



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS
1455 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94103-1399

10-Sep-2014

CESPD-DE

MEMORANDUM FOR Commander, Los Angeles District, ATTN: CESPL-PM-N, Mr. Joseph Johnson

Subject: Surfside-Sunset (Stage 13), San Gabriel River to Newport Bay, Orange County, California, Review Plan Approval

1. Surfside-Sunset (Stage 13), San Gabriel River to Newport Bay, Orange County, California, Review Plan that is enclosed is in accordance with Engineering Circular (EC) 1165-2-214, Review of Decision Documents, dated 15 Dec 2012. The South Pacific Division (SPD), Planning and Policy Division, Regional Business Technical Division, and Los Angeles District Support Team have reviewed the Review Plan that has been submitted. The South Pacific Division approves the Surfside-Sunset Project Review Plan.
2. With MSC approval the Review Plan will be made available for public comment via the internet and the comments received will be incorporated into future revisions of the Review Plans. SPD is designated as the Review Management Organization (RMO) for the Surfside-Sunset project. The Review Plan does not include Independent External Peer Review Type II Safety Assurance Review (SAR).
3. I hereby approve the Review Plan which is subject to change as study circumstances require. This is consistent with study development under the Project Management Business Process. Subsequent revisions to the Review Plan after public comment or during project execution will require new written approval from this office.
4. Points of contact for this action are Mr. Marc J. Goodhue, CESPD-RBT, 415-503-6568, marc.j.goodhue@usace.army.mil and Mr. Paul Bowers, CESPD-PDC, 415-503-6556, paul.w.bowers@usace.army.mil.

BUILDING STRONG and Taking Care of People!


R. MARK TOY.
Brigadier General USA
Commanding

Encl

Construction General (CG)
Beach Erosion Project

Review Plan

**Surfside-Sunset (Stage 13)
San Gabriel River to Newport Bay
Orange County, California**
for
**Design Documentation Report and
Plans & Specifications**

Revised 9 September 2014



**U.S. ARMY CORPS
of ENGINEERS**
Los Angeles District

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Review Plan: Orange County Beach Erosion Control Project, San Gabriel River to Newport Bay, Orange County, California, Stage 13, DDR and Plans & Specifications

Appendix A - Sample Statement of Technical Review for Plans & Specifications

1 PURPOSE

The purpose of this Review Plan is to outline the review processes that will be executed for the Orange County Beach Erosion Control Project, San Gabriel River to Newport Bay, Orange County, California, commonly referred to as Surfside-Sunset (Stage 13), for the Design Documentation Report and Plans & Specifications.

2 REFERENCES

- 1) EC 1165-2-214, Civil Works Review Policy, 15 December 2012
- 2) ER 415-1-11, Biddability, Constructibility, Operability, Environmental and Sustainability (BCOES) Reviews, 1 January 2013
- 3) ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 Aug 1999
- 4) ER 1110-1-12, Quality Management, 30 Sep 2006
- 5) ER 1110-1-8159, Engineering and Design, DrChecks, 10 May 2001

3 PROJECT INFORMATION

The project was authorized by act of Congress, Public Law 87-874, 87th Congress, 2nd session, approved October 23, 1962, in accordance with House Document 602, 87th Congress.

The project area is along the northern coastline of Orange County, California extending approximately 13 miles between Anaheim Bay and Newport Beach Pier. The shoreline is nearly a continuous sandy beach. The northern limit is marked by the Anaheim Bay Harbor; the southern limit is marked by the Newport Submarine Canyon whose terminus lies in close proximity to Newport Pier. The continuous stretch of sandy beach is broken by the low coastal cliffs in Huntington Beach. The entire stretch of shoreline is considered a single littoral unit along which sand may pass unrestricted from one end to the other.

The predominant direction of littoral movement in the project area is from northwest to southeast (updrift to downdrift). The littoral processes analysis contained in the project authorization study concluded that when sufficient material is available, the rate of littoral transport may amount to 350,000 cubic yards per year. The beach berm elevation is typically +13 ft MLLW. The beach width in the project area is measured on a periodic basis and indicates beach widths ranging from 150 ft to 375 ft (as of June 2014).

The purpose of the project is to provide storm damage protection to the immediate section of shoreline landward of the beach fill and act as a feeder beach for the 13 miles of downdrift shoreline. The general features of the project to date have included periodic beach nourishment at Surfside and Newport Beach as well as the construction of a groin field and sand fill operations at west Newport Beach. Since 1964, approximately 17.1 million cubic yards of sand have been placed in the project area, and eight groins have been constructed in Newport Beach.

Approximately 1,500,000 cubic yards of sand will be pumped from an offshore borrow area to the beach at Surfside-Sunset during Stage 13. Beach fill operations are typically performed utilizing a hydraulic pipeline dredge, with placement of fill material at Surfside Colony. The work is typically conducted during the fall/winter time period due to environmental restrictions. This project is expected to be conducted similarly.

4 DESIGN CONSIDERATIONS

4.1 Design Criteria

Design criteria is based on considerable project construction history, standard engineering practice, and applicable engineering regulations, criteria, guides, memoranda, policies, and procedures.

4.2 Design Complexity

The project includes proposed construction features for which the engineering analyses and design is considered non-complex. These features include dredging and beach fill.

4.3 Construction Complexity

Construction of the project components is considered non-complex, and is comprised of dredging and beach fill.

4.4 Special Considerations

Although construction of the project components is considered non-complex, environmental considerations require the work to be done during the fall/winter period. Storms and/or heavy seas will require the contractor to employ extra precautions to avoid potential damages to plant and/or equipment during dredging operations.

4.5 Model Certifications / acceptance

This project component will not utilize any modeling.

5 REVIEW PROCESS

The review process will consist of multiple standard reviews of all work products. The work products for this phase include the Design Documentation Report (DDR), final Plans and Specifications (P&S), and any environmental compliance documentation. The reviews to be conducted include a discipline quality check of each design discipline prior to District Quality Control (DQC), an Agency Technical Review, and, in accordance with current guidance, a Safety Assurance Review. Review information and processes are summarized below:

5.1 Review Management Organization (RMO)

The South Pacific Division (SPD) is designated as the RMO for this project.

5.2 Design Review and Checking System (DrChecks)

The DQC, ATR, BCOE, and Sponsor review teams will document all comments and recommendations in the DrChecks module in ProjNet in accordance with ER 1110-1-8159. Comments will be written to give a clear statement of the concern, basis of concern, and actions necessary to resolve the concern. Comments should cite appropriate references (ER, design memorandums, etc.). The PDT will evaluate and respond to each comment in DrChecks. Responses will clearly state concurrence or non-concurrence with the comment. Non-concurrence will include an explanation or a proposed alternative action to address the concern. Concurrence will include what corrective action will be taken, when, and where it will be done (plan sheet #, specifications section #, etc.). All comments shall be resolved and back-checked in the DrChecks project record prior to the corresponding review certification.

5.3 Issue Resolution

If issues cannot be resolved between the PDT team members and the reviewer counterpart, then the ATR lead shall resolve the issue. If the issue cannot be resolved by the ATR lead, it will be raised to the next level of management for both the PDT discipline and the review team discipline, and if necessary to the MSC or HQUSACE.

5.4 District Quality Control (DQC)

The District Quality Control (DQC) is conducted to include a comprehensive evaluation of correct application of methods, validity of assumptions, adequacy of basic data, completeness of documentation, compliance with guidance and standards, biddability, constructability, operability, and environmental considerations.

The DQC comments shall be provided in DrChecks in accordance with paragraph 5.2 above. The DQC team members, upon review of the revised final work products, shall complete the Statement of DQC Certification.

The DQC team members shall include district staff members not directly involved in the design; Section and/or Branch Chiefs; and/or their representative staff member to ensure consistency and effective coordination across all disciplines, and to assure overall coherence and integrity of the final products.

5.5 Agency Technical Review (ATR)

5.5.1 Process

Agency Technical Review (ATR) is undertaken to “ensure the quality and credibility of the government’s scientific information” is in accordance with EC 1165-2-214 and ER 1110-1-12. An ATR will be performed on the DDR and P&S.

ATR will be conducted by individuals and organizations that are external to the Los Angeles District. The ATR Team leader is a USACE employee from outside the South Pacific Division (SPD). The ATR Team required disciplines and experience are described below.

ATR comments are documented in the DrChecks review documentation database. DrChecks is a module within the ProjNet suite of tools.

At the conclusion of the ATR effort, the ATR team will prepare a Review Report summarizing the review. This Review Report will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organization, their position, and relevant expertise;
- Include the charge to the reviewer;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issues (if any); and
- Include a verbatim copy of each reviewer’s comments, or represent the views of the group as a whole, including any disparate and dissenting views.

The ATR team, upon review of the revised final work products, shall complete the Statement of ATR Certification.

5.5.2 ATR Team Members and Responsibilities

As stipulated in ER 1110-1-12, ATR members will be sought from the following sources: regional technical specialists (RTS); appointed subject matter experts (SME) from other districts; senior level experts from other districts; Center of Expertise staff; experts from other USACE commands; contractors; academic or other technical experts; or a combination of the above. All Engineering and Construction ATR reviewers shall be certified in the Corps of Engineers Review and Certification and Access Program (CERCAP). The ATR Team will be comprised of the following disciplines; knowledge, skills and abilities; and experience levels:

- Coastal Engineering: The team member should be a technical expert in coastal engineering and have at least 12 years experience in beach fill and dredging projects.
- Geotechnical Engineering: The team member should be a registered professional with experience with beach fill and dredging projects.
- NEPA Compliance: The team member should have experience in NEPA compliance activities and preparation of Environmental Assessments and writing of specification section "Environmental Protection" for storm damage reduction projects.
- ATR Team Leader. The ATR team Leader should have experience with beach fill projects. The ATR Team Lead may be a co-duty to one of the above review disciplines.

5.6 Biddability, Constructability, Operability, and Environmental Review

Biddability, Constructability, Operability, and Environmental (BCOE) Review are conducted to ensure that:

- contract documents can be understood, bid, administered, and executed;
- the designed project can be built with ease;
- the project can be operated and maintained with ease; and
- the air, water, land, animals, plants and other natural resources are protected from the effects of the construction and operation of the project.

5.6.1 Process

The BCOE team members will review the work products for biddability, constructability, operability, and environmental in accordance with ER 415-1-11. All comments and responses shall be stated and provided in DrChecks in accordance with paragraph 5.2 above. The BCOE team, upon review of the revised final work products, shall complete the Statement of BCOE Certification.

5.7 Customer Review

A customer review will be conducted to ensure the customer's expectations as agreed upon for the project are met. The customer review will take place concurrently with the ATR.

5.7.1 Process

The Sponsor review team members will review the work products. All comments and responses shall be stated and provided in DrChecks in accordance with paragraph 5.2 above.

5.8 Cost Engineering

District Quality Control (DQC) will be performed on cost engineering products.

6 TYPE II INDEPENDENT EXTERNAL PEER REVIEW (Safety Assurance Review)

6.1 Life Safety

A Type II Independent External Peer Review (IEPR) (Safety Assurance Review (SAR)) shall be conducted on design and construction activities for any project where: a) the Federal action is justified by life safety; b) potential hazards pose a significant threat to human life (public safety); or c) the failure of the project would pose a significant threat to human life. This applies to new projects and to the major repair, rehabilitation, replacement, or modification of existing facilities. Any project where the Federal action would pose a significant threat to human life (public safety) requires a Type II review.

External panels will review the design and construction activities prior to initiation of physical construction and periodically thereafter until construction activities are completed. The review shall be on a regular schedule sufficient to inform the Chief of Engineers on the adequacy, appropriateness, and acceptability of the design and construction activities for the purpose of assuring that good science, sound engineering, and public health, safety, and welfare.

The District Chief of Engineering, as the Engineer-In-Responsible-Charge, needs to assess whether the threat is significant and document that in the Review Plan. A recommendation to not conduct a SAR shall (like any Review Plan recommendation) have the endorsement of the RMO prior to approval of the Review Plan.

When a Type II review is included in the project's approved Review Plan, the District Chief of Engineering, as the Engineer-In-Responsible-Charge, is responsible for ensuring the Type II review is conducted in accordance with this Circular, and will fully coordinate with the Chief of Construction, the Chief of Operations, and the project manager through the Pre-Construction, Engineering, and Design (PED) and construction phases.

6.2 Other Factors

Other factors to consider for conducting a Type II IEPR (Safety Assurance Review) of a project or components of a project are:

(1) The project involves the use of innovative materials or techniques where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices;

(2) The project design requires redundancy, resiliency, and robustness.

(a) Redundancy. Redundancy is the duplication of critical components of a system with the intention of increasing reliability of the system, usually in the case of a backup or fail-safe.

(b) Resiliency. Resiliency is the ability to avoid, minimize, withstand, and recover from the effects of adversity, whether natural or manmade, under all circumstances of use.

(c) Robustness. Robustness is the ability of a system to continue to operate correctly across a wide range of operational conditions (the wider the range of conditions, the more

robust the system), with minimal damage, alteration or loss of functionality, and to fail gracefully outside of that range.

(3) The project has unique construction sequencing or a reduced or overlapping design construction schedule; for example, significant project features accomplished using the Design-Build or Early Contractor Involvement (ECI) delivery systems.

6.3 Risk Informed Assessment

In accordance with EC 1165-2-214, a risk informed assessment was made as to whether this project poses a significant threat to human life (public safety). The key factors considered are:

a. The Orange County Beach Erosion Control Project, San Gabriel River to Newport Bay, Orange County, California, was originally authorized for the principal purpose of addressing a beach erosion problem by constructing a feeder beach in the vicinity of Surfside-Sunset with the expectation that natural wave action will distribute the sand alongshore thereby protecting the downdrift shoreline. Life safety was not a justification in this Congressional authorization.

b. The constructed project will result in an increase in the beach width. The constructed beach will mimic the naturally occurring beach in berm elevation, foreshore slope, and texture (grain size). Other than an increased beach width within the immediate construction area, the nourished beach within the 13 mile project area will be indistinguishable from the naturally occurring beach. There are little/no potential hazards due to the constructed project.

c. This project does not protect life essential and/or critical public facilities. The project does not protect a primary or intermediate storm evacuation route. All storm evacuations can be accomplished by other thoroughfares within the project area. Failure of the shore protection component would most likely take the form of substantial erosion during a significant coastal storm event. This occurred during the 1997-1998 El Nino winter storm season where the beach in the project footprint was substantially but not completely eroded. No storm related damages to public/private property were recorded.

d. The project will result in an increase in the beach width along approximately 1.5 miles of shoreline and sustain current beach widths over approximately 12 miles of shoreline. Previous beach fill operations over the project life since 1962 has resulted in no human injuries and/or deaths. It is similarly expected that this Federal action will pose no new hazards to public safety and/or threats to human life.

6.4 Chief of Engineering Life Safety Assessment

The Los Angeles District Chief of Engineering has determined that:

- a) the Federal action is not justified by life safety;
- b) potential hazards do not pose a significant threat to human life (public safety);
- c) the failure of the project would not pose a significant threat to human life;
- d) the Federal action would not pose a significant threat to human life (public safety); and
- e) the "Other Factors", cited in paragraph 6.2 above, to consider for conducting a Type II IEPR (Safety Assurance Review) of a project are not applicable to this project.

The Chief of Engineering Division determines that an SAR is not needed.

7 DOCUMENTATION

The engineering technical team leader (ETL) will maintain a file of quality control records for the project. Documents to be stored in the project quality control file will include, but not be limited to: Review Plan, annotated DrChecks comments for all reviews, and review certifications. In addition, each PDT member is responsible for keeping adequate records of all design decisions, calculations, and process. Records should include applicable e-mails, meeting notes, telephone notes, and design notes.

8 PROJECT DELIVERY TEAM

The Project Delivery Team will be comprised of the following personnel.

Project Manager	(CESPL-PM-N)	Joseph Johnson
Coastal Engineering	(CESPL-ED-DC)	Chuck Mesa
Geotechnical Engineering	(CESPL-ED-GG)	Jeffrey Devine
Environmental	(CESPL-PD-RN)	Lawrence Smith

9 ATR TEAM

The ATR Team will be comprised of Jacksonville District (SAJ) personnel.

ATR Team Lead: Tom Martin (SAJ-EN-WC); 904-232-2428

10 REVIEW PLAN POINTS OF CONTACT

Project Manager (PM)

Joseph Johnson (213) 452-3829; joseph.a.johnson@usace.army.mil

Engineering Technical Lead (ETL)

Chuck Mesa (213) 452-3678; chuck.mesa@usace.army.mil

South Pacific Division (SPD)

Paul Bowers (415) 503-6556; paul.w.bowers@usace.army.mil

APPENDIX A: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the <type of product> for <project name and location>. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrCheckssm.

SIGNATURE

Name

ATR Team Leader

Office Symbol/Company

Date

SIGNATURE

Name

Project Manager

Office Symbol

Date

SIGNATURE

Name

Review Management Office Representative

Office Symbol

Date

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: Describe the major technical concerns and their resolution.

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE

Name

Chief, Engineering Division

Office Symbol

Date

SIGNATURE

Name

Chief, Planning Division

Office Symbol

Date