



FINAL

FORMER MARINE CORPS AIR STATION (MCAS) EL TORO

95th Restoration Advisory Board (RAB) Meeting Minutes

Meeting Location: Heritage Fields, Greyhawk Conference Room, Irvine California

Meeting Date/Time: 15 April 2009/6:42 pm – 8:02 pm

Minutes Prepared by: Tony Guiang, CDM

Attachment:

Presentation Slides: “Installation Restoration Program (IRP) Operable Unit 2C, Site 3 – Original Landfill, Site 5 – Perimeter Road Landfill, Remedial Design/Remedial Action Update.”

WELCOME/INTRODUCTIONS/AGENDA REVIEW:

Ms. Debra Theroux (Interim Base Realignment and Closure [BRAC] Environmental Coordinator [BEC] and Interim Navy RAB Co-Chair) welcomed everyone and asked Ms. Marcia Rudolph (RAB member, Subcommittee Co-Chair) to lead the Pledge of Allegiance. Self-introductions by all those in attendance followed. A total of 19 attendees were present. Ms. Theroux then reviewed the RAB meeting agenda; no changes to the agenda were suggested by the RAB. Mr. Roy Herndon (RAB member) and Mr. Peter Hersh (RAB member) were given excused absences.

ANNOUNCEMENTS/ REVIEW OF ACTION ITEMS

Ms. Theroux made the following announcements:

- Mr. Rich Muza (United States Environmental Protection Agency [U.S. EPA]) has been re-assigned and taken on a new role with the U.S. EPA. The U.S. EPA is hoping to find a replacement for Mr. Muza soon. In the meantime, his replacement is Ms. Claire Trombadore. Any questions, comments, or correspondence should be directed to her (Ms. Theroux provided her contact information) until a more permanent replacement has been identified. On behalf of Mr. Muza, Ms. Theroux expressed her best wishes and gratitude for all the time spent working with the RAB over the past years. Ms. Rudolph asked if it were possible to extend a letter of gratitude and recognition to Mr. Muza for his years of service and commitment to the RAB. Mr. Wallace reiterated Ms. Rudolph’s sentiment. He went on to say he was tasked by the City of Irvine Mayor to extend his gratitude to Mr. Muza for helping to engineer a highly technical letter addressing the community’s concern over trichloroethylene (TCE). Ms. Theroux agreed to consider the requests and noted Mr. Muza’s contact information remains the same, should anyone feel the need to contact him.
- Ms. Theroux announced the BRAC Program Management Office (PMO) has finally identified and selected a permanent BEC: Mr. Jim Callian. Ms. Theroux asked that any questions, comments, and correspondence continue to be directed to her until the transition is finalized.
- Ms. Theroux noted as long as the RAB meeting presentation slides did not include very detailed maps or sketches, the Navy will continue the practice of printing two slides or more

per page for meeting handouts. However, if presentations include maps and figures in detail, then one slide per page for the handouts will be printed.

- Following up on an Action Item from the last RAB meeting, Ms. Theroux asked those individuals who expressed interest in conducting a site visit to IRP Site 1 to meet after the RAB meeting to coordinate the best time and date for a May 2009 site tour.
- Ms. Theroux stated the Navy recently published two public notices. One announces the IRP Sites 3 and 5 Record of Decision (ROD) and the other announces the IRP Sites 18 and 24 Explanation of Significant Differences (ESD). Both documents are available for viewing and down loading in PDF format from the BRAC PMO website.

APPROVAL OF 03 DECEMBER 2008 RAB MEETING MINUTES

Mr. Bob Woodings (RAB Community Co-Chair) opened the floor for discussion, questions, or corrections to the 28 January 2009 RAB meeting minutes. Mr. Woodings had minor comments on the minutes concerning street names that were misspelled. Upon making the corrections, the meeting minutes were approved by the RAB with no additional changes. In addition, Mr. Woodings applauded the inclusion of the "State of the Station Environmental Program" presentation slides in the meeting minutes.

SUBCOMMITTEE MEETING REPORT

Ms. Rudolph began her subcommittee meeting report by expressing her approval in moving forward with the site tour of IRP Site 1. She provided a summary of the Subcommittee Meeting discussions and the resulting questions for the Navy as follows:

- Ms. Rudolph asked the RAB if there was any information available on the latest condition of the fairy shrimp ponds owing to the recent moisture. She noted any information from the Navy regarding their current condition is appreciated.
- Ms. Rudolph noted the IRP Sites 2 and 17 Remedial Action Completion Report (RACR) and Finding of Suitability to Transfer (FOST) #5 were recently published. Relative to the FOST #5, she mentioned one of the questions raised during the Subcommittee Meeting was in regard to the protocol and procedure followed when a portion of the parcel is pulled out of the transfer. Ms. Rudolph was hoping for an answer from either the newly appointed U.S. EPA representative or from the new BEC.
- Ms. Rudolph expressed concern over the petroleum at IRP Site 16 and the possibility of impairment to existing wells at the site resulting from petroleum remediation activities. She requested if existing wells are impaired or damaged in any way by the remediation activities at the site, that they be replaced with new, operational wells capable of the same performance.
- Citing the perchlorate plume at IRP Site 1 and the upgradient/downgradient perchlorate link to IRP Site 2, Ms. Rudolph expressed concern over whether there was perchlorate at IRP Site 5. She requested the Navy provide further discussion and insight on whether perchlorate exists at IRP Site 5.

- In closing, Ms. Rudolph asked the Subcommittee Meetings begin at 5:30 pm rather than 5:00 pm beginning with the next Subcommittee Meeting scheduled for 19 August 2009. In addition, because the focus of the contamination at MCAS El Toro is now moving towards groundwater, she expressed her hope that Mr. John Broderick (Regional Water Quality Control Board [RWQCB]) would make himself available to attend the next RAB meeting. Ms. Rudolph extended an open invitation to the RAB meeting attendees to attend future Subcommittee Meetings.

AVAILABLE INFORMATION/CONTACTS

Ms. Theroux presented a series of slides listing dates and times for the upcoming quarterly RAB meetings. In addition; she presented slides listing key Navy and regulatory agency contacts; RAB points of contact; Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Administrative Record (AR) File and Information Repository (IR) locations and hours; and environmental and reuse/redevelopment websites.

Ms. Theroux noted that following a quarterly RAB meeting schedule, the next meeting should occur in July 2009; however, as previously agreed with the RAB, the next RAB meeting is scheduled for 19 August 2009. The August and December 2009 RAB meetings are scheduled to be held at the Irvine City Hall, Conference and Training Center.

Ms. Theroux mentioned historical technical documents can be found at the CERCLA AR File and either Sue Rawal or the Navy can help locate specific documents. She explained the BRAC PMO Navy website provides information on the entire BRAC program, which includes former MCAS El Toro. Information on the Navy website reflects the past five years and any documents prior to 2005 can be requested from the BRAC PMO webmaster.

REGULATORY AGENCY UPDATE

Mr. Quang Than (California Department of Toxic Substances Control [DTSC])

Mr. Than explained as a result of the reorganization happening at the DTSC, he may be assigned additional duties in the near future but will keep the RAB and the Navy informed on any changes. He presented the RAB with a list of the documents since the last meeting he has worked on and made special mention of the following documents:

- DTSC is currently reviewing the Draft FOST #5, and expects to complete the review by Friday (17 April 2009). Reiterating Ms. Rudolph's earlier request, Mr. Than asked the Navy for clarification on the guidance or protocol followed by the Department of Defense (DOD) when a portion of the parcel is being carved out for transfer; specifically Building 746.
- DTSC is looking forward to reviewing the Draft Five-Year Review Report for IRP Sites 2, 16, 17, 18, and 24, which is scheduled to be submitted for review in May 2009.

In closing, Mr. Than opened the floor for comments and questions. Ms. Theroux announced to the RAB the availability of regulatory agency comment/concurrence letters received by the Navy since the last RAB meeting. She noted as many as 30 letters are available for viewing at this evening's RAB meeting.

IRP OPERABLE UNIT 2C, SITE 3 - ORIGINAL LANDFILL, SITE 5 - PERIMETER ROAD LANDFILL

Mr. Smits provided a presentation titled "IRP Operable Unit 2C, Site 3 - Original Landfill, Site 5 - Perimeter Road Landfill, Remedial Design/Remedial Action Update" (Attachment). Mr. Smits' presentation included an update on IRP Sites 3 and 5, and a summary of the site descriptions, site investigations, selected remedies at the sites, components of the remedies, details on the landfill cap design and construction, post-construction activities, and a schedule of milestone events. Mr. Smits also introduced Mr. Chris Johnson of Shaw Environmental as the Construction Project Manager.

Mr. Smits noted that IRP Sites 3 and 5 are within Carve-Out (CO) Areas II-B and II-H, respectively, and until remedies are in place and operating properly and successfully (OPS) determinations have been made, they will remain part of the COs.

Mr. Smits provided a brief description of each landfill including the types of wastes contained at each site. He added that IRP Site 3 (Original Landfill) contained most of the original waste being generated at the base and at one time was thought to comprise approximately 11 acres based on the remedial investigation (RI) findings. As a result of subsequent trenching that occurred throughout IRP Site 3, the footprint of the landfill was reduced significantly to include the main area known as Waste Area A and other smaller areas (B through F and Unit 4) located throughout the site. Mr. Smits explained after use of IRP Site 3 (Original Landfill) ceased, IRP Site 5 (Perimeter Road Landfill) became the operational landfill on base and accepted waste similar to that at IRP Site 3. Based on data from the RI, the area comprising IRP Site 5 was approximately 1 acre. Subsequent trenching activity at IRP Site 5 confirmed the footprint of the landfill and did not show much variation from the previous estimate for the landfill boundaries.

Mr. Smits explained the Navy has followed the CERCLA process and is now at the remedial design/remedial action stage. He provided a summary of the previous investigations leading up to the final remedy selections for the sites. Mr. Smits explained that between 2000 and 2004, trenching activities and landfill gas monitoring were conducted at IRP Sites 3 and 5. As noted before, as a result of trenching activities, the IRP Site 3 footprint was reduced from approximately 11 acres to approximately 2 acres. Ms. Rudolph expressed the community's sense of security in knowing a more exact footprint of the buried waste.

Mr. Smits noted that both landfills have been in place for a long time and landfill materials generally decompose shortly after capping; results from the landfill soil gas investigations showed very low concentrations of volatile organic compounds [VOCs] and methane. Due to the low landfill gas concentrations, the buffer zones around the landfills were reduced from 1,000 feet to 100 feet with regulatory agency concurrence. As a conservative measure, the remedies include continued passive and active soil gas monitoring for both landfills.

Mr. Johnson of Shaw Environmental continued the presentation to the RAB by summarizing components of the remedies. For IRP Site 3, the remedy includes consolidating the smaller waste areas (B through F and Unit 4) into the larger waste area (A). Mr. Johnson presented pictures of IRP Site 3 Waste Area A and Waste Areas B/D/F and a picture of IRP Site 5 to the RAB. He noted Waste Area A consists of a flat area with gravel and broken up concrete and IRP Site 5 is relatively flat.

Mr. Johnson continued his presentation by showing a conceptual cross section of the IRP Sites 3 and 5 caps. He explained the landfill caps will include a foundation layer compacted over the waste providing a smooth surface for the flexible membrane liner (FML). He showed the RAB samples of 40-mil and 60-mil high density polyethylene (HDPE) liner. He explained the plan is to use 60-mil linear-low density polyethylene (LDPE) liners for IRP Sites 3 and 5 which are thicker, more flexible, and more resistant to puncture than the 40-mil HDPE. Mr. Johnson explained the liners arrive in large rolls and are laid out in a shingle pattern and sealed at the seams. The next layer is a geotextile cushion placed on top of the FML. Finally, a 2-foot thick soil layer with a minimum slope of 3% is placed on top of the geotextile cushion and hydro-seeded with shallow-rooting native vegetation.

Mr. Johnson explained the operation and maintenance of the remedies will include implementing the monitoring programs, and maintaining the drainage features and institutional controls (ICs) at the sites.

Mr. Johnson explained profiles of the IRP Sites 3 and 5 waste areas were created based on data collected during the trenching activities. He showed slides identifying the extent of cover at both sites and pointed out that all waste at both sites is covered with soil ranging from 1 to 9 feet, with the majority of the waste covered with 5 feet of soil. He then presented cross sections of each site showing the extent and finished grade of the final covers. He noted the goal was to minimize the vertical profile of the waste by establishing the foundation layer between 3 to 5 feet above grade at IRP Site 3 and 3 to 4 feet above grade at IRP Site 5. Implementing this scenario would minimize erosion and allow easier maintenance of the landfills.

Mr. Johnson also showed the layout of the landfill gas venting systems for IRP Sites 3 and 5, which include gas extraction wells installed through the landfill liner for passive or active soil gas sampling and gravel gas monitoring trenches with riser vent pipes installed at 25 feet midway through the waste. He identified the gas monitoring wells that will be located at the 50-foot compliance boundary and explained they will be sampled for compliance in accordance with the California Integrated Waste Management Board requirements.

Ms. Rudolph asked about the inclusion of fencing at the sites. Mr. Johnson explained the design for fencing was still being considered, but noted the landfill gas venting system would likely be enclosed with a permanent fence and a temporary fence would be installed along the 100-foot buffer zone perimeter. He explained temporary fencing was being considered for the perimeter versus permanent fencing so the buffer zone could be revised if landfill gas monitoring indicates migration is not occurring and the buffer zone area could be transferred for reuse. Ms. Arnold added that any equipment at the sites would be secured to help prevent vandalism.

Mr. Werkmeister asked where the old flight simulator building was in relation to the landfill gas venting system. Mr. Johnson responded it was outside the 100-foot buffer zone and like Agua Chinon Wash, will not be impacted.

Mr. Johnson noted they were in the process of preparing a Long-Term Operations and Maintenance (O&M) Plan for IRP Sites 3 and 5, which will be finalized before construction is completed. In closing, Mr. Smits announced a Fact Sheet will be issued in June 2009 to announce the upcoming capping construction activities. He provided a proposed schedule of

milestones and documents for the sites and opened the floor to additional comments or questions.

Ms. Rudolph asked whether groundwater will continue to be monitored at IRP Sites 3 and 5. Mr. Smits responded the Navy will continue groundwater monitoring at the sites as part of the long term O& M. Ms. Arnold added that pursuant to the ROD, groundwater at the sites was not an issue and groundwater received concurrence for no further remedial action. However, the Navy will continue to monitor groundwater in order to confirm the remedies are doing what they are expected to do; e.g., prevent infiltration or leaching of the in-place waste to groundwater.

Mr. Woodings asked the Navy why an evapotranspiration cover was not being implemented for the IRP Sites 3 and 5 landfills as it was considered for other similar landfills. Mr. Smits explained that due the irrigation at these sites, the FML cap was preferred as it diverts infiltrating irrigation water away from the waste. He noted that this issue was discussed in the Proposed Plan and addressed during the public comment period.

Mr. Woodings asked how the Navy intends to transport the waste from the IRP Site 3 smaller waste areas (B through F and Unit 4) to the IRP Site 3 larger waste area (A) for consolidation. Mr. Johnson responded the waste would be transported via truck, the average distance for transporting the waste is approximately 50 yards, and no public roads are affected. He further added the waste to be transported comprises primarily of construction debris mixed with concrete and minor waste.

Mr. Than asked who the IRP Sites 3 and 5 properties will be transferred to eventually. Ms. Theroux stated both sites will transfer to Lennar initially before they are transferred to the Orange County Great Park (OCGP).

Mr. Woodings asked if ICs will be implemented at IRP Sites 3 and 5. Mr. Smits confirmed that ICs will be implemented at both sites. Ms. Arnold augmented Mr. Smits' response by explaining the ICs are documented in the ROD and the O & M Plan will include a land-use control (LUC) RD, which will include inspection sheets and checklists to be used by the transferee during a reconnaissance of the site to ensure the integrity of the cap and ascertain whether there are any IC violations. She cited examples of ICs including the restriction for no residential dwellings, hospitals, or digging at the sites.

OPEN QUESTION AND ANSWER

Ms. Theroux thanked Mr. Smits and Mr. Johnson for the presentation and opened the floor for discussion on other environmental sites or anything the regulatory agency representatives may have brought up in the evening's meeting. No additional comments or questions were raised by the RAB meeting attendees.

Ms. Theroux announced the next meeting would take place on 19 August 2009. Ms. Rudolph expressed interest in obtaining more information from either the Navy or the U.S. EPA on the identification of COs. She also expressed interest in hearing a presentation on FOST #5 at the next RAB meeting to learn what parcels are ready to transfer. Ms. Rudolph asked the Navy

what other documents were scheduled to be issued from now until the August 2009 RAB meeting.

Ms. Arnold, Ms. Theroux, and Mr. Callian noted the following documents are scheduled to be issued before the August 2009 RAB meeting:

- Draft Final Workplan for RD/RA at IRP Sites 3 and 5
- Final Work Plan for Pilot Study at IRP Site 1
- Draft 5-Year Review
- Fact Sheet for IRP Sites 3 and 5
- Draft O&M Plan for IRP Sites 3 and 5

Although there are no documents scheduled for IRP Sites 8 and 12, Mr. Callian suggested an update on the fieldwork for those sites could be included as a topic for discussion at the next RAB meeting.

Ms. Theroux announced to the RAB that if there is a topic they feel requires a more technical discussion or further clarification, a Navy team would be available to review the documents with the RAB at a special meeting.

Mr. Woodings noted that the August 2009 RAB meeting would be an opportune time to hear about the success of the Alton Parkway construction project. Mr. Vince Gin took the floor to provide a brief update on the Alton Parkway highway extension. He noted that on 7 April 2009, the County Board of Supervisors approved the construction plan for Alton Parkway and they have moved forward with advertising the project to obtain construction bids. He noted that key approvals from U.S. Army Corps of Engineers, U.S. Fish and Game, Regional Water Quality Control Board, and the Navy (approval on Project Environmental Review Forms [PERFs]) had not yet been received; however, the County did so to expedite the process anticipating receipt of the necessary approvals prior to awarding the construction contracts. Mr. Gin stated construction is scheduled to take place in September 2009, which accommodates restricted access schedules due endangered species activities in the area.

Ms. Mary Aileen Matheis (RAB member) asked if the funding was available for the Alton Parkway project. Mr. Gin confirmed the funding is available and the project would not have moved forward had it not been available.

Ms. Theroux went through a brief summary on the PERF process. She mentioned a portion of the Alton Parkway overlaps the buffer zone associated with IRP Site 2 known as Parcel II-V. Ms. Theroux explained once a PERF is submitted to the Navy, the Navy works with the BRAC Closure Team (BCT) to review the details of the project by assessing whether the project has the potential for impacting any ongoing CERCLA projects. This is the process the Alton Parkway construction project will go through to achieve approvals.

MEETING SUMMARY AND CLOSING

In closing, Ms. Theroux thanked the RAB officers, RAB members, Navy colleagues, Navy support staff, and all other meeting attendees. She mentioned she will remain involved with the former MCAS El Toro team and appreciated the valuable experience the Interim BEC role has given her. Ms. Theroux thanked everyone and the 15 April 2009 meeting adjourned at 8:02 pm.

LIST OF HANDOUTS PROVIDED AT THE MEETING

- 15 April 2009 Former MCAS El Toro RAB Meeting Agenda and Upcoming RAB Meeting Schedule
- Where to Get More Information & Environmental Websites
- Presentation Slides: "Installation Restoration Program (IRP) Operable Unit 2C, Site 3 - Original Landfill, Site 5 - Perimeter Road Landfill, Remedial Design/Remedial Action Update"
- Former MCAS El Toro IRP Site Location Map
- Former MCAS El Toro RAB Mission Statement and Operating Procedures
- Former MCAS El Toro RAB Fact Sheet/Membership Application
- Former MCAS El Toro Mailing List Coupon

Copies of the meeting minutes and handouts provided at the 15 April 2009 RAB meeting are available at the IR for former MCAS El Toro located in the Government Publication Section of the Heritage Park Regional Library, Irvine, California. Library hours are 10 am to 9 pm Monday through Thursday; 10 am to 5pm Friday and Saturday; and 12 pm to 5 pm on Sunday. The library may be reached at (949) 936-4040. In addition, copies of the meeting minutes and handouts are also available at the CERCLA AR File maintained at Building 307 at former MCAS El Toro by Ms. Sue Rawal. Documents can be viewed by appointment; (call Ms. Rawal at (949) 726-5398 between 9 am and 1 pm Monday through Thursday.

Final minutes from previous RAB meetings can be found on the internet at the Navy BRAC website: www.bracpmo.navy.mil

INTERNET SITES

Navy and Marine Corps Internet Access

BRAC PMO Web Site (includes RAB meeting minutes): <http://www.bracpmo.navy.mil/>

Department of Defense – Environmental Cleanup Home Page Web Site:

<http://www.dtic.mil/envirodod/>

U.S. EPA:

Homepage: www.epa.gov

Superfund information: www.epa.gov/superfund

National Center for Environmental Assessment: www.epa.gov/ncea

Federal Register Environmental Documents: www.epa.gov/federalregister

Cal/EPA:

Homepage: www.calepa.ca.gov

Department of Toxic Substances Control: www.dtsc.ca.gov

Department of Health Services, reorganized into the Department of Health Care Services and the Department of Public Health: www.dhs.ca.gov

Santa Ana Regional Water Quality Control Board: www.waterboards.ca.gov/santaana

Additional Websites: Reuse and Redevelopment

Orange County Great Park: www.ocgp.org

Great Park Conservancy: www.orangecountygreatpark.org

Heritage Fields LLC, a joint venture of Lennar Homes of California, Inc. LNR Property Corporation Rockpoint Group, L.L.C: www.lennar.com

City of Irvine Planning Commission:

www.ci.irvine.ca.us/council/comms/planning/default.asp.



INSTALLATION RESTORATION PROGRAM (IRP) OPERABLE UNIT 2C SITE 3 – ORIGINAL LANDFILL SITE 5 – PERIMETER ROAD LANDFILL

REMEDIAL DESIGN/REMEDIAL ACTION UPDATE

Presented By

**Marc P. Smits, P.E. – Navy Remedial Project Manager
Chris E. Johnson – Shaw Environmental Project Manager**

**Base Realignment and Closure (BRAC) Program
Management Office West**

April 15, 2009



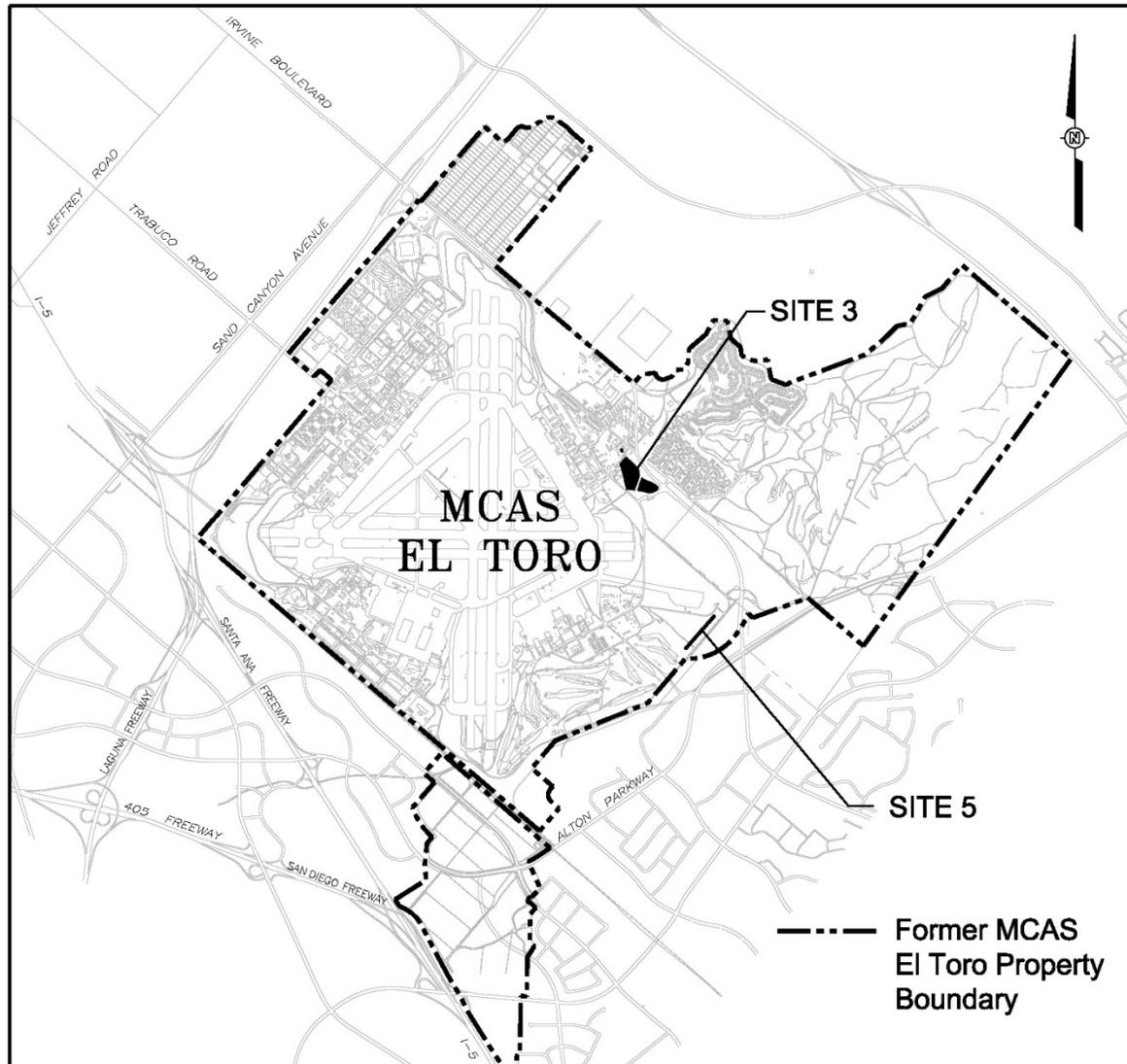
OVERVIEW



- SITE DESCRIPTIONS
- SITE INVESTIGATIONS
- SELECTED REMEDY
- COMPONENTS OF REMEDY
- LANDFILL CAP DESIGN AND CONSTRUCTION
- POST-CONSTRUCTION ACTIVITIES
- SCHEDULE



SITE LOCATION MAP





SITE DESCRIPTIONS

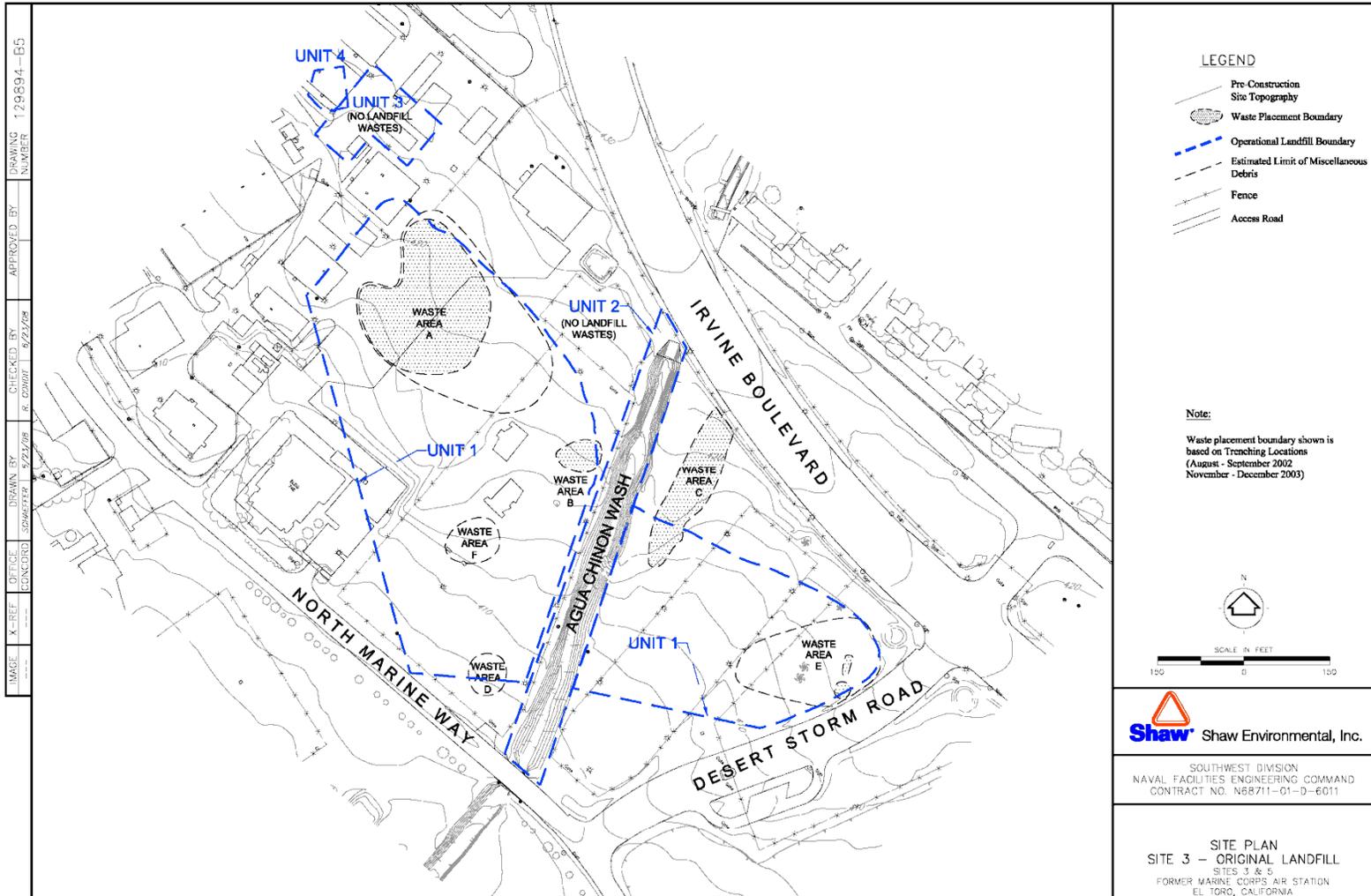


SITE 3 – ORIGINAL LANDFILL

- Active from 1943 to 1955
- Encompasses Approximately 11 acres
- Unlined Channel (Agua Chinon Wash) Crosses the Site
- Original landfill at Base - Operated as a Cut-and-Fill Disposal Facility
- Types of Waste Included Metals, Incinerator Ash, Solvents, Paint, Residues, Hydraulic Fluids, Engine Coolants, Oily Wastes, Municipal Solid Waste, and Inert Solid Wastes
- Several Small, Waste and Debris Areas (Areas B – F) Exist Outside of Main Landfill Area (Area A)



SITE 3 SITE PLAN





SITE DESCRIPTIONS

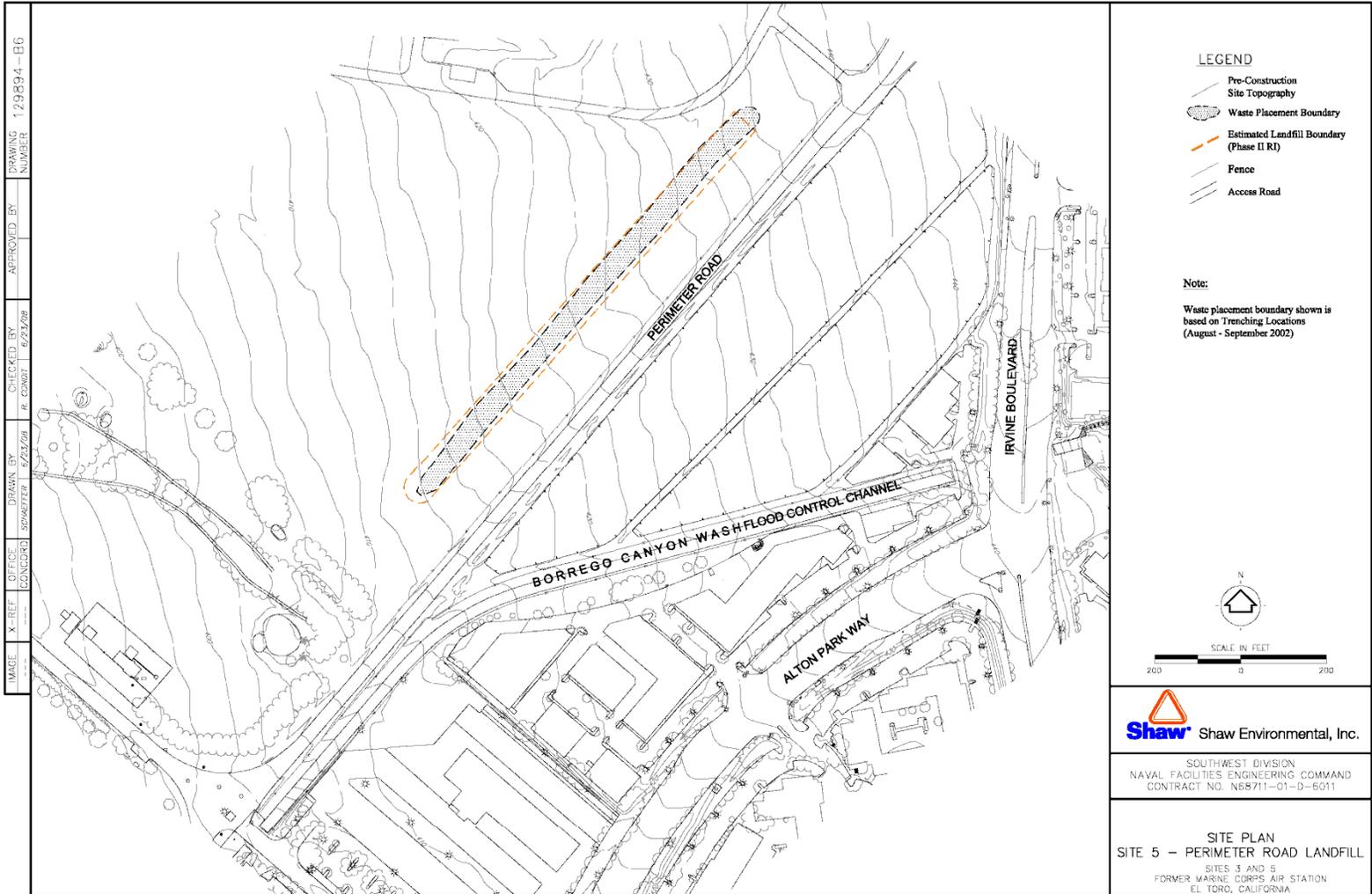


SITE 5 – PERIMETER ROAD LANDFILL

- Active from 1955 to the late 1960s
- Encompasses Approximately 1.8 acres
- 300 feet Northwest of Borrego Canyon Wash
- Operated as a Cut-and-Fill Disposal Facility
- Types of Waste Included Burnable Trash, Municipal Solid Waste, Cleaning Fluids, Scrap Metals, Paint Residues, and Unspecified Fuels, Oils, and Solvents



SITE 5 SITE PLAN





SITE INVESTIGATIONS



INVESTIGATIONS SUPPORTING THE SELECTED REMEDY

- Draft Final Remedial Investigation Report – April 1997
- Draft Final Feasibility Study Report – September 1997
- Proposed Plan – June 1998
- Draft Record of Decision – March 1999
- Final Historical Radiological Assessment – May 2000
- Final Feasibility Study Addendum – December 2006
- Final Radiological Release Report – December 2006
- Proposed Plan – January 2007
- Final Record of Decision – February 2008



SITE INVESTIGATIONS



TRENCHING ACTIVITIES - 2003

- Investigation to further define the landfill boundaries at Site 3
- Limited waste was found during initial trenching
- Expanded trenching activities to identify smaller pockets of waste throughout the Site 3 boundary
- Landfill boundaries were revised to a much smaller area than was previously estimated (landfill footprint reduced from 11 acres to approximately 2 acres)
- Smaller pockets of waste and debris identified during trenching will be consolidated into the main portion of the landfill



SITE INVESTIGATIONS



LANDFILL GAS INVESTIGATIONS – 2002 to 2004

- Four perimeter soil gas wells were installed at Site 3 and four wells were installed at Site 5 to confirm that soil gas was not migrating from the landfill
- Conducted four rounds of sampling at all soil gas wells
- Low concentrations of VOCs and very low concentrations of methane detected at the wells
- Results used to reduce the buffer zone around the perimeter of the landfills from 1,000 feet to 100 feet
- Soil gas monitoring and passive/active landfill gas systems will be implemented to minimize the potential for landfill gas to migrate beyond the 100 foot boundary



SITE INVESTIGATIONS



RADIOLOGICAL INVESTIGATIONS – 2000 to 2004

- Radiological evaluations conducted in 2000, 2001, and 2004
- Radiological surveys using detectors were conducted over the entire surfaces of Sites 3 and 5
- Soil samples were also collected and analyzed to compare with background and radiological release criteria for the base
- Result of the radiological surveys confirmed that the radiological levels in the surface soils are consistent with background



SELECTED REMEDY



- Various remedial alternatives were developed and evaluated for capping the two landfills
- A Proposed Plan was issued In January 2007 that presented the preferred remedy
- A public meeting was held to present the Proposed Plan and obtain the public's input on the Navy's proposed remedy
- The Navy and the U.S. EPA co-selected a synthetic flexible membrane liner (FML) and a soil cover with institutional controls as the final remedy
- The U.S. EPA, DTSC, and RWQCB concurred with the selected remedy and the decision is documented in the Record of Decision, issued in February 2008



COMPONENTS OF THE REMEDY



- Consolidate waste into existing landfill (Site 3 only)
- Install a synthetic flexible membrane liner (FML)
- Construct a 2-foot soil cover
- Construct a landfill gas collection and/or venting system
- Install passive gas control trenches
- Conduct monitoring of groundwater and landfill gas well/system (using California Integrated Waste Management Board protocol)
- Conduct periodic inspections of the cap, drainage features, and settlement monuments
- Implement institutional controls for the landfills

Site 3 - Waste Area A



Site 3 - Waste Areas B/D/F

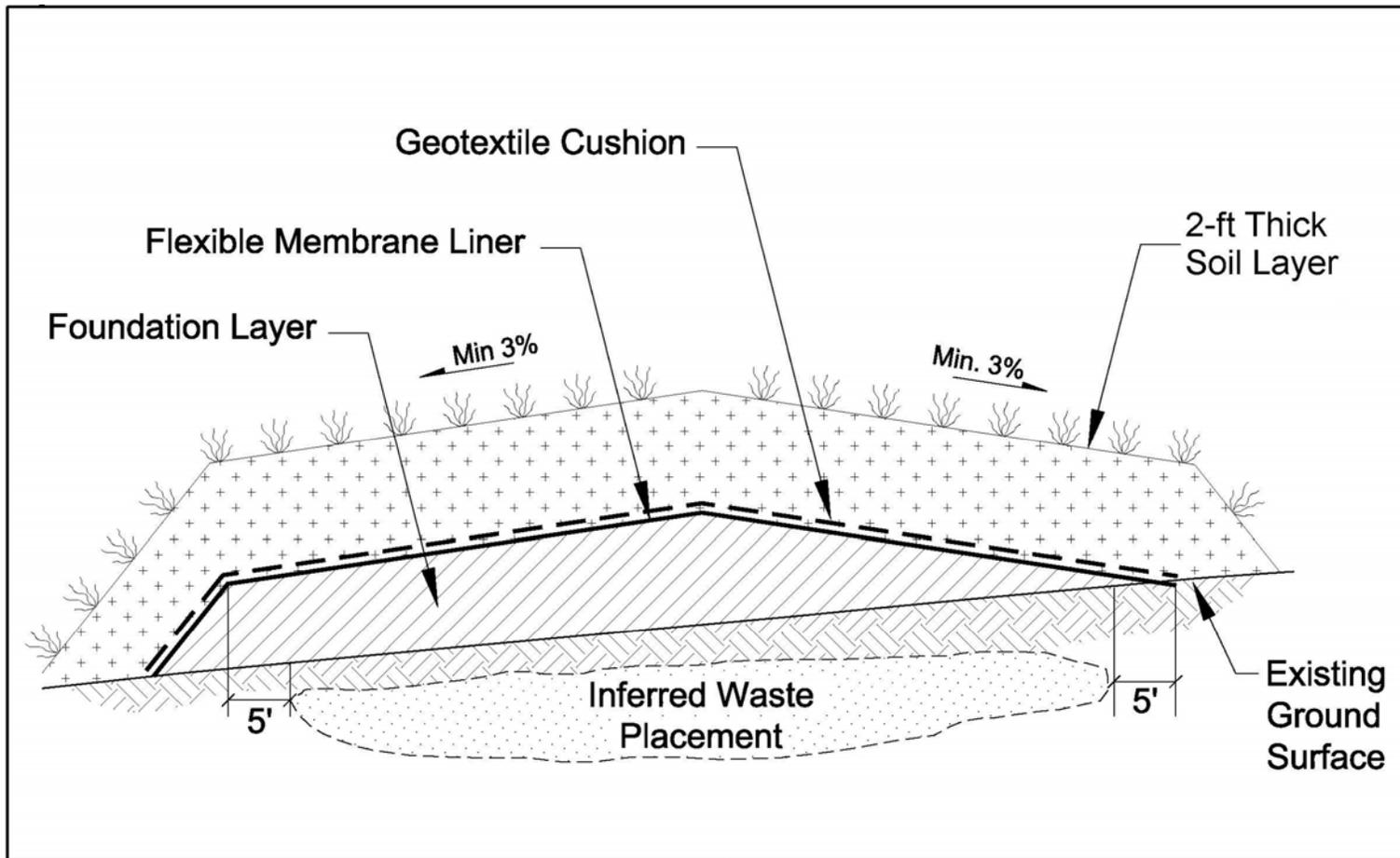


Site 5 - Looking SW



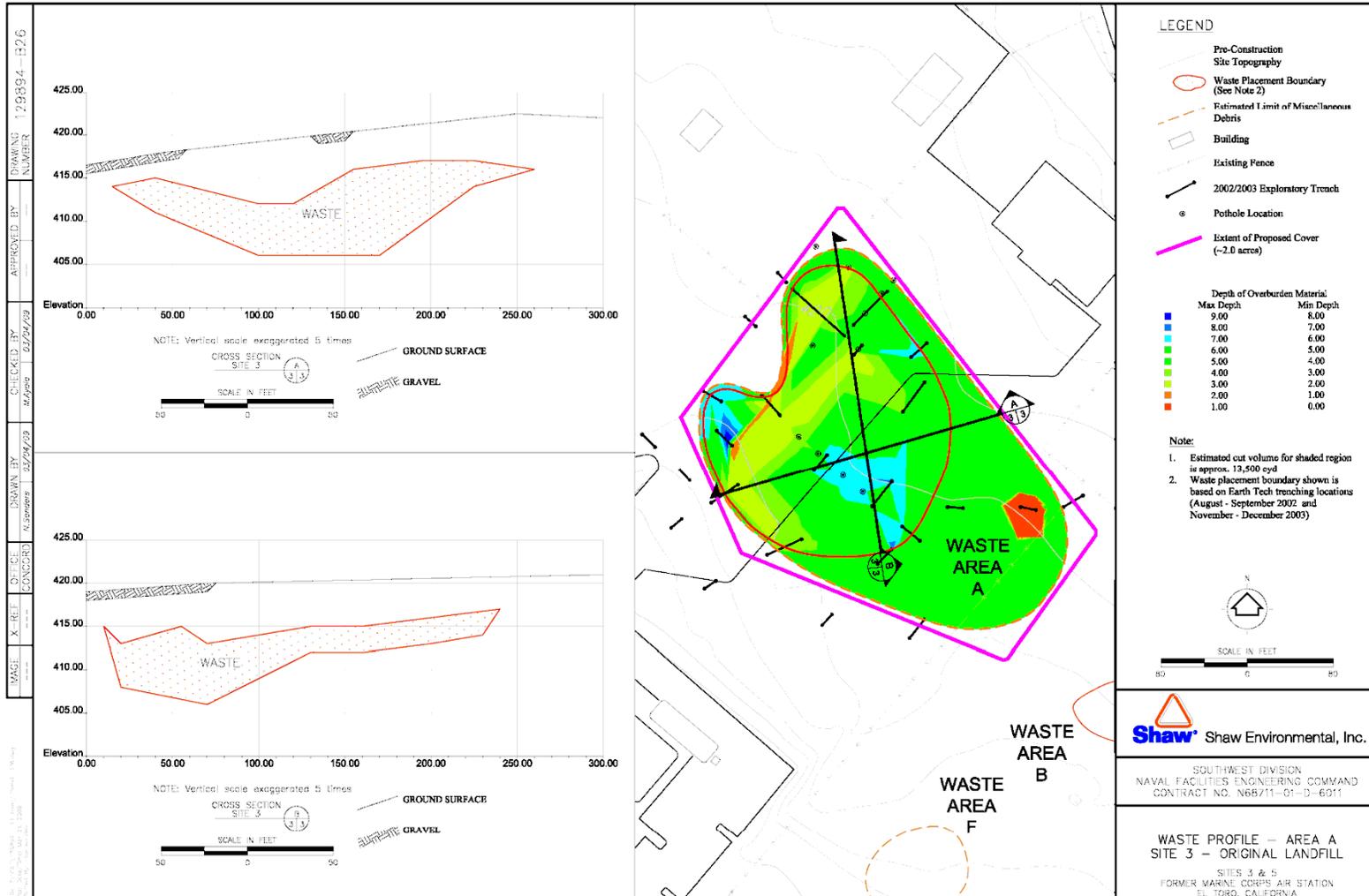


TYPICAL COVER CROSS-SECTION



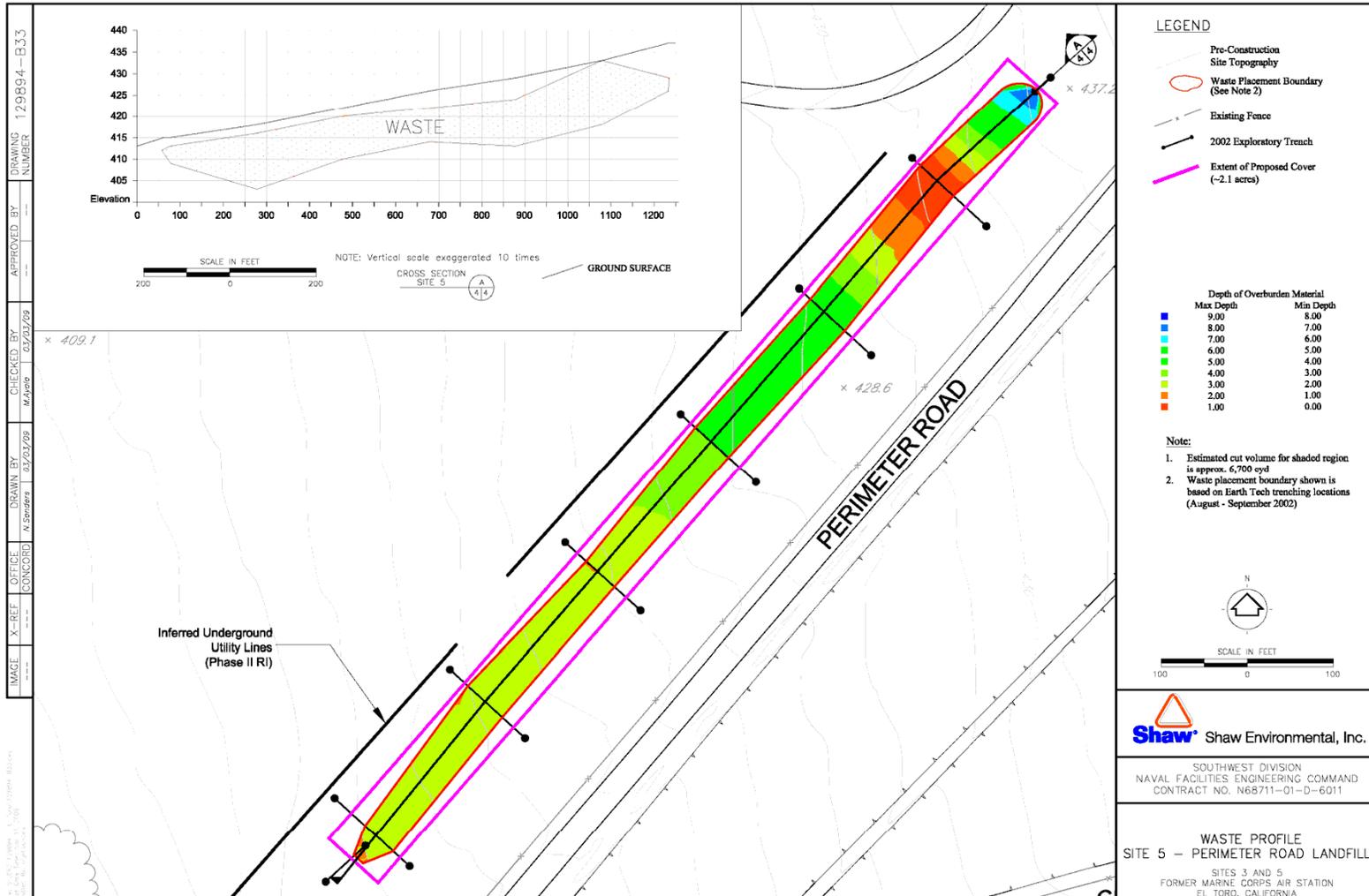


SITE 3 WASTE PROFILE – AREA A



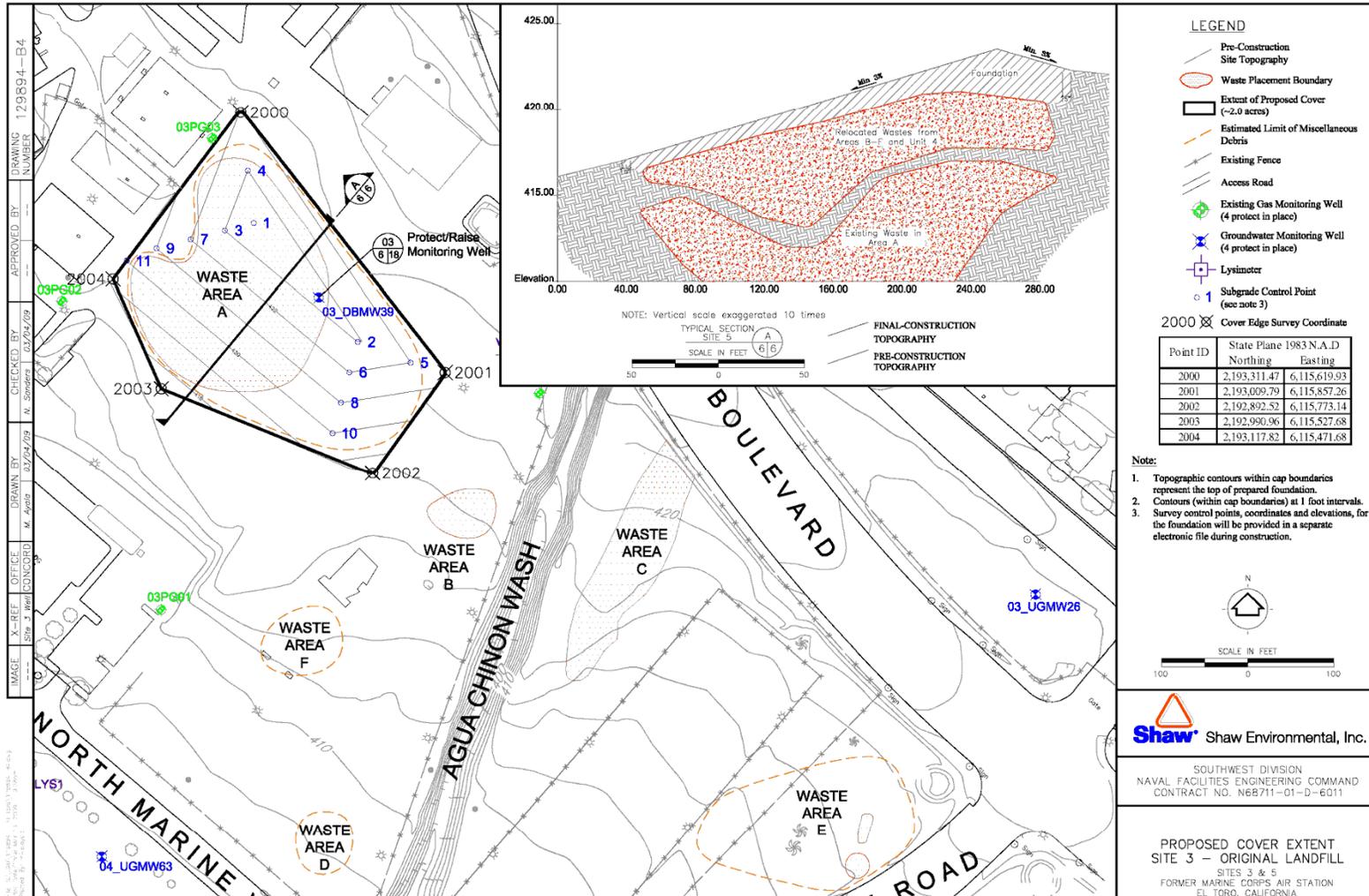


SITE 5 WASTE PROFILE





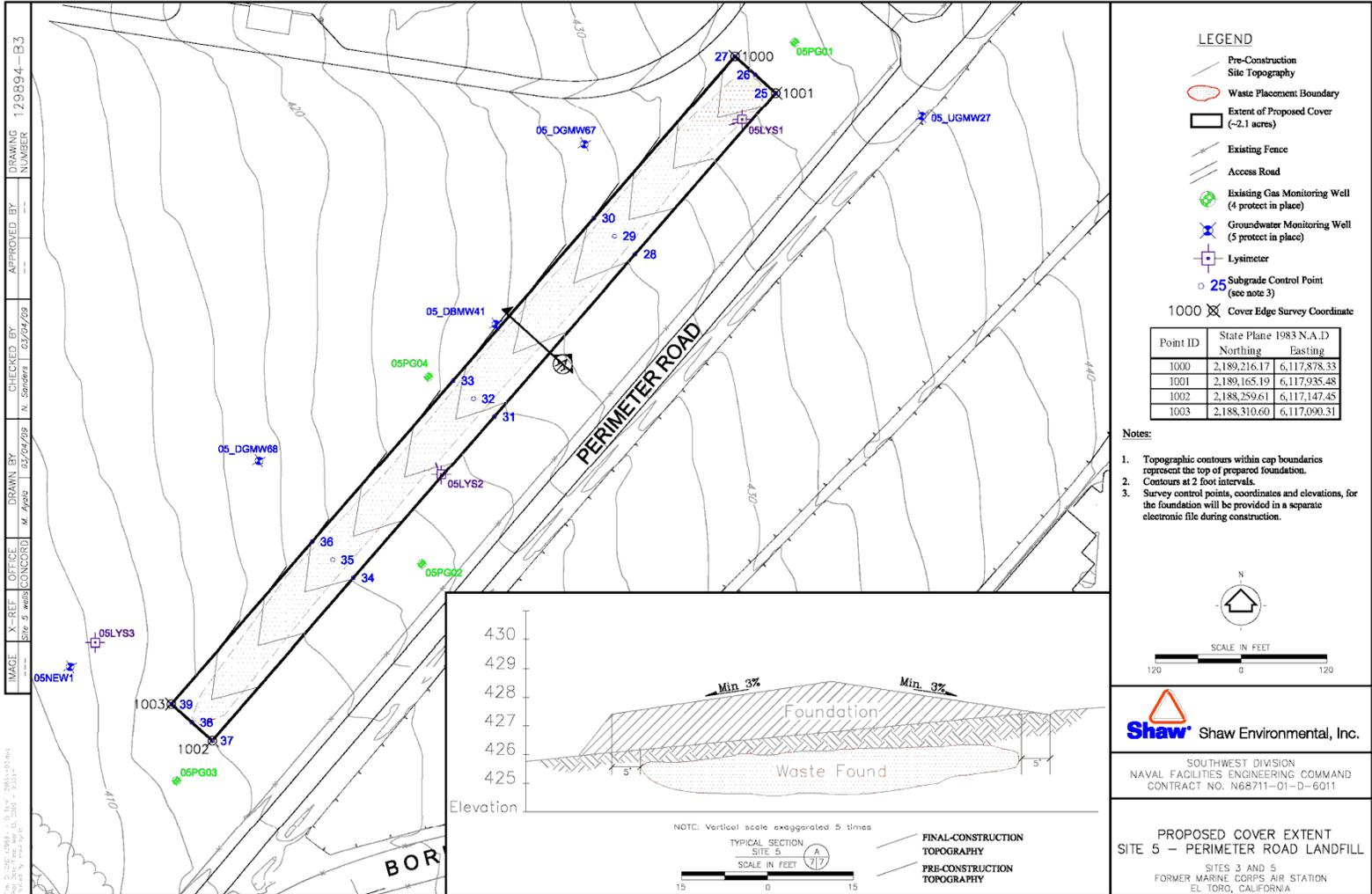
SITE 3 FINAL COVER EXTENT



Conceptual Draft Drawings – Not Approved for Construction



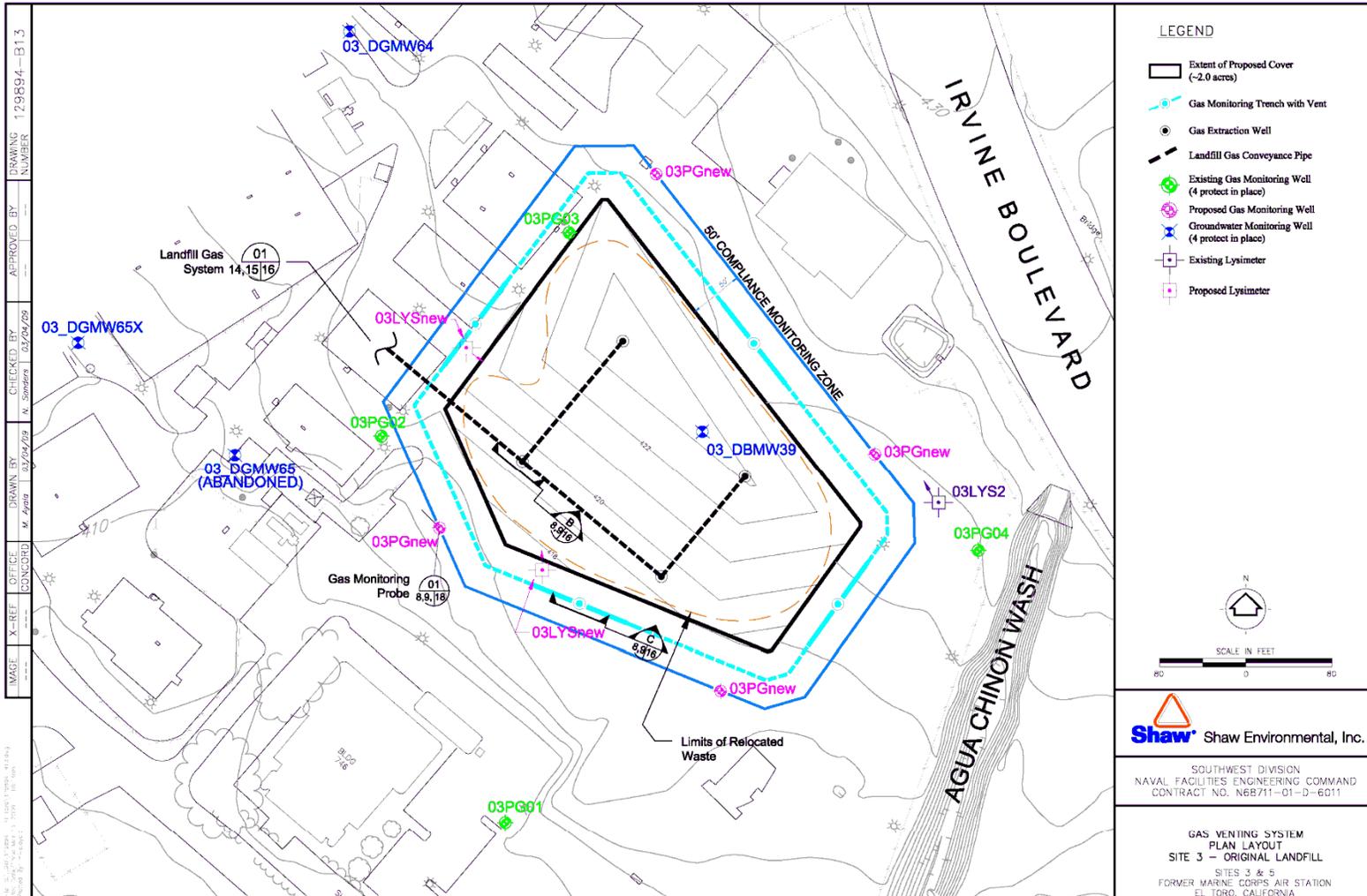
SITE 5 FINAL COVER EXTENT



Conceptual Draft Drawings – Not Approved for Construction



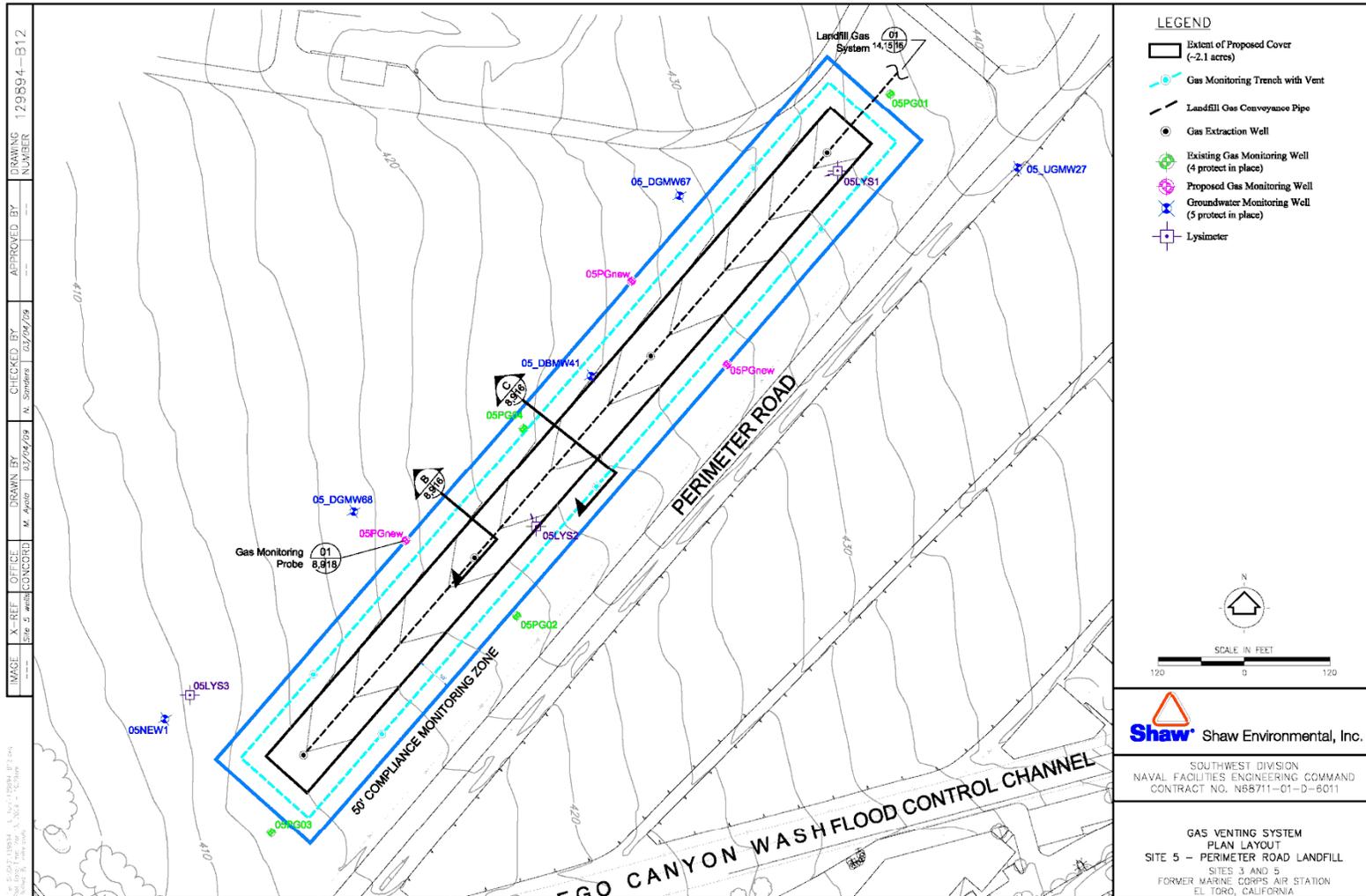
SITE 3 FINAL LAYOUT INCLUDING GAS VENTING SYSTEM



Conceptual Draft Drawings – Not Approved for Construction



SITE 5 FINAL LAYOUT INCLUDING GAS VENTING SYSTEM



Conceptual Draft Drawings – Not Approved for Construction



POST-CONSTRUCTION ACTIVITIES



- Operation and Maintenance/Long-Term Monitoring Plan
 - visual inspection of landfill covers
 - settlement monuments
 - vegetation control
 - groundwater, leachate, and landfill gas monitoring
 - land use control monitoring
- Remedial Action Completion Report
- Operating Properly and Successfully Report



SCHEDULE



- Submit Final Remedial Design/Remedial Action Work Plan July 2009
- Begin Field Construction Activities July 2009
- Finish Field Construction Activities December 2009
- Final Operation and Maintenance/Long-Term Monitoring Plan December 2009
- Final Remedial Action Completion Report (RACR) October 2010
- Operating Properly and Successfully (OPS) Report August 2011