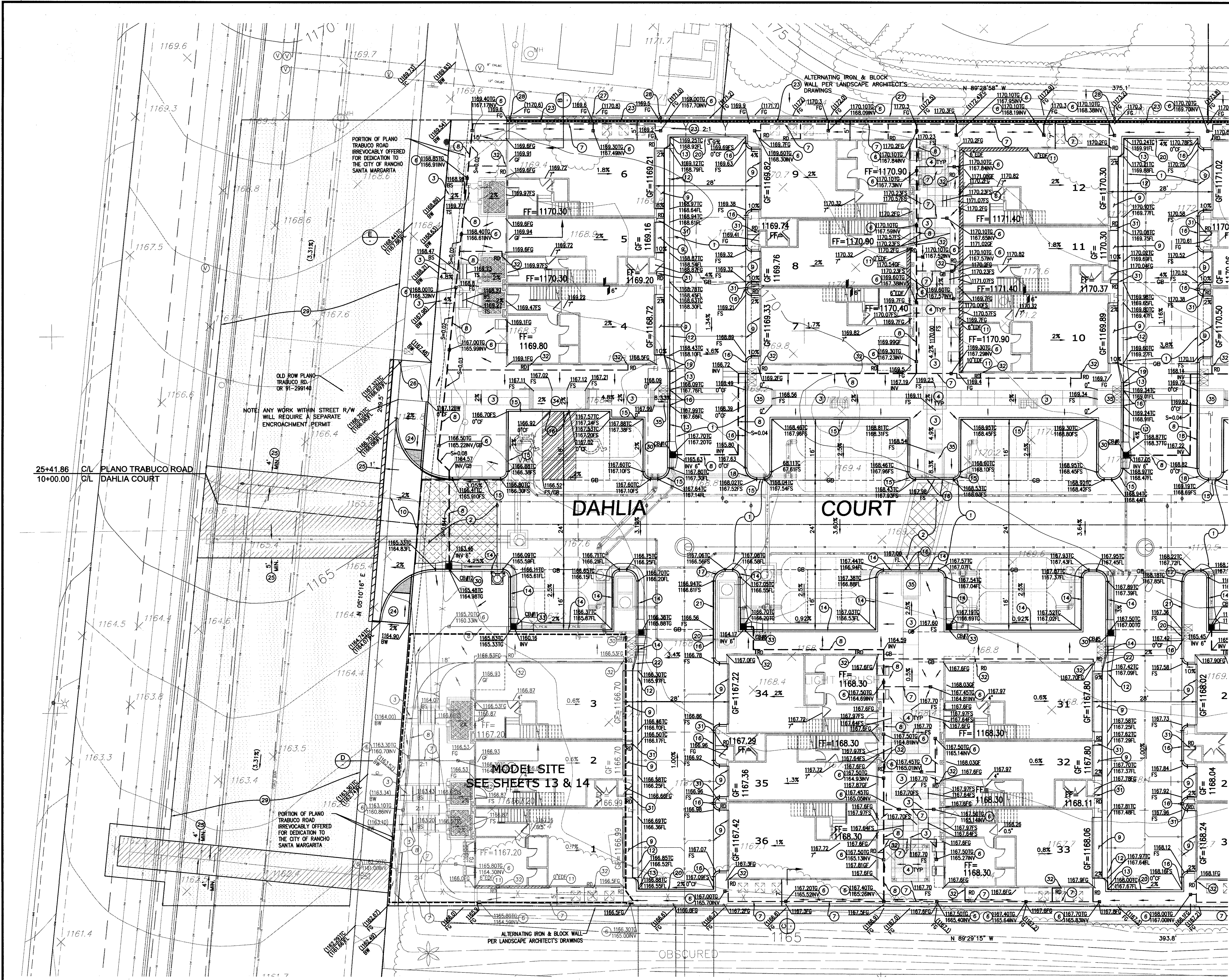
OWNER:	WILLIAM LYON HOMES
PROJECT ADDRESS:	4695 MACARTHUR COURT, 8th FLOOR NEWPORT BEACH, CALIFORNIA 92660 (949) 833-3600 - (949) 476-2178 FAX
	21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA.



CIVIL ENGINEER:	CHARLES HARTMAN & ASSOC.
	PLANNING - ENGINEERING - SURVEYING 27127 CALLE ARROYO, SUITE 100 SAN JUAN CAPISTRANO, CA 92675 (949) 661-6666 - (949) 661-6674 FAX
NAME:	RCE NO.: 29243 DATE: 1/20/16

BENCHMARK:	3W-59-83
	ELEV. 1191.336 (NAV 88) FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3W-59-83", SET IN THE NORTHWEST CORNER OF AN 11 FT. BY 8 FT. CONCRETE CATCH BASIN. MONUMENT IS LOCATED IN THE SOUTHEAST CORNER OF THE INTERSECTION OF ROBINSON RANCH ROAD AND PLANO TRABUCO ROADS, 39 FT. SOUTHERLY OF THE CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.
BASIS OF BEARINGS:	BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL CONTROL STATION GPS NO. 4515 AND GPS NO. 4522 BEING N 381°12'11" E PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

TRACT 17805	SHEET NO.:
PRECISE GRADING PLAN	1
	OF 15 SHEETS



CONSTRUCTION NOTES

1. CONST. AC OVER AB PER SOILS ENGINEER'S RECOMMENDATION.
2. CONST. DECORATIVE CONCRETE PAVEMENT PER LANDSCAPE ARCHITECT'S DRAWINGS.
3. CONST. P.C.C. SIDEWALK PER LANDSCAPE ARCHITECT'S DRAWINGS.
4. CONST. DECORATIVE WALKWAY PER LANDSCAPE ARCHITECT'S DRAWINGS.
5. CONST. 6" ATRIUM GRATE PER DETAIL, SHT. 2.
6. CONST. 4" PVC DRAIN PIPE SDR35.
7. CONST. 6" PVC DRAIN PIPE SDR35.
8. CONST. P.C.C. DRIVEWAY 4" THICK PER SOILS REPORT.
9. CONST. 24" P.C.C. DRIVEWAY APPROACH PER DETAIL ON SHT. 2.
10. CONST. EXTRA DEPTH FOOTING PER PLAN AND DETAIL ON SHT. 2.
11. CONST. 4" P.C.C. FLARED CURB AND GUTTER PER DETAIL ON SHT. 2.
12. CONST. 4" P.C.C. CURB AND GUTTER PER DETAIL ON SHT. 2.
13. CONST. 6" P.C.C. CURB AND GUTTER PER DETAIL ON SHT. 2.
14. CONST. 6" P.C.C. CURB ONLY PER DETAIL ON SHT. 2.
15. CONST. 6" P.C.C. CURB ONLY PER DETAIL ON SHT. 2.
16. CONST. 6" P.C.C. CURB ONLY PER DETAIL ON SHT. 2.
17. CONST. 6" P.C.C. CURB ONLY TO 4" P.C.C. CURB & GUTTER TRANSITION.
18. CONST. 6" P.C.C. CURB ONLY TO 6" P.C.C. CURB ONLY TRANSITION.
19. CONST. 4" P.C.C. CURB & GUTTER TO 4" P.C.C. FLARED CURB & GUTTER TRANSITION PER DETAIL, SHT. 2.
20. CONST. 4" P.C.C. CURB ONLY TO 6" P.C.C. CURB ONLY TRANSITION.
21. CONST. 4" P.C.C. CURB ONLY PER DETAIL ON SHT. 2.
22. CONST. 6" P.C.C. CURB & GUTTER TO 4" P.C.C. FLARED CURB & GUTTER TRANSITION PER DETAIL, SHT. 2.
23. CONST. RETAINING WALL PER PLAN AND STRUCTURAL PLANS.
24. CONST. P.C.C. ACCESS RAMP PER SPWPC STD. 111-4 (CASE D, TYPE 2).
25. REMOVE AND REPLACE EXISTING AC PER DETAIL ON SHT. 2.
26. REMOVE EXIST. DRIVEWAY AND REPLACE W/ FULL WIDTH P.C.C. SIDEWALK AND 8" P.C.C. CURB & GUTTER TO MATCH EXISTING.
27. CONST. 1" CONCRETE "V" DRAINAGE DITCH BEHIND RETAINING WALL PER DETAIL ON SHT. 14.
28. CONST. DITCH DRAIN PER DETAIL ON SHT. 14 AND PER PLAN.
29. PLACE TYPE II EMULSION AGGREGATE SLURRY WITH 2% LATEX TO THE SATISFACTION OF THE CITY ENGINEER.
30. CONST. LOCAL DEPRESSION PER SPWPC STD. 313-3 (CASE C, MODIFIED PER PLAN, L=0.2', M=2.12', N=2.66').
31. INSTALL DOWNSPOUT SPLASH PAD.
32. CONST. DOWNSPOUT CONNECTION TO SD PER DETAIL, HEREON.
33. CONST. LOCAL DEPRESSION PER SPWPC STD. 313-3 (CASE C, MODIFIED PER DETAIL ON SHT. 2).
34. CONST. P.C.C. ACCESS RAMP PER SPWPC STD. 111-4 (CASE B, TYPE 1).
35. CONST. P.C.C. ACCESS RAMP PER PLAN AND DETAIL ON SHT. 2.



SCALE: 1"=10'

GRAPHIC SCALE

(IN FEET)

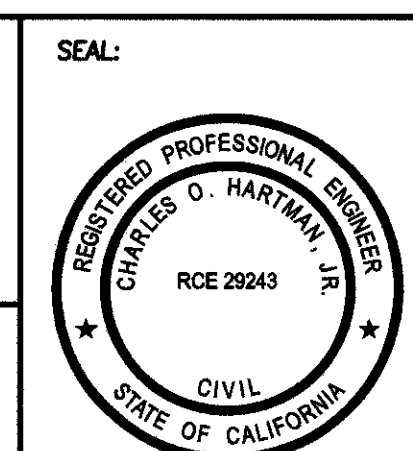
1 inch = 10 ft.

NOTES:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED

NO.	BY	INT	REVISIONS	R'APP'D	APP'D	DATE
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OWNER:
WILLIAM LYON HOMES
4696 MACARTHUR COURT, 8TH FLOOR
NEWPORT BEACH, CALIFORNIA 92660
(949) 833-3600 • (949) 476-2178 FAX

PROJECT ADDRESS:
21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA.



CIVIL ENGINEER:
CHARLES HARTMAN & ASSOC.
PLANNING - ENGINEERING - SURVEYING
2717 CALLE ARROYO, SUITE 100A
SAN JUAN CAPISTRANO, CA 92675 (949) 681-6995 • (949) 681-6674 FAX

RCE NO.: 28243
DATE: 1/20/16

BENCHMARK:
3W-59-83
FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3W-59-83", SET IN THE NORTHWEST CORNER OF LOT 11 BY 6 FT. CONCRETE GATCH BUSH. MONUMENT IS LOCATED IN THE SOUTHEAST CORNER OF THE INTERSECTION OF ROBINSON RANCH ROAD AND PLANO TRABUCO ROAD, 39 FT. SOUTHERLY OF THE CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.

BASIS OF BEARINGS:
BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL CONTROL STATION OPS NO. 4515 AND OPS NO. 4522 BEING N 38°12'11" E PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

DESCRIPTION:

TRACT 17805

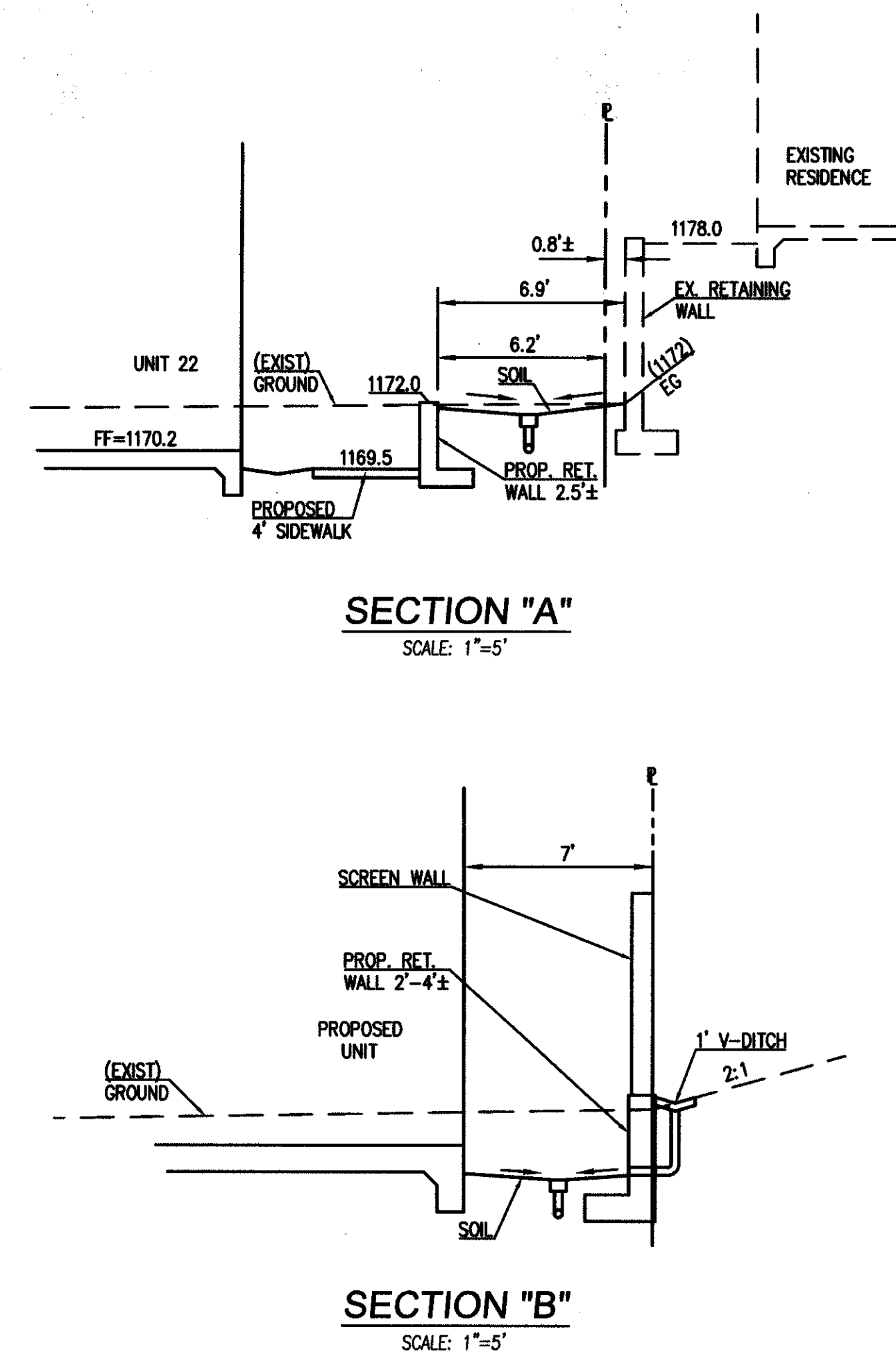
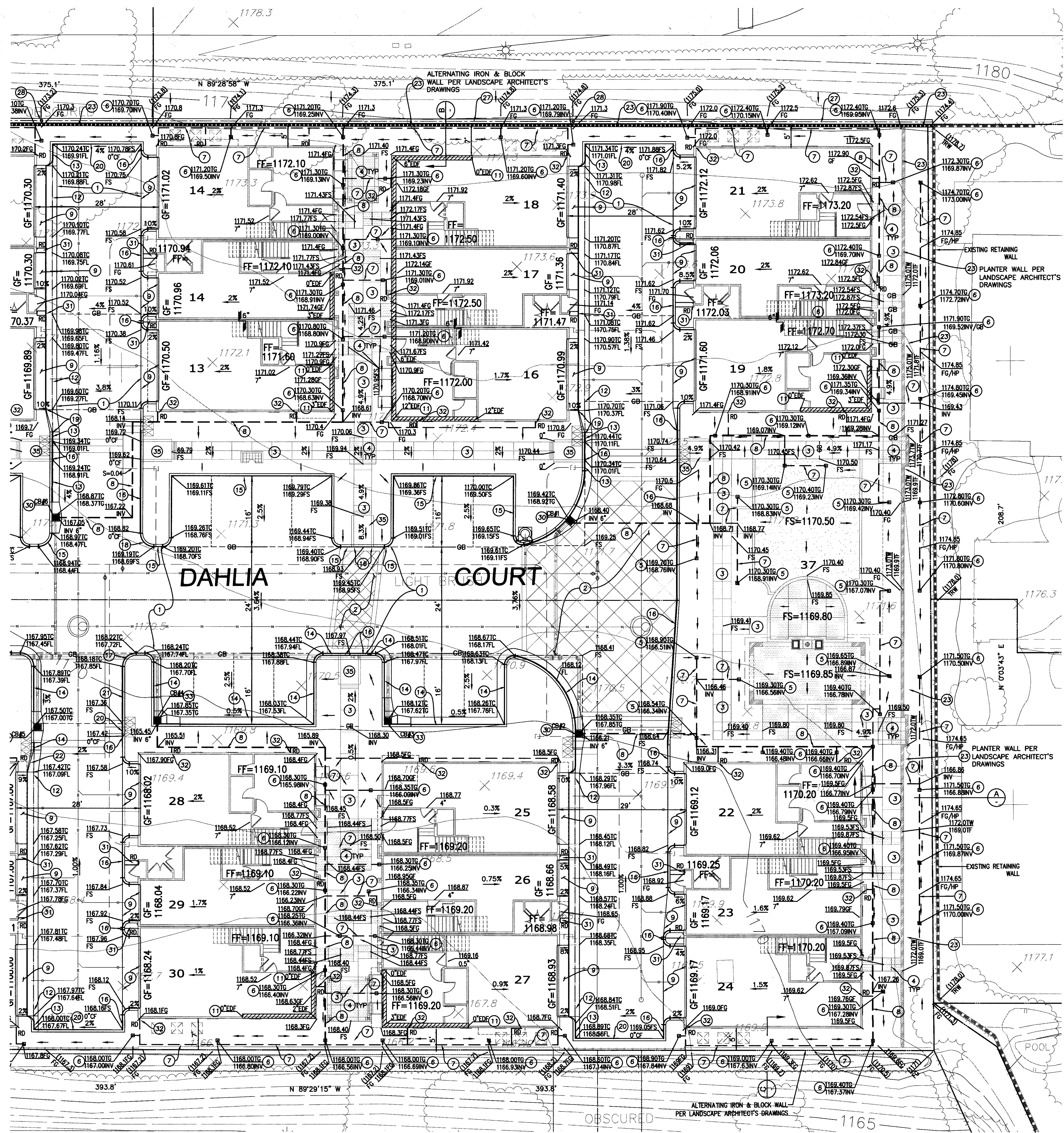
PRECISE GRADING PLAN

SHEET NO.:

3

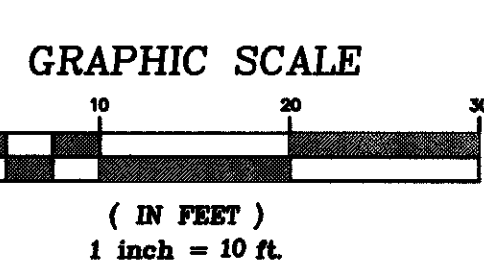
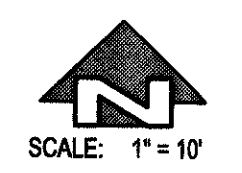
OF 15 SHEETS

SEE SHEET 3



CONSTRUCTION NOTES

1. CONST. AC OVER AS PER SOILS ENGINEER'S RECOMMENDATION.
2. CONST. DECORATIVE CONCRETE PAVEMENT PER LANDSCAPE ARCHITECT'S DRAWINGS.
3. CONST. P.C.C. SIDEWALK PER LANDSCAPE ARCHITECT'S DRAWINGS.
4. CONST. DECORATIVE WALKWAY PER LANDSCAPE ARCHITECT'S DRAWINGS.
5. CONST. 9" X 9" SQUARE GRATE PER DETAIL, SHIT. 2.
6. CONST. 6" ATRUM GRATE PER DETAIL, SHIT. 2.
7. CONST. 4" PVC DRAIN PIPE SDR35.
8. CONST. 6" PVC DRAIN PIPE SDR35.
9. CONST. P.C.C. DRIVEWAY 4" THICK PER SOILS REPORT.
10. CONST. EXTRA DEPTH FOOTING PER PLAN AND DETAIL ON SHIT. 2.
11. CONST. 4" P.C.C. FLARED CURB AND GUTTER PER DETAIL ON SHIT. 2.
12. CONST. 4" P.C.C. CURB AND GUTTER PER DETAIL ON SHIT. 2.
13. CONST. 6" P.C.C. CURB AND GUTTER PER DETAIL ON SHIT. 2.
14. CONST. 6" P.C.C. CURB ONLY PER DETAIL ON SHIT. 2.
15. CONST. 6" P.C.C. CURB ONLY PER DETAIL ON SHIT. 2.
16. CONST. 0" P.C.C. CURB ONLY PER DETAIL ON SHIT. 2.
17. CONST. 4" P.C.C. CURB ONLY TO 6" P.C.C. CURB ONLY TRANSITION.
18. CONST. 0" P.C.C. CURB ONLY TO 6" P.C.C. CURB ONLY TRANSITION.
19. CONST. 4" P.C.C. CURB & GUTTER TO 4" P.C.C. FLARED CURB & GUTTER TRANSITION PER DETAIL ON SHIT. 2.
20. CONST. 4" P.C.C. CURB ONLY TO 0" P.C.C. CURB ONLY TRANSITION.
21. CONST. 4" P.C.C. CURB ONLY PER DETAIL ON SHIT. 2.
22. CONST. RETAINING WALL PER PLAN AND STRUCTURAL PLANS.
23. CONST. 1" CONCRETE "V" DRAINAGE DITCH BEHIND RETAINING WALL PER DETAIL ON SHIT. 14.
24. CONST. DITCH DRAIN PER DETAIL ON SHIT. 14 AND PER PLAN.
25. CONST. LOCAL DEPRESSION PER SPWPC STD. 313-3 (CASE C, MODIFIED PER PLAN, L=0.2', M=2.12', N=2.66').
26. INSTALL DOWNSPOUT SPLASH PAD.
27. CONST. DOWNSPOUT CONNECTION TO SD PER DETAIL, HEREON.
28. CONST. LOCAL DEPRESSION PER SPWPC STD. 313-3 (CASE C, MODIFIED PER DETAIL ON SHIT. NO. 2).
29. CONST. P.C.C. ACCESS RAMP PER PLAN AND DETAIL ON SHIT. 2.



NOTES:
WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED

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OWNER:
WILLIAM LYON HOMES
4695 MACARTHUR COURT, 8TH FLOOR
NEWPORT BEACH, CALIFORNIA 92660
(949) 833-3600 - (949) 476-2178 FAX

PROJECT ADDRESS:
21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA.



CIVIL ENGINEER:
CHARLES HARTMAN & ASSOC.
PLANNING - ENGINEERING - SURVEYING
3717 CALLE ARROYO, SUITE 100
SAN JUAN CAPISTRANO, CA 92675 (949) 861-6895 - (949) 861-6874 FAX

NAME: *CH*
RCE NO.: 29243
DATE: 1/20/16

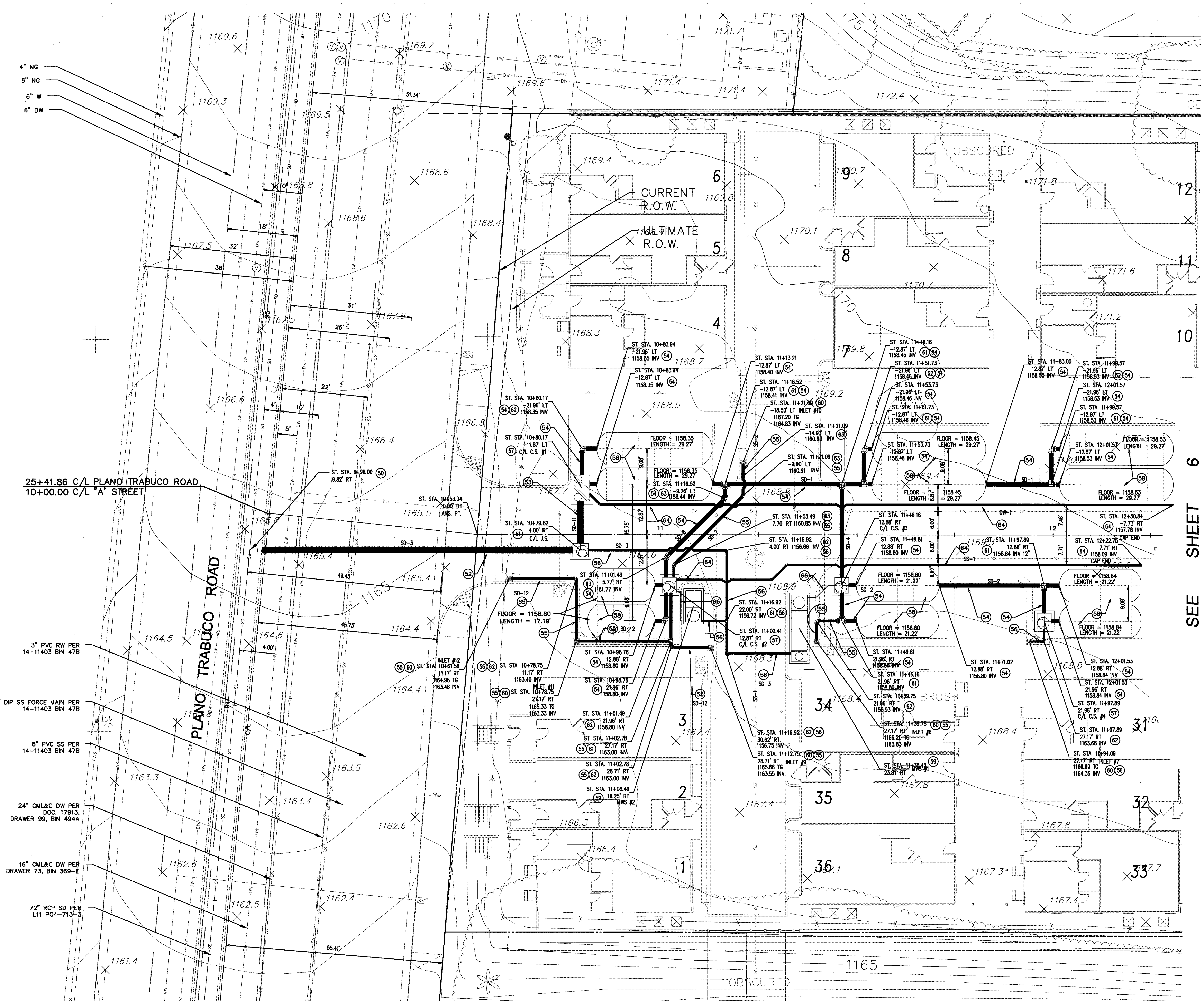
BENCHMARK: 3W-59-83
FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3W-59-83", SET IN THE NORTHWESTERLY CORNER OF AN 11 FT. BY 5 FT. CONCRETE CATCH BASIN. MONUMENT IS LOCATED IN THE SOUTHEASTERLY CORNER OF THE INTERSECTION OF ROBINSON RANCH ROAD AND PLANO TRABUCO ROAD, 39 FT. SOUTHERLY OF THE CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.

BASIS OF BEARINGS:
BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL CONTROL STATION GPS NO. 4515 AND GPS NO. 4522 BEING N 38°12'11" E PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

DESCRIPTION:
TRACT 17805
PRECISE GRADING PLAN

SHEET NO.:
4
OF 15 SHEETS

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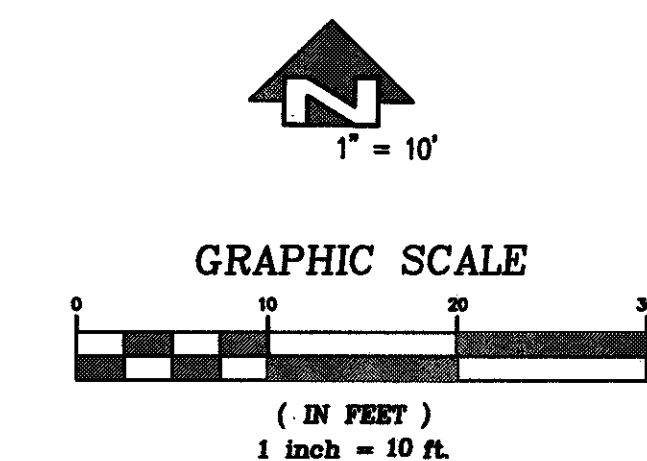


- DRAINAGE IMPROVEMENTS**
- (50) CONSTRUCT JUNCTION STRUCTURE PER SPPWC STD. PLAN NO. 332-2.
 - (51) CONSTRUCT MANHOLE PER SPPWC STD. PLAN NO. 321-2.
 - (52) INSTALL 18" RCP WITH WATER-TIGHT JOINTS, BEDDING PER OCRDMD STD. 1319.
 - (53) INSTALL 18" DIA. PVC, BEDDING PER OCRDMD STD. 1319.
 - (54) INSTALL 12" DIA. PVC, BEDDING PER OCRDMD STD. 1319.
 - (55) INSTALL 8" DIA. PVC, BEDDING PER OCRDMD STD. 1319.
 - (56) INSTALL 6" DIA. PVC, BEDDING PER OCRDMD STD. 1319.
 - (57) CONSTRUCT CONTROL STRUCTURE PER DETAIL, SHT. 8.
 - (58) CONSTRUCT 'STORMTECH' MC-4500 CHAMBER PER DETAIL, SHT. 8.
 - (59) CONSTRUCT 'MODULAR WETLANDS' STRUCTURE PER DETAIL, SHT. 8.
 - (60) CONSTRUCT CURB INLET PER DETAIL, SHT. 8.
 - (61) INSTALL PVC TEE (LINE SIZE)
 - (62) INSTALL PVC 90° BEND (LINE SIZE)
 - (63) INSTALL PVC 45° BEND (LINE SIZE)
 - (64) INSTALL 6" DIA. PVC PERF. PIPE PER DETAIL, SHT. 9.
 - (66) INSTALL 1" DIA. PVC, BEDDING PER OCRDMD STD. 1319.

STORMTECH CHAMBER NOTES:

- LENGTH 29.27' = 6 CHAMBERS + 2 END CAPS
- LENGTH 21.22' = 4 CHAMBERS + 2 END CAPS
- LENGTH 17.19' = 3 CHAMBERS + 2 END CAPS

SEE SHEET 7 FOR PROFILES



NOTES:

WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED

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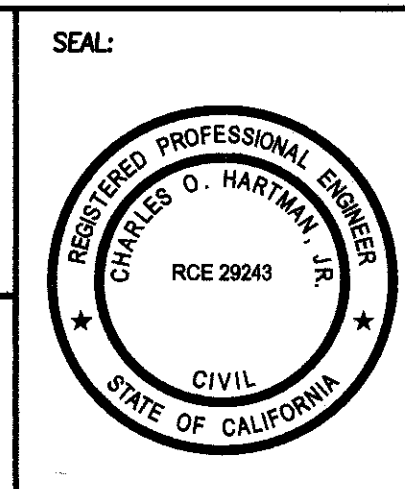
OWNER:

WILLIAM LYON HOMES

4685 MACARTHUR COURT, 8TH FLOOR
NEWPORT BEACH, CALIFORNIA 92660
(949) 833-3600 - (949) 478-2178 FAX

PROJECT ADDRESS:

21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA.



CIVIL ENGINEER:

CHARLES HARTMAN & ASSOC.

PLANNING - ENGINEERING - SURVEYING

2717 CALLE ARROYO SUITE 1004
SAN JUAN CAPISTRANO, CA 92675 (949) 661-6666 (949) 661-6674 FAX

NAME: [Signature]

DATE: 1/20/16

BENCHMARK: 3W-59-83
FOUND 3'-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3W-59-83", SET IN THE NORTHWESTERLY CORNER OF AN 11 FT. BY 5 FT. CONCRETE CATCH BASIN. MONUMENT IS LOCATED IN THE SOUTHEASTERN CORNER OF THE INTERSECTION OF ROBINSON RANCH ROAD AND PLANO TRABUCO ROADS, 39 FT. SOUTHERLY OF THE CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.

ELEV. 1191.336 (NAV 88)

DESCRIPTION:

BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL CONTROL STATION GPS NO. 4515 AND GPS NO. 4522 BEING N 38°12'11" E PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

TRACT 17805

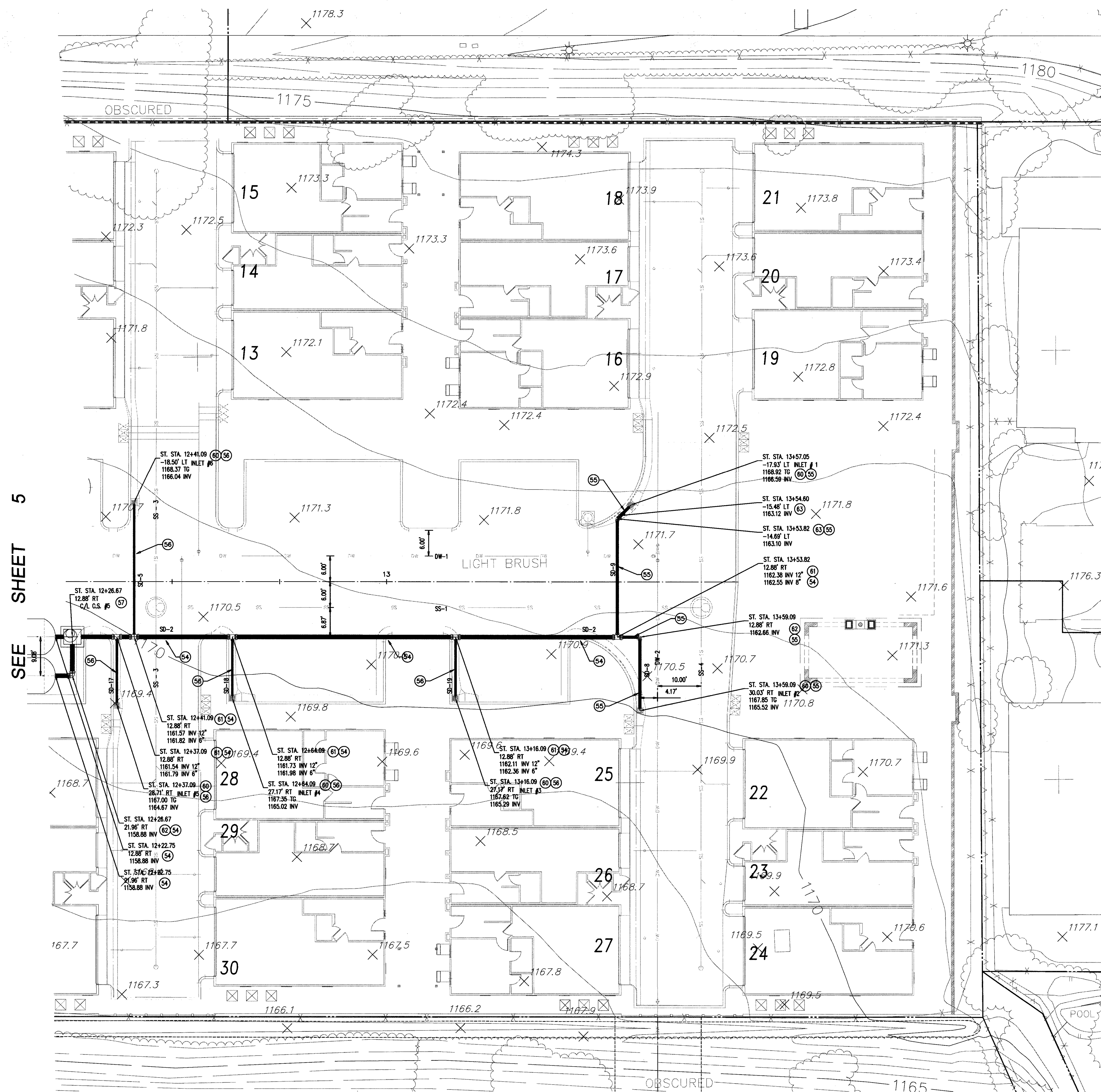
SD LINES 1 - 10

PLAN VIEW

PRECISE GRADING PLAN

SHEET NO. 5

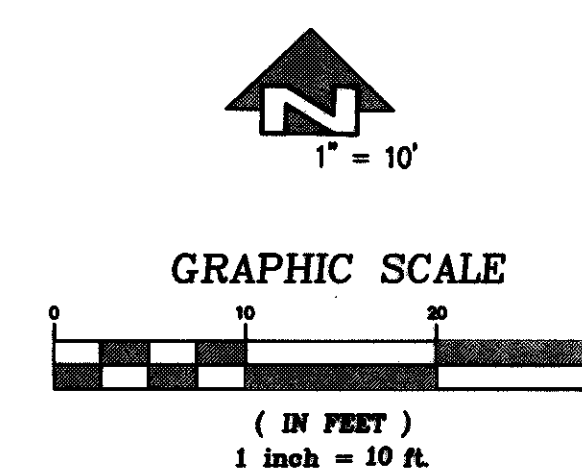
OF 15 SHEETS



DRAINAGE IMPROVEMENTS

54. INSTALL 12" DIA. PVC, BEDDING PER OCRDMD STD. 1319.
55. INSTALL 8" DIA. PVC, BEDDING PER OCRDMD STD. 1319.
56. INSTALL 8" DIA. PVC, BEDDING PER OCRDMD STD. 1319.
57. CONSTRUCT CONTROL STRUCTURE PER DETAIL, SHT. 8.
58. CONSTRUCT CURB INLET PER DETAIL, SHT. 8.
59. INSTALL PVC TEE (LINE SIZE)
60. INSTALL PVC 90° BEND (LINE SIZE)
61. INSTALL PVC 45° BEND (LINE SIZE)


SEE SHEET 7 FOR PROFILES



NOTES:


WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED

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<p>OWNER:</p> 	<p>WILLIAM LYON HOMES</p> <p>4695 MACARTHUR COURT, 8th FLOOR NEWPORT BEACH, CALIFORNIA 92660 (949) 833-3600 - (949) 476-2178 FAX</p>
<p>PROJECT ADDRESS:</p>	

PROJECT ADDRESS:

CIVIL ENGINEER:



CHAS. HAUTMAN & ASSOC.
PLANNING - ENGINEERING - SURVEYING
27127 CALLE ARROYO - SUITE 1904
SAN JUAN CAPISTRANO, CA 92675 (949) 951-6595 (949) 951-6674 FAX



RCE NO.: 2924

BENCHMARK: 3W-59-83 ELEV. 1191.336 (NAV 88)
FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3W-59-83", SET IN
THE NORTHWESTERLY CORNER OF AN 11 FT. BY 5 FT. CONCRETE TGT.
MONUMENT IS LOCATED IN THE SOUTHEASTERLY CORNER OF THE INTERSECTION OF
ROBINSON RANCH ROAD AND PLANO TRABUCO ROADS, 39 FT. SOUTHERLY OF THE
CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE
OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.

BASIS OF BEARINGS:
BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL

	DESCRIPTION:
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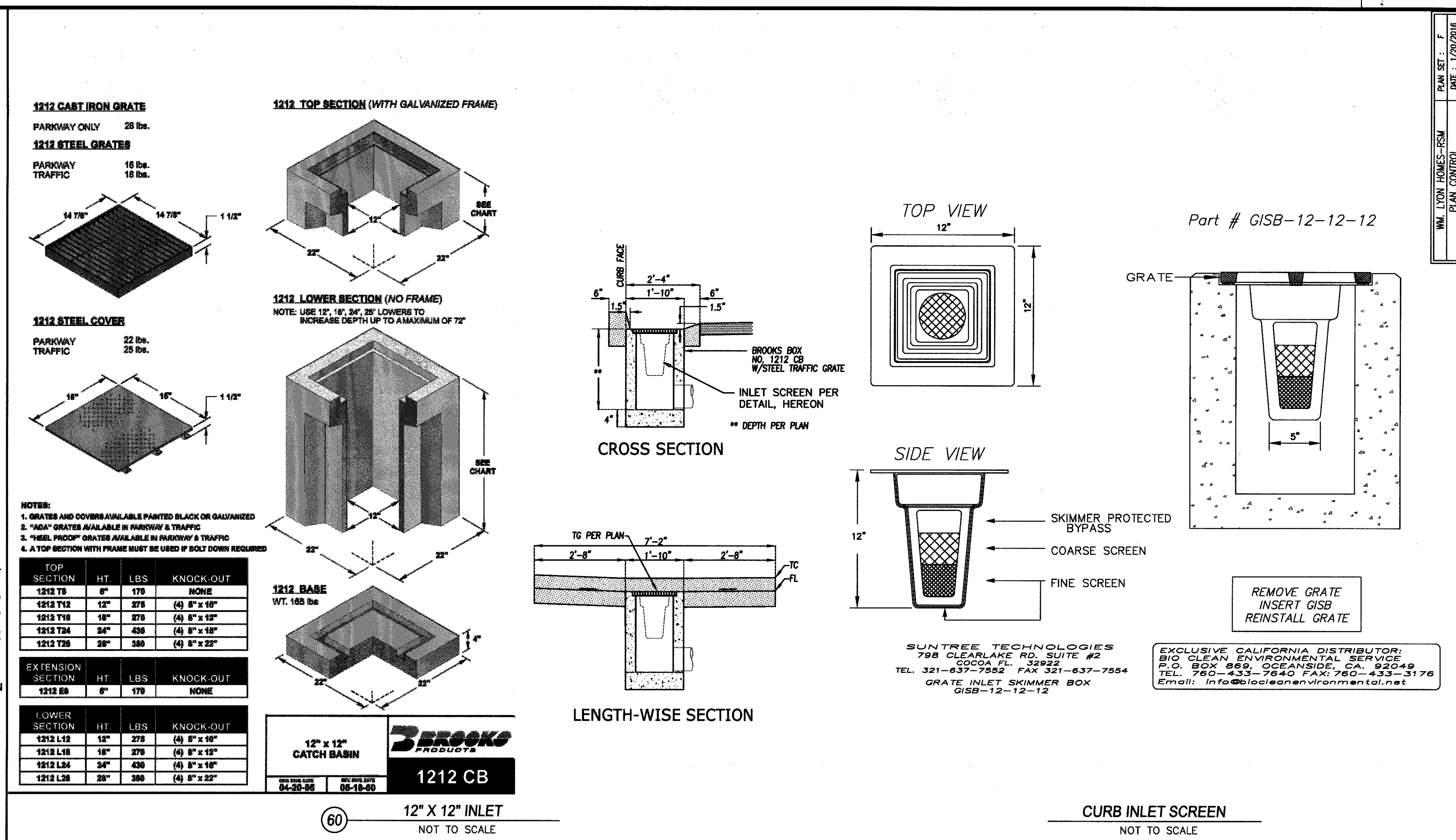
TRACT 17805
SD LINES 1 - 10
PLAN VIEW

PRECISE GRADING PLAN

SHEET NO. :

6

OF 15 SHEETS



MWS #1



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<p>THE PRODUCT DESCRIBED MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING US PATENTS: 2,683,042; 2,749,042; 2,674,574; 4,303,016; RELATED FOREIGN PATENTS OR OTHER PATENTS PENDING</p>	<p>PROPRIETARY AND CONFIDENTIAL:</p> <p>THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE SOLE PROPERTY OF MODULAR NEURONS SYSTEMS. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE PERMISSION OF MODULAR NEURONS SYSTEMS IS PROHIBITED.</p>
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DESCRIPTION:	TRACT 17805 STORM DRAIN DETAILS PRECISE GRADING PLAN
SHEET NO.:	<div style="text-align: center; font-size: 2em; font-weight: bold;">8</div> <div style="text-align: right; padding-right: 10px;"> OF <u>15</u> SHEETS </div>

PROJECT INFORMATION	
ENGINEER	BILL DELONG
PRODUCT	714-394-8622
MANAGER	BILL.DELONG@ADS-PIPE.COM
ADS SALES REP	SALES2
	SALES3
PROJECT NO.	PROJECT#



STORMWATER CHAMBER SPECIFICATIONS

- CHAMBERS SHALL BE STORMTECH MC-4500 OR APPROVED EQUAL.
- CHAMBERS SHALL BE MANUFACTURED FROM VIRGIN, IMPACT-MODIFIED POLYPROPYLENE COPOLYMERS.
- CHAMBER ROWS SHALL PROVIDE CONTINUOUS, UNSTRUCTURED INTERNAL SPACE WITH NO INTERNAL SUPPORT PANELS THAT WOULD IMPEDE FLOW OR LIMIT ACCESS FOR INSPECTION.
- THE STRUCTURAL DESIGN OF THE CHAMBERS, THE STRUCTURAL BACKFILL, AND THE INSTALLATION REQUIREMENTS SHALL ENSURE THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET FOR: 1) LONG-DURATION DEAD LOADS AND 2) SHORT-DURATION LIVE LOADS, BASED ON THE AASHTO DESIGN TRUCK WITH CONSIDERATION FOR IMPACT AND MULTIPLE VEHICLE PRESENCES.
- CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418, "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- CHAMBERS SHALL BE DESIGNED AND ALLOWABLE LOADS DETERMINED IN ACCORDANCE WITH ASTM F2787, "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- ONLY CHAMBERS THAT ARE APPROVED BY THE SITE DESIGN ENGINEER WILL BE ALLOWED. THE CHAMBER MANUFACTURER SHALL SUBMIT THE FOLLOWING UPON REQUEST TO THE SITE DESIGN ENGINEER FOR APPROVAL, BEFORE DELIVERING CHAMBERS TO THE PROJECT SITE:
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE SAFETY FACTORS ARE GREATER THAN OR EQUAL TO 1.56 FOR DEAD LOAD AND 1.75 FOR LIVE LOAD, THE MINIMUM REQUIRED BY ASTM F2787 AND BY AASHTO FOR THERMOPLASTIC PIPE.
 - A STRUCTURAL EVALUATION SEALED BY A REGISTERED PROFESSIONAL ENGINEER THAT DEMONSTRATES THAT THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, SECTION 12.12, ARE MET, THE 90-YEAR CRISP MODULUS DATA SPECIFIED IN ASTM F2418 MUST BE USED AS PART OF THE AASHTO STRUCTURAL EVALUATION TO VERIFY LONG-TERM PERFORMANCE.
 - STRUCTURAL CROSS SECTION DETAIL ON WHICH THE STRUCTURAL EVALUATION IS BASED.
- CHAMBERS AND END CAPS SHALL BE PRODUCED AT AN ISO 9001 CERTIFIED MANUFACTURING FACILITY.

IMPORTANT - NOTES FOR THE BIDDING AND INSTALLATION OF MC-4500 CHAMBER SYSTEM

- STORMTECH MC-4500 CHAMBERS SHALL NOT BE INSTALLED UNTIL THE MANUFACTURER'S REPRESENTATIVE HAS COMPLETED A PRE-CONSTRUCTION MEETING WITH THE INSTALLERS.
- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3600/MC-4500 CONSTRUCTION GUIDE".
- CHAMBERS ARE NOT TO BE BACKFILLED WITH A DOZER OR EXCAVATOR SITUATED OVER THE CHAMBERS.
 - STORMTECH RECOMMENDS 3 BACKFILL METHODS:
 - STONESHOOT LOCATED OFF THE CHAMBER BED.
 - BACKFILL AS ROWS ARE BUILT USING AN EXCAVATOR ON THE FOUNDATION STONE OR SUBGRADE.
 - BACKFILL FROM OUTSIDE THE EXCAVATION USING A LONG-BOOM HOE OR EXCAVATOR.
- THE FOUNDATION STONE SHALL BE LEVELLED AND COMPACTED PRIOR TO PLACING CHAMBERS.
- JOINTS BETWEEN CHAMBERS SHALL BE PROPERLY SEATED PRIOR TO PLACING STONE.
- MAINTAIN MINIMUM 9" (230 mm) SPACING BETWEEN THE CHAMBER ROWS.
- INLET AND OUTLET MANIFOLDS MUST BE INSERTED A MINIMUM OF 12" (300 mm) INTO CHAMBER END CAPS.
- EMBEDMENT STONE SURROUNDING CHAMBERS MUST BE A CLEAN, CRUSHED, ANGULAR STONE 3/4" (20-50 mm) MEETING THE AASHTO M43 DESIGNATION OF #5 OR #4.
- STONE SHALL BE BROUGHT UP EVENLY AROUND CHAMBERS SO AS NOT TO DISTORT THE CHAMBER SHAPE. STONE DEPTHS SHOULD NEVER DIFFER BY MORE THAN 12" (300 mm) BETWEEN ADJACENT CHAMBER ROWS.
- STONE MUST BE PLACED ON THE TOP CENTER OF THE CHAMBER TO ANCHOR THE CHAMBERS IN PLACE AND PRESERVE ROW SPACING.
- ADS RECOMMENDS THE USE OF "FLEXSTORM CATCH IT" INSERTS DURING CONSTRUCTION FOR ALL INLETS TO PROTECT THE SUBSURFACE STORMWATER MANAGEMENT SYSTEM FROM CONSTRUCTION SITE RUNOFF.

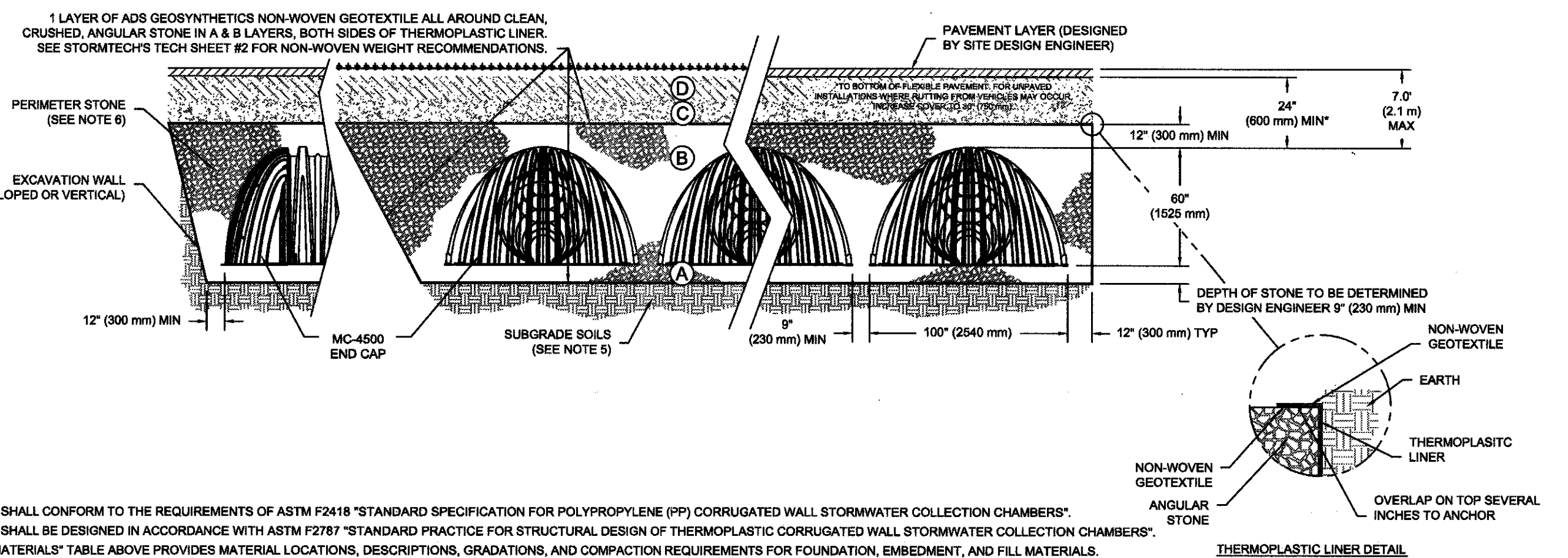
NOTES FOR CONSTRUCTION EQUIPMENT

- STORMTECH MC-4500 CHAMBERS SHALL BE INSTALLED IN ACCORDANCE WITH THE "STORMTECH MC-3600/MC-4500 CONSTRUCTION GUIDE".
- THE USE OF EQUIPMENT OVER MC-4500 CHAMBERS IS LIMITED:
 - NO EQUIPMENT IS ALLOWED ON BARL CHAMBERS.
 - NO RUBBER TIED LOADER, DUMP TRUCK, OR EXCAVATORS ARE ALLOWED UNTIL PROPER FILL DEPTHS ARE REACHED IN ACCORDANCE WITH THE "STORMTECH MC-3600/MC-4500 CONSTRUCTION GUIDE".
 - WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT CAN BE FOUND IN THE "STORMTECH MC-3600/MC-4500 CONSTRUCTION GUIDE".
- FULL 36" (900 mm) OF STABILIZED COVER MATERIALS OVER THE CHAMBERS IS REQUIRED FOR DUMP TRUCK TRAVEL OR DUMPING.
 - USE OF A DOZER TO PUSH EMBEDMENT STONE BETWEEN THE ROWS OF CHAMBERS MAY CAUSE DAMAGE TO CHAMBERS AND IS NOT AN ACCEPTABLE BACKFILL METHOD. ANY CHAMBERS DAMAGED BY USING THE "DUMP AND PUSH" METHOD ARE NOT COVERED UNDER THE STORMTECH STANDARD WARRANTY.
 - CONTACT STORMTECH AT 1-888-492-2684 WITH ANY QUESTIONS ON INSTALLATION REQUIREMENTS OR WEIGHT LIMITS FOR CONSTRUCTION EQUIPMENT.

ACCEPTABLE FILL MATERIALS: STORMTECH MC-4500 CHAMBER SYSTEMS

MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER.	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
C INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE (B) LAYER TO 24" (600 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	AASHTO M145 ¹ A-1, A-2.4, A-3 OR AASHTO M43 ² 3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	BEGIN COMPACTIONS AFTER 24" (600 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 12" (300 mm) MAX LIFTS TO A MIN. 90% PROCTOR DENSITY FOR WELL-GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS.
B EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE (A) LAYER TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43 ² 3, 4	NO COMPACTION REQUIRED.
A FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE, NOMINAL SIZE DISTRIBUTION BETWEEN 3/4-2 INCH (20-50 mm)	AASHTO M43 ² 3, 4	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. ^{1,2}

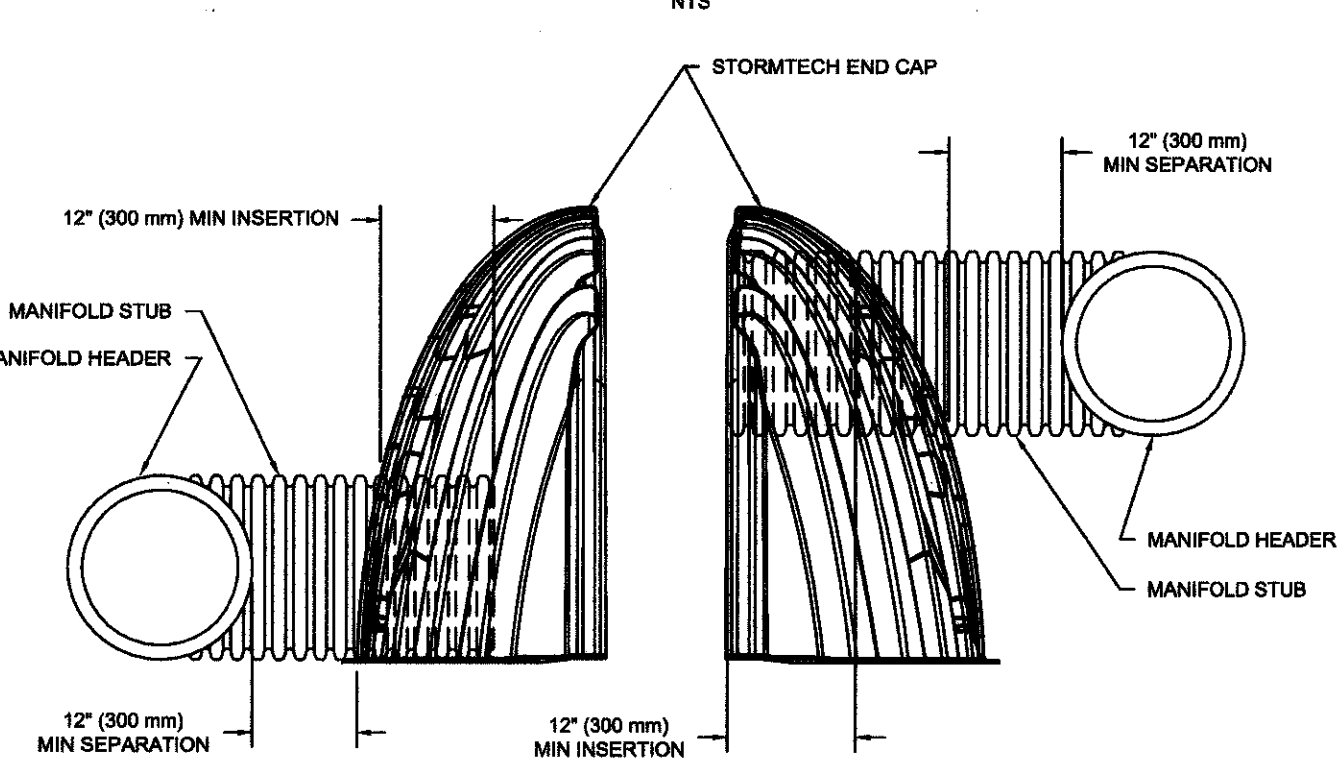
- PLEASE NOTE:
- THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
 - STORMTECH COMPACTION REQUIREMENTS ARE MET FOR A LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 9" (230 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. WHERE VIBRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS.



NOTES:

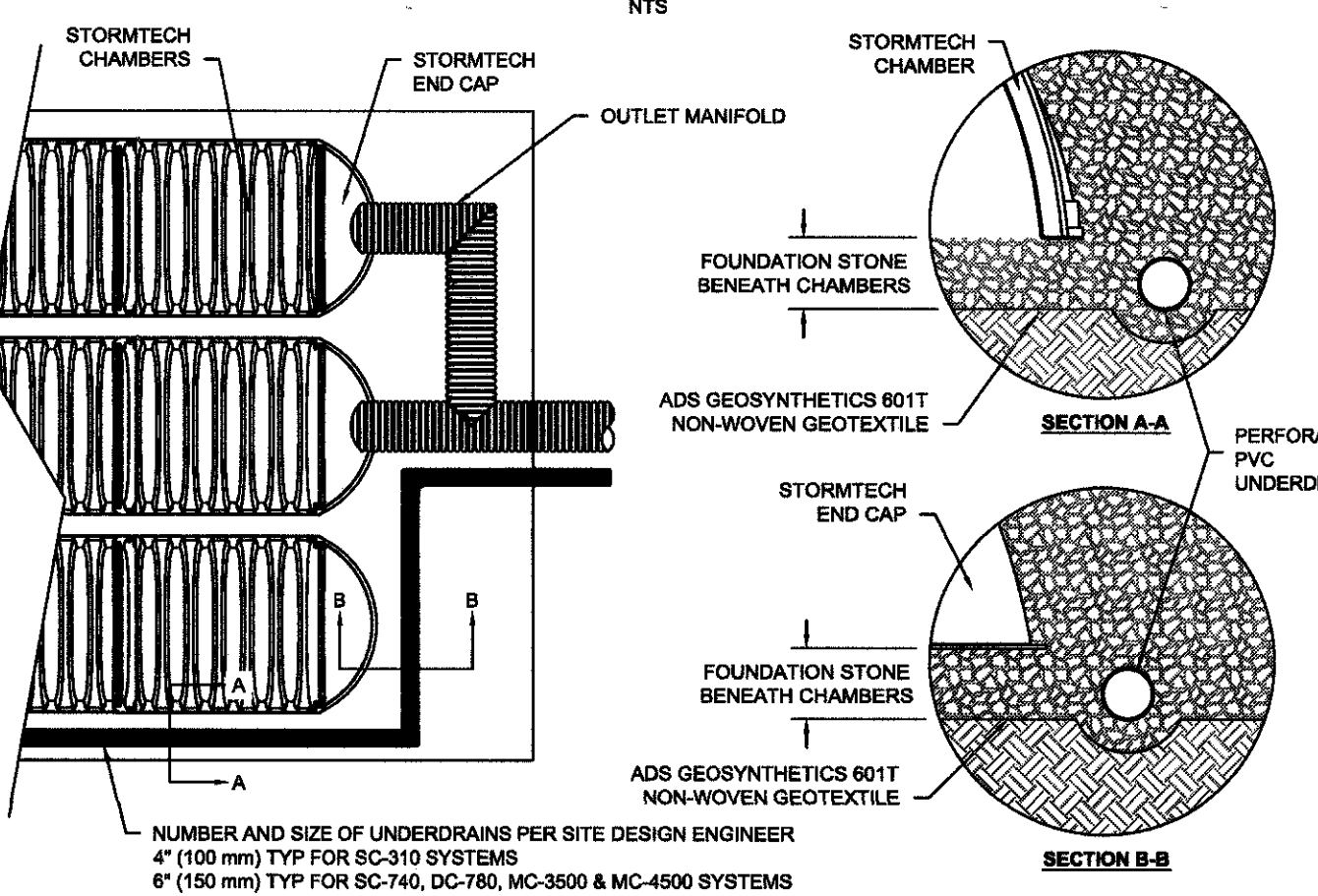
- MC-4500 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- MC-4500 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE "SITE DESIGN ENGINEER" REFERS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN AND LAYOUT OF THE STORMTECH CHAMBERS FOR THIS PROJECT.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

MC-SERIES END CAP INSERTION DETAIL

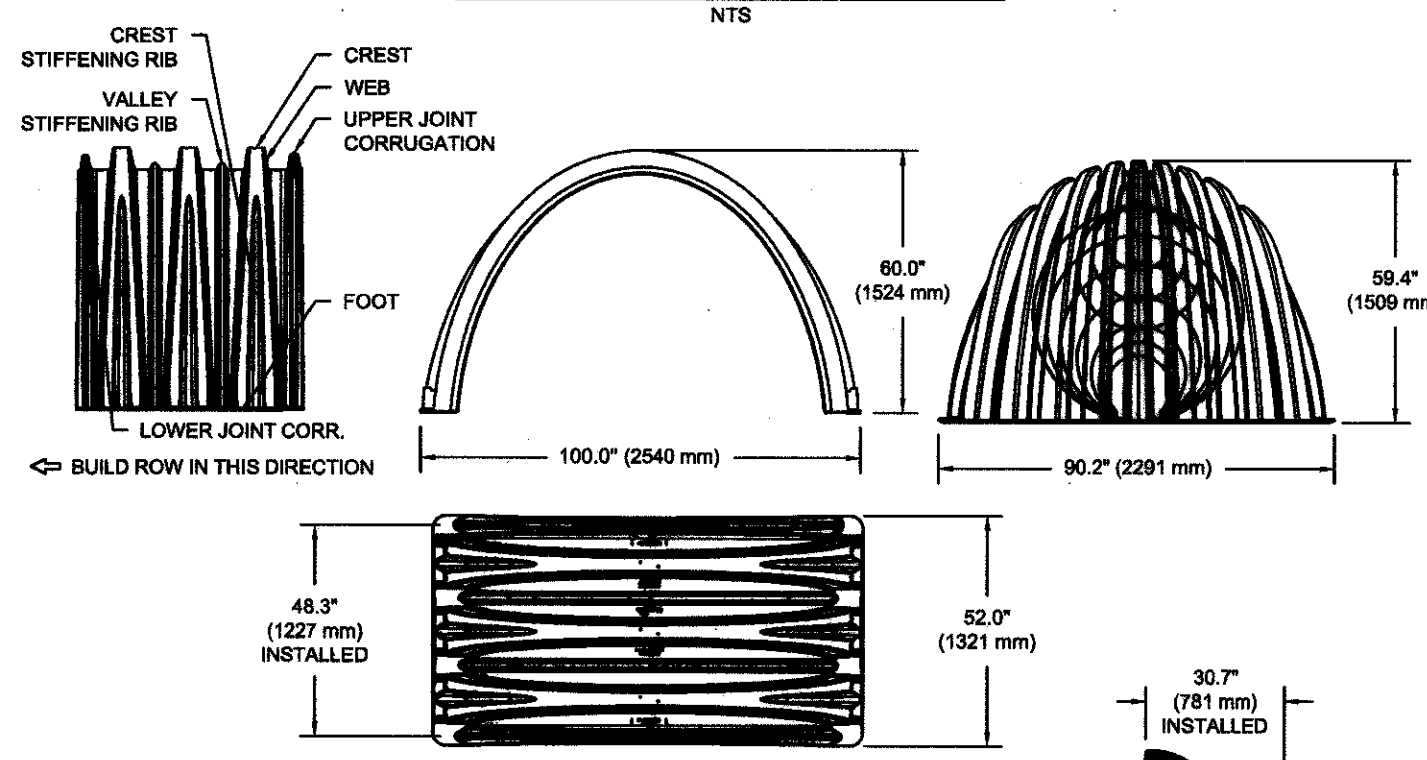


NOTE: MANIFOLD STUB MUST BE LAID HORIZONTAL FOR A PROPER FIT IN END CAP OPENING.

UNDERDRAIN DETAIL



MC-4500 TECHNICAL SPECIFICATION



NOMINAL CHAMBER SPECIFICATIONS	
SIZE (W X H X INSTALLED LENGTH)	100.0" X 60.0" X 48.3" (2540 mm X 1524 mm X 1227 mm)
CHAMBER STORAGE	106.8 CUBIC FEET (3.01 m ³)
MINIMUM INSTALLED STORAGE	102.8 CUBIC FEET (4.60 m ³)
WEIGHT	130.0 lbs. (59.0 kg)

NOMINAL END CAP SPECIFICATIONS	
SIZE (W X H X INSTALLED LENGTH)	90.2" X 59.4" X 30.7" (2291 mm X 1508 mm X 781 mm)
END CAP STORAGE	35.7 CUBIC FEET (1.01 m ³)
MINIMUM INSTALLED STORAGE	108.7 CUBIC FEET (3.09 m ³)
WEIGHT	135.0 lbs. (61.2 kg)

¹ ASSUMES 12" (305 mm) STONE ABOVE, 9" (229 mm) STONE FOUNDATION AND BETWEEN CHAMBERS, 12" (305 mm) STONE PERIMETER IN FRONT OF END CAPS AND 40% STONE POROSITY.

STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B".

STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "C".

PART #	STUB	B	C
MC4500REPE007	6" (150 mm)	42.54" (1081 mm)	0.96" (22 mm)
MC4500REPE008	8" (200 mm)	40.50" (1029 mm)	—
MC4500REPE009	10" (250 mm)	38.37" (975 mm)	1.01" (26 mm)
MC4500REPE010	12" (300 mm)	36.68" (937 mm)	1.33" (34 mm)
MC4500REPE011	14" (350 mm)	35.00" (891 mm)	1.55" (39 mm)
MC4500REPE012	16" (400 mm)	33.72" (861 mm)	1.70" (43 mm)
MC4500REPE013	18" (450 mm)	32.50" (830 mm)	1.87" (48 mm)
MC4500REPE014	20" (500 mm)	31.33" (799 mm)	2.06" (53 mm)
MC4500REPE015	22" (550 mm)	30.21" (772 mm)	2.26" (58 mm)
MC4500REPE016	24" (600 mm)	29.13" (744 mm)	2.47" (63 mm)
MC4500REPE017	26" (650 mm)	28.09" (717 mm)	2.69" (69 mm)
MC4500REPE018	28" (700 mm)	27.09" (690 mm)	2.92" (75 mm)
MC4500REPE019	30" (750 mm)	26.13" (667 mm)	3.16" (81 mm)
MC4500REPE020	32" (800 mm)	25.21" (644 mm)	3.42" (88 mm)

NOTE: ALL DIMENSIONS ARE NOMINAL.

CUSTOM PRECISED INVERTS ARE AVAILABLE UPON REQUEST. INVENTORIED MANIFOLDS INCLUDE 12-24" (300-600 mm) SIZE ON SIZE AND 16-48" (400-1200 mm) ECCENTRIC MANIFOLDS. CUSTOM INVERT LOCATIONS ON THE MC-4500 END CAP CUT IN THE FIELD ARE NOT RECOMMENDED FOR PIPE SIZES GREATER THAN 10" (250 mm).

THE INVERT LOCATION IN COLUMN 'B' ARE THE HIGHEST POSSIBLE FOR THE PIPE SIZE.

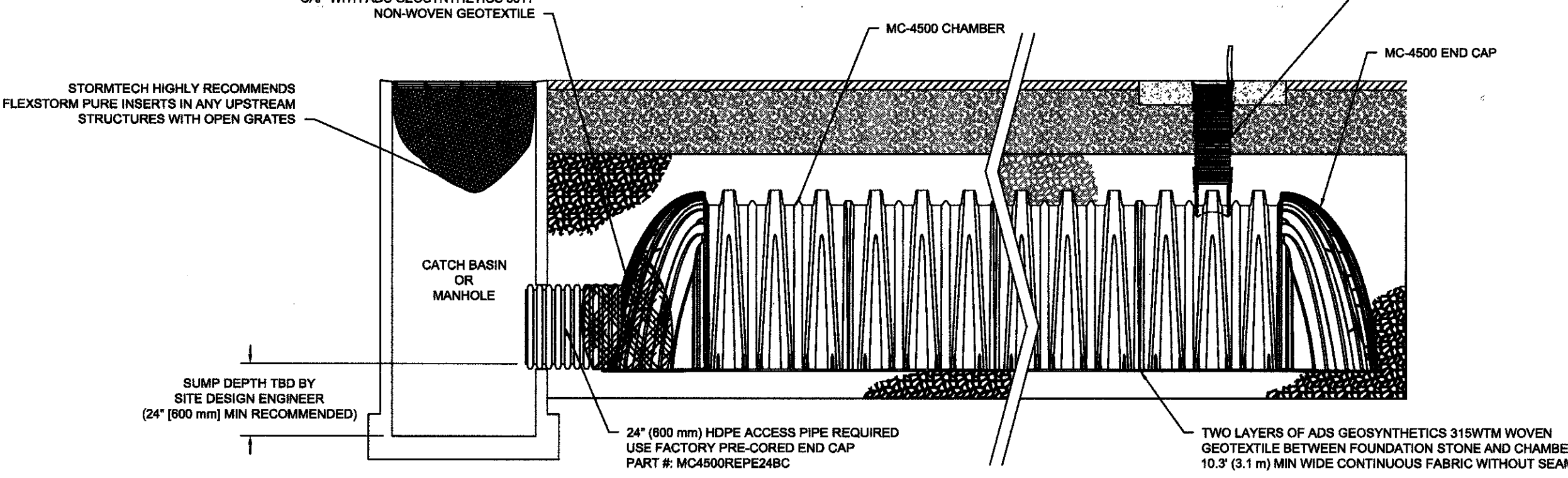
INSPECTION & MAINTENANCE

- INSPECT ISOLATOR ROW FOR SEDIMENT
 - INSPECTION PORTS (IF PRESENT)
 - REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
 - REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED
 - USING A FLASHLIGHT AND STADIUM ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
 - LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- ALL ISOLATOR ROWS
 - REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW
 - USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
 - MIRROR OR VIDEO CAMERA MAY BE USED TO AVOID A CONFINED SPACE ENTRY
 - FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
 - IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
 - A FIXED CURBLET CLEANING NOZZLE WITH REAR FACING SPREAD OF 40" (1.1 m) OR MORE IS PREFERRED
 - APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLOOD WATER IS CLEAN
 - VACUUM STRUCTURE RUMPS AS REQUIRED
- REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.
- INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

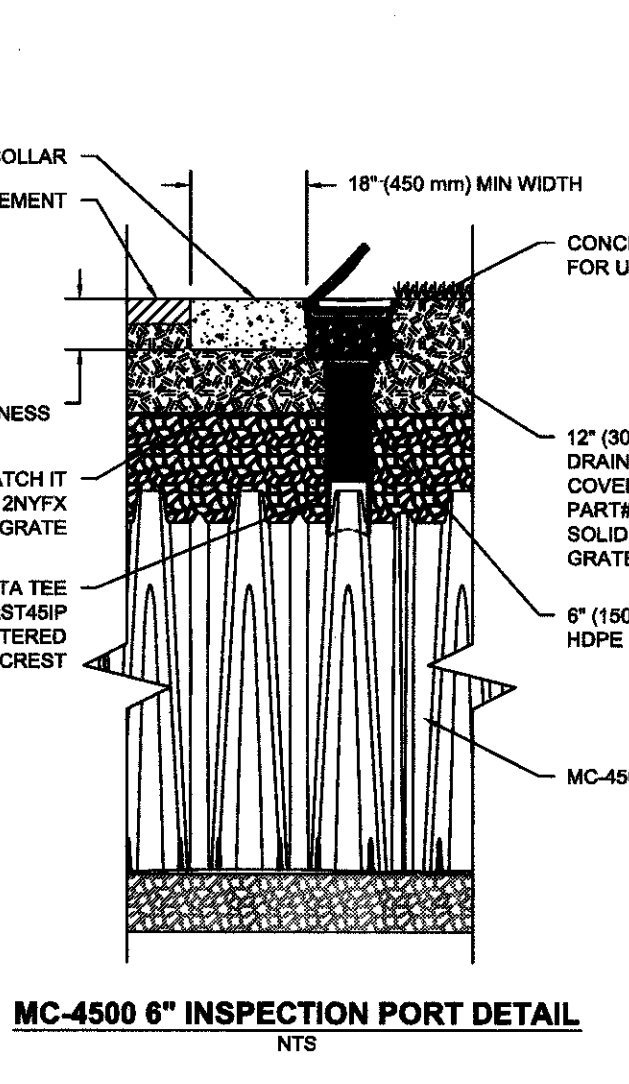
NOTES

- INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION, ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- CONDUCT JETTING AND VACUUMING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

MC-4500 ISOLATOR ROW DETAIL



MC-4500 6" INSPECTION PORT DETAIL



OWNER:

WILLIAM LYON HOMES
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NEWPORT BEACH, CALIFORNIA 92660
(949) 833-3600 - (949) 478-2178 FAX

PROJECT ADDRESS:

21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA.

SEAL:



CIVIL ENGINEER:

CHARLES HARTMAN & ASSOC.
PLANNING - ENGINEERING - SURVEYING
27107 CALLE ARROYO, SUITE 1904
SAN JUAN CAPISTRANO, CA 92675 (949) 961-9695 - (949) 961-0674 FAX

NAME:

RCE NO.: 29243
DATE: 1/20/16

BENCHMARK:

3W-59-83
FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3W-59-83", SET IN THE NORTHWESTERLY CORNER OF AN 11 FT. BY 15 FT. CONCRETE CATCH BASIN. MONUMENT IS LOCATED IN THE SOUTHEASTERN CORNER OF THE INTERSECTION OF ROBINSON RANCH ROAD AND PLANO TRABUCO ROADS, 39 FT. SOUTHERLY OF THE CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.

BASIS OF BEARINGS:

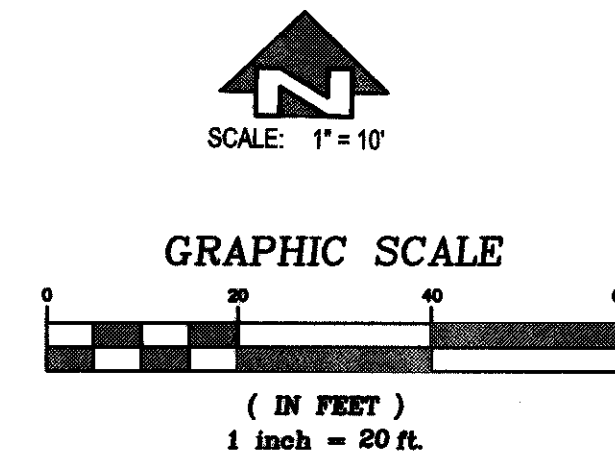
BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL CONTROL STATION GPS NO. 4515 AND GPS NO. 4522 BEING N 38°12'11" E PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

DESCRIPTION:

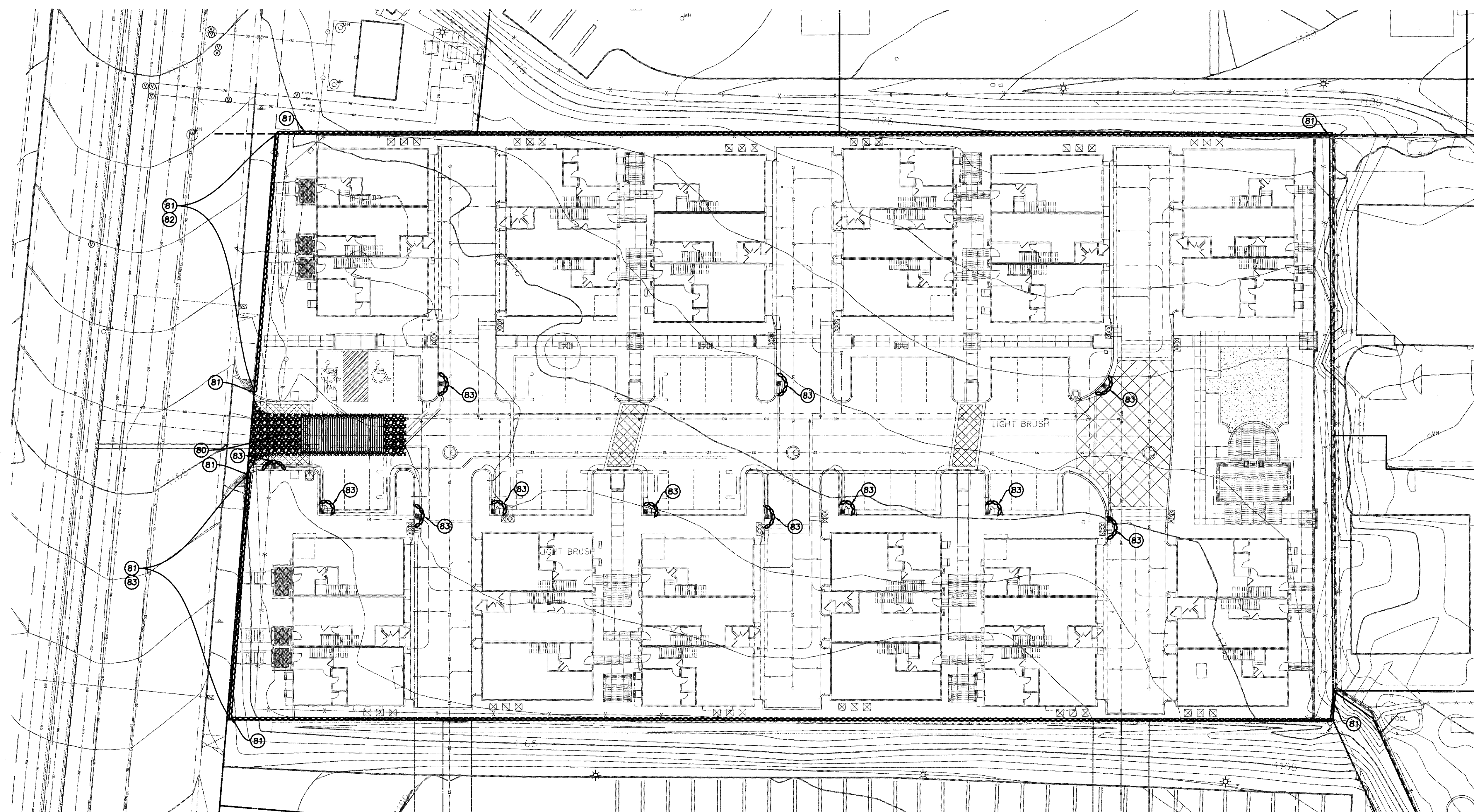
TRACT 17805
STORM DRAIN DETAILS
PRECISE GRADING PLAN

SHEET NO.:

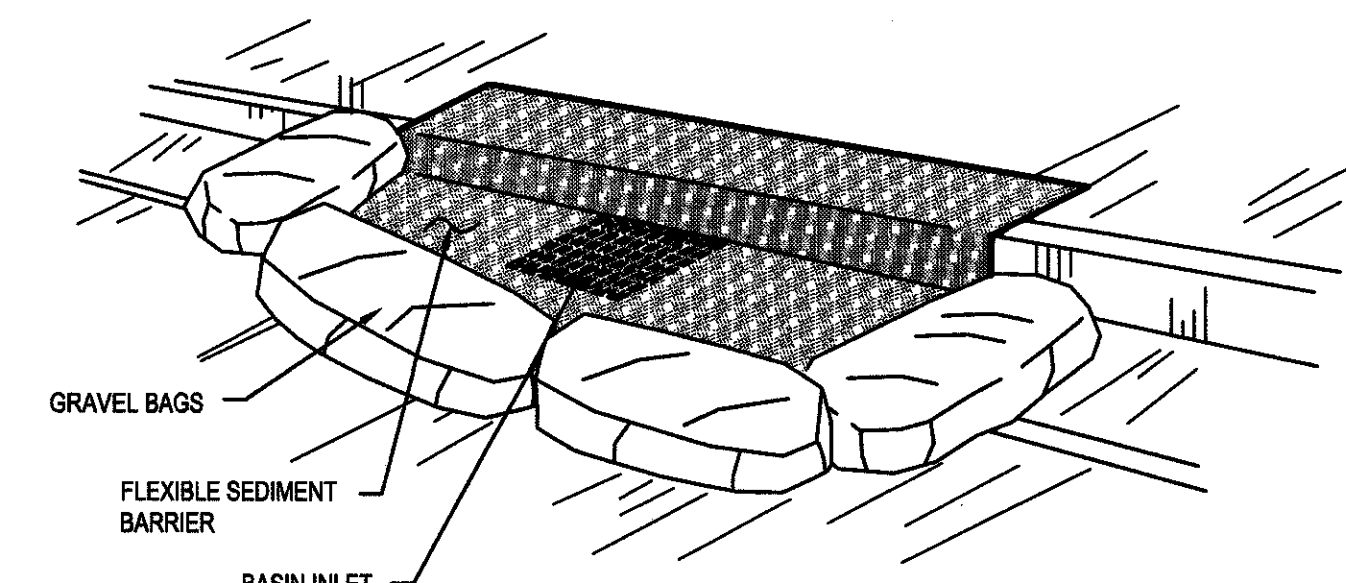
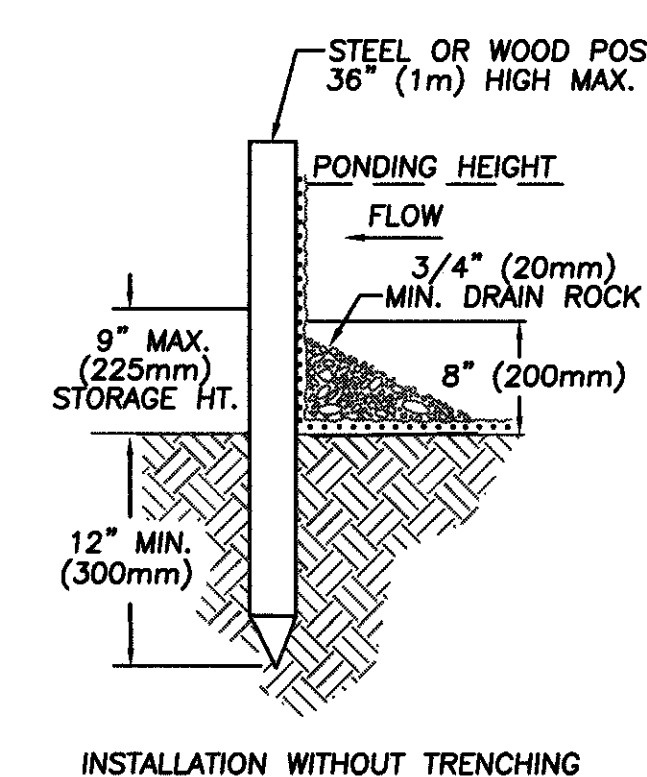
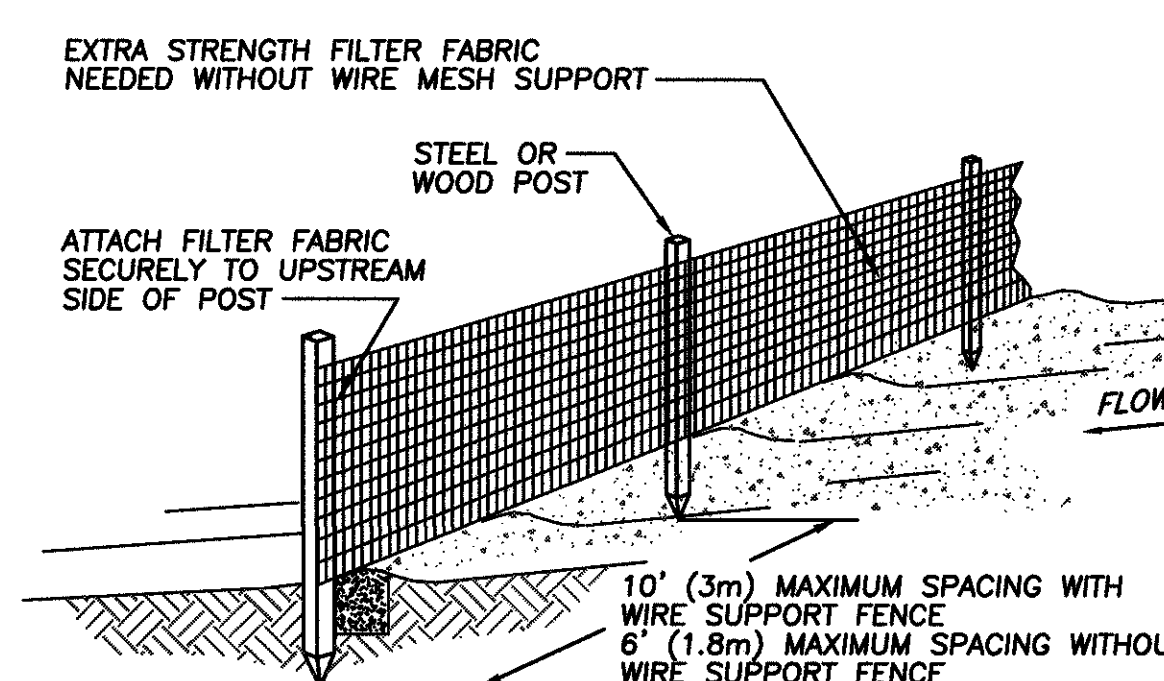
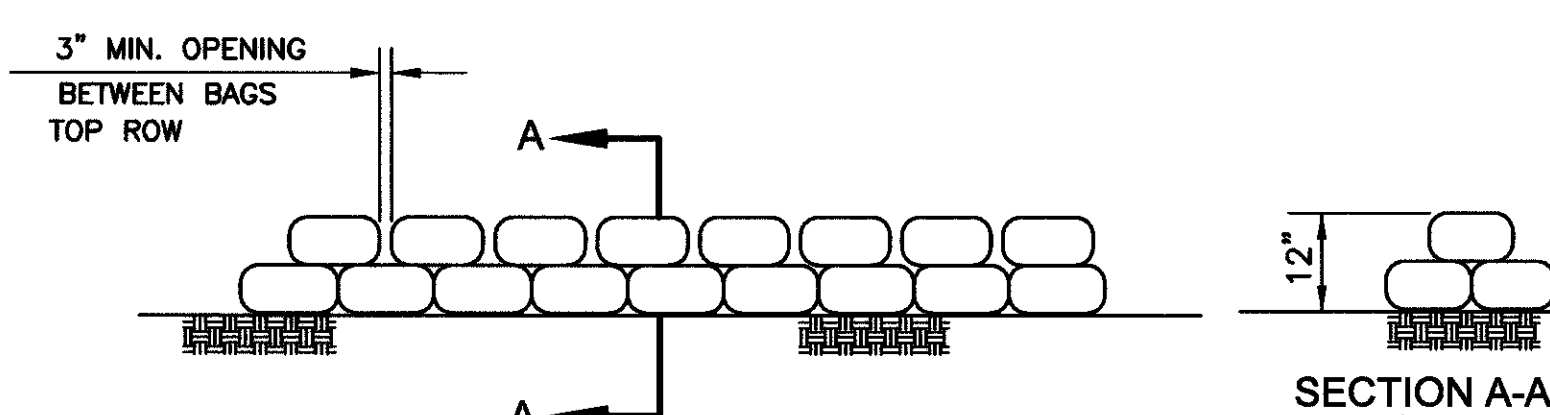
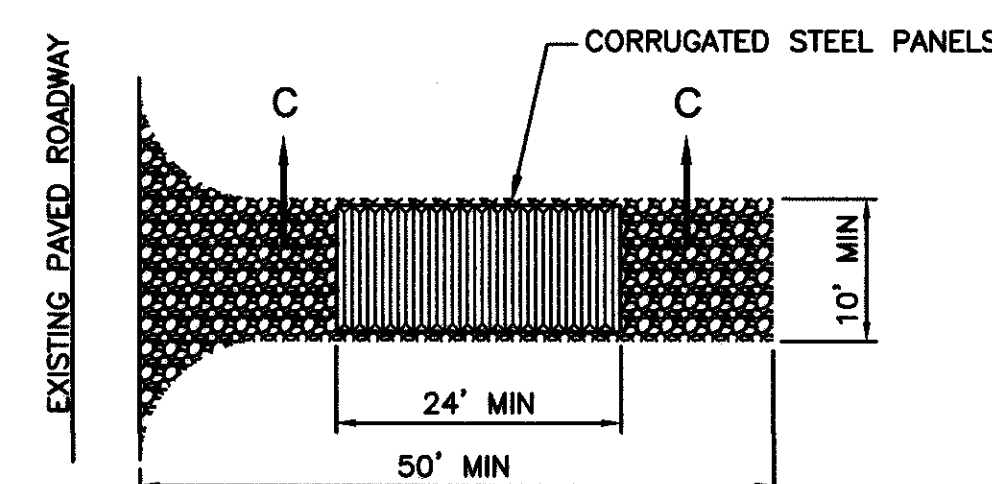
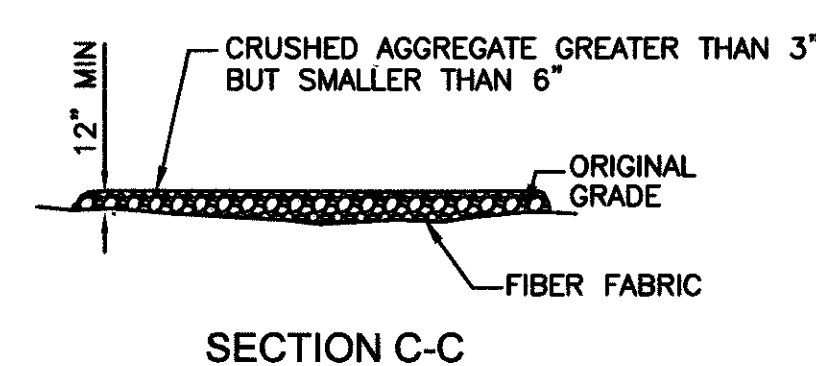
9
OF 15 SHEETS



WILLIAM LYON HOMES - RSM
PLAN SET
DATE: 1/20/2016



- EROSION CONTROL CONSTRUCTION NOTES:
- 80 CONSTRUCT TEMPORARY CONSTRUCTION ENTRANCE TC-1 PER DETAIL ON SHEET 5.
 - 81 CONSTRUCT GRAVELBAG BARRIER SE-6, SE-8 PER DETAIL ON SHEET 5.
 - 82 PLACE TEMPORARY SILT FENCE ALONG PERIMETER SE-1 PER DETAIL ON SHEET 5.
 - 83 CONSTRUCT TEMPORARY INLET PROTECTION SE-10 PER DETAIL ON SHEET 5.



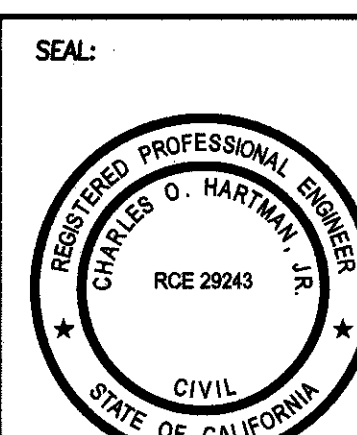
NOTES:

WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED

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OWNER:
WILLIAM LYON HOMES
4695 MACARTHUR COURT, 8th FLOOR
NEWPORT BEACH, CALIFORNIA 92660
(949) 833-3600 - (949) 476-2178 FAX

PROJECT ADDRESS:
21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA.



CIVIL ENGINEER:
CHARLES HARTMAN & ASSOC.
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27127 CALLE ARROYO - SUITE 1004
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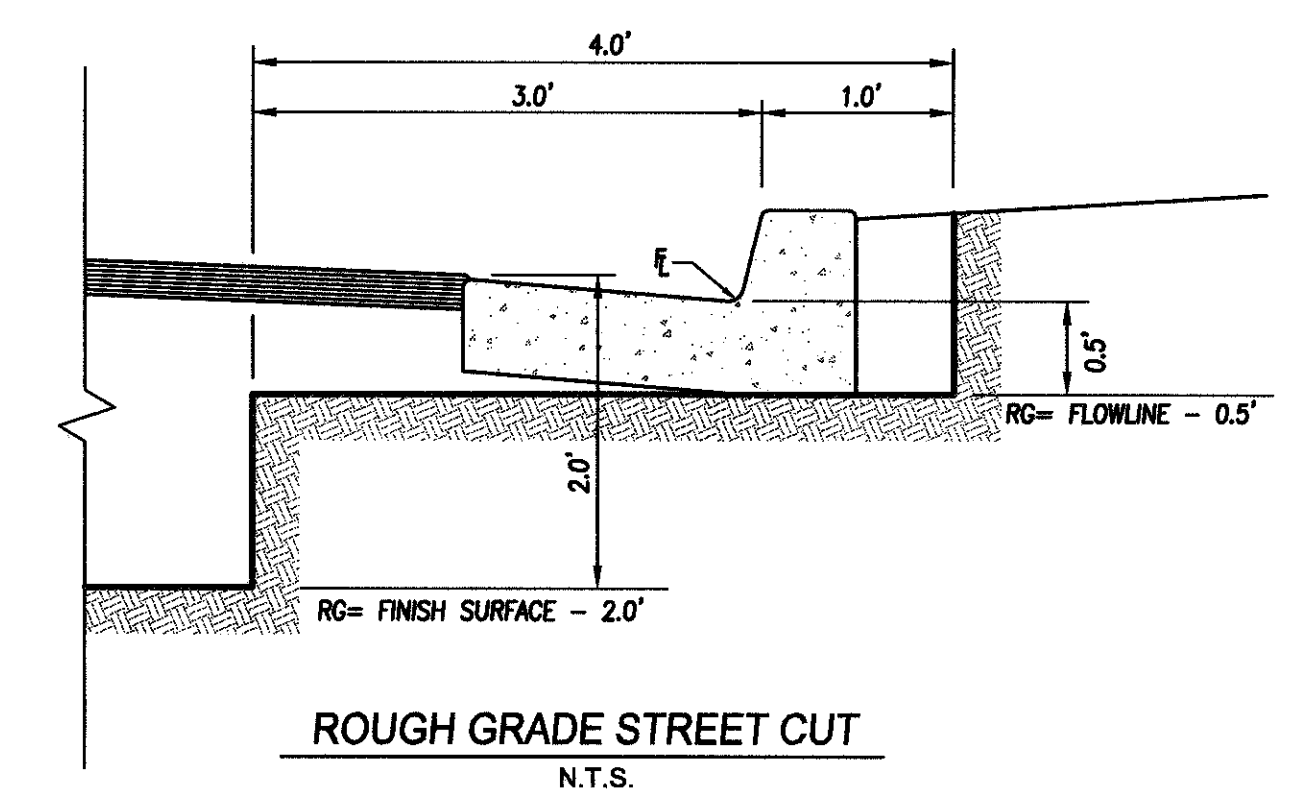
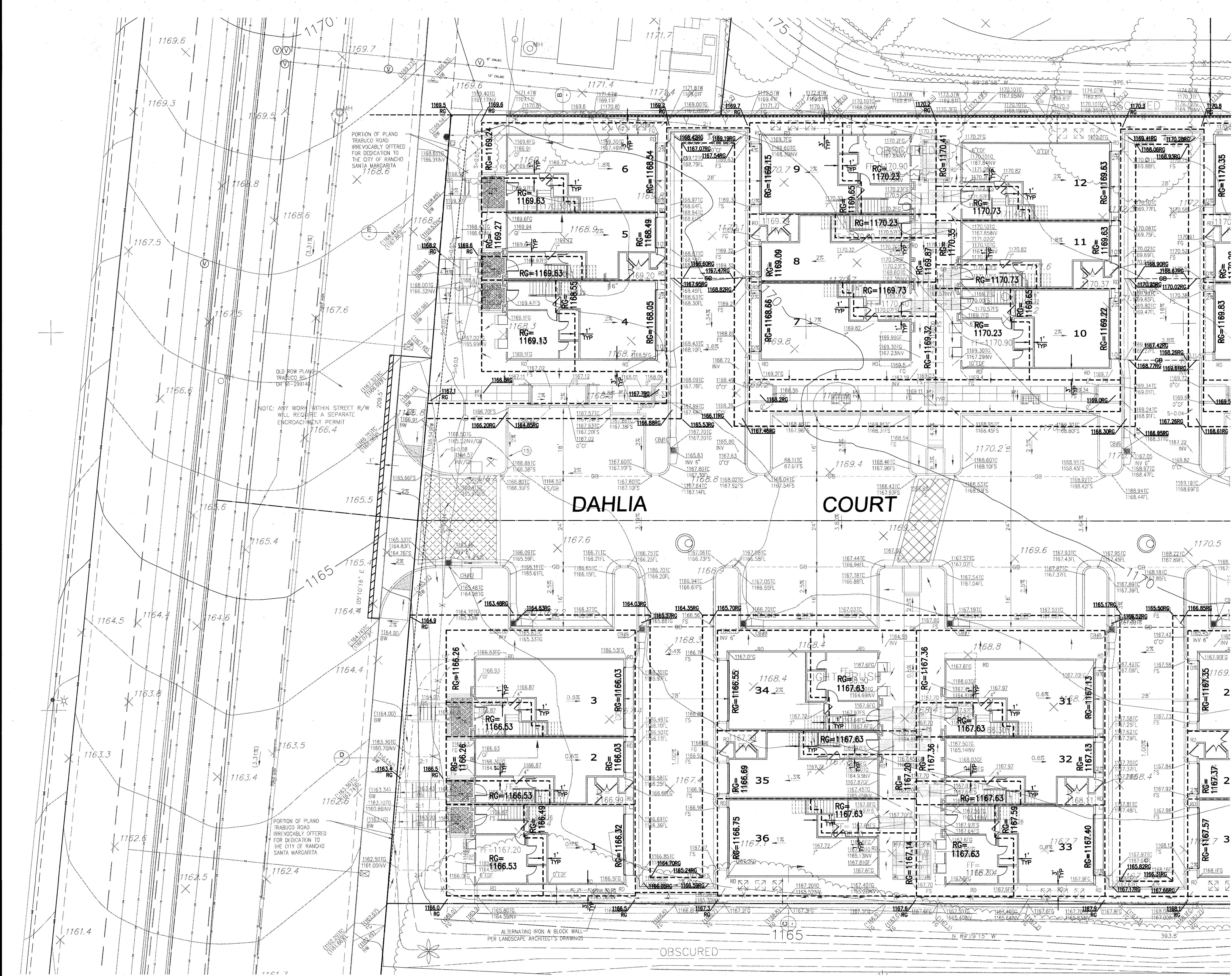
NAME: *[Signature]*
RCE NO.: 29243
DATE: 1/20/16

BENCHMARK: 3W-59-83 ELEV. 1191.336 (NAV 88)
FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3W-59-83", SET IN THE NORTHWESTERLY CORNER OF AN 11 FT. BY 5 FT. CONCRETE CATCH BASIN. MONUMENT IS LOCATED IN THE SOUTHEASTERLY CORNER OF THE INTERSECTION OF ROBINSON RANCH ROAD AND PLANO TRABUCO ROADS, 39 FT. SOUTHERLY OF THE CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.

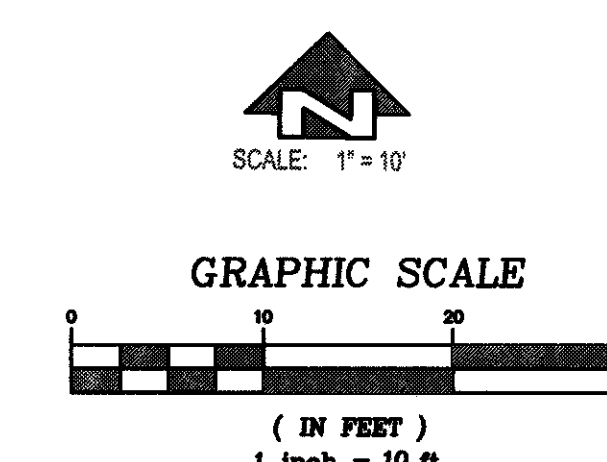
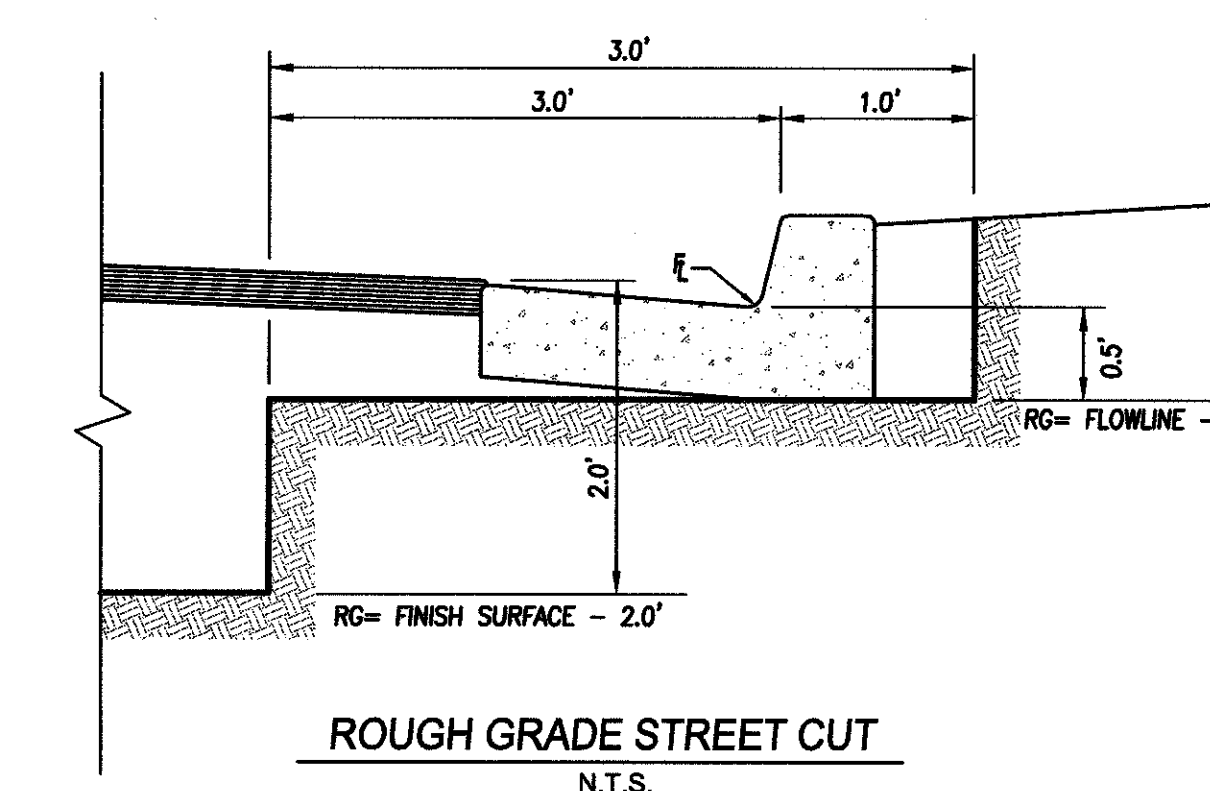
BASIS OF BEARINGS:
BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL CONTROL STATION GPS NO. 4515 AND GPS NO. 4522 BEING N 38°12'11" E PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

DESCRIPTION:
TRACT 17805
EROSION CONTROL
PRECISE GRADING PLAN

SHEET NO.:
10
OF 15 SHEETS



NOTES: WORK CONTAINED WITHIN THESE PLANS SHALL NOT COMMENCE UNTIL AN ENCROACHMENT PERMIT AND/OR A GRADING PERMIT HAS BEEN ISSUED.	<table border="1"><tr><th>NO.</th><th>BY</th><th>INT</th><th>REVISIONS</th><th>R'APP'D</th><th>APP'D</th><th>DATE</th></tr><tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	NO.	BY	INT	REVISIONS	R'APP'D	APP'D	DATE	9							8							7							6							5							4							3							2							1							OWNER: WILLIAM LYON HOMES 4895 MACARTHUR COURT, 8th FLOOR NEWPORT BEACH, CALIFORNIA 92660 (949) 833-3600 - (949) 476-2178 FAX	SEAL: CHARLES HARTMAN & ASSOC. PLANNING - ENGINEERING - SURVEYING 2727 CALLE ARROYO, SUITE 1004 SAN JUAN CAPISTRANO, CA 92675 (949) 661-6885 - (949) 661-6874 FAX	CIVIL ENGINEER: CHARLES HARTMAN & ASSOC. PLANNING - ENGINEERING - SURVEYING 2727 CALLE ARROYO, SUITE 1004 SAN JUAN CAPISTRANO, CA 92675 (949) 661-6885 - (949) 661-6874 FAX	BENCHMARK: 3W-59-83 FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3W-59-83", SET IN THE NORTHWEST CORNER OF AN 11 FT. BY 9 FT. CONCRETE CATCH BASIN. MONUMENT IS LOCATED IN THE SOUTHEAST CORNER OF THE INTERSECTION OF ROBINSON RANCH ROAD AND PLANO TRABUCO ROAD, 39 FT. SOUTHERLY OF THE CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.	DESCRIPTION: BASIS OF BEARINGS: BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL CONTROL STATION GPS NO. 4315 AND GPS NO. 4322 BEING N 38°12'11" E PER RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.	TRACT 17805 ROUGH GRADING PLAN	SHEET NO.: 11 OF 15 SHEETS
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PROJECT ADDRESS: 21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA.	DATE: 1/20/16	NAME: CHL	DATE: 1/20/16																																																																											




SEE SHEET 11

NOTES:

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OWNER: 	WILLIAM LYON HOME 4885 MACARTHUR COURT, 6th FLOOR NEWPORT BEACH, CALIFORNIA 92660 (949) 833-3600 - (949) 476-2178 FAX
PROJECT ADDRESS: 21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA	



CIVIL ENGINEER:

CMA

CHARLES HARTMAN & ASSOC.
PLANNING - ENGINEERING - SURVEYING
27127 CALLE ARROYO SUITE 1000
SAN JUAN CAPISTRANO, CA 92675 (949) 861-6695 - (949) 861-6674 FAX

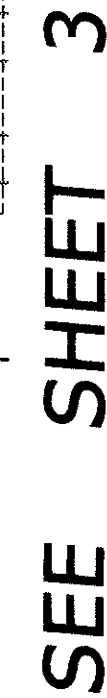
NAME: CHL RCE NO.: 2924
DATE: 1/20/

BENCHMARK: 3W-59-83 ELEV. 1191.336 (NAV 88)
FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK STAMPED "3W-59-83, SET 11"
THE NORTHEASTLY CORNER OF AN 11 FT. BY 5 FT. CONCRETE CATCH BASIN.
MONUMENT IS LOCATED IN THE SOUTHEASTERLY CORNER OF THE INTERSECTION OF
ROBINSON RANCH ROAD AND PLANO TRABUCCO ROADS, 39 FT. SOUTHERLY OF THE
CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE
OF PLANO TRABUCCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.

BASIS OF BEARINGS:

BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL
CENTERLINE OF PLANO QRS NO. 4515 AND QRS NO. 4502 BEING 3°12'11" E PER
RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

DESCRIPTION: <div style="text-align: center;"> <h1>TRACT 17805</h1> <h2>ROUGH GRADING PLAN</h2> </div>	SHEET NO.: <div style="text-align: center;"> <h1>12</h1> </div> OF <u>15</u> SHEETS
-----------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------



CONSTRUCTION NOTES


- 3 CONST. P.C.C. SIDEWALK PER LANDSCAPE ARCHITECT'S DRAWINGS.
- 6 CONST. 6" ATRIUM GRATE PER DETAIL, SHT. 2.
- 7 CONST. 4" PVC DRAIN PIPE SDRJ35.
- 8 CONST. 6" PVC DRAIN PIPE SDRJ35.
- 11 CONST. EXTRA DEPTH FOOTING PER PLAN AND DETAIL ON SHT. 2.
- 40 CONST. TEMPORARY 3" AC. OVER COMPACTED NATIVE PER PLAN.
- 41 CONST. DECORATIVE CONCRETE PAVEMENT PER LANDSCAPE ARCHITECT'S DRAWINGS.
- 42 PLACE 2' x 12" TEMPORARY REDWOOD HEADER PER PLAN.
- 43 CONST. TEMPORARY STRAPPING PER PLAN.
- 44 CONST. TEMPORARY AC BERM PER PLAN.
- 45 CONST. TEMPORARY WALKWAY PER LANDSCAPE ARCHITECT'S DRAWINGS.
- 46 CONST. TEMPORARY MOULD FENCING PER LANDSCAPE ARCHITECT'S DRAWINGS.



DEMOLITION NOTES

- 70 REMOVE TEMPORARY 3" AC PAVEMENT
- 71 REMOVE DECORATIVE CONCRETE PAVEMENT
- 72 REMOVE 2' x 12" TEMPORARY REDWOOD HEADER
- 73 REMOVE TEMPORARY AC BERM
- 74 REMOVE TEMPORARY WALKWAY PER LANDSCAPE ARCHITECT'S DRAWINGS.
- 75 REMOVE TEMPORARY MODEL FENCING

OWNER:

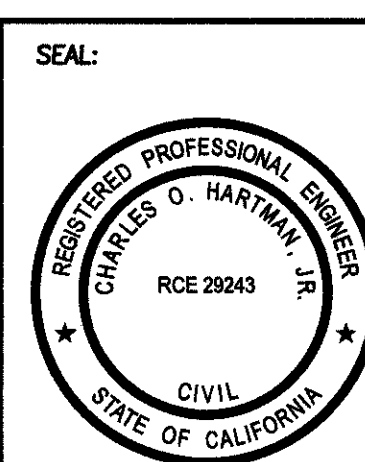


WILLIAM LYON HOMES

4695 MACARTHUR COURT, 8th FLOOR
NEWPORT BEACH, CALIFORNIA 92680
(949) 833-3600 - (949) 478-2178 FAX

PROJECT ADDRESS:

21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA.

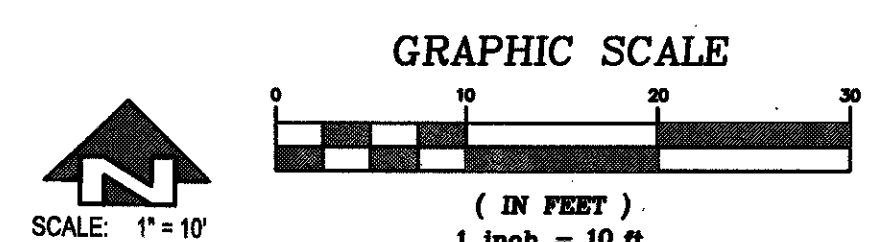


BENCHMARK: JW-59-83 ELEV. 1191.336 (NAV 88)
FOUND 3-5/4" OCS ALUMINUM BENCHMARK DISK STAMPED "JW-59-83" SET IN
THE NORTHEASTLY CORNER OF AIL 11 FT BY 5 FT CONCRETE CATCH BASIN.
MONUMENT IS LOCATED IN THE SOUTHEASTERLY CORNER OF THE INTERSECTION OF
ROBINSON RANCH ROAD AND PLANO TRABUCO ROADS, 38 FT. SOUTHERLY OF
THE CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE
OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.

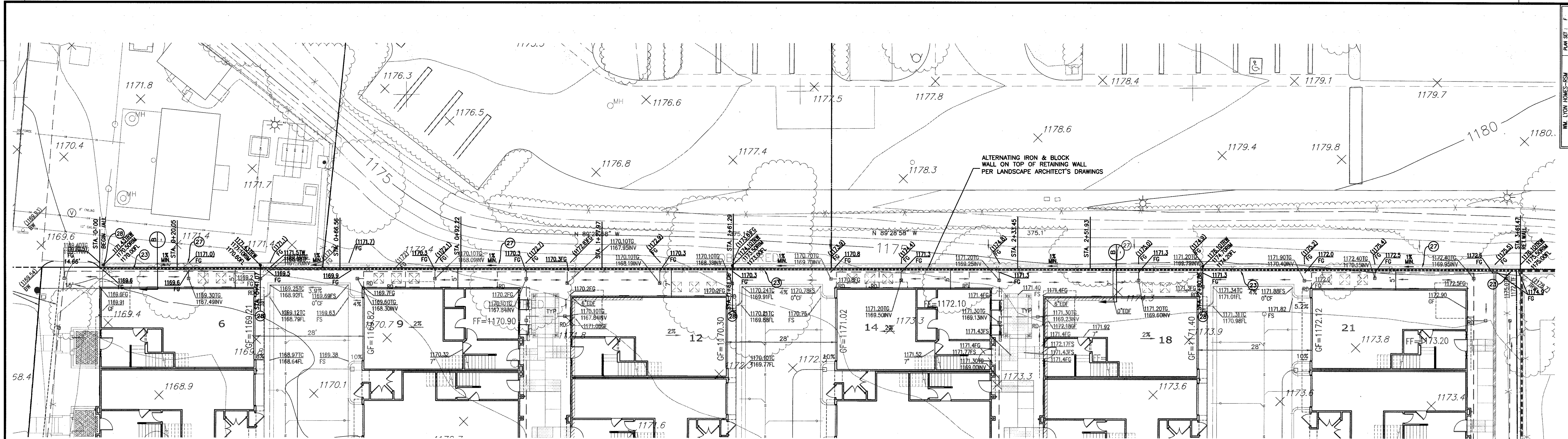
BASIS OF BEARINGS:

BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL
CONTROL STATION QPS NO. 4516 AND QPS NO. 4522 BEING $138^{\circ}11'12.8"$ PER
RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

SHEET NO.:
13
OF 15 SHEETS

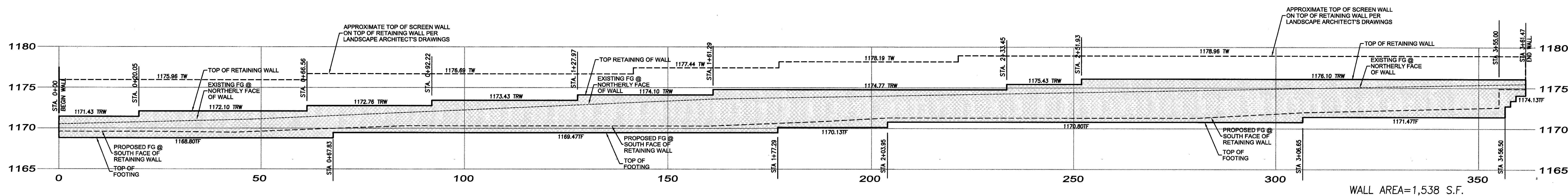


P:\PROJ\14-001_Lyon_RSA\DWG\POP\POP-14-retwall.dwg, 1/20/2016 10:54:54 AM, Adobe PDF-BW.pct3

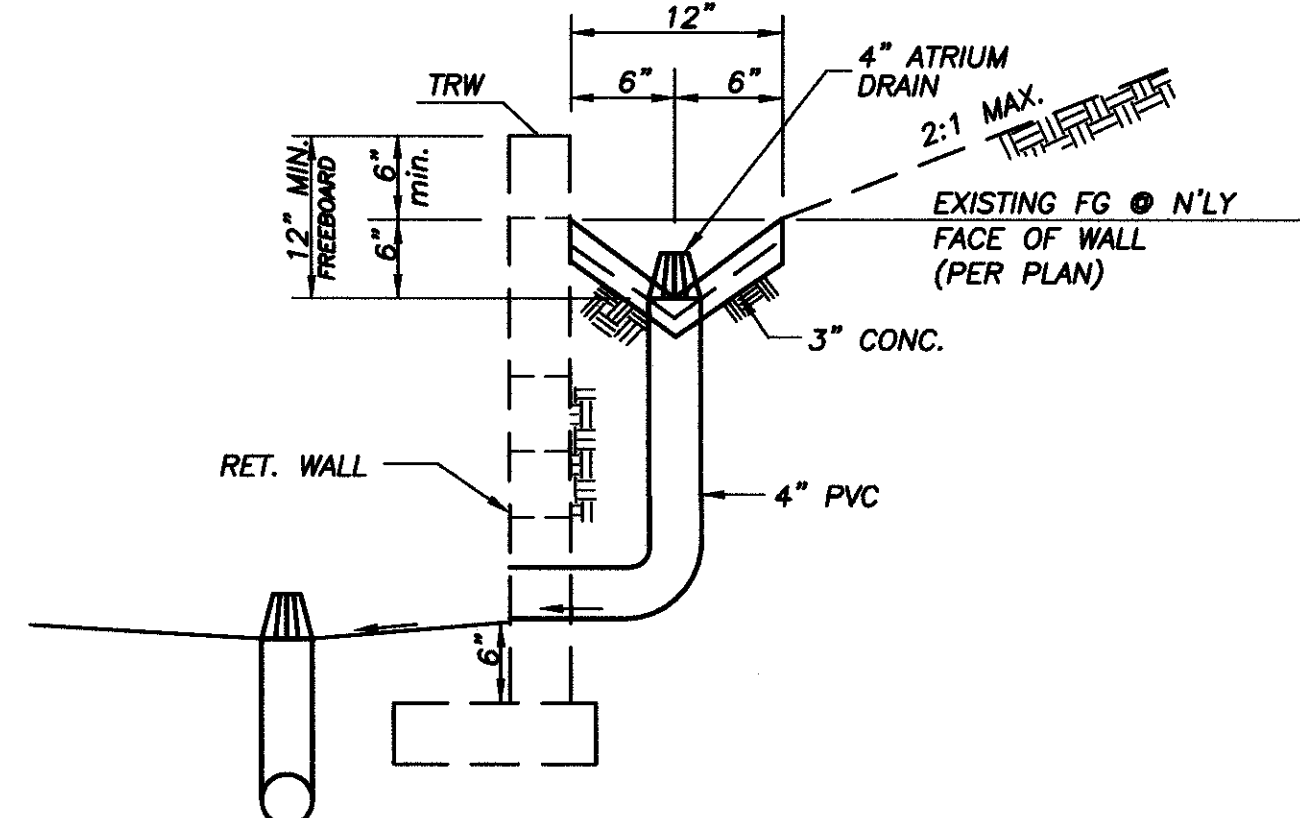


PLAN
SCALE: 1"=10'

NOTE:
RETAINING WALLS SHOWN ON THESE PLANS FOR REFERENCE.
TO BE BUILT PER SEPARATE PERMIT. SEE ARCHITECTURAL PLANS
FOR SCREEN WALLS, STRUCTURAL SECTIONS AND CALCS.

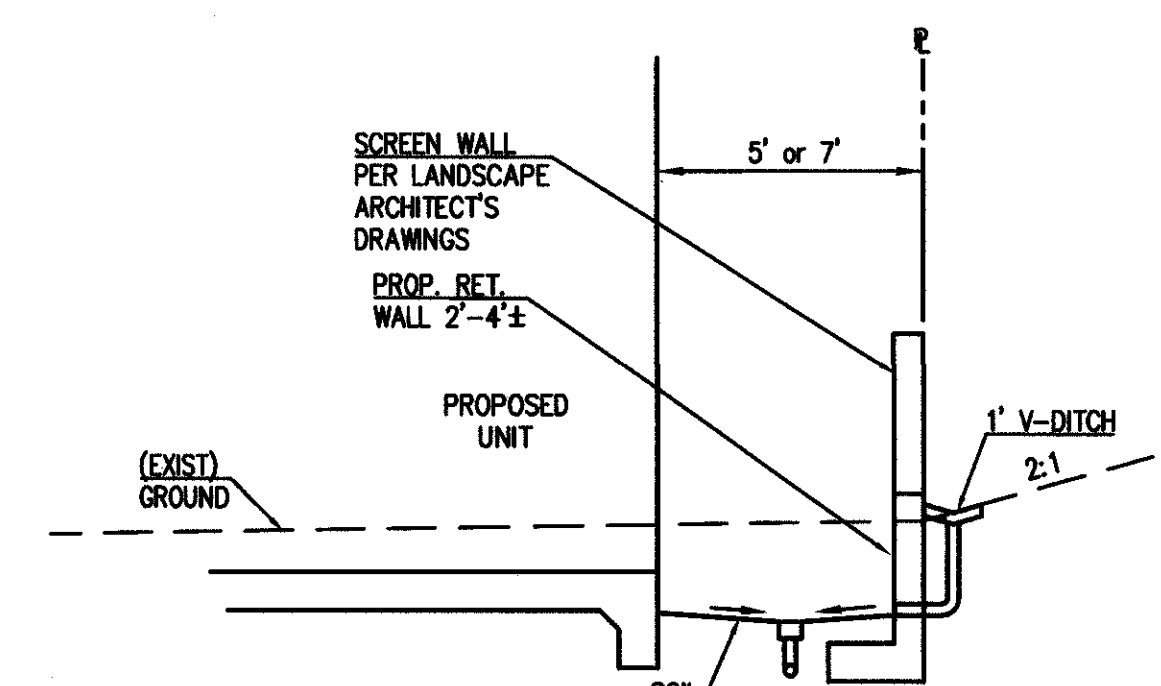


WALL AREA=1,538 S.F.



27 28 12" WIDE UTILITY "V" DITCH
N.T.S.

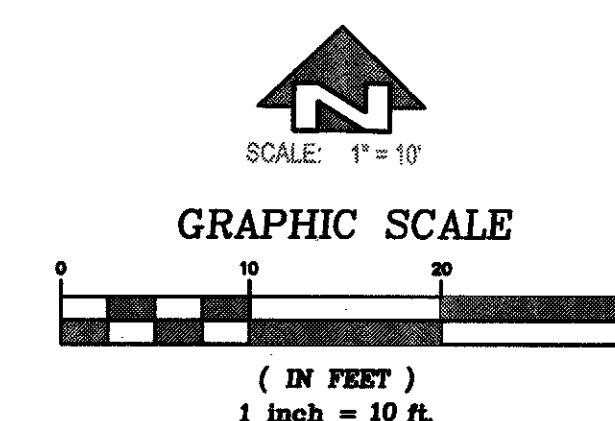
PROFILE
SCALE:
HORIZ: 1"=10'
VERT: 1"=5'



SECTION "B"
SCALE: 1"=5'

CONSTRUCTION NOTES

- 23 CONST. RETAINING WALL PER PLAN AND STRUCTURAL PLANS.
- 27 CONST 1' CONCRETE "V" DRAINAGE DITCH BEHIND RETAINING WALL PER DETAIL ON SHT 14
- 28 CONST DITCH DRAIN PER DETAIL ON SHT. 14 AND PER PLAN.



NOTES:

WORK CONTAINED WITHIN THESE PLANS SHALL
NOT COMMENCE UNTIL AN ENCROACHMENT
PERMIT AND/OR A GRADING PERMIT HAS BEEN
ISSUED

NO.	BY	INT	REVISIONS	R'APP'D	APP'D	DATE
9						
8						
7						
6						
5						
4						
3						
2						
1						

OWNER:

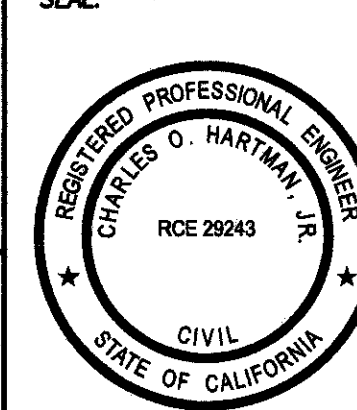


WILLIAM LYON HOMES
4685 MACARTHUR COURT, 8th FLOOR
NEWPORT BEACH, CALIFORNIA 92660
(949) 833-3600 - (949) 478-2178 FAX

PROJECT ADDRESS:

21522 PLANO TRABUCO ROAD, RANCHO SANTA MARGARITA.

SEAL:



CIVIL ENGINEER:

CHARLES HARTMAN & ASSOC.
PLANNING - ENGINEERING - SURVEYING
27107 CALLE ARROYO - SUITE 1004
SAN JUAN CAPISTRANO, CA 92675 (949) 861-0885 - (949) 861-0874 FAX

NAME:

DATE: 1/20/16

BENCHMARK:

3W-59-83
FOUND 3-3/4" OCS ALUMINUM BENCHMARK DISK, STAMPED "3W-59-83", SET IN
THE NORTHWESTERLY CORNER OF AN 11 FT. BY 5 FT. CONCRETE CATCH BASIN.
MONUMENT IS LOCATED IN THE SOUTHEASTERLY CORNER OF THE INTERSECTION OF
ROBINSON RANCH ROAD AND PLANO TRABUCO ROADS, 39 FT. SOUTHERLY OF THE
CENTERLINE OF ROBINSON RANCH ROAD AND 70 FT. EASTERLY OF THE CENTERLINE
OF PLANO TRABUCO ROAD. MONUMENT IS SET LEVEL WITH SIDEWALK.

BASIS OF BEARINGS:

BEARINGS SHOWN HEREON ARE BASED ON THE BEARING BETWEEN OCS HORIZONTAL
CONTROL STATION GPS NO. 4515 AND GPS NO. 4522 BEING N 38°12'11" E PER
RECORDS ON FILE IN THE OFFICE OF THE ORANGE COUNTY SURVEYOR.

DESCRIPTION:

TRACT 17805

RETAINING WALL PLAN

SHEET NO.:

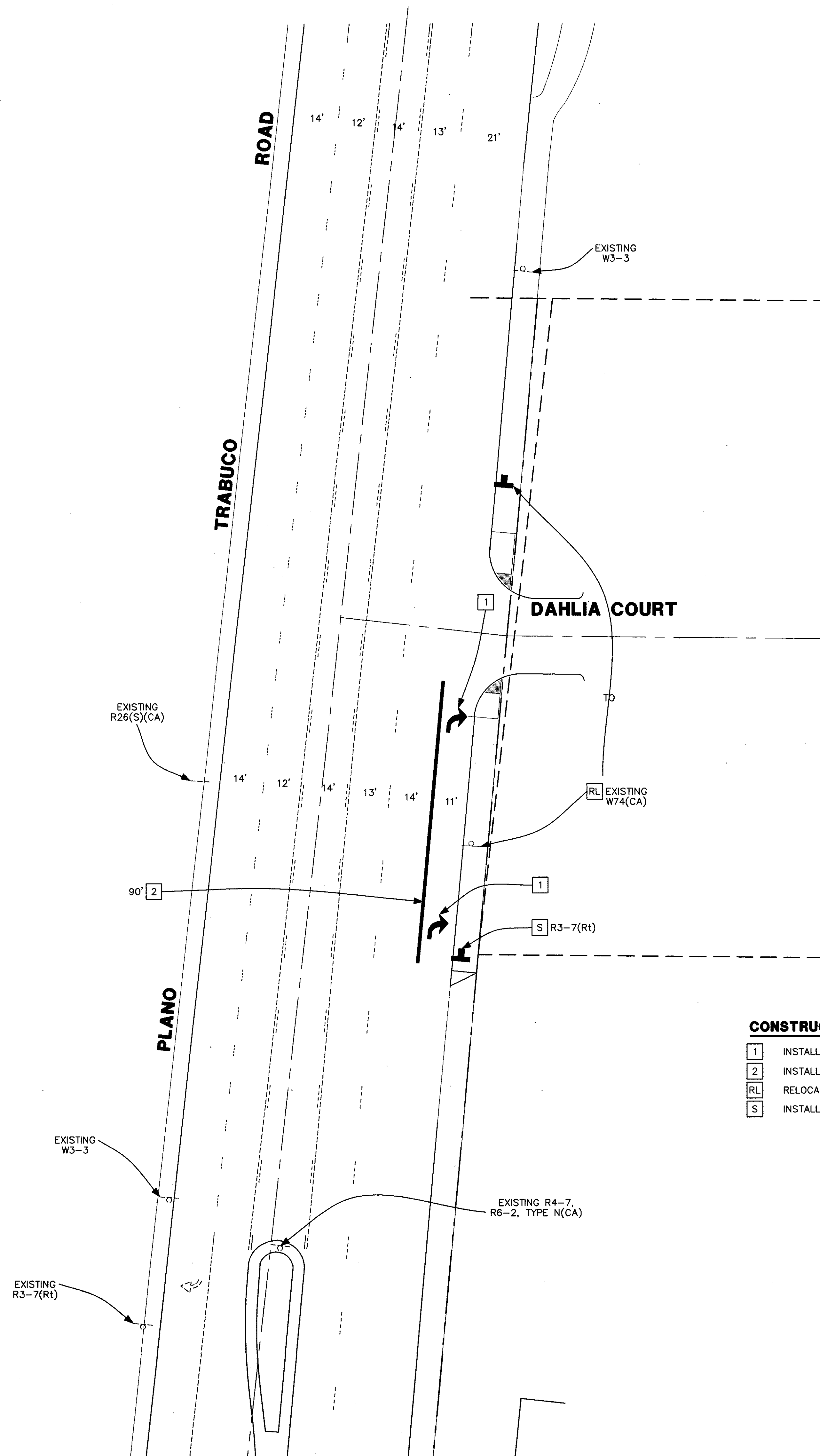
14

OF 15 SHEETS

GENERAL NOTES

1. SIGNING AND STRIPING SHALL CONFORM TO THE LATEST EDITION OF CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD), LATEST EDITION OF CALTRANS STANDARD PLANS AND STANDARD SPECIFICATIONS, THESE PLANS AND SPECIAL PROVISIONS.
2. PAVEMENT LEGENDS SHALL MATCH THE CITY OF RANCHO SANTA MARGARITA STENCILS.
3. ALL NEW STRIPING AND PAVEMENT MARKINGS SHALL BE PAINT PER CALTRANS AND CITY OF RANCHO SANTA MARGARITA REQUIREMENTS.
4. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE REFLECTORIZED AND APPLIED IN TWO COATS. A MINIMUM OF SEVEN DAYS SHALL BE PROVIDED BETWEEN FIRST AND SECOND COATS.
5. ALL CONFLICTING STRIPINGS, PAVEMENT MARKINGS, AND CURB PAINT SHALL BE REMOVED BY WET SANDBLASTING OR OTHER APPROVED METHOD PRIOR TO INSTALLATION OF NEW STRIPING. ALL CONFLICTING RAISED PAVEMENT MARKERS SHALL BE REMOVED.
6. PAVEMENT THAT IS DAMAGED DUE TO REMOVAL OF MARKERS OR STRIPING SHALL BE REPAIRED TO THE SATISFACTION OF THE CITY INSPECTOR.
7. THE CONTRACTOR SHALL CONTACT THE CITY OF RANCHO SANTA MARGARITA 48 HOURS PRIOR TO BEGINNING OF WORK.
8. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS BEFORE STARTING WORK. IF CONDITIONS EXIST WHICH ARE CONTRARY TO THOSE SHOWN ON THESE PLANS, THE CITY OF RANCHO SANTA MARGARITA SHALL BE NOTIFIED BEFORE PROCEEDING WITH WORK.
9. STRIPING SHALL BE CAT TRACKED AND APPROVED BY THE CITY INSPECTOR PRIOR TO FINAL INSTALLATION.
10. ALL SIGN FACE RETROREFLECTIVE SHEETING SHALL BE PER THE LATEST EDITION OF CA MUTCD AND CALTRANS STANDARD SPECIFICATIONS.
11. ALL SIGN POSTS SHALL BE U-CHANNEL POSTS WITH BREAK AWAY JOINT.

SCALE: 1" = 20'

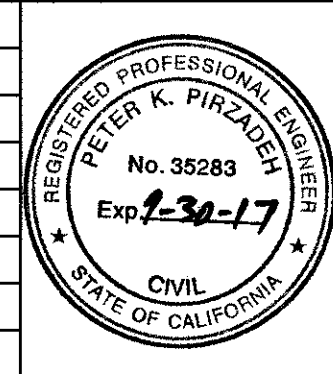


CONSTRUCTION NOTES

1. INSTALL WHITE PAVEMENT LEGENDS AS SHOWN PER CITY OF RANCHO SANTA MARGARITA STENCILS.
2. INSTALL 8" SOLID WHITE CHANNELIZING LINE (DETAIL 38 CA MUTCD).
- RL RELOCATE EQUIPMENT.
- S INSTALL SIGN PER DESIGNATION. SEE CALIFORNIA MUTCD.

PAI 14318-RSM Dwg-signing&striping.dwg 1/25/16

NO.	DATE	REVISIONS	ENGR.	DATE
6				
5				
4				
3				
2				
1				



Pirzadeh & Associates, Inc.
30 Executive Park
Suite 270
Irvine, CA 92614-5776
t: (949) 851-1367
f: (949) 851-5179
www.pirzadeh.com
DATE: 1-25-2016
PETER K. PIRZADEH, RCE 35283 EXPIRE 9-30-17

DEVELOPER/OWNER:
WILLIAM LYON HOMES
4695 MACARTHUR COURT, 8TH FLOOR
NEWPORT BEACH, CALIFORNIA 92660
(949) 833-3600

DATE
1/25/16

SIGNING AND STRIPING PLAN
PLANO TRABUCO ROAD
AT DAHLIA COURT
CITY OF RANCHO SANTA MARGARITA
PUBLIC WORKS DEPARTMENT

PROJECT NO. -
PERMIT NO. -
SHEET 15
OF 15
JOB NO. 14318

Permit Fee Calculation EP 16-10

	Fee	Unit	LF/SF	Quantity	Total	Unit
Trenching/Utilities	\$245.00	\$ 0.25	If	190	\$292.50	lin.ft.
Lane Closure	\$200.00			5	\$1,000.00	Per Day
DW Approach	\$300.00			1	\$300.00	ea.
					\$1,292.50	Inspection Fee
Permit Issuance Fee	\$55.00			1	\$55.00	Per Issuance
					\$1,347.50	Total

Sandra Norman

From: Wilson Leung
Sent: Tuesday, February 09, 2016 9:38 AM
To: Sandra Norman
Subject: FW: RE: TCP for Dahlia Courts

Hi Sandy,

Here are the comments for the EP for Dahlia Courts.

Regards,

Wilson Leung

From: Bill Lawson
Sent: Thursday, February 04, 2016 4:22 PM
To: Wilson Leung
Cc: Joe Parco
Subject: RE: RE: TCP for Dahlia Courts

Wilson,

I have briefly reviewed the TCP and have the following comments.

1. The work hours shall be restricted between 7:00 a.m. and 3:30 p.m. This means that the first cone should be placed at 7:00 a.m. and the last cone shall be picked up at 3:30 p.m.
2. All traffic control devices shall be removed from view between the hours of 3:30 p.m. to 7:00 a.m.

Bill Lawson, PE
Traffic Engineer/Consultant



City of Rancho Santa Margarita
22122 El Paseo
Rancho Santa Margarita, CA 92688
(949) 635-1800 x6508
www.cityofrsm.org

From: Wilson Leung
Sent: Thursday, February 04, 2016 3:33 PM
To: Bill Lawson
Subject: FW: RE: TCP for Dahlia Courts



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

2/12/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Venbrook Insurance Services CA Lic 0D80832 6320 Canoga Avenue, 12th Floor Woodland Hills, CA 91367 www.venbrook.com	CONTACT NAME: PHONE (A/C, No. Ext): 818-598-8900 FAX (A/C, No): 818-598-8910 E-MAIL ADDRESS: INSURER(S) AFFORDING COVERAGE INSURER A: Old Republic General Insurance Co. NAIC # 24139 INSURER B: St. Paul Fire and Marine Insurance Company 24767 INSURER C: Travelers Property Casualty Co of America 25674 INSURER D: INSURER E: INSURER F:
INSURED Boudreau Pipeline Corporation Contracts@boudreaupipeline.com 463 N. Smith Avenue Corona CA 92880	

COVERAGES**CERTIFICATE NUMBER:** 28562188**REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> BFPD/XCU/OCF <input checked="" type="checkbox"/> Contractual GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	<input checked="" type="checkbox"/>		A1CG05041500	3/1/2015	3/1/2016	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS			A1CA05041500	3/1/2015	3/1/2016	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			ZUP15N2446A15NF	3/1/2015	3/1/2016	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000 \$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input checked="" type="checkbox"/> N <input type="checkbox"/> Y	N/A	VTC2J-UB-5G47978-A-16	1/1/2016	1/1/2017	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Permits

City of Rancho Santa Margarita, its officers, agents and employees, shall be expressly listed named as Additional Insured's under the General Liability policy if required by written contract with the Named Insured but only for coverages and limits provided by the policy and the additional insured endorsement.

*10 Days Notice of Cancellation for Non-Payment of Premium, 30 Days All Others.

CERTIFICATE HOLDER

City of Santa Margarita
22112 El Paseo
Rancho Santa Margarita CA 92688

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

(WH) Adrianna Padilla

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ACORD 25 (2014/01)

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THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – SCHEDULED PERSON OR ORGANIZATION

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location(s) Of Covered Operations
WHERE REQUIRED BY WRITTEN CONTRACT.	
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

C. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or

2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

OLD REPUBLIC GENERAL INSURANCE CORPORATION
CHANGES ADDITIONAL INSURED PRIMARY WORDING SCHEDULE

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

THIS ENDORSEMENT MODIFIES INSURANCE PROVIDED UNDER THE FOLLOWING:

COMMERCIAL GENERAL LIABILITY COVERAGE FORM

Name of Additional Insured Person(s)
Or Organization(s)

Location(s) of Coverage Operations

As required by written contract.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The insurance provided by this endorsement is primary insurance and we will not seek contribution from any other insurance of a like kind available to the person or organization shown in the schedule above unless the other insurance is provided by a contractor other than the person or organization shown in the schedule above for the same operation and job location. If so, we will share with that other insurance by the method described in paragraph 4.c of Section IV – Commercial General Liability Conditions.

All other terms and conditions remain unchanged.

Named Insured	Boudreau Pipeline Corporation Contracts@boudreaupipeline.com		
Policy Number	A1CG05041500	Endorsement No.	
Policy Period	3/1/2015 to 3/1/2016	Endorsement Effective Date	
Producer's Name:	Venbrook Insurance Services		
Producer Number:			



AUTHORIZED REPRESENTATIVE

2/12/2016

DATE

CG EN CN 0029 09 06

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – STATE OR GOVERNMENTAL
AGENCY OR SUBDIVISION OR POLITICAL
SUBDIVISION – PERMITS OR AUTHORIZATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

State Or Governmental Agency Or Subdivision Or Political Subdivision:

WHERE REQUIRED BY PERMIT OR AUTHORIZATION.

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

A. Section II – Who Is An Insured is amended to include as an additional insured any state or governmental agency or subdivision or political subdivision shown in the Schedule, subject to the following provisions:

1. This insurance applies only with respect to operations performed by you or on your behalf for which the state or governmental agency or subdivision or political subdivision has issued a permit or authorization.

However:

- a. The insurance afforded to such additional insured only applies to the extent permitted by law; and
- b. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

2. This insurance does not apply to:

- a. "Bodily injury", "property damage" or "personal and advertising injury" arising out of operations performed for the federal government, state or municipality; or
- b. "Bodily injury" or "property damage" included within the "products-completed operations hazard".

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations
WHERE REQUIRED BY WRITTEN CONTRACT, BUT ONLY WHEN COVERAGE FOR COMPLETED OPERATIONS IS SPECIFICALLY REQUIRED BY THAT CONTRACT.	
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to Section III – Limits Of Insurance:

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

From: [Wilson Leung](#)
To: [Diego Chavez](#)
Cc: [Sandra Norman](#)
Subject: FW: Dahlia Court Encroachment Permit App
Date: Tuesday, February 16, 2016 10:11:49 AM
Attachments: [Boudreau Pipeline Cert of Insurance.pdf](#)
[Boudreau Pipeline Contractors License.pdf](#)
[Boudreau Pipeline Encroachment App.pdf](#)
Importance: High

Good Morning Diego,

Can you please check the insurance for offsite improvements in the public right of way. Let me know if you have any questions or concerns, Thank you.

Regards,

Wilson Leung

From: Charnette Neal [mailto:Charnette.Neal@Lyonhomes.com]
Sent: Tuesday, February 16, 2016 10:05 AM
To: Wilson Leung
Cc: Sandra Norman; Rick Puffer
Subject: Dahlia Court Encroachment Permit App
Importance: High

Morning Wilson:

Attached, please find Boudreau's Contractor's License, Insurance and Application.

Please let me know everything is approved and ready for me to come in and pull the permit.

If you have any questions, please let me know, thanks.

Charnette Neal
PROJECT COORDINATOR
Charnette.neal@lyonhomes.com
Office 949.476.5408 Efax 949.252.2573
www.lyonhomes.com



From: Wilson Leung [mailto:wleung@cityofrsm.org]
Sent: Wednesday, February 10, 2016 3:01 PM
To: Charnette Neal <Charnette.Neal@Lyonhomes.com>
Cc: Sandra Norman <snorman@cityofrsm.org>
Subject: RE: Encroachment Permit Fees

Good Afternoon Charnette,

The calculated fees due for the offsite encroachment is **\$1,347.50**. If there are any other questions or concerns, please feel free to contact me anytime. Thank you.

Regards,

Wilson Leung
Associate Engineer
City of Rancho Santa Margarita
Phone (949) 635-1800 ext. 6506
Fax (949) 635-1667
wleung@cityofrsm.org