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Border Security: Barriers Along the U.S. International Border

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Border Security: Barriers Along the U.S. International Border

Summary

Congress has been considering expanding the barriers currently deployed along the U.S. international land border. Currently, the United States Border Patrol (USBP) deploys fencing, which aims to impede the illegal entry of individuals, and vehicle barriers, which aim to impede the illegal entry of vehicles (but not individuals) along the border. The USBP first began erecting barriers in 1990 to deter illegal entries and drug smuggling in its San Diego sector. The ensuing 14 mile-long San Diego "primary fence" formed part of the USBP's "Prevention Through Deterrence" strategy, which called for reducing unauthorized migration by placing agents and resources directly on the border along population centers in order to deter would-be migrants from entering the country. In 1996, Congress passed the Illegal Immigration Reform and Immigrant Responsibility Act which, among other things, explicitly gave the Attorney General (now the Secretary of the Department of Homeland Security) broad authority to construct barriers along the border and authorized the construction of a secondary layer of fencing to buttress the completed 14 mile primary fence. Construction of the secondary fence stalled due to environmental concerns raised by the California Coastal Commission. In 2005, Congress passed the REAL ID Act which authorized the Secretary of the Department of Homeland Security (DHS) to waive all legal requirements in order to expedite the construction of border barriers. DHS has since announced it will use this waiver authority to complete the San Diego fence and is acquiring the necessary land.

While the San Diego fence, combined with an increase in agents and other resources in the USBP's San Diego sector, has proven effective in reducing the number of apprehensions made in that sector, there is considerable evidence that the flow of illegal immigration has adapted to this enforcement posture and has shifted to the more remote areas of the Arizona desert. Over the twelve year period between 1992 and 2004, overall apprehensions in the San Diego sector declined by 76% while apprehensions in the Yuma sector increased by 591%. Nationally, the USBP made 1.2 million apprehensions in 1992 and again in 2004, suggesting that the increased enforcement in San Diego sector has had little impact on overall apprehensions.

In addition to border fencing, the USBP deploys both permanent and temporary vehicle barriers to the border. Temporary vehicle barriers are typically chained together and can be moved to different locations at the USBP's discretion. Permanent vehicle barriers are embedded in the ground and are meant to remain in one location. The USBP is currently erecting a 150 mile stretch of vehicle barriers, in conjunction with the National Park Service, near Yuma, Arizona.

A number of policy issues concerning border barriers generally and fencing specifically may be of interest to Congress, including, but not limited to: their effectiveness; their costs versus their benefits; their location; their design; and their potential diplomatic ramifications. Prominent bills include House-passed H.R. 4437 and H.R. 6061, and Senate-passed S. 2611, and H.R. 5631.

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Background

Within the Department of Homeland Security's (DHS) Customs and Border Protection (CBP), the U.S. Border Patrol (USBP) is charged with securing our nation's land and maritime borders between official ports of entry (POE) to deter and interdict terrorists, weapons of mass destruction, and aliens attempting to enter the country unlawfully. In order to discharge its duties, the USBP deploys personnel, technology, and tactical infrastructure such as vehicle barriers and fencing. Fencing is erected on the border to impede the illegal entry of unauthorized aliens, while vehicle barriers are designed to impede the entry of vehicles but do not impede the entry of individuals. This report will analyze the barriers that are currently being constructed and maintained along the border by the USBP, including historical and future cost estimates and the policy issues involved. Because the current debate has largely focused on the deployment of fencing to the border, this report will focus on the policy issues surrounding the construction of border fencing. However, information concerning the kinds of vehicle barriers being deployed at the border will be provided where available.

Using the broad powers granted to the Attorney General (AG) to control and guard the U.S. border,[1] the USBP began erecting a barrier known as the "primary fence" directly on the border in 1990 to deter illegal entries and drug smuggling in its San Diego sector.[2] The San Diego fence formed part of the USBP's "Prevention Through Deterrence" strategy,[3] which called for reducing unauthorized migration by placing agents and resources directly on the border along population centers in order to deter would-be migrants from entering the country. The San Diego primary fence was completed in 1993, covering the first 14 miles of the border from the Pacific Ocean. The fence was constructed of 10-foot-high welded steel army surplus landing

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[1] 8 U.S.C. §1103 (a)(5). Although the law still cites to the Attorney General, the authorities granted by this section now appear to rest with the Secretary of DHS. See The Homeland Security Act of 2002, P.L. 104-208, §§102(a), 441, 1512(d) and 1517 (references to the Attorney General or Commissioner in statute and regulations are deemed to refer to the Secretary of DHS).

[2] For more information on the San Diego border fence, please refer to CRS Report RS22026, *Border Security: Fences Along the U.S. International Border*, by Blas Nuñez-Neto and Stephen Viña.

[3] For an expanded discussion of the USBP, please refer to CRS Report RL32562, *Border Security: The Role of the U.S. Border Patrol*, by Blas Nuñez-Neto.

mats[4] with the assistance of the Corps of Engineers and the California National Guard. In addition to the 14 miles of primary fencing erected in its San Diego sector, the USBP maintains stretches of primary fencing in several other sectors along the southwest border, including Yuma, Tucson, El Centro, and El Paso.

In 1996, Congress passed the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) which, among other things, explicitly gave the Attorney General broad authority to construct barriers along the border and authorized the Immigration and Naturalization Service (INS) to construct a secondary layer of fencing to buttress the completed 14 mile primary fence.[5] Construction of the secondary fence stalled after 9.5 miles had been completed due to environmental concerns raised by the California Coastal Commission (CCC). In 2005, Congress passed the REAL ID Act which, among other things, authorized the Secretary of the Department of Homeland Security (DHS) to waive all legal requirements in order to expedite the construction of border barriers.[6]

In addition to border fencing, the USBP deploys both permanent and temporary vehicle barriers at the border. Vehicle barriers are meant to stop the entry of vehicles, but not people, into the United States. Temporary vehicle barriers are typically chained together and can be moved to different locations at the USBP's discretion. Permanent vehicle barriers are embedded in the ground and are meant to remain in one location. The USBP is currently erecting a 150 mile stretch of vehicle barriers in conjunction with the National Park Service near Yuma, Arizona.

The San Diego Border Primary Fence

The USBP's San Diego sector extends along the first 66 miles from the Pacific Ocean of the international border with Mexico, and covers approximately 7,000 square miles of territory. Located north of Tijuana and Tecate, Mexican cities with a combined population of over two million people, the sector features no natural barriers to entry by unauthorized migrants and smugglers.[7] As a result of this geographical reality and in response to the large numbers of unauthorized aliens crossing the border in the area, in 1990 the USBP began erecting a physical barrier to deter illegal entries and drug smuggling. The ensuing "primary" fence covered the

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[4] U.S. Government Accountability Office, *Border Control — Revised Strategy Is Showing Some Positive Results*, GAO/GGD-95-30, Jan. 31, 1995. Referred to hereafter as GAO Report 95-30.

[5] See P.L. 104-208, Div. C. IIRIRA was passed as part of the Omnibus Consolidated Appropriations Act of 1997.

[6] P.L. 109-13.

[7] U.S. Department of Justice, Office of the Inspector General, *Operation Gatekeeper: An Investigation Into Allegations of Fraud and Misconduct*, July, 1998, available at [http://www.usdoj.gov/oig/special/9807/gkp01.htm#P160_18689]

first 14 miles of the border, starting from the Pacific Ocean, and was constructed of 10 foot high welded steel.[8]

Operation Gatekeeper

The primary fence, by itself, did not have a discernible impact on the influx of unauthorized aliens coming across the border in San Diego. As a result of this, Operation Gatekeeper was officially announced in the San Diego sector on October 1, 1994. The chief elements of the operation were large increases in the overall manpower of the sector, and the deployment of USBP personnel directly along the border to deter illegal entry. The strategic plan called for three tiers of agent deployment. The first tier of agents was deployed to fixed positions on the border. The agents in this first tier were charged with preventing illegal entry, apprehending those who attempted to enter, and generally observing the border. A second tier of agents was deployed north of the border in the corridors that were heavily used by illegal aliens. The second tier of agents had more freedom of movement than the first tier and were charged with containing and apprehending those aliens who made it past the first tier. The third tier of agents were typically assigned to man vehicle checkpoints further inland to apprehend the traffic that eluded the first two tiers. As the Department of Justice Inspector General report notes, "given Gatekeeper's deterrence emphasis, many agents were assigned to first-tier, fixed positions along the border. These agents were instructed to remain in their assigned positions rather than chase alien traffic passing through adjacent areas. Prior to Gatekeeper, such stationary positions were relatively rare."[9]

Operation Gatekeeper resulted in significant increases in the manpower and other resources deployed to San Diego sector. Agents received additional night vision goggles, portable radios, and four-wheel drive vehicles, and light towers and seismic sensors were deployed.[10] According to the former INS, between October 1994 and June of 1998, San Diego sector saw the following increases in resources:

- USBP agent manpower increased by 150%;
- Seismic sensors deployed increased by 171%;
- Vehicle fleet increased by 152%.
- Infrared night-vision goggles increased from 12 to 49;
- Permanent lighting increased from 1 mile to 6 miles, and 100 portable lighting platforms were deployed;
- Helicopter fleet increased from 6 to 10.[11]

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[8] GAO Report 95-30.

[9] U.S. Department of Justice, Office of the Inspector General, *Operation Gatekeeper: An Investigation Into Allegations of Fraud and Misconduct*, July, 1998, available at [http://www.usdoj.gov/oig/special/9807/index.htm]. Hereafter referred to as DOJ-OIG Gatekeeper Report.

[10] DOJ-OIG Gatekeeper Report.

[11] U.S. Department of Justice, Immigration and Naturalization Service, "Operation Gatekeeper Fact Sheet," July 14, 1998.

As a result of the increase in resources and the new strategy that were the main components of Operation Gatekeeper, the USBP estimated in 1998 that the entire 66 miles of border patrolled by the San Diego sector's agents could be brought under control in five years.[12]

Sandia National Laboratory Study

According to CBP, the primary fence, in combination with various USBP enforcement initiatives along the San Diego border region (i.e., Operation Gatekeeper), proved to be successful but fiscally and environmentally costly.[13] For example, as unauthorized aliens and smugglers breached the primary fence and attempted to evade detection, USBP agents were often forced to pursue the suspects through environmentally sensitive areas. It soon became apparent to immigration officials and lawmakers that the USBP needed, among other things, a "rigid" enforcement system that could integrate infrastructure (i.e., a multi-tiered fence and roads), manpower, and new technologies to further control the border region.

The concept of a three-tiered fence system was first recommended by a 1993 Sandia Laboratory study commissioned by the former Immigration and Naturalization Service (INS). According to the Sandia study, the use of multiple barriers in urban areas would increase the USBP's ability to discourage a significant number of illegal border crossers, to detect intruders early and delay them as long as possible, and to channel a reduced number of illegal border crossers to geographic locations where the USBP was better prepared to deal with them.[14] The Sandia study further noted that segments of the border could not be controlled at the immediate border due to the ruggedness of the terrain, and recommended the use of highway checkpoints in those areas to contain aliens after they had entered the country illegally.[15] The study concluded that aliens attempting to enter the United States from Mexico had shown remarkable resiliency in bypassing or destroying obstacles in their path, including the existing primary fence, and postulated that "[a] three-fence barrier system with vehicle patrol roads between the fences and lights will provide the necessary discouragement."[16]

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[12] DOJ-OIG Gatekeeper Report.

[13] See California Coastal Commission, *W 13a Staff Report and Recommendation on Consistency Determination*, CD-063-03, Oct. 2003, at 14-16 (stating that construction of the primary fence significantly assisted the USBP's efforts in deterring smuggling attempts via drive-throughs using automobiles and motorcycles). (Hereafter CCC Staff Report.)

[14] GAO 95-30, p. 13.

[15] GAO 95-30, p. 13.

[16] Peter Andreas, "The Escalation of U.S. Immigration Control in the Post-NAFTA Era," *Political Science Quarterly*, vol. 113, no. 4, winter 1998-1999, p. 595.

Original Congressional Border Barrier Legislation

As previously mentioned, the INS constructed the primary fencing in San Diego using the broad authority granted to the AG in order to guard and control the U.S. border by the Immigration and Nationality Act (INA).[17] In 1996, Congress expressly authorized the AG to construct barriers at the border for the first time in the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA).[18]

Section 102 of IIRIRA — Improvement of Barriers at the Border

Section 102 of IIRIRA concerned the improvement and construction of barriers at our international borders. Section 102(a) appeared to give the AG[19] broad authority to install additional physical barriers and roads "in the vicinity of the United States border to deter illegal crossings in areas of high illegal entry into the United States." The phrase *vicinity of the United States border* is not defined in the Immigration and Nationality Act (8 U.S.C. §1101 *et seq*.) or in immigration regulations. The section also did not stipulate what specific characteristics would designate an area as one of *high illegal entry*.

Section 102(b) mandated that the AG construct a barrier in the border area near San Diego. Specifically, §102(b) directed the AG to construct a three-tiered barrier along the 14 miles of the international land border of the U.S., starting at the Pacific Ocean and extending eastward. Section 102(b) ensured that the AG will build a barrier, pursuant to his broader authority in §102(a), near the San Diego area, although there is some debate whether IIRIRA requires *continuous* triple fencing and roads for the entire 14-mile corridor.[20] Section 102(b) also provided authority for the acquisition of necessary easements, required certain safety features be incorporated into the design of the fence, and authorized a total appropriation not to exceed $12 million to carry out the section.

Section 102(c) waived the Endangered Species Act (ESA) of 1973 (16 U.S.C. §§1531 *et seq*.) and the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. §§4321 *et seq*.), to the extent the AG determined necessary, in order to ensure expeditious construction of the barriers authorized to be constructed under §102. The waiver authority in this provision appeared to apply both to barriers that may be constructed *in the vicinity of the border* and to the barrier that was to be constructed near the San Diego area. The INS (and CBP after 2003) reportedly never exercized this original waiver authority, instead reportedly choosing to comply with the NEPA

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[17] 8 U.S.C. §1103 (a)(5).

[18] P.L. 104-208, §102.

[19] Although the law still cites to the Attorney General, the authorities granted by this section now appear to rest with the Secretary of DHS. See The Homeland Security Act of 2002, P.L. 104-208, §§102(a), 441, 1512(d) and 1517 (references to the Attorney General or Commissioner in statute and regulations are deemed to refer to the Secretary).

[20] See CCC, *Staff Report*, at 7 nt. 2 and p. 23 nt. 4.

and the ESA. The INS published a Final Environmental Impact Study pursuant to NEPA and received a non-jeopardy Biological Opinion from the U.S. Fish and Wildlife Service under the ESA.[21] This waiver authority was expanded in the 109th Congress by the REAL-ID Act, which will be discussed in greater detail subsequently, and DHS has subsequently announced it will be implementing this expanded waiver authority.

Section 102(d) also provided the AG with various land acquisition authority. In 2002, Congress amended the U.S. Code to authorize the AG to use INS funds to purchase land for enforcement fences and to construct the fences.[22]

The San Diego Sandia Fence

In 1996, construction began on the secondary fence that had been recommended by the Sandia study with congressional approval. The new fence was to parallel the fourteen miles of primary fence already constructed on land patrolled by the Imperial Beach Station of the San Diego sector, and included permanent lighting as well as an access road in between the two layers of fencing. Of the 14 miles of fencing authorized to be constructed by IIRIRA, nine miles of the triple fence had been completed by the end of FY2005. Two sections, including the final three mile stretch of fence that leads to the Pacific Ocean, have not been finished.

The California Coastal Commission

In order to finish the fence, the USBP proposed to fill a deep canyon known as "Smuggler's Gulch" with over two million cubic yards of dirt. The triple-fence would then be extended across the filled gulch. California's Coastal Commission (CCC), however, objected to and essentially halted the completion of the fence in February 2004, because it determined that CBP had not demonstrated, among other things, that the project was consistent "to the maximum extent practicable" with the policies of the California Coastal Management Program — a state program approved under the federal Coastal Zone Management Act (CZMA) (16 U.S.C. §§1451-1464).[23] The CZMA requires federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone to be carried out in a manner which is consistent to the maximum extent practicable with the policies of an approved state management program.[24] If a federal court finds a federal activity to be inconsistent with an approved state program and the Secretary of DHS (Secretary) determines that compliance is unlikely to be achieved through

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[21] Ibid.

[22] P.L.107-273, §201(a).

[23] See CCC, *Staff Report*, at 5-7. After California's Coastal Management Plan was approved by the National Oceanic and Atmospheric Administration pursuant to the CZMA in 1977, apparently all federal activities affecting coastal zone resources in California became subject to the CCC's regulatory purview.

[24] 16 U.S.C. §1456(c).

mediation, the President may exempt from compliance the activity if the President determines that the activity is in the "paramount interest of the United States."[25]

According to the CCC, CBP did not believe that it could make further environmental concessions and still comply with IIRIRA. The CCC held that Congress did not specify a particular design in the IIRIRA, and that CBP failed to present a convincing argument that the less environmentally damaging alternative projects it rejected would have prevented compliance with the IIRIRA. Specifically, the CCC was concerned with the potential for significant adverse effects on: (1) the Tijuana River National Estuarine Research and Reserve; (2) state and federally listed threatened and endangered species; (3) lands set aside for protection within California's Multiple Species Conservation Program; and, (4) other aspects of the environment. In response to the CCC's findings, Congress expanded the waiver authority in the REAL ID Act, described in more detail below, in order to allow DHS to waive the CZMA, among other things.

The REAL ID Act

In the 109th Congress, H.R. 418, the REAL ID Act of 2005, contained language requiring the Secretary of DHS to waive *all laws* necessary to ensure expeditious construction of the security barriers. H.R. 418 was passed by the House as a stand-alone piece of legislation, but was also attached as an amendment to House-passed H.R. 1268, the emergency supplemental appropriations bill for FY2005. During conference, language was revised in H.R. 1268 to "authorize," instead of "require," the Secretary of DHS to waive all "legal requirements," instead of "all laws." The conferees also added a new provision that would make such waiver decisions effective upon publication in the Federal Register. Language was also added granting federal district courts exclusive jurisdiction to review claims alleging that the actions or decisions of the Secretary violate the U.S. Constitution, and allowing district court rulings to be reviewed only by the U.S. Supreme Court. H.R. 1268 was signed into law on May 11, 2005 (P.L. 109-13).[26]

The waiver authority provided in §102 of the REAL ID Act appears to be a broad grant of authority because, in part, it authorizes the waiver of *all* legal requirements determined necessary by the Secretary for the expeditious construction of authorized barriers and only allows judicial review for constitutional claims.[27] Furthermore, these claims can only be appealed to the Supreme Court (i.e, there is no intermediate appellate review), whose review is discretionary. It is unclear what a "legal requirement" may include, but the term could arguably be as limited as filing requirements or be as broad as an entire law. Moreover, because §102 of the REAL

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[25] 16 U.S.C. §1456(c)(1)(B).

[26] For more information on the REAL ID Act, please refer to CRS Report RL32754, *Immigration: Analysis of the Major Provisions of the REAL ID Act of 2005*, by Michael John Garcia, Margaret Mikyung Lee, and Todd Tatelman.

[27] One of the most analogous provisions CRS located appears to be, at least on its face, 43 U.S.C. §1652(c), which authorizes the waiver of all procedural requirements in law related to the construction of the Trans-Alaska pipeline and limits judicial review to constitutional claims.

ID Act amends only the waiver provision of §102 of IIRIRA, the new waiver authority appears to apply to all the barriers that may be constructed under IIRIRA — i.e., both to barriers constructed in the vicinity of the border in areas of high illegal entry and to the barrier that is to be constructed near the San Diego area.

Current Status of the San Diego Triple Fence

The military has now begun upgrading and rebuilding the San Diego border fence. The Senate-passed version of the FY2006 DHS Appropriations bill, H.R. 2360, includes $50 million for construction of the border fence in San Diego, and $50 million for border infrastructure, including fences and vehicle barriers, in Arizona. On September 14, 2005, DHS announced it is applying its new waiver authority to complete the San Diego fence.[28] DHS is currently in the land acquisition phase of the project, and construction had not started as of September 2006.[29]

The San Diego Fence and USBP Apprehensions

Apprehension statistics have long been used as a performance measure by the USBP. However, the number of apprehensions may be a misleading statistic for several reasons, including the data's focus on events rather than people[30] and the fact that there are no reliable estimates for how many aliens successfully evade capture. This makes it difficult to establish a firm correlation between the number of apprehensions in a given sector and the number of people attempting to enter through that sector. While caution should be taken when attempting to draw conclusions about the efficacy of policy initiatives based solely on apprehensions statistics, *they remain the most reliable way to codify* trends in illegal migration along the border.

The San Diego fence spans two border patrol stations within the San Diego sector: Imperial Beach station and Chula Vista station. As previously noted, the primary fence was constructed in those two stations beginning in FY1990; the secondary fence was constructed beginning in FY1996. **Figure 1** shows the stark decrease in apprehensions at the Imperial Beach station *from* fiscal year (FY) 1992 *to* FY2004. The majority of the decrease occurred in the four year period from FY1995 through FY1998 and coincided with Operation Gatekeeper, which as previously noted combined the construction of fencing along the border with an increase in agents and other resources deployed directly along the border. For the period from FY1998 to FY2004, apprehensions at the Imperial Beach station averaged about 14,000 each year.

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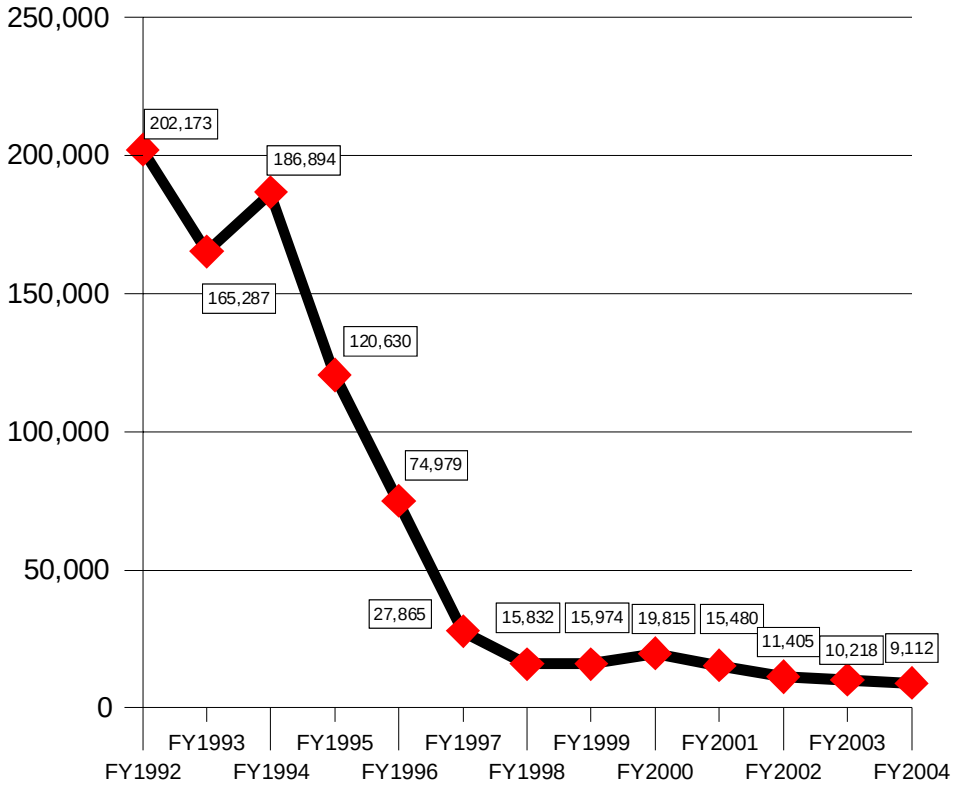
[28] Department of Homeland Security, "Determination Pursuant to Section 102 of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 as Amended by Section 102 of the REAL ID Act of 2005," 70 *Federal Register* 55622-02, September 22, 2005.

[29] Interview with CBP Congressional Affairs, September 13, 2006.

[30] If the same person is apprehended multiple times attempting to enter the country in one year, each apprehension will be counted separately by the USBP in generating their apprehension statistics. This means that apprehension statistics may overstate the number of aliens apprehended each year.

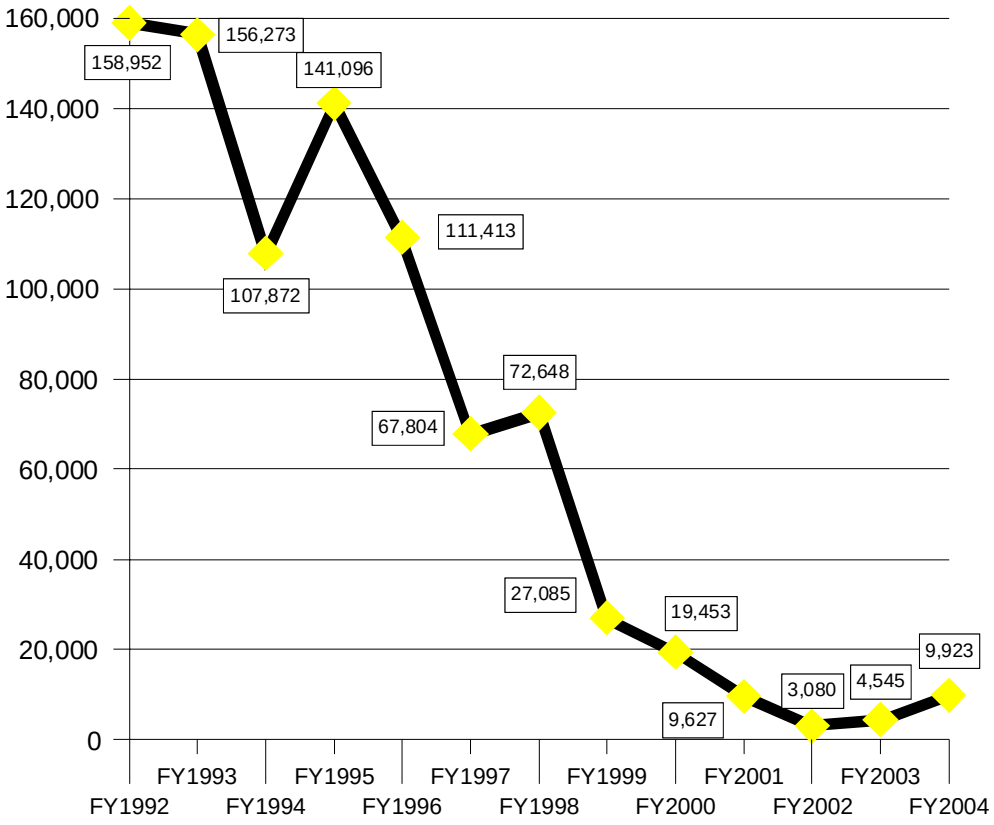
Figure 1: Imperial Beach Station Apprehensions



Source: CRS analysis of CBP data.

Figure 2 shows the apprehensions at the Chula Vista station over the same period of time. The trend in apprehensions at Chula Vista is somewhat similar to Imperial Beach, with overall apprehensions dropping significantly *from* FY1992 *to* FY2002. Apprehensions increased slightly from FY2002 to FY2004, but remain far below their early 1990s levels. Interestingly, the rate of decline in Chula Vista in the mid-1990s lagged behind the rate of decline in Imperial Beach station during this period. This suggests that as enforcement ramped up in Imperial Beach station, unauthorized migration shifted westward to Chula Vista. From FY1992 to FY1998, for example, apprehensions decreased by 92% in Imperial Beach, but only by 54% in Chula Vista. From FY1998 through FY2001, apprehensions leveled off in Imperial Beach, averaging around 16,000 a year, but continued to decline at Chula Vista, from 72,648 in FY1998 to 3,080 in FY2002. Overall, the trend indicates the following: as enforcement measures, in this case including fencing, were deployed — first focusing on Imperial Beach, and later extending to Chula Vista — the flow of unauthorized migration pushed eastward. The drop in apprehensions occurred first in Imperial Beach, and then later pushed eastward to Chula Vista.

Figure 2: Chula Vista Station Apprehensions



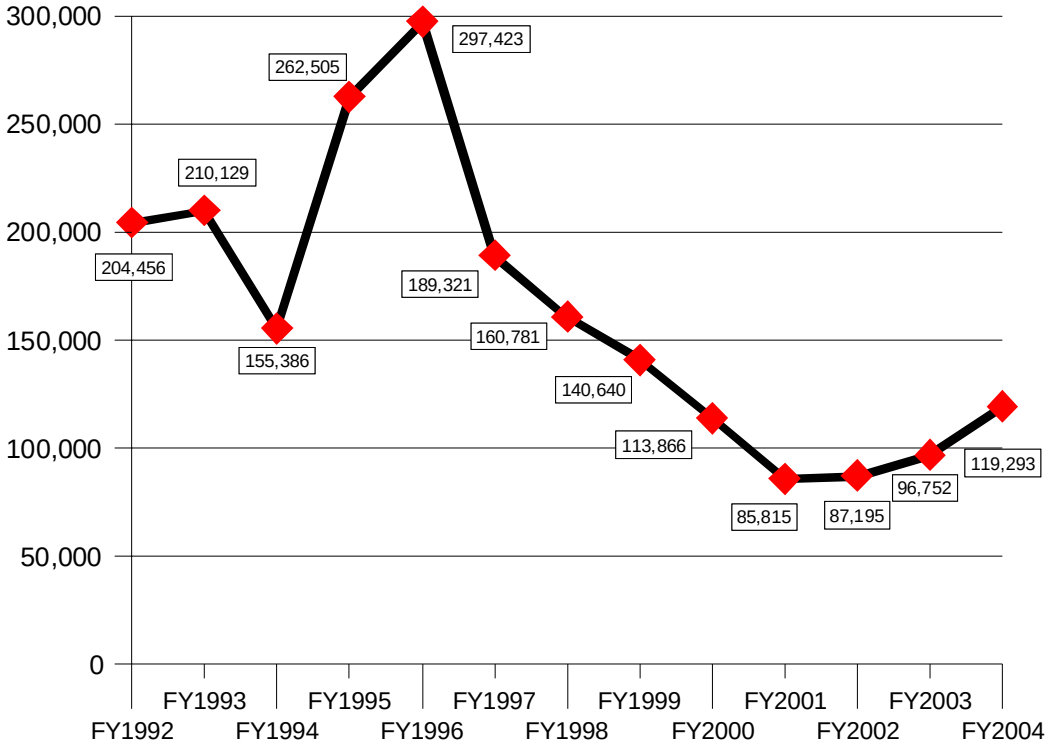
Source: CRS analysis of CBP data.

Figure 3 shows the aggregate apprehensions made at the other San Diego sector stations, excluding Imperial Beach and Chula Vista. Those stations are El Cajon, Campo, San Clemente, Temecula, and Brown Field. **Figure 3** shows that at the time apprehensions were beginning to decline in Imperial Beach (starting in FY1995) and Chula Vista (starting in FY1996), apprehensions at other San Diego sector stations almost doubled. This suggests that as enforcement efforts increased in the two westernmost stations, including the installation of fencing and the deployment of additional agents, the flow of illegal migration pushed eastward to the other stations in the San Diego sector. While apprehensions declined in the non-fenced stations of the San Diego sector from FY1997 to FY2001, the rate of decline was not as steep as the rate of decline at the stations where fencing was deployed. Overall, the decline in apprehensions in the rest of the San Diego sector has lagged behind the decreases in Imperial Beach and Chula Vista: from FY1992 to FY2004, apprehensions in the other San Diego sector stations decreased by 42%, compared to decreases of 95% in Imperial Beach and 94% in Chula Vista. In FY2003 and FY2004, apprehensions increased slightly in the rest of San Diego sector, possibly in response to the increasing USBP focus on the Tucson sector in Arizona.[31] It seems, then, that the installation of border fencing, in combination with an increase in agent manpower and technological assets, has had a significant effect on the apprehensions made in

[31] For more information on overall apprehension trends, please refer to CRS Report RL32562, *Border Security: The Role of the U.S. Border Patrol*, by Blas Nuñez-Neto.

the San Diego sector. This in turn suggests that fewer unauthorized aliens are attempting to cross the border in the San Diego sector as a result of the increased enforcement measures, including fencing, manpower, and other resources, that were deployed to that sector.

Figure 3: Apprehensions at San Diego Sector Stations, Excluding Imperial Beach and Chula Vista

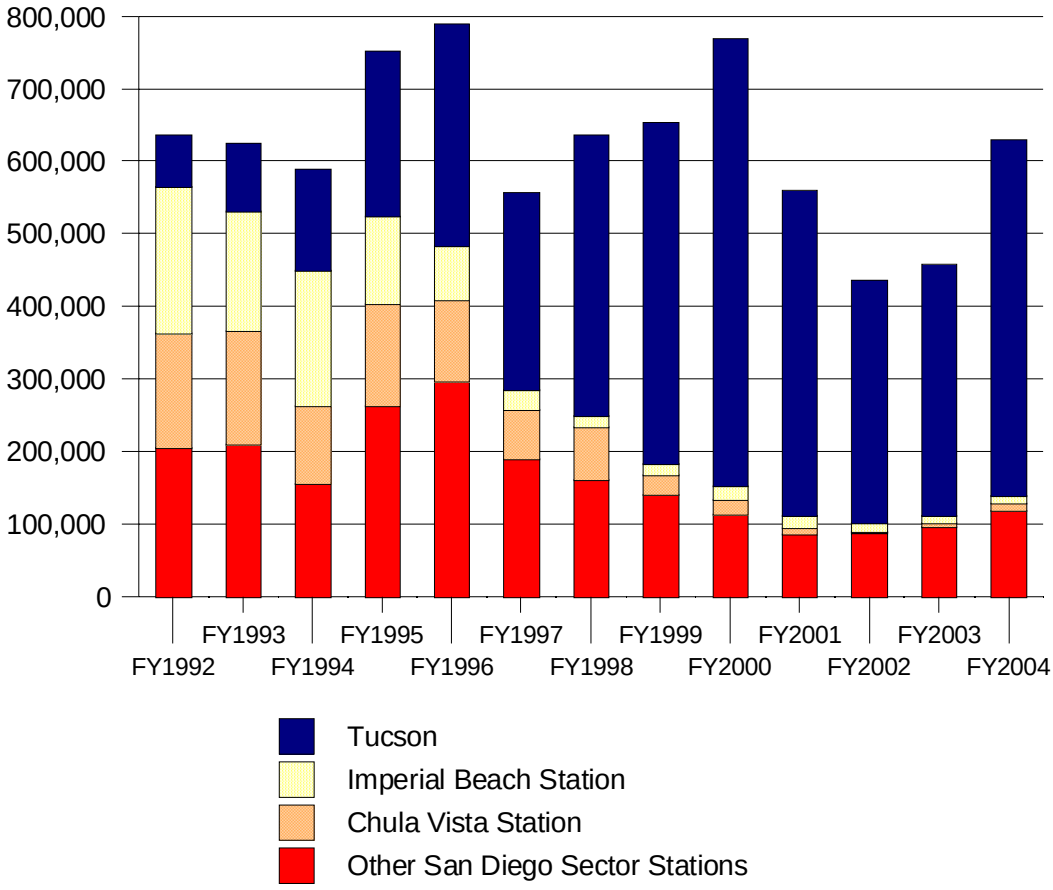


Source: CRS analysis of CBP data.

Figure 4 shows overall San Diego sector apprehensions, breaking out the Imperial Beach and Chula Vista stations, and compares them to the apprehensions made at the Tucson sector between FY1992 and FY2004. The data used to create this graph can be seen presented in table form in **Appendix V**. **Figure 4** shows that in FY1992, Imperial Beach and Chula Vista accounted for 64% of all apprehensions made in the San Diego sector; by FY2004 the two stations accounted for only 14% of all apprehensions made in the sector. However, as apprehensions declined in Imperial Beach and Chula Vista stations and San Diego sector as a whole over the late 1990s and early 2000s, apprehensions in the Tucson sector in Arizona increased significantly over this period. Over the twelve year period between 1992 and 2004, overall apprehensions in the San Diego sector declined by 76%. However, as apprehensions were decreasing in the San Diego sector, they were increasing in other sectors further east. This increase was most notable within the Tucson sector in Arizona, where apprehensions increased six-fold (591%) between FY1992 and FY2004. As **Figure 4** shows, overall apprehensions in the San Diego and Tucson sectors combined have averaged roughly 620,000 yearly since FY1992, with the San Diego sector accounting for the lion's share during the early 1990s and the Tucson sector accounting for the majority in the early 2000s. This provides further indication

that the construction of the fence, combined with the increases in manpower in the San Diego sector, changed the patterns of migration for unauthorized aliens attempting to enter the country illegally from Mexico.

Figure 4: Apprehensions at San Diego Sector Stations and Tucson Sector



Source: CRS analysis of CBP data.

As **Figures 1-4** show, the increased deployment of agents, infrastructure, technology, and other resources within the San Diego sector has resulted in a significant decline in the number of apprehensions made in that sector. Nationally, apprehensions made by the USBP grew steadily through the late 1990s, only to decline in the early 2000s. However, in 1992 the USBP apprehended 1.2 million unauthorized aliens; in 2004, the USBP also apprehended 1.2 million unauthorized aliens.[32] While the increased enforcement in the San Diego sector has resulted in a shift in migration patterns for unauthorized aliens, it does not appear to have decreased the overall number of apprehensions made each year by USBP agents. As previously noted, apprehensions statistics can be somewhat misleading, but they nevertheless remain the best way to codify trends in unauthorized migration along the border. However, it is impossible to ascertain solely by looking at apprehensions statistics how many unauthorized aliens are attempting to enter the country illegally,

[32] CRS analysis of CBP data.

because it is unclear how many individuals evade being captured by the USBP each year.

Border Barrier Construction

The USBP has been constructing and maintaining barriers along the international land border since 1991. These barriers have historically been limited to selected urban areas as part of the USBP's overall strategy of rerouting illegal migration away from urban areas towards geographically isolated areas where their agents have a tactical advantage over border crossers. Two main types of border fencing have been constructed: primary fencing located directly on the border along several urban areas; and Sandia fencing, also known as secondary or triple fencing, in San Diego. Additionally, the USBP has begun installing permanent vehicle barriers in various segments of the border. Vehicle barriers are designed to impede the entry of vehicles while allowing individuals and animals to cross the border freely. As such, they have a lower environmental footprint than border fencing.

Border Fence Construction Process and Funding

CBP currently constructs border fencing under a Memorandum of Agreement (MOA) with the ECSO (Engineering and Construction Support Office) of the US Army Corps of Engineers (Corps). ECSO manages several components of the construction process for CBP, including planning and acquisition of real estate; drafting the environmental protection plan; designing the project and formulating the engineering costs; overseeing the construction process; and enforcing the appropriate warranties. On most of the tactical infrastructure projects, National Guard units and military units from the Department of Defense (DOD) Joint Task Force North provide the labor. DOD uses these projects as part of their training regimen, leveraging their ability to deploy tactical infrastructure and thereby providing zero labor costs to CBP.[33] The funding for land acquisition and fence materials comes out of the CBP construction account within the DHS appropriation. Specific funding for fence construction is rarely identified in the conference reports, though it typically has been identified within the DHS (and previously the former INS) Congressional Budget Justifications.[34] **Table 1** shows the overall amount appropriated for the USBP construction account, and the specific amounts identified for tactical infrastructure within that account, since FY1996. Appropriations for fencing and other border barriers has increased markedly over the past five years, from $6 million in FY2002 to $93 million in FY2006.

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[33] Department of Homeland Security, Congressional Budget Justifications for Fiscal Year 2007, pg. CBP Construction 20. Hereafter referred to as DHS FY2007 Justifications.

[34] FY2006 is an exception. Within the conference report, $35 million was identified for the Southwest Border Fence and $35 million was identified for the construction of vehicle barriers and other border infrastructure in Tucson sector. H.Rept. 109-241.

Table 1. Border Patrol Tactical Infrastructure Appropriations

(millions of dollars)

Fiscal Year	Construction Account (total)	Tactical Infrastructure Construction
2007 (request)	256	106
2006	298	93
2005	92	15
2004	89	14
2003	235	23
2002	128	6
2001	133	3
2000	100	9
1999	90	4
1998	76	8
1997	10	4
1996	25	4

Sources: For FY2006-FY2007, the amounts appropriated for construction and tactical infrastructure were identified from the FY2007 DHS Congressional Budget Justifications. For FY2004-FY2005, the amounts appropriated for construction and tactical infrastructure were identified from the FY2006 DHS Congressional Budget Justifications. FY2003 construction and tactical infrastructure funding was identified from the FY2005 DHS Congressional Budget Justifications. FY1996-FY2002 tactical infrastructure funding was identified in the FY2003 INS Congressional Budget Justifications; funding for FY1998-FY2000 includes San Diego fencing as well as fencing, light, and road projects in El Centro, Tucson, El Paso, and Marfa. FY2001 and FY2002 construction funding identified from the FY2002 INS Congressional Budget Justifications. FY2000 construction funding identified from the FY2001 INS Congressional Budget Justifications and H.Rept. 107-278. FY1999 construction funding identified from P.L. 105-277. FY1998 construction funding identified from P.L. 105-119. FY1997 funding identified from P.L. 104-208. FY1996 construction funding identified from P.L. 104-134.

Note: In FY2003 immigration inspections from the former INS, Customs inspections from the former customs service, and the USBP were merged to form the Bureau of Customs and Border Protection within DHS. As a result of this the data for years prior to FY2003 may not be comparable with the data for FY2004 and after.

Under the current MOA, once CBP purchases the materials and acquires the land, the Corps of Engineers undertakes the engineering studies and provides the manpower and machinery that are used to install the fencing. The actual manpower is typically provided by the State National Guard (the California National Guard, for example, constructed much of the San Diego fence), although occasionally the

military, and sometimes the USBP, are involved in the construction.[35] The Corps of Engineers funding comes from the Department of Defense Drug Interdiction and Counter-Drug Activities Account. **Table 2** shows the funding for the "Southwest Border Fence" sub-account within this DOD Account, from FY1997 to FY2006.

Table 2. DOD Funding for the Southwest Border Fence
(millions of dollars)

Fiscal Year	DOD Funding
2006	3.5
2005	N/A
2004	4.0
2003	4.7
2002	5.0
2001	5.0
2000	4.0
1999	3.0
1998	4.0
1997	5.0

Source: FY2006, H.Rept. 109-359; FY2005, H.Rept. 108-622; FY2004, H.Rept. 108-283; FY2004, H.Rept. 107-732; FY2002, H.Rept. 107-333; FY2002, H.Rept. 106-945; FY2000, H.Rept. 106-371, FY1999, H.Rept. 105-746; FY1998, H.Rept. 105-265; FY1997, H.Rept. 104-724.

Notes: FY2005 funding for the "Southwest Border Fence" sub-account was not identified in the Conference Report, H.Rept. 108-622. The House Committee had recommended $7 million for this sub-account in H.Rept. 108-553; while the Senate Committee had not recommended any funding for it in S.Rept. 108-284.

Types of Fences and Barriers

The USBP currently uses three main types of barriers along the border: primary fencing immediately on the international border, Sandia fencing behind the primary fencing, and vehicle barriers meant to stop vehicles, but not people on foot, from traversing the border. While other forms of primary fencing, such as bollard fencing[36] and picket fencing,[37] have been constructed in limited areas,[38] to date the

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[35] From interviews with CBP, November 30, 2005 and September 13, 2006, and the Corps of Engineers, November 29, 2005.

[36] Bollard fencing is comprised of vertical installations of solid concrete, metal spheres, or large posts, embedded into the ground at small enough intervals as to be impassable. Bollard fencing is difficult to compromise but expensive to install. See **Appendix I** for a depiction

(continued...)

agency has largely focused on using the landing mat fencing as a primary fence and the Sandia fence as a secondary fence.

Landing Mat Fencing. Landing mat fencing is composed of army surplus carbon steel landing mats which were used to create landing strips during the Vietnam War. The landing mats form panels 12 feet long, 20 inches wide, and 1/4 inch thick, which are welded to steel pipes buried 8 feet deep every 6 feet along the fence. Each mile of fencing requires the use of 3,080 panels.[39] There are about 5 miles of surplus landing mat fencing remaining as of 2006.[40] According to the USBP, sites that feature landing mat fencing include the following USBP stations: Campo, CA; Yuma, AZ; Nogales, AZ; Naco, AZ; Douglas, AZ, and El Paso, TX.[41] There are 62 miles of landing mat fencing currently constructed.[42]

In a 1999 study, the Corps of Engineers predicted that construction costs for the landing mat fencing would range from $388,005 to $431,117 per mile.[43] This estimate includes the cost of materials, despite the fact that the landing mat fencing constructed to date has been comprised of army-surplus panels acquired by CBP at no cost. As previously noted, however, only about 5 miles of surplus landing mat fencing material remains available. Maintenance costs per year could vary widely depending on the number of breaches the fence undergoes. Low levels of damage to the fence would result in low annual repair costs, while a large number of breaches could result in stretches of fencing needing to be replaced. Per mile, the Corps of Engineers estimated that yearly maintenance costs would probably range from $1,742

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[36] (...continued)
of bollard fencing.

[37] Picket fencing is comprised of metal stakes set sufficiently close together as to be impassable. See **Appendix I** for a depiction of picket fencing.

[38] Roughly 13 miles of these alternate forms of fencing have been constructed to date, according to an interview with CBP Congressional Affairs on September 13, 2006.

[39] U.S. Army Corps of Engineers, Construction Engineering Research Laboratories, *Engineering Life-Cycle Cost Comparison Study of Barrier Fencing Systems*, USACERL Technical Report 99/28, February 1999, p. 14. Hereafter referred to as Corps of Engineers Study.

[40] Interview with CBP Congressional Affairs, September 13, 2006.

[41] Telephone conversation with CBP, November 30, 2005.

[42] Interview with CBP Congressional Affairs, December 23, 2005.

[43] The Corps of Engineers used 1997 dollars in their study. For the purposes of this memorandum, the numbers predicted by the Corps have been adjusted to 2005 dollars using the Gross Domestic Product (GDP) deflator available at [http://www1.jsc.nasa.gov/bu2/inflateGDP.html]. The actual predictions made by the Corps, in 1997 dollars, were $341,584 to $379,538 per mile for construction costs, and $1,534 to $15,629 per year in maintenance costs.

to $17,753.[44] The Corps of Engineers noted that the net present value[45] of the fence after 25 years of operation, per mile, would range from $5.4 million and $8.3 million a mile depending on the amount of damage sustained by the fencing each year.

Sandia Secondary Fence. The secondary fence proposed by the Sandia study has only been constructed over roughly 9.5 miles of the 14 miles in the original plan due to environmental concerns voiced by the California Coastal Commission. As previously discussed, P.L. 109-13 included language that will allow waiver of all legal requirements determined necessary by the Secretary of DHS for the expeditious construction of authorized barriers and only allows judicial review for constitutional claims. On September 14, 2005, DHS announced it is applying its new waiver authority to complete the San Diego fence.[46] However, construction has not begun on the remaining four miles of the San Diego fence because DHS is in the process of acquiring the necessary land.[47] DHS is currently estimating that it will cost an additional $66 million to finish the San Diego fence, bringing overall costs for this 14 mile-long project to $127 million. Additionally, DHS notes that it will use a mix of DOD resources and private contractors to finish the fence, and that the cost of using contractors is included in the request.[48]

The Sandia fence, as it has been constructed in the San Diego sector, is a secondary fence constructed behind the primary fence. Enough space is left between the two fences to accommodate an access road. The secondary fence is an angled two-piece fence. The fence is vertical up to ten feet high, and then extends out at an angle towards the climber. This prevents climbing by using gravity and the weight of the climber against them. The Corps of Engineers estimated that Sandia fencing costs per mile would range from $785,679 to $872,977 for construction and $953 to $7,628 per mile yearly for maintenance. Additionally, the Corps of Engineers study notes that the Sandia fence would possibly need to be replaced in the fifth year of operation and in every fourth year thereafter if man-made damage to the fence was "severe and ongoing." For this reason, in the study the Corps of Engineers noted that

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[44] Corps of Engineers Study, p. 21.

[45] Net present value is a term used by the Corps of Engineers in their life cycle costs analyses for construction projects. It amortizes the future costs of a project and shows what the entire costs of the project will be. In this case, these numbers represent 25 year predictions and have been adjusted from 1997 dollars to 2005 dollars using a GDP Deflator

[46] DHS published a Federal Register notice on September 22, 2005, declaring the waiver of, in their entirety: (1) the National Environmental Protection Act (42 U.S.C. 4321 et seq.); (2) the Endangered Species Act (16 U.S.C. 1531 et seq.); (3) the Coastal Zone Management Act (16 U.S.C. 1451 et seq.); (4) the Federal Water Pollution Control Act (33 U.S.C. §§1251 et seq.); (5) the National Historic Preservation Act (16 U.S.C. §§470 et seq.); (6) the Migratory Bird Treaty Act (16 U.S.C. §§703 et seq.); (7) the Clean Air Act (42 U.S.C. §§7401 et seq.); and (8) the Administrative Procedure Act (5 U.S.C. §§551 et seq.).

[47] Telephone conversation with CBP, November 30, 2005.

[48] DHS FY2007 Justifications. pg. CBP Construction 18.

the net present value of the fence after 25 years of operation, per mile, would range from $11.1 million to $61.6 million.[49]

Other Border Barriers: Vehicle Barriers

The USBP utilizes various different types of barriers to impede vehicles from crossing into the United States from Mexico. Some of these barriers are temporary and can be moved to different locations when needed, others are permanent barriers. The main purpose of vehicle barriers is to prevent smugglers from easily driving their vehicles across the border.

Permanent Vehicle Barriers. Permanent vehicle barriers, as their name suggests, are not designed to be moved but rather are permanent installations. Permanent vehicle barriers are typically steel posts, or bollards, that are excavated 5 feet deep and inserted into a poured concrete base. The posts alternate in above-ground height in order to dissuade individuals from forming a ramp over the barrier. They are spaced so as to allow foot and animal traffic but not vehicular traffic. The USBP recently began building permanent vehicle barriers in the Yuma sector, with a substantial stretch slated to be built along the Organ Pipe Cactus National Monument. When linked with the 30 miles of vehicle barriers built by the National Park Service, a USBP spokesman reportedly noted that the total 123 mile length of the project "will form the largest continuous physical barrier along the border in the nation."[50]

In the FY2007 DHS Congressional Budget Justifications, DHS notes that the Yuma vehicle barrier project would take until at least 2010 (and possibly longer) to complete if CBP continued to use the Corps of Engineers and other military personnel to construct the barriers. Instead, CBP proposes hiring commercial contractors to build 39 miles of vehicle barriers in the Yuma sector, or almost half of the project's 93 mile total.[51] CBP is projecting that the project will be completed by FY2011, and that the overall project costs will be $116 million.[52] This means that, overall, the project will cost roughly $1.25 million per mile. The National Park Service has spent $11.1 million to construct 18 miles of permanent vehicle barriers in Organ Pipe Cactus National Monument, and has obligated, but not yet spent, an

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[49] The numbers used by the Corps of Engineers were cited in 1997 dollars. They have been adjusted to 2005 dollars using the GDP deflator cited above. The actual costs per mile in the Corps of Engineers Study were: $691,680 to $768,533 for construction, and $839 to $6,715 for maintenance. Net Present Value after 25 years in 1997 dollars ranged from $9.73 million to $54.23 million. Corps of Engineer Study, p. 3 and p. 23.

[50] Jonathan Athens, "Officials say OK to Border Fence," YumaSun.com (July 20, 2005) available at [http://sun.yumasun.com/google/ysarchive14980.html].

[51] DHS FY2007 Justifications, pg. CBP Construction-7. CBP project length does not include the 30 miles of vehicle barriers maintained by the National Park Service.

[52] DHS FY2007 Justifications, pg. CBP Construction-18. It is unclear why the project is predicted to take less time with contractors, and yet the overall completion date for the construction is predicted to be 2011.

additional $6.6 million in FY2005 funding to complete the remaining 13 miles of the project.[53]

DHS currently has roughly 50 miles of vehicle barriers deployed along the border.[54] Vehicle barriers have been used in the El Centro, CA, Yuma, AZ, Tucson, AZ, and El Paso, TX sectors.[55]

Temporary Vehicle Barriers. Temporary vehicle barriers are typically built from welded metal, such as railroad track, but can also be constructed from telephone poles or pipe. These barriers are built so that they cannot be rolled or moved manually; they can only be moved with a forklift or a front-end loader. They are usually built at USBP stations and transported to areas of high vehicle entry, where they are placed and chained together.[56] The main advantage of the temporary vehicle barriers is their ability to be redeployed to different areas to address changes in smuggling patterns. The main disadvantage of these barriers is that they are easier to compromise than permanent vehicle barriers.

Legislation in the 109th Congress

There are a number of bills in the 109th Congress that would expand the current fencing and other forms of barriers at the international land border. Some of these bills would require fencing to be constructed along the entire southwest border, others would identify particular stretches of land which would receive fencing, and still others would call for studies to determine whether fencing is a cost-effective way of securing the border. The REAL-ID Act (P.L. 109-13) expanded DHS' waiver authority in order to expedite the construction of border fencing. Subsequently, H.R. 4437 and H.R. 6061, which would direct DHS to construct roughly 849 miles of fencing along the border, were passed by the House on December 16, 2005 and September 14, 2006 respectively. S. 2611, which calls for 370 miles of fencing to be constructed, was passed by the Senate on May 25, 2006. Senate Amendment 4788 was added to the Department of Defense Appropriation Bill, H.R. 5631, on August 2, 2006, and would appropriate $1.8 billion to the National Guard for the construction of border fencing. H.R. 5631 was passed by the Senate on September 7, 2006 and is currently in Conference. Following is a brief discussion of the border barrier related legislation in the 109th Congress.

H.R. 4083 would amend the INA to direct the Secretary to construct a fence along the entire southwest border and would authorize $2 billion for this purpose.

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[53] From the National Park Service, February 9, 2006. The National Park Service notes that 30 miles of permanent vehicle barriers are being built at the Organ Pipe Cactus National Monument, and one mile is being built in the Coronado National Monument.

[54] Email correspondence with CBP Congressional affairs, December 23, 2005.

[55] Telephone conversation with CBP, November 30, 2005.

[56] U.S. Department of Justice, Immigration and Naturalization Service, *Final Environmental Assessment U.S. Border Patrol Temporary Vehicle Barriers Naco and Douglas, Arizona*, November 2002.

S. 1916 includes a provision requiring the Secretary to study the feasibility and cost of constructing a triple fence along the southwest border. S. 2049 would direct the Secretary to construct whatever fencing and other infrastructure is necessary to achieve operational control of the border. H.R. 4313, S. 2061, S. 2117, S. 2368, and S. 2377 would direct the Secretary to construct a two layered reinforced fence along the southern international land border, starting with high alien traffic and smuggling areas. H.R. 4313, S. 2117, S.2368, and S. 2377 would also direct the Secretary to create a border zone within 100 yards of the land border and would require other agencies to transfer any land in their jurisdiction that falls inside the border zone to DHS without reimbursement. Additionally, H.R. 4313 and S. 2117 would direct the Secretary to undertake a review and value assessment of all property in the border zone owned by private parties and state and local governments, and to begin acquiring this property as soon as practicable.

H.R. 4437, as amended, would direct DHS to construct two layered reinforced fencing and additional physical barriers, roads, lighting, cameras and sensors along roughly 730 miles[57] of the southern border, including 20 miles around Tecate, CA; from Calexico, CA to Douglas, AZ; from Columbus, NM to El Paso, TX; from Del Rio, TX to Eagle Pass, TX; and from Laredo, TX to Brownsville, TX. The bill would designate the roughly 370 mile portion of the fence between Calexico, CA and Douglas, AZ a priority area and would direct DHS to ensure that "an interlocking surveillance camera system" is installed along this area by May 30, 2006, and that the fence is completed by May 30, 2007. The bill would also designate a 30 mile stretch around Laredo, TX as a priority area and would direct DHS to complete this fencing by December 31, 2006. H.R. 6061 includes a similar provision but would push back the construction deadlines for the priority areas by one year for the Calexico, CA to Douglas, AZ stretch of fencing and by two years for the 30 mile stretch around Laredo, TX.

S. 2611, as amended, S. 2454, S. 2612, and S. 3564 would replace the current border fencing in the Tucson sector with a reinforced double layer fence and would direct DHS to construct 150 miles of vehicle barriers in the sector. S. 2454 would require that fencing be extended 25 miles west of Naco, AZ; S. 2611, S. 2612, and S. 3564 would require that fencing be extended at least 10 miles west of Naco. Each of the bills would also expand the fencing in the Yuma sector, would require that the double or triple layer fence constructed be extended at least two miles beyond urban areas, and would add 50 miles of vehicle barriers to the sector. The bills would direct DHS, in conjunction with other federal agencies, to submit a study on the construction of a system of barriers along the southern and northern borders, including information on the need for such a system, the costs associated with constructing the system, the system's potential environmental impacts, and the system's potential impact on trade or tourism. S. 2394 would direct DHS to initiate a process for planning, constructing, and maintaining a permanent barrier or wall along appropriate areas of the border.

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[57] This is a conservative estimate generated by calculating the length of a straight line between each of the locations outlined in the provision. Given the fact that the border is not a straight line, the actual length of the fencing that would be required by this provision may be longer.

S. 2611, as amended, and S. 3564 would further direct DHS to construct 370 miles of triple-layered fencing and 500 miles of vehicle barriers in areas along the southwest border most often used by smugglers or illegal aliens to enter the United States within two years of enactment. The Senate-passed Defense Appropriations Bill for FY2007 (H.R. 5631), as amended by S.Amdt. 4788, would appropriate $1,829 million for the National Guard to construct 370 miles of triple-layered fencing and 500 miles of vehicle barriers along the southwest border.

H.R. 4437 and H.R. 4312 would require DHS to reimburse property owners for the costs incurred in repairing private infrastructure along the border damaged by aliens entering the country illegally. The bills would authorize appropriations of $50,000 a year for this program.

Issues For Congress

There are a number of policy issues that Congress may consider concerning the construction of barriers along the border, including, but not limited to: their effectiveness; their overall costs compared with their benefits; their possible diplomatic ramifications; their unintended consequences; and the locations in which they are to be constructed. Although these issues apply to all potential barriers at the border, due to the focus on border fencing in the current congressional debate this section will focus its analysis on the potential policy issues surrounding the construction of fencing at the border.

Effectiveness. Proponents of border fences point to the substantial reduction in apprehensions along the San Diego sector as tangible proof that fences succeed in reducing cross-border smuggling and migration where they are constructed.[58] Opponents attribute part of the decrease in apprehensions to the increase in manpower and resources in the sector and, pointing to the increase in apprehensions in less-populated sectors, contend that the fence only succeeds in re-routing unauthorized migration and not in stopping it.[59] The USBP, for its part, states that border fencing is a force multiplier because it allows its agents to focus enforcement actions in other areas. The USBP has also stated that the fencing constructed in urban areas has helped reroute unauthorized migration to less populated areas where its agents have a tactical advantage over border crossers. As previously noted, the number of USBP apprehensions in 2004 were almost identical to the number of

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[58] For the views of supporters of border fencing, refer to "We Need a Fence," available at [http://www.weneedafence.com/], last visited September 21, 2006, and Thomas Sowell, "Let's Get Our Terms Straight," available at [http://www.annistonstar.com/opinion/2006/as-insight-0402-0-6d01s3130.htm], last visited September 21, 2006.

[59] For the views of opponents of border fencing, refer to Eilene Zimmerman, "Against the Wall," *Salon,* December 12, 2005, available at [http://dir.salon.com/story/news/feature/2005/12/12/border_wall/index.html], last visited September 21, 2006, and Molly Ivins, "Another Brick in the Wall," available at [http://www.annistonstar.com/opinion/2006/as-insight-0402-0-6d01s3130.htm] last visited September 21, 2006.

apprehensions in 1992; the main difference is that while San Diego accounted for the majority of apprehensions in 1992, in 2004 Tucson and Yuma sectors accounted for the majority of apprehensions.

A possible issue for Congress concerns the overall effectiveness of border fencing, especially if it is not constructed across the entire border in question. In the limited urban areas where border fencing has been constructed, it has typically reduced apprehensions. However, there is also strong indication that the fencing, combined with added enforcement, has re-routed illegal immigrants to other less fortified areas of the border. Additionally, in the limited areas where fencing has been erected there have been numerous breaches of the border fencing and a number of tunnels discovered crossing underneath the fencing. It stands to reason that even if border fencing is constructed over a significant portion of the land border, the incidences of fence breaches and underground tunnels would increase. Possible policy options to address these issues could include mandating that border fencing be highly tamper-resistant or directing CBP to invest in tunnel-detection technologies.

Costs. Because border fencing is a relatively new and limited phenomenon along the U.S.-Mexico border, there is a dearth of information concerning its overall costs and benefits. The Corps of Engineers study predicted that the costs of constructing a double layer fence consisting of primary fencing and Sandia fencing would range from $1.2 million to $1.3 million a mile. The Corps of Engineers also predicted that the 25 year life cycle cost of the fence would range from $16.4 million to $70 million per mile depending on the amount of damage sustained by the fencing. If significant portions of the border were to be fenced, reducing the areas along which individuals could cross the border, it may stand to reason that the fencing will be subjected to more breaches and other attempts to compromise than the fencing that has already been constructed. This may mean that the costs of maintaining border fencing that is widely deployed in the future will be higher than they have been thus far for the limited deployment. The Corps estimates do not include the costs of acquiring the land or most labor costs, since construction would be done by DOD; these could well turn out to be significant expenses. The Congressional Budget Office (CBO) has estimated that border fencing would cost $3 million a mile to construct.[60] However, the CBO does not elaborate on what is included in that estimate. DHS predicts that the San Diego fence will have a total cost of $127 million for its 14 mile length when it is completed — roughly $9 million a mile. However this cost may be somewhat misleading due to the following factors: construction of the fence was delayed for an extended period of time; the remaining construction involves filling a relatively large gulch which may be more complex than the average stretch of border; and DHS is proposing to use private contractors to expedite the construction process which will increase the labor costs and thus the project costs.

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[60] Congressional Budget Office, *Congressional Budget Office Cost Estimate: S. 2611 Comprehensive Immigration Reform Act of 2006*, May 16, 2006. P. 34. Available at [http://www.cbo.gov/ftpdocs/72xx/doc7208/s2611.pdf], last visited August 2, 2006.

Some have argued that building fences on the border is too expensive and would consume funding that would be better spent on hiring additional agents or deploying additional technologies to the border.[61] Others maintain that the costs of fencing are negligible compared to the costs of illegal immigration, and that fencing has been proven effective at decreasing illegal immigration in those areas where it has been deployed.[62] The USBP has testified that "for border control, for border security, we need that appropriate mix. It's not about fences. It's not about Border Patrol agents. It's not about technology. It's about all of those things."[63] At issue for Congress is how best to allocate scarce border security resources while safeguarding homeland security. Does border fencing represent the best investment of border security funding, and what is the appropriate mix of border security resources? How much will maintaining border fencing cost in the future, and which agency will be responsible for this maintenance? Will using private contractors to expedite the construction of border fencing increase the costs?

Fence Design. Congress mandated the design of the border fence in San Diego in IIRIRA. Many of the bills being considered in the 109th Congress that include fencing provisions also identify the kind of fencing — typically double or triple fencing — that should be constructed. There are many different fence designs that could be deployed to the border, and each have their relative strengths and weaknesses. Concrete panels, for example, are among the more cost-effective solutions but USBP agents cannot see through this type of fencing; the USBP has testified about their preference for fencing that can be seen through, so as to identify the activity occurring on the Mexican side of the border and thus preserve their tactical advantage over potential border crossers, and to better avoid potential rockings[64] or other violent incidents. Sandia fencing has been effective in San Diego and can be seen through, but is among the more expensive fencing options. Bollard fencing has been effective in its limited deployment and can also be seen through, but is also expensive to install and to maintain. Chain link fencing is relatively

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[61] See Jason Ackleson, "Fencing in Failure; Effective Border Control is Not Achieved by Building More Fences," *Immigration Policy in Focus*, Vol. 4, Issue 2, April 2005, available at [http://www.ailf.org/ipc/policy_reports_2005_fencinginfailure.asp], last visited September 21, 2006.

[62] For a series of examples, see Parapundit, *Immigration Border Control Archives*, available at [http://www.parapundit.com/archives/cat_immigration_border_control.html], last visited August 20, 2006.

[63] Testimony of Kevin Stevens, Senior Associate Chief of Customs and Border Protection, in U.S. Congress, House Homeland Security Committee, Economic Security, Infrastructure Protection and Cyber Security Subcommittee, and House Government Reform Committee, Criminal Justice, Drug Policy, and Human Resources Subcommittee, *Fencing the Border: Construction Options and Strategic Placement*, 109th Cong., 2nd sess, July 20, 2006. Hereafter referred to as: *Fencing the Border* hearing, July 20, 2006.

[64] Rockings refer to the phenomenon of individuals on the Mexican side of the border hurling stones and other items over the fence at USBP agents and vehicles. In the Yuma sector, for example, agents patrolling along the fence are deployed in armored vehicles known as "war-wagons" to protect themselves from rockings and other forms of assault, which are common in that area. Information obtained during a CRS site visit to Yuma sector in August, 2005.

economical, but more easily compromised.[65] If fencing is to be constructed along the border, an issue concerns what kinds of fencing should be constructed in order to maximize its deterrent effect and its utility to the USBP while minimizing the costs associated with its construction and maintenance.

Fence Location. The USBP has testified that border fencing is most effective for its operational purposes when deployed along urban areas.[66] In these areas, individuals crossing the border have a short distance to cover before disappearing into neighborhoods; once they have entered neighborhoods it is much more difficult for USBP agents to identify and apprehend unauthorized aliens. Additionally, from populated areas it is relatively easy for unauthorized aliens to find transportation into the interior. For these reasons, all of the border fencing constructed by the USBP to date has been built in urban areas abutting the border, such as San Diego, Nogales, and El Paso. In rural areas, the USBP has testified that it has a tactical advantage over border crossers because they must travel longer distances before reaching populated areas. According to CBP, fencing is manpower intensive because agents must continually check the fence for breaches and for illegal activity. This does not represent a problem in urban areas, because the USBP stations are typically located near the border in those areas. In some of the more rural areas of the border, where the nearest towns and USBP stations may be many miles away from the border, this would mean that agents would need to spend much of their working day commuting from the nearest USBP station to the fence location.[67] Additionally, because the border fencing constructed to date has been built along urban areas it has been relatively easy to house the individuals involved in its construction. If border fencing is extended into the more remote areas of the border, the costs of its construction may increase due to the need to bring the individuals and goods needed to build the fence to these areas for extended periods of time.

A very practical issue concerns what areas of the border should be fenced. Should fencing be restricted to urban or semi-urban areas in order to give the USBP a tactical advantage over border crossers, or should fencing be constructed along any geographical area of the border that features large numbers of unauthorized immigration? In rural areas, should fencing be limited to areas of high illegal entry in order to impede individuals from crossing the border, or should fencing be constructed as a deterrent in any area, even those featuring low levels of illegal entry? Should fencing be deployed in sectors where the distance between the nearest USBP station and the fence requires agents to spend most of their day commuting? Should fencing be deployed to the northern border as well as the southwest border? Will building fencing along more remote areas of the border increase the construction costs?

Land Acquisition. There are a number of issues associated with the acquisition of the land that would be required for border fencing. Much of the land along the California and Arizona border is owned by the federal government;

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[65] *Fencing the Border* hearing, July 20, 2006.

[66] *Fencing the Border* hearing, July 20, 2006.

[67] Interview with CBP Congressional Affairs, September 13, 2006.

however most of the land along the Texas border is owned by private individuals. What will the costs of acquiring the land to construct border fencing be, and have these costs been factored into estimates of border fencing costs? Will eminent domain be used to confiscate land from individuals who do not wish to have fencing built on their lands?

A corollary issue may involve DHS' authority to construct border fencing along tribal lands. The Arizona desert along the Tohono O'odham reservation has become one of the most heavily trafficked border areas in the country, and the USBP has been restricted in its operations in the reservation due to tribal concerns.[68] The Tohono O'odham have reportedly vowed to fight the construction of fencing on tribe-owned land, citing environmental and cultural concerns.[69] Whether the expanded waiver authority that was given to the Secretary of DHS by the REAL-ID Act would allow the Department to override the jurisdiction of tribal governments along the border remains an open question.

Diplomatic Ramifications. The governments of Mexico and Canada have both voiced concern about the United States constructing barriers along the international border. Mexican President Vicente Fox has come out strongly against the construction of border barriers on numerous occasions, stating his belief that these projects isolate the two nations, create frustration and misunderstandings, and do not solve the underlying problems that lead individuals to enter the United States illegally. Mexican Press Secretary Rubén Aguilar Valenzuela stated his government's belief that "history has also taught us that a wall is never the solution to problems and that all walls eventually get torn down."[70] The Mexican government has reportedly forwarded numerous diplomatic notes to the White House registering its complaints against the possible expansion of border fencing. The Canadian government has also reportedly voiced concern over language that was inserted into H.R. 4437 that would require a study of fencing options along the northern border, citing the impracticality of fencing the northen border and the fact that the U.S. government has never discussed such a plan with Canadian authorities.[71] Deputy Assistant Secretary for Immigration and Customs Enforcement John P. Clark reportedly stated during Congressional testimony that the proposed expansion of border fencing "harkens back to the Chinese wall and the Berlin Wall, not the

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[68] The USBP has been prohibited from building permanent camera installations and from paving access roads leading to and along the border. Information obtained during a CRS site-visit to the Tohono O'odham reservation, August 2005.

[69] Randal Archibald, "Border Fence Must Skirt Objections From Arizona Tribe," *New York Times*, September 20, 2006.

[70] Mexican Government Press Release, "Crecimiento con Calidad: El Presidente Vicente Fox encabezará la cena de gala de la XI Cumbre Anual Hemispheria San Pedro 2005: Rubén Aguilar, Vocero de Presidencia," May 12, 2005. Translation by CRS. Available at [http://www.presidencia.gob.mx/actividades/crecimiento/?contenido=18195&pagina=31]. Last visited August 20, 2006.

[71] Beth Gorham, "Canada Balks at U.S. Plan for Border Fence," *Canadian Press*, December 17, 2005. Available at [http://www.canada.com/nationalpost/story.html?id=6c13f3fd-bdfb-4346-99ef-3f01f870c801&k=60592&p=1], last visited August 20, 2006.

message we want to send to the Mexican government, the Canadian government, and the rest of the world."[72] There are a number of possible issues for Congress to consider involving the potential diplomatic ramifications of constructing barriers along the border: Do the gains in border security outweigh the risk of alienating Mexico and Canada? Should the Mexican or Canadian government's opinions or wishes be taken into account when border fencing is concerned? Given the need to coordinate intelligence and law enforcement activities at the border, should maintaining cordial working relationships with Mexico and Canada take precedence over sealing the border with physical barriers?

Unintended Consequences. There is considerable evidence that the USBP's historical strategy of "Prevention through Deterrence," whereby agents and resources including border fencing and other barriers have been concentrated along urban areas and areas traditionally featuring high levels of illegal entry, has succeeded in changing the flow of illegal migration. While San Diego and El Paso were historically the two sectors that featured the most apprehensions and the highest levels of illegal immigration, since the mid-1990s and the advent of Operations Gatekeeper and Hold the Line in those sectors, the more remote geographical areas of the Arizona border have become the hot-spots for illegal migration into the United States. One unintended consequence of this enforcement posture and the shift in migration patterns has been an increase in the number of migrant deaths each year; on average 200 migrants died each year in the early 1990s, compared with 472 migrant deaths in 2005. Another unintended consequence of this enforcement posture may have been a relative increase, compared to the national average, in crime along the border in these more-remote regions. While crime rates in San Diego, CA and El Paso, TX, have declined over the past fifteen years, the reduction in crime rates along the more rural areas of the border have lagged behind the national trends. Another unintended consequence of the border fencing has been the proliferation of tunnels dug underneath the border. In San Diego, where the double-layer Sandia fencing has been constructed, smugglers have dug a number of tunnels underneath the border fence. One of these tunnels was almost a kilometer long and was built from reinforced concrete — evidence of a rather sophisticated smuggling operation.

A possible issue for Congress to consider as it debates expanding the existing border fencing concerns what the unintended consequences of this expansion could be. Given the re-routing of migration flows that have already occurred, are DHS and the relevant border communities prepared to handle the increased flow of illegal migration to non-reinforced areas? Is DHS prepared to deal with an increase in the phenomenon of cross-border tunnels and other attempts to defeat the purpose of the fencing? What will the impact on crime rates be along the unreinforced areas of the border? Will USBP agents be required to spend some of their patrolling time guarding the fence?

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[72] Eunice Moscoso, "Border Fence Would Cost Millions, Not Work Critics Say," *Cox News Service*, November 9, 2005.

Appendix I: Examples of USBP Border Fencing

Bollard fence

Landing mat fence

Picket or decorative fence

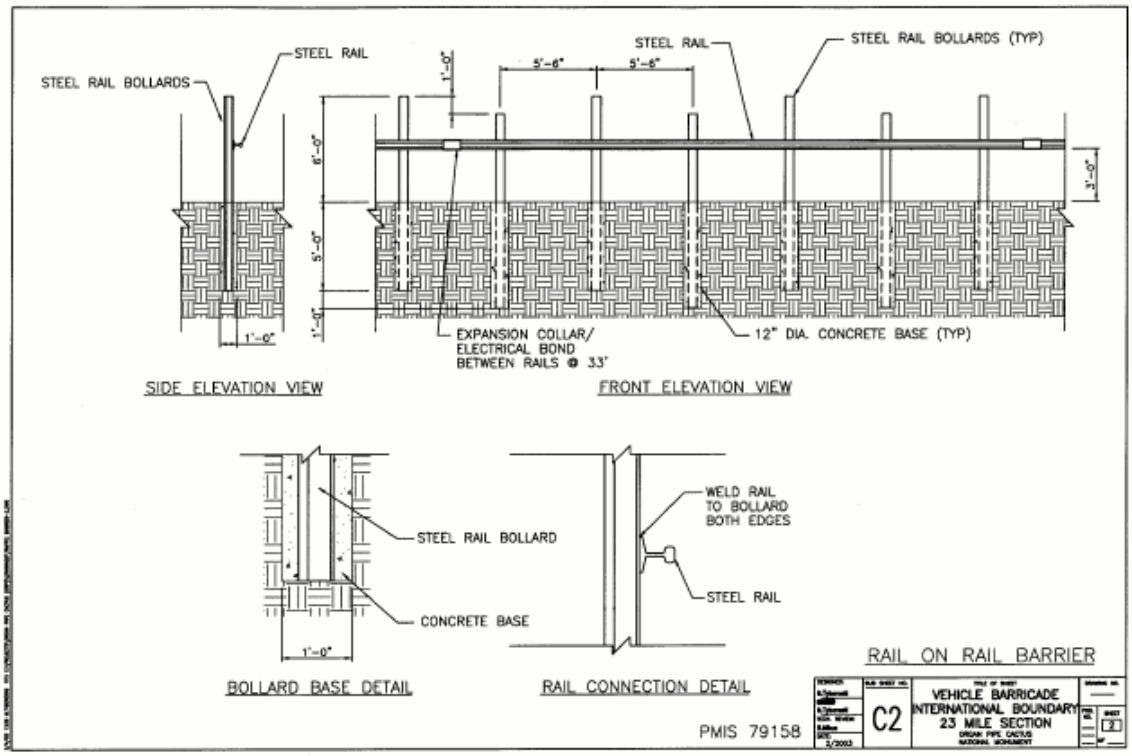
Sandia fence

Source: U.S. Department of Justice, Immigration and Naturalization Service, *Environmental Assessment for Infrastructure Within U.S. Border Patrol Naco-Douglas Corridor Cochise County, Arizona*, August, 2000, p. 1-13.

Appendix II: The San Diego Fence

Source: U.S. Department of Homeland Security; *Environmental Impact Statement for the Completion of the 14-Mile Border Infrastructure System San Diego, California,* July 2003.

Appendix III: Permanent Vehicle Barrier Schematic



Source: U.S. Department of the Interior, National Park Service, *Proposed Vehicle Barrier Environmental Assessment*, April, 2003.

Appendix IV: Permanent Vehicle Barriers

Source: CBP Congressional Affairs.

Appendix V: Data From Figure 4

	FY1992	FY1993	FY1994	FY1995	FY1996	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004
Other San Diego Sector Stations	204,456	210,129	155,386	262,505	297,423	189,321	160,781	140,640	113,866	85,815	87,195	96,752	119,293
Chula Vista Station	158,952	156,273	107,872	141,096	111,413	67,804	72,648	27,085	19,453	9,627	3,080	4,545	9,923
Imperial Beach Station	202,173	165,287	186,894	120,630	74,979	27,865	15,832	15,974	19,815	15,480	11,405	10,218	9,112
Tucson	71,036	92,639	139,473	227,529	305,348	272,397	387,406	470,449	616,346	449,675	333,648	347,263	490,827

Source: CRS Presentation of CBP data