

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

2375 Northside Drive, Suite. 100, San Diego, CA 92108
Phone (619) 516-1990 • Fax (619) 516-1994
<http://www.waterboards.ca.gov/sandiego/>

**Clean Water Act Section 401 Water Quality Certification
and Waste Discharge Requirements
for Discharge of Dredged and/or Fill Materials**

**PROJECT: Versum Materials Swale Repair
Certification Number R9-2017-0176
WDID: 9000003229**

Reg. Meas. ID: 416851
Place ID: 841116
Party ID: 569251
Person ID: 569252

**APPLICANT: Versum Materials
1969 Palomar Oaks Way
Carlsbad, CA 92011**

ACTION:

<input checked="" type="checkbox"/> Order for Low Impact Certification	<input type="checkbox"/> Order for Denial of Certification
<input type="checkbox"/> Order for Technically-conditioned Certification	<input type="checkbox"/> Waiver of Waste Discharge Requirements
<input checked="" type="checkbox"/> Enrollment in SWRCB GWDR Order No. 2003-017-DWQ	<input type="checkbox"/> Enrollment in Isolated Waters Order No. 2004-004-DWQ

PROJECT DESCRIPTION

An application dated October 23, 2017 was submitted by Versum Materials (hereinafter Applicant), for Water Quality Certification pursuant to section 401 of the Clean Water Act (33 U.S.C. § 1341) for the proposed Versum Materials Swale Repair Project (Project). The Applicant has applied for Clean Water Act section 404 Nationwide Permit No. 13 Bank Stabilization from the United States Army Corps of Engineers for the Project (USACE File Nos. SPL-2017-00707-WSZ).

The Project is located within the City of Carlsbad, San Diego County, CA at 1979 Palomar Oaks Way. The Project's center reading is at latitude 33.11787, longitude -117.28333.

The Applicant has paid all required fees for this Certification in the amount of \$1,500.00. On March 7, 2018, the San Diego Water Board provided public notice of the Project application pursuant to California Code of Regulations, title 23, section 3858 by posting information describing the Project on the San Diego Water Board's web site and providing a period of twenty-one days for public review and comment. No comments were received.

The Applicant proposes to remove an existing 529 foot (ft.) long by 3 ft. wide concrete lined section of Encinas Creek that is degraded and replace with open celled concrete articulated matting. Once the concrete ditch has been removed, a series of interlocking concrete mats will be installed extending up to 16 ft. up each side of the Creek banks tied together with a mesh of steel cables. The integrated cable allow for mat-to-mat connection, connection to the ground, and permanent anchoring with tie-down stakes. The open cells mats provides 40% open area

between the concrete blocks which will allow for water infiltration and opportunity for plant establishment. Once the concrete mats are installed, a thin layer of soil will be used to cover the concrete mats and hydroseeded with a native plant mix. Project construction will permanently impact 0.15 acres (529 linear feet) of wetland waters of the United States and/or State. Duration of construction time is estimated to be two months. The Project is considered self mitigating because the functions of Encinas Creek are being restored by the removal of the current degraded concrete channel, the use of open cell concrete mats, and the addition of soil as cover the concrete mats that will be planted with a native seed mix. No compensatory mitigation is required for this Project.

Receiving waters potentially affected by the Project are protected in accordance with water quality standards in the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan). This Certification authorizes permanent and temporary impacts to waters of the United States and/or State affected by the Project. The temporary impacts will be restored by the Applicant to pre-Project conditions and do not include physical loss of aquatic resource area or degradation of ecological conditions. Maintenance and monitoring of the Project is required as outlined in the *Habitat Mitigation and Monitoring Plan – Versum Materials Swale Repair Project, Planning Systems, December 15, 2017*. Based on all of these considerations, the Applicant's compliance with the terms and conditions of this Certification will ensure that the water quality standards for all waters of the United States and/or State impacted by the Project are met.

Additional Project details are provided in Attachments 2 of this Certification.

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Attachments:

- 1. Definitions**
- 2. Project Figures and Plans**

The San Diego Water Board has independently reviewed the record of the Project to analyze the extent and nature of proposed Project impacts to the water quality and beneficial uses of waters of the United States and/or State and associated compensatory mitigation required to offset impacts attributed to the Project. In accordance with this Certification, the Applicant may proceed with the Project under the following terms and conditions:

I. STANDARD CONDITIONS

Pursuant to section 3860 of title 23 of the California Code of Regulations, the following three standard conditions apply to all water quality certification actions:

- A. This Certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the Water Code and chapter 28, article 6 (commencing with title 23, section 3867), of the California Code of Regulations.
- B. This Certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility and requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent Certification application was filed pursuant to California Code of Regulations title 23, section 3855 subdivision (b), and that application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.
- C. This Certification action is conditioned upon total payment of any fee required under title 23, chapter 28 (commencing with section 3830) of California Code of Regulations and owed by the applicant.

II. GENERAL CONDITIONS

- A. **Term of Certification.** Water Quality Certification No. R9-2017-0176 (Certification) shall expire upon a) the expiration or retraction of the Clean Water Act section 404 (33 U.S.C. §1344) permit issued by the U.S. Army Corps of Engineers for this Project, or b) five (5) years from the date of issuance of this Certification, whichever occurs first.
- B. **Duty to Comply.** The Applicant must comply with all conditions and requirements of this Certification. Any Certification noncompliance constitutes a violation of the Water Code and is grounds for enforcement action or Certification termination, revocation and reissuance, or modification.
- C. **General Waste Discharge Requirements.** The requirements of this Certification are enforceable through Water Quality Order No. 2003-0017-DWQ, *Statewide General Waste Discharge Requirements for Discharges of Dredged or Fill Material that have Received State Water Quality Certification* (Water Quality Order No. 2003-0017-DWQ). This provision shall apply irrespective of whether a) the federal permit for which the Certification was obtained is subsequently retracted or is expired, or b) the Certification is expired. Water Quality Order No. 2003-0017-DWQ is accessible at:

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/gowdr401regulated_projects.pdf

- D. **Project Conformance with Application.** All water quality protection measures and BMPs described in the application and supplemental information for water quality certification are incorporated by reference into this Certification as if fully stated herein. Notwithstanding any more specific conditions in this Certification, the Applicant shall construct, implement and comply with all water quality protection measures and BMPs described in the application and supplemental information. The conditions within this Certification shall supersede conflicting provisions within the application and supplemental information submitted as part of this Certification action.
- E. **Project Conformance with Water Quality Control Plans or Policies.** Notwithstanding any more specific conditions in this Certification, the Project shall be constructed in a manner consistent with the Basin Plan and any other applicable water quality control plans or policies adopted or approved pursuant to the Porter Cologne Water Quality Act (Division 7, commencing with Water Code Section 13000) or section 303 of the Clean Water Act (33 U.S.C §1313.). The Basin Plan is accessible on-line at:
- http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtm
!
- F. **Project Modification.** The Applicant must submit any changes to the Project, including Project operation, which would have a significant or material effect on the findings, conclusions, or conditions of this Certification, to the San Diego Water Board for prior review and written approval. If the San Diego Water Board is not notified of a significant change to the Project, it will be considered a violation of this Certification.
- G. **Certification Distribution Posting.** During Project construction, the Applicant must maintain a copy of this Certification at the Project site. This Certification must be available at all times to site personnel and agencies. A copy of this Certification shall also be provided to any contractor or subcontractor performing construction work, and the copy shall remain in their possession at the Project site.
- H. **Inspection and Entry.** The Applicant must allow the San Diego Water Board or the State Water Resources Control Board, and/or their authorized representative(s) (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents as may be required under law, to:
1. Enter upon the Project or Compensatory Mitigation site(s) premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Certification;
 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Certification;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Certification; and
 4. Sample or monitor, at reasonable times, for the purposes of assuring Certification compliance, or as otherwise authorized by the Clean Water Act or Water Code, any substances or parameters at any location.
- I. **Enforcement Notification.** In the event of any violation or threatened violation of the conditions of this Certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under State law. For purposes of section 401(d) of the Clean Water Act, the applicability of any State law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this Certification.
- J. **Certification Actions.** This Certification may be modified, revoked and reissued, or terminated for cause including but not limited to the following:
1. Violation of any term or condition of this Certification;
 2. Monitoring results indicate that continued Project activities could violate water quality objectives or impair the beneficial uses of Encinas Creek;
 3. Obtaining this Certification by misrepresentation or failure to disclose fully all relevant facts;
 4. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
 5. Incorporation of any new or revised water quality standards and implementation plans adopted or approved pursuant to the Porter-Cologne Water Quality Control Act or section 303 of the Clean Water Act.
- The filing of a request by the Applicant for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Certification condition.
- K. **Duty to Provide Information.** The Applicant shall furnish to the San Diego Water Board, within a reasonable time, any information which the San Diego Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Certification or to determine compliance with this Certification.
- L. **Property Rights.** This Certification does not convey any property rights of any sort, or any exclusive privilege.
- M. **Petitions.** Any person aggrieved by this action of the San Diego Water Board may petition the State Water Resources Control Board (State Water Board) to review the

action in accordance with the California Code of Regulations, title 23, sections 3867 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Certification. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

III. CONSTRUCTION AND POST CONSTRUCTION BEST MANAGEMENT PRACTICES

- A. **Construction Requirements.** Prior to start of Project construction, the Applicant must, as applicable, obtain coverage under, and comply with, the requirements of State Water Resources Control Board Water Quality Order No. 2009-0009-DWQ, the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activity (General Construction Storm Water Permit) and any reissuance. If Project construction activities do not require coverage under the General Construction Storm Water Permit, the Applicant must develop and implement a pollution control plan, construction BMP plan, and/or erosion and sediment control plan to prevent the discharge of sediment and other pollutants during construction activities.
- B. **Post-Construction Requirements.** The Project must meet all the Post-Construction requirements of the San Diego Water Board Order No. R9-2013-0001 (and amendments) National Pollutant Discharge Elimination Systems Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer Systems (MS4) Draining the Watersheds within the San Diego Region (Regional MS4 Permit).

IV. PROJECT IMPACTS AND COMPENSATORY MITIGATION

- A. **Project Impacts and Compensatory Mitigation.** Unavoidable Project impacts to Encinas Creek within the Carlsbad Watershed must not exceed the type and magnitude of impacts described above. The Project is self-mitigating and compensatory mitigation is not required.
- B. **Temporary Project Impact Areas.** The Applicant must restore all areas of temporary impacts and all other areas of temporary disturbance which could result in a discharge or a threatened discharge of pollutants to waters of the United States and/or State. Restoration must include grading of disturbed areas to pre-project contours and re-vegetation with native species. The Applicant must implement all necessary BMPs to control erosion and runoff from areas associated with the Project.

V. MONITORING AND REPORTING REQUIREMENTS

- A. **Annual Project Progress Reports.** The Applicant must submit annual Project progress reports describing compliance with all requirements of this Certification to the San Diego Water Board prior to **May 1** of each year following the issuance of this Certification, until the Project has reached completion. The report must include the following information:
1. The names, qualifications, and affiliations of the persons contributing to the report;

2. The status, progress, and anticipated schedule for completion of Project construction activities;
 3. A description of Project construction delays encountered or anticipated that may affect the schedule for construction completion; and
 4. A description of each incident of noncompliance during the annual monitoring period and its cause, the period of the noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
- B. Final Project Completion Report.** The Applicant must submit a Final Project Completion Report to the San Diego Water Board **within 30 days of completion** of the Project. The final report must include the following information:
1. Date of construction initiation;
 2. Date of construction completion;
 3. As-built drawings of the Project, no bigger than 11"X17"; and
 4. Photo documentation of implemented post-construction BMPs and all areas of permanent and temporary impacts, prior to and after project construction. Photo documentation must be conducted in accordance with guidelines posted at http://www.waterboards.ca.gov/sandiego/water_issues/programs/401_certification/docs/401c/401PhotoDocRB9V713.pdf. In addition, photo documentation must include Global Positioning System (GPS) coordinates for each of the photo points referenced.
- C. Reporting Authority.** The submittal of information required under this Certification, or in response to a suspected violation of any condition of this Certification, is required pursuant to Water Code section 13267 and 13383. Civil liability may be administratively imposed by the San Diego Water Board for failure to submit information pursuant to Water Code sections 13268 or 13385.
- D. Electronic Document Submittal.** The Applicant must submit all reports and information required under this Certification in electronic format via e-mail to SanDiego@waterboards.ca.gov. Documents over 50 megabytes will not be accepted via e-mail and must be placed on a disc and delivered to:

California Regional Water Quality Control Board
San Diego Region
Attn: 401 Certification No. R9-2017-0176:841116:amonji
2375 Northside Drive, Suite 100
San Diego, California 92108

Each electronic document must be submitted as a single file, in Portable Document Format (PDF), converted to text searchable format using Optical Character Recognition (OCR), and not be password protected. All electronic documents must include scanned copies of all signature pages; electronic signatures will not be accepted. Please direct questions about large document submittal procedures to Mission Support Services staff at (619) 516-1990. Electronic documents submitted to the San Diego Water Board must include the following identification numbers in the header or subject line: Certification No. R9-2017-0176:841116:amonji.

E. Document Signatory Requirements. All applications, reports, or information submitted to the San Diego Water Board must be signed as follows:

1. For a corporation, by a responsible corporate officer of at least the level of vice president.
2. For a partnership or sole proprietorship, by a general partner or proprietor, respectively.
3. For a municipality, or a state, federal, or other public agency, by either a principal executive officer or ranking elected official.
4. A duly authorized representative may sign applications, reports, or information if:
 - a. The authorization is made in writing by a person described above.
 - b. The authorization specifies either an individual or position having responsibility for the overall operation of the regulated activity.
 - c. The written authorization is submitted to the San Diego Water Board Executive Officer.

If such authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the Project, a new authorization satisfying the above requirements must be submitted to the San Diego Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative.

F. Document Certification Requirements. All applications, reports, or information submitted to the San Diego Water Board must be certified as follows:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

VI. NOTIFICATION REQUIREMENTS

- A. **Twenty Four Hour Non-Compliance Reporting.** The Applicant shall report any noncompliance which may endanger health or the environment. Any such information shall be provided orally to the San Diego Water Board within **24 hours** from the time the Applicant becomes aware of the circumstances. A written submission shall also be provided within five days of the time the Applicant becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
- B. **Anticipated Noncompliance.** The Applicant shall give advance notice to the San Diego Water Board of any planned changes in the Project or the Compensatory Mitigation project which may result in noncompliance with Certification conditions or requirements.
- C. **Transfers.** This Certification is not transferable in its entirety or in part to any person or organization except after notice to the San Diego Water Board in accordance with the following terms:
1. **Transfer of Property Ownership:** The Applicant must notify the San Diego Water Board of any change in ownership of the Project area. Notification of change in ownership must include, but not be limited to, a statement that the Applicant has provided the purchaser with a copy of the Section 401 Water Quality Certification and that the purchaser understands and accepts the certification requirements and the obligation to implement them or be subject to liability for failure to do so; the seller and purchaser must sign and date the notification and provide such notification to the San Diego Water Board **within 10 days of the transfer of ownership.**
 2. **Transfer of Mitigation Responsibility:** Any notification of transfer of responsibilities to satisfy the mitigation requirements set forth in this Certification must include a signed statement from an authorized representative of the new party (transferee) demonstrating acceptance and understanding of the responsibility to comply with and fully satisfy the mitigation conditions and agreement that failure to comply with the mitigation conditions and associated requirements may subject the transferee to enforcement by the San Diego Water Board under Water Code section 13385, subdivision (a). Notification of transfer of responsibilities meeting the above conditions must be provided to the San Diego Water Board **within 10 days of the transfer date.**
 3. **Transfer of Post-Construction BMP Maintenance Responsibility:** The Applicant assumes responsibility for the inspection and maintenance of all post-construction structural BMPs until such responsibility is legally transferred to another entity. At the time maintenance responsibility for post-construction BMPs is legally transferred the Applicant must submit to the San Diego Water Board a copy of such documentation and must provide the transferee with a copy of a long-term BMP

maintenance plan that complies with manufacturer specifications. The Applicant must provide such notification to the San Diego Water Board within **10 days** of the transfer of BMP maintenance responsibility.

Upon properly noticed transfers of responsibility, the transferee assumes responsibility for compliance with this Certification and references in this Certification to the Applicant will be interpreted to refer to the transferee as appropriate. Transfer of responsibility does not necessarily relieve the Applicant of this Certification in the event that a transferee fails to comply.

- D. **Discharge Commencement.** The Applicant must notify the San Diego Water Board in writing **at least 5 days prior** to the start of Project construction.

VII. CALIFORNIA ENVIRONMENTAL QUALITY ACT COMPLIANCE

- A. The City of Carlsbad is the Lead Agency under the California Environmental Quality Act (CEQA) (Public Resources Code section 21000, et seq.) section 21067, and CEQA Guidelines (California Code of Regulations, title 14, section 15000 et seq.) section 15367, and has determined the Project is categorically exempt.
- B. The San Diego Water Board is a Responsible Agency under CEQA (Public Resources Code section 21069; CEQA Guidelines section 15381). The San Diego Water Board has independently determined that the Project is categorically exempt because the Project replaces existing structures located on the same site and the replacement structures will have substantially the same purpose and capacity as the structures being replaced.
- C. As a Responsible Agency under CEQA, the San Diego Water Board will file a Notice of Exemption in accordance with CEQA Guidelines section 15062.

VIII. SAN DIEGO WATER BOARD CONTACT PERSON

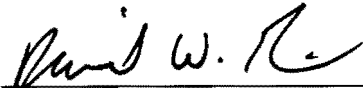
Alan Monji, Environmental Scientist
Telephone: 619-521-3968
Email: Alan.Monji@waterboards.ca.gov

IX. WATER QUALITY CERTIFICATION

I hereby certify that the proposed discharge from the **Versum Materials Swale Repair Project** (Certification No. R9-2017-0176) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under State Water Board Order No. 2003-0017-DWQ, "*Statewide General Waste Discharge Requirements for Dredged or Fill Discharges that have Received State Water Quality Certification (General WDRs)*," which requires compliance with all conditions of this Water Quality Certification. Please note that enrollment under Order No. 2003-017-DWQ is conditional and, should new information come to our attention that indicates a water quality problem, the San Diego Water Board may issue individual waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all Certification actions are contingent on (a) the discharge being limited to, and all proposed mitigation being completed in strict compliance with, the applicants' Project description and/or the description in this Certification, and (b) compliance with all applicable requirements of the Basin Plan.

I, David W. Gibson, Executive Officer, do hereby certify the forgoing is a full, true, and correct copy of Certification No. R9-2017-0176 issued on April 27, 2018.



DAVID W. GIBSON
Executive Officer
San Diego Water Board

27 April 2018
Date

ATTACHMENT 1

DEFINITIONS

Activity - when used in reference to a permit means any action, undertaking, or project including, but not limited to, construction, operation, maintenance, repair, modification, and restoration which may result in any discharge to waters of the state.

Buffer - means an upland, wetland, and/or riparian area that protects and/or enhances aquatic resource functions associated with wetlands, rivers, streams, lakes, marine, and estuarine systems from disturbances associated with adjacent land uses.

California Rapid Assessment Method (CRAM) - is a wetland assessment method intended to provide a rapid, scientifically-defensible and repeatable assessment methodology to monitor status and trends in the conditions of wetlands for applications throughout the state. It can also be used to assess the performance of compensatory mitigation projects and restoration projects. CRAM provides an assessment of overall ecological condition in terms of four attributes: landscape context and buffer, hydrology, physical structure and biotic structure. CRAM also includes an assessment of key stressors that may be affecting wetland condition and a "field to PC" data management tool (eCRAM) to ensure consistency and quality of data produced with the method.

Compensatory Mitigation Project - means compensatory mitigation implemented by the Applicant as a requirement of this Certification (i.e., applicant -responsible mitigation), or by a mitigation bank or an in-lieu fee program.

Discharge of dredged material – means any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States and/or State.

Discharge of fill material – means the addition of fill material into waters of the United States and/or State.

Dredged material – means material that is excavated or dredged from waters of the United States and/or State.

Ecological Success Performance Standards – means observable or measurable physical (including hydrological), chemical, and/or biological attributes that are used to determine if a compensatory mitigation project meets its objectives.

Enhancement – means the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Establishment – means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist. Creation results in a gain in aquatic resource area.

Fill material – means any material used for the primary purpose of replacing an aquatic area with dry land or of changing the bottom elevation of a water body.

Isolated wetland – means a wetland with no surface water connection to other aquatic resources.

Mitigation Bank – means a site, or suite of sites, where resources (e.g., wetlands, streams, riparian areas) are restored, established, enhanced, and/or preserved for the purpose of providing mitigation for impacts authorized by this Certification.

Preservation - means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/ historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration - means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Start of Project Construction - For the purpose of this Certification, "start of Project construction" means to engage in a program of on-site construction, including site clearing, grading, dredging, landfilling, changing equipment, substituting equipment, or even moving the location of equipment specifically designed for a stationary source in preparation for the fabrication, erection or installation of the building components of the stationary source within waters of the United States and/or State.

Uplands - means non-wetland areas that lack any field-based indicators of wetlands or other aquatic conditions. Uplands are generally well-drained and occur above (i.e., up-slope) from nearby aquatic areas. Wetlands can, however, be entirely surrounded by uplands. For example, some natural seeps and constructed stock ponds lack aboveground hydrological connection to other aquatic areas. In the watershed context, uplands comprise the landscape matrix in which aquatic areas form. They are the primary sources of sediment, surface runoff, and associated chemicals that are deposited in aquatic areas or transported through them.

Water quality objectives and other appropriate requirements of state law – means the water quality objectives and beneficial uses as specified in the appropriate water quality control plan(s); the applicable provisions of sections 301, 302, 303, 306, and 307 of the Clean Water Act; and any other appropriate requirement of state law.

ATTACHMENT 2

LOCATION MAPS and FIGURES

1. Planning Systems, Location Map, Versum Palomar Oaks Channel Repair Project, Figure 1.
2. O'Day Consultants, Grading Plans for Versum Palomar Oaks Channel Repair Project, February 2018, Sheets 1-7.



SOURCE: Google Earth (image date November 2008)

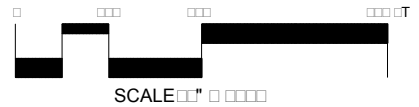


FIGURE 1 Location Map

VERSUM - PALOMAR OAKS CHANNEL REPAIR PROJECT
Carlsbad, CA

December 2008



LAND USE/COASTAL PLANNING
LANDSCAPE ARCHITECTURE
POLICY AND PROCESSING
ENVIRONMENTAL MITIGATION

1530 FARADAY AVENUE, SUITE 100, CARLSBAD, CA 92008
(760) 931-0780 FAX (760) 931-5744

GRADING NOTES

(IN ADDITION TO THE REQUIREMENTS OF CHAPTER 15.16 OF THE CARLSBAD MUNICIPAL CODE.)

- 1. THIS PLAN SUPERSEDES ALL OTHER PLANS PREVIOUSLY APPROVED BY THE CITY OF CARLSBAD REGARDING GRADING SHOWN ON THIS SET OF PLANS.
2. APPROVAL OF THIS PLAN DOES NOT LESSEN OR WAIVE ANY PORTION OF THE CARLSBAD MUNICIPAL CODE...
3. CITY APPROVAL OF PLANS DOES NOT RELIEVE THE DEVELOPER OR ENGINEER OF WORK FROM RESPONSIBILITY FOR THE CORRECTION OF ERRORS AND OMISSIONS DISCOVERED DURING CONSTRUCTION...
4. A RIGHT-OF-WAY PERMIT FROM THE CITY ENGINEER WILL BE REQUIRED FOR ANY WORK IN THE PUBLIC RIGHT-OF-WAY...
5. NO WORK SHALL BE COMMENCED UNTIL ALL PERMITS HAVE BEEN OBTAINED FROM THE CITY AND OTHER APPROPRIATE AGENCIES...
6. APPROVAL OF THESE PLANS BY THE CITY ENGINEER DOES NOT AUTHORIZE ANY WORK OR GRADING TO BE PERFORMED UNTIL THE PROPERTY OWNER'S PERMISSION HAS BEEN OBTAINED...
7. NO REVISIONS WILL BE MADE TO THESE PLANS WITHOUT THE WRITTEN APPROVAL OF THE CITY ENGINEER...
8. ORIGINAL DRAWINGS SHALL BECOME THE PROPERTY OF THE CITY UPON BEING SIGNED BY THE CITY ENGINEER...
9. THE ORIGINAL DRAWING SHALL BE REVISED TO REFLECT AS-BUILT CONDITIONS BY THE ENGINEER-OF-WORK PRIOR TO FINAL ACCEPTANCE OF THE WORK BY THE CITY...
10. ACCESS FOR FIRE AND OTHER EMERGENCY VEHICLES SHALL BE MAINTAINED TO THE PROJECT SITE AT ALL TIMES DURING CONSTRUCTION...
11. WHERE TRENCHES ARE WITHIN CITY EASEMENTS, A SOILS REPORT COMPRISED OF: (A) SUMMARY SHEET, (B) LABORATORY WORK SHEETS AND (C) COMPACTION CURVES SHALL BE SUBMITTED BY A PROFESSIONAL ENGINEER...
12. A SOILS COMPACTION REPORT AND COMPLIANCE VERIFICATION REGARDING ADHERENCE TO RECOMMENDATIONS OUTLINED IN THE SOILS REPORT IS REQUIRED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT...
13. A PRECONSTRUCTION MEETING SHALL BE HELD AT THE SITE PRIOR TO THE BEGINNING OF WORK AND SHALL BE ATTENDED BY ALL REPRESENTATIVES RESPONSIBLE FOR CONSTRUCTION, INSPECTION, SUPERVISION, TESTING AND ALL OTHER ASPECTS OF THE WORK...
14. ALL INSPECTION REQUESTS OTHER THAN FOR PRECONSTRUCTION MEETING WILL BE MADE BY CALLING THE ENGINEERING 24-HOUR INSPECTION REQUEST LINE AT (760) 438-3891...
15. THE OWNER AND/OR APPLICANT THROUGH THE DEVELOPER AND/OR CONTRACTOR SHALL DESIGN, CONSTRUCT AND MAINTAIN ALL SAFETY DEVICES, INCLUDING SHORING, AND SHALL BE SOLELY RESPONSIBLE FOR CONFORMING TO ALL LOCAL, STATE AND FEDERAL SAFETY AND HEALTH STANDARDS, LAWS AND REGULATIONS...
17. NO BLASTING SHALL BE PERFORMED UNTIL A VALID BLASTING PERMIT HAS BEEN OBTAINED FROM THE CITY OF CARLSBAD...
18. IF ANY ARCHAEOLOGICAL RESOURCES ARE DISCOVERED WITHIN ANY WORK AREA DURING CONSTRUCTION OPERATIONS, WORK SHALL CEASE IMMEDIATELY...
19. ALL OPERATIONS CONDUCTED ON THE SITE OR ADJACENT THERETO, INCLUDING WARMING UP, REPAIR, ARRIVAL DEPARTURE OR OPERATION OF TRUCKS, EARTHMOVING EQUIPMENT, CONSTRUCTION EQUIPMENT AND ANY OTHER ASSOCIATED GRADING EQUIPMENT SHALL BE LIMITED TO THE PERIOD BETWEEN 7:00 A.M. AND 6:00 P.M. EACH DAY...
20. ALL OFF-SITE HAUL ROUTES SHALL BE SUBMITTED BY THE CONTRACTOR TO THE CITY ENGINEER FOR APPROVAL TWO FULL WORKING DAYS PRIOR TO BEGINNING OF WORK...
21. IMPORT MATERIAL SHALL BE OBTAINED FROM, AND WASTE MATERIAL SHALL BE DEPOSITED AT, A SITE APPROVED BY THE CITY ENGINEER...
22. BRUSH SHALL BE REMOVED ONLY WITHIN THE AREA TO BE GRADED. NO TREES ARE TO BE REMOVED UNLESS SPECIFICALLY NOTED ON THE PLAN...
23. ALL AREAS SHALL BE GRADED TO DRAIN, GRADING RESULTING IN THE PONDING OF WATER IS NOT PERMITTED...
24. THESE PLANS ARE SUBJECT TO A SIGNED AND APPROVED SWPPP AND/OR SET OF EROSION CONTROL PLANS...
25. ALL SLOPES SHALL BE TRIMMED TO A FINISH GRADE TO PRODUCE A UNIFORM SURFACE AND CROSS SECTION...
26. ALL SLOPES SHALL BE IRRIGATED, STABILIZED, PLANTED AND/OR HYDROSEEDED WITHIN TEN DAYS OF THE DATE WHEN EACH SLOPE IS BROUGHT TO GRADE...
27. LANDSCAPING SHALL BE ACCOMPLISHED ON ALL SLOPES AND PADS AS REQUIRED BY THE CITY OF CARLSBAD LANDSCAPE MANUAL...

EROSION CONTROL NOTES

- 1. IN CASE EMERGENCY WORK IS REQUIRED, CONTACT BILL ELKINS AT (760) 603-2272 (PHONE NUMBER)
2. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAINY SEASON...
3. FOR PROJECTS COVERED BY STATE SWPPP/NOID, IN ACCORDANCE WITH THE CONSTRUCTION ORDER ISSUED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD...
4. THE CONTRACTOR SHALL RESTORE ALL EROSION CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER...
5. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE CITY ENGINEER...
6. THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION...
7. ALL EROSION CONTROL MEASURES PROVIDED PER THE APPROVED SWPPP AND/OR EROSION CONTROL PLAN SHALL BE INCORPORATED HEREON...
8. GRADED AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPE...
9. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY...
10. ALL GRAVEL BAGS SHALL BE BURLAP TYPE WITH 3/4 INCH MINIMUM AGGREGATE...
11. SHOULD GERMINATION OF HYDROSEEDED SLOPES FAIL TO PROVIDE EFFECTIVE COVERAGE OF GRADED SLOPES (90% COVERAGE) PRIOR TO NOVEMBER 15, THE SLOPES SHALL BE STABILIZED BY PUNCH STRAW...

ENGINEER'S NOTES

- 1. REVISION OF THESE PLANS MAY BE REQUIRED IF THE PROPOSED GRADING AND IMPROVEMENTS ARE NOT CONSTRUCTED PRIOR TO THE DEADLINE DATE OF THE IMPROVEMENT AGREEMENT.
2. THE EXISTENCE AND LOCATION OF UTILITY STRUCTURES AND FACILITIES SHOWN ON THE CONSTRUCTION PLANS WERE OBTAINED BY A SEARCH OF THE AVAILABLE RECORDS...
3. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING FACILITIES (ABOVEGROUND AND UNDERGROUND) WITHIN THE PROJECT SITE...
4. STORM DRAIN PIPE SHALL BE REINFORCED CONCRETE PIPE WITH A MINIMUM D-LOAD OF 1,350 FOR PRIVATE STORM DRAIN PIPES...
5. THE SOILS REPORT TITLED "GEOTECHNICAL INVESTIGATION PROPOSED COMMERCIAL BUILDING ASTON AVENUE, WEST OF COLLEGE BOULEVARD, CARLSBAD, CALIFORNIA..."

WORK TO BE DONE

- THE GRADING WORK SHALL CONSIST OF THE CONSTRUCTION OF ALL CUTS AND FILLS, REMEDIAL GRADING, DRAINAGE FACILITIES, EROSION CONTROL FACILITIES, AND PLANTING OF PERMANENT LANDSCAPING AND PREPARATION OF AS-BUILT GRADING PLANS...
1. CARLSBAD MUNICIPAL CODE
2. CITY OF CARLSBAD ENGINEERING STANDARDS
3. THIS SET OF PLANS
4. THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK)
5. SOILS REPORT AND RECOMMENDATIONS BY GROUP DELTA DATED JULY 26, 2017
6. THE SAN DIEGO REGIONAL STANDARD DRAWINGS AND AS MAY BE MODIFIED BY THE CITY OF CARLSBAD STANDARDS...
8. STORM WATER POLLUTION PREVENTION PLAN PREPARED BY O'DAY CONSULTANTS, INC. DATED N/A
9. STORM WATER QUALITY MANAGEMENT PLAN PREPARED BY N/A, STANDARD PROJECT DATED N/A
10. CALIFORNIA STORM WATER QUALITY ASSOCIATION BMP CONSTRUCTION HANDBOOK AND CALTRANS CONSTRUCTION SITE BMP MANUAL.

LEGEND

Table with 4 columns: DESCRIPTION, DWG. NO., SYMBOL, QUANTITY. Lists various construction elements like PROPERTY BOUNDARY, EASEMENT, EXISTING DRAINAGE SWALE, PROPOSED DRAINAGE DITCH, EXISTING WALL, EX. 100-YR STORM WATER SURFACE ELEVATION, EX. FENCE, PROPOSED RIP RAP, EXISTING GUNITE SLOPE PROTECTION, EXISTING RIPRAP SLOPE PROTECTION, PROPOSED CABLED CONCRETE, EXISTING CONTOUR, PROPOSED CONTOUR, LIMIT OF GRADING / DAYLIGHT LINE, EXISTING ELEVATION, PROPOSED ELEVATION, FL, EP, TW, FS, WS, EG.

NOTE: QUANTITIES ARE FOR BONDING PURPOSES ONLY. ACTUAL QUANTITIES MAY VARY. STANDARD DWGS. ARE SAN DIEGO REGIONAL STDS. UNLESS NOTED OTHERWISE.

LEGAL DESCRIPTION

PARCELS A & B PER PARCEL MAP 12354 APN 213-092-20 & 21 & LOT 20 PER PARCEL MAP 10198 AS ADJUSTED PER MAPS 12354 AND 11358 APN 213-092-25

PROJECT ADDRESS

1969 PALOMAR OAKS WAY CARLSBAD, CA 92011

REFERENCE DRAWINGS

CITY OF CARLSBAD DWG NO. 211-8

EARTHWORK QUANTITIES

CUT: 70 CY
FILL: 255 CY
IMPORT: 185 CY
EXPORT: 0 CY
REMEDIAL: 5 CY

EARTHWORK QUANTITIES NOTES:

- 1) EARTHWORK QUANTITIES ARE ESTIMATED AND ARE FOR BONDING PURPOSES ONLY. ACTUAL QUANTITIES MAY VARY.
2) VOLUMES SHOWN DO NOT ACCOUNT FOR SHRINKAGE/BULKING.
3) REMEDIAL GRADING TO BE PERFORMED IN PROPOSED DRAINAGE SWALE AREAS.

BENCH MARK

DESCRIPTION: CITY OF CARLSBAD SURVEY CONTROL POINT 46 BEING A BRASS DISC STAMPED "LS 5669"
LOCATION: INTERSECTION OF BLACK RAIL RD. AND MARTINGALE CT. 21 FEET WESTERLY OF THE EASTERLY EDGE OF PAVEMENT OF BLACK RAIL RD., 5 FEET WEST OF A SEWER MANHOLE AND 51 FEET NORTHEASTERLY OF A STREET LIGHT.
RECORDED: RECORD OF SURVEY NO. 17271
ELEVATION: 342.73 DATUM: NGVD 29

TOTAL LOT AREA = 38.84 ACRES
TOTAL DISTURBED AREA = 0.43 ACRES
(THIS AREA INCLUDES BUT IS NOT LIMITED TO OFF-SITE WORK INCLUDING PUBLIC IMPROVEMENTS AND TEMPORARY DISTURBANCE SUCH AS VEHICLE AND EQUIPMENT STAGING AREAS, CONSTRUCTION WORKER FOOT TRAFFIC, SOIL/GRAVEL PILES, UTILITY TRENCHES, BACKFILL CUTS AND SLOPE KEYWAYS)
TOTAL REPLACED IMPERVIOUS AREA = 1,587 SF
TOTAL PROPOSED IMPERVIOUS AREA = 0.00 SF

"AS BUILT" form with fields for RCE, EXP, DATE, REVIEWED BY, INSPECTOR, DATE.

O'Day CONSULTANTS logo and address: 2710 Loker Avenue West, Suite 100, Carlsbad, California 92010. Phone: 760-931-7700. Fax: 760-931-8680. Website: Odayconsultants.com

DESIGNED BY: C.E. DATE: SEPT 2017
DRAWN BY: C.E. SCALE: AS SHOWN
PROJECT MGR.: J.T. JOB NO.: 121021

ENGINEER OF WORK: JOANNE S. TYLER DATE: RCE: 59286



Professional Engineer Seal for Joanne S. Tyler, No. 59286, State of California.

R.C.E. NO.: 59286 EXP.: 12/31/17
SOILS ENGINEER'S CERTIFICATE

I (WE) HEREBY CERTIFY THAT A REGISTERED SOILS ENGINEER OR GEOLOGIST HAS BEEN OR WILL BE RETAINED TO SUPERVISE OVER-ALL GRADING ACTIVITY AND ADVISE ON THE COMPACTION AND STABILITY OF THIS SITE...

SIGNED: _____ DATE: _____
G.E./P.E. NO.: 82035
DATE: _____
LICENSE EXPIRATION DATE: 3-31-18

OWNER'S CERTIFICATE

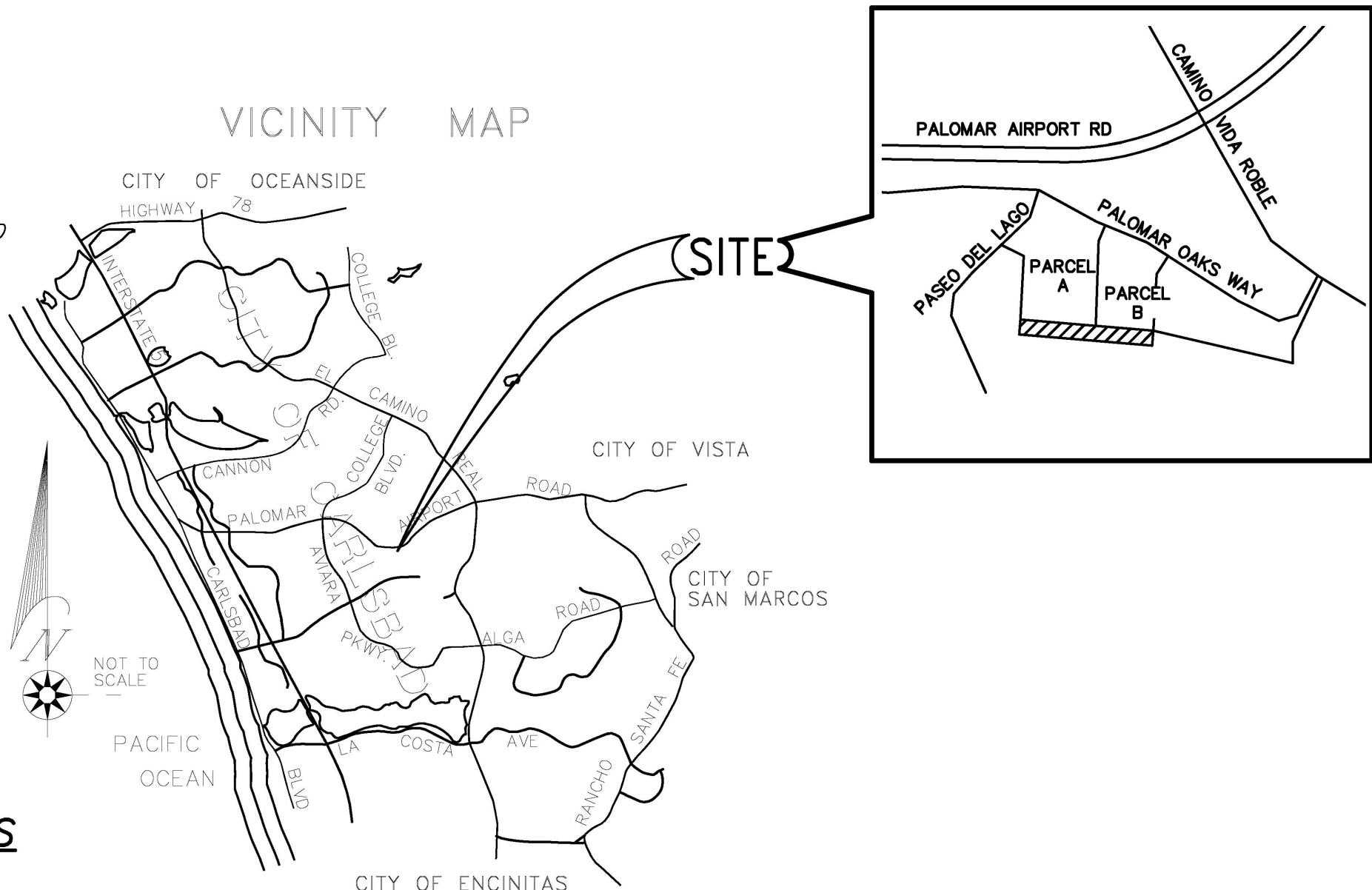
I (WE) HEREBY CERTIFY THAT A REGISTERED SOILS ENGINEER OR GEOLOGIST HAS BEEN OR WILL BE RETAINED TO SUPERVISE OVER-ALL GRADING ACTIVITY AND ADVISE ON THE COMPACTION AND STABILITY OF THIS SITE...

SOURCE OF TOPOGRAPHY

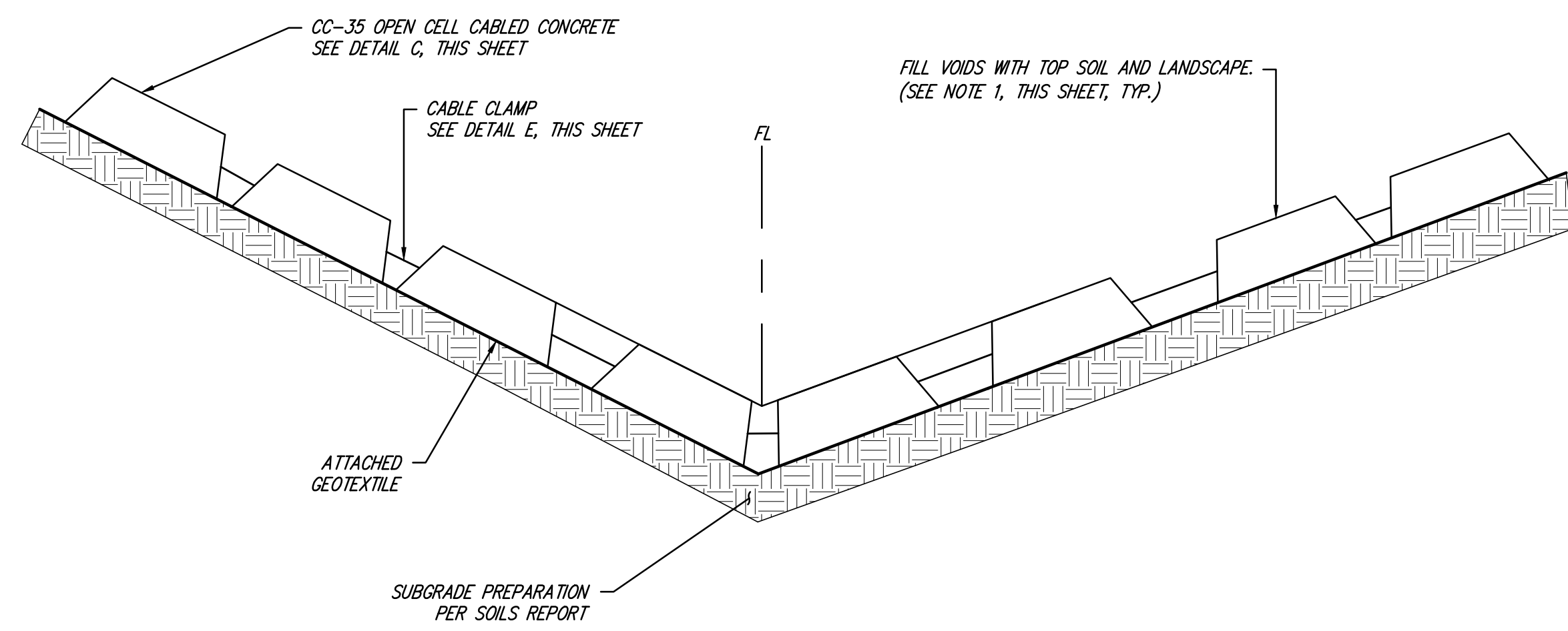
TOPOGRAPHY SHOWN ON THESE PLANS WAS GENERATED BY FIELD SURVEY METHODS FROM INFORMATION GATHERED ON JUNE 12-JUNE 20, 2017 BY O'DAY CONSULTANTS, INC.

PROJECT LOCATION

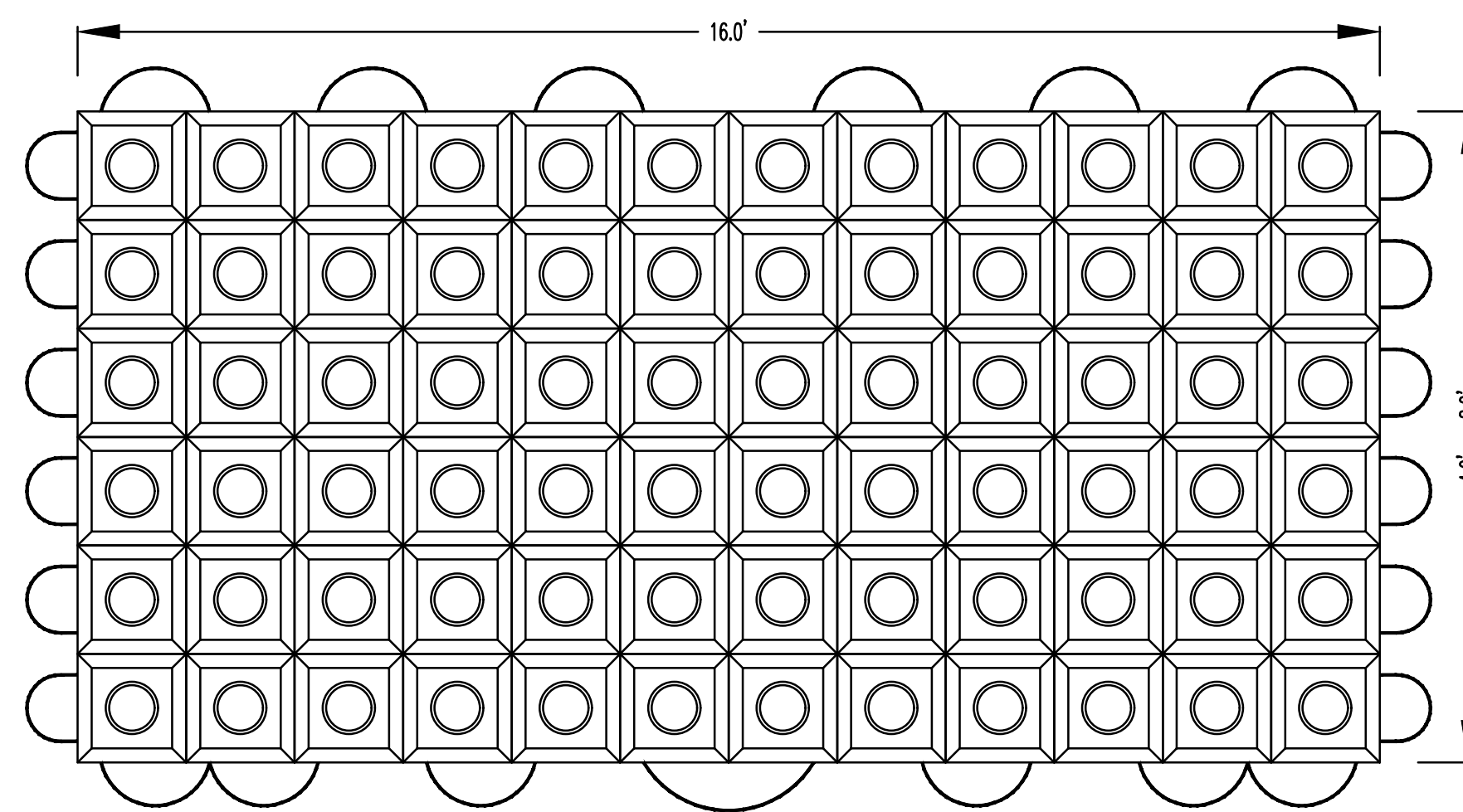
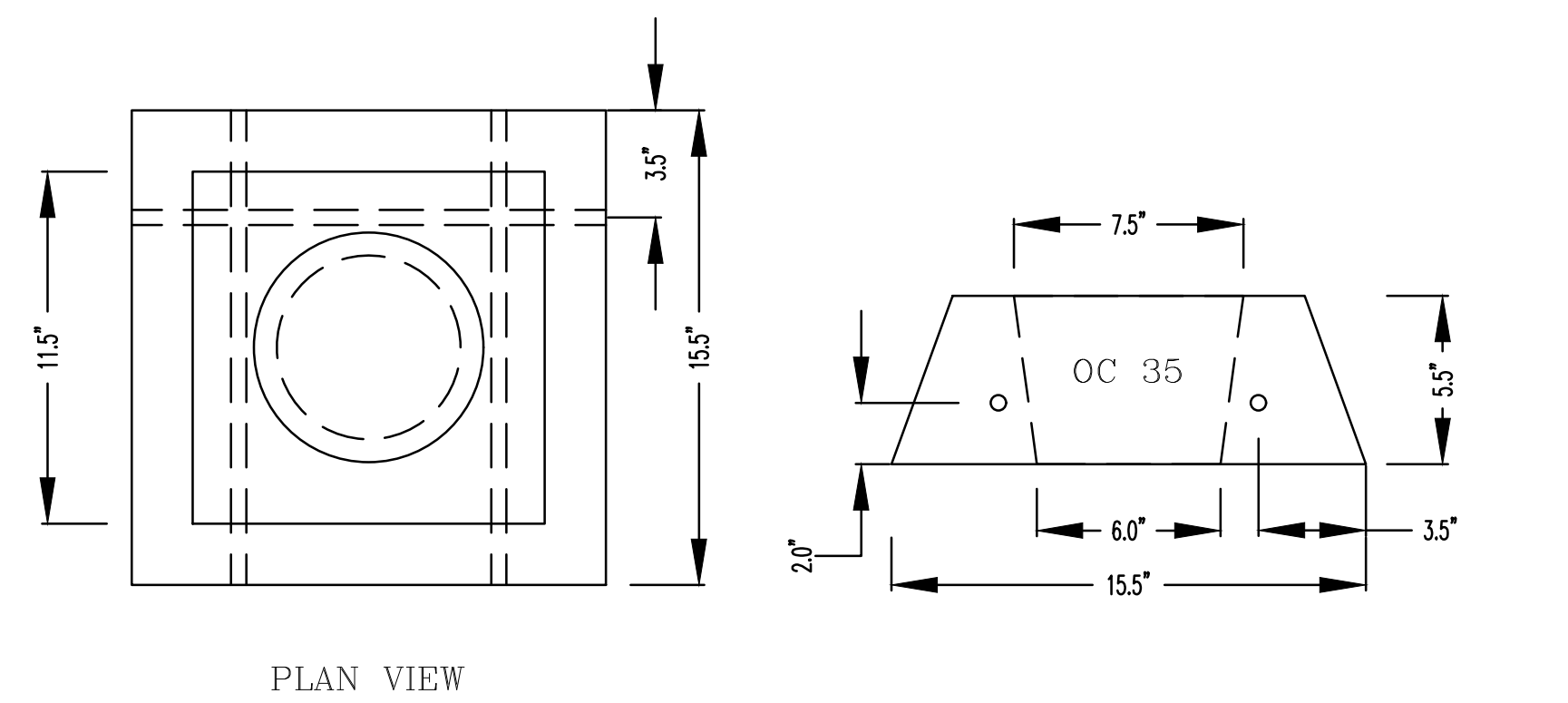
THIS PROJECT IS LOCATED WITHIN ASSESSORS PARCEL NUMBER(S) 213-092-25
THE CALIFORNIA COORDINATE INDEX OF THIS PROJECT IS: N. 33.1183 E. -117.2831



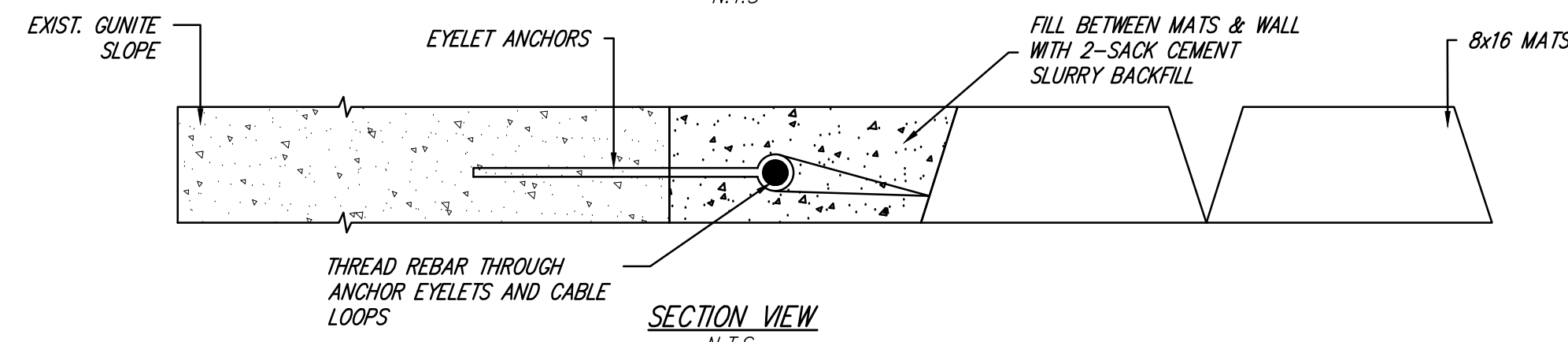
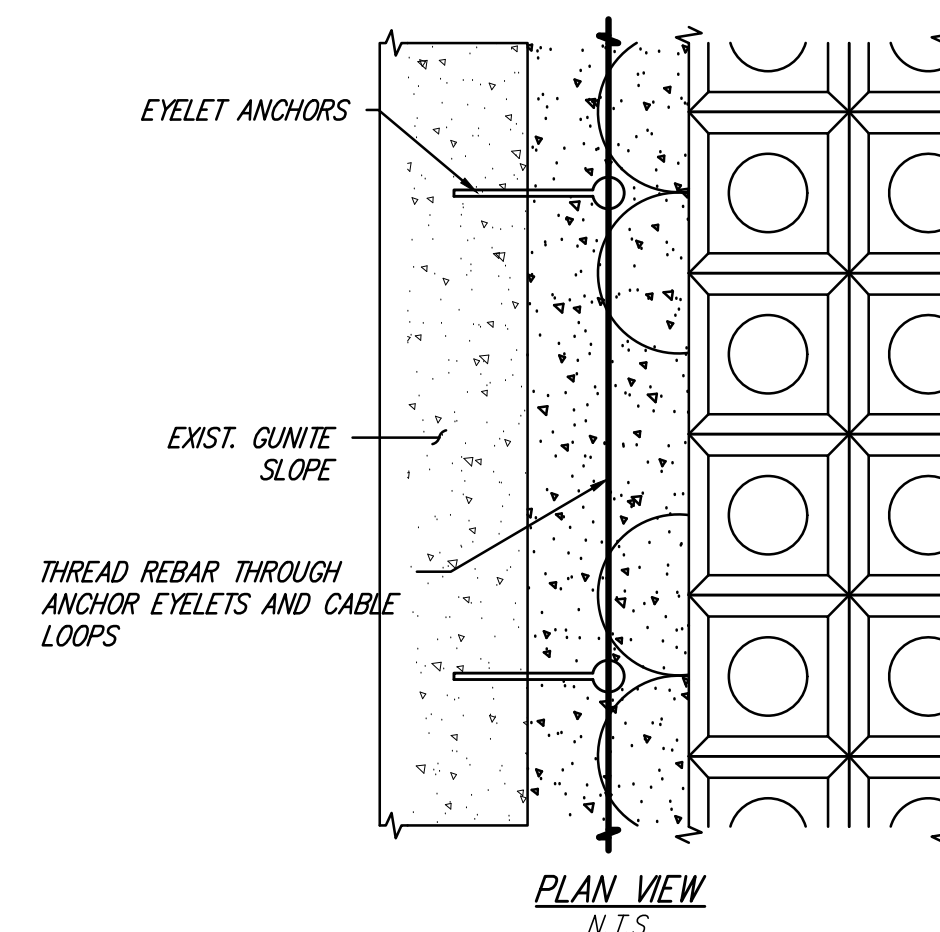
CABLED CONCRETE DETAILS



A CHANNEL FLOWLINE DETAIL
NOT TO SCALE



C UNIT DEPTH DETAIL
CC-35 OPEN CELL (NTS)



D CABLED CONCRETE TIE INTO EXISTING GUNITE SLOPE
NOT TO SCALE

"AS BUILT"

JOANNE S. TYLER DATE

REVIEWED BY: DATE

INSPECTOR DATE

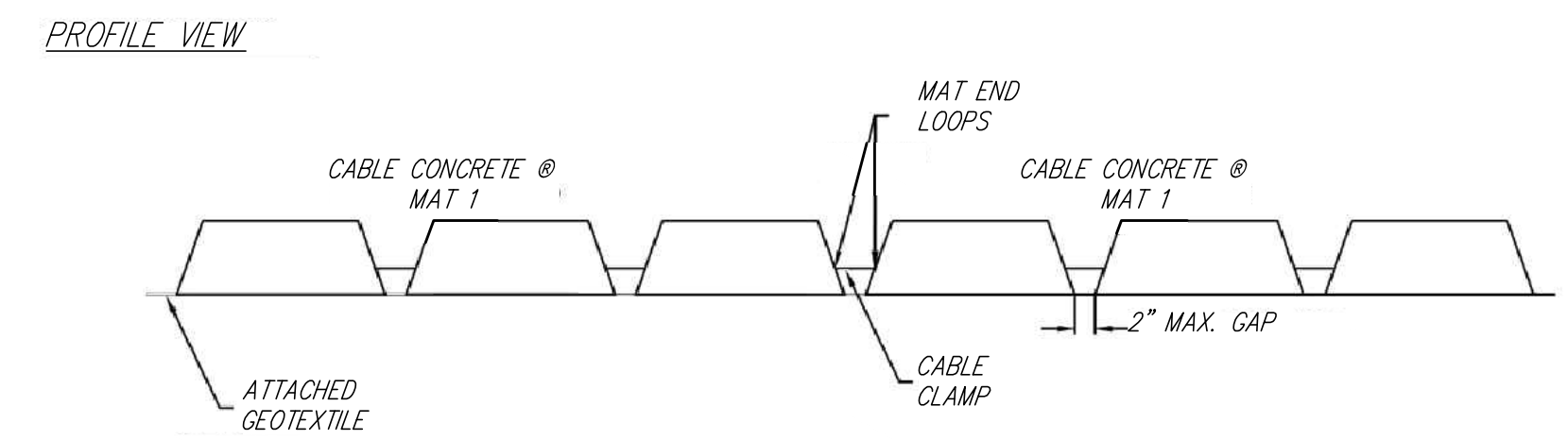
BENCHMARK

DESCRIPTION: BRASS DISC WELL MONUMENT STAMPED "LS 5669"

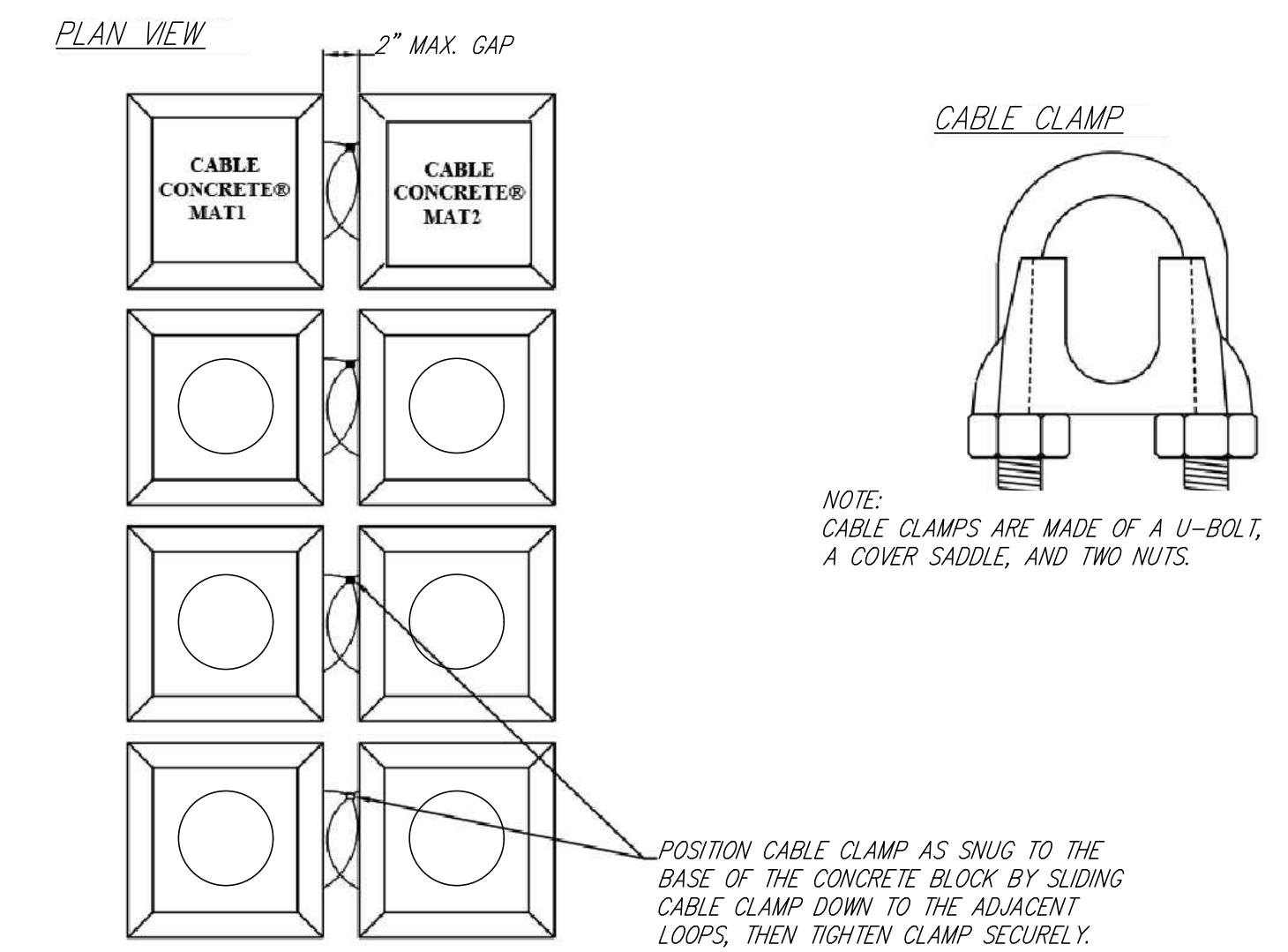
LOCATION: INTERSECTION OF BLACK RAIL RD. AND MARTINGALE CT. 21 FEET WESTERLY OF THE EASTERLY EDGE OF PAVEMENT OF BLACK RAIL RD., 5 FEET WEST OF A SEWER MANHOLE AND 51 FEET NORTHEASTERLY OF A STREETLIGHT.

RECORD FROM: CITY OF CARLSBAD SURVEY CONTROL POINT 46 AND 65 PER R.O.S. 17271

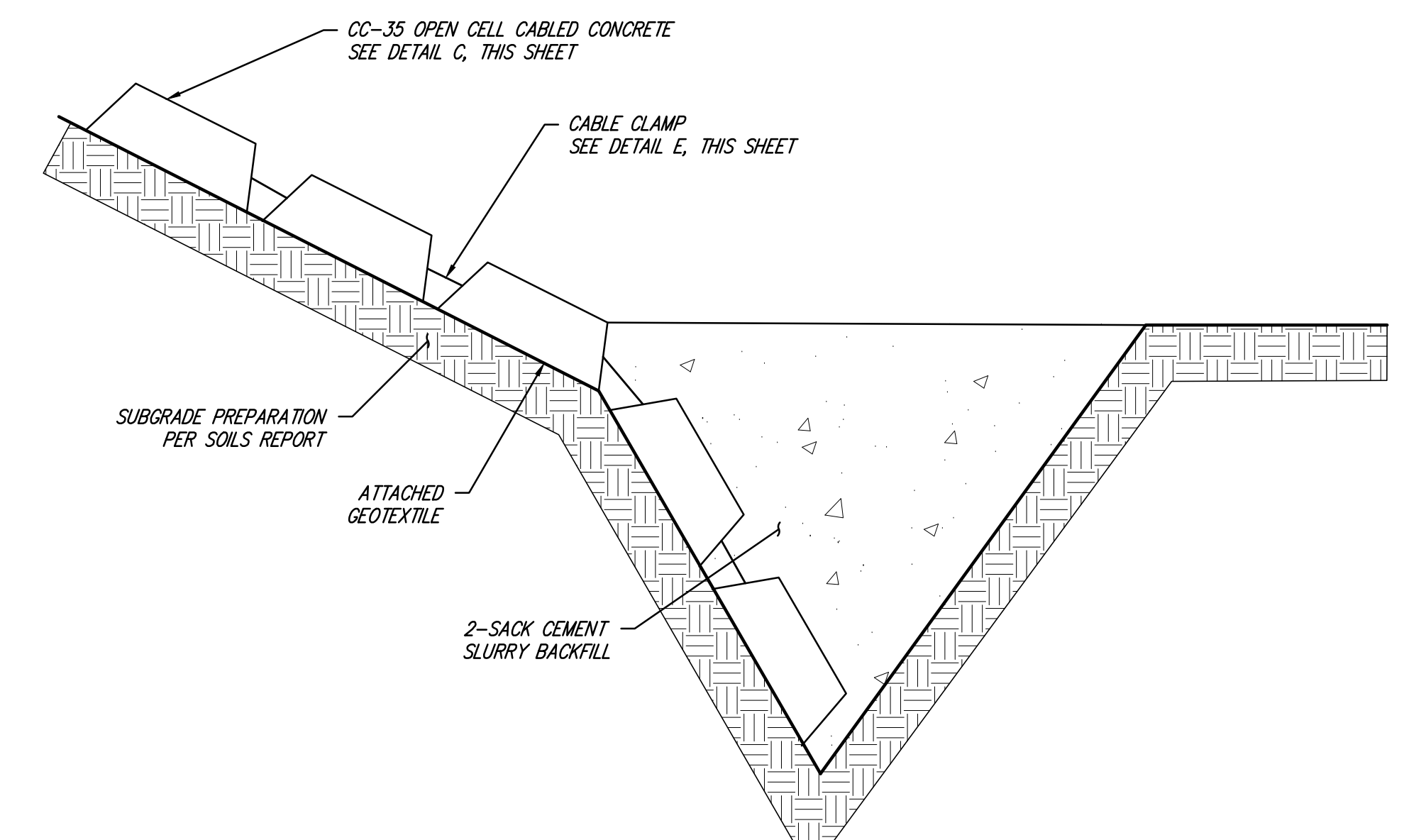
ELEVATION: 342.73 DATUM: NVD 1929



WHEN PLACING THE MATS, THE GAP BETWEEN THE MATS SHOULD NOT BE ANY LARGER THAN A 2" MAXIMUM. IF THE MATS ARE PLACED WITH A LARGER SPACE THAN 2", IT IS RECOMMENDED TO GROUT THE SEAMS BETWEEN THE MATS.



E CABLE CLAMP DETAIL
NOT TO SCALE



F TOE IN DETAIL
NOT TO SCALE

NOTES:

- SEE ARMY CORPS PERMIT NO. SPL-2017-00707-WSZ FOR LANDSCAPING OPEN CELL AND BETWEEN BLOCKS.
- CABLED CONCRETE DETAILS PROVIDED FROM INTERNATIONAL EROSION CONTROL SYSTEMS, INC. (IECS)

INTERNATIONAL EROSION CONTROL SYSTEMS INC.
3030 N. ROCKY POINT DRIVE SUITE 150, TAMPA FL 33067
MAILING ADDRESS: 24601 PIONEER LINE, WEST LORNE, ONTARIO CANADA N0L 2P0

PROJECT DEVELOPMENT/MANAGER: DAVID FAIRLEY
PHONE: (855) 768-1420
CELL: (519) 854-5516
FAX: (855) 768-1425
EMAIL: DFAIRLEY@IECSUSA.COM

WWW.IECSUSA.COM

NOTE

CONTRACTOR TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION!

NOTE!!

ELECTRONIC DATA FILES ARE FOR REFERENCE ONLY AND ARE NOT TO BE USED FOR HORIZONTAL OR VERTICAL SURVEY CONTROL.

O'Day CONSULTANTS

2710 Laker Avenue West Suite 100 Carlsbad, California 92010
760-931-7700 Fax: 760-931-8680
OdayConsultants.com

Civil Engineering Planning Processing Surveying

DESIGNED BY: C.E. DATE: FEB 2018

DRAWN BY: C.E. SCALE: AS SHOWN

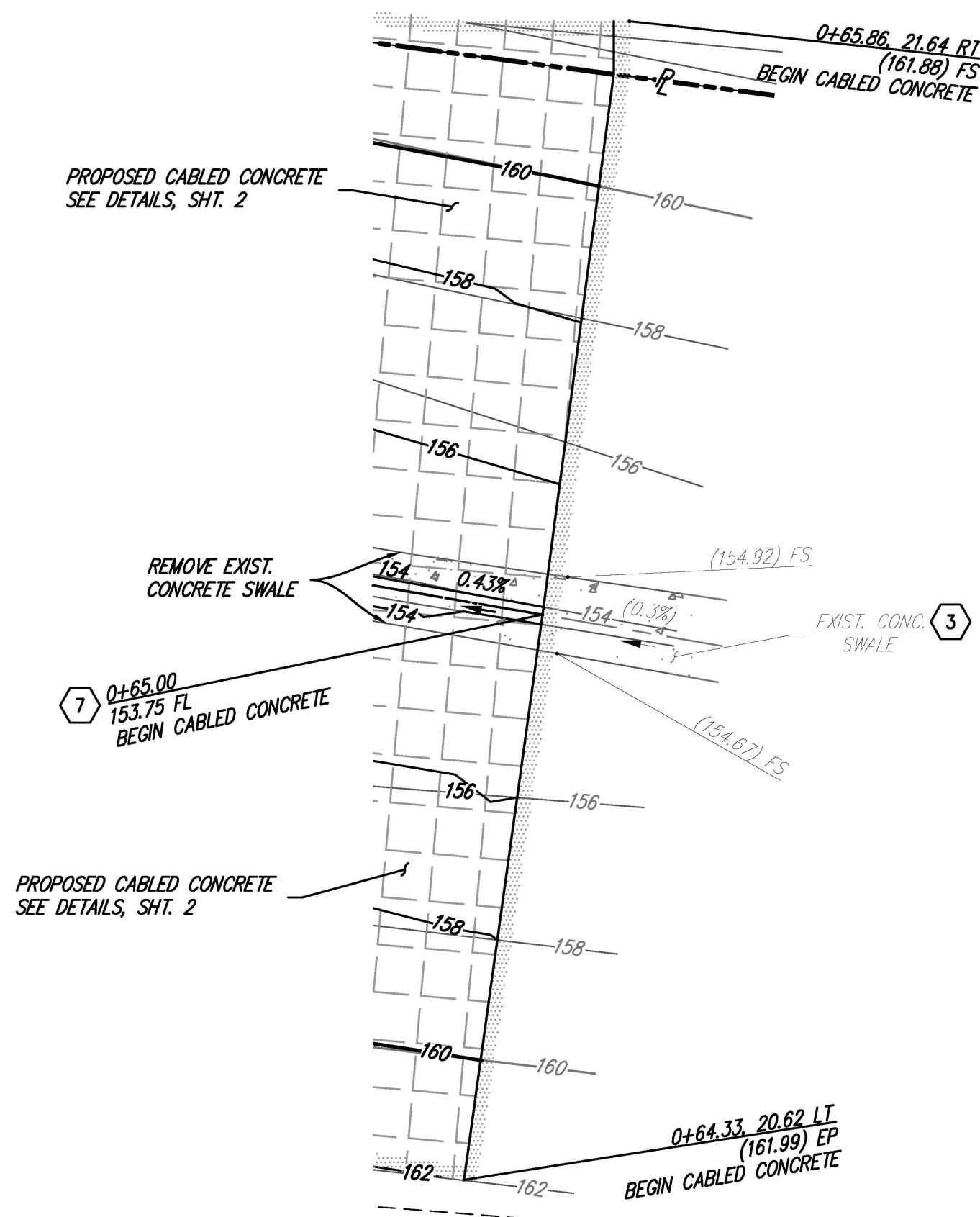
PROJECT MGR.: J.T. JOB NO.: 121021

ENGINEER OF WORK: JOANNE S. TYLER DATE: RCE: 59286

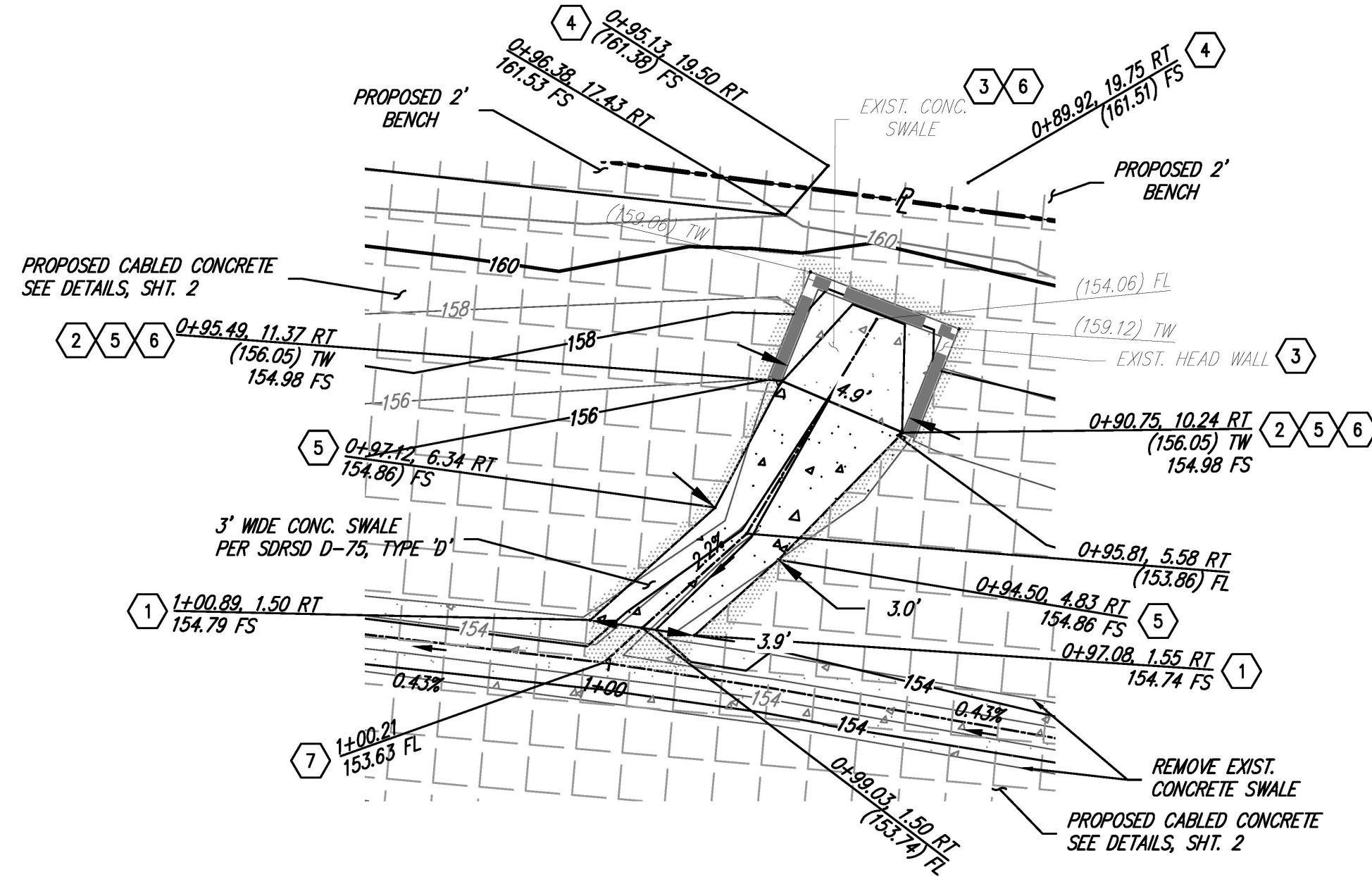


SHEET 2		CITY OF CARLSBAD ENGINEERING DEPARTMENT		SHEETS 7	
GRADING PLANS FOR: VERSUM MATERIALS CHANNEL STABILIZATION GR2017-0060 CABLED CONCRETE DETAILS					
APPROVED: JASON S. GELDERT					
CITY ENGINEER		PE 63912		EXPIRES 9/30/18	
DATE		DATE		DATE	
DWN BY: C.E.		PROJECT NO. DEV2017-0229		DRAWING NO. 507-8A	
CHKD BY:		REVISION DESCRIPTION		CITY APPROVAL	
REVISION DESCRIPTION		DATE		INITIAL	
ENGINEER OF WORK		DATE		INITIAL	

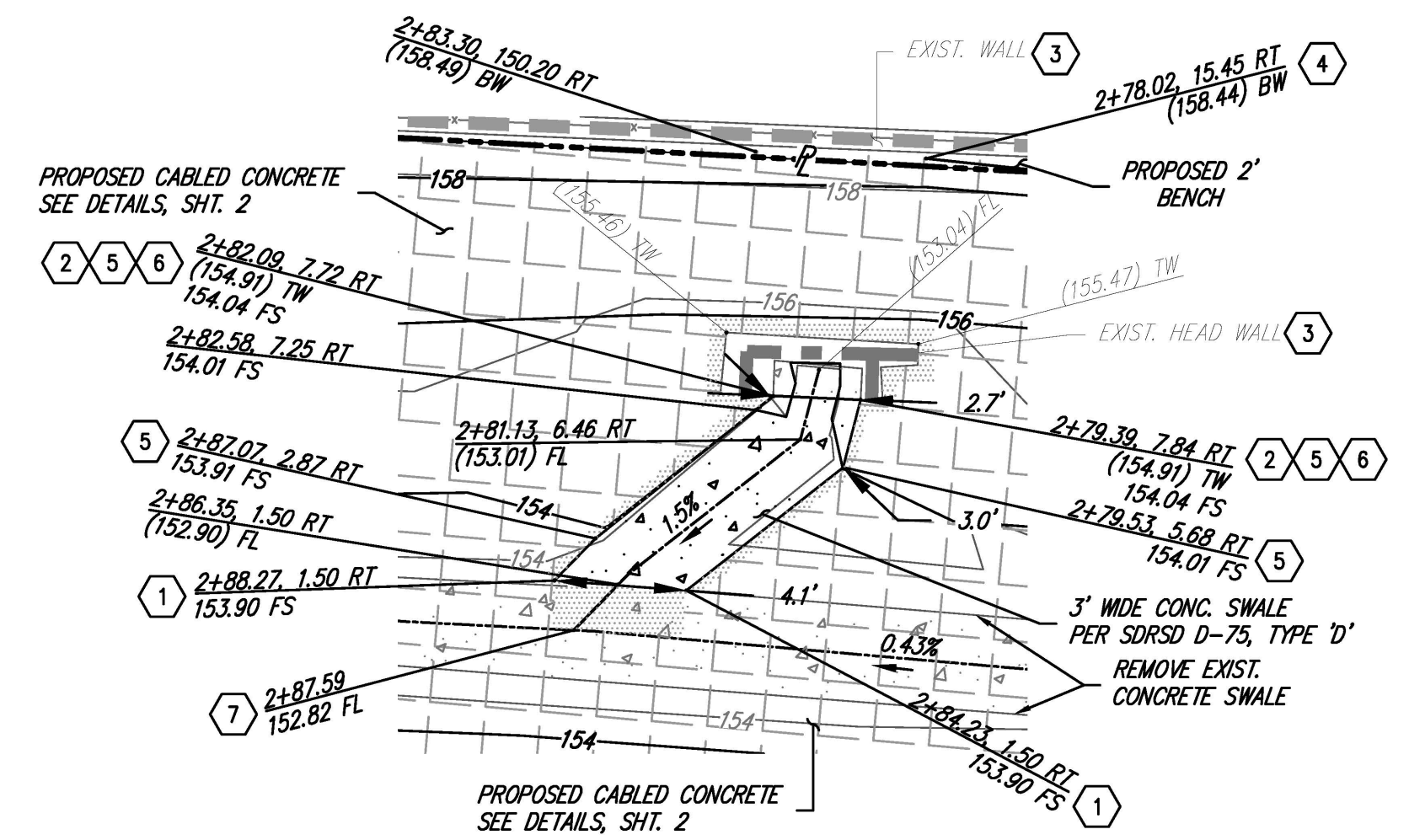
GRADING DETAILS



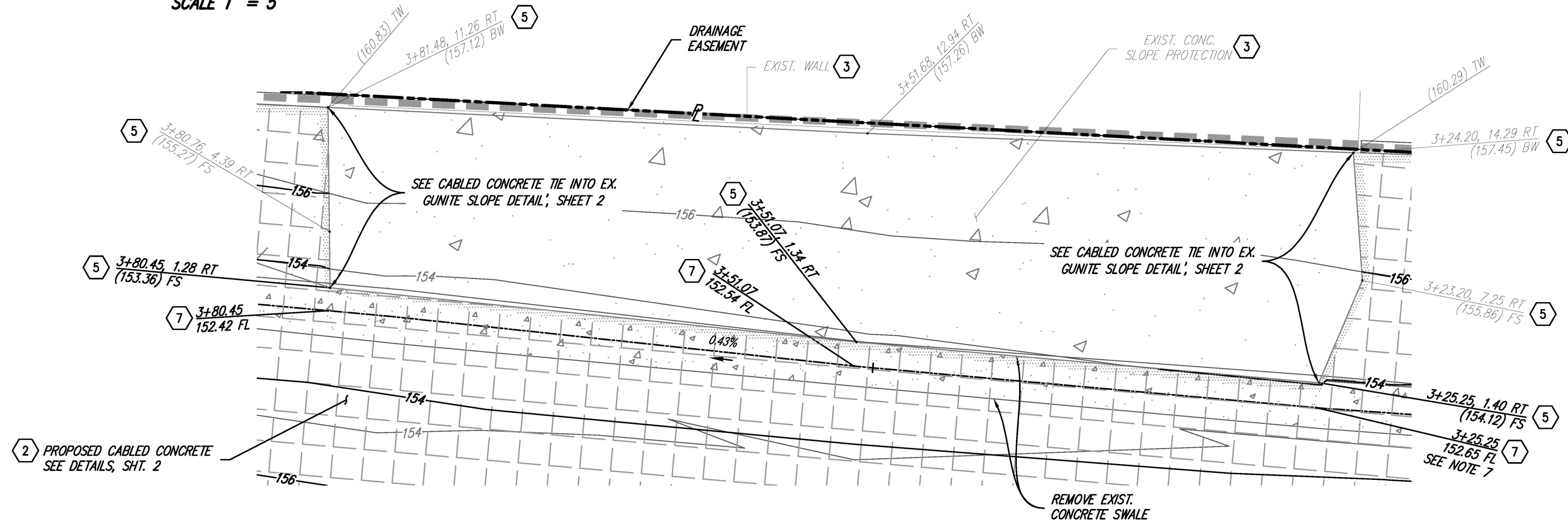
DETAIL '1'
SCALE 1" = 5'



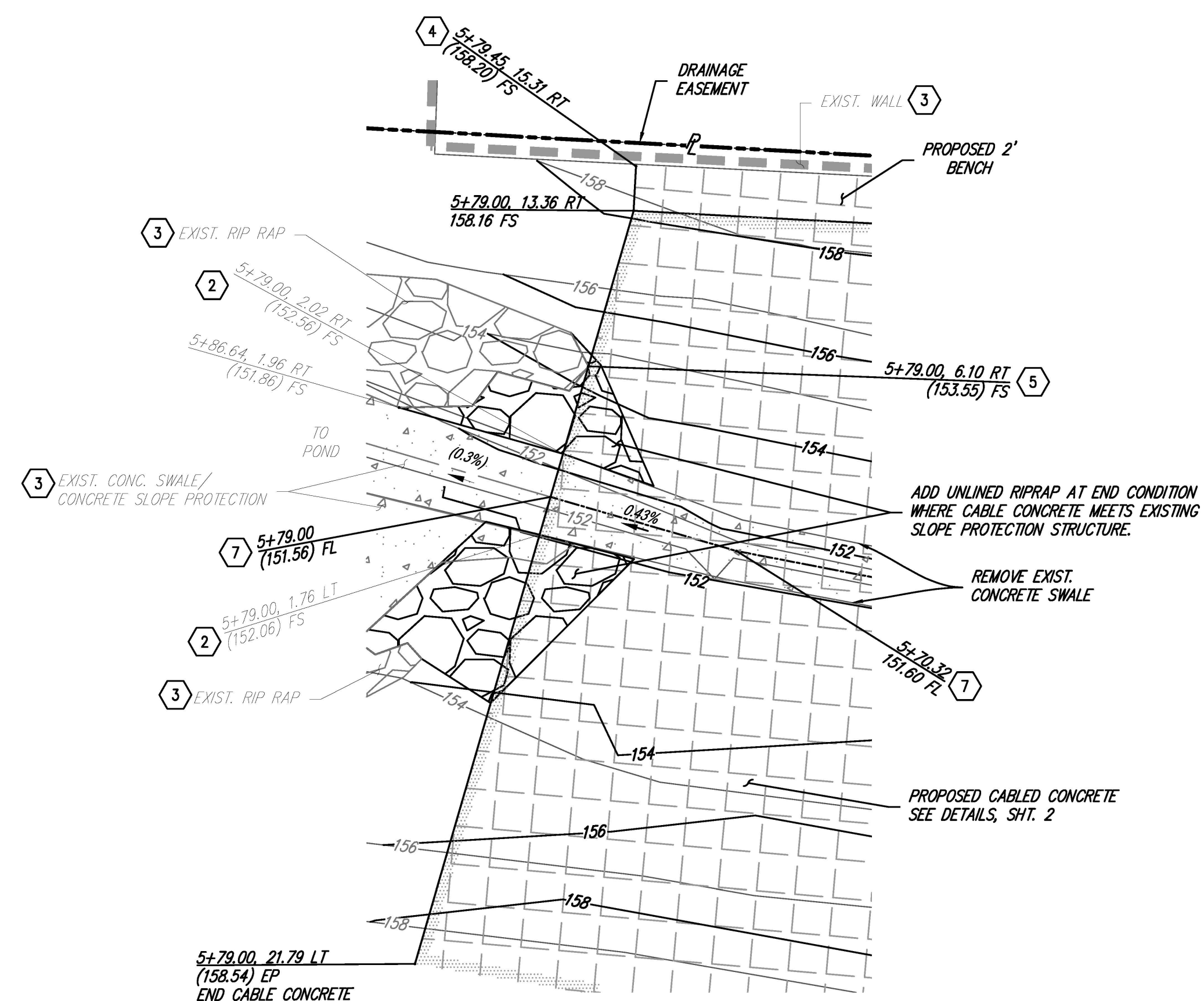
DETAIL '2'
SCALE 1" = 5'



DETAIL '3'
SCALE 1" = 5'



DETAIL '4'
SCALE 1" = 5'



DETAIL '5'
SCALE 1" = 5'

CONSTRUCTION NOTES

- 1 REMOVE AND REPLACE EXIST. SWALE; TIE INTO PROPOSED DRAINAGE CHANNEL
- 2 BEGIN SWALE WIDTH TRANSITION TO MATCH EXISTING
- 3 EXISTING STRUCTURE TO REMAIN IN PLACE
- 4 MATCH PROPOSED BENCH TO EXISTING FINISHED SURFACE
- 5 MATCH CABLED CONCRETE TO EXISTING STRUCTURE. APPLY GROUTING TO CONNECT CABLE CONCRETE. SEE KEY-IN DETAIL ON SHEET 2.
- 6 SAWCUT EXISTING SWALE AT HEADWALL AND CONSTRUCT NEW DRAINAGE SWALE (PER STD. D-75 TYPE D)
- 7 CABLED CONCRETE WILL TERMINATE AT THE PROPOSED CHANNEL FLOWLINE. SEE TOE-IN DETAIL ON SHEET 2.

LEGEND

- SEE 'KEY-IN DETAIL' ON SHEET 2

NOTE
CONTRACTOR TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION!

NOTE!
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DESIGNED BY: C.E. DATE: SEPT 2017
 DRAWN BY: C.E. SCALE: AS SHOWN
 PROJECT MGR.: J.T. JOB NO.: 121021
 ENGINEER OF WORK: JOANNE S. TYLER DATE: RCE: 59286



"AS BUILT"
 JOANNE S. TYLER DATE
 RCE 59286
 REVIEWED BY:
 INSPECTOR DATE

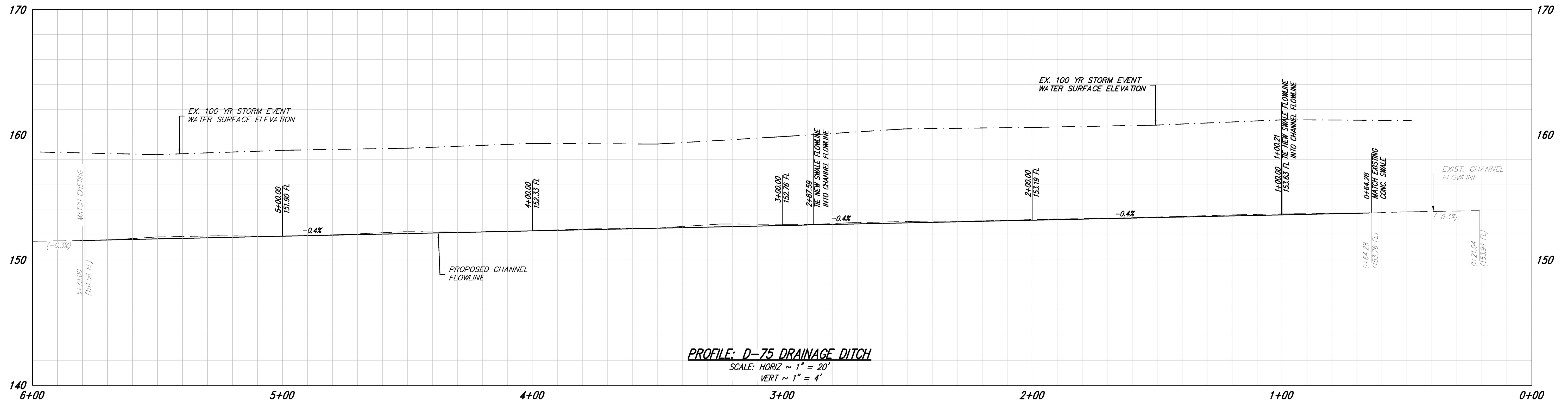
BENCHMARK

DESCRIPTION: BRASS DISC WELL MONUMENT STAMPED "LS 5669"
 LOCATION: INTERSECTION OF BLACK RAIL RD. AND MARTINGALE CT. 21 FEET WESTERLY OF THE EASTERLY EDGE OF PAVEMENT OF BLACK RAIL RD. 5 FEET WEST OF A SEWER MANHOLE AND 51 FEET NORTHEASTERLY OF A STREETLIGHT.
 RECORD FROM: CITY OF CARLSBAD SURVEY CONTROL POINT 46 AND 65 PER R.O.S. 17271
 ELEVATION: 342.73 DATUM: NGVD 1929

DATE	INITIAL	REVISION DESCRIPTION	DATE	INITIAL	DATE	INITIAL

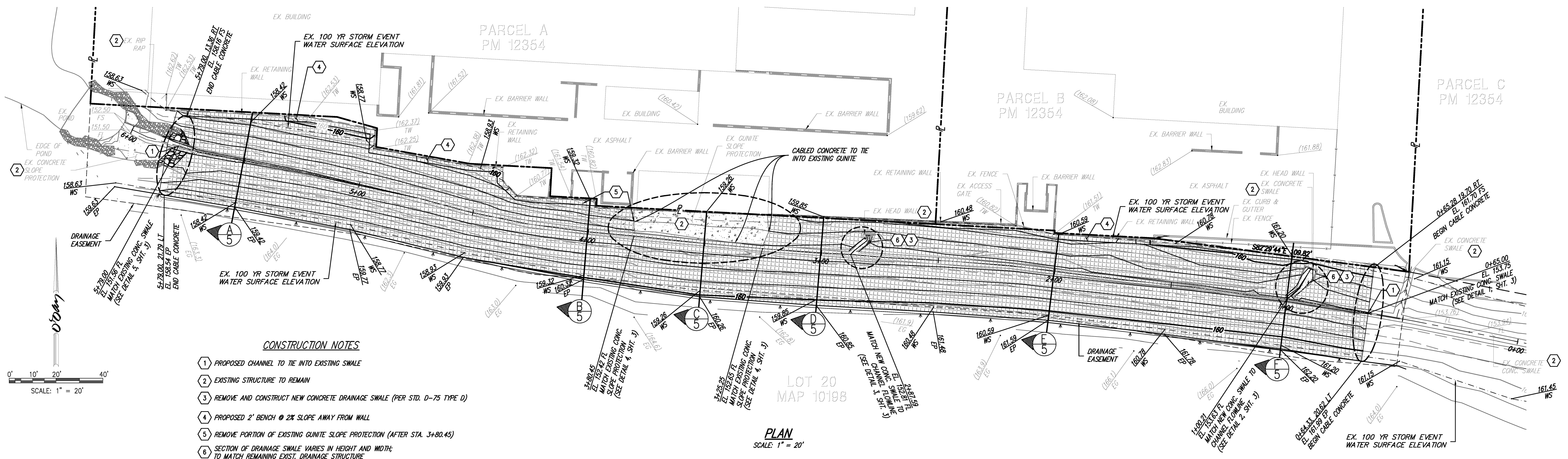
SHEET 3	CITY OF CARLSBAD ENGINEERING DEPARTMENT	SHEETS 7
GRADING PLAN FOR: VERSUM MATERIALS 1969 PALOMAR OAKS WAY GRADING DETAIL		
APPROVED: JASON S. GELDERT		
ENGINEER MANAGER PE 63912 EXPIRES 9/30/16 DATE		
DWN BY: C.E.	PROJECT NO.	DRAWING NO.
CHKD BY:		
RYWD BY:		

GRADING PLAN & PROFILE



PROFILE: D-75 DRAINAGE DITCH

SCALE: HORIZ ~ 1" = 20'
VERT ~ 1" = 4'



CONSTRUCTION NOTES

- 1 PROPOSED CHANNEL TO TIE INTO EXISTING SWALE
- 2 EXISTING STRUCTURE TO REMAIN
- 3 REMOVE AND CONSTRUCT NEW CONCRETE DRAINAGE SWALE (PER STD. D-75 TYPE D)
- 4 PROPOSED 2' BENCH @ 2% SLOPE AWAY FROM WALL
- 5 REMOVE PORTION OF EXISTING GUNITE SLOPE PROTECTION (AFTER STA. 3+80.45)
- 6 SECTION OF DRAINAGE SWALE VARIES IN HEIGHT AND WIDTH; TO MATCH REMAINING EXIST. DRAINAGE STRUCTURE

NOTE
CONTRACTOR TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION!

NOTE!!
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DESIGNED BY: C.E. DATE: SEPT 2017
DRAWN BY: C.E. SCALE: AS SHOWN
PROJECT MGR.: J.T. JOB NO.: 121021
ENGINEER OF WORK:
JOANNE S. TYLER DATE: RCE: 59286



"AS BUILT"	
JOANNE S. TYLER RCE 59286	DATE
REVIEWED BY:	DATE
INSPECTOR	DATE

PLAN

SCALE: 1" = 20'

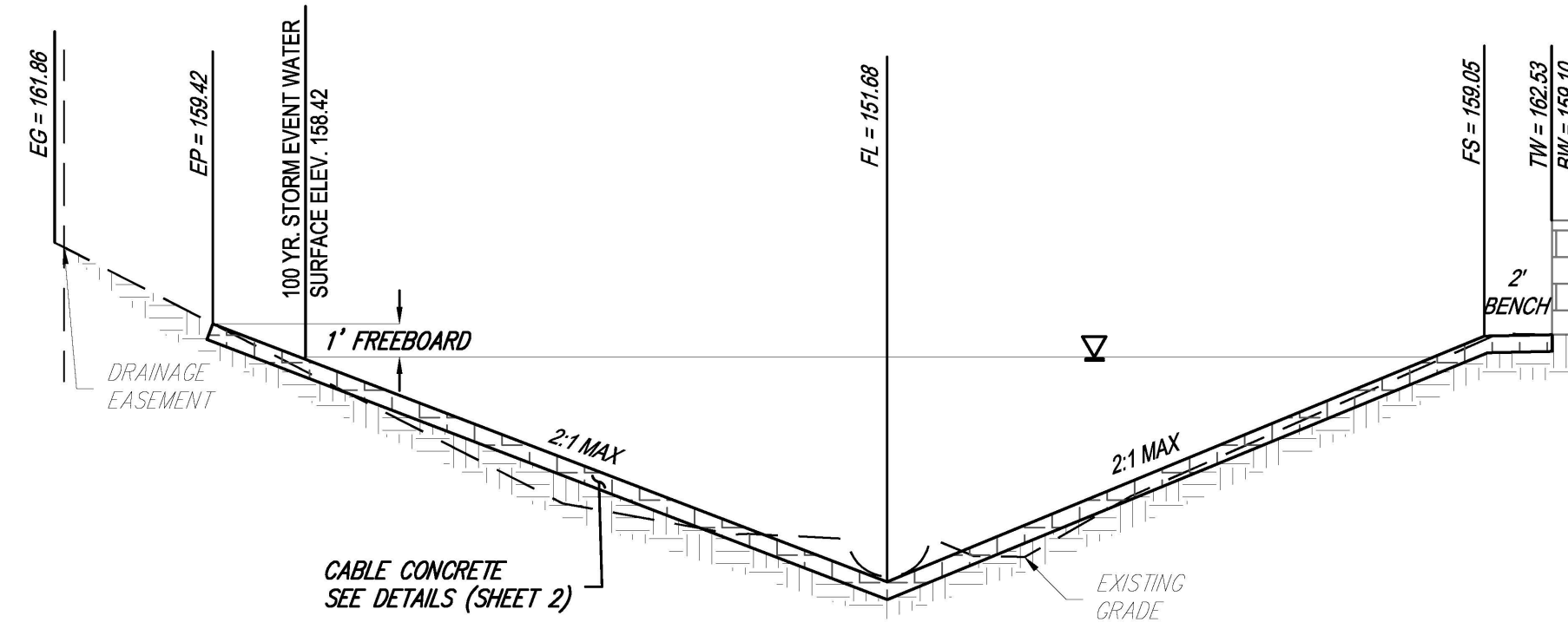
BENCHMARK

DESCRIPTION: BRASS DISC WELL MONUMENT STAMPED "LS 5669"
LOCATION: INTERSECTION OF BLACK RAIL RD. AND MARTINGALE CT. 21 FEET WESTERLY OF THE EASTERLY EDGE OF PAVEMENT OF BLACK RAIL RD., 5 FEET WEST OF A SEWER MANHOLE AND 51 FEET NORTHEASTERLY OF A STREETLIGHT.
RECORD FROM: CITY OF CARLSBAD SURVEY CONTROL POINT 46 AND 65 PER R.O.S. 17271
ELEVATION: 342.73 DATUM: NGVD 1929

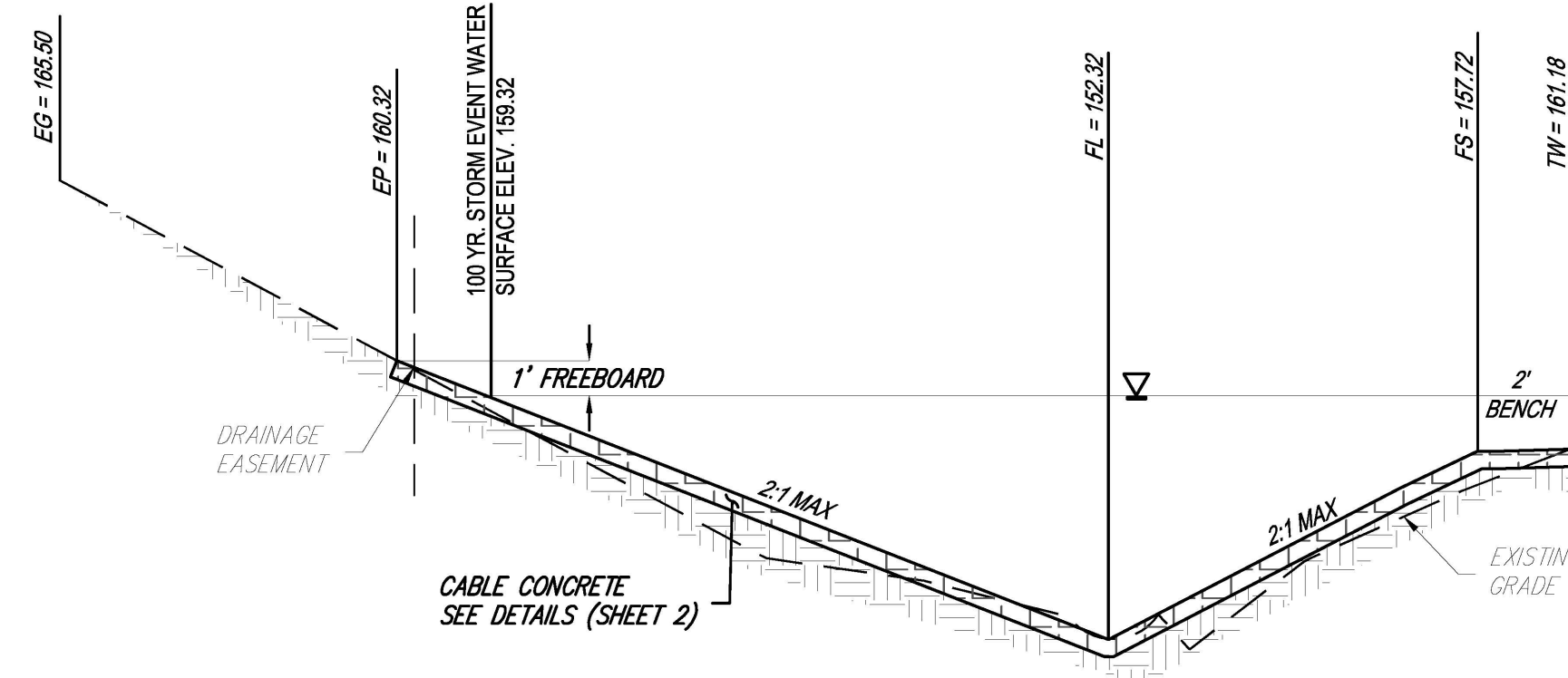
DATE	INITIAL	REVISION DESCRIPTION	DATE	INITIAL	DATE	INITIAL

SHEET 4	CITY OF CARLSBAD ENGINEERING DEPARTMENT	SHEETS 7
GRADING PLAN FOR: VERSUM MATERIALS 1969 PALOMAR OAKS WAY GRADING PLAN & PROFILE		
APPROVED: JASON S. GELBERT		
ENGINEER MANAGER	PE 63912	EXPIRES 9/30/16
DWN BY: C.E.	PROJECT NO.	DRAWING NO.
CHKD BY:		
RVWD BY:		

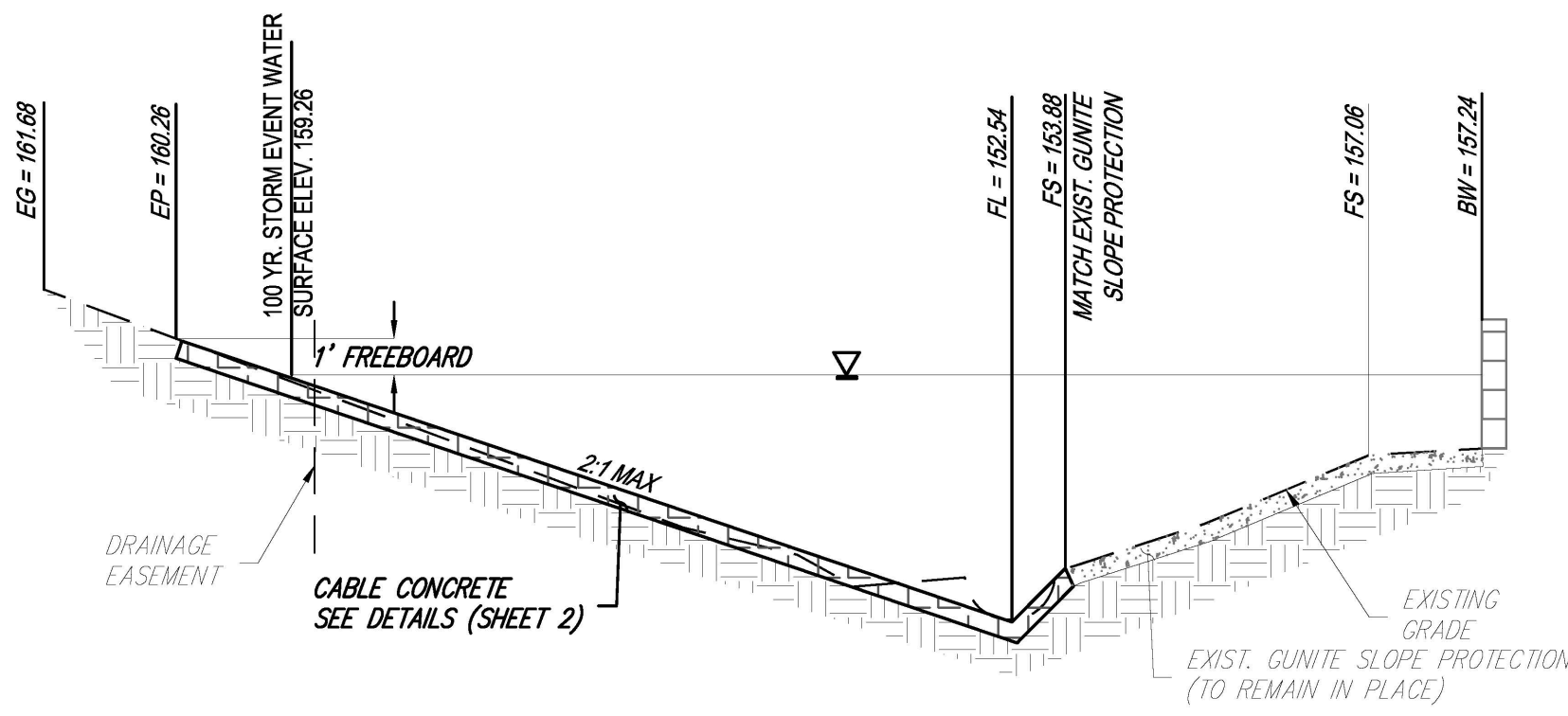
SECTION DETAILS



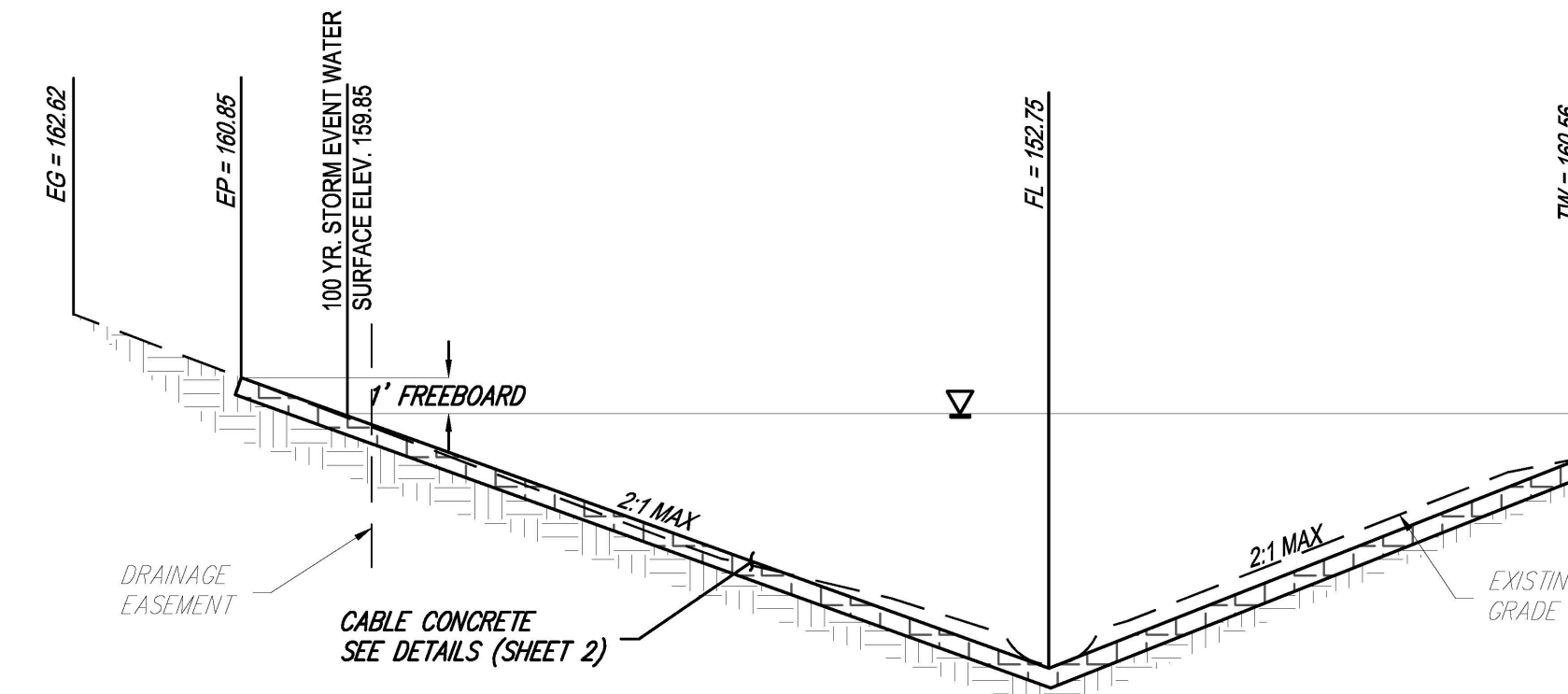
SECTION 'A'
SCALE 1" = 5'



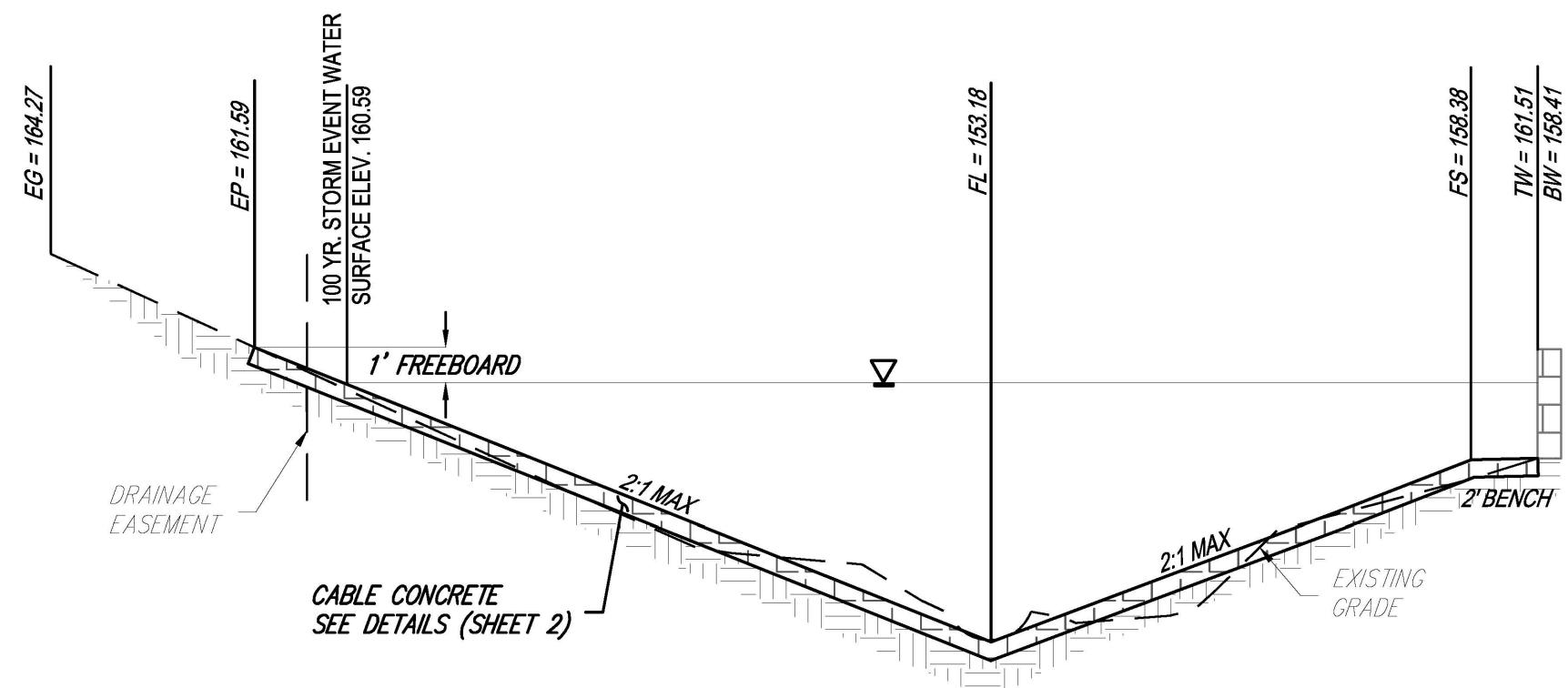
SECTION 'B'
SCALE 1" = 5'



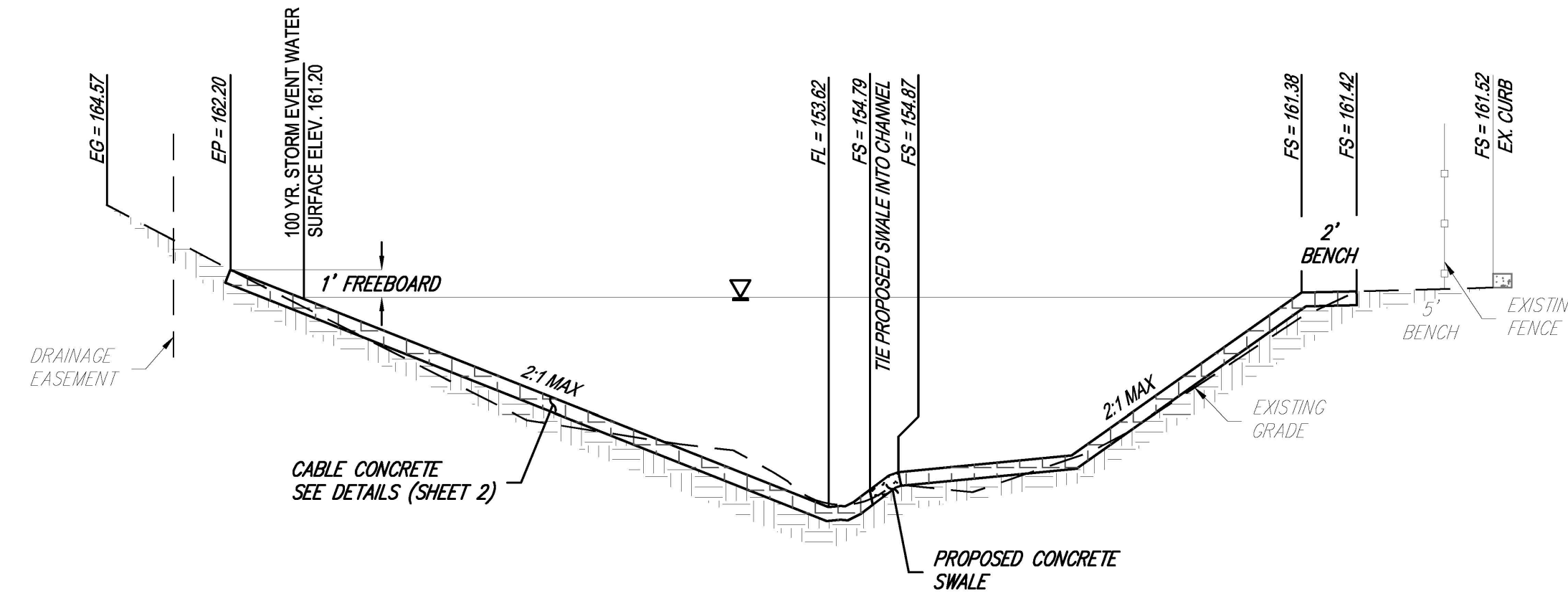
SECTION 'C'
SCALE 1" = 5'



SECTION 'D'
SCALE 1" = 5'



SECTION 'E'
SCALE 1" = 5'



SECTION 'F'
SCALE 1" = 5'

NOTE
CONTRACTOR TO VERIFY THE EXACT LOCATION OF EXISTING UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION!

NOTE!!
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O'Day
CONSULTANTS

2710 Loker Avenue West
Suite 100 Carlsbad,
California 92010
760-931-7700 Fax:
760-931-8680
OdayConsultants.com

Civil Engineering
Planning
Processing
Surveying

DESIGNED BY: C.E. DATE: SEPI 2017
DRAWN BY: C.E. SCALE: AS SHOWN
PROJECT MGR.: J.T. JOB NO.: 121021

ENGINEER OF WORK:
JOANNE S. TYLER DATE: _____
RCE: 59286



"AS BUILT"

JOANNE S. TYLER	DATE
RCE 59286	
REVIEWED BY:	
INSPECTOR	DATE

BENCHMARK

DESCRIPTION: BRASS DISC WELL MONUMENT
STAMPED "LS 5689"

LOCATION: INTERSECTION OF BLACK RAIL RD. AND
MARTINGALE CT. 21 FEET WESTERLY OF THE
EASTERLY EDGE OF PAVEMENT OF BLACK RAIL
RD., 5 FEET WEST OF A SEWER MANHOLE AND
51 FEET NORTHEASTERLY OF A STREETLIGHT.

RECORD FROM: CITY OF CARLSBAD SURVEY CONTROL
POINT 46 AND 65 PER R.O.S. 17271

ELEVATION: 342.73 DATUM: NGVD 1929

DATE	INITIAL	REVISION DESCRIPTION	DATE	INITIAL

SHEET 5	CITY OF CARLSBAD ENGINEERING DEPARTMENT	SHEETS 7
GRADING PLAN FOR: VERSUM MATERIALS 1969 PALOMAR OAKS WAY SECTION DETAILS		
APPROVED: JASON S. GELBERT		
ENGINEER MANAGER	PE 63912	EXPIRES 9/30/16
DWN BY: <u>C.E.</u>	PROJECT NO.	DRAWING NO.
CHKD BY:		
RVWD BY:		

TIER 2 CITY STORM WATER POLLUTION PREVENTION PLAN (TIER 2 SWPPP)

STORM WATER POLLUTION PREVENTION NOTES

GENERAL SITE MANAGEMENT REQUIREMENTS

THE FOLLOWING GENERAL SITE MANAGEMENT REQUIREMENTS SHALL BE ADHERED TO THROUGHOUT THE DURATION OF THE CONSTRUCTION WORK (YEAR ROUND).

- IN CASE EMERGENCY WORK IS REQUIRED, CONTACT: BILL ELKINS FROM VERSUM MATERIALS AT (TEL.NO.) (760) 603-2272.
- DEVICES SHOWN ON CITY APPROVED PLANS SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE ENGINEERING INSPECTOR.
- THE CONTRACTOR SHALL RESTORE ALL EROSION CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
- THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES AS MAY BE REQUIRED BY THE CITY ENGINEER DUE TO UNCOMPLETED GRADING OPERATIONS OR UNFORSEEN CIRCUMSTANCES WHICH MAY ARISE.
- THE CONTRACTOR SHALL BE RESPONSIBLE AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT PUBLIC TRESPASS ONTO AREAS WHERE IMPOUNDED WATERS CREATE A HAZARDOUS CONDITION.
- GRADING AREAS AROUND THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
- ALL REMOVABLE PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN FIVE (5) DAY RAIN PROBABILITY FORECAST EXCEEDS FORTY PERCENT (40%). SILT AND OTHER DEBRIS SHALL BE REMOVED AFTER EACH RAINFALL.
- ALL GRAVEL BAGS SHALL CONTAIN 3/4 INCH MINIMUM AGGREGATE.

- ALL EXPOSED DISTURBED AREAS MUST HAVE EROSION PROTECTION BMPs PROPERLY INSTALLED. THIS INCLUDES ALL BUILDING PADS, UNFINISHED ROADS, AND SLOPES.
- ADEQUATE PERIMETER PROTECTION BMPs MUST BE INSTALLED AND MAINTAINED AND WILL BE UPGRADED, IF NECESSARY, TO PROVIDE SUFFICIENT PROTECTION FROM RUNOFF DURING RAIN EVENTS.
- ADEQUATE SEDIMENT CONTROL BMPs MUST BE INSTALLED AND MAINTAINED.
- ADEQUATE BMPs TO CONTROL OFFSITE SEDIMENT TRACKING MUST BE INSTALLED AND MAINTAINED.
- A MINIMUM OF 125% OF THE MATERIAL NEEDED TO INSTALL STANDBY BMPs TO PROTECT THE EXPOSED AREAS FROM EROSION AND PREVENT SEDIMENT DISCHARGES, MUST BE STORED ON-SITE. AREAS ALREADY PROTECTED FROM EROSION USING PHYSICAL STABILIZATION OR ESTABLISHED VEGETATION STABILIZATION BMPs ARE NOT CONSIDERED TO BE "EXPOSED" FOR PURPOSES OF THIS REQUIREMENT.
- THE OWNER/DEVELOPER/CONTRACTOR MUST FOLLOW "WEATHER TRIGGERED" ACTION PLAN AND BE ABLE TO DEPLOY STANDBY BMPs TO PROTECT THE EXPOSED PORTIONS OF THE SITE WITHIN 48 HOURS OF A PREDICTED STORM EVENT (A PREDICTED STORM EVENT IS DEFINED AS A 40% CHANCE OF RAIN WITHIN A 5-DAY NATIONAL WEATHER SERVICE FORECAST). ON REQUEST, THE OWNER/DEVELOPER/CONTRACTOR MUST PROVIDE PROOF OF THIS CAPABILITY.
- DEPLOYMENT OF PHYSICAL OR VEGETATION EROSION CONTROL BMPs MUST COMMENCE AS SOON AS SLOPES ARE COMPLETED. THE OWNER/DEVELOPER/CONTRACTOR MAY NOT RELY ON THE ABILITY TO DEPLOY STANDBY BMP MATERIALS TO PREVENT EROSION OF SLOPES THAT HAVE BEEN COMPLETED.
- THE AREA THAT CAN BE CLEARED, GRADED, AND LEFT EXPOSED AT ONE TIME IS LIMITED TO THE AMOUNT OF ACREAGE THAT THE CONTRACTOR CAN ADEQUATELY PROTECT PRIOR TO A PREDICTED RAIN EVENT. FOR LARGER SITES, GRADING SHOULD BE PHASED. IT MAY BE NECESSARY TO DEPLOY EROSION AND SEDIMENT CONTROL BMPs IN AREAS THAT ARE NOT COMPLETED, BUT ARE NOT ACTIVELY BEING WORKED BEFORE ADDITIONAL GRADING IS ALLOWED TO PROCEED, AT THE DISCRETION OF THE CITY INSPECTOR.

- ALL DISTURBED AREAS THAT ARE NOT COMPLETED AND/OR NOT BEING ACTIVELY GRADED MUST BE FULLY PROTECTED FROM EROSION IF LEFT FOR 14 OR MORE DAYS. THE ABILITY TO INSTALL BMP MATERIALS IN A PROMPT MANNER IS NOT SUFFICIENT. BMPs NEED TO BE INSTALLED IN THESE AREAS.
- BMPs MUST BE STOCKPILED AT VARIOUS LOCATION THROUGHOUT THE PROJECT SITE THROUGHOUT THE YEAR. WHENEVER THERE IS A 40% CHANCE OR GREATER OF A RAIN WITHIN A THREE (3) DAY FORECAST, THE INSPECTOR WILL VERIFY THAT BMPs ARE ADEQUATELY STOCKPILED. BMPs MUST BE STOCKPILED AND READY FOR DEPLOYMENT WHEN THERE IS 50% CHANCE OF RAIN WITHIN A 48 HOUR FORECAST. FAILURE TO COMPLY WITH THIS REQUIREMENT COULD RESULT IN THE ISSUANCE OF A STOP WORK NOTICE OR OTHER ENFORCEMENT ACTION.
- ALL TREATMENT AND EROSION CONTROL BMPs MUST BE INSPECTED WEEKLY AND PRIOR TO A FORECASTED RAIN EVENT OF GREATER THAN 50%, AND AFTER A RAIN EVENT. IN ADDITION, TREATMENT CONTROL BMPs MUST BE SERVICED AS NEEDED THROUGHOUT THE YEAR.
- IF SELECTED BMP FAILS DURING A RAIN EVENT, IT MUST BE REPAIRED OR IMPROVED OR REPLACED WITH AN ACCEPTABLE ALTERNATIVE AS SOON AS IT IS SAFE TO DO SO. THE FAILURE OF A BMP INDICATES IT WAS NOT ADEQUATE FOR THE CIRCUMSTANCES IN WHICH IT WAS USED. REPAIRS AND REPLACEMENT MUST THEREFORE PUT A MORE ROBUST BMP MEASURE IN PLACE.
- ALL CONSTRUCTION EMPLOYEES MUST BE TRAINED ON THE IMPORTANCE OF STORM WATER POLLUTION PREVENTION AND BMP MAINTENANCE.

WEATHER TRIGGERED ACTION PLAN

THE DEVELOPER SHALL DEPLOY STANDBY BEST MANAGEMENT PRACTICE MEASURES TO COMPLETELY PROTECT THE EXPOSED PORTIONS OF THE SITE WITHIN 48 HOURS OF A PREDICTED STORM EVENT (A PREDICTED STORM EVENT IS DEFINED AS A FORECASTED, 40% CHANCE OF RAIN BY THE NATIONAL WEATHER SERVICE). IN ADDITION TO BMPs IMPLEMENTED YEAR-ROUND INCLUDING PERIMETER CONTROL, WIND EROSION CONTROL, TRACKING, NON-STORM WATER CONTROL, WASTE MANAGEMENT, AND MATERIALS POLLUTION CONTROL.

THE NATIONAL WEATHER SERVICE FORECAST SHALL BE MONITORED AND USED BY THE DEVELOPER ON A DAILY BASIS. IF PRECIPITATION IS PREDICTED (40% CHANCE OF RAIN), THEN THE NECESSARY WATER POLLUTION CONTROL PRACTICES SHALL BE DEPLOYED WITHIN 48 HOURS AND PRIOR TO THE ONSET OF THE PRECIPITATION.

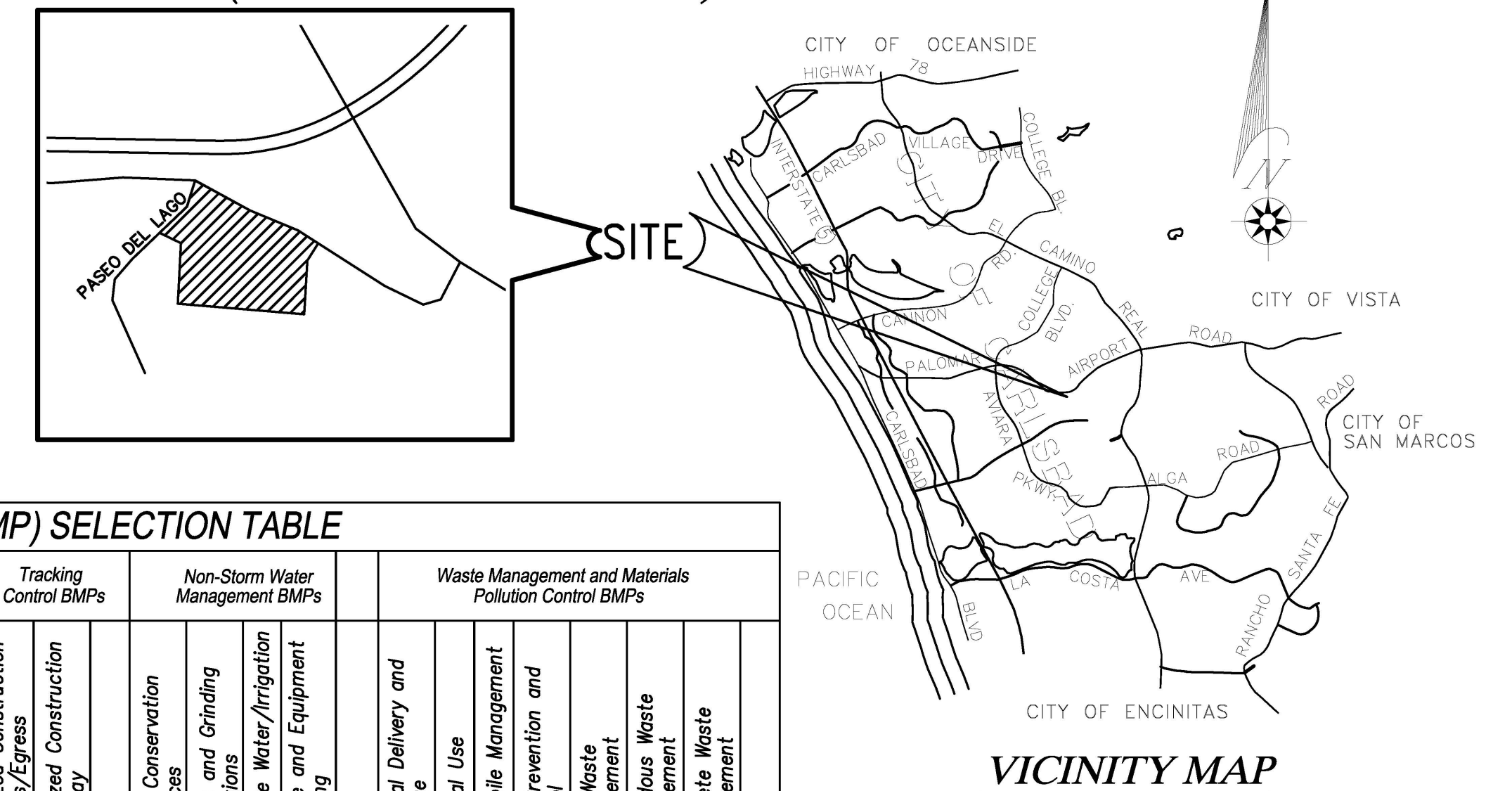
THE DEPLOYMENT OF THE BMPs SHALL INCLUDE BUT NOT BE LIMITED TO GRAVEL BAGS AND SILT FENCES. A MINIMUM OF 125% OF THE MATERIAL NEEDED TO INSTALL STANDBY BEST MANAGEMENT PRACTICES MEASURES TO PROTECT THE EXPOSED AREAS FROM EROSION AND PREVENT SEDIMENT DISCHARGES MUST BE STORED ON-SITE. AREAS THAT HAVE ALREADY BEEN PROTECTED FROM EROSION USING PHYSICAL STABILIZATION OR ESTABLISHED VEGETATION STABILIZATION BMPs AS DETERMINED BY THE CITY OF CARLSBAD ARE NOT CONSIDERED TO BE "EXPOSED" FOR THE PURPOSES OF "WEATHER TRIGGERED ACTION PLAN". AN ADEQUATE SOURCE OF EQUIPMENT AND WORKERS SHALL BE AVAILABLE FOR DEPLOYMENT OF "WEATHER TRIGGERED BMPs".

EROSION CONTROL HYDROSEEDING, PLANTING AND IRRIGATION

- ALL PERMANENT AND TEMPORARY EROSION CONTROL PLANTING AND IRRIGATION SHALL BE INSTALLED AND MAINTAINED AS REQUIRED IN SECTION 212 OF THE STANDARD SPECIFICATIONS AND THE FOLLOWING:
 - HYDROSEEDING SHALL BE APPLIED TO:
 - ALL SLOPES THAT ARE GRADED 6:1 (HORIZONTAL TO VERTICAL) OR STEEPER WHEN THEY ARE:
 - THREE FEET OR MORE IN HEIGHT AND ADJACENT TO PUBLIC WALL OR STREET.
 - ALL SLOPES 4 FEET OR MORE IN HEIGHT.
 - AREAS GRADED FLATTER THAN 6:1 WHEN ANY OF THE FOLLOWING CONDITIONS EXIST:
 - NOT SCHEDULED FOR IMPROVEMENTS (CONSTRUCTION OR GENERAL LANDSCAPING) WITHIN 60 DAYS OF ROUGH GRADING.
 - IDENTIFIED BY THE PARKS AND RECREATION DIRECTOR AS HIGHLY VISIBLE TO THE PUBLIC.
 - HAVE ANY SPECIAL CONDITION IDENTIFIED BY THE CITY ENGINEER THAT WARRANTS IMMEDIATE TREATMENT.
 - HYDROSEEDING AREAS SHALL BE IRRIGATED IN ACCORDANCE WITH THE FOLLOWING CRITERIA:
 - ALL SLOPES THAT ARE GRADED 6:1 OR STEEPER AND THAT ARE:
 - THREE TO EIGHT FEET IN HEIGHT SHALL BE IRRIGATED BY HAND WATERING FROM QUICK COUPLERS/HOSE BIBS OR A CONVENTIONAL SYSTEM OF LOW PRECIPITATION SPRINKLER HEADS PROVIDING 100% COVERAGE.
 - GREATER THAN 8 FEET IN HEIGHT SHALL BE WATERED BY A CONVENTIONAL SYSTEM OF LOW PRECIPITATION SPRINKLER HEADS PROVIDING 100% COVERAGE.
 - AREAS SLOPED LESS THAN 6:1 SHALL BE IRRIGATED AS APPROVED BY THE CITY ENGINEER. PRIOR TO HYDROSEEDING THE DEVELOPER SHALL SUBMIT A PROPOSED SCHEME TO PROVIDE IRRIGATION TO THE CITY ENGINEER. THE PROPOSAL SHALL BE SPECIFIC REGARDING THE NUMBERS, TYPE, AND COSTS OF THE ELEMENTS OF THE PROPOSED SYSTEM.
 - IRRIGATION SHALL MAINTAIN THE MOISTURE LEVEL OF THE SOIL AT THE OPTIMUM LEVEL FOR THE GRADING OF THE HYDROSEEDED GROWTH.
 - HYDROSEEDING MIX SHALL CONSIST OF ALL OF THE FOLLOWING:
 - SEED MIX SHALL CONSIST OF NO LESS THAN:
 - 20 lbs. PER ACRE OF ROSE CLOVER
 - 20 lbs. PER ACRE OF ZORRO FESCUE
 - 3lbs PER ACRE OF E SCHOOL CIA CALIFORNICA
 - 4 lbs PER ACRE OF ACHILLEA MILLEFOLIA
 - 3lbs PER ACRE OF ALYSSUM (CARPET OF SNOW)
 - 1/2 lb. PER ACRE IF DIMORPHOLECA
 - ITEMS c, d, e, and f OF THIS SUBSECTION MAY BE OMITTED ON VISIBLE FROM EITHER A PUBLIC STREET OR RESIDENTIAL STRUCTURES.
 - ITEM g OF THIS SUBSECTION MUST BE INOCULATED WITH A NITROGEN FIXING BACTERIA AND APPLIED DRY EITHER BY DRILLING OR BROADCASTING BEFORE HYDROSEEDING.
 - ALL SEED MATERIALS SHALL BE TRANSPORTED TO THE JOBSITE IN UNOPENED CONTAINERS WITH THE CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE CERTIFICATION TAG ATTACHED TO, OR PRINTED ON SAID CONTAINERS.
 - NON-PHYTO-TOXIC WETTING AGENTS MAY BE ADDED TO THE HYDROSEED SLURRY AT THE DISCRETION OF THE CONTRACTOR.

- TYPE 1 MULCH APPLIED AT THE RATE OF NO LESS THAN 2000 lbs PER ACRE. TYPE 6 MULCH (STRAW) MAY BE SUBSTITUTED, WHEN STRAW IS USED, IT MUST BE ANCHORED TO THE SLOPE BY MECHANICALLY PUNCHING NO LESS THAN 50% IF THE STRAW INTO THE SOIL.
- FERTILIZER CONSISTING OF AMMONIUM PHOSPHATE SULFATE, 16-20-0 WITH 15% SULPHUR APPLIED AT THE RATE OF 500 lbs. PER ACRE.
- AREAS TO BE HYDROSEEDED SHALL BE PREPARED PRIOR TO HYDROSEEDING:
 - ROUGHENING THE SURFACE TO BE PLANTED BY ANY OR A COMBINATION OF:
 - TRACK WALKING SLOPES STEEPER THAN 6:1.
 - HARROWING AREAS 6:1 OR FLATTER THAT ARE SUFFICIENTLY FRIABLE.
 - AREAS GRADED FLATTER THAN 6:1 WHEN ANY OF THE FOLLOWING CONDITIONS EXIST:
 - ADJUSTING THE SURFACE SOIL MOISTURE TO PROVIDE A DAMP BUT NOT SATURATED SEED BED.
 - THE ADDITION OF SOIL AMENDMENTS, PH ADJUSTMENT, LEACHING COVERING SALINE SOILS TO PROVIDED VIALB CONDITIONS FOR GROWTH.
- HYDROSEEDING AREAS SHALL BE MAINTAINED TO PROVIDE A VIGOROUS GROWTH UNTIL THE PROJECT IS PERMANENTLY LANDSCAPED OR, FOR AREAS WHERE HYDROSEEDING IS THE PERMANENT LANDSCAPING, UNTIL THE PROJECT IS COMPLETED AND ALL BONDS RELEASED.

- ALL SLOPES SHALL HAVE IRRIGATION INSTALLED AND BE STABILIZED, PLANTED AND/OR HYDROSEEDED WITHIN TEN (10) DAYS OF THE TIME WHEN EACH SLOPE IS BROUGHT TO GRADE AS SHOWN ON THE APPROVED GRADING PLANS.
- SHOULD GERMINATION OF HYDROSEEDED SLOPES FAIL TO PROVIDE EFFICIENT COVERAGE OF GRADING SLOPES (90% COVERAGE) PRIOR TO OCTOBER 1, THE SLOPES SHALL BE STABILIZED BY AN APPROPRIATE EROSION CONTROL MATTING MATERIAL APPROVED BY THE PUBLIC WORKS INSPECTOR.
- LANDSCAPING SHALL BE ACCOMPLISHED ON ALL SLOPES AND PADS AS REQUIRED BY THE CITY OF CARLSBAD LANDSCAPE MANUAL, THE LANDSCAPING PLANS FOR THIS PROJECT OR AS DIRECTED BY THE CITY ENGINEER OF PLANNING DIRECTOR.
- THE OWNER/APPLICANT SHALL ENSURE THAT ALL CONTRACTORS SHALL COORDINATE THE WORK OF THIS CONSTRUCTION SWPPP SHOWN ON ANY GRADING PLANS, LANDSCAPE AND IRRIGATION PLANS, AND IMPROVEMENT PLANS AS REQUIRED FOR THIS PROJECT WORK.



BEST MANAGEMENT PRACTICES (BMP) SELECTION TABLE																											
Best Management Practice* (BMP) Description →	Erosion Control BMPs					Sediment Control BMPs					Tracking Control BMPs		Non-Storm Water Management BMPs		Waste Management and Materials Pollution Control BMPs												
	Preservation of Existing Vegetation	Hydroseeding	Geotextiles & Mats	Wood Mulching	Earth Dikes and Drainage Swales	Silt Fence	Sediment Trap	Check Dam	Fiber Rolls	Gravel Bag Berm	Street Sweeping and Vacuuming	Sandbag Barrier	Storm Drain Inlet Protection	Stabilized Construction Ingress/Egress	Stabilized Construction Roadway	Water Conservation Practices	Paving and Grinding Operations	Portable Water/Irrigation	Vehicle and Equipment Cleaning	Material Delivery and Storage	Material Use	Stockpile Management	Spill Prevention and Control	Solid Waste Management	Hazardous Waste Management	Concrete Waste Management	
CASQA Designation →	EC-2	EC-4	EC-7	EC-8	EC-9	EC-11	SE-1	SE-3	SE-4	SE-5	SE-6	SE-7	SE-8	SE-10	TR-1	TR-2	NS-1	NS-3	NS-7	NS-8	WM-1	WM-2	WM-3	WM-4	WM-5	WM-6	WM-8
Construction Activity																											
X Grading/Soil Disturbance	X						X	X	X	X	X	X		X			X				X	X	X	X	X	X	X
Trenching/Excavation																											
Stockpiling																											
Drilling/Boring																											
Concrete/Asphalt Sawcutting																	X										
Concrete Flatwork																											
Paving																											
Conduit/Pipe Installation																											
Stucco/Mortar Work																											
X Waste Disposal																X	X	X				X	X	X			X
Staging/Lay Down Area																											
X Equipment Maintenance and Fueling																	X						X				
Hazardous Substance Use/Storage																											
Dewatering																											
X Site Access Across Dirt														X		X		X									
Other (list):																											

LEGEND

DESCRIPTION

EC-2, PRESERVATION OF EXISTING VEGETATION	EC-2
EC-12, STREAM BANK STABILIZATION	EC-12
SE-1, SILT FENCE	
SE-4, GRAVEL BAG CHECK DAM	
SE-5, FIBER ROLL	
SE-7, STREET SWEEPING AND VACUUMING	SE-7
TC-1, STABILIZED CONSTRUCTION ENTRANCE	
TC-3, ENTRANCE OUTLET TIRE WASH	
WE-1, WIND EROSION CONTROL	WE-1
NS-1, WATER CONSERVATION PRACTICES	NS-1
NS-3, PAVING AND GRINDING OPERATIONS	NS-3
NS-5, CLEAR WATER DIVERSION	NS-5
NS-8, VEHICLE AND EQUIPMENT CLEANING	NS-8
NS-9, VEHICLE AND EQUIPMENT FUELING	NS-9
NS-10, VEHICLE AND EQUIPMENT MAINTENANCE	NS-10
NS-15, DEMOLITION ADJACENT TO WATER	NS-15
WM-1, MATERIAL DELIVERY AND STORAGE	WM-1
WM-2, MATERIAL USE	WM-2
WM-3, STOCKPILE MANAGEMENT	WM-3
WM-4, SPILL PREVENTION AND CONTROL	WM-4
WM-5, SOLID WASTE MANAGEMENT	WM-5
WM-7, CONTAMINATED SOIL MANAGEMENT	WM-7
WM-8, CONCRETE WASTE MANAGEMENT	WM-8
WM-9, SANITARY/SEPTIC WASTE MANAGEMENT	WM-9
EXISTING CONCRETE BROW DITCH	

OWNER'S CERTIFICATION:

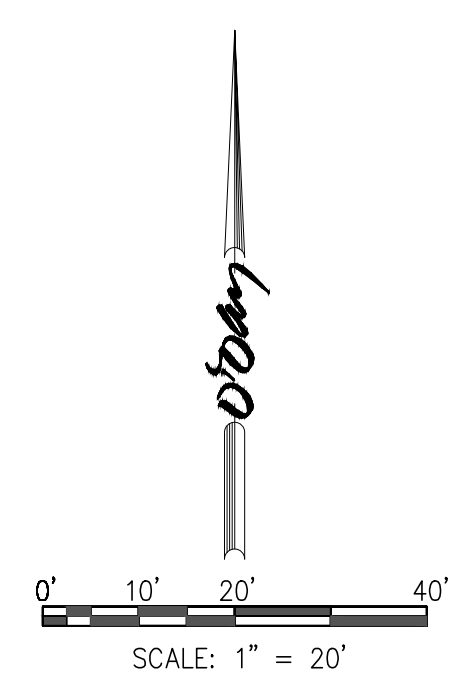
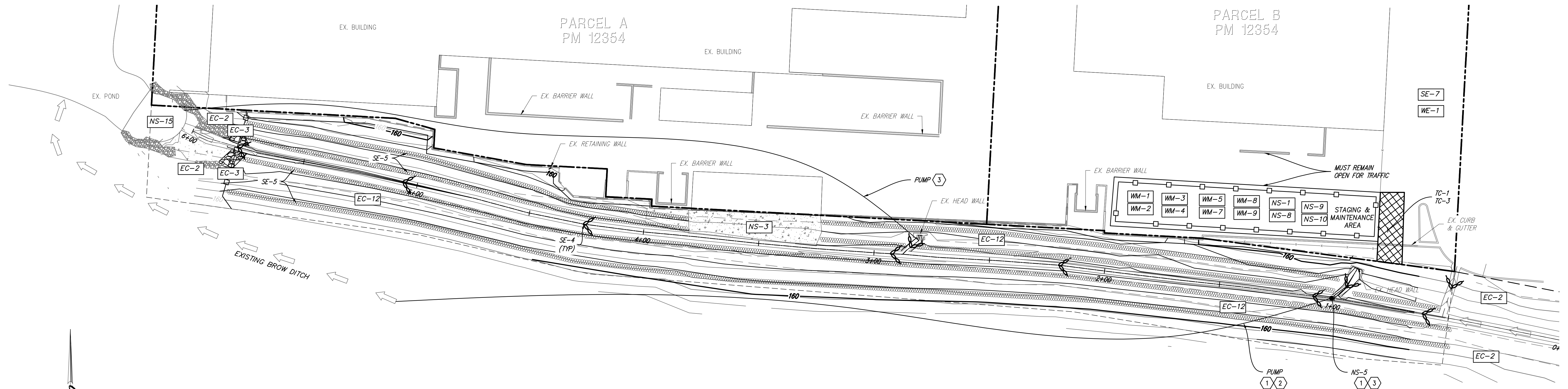
I UNDERSTAND AND ACKNOWLEDGE THAT I MUST: (1) IMPLEMENT BEST MANAGEMENT PRACTICES (BMPs) DURING CONSTRUCTION ACTIVITIES TO THE MAXIMUM EXTENT PRACTICABLE TO AVOID THE MOBILIZATION OF POLLUTANTS SUCH AS SEDIMENT AND TO AVOID THE EXPOSURE OF STORM WATER TO CONSTRUCTION RELATED POLLUTANTS; AND (2) ADHERE TO, AND AT ALL TIMES, COMPLY WITH THIS CITY APPROVED TIER 2 CONSTRUCTION SWPPP THROUGHOUT THE DURATION OF THE CONSTRUCTION ACTIVITIES UNTIL THE CONSTRUCTION WORK IS COMPLETE AND SIGNED OFF BY THE CITY OF CARLSBAD.

OWNER(S)/ OWNER'S AGENT NAME (PRINT) _____ DATE _____
 OWNER(S)/ OWNER'S AGENT NAME (SIGNATURE) _____ DATE _____

NAME OF PREPARER: <u>O'Day CONSULTANTS</u>	
QUALIFICATION OF PREPARER: <u>JOANNE S. TYLER, P.E./Q.S.D.</u>	
ADDRESS: <u>2710 LOKER AVE. WEST, STE 100</u> <u>CARLSBAD, CA 92010</u>	
PHONE NO.: <u>(760) 931-7700</u>	
SIGNATURE:	59286 R.C.E./CERT. NO.
	12/31/17 LIC. EXP. DATE
	DATE
DESIGNED BY: <u>C.E.</u> DATE: <u>SEPT 2017</u>	
DRAWN BY: <u>C.E.</u> SCALE: <u>AS SHOWN</u>	
PROJECT MGR.: <u>J.T.</u> JOB NO.: <u>121021</u>	
ENGINEER OF WORK:	
<u>JOANNE S. TYLER</u>	DATE: _____ RCE: <u>59286</u>

SHEET 6	CITY OF CARLSBAD ENGINEERING DEPARTMENT	SHEETS 7
CITY STORM WATER POLLUTION PREVENTION PLAN SWPPP TIER 2 - TITLE SHEET		
VERSUM CHANNEL IMPROVEMENT		
APPROVED: JASON S. GELDRIT		
ENGINEER MANAGER	PE 63912	EXPIRES 9/30/18
DWN BY: <u>C.E.</u>	PROJECT NO.	DRAWING NO.
CHKD BY: _____		
RVWD BY: _____		

TIER 2 CITY STORM WATER POLLUTION PREVENTION PLAN (TIER 2 SWPPP)



- EROSION CONTROL NOTES:**
- ① NS-5 NOTE: SUMP PUMP WILL BE INSTALLED UPSTREAM OF CONSTRUCTION LIMIT TO DIVERT RUNOFF TO EXISTING BROW DITCH, ALONG BROW DITCH AND ULTIMATELY BACK TO CHANNEL AT POND.
 - ② PUMP WILL BE RELOCATED ACCORDINGLY PER PROJECT PHASING.
 - ③ OUTFALLS SHALL BE PUMPED AND REROUTED TO LOCATION PAST OR AT END OF CONSTRUCTION AREA ON WEST END.



O'Day CONSULTANTS
 2710 Laker Avenue West
 Suite 100 Carlsbad,
 California 92010
 760-931-7700 Fax:
 760-931-8680
 ODayConsultants.com

DESIGNED BY: C.E. DATE: SEPT 2017
 DRAWN BY: C.E. SCALE: AS SHOWN
 PROJECT MGR.: J.T. JOB NO.: 121021
 ENGINEER OF WORK:
 JOANNE S. TYLER DATE: RCE: 59286

SHEET 7	CITY OF CARLSBAD ENGINEERING DEPARTMENT	SHEETS 7
CITY STORM WATER POLLUTION PREVENTION PLAN SWPPP TIER 2 - EROSION CONTROL PLAN VERSUM CHANNEL IMPROVEMENT		
APPROVED: JASON S. GELDERT		
ENGINEER MANAGER	PE 63912	EXPIRES 9/30/18
DWN BY: C.E.	PROJECT NO.	DRAWING NO.
CHKD BY:		
RVWD BY:		