United States Southern Border Protection Viability Assessment and Pre-Planning

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Originally Published: 11/07/2024
Last Update: 11/30/2024

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Preface

The entry of unauthorized individuals strains the economic health of, and availability of resources for, authorized citizens of a country or region. Increases in criminal activity and the influx of contraband such as drugs and weapons compound the problem.

The effort to protect a country's borders is not related to and must not be influenced by prejudice or discrimination. Most illegal immigrants are normal law-abiding individuals and families trying to escape poverty and violence. The issue of unauthorized entry is one of economics, safety, and the defense and health of the country and its citizens.

An economically feasible wall cannot provide sufficient border protection and cannot prevent the illegal migration of unauthorized individuals into the country. A wall solution that would effectively prevent unauthorized entry into the United States of America would probably cost hundreds of billions of dollars and take decades to build.

Protecting a country's border economically requires personnel stationed along the border in combination with specific structures and processes working together as a single entity.

The ideal solution would involve using existing armed services personnel to patrol the border, though in the USA the armed services are not responsible for border protection.

For the wall itself, commercialization, outsourcing, or contracting of independent resources to build a wall is tantamount to treason when the country already has resources available. Under no circumstances must anyone profit at taxpayer expense when it comes to protecting the country.

Legislative changes may be required.

Introduction

This document combines two distinct topics relating to the protection of the southern border of the United States. The first topic relates to the construction of a physical wall while the second topic relates to actually protecting the southern border (which an economically feasible wall cannot do).

As described here, the wall should be built by the US Army Corps of Engineers (USACE) and the border posts would be manned by existing Department of Homeland Security (DHS) personnel.

Under the solution described in this document, existing Ports of Entry are the gatekeepers of immigration into the United States. Protecting the border requires approximately six security personnel every half a mile along the border, along with monitoring electronics every several hundred feet, the infrastructure required to support such personnel and systems, any legislative changes required to support the process, and the funding required to implement the solution.

The information described herein is a pre-planning proposal that is meant to serve as a starting point for discussions relating to a viable and comprehensive border protection solution. This solution may require action at the Congressional level.

Opinions, politics, agendas, and profit are ignored in this treatise. Only the economic health of the United States of America and the safety of its citizens are considered.

Border Protection

The purpose of a border wall would be to help block the entry of illegal immigrants into the Unites States of America due to the economic burden such immigration causes. Unfortunately, a wall that could reliably stop most of the illegal immigrant transition across the border would probably take decades to build and could cost hundreds of billions of dollars or more to build and maintain if current direction and practice are adhered to. Both the expended time and the exorbitant cost are prohibitive.

Solutions

This document evaluates two solutions that could potentially be both economically viable and realistically implemented in a timely fashion. These solutions include a barrier, monitoring, personnel, and the infrastructure required to support the process of protecting the country's southern border.

Prerequisites

An effort to design and build a solution that protects the border must not rely on for-profit resources. This will help protect against greed-induced fraud, deception, increased costs, and cost overruns, as well as the resulting taxpayer burden and potential project failure.

Wall

Under this proposal, the United States Army Corps of Engineers (USACE) is responsible for the majority of the planning, design, and construction required to build the wall and its supporting monitoring infrastructure. No for-profit firms can be hired, employed, or used in the construction of the wall. USACE can recruit qualified and/or able civilians or military personnel for voluntary work (with pay) for assistance if needed. Minimal oversight of the USACE would be required.

Personnel

The Department of Homeland Security (DHS) currently consists of approximately 240,000 employees. The personnel required to protect the border as defined by this document is about one tenth of the number of total DHS employees.

Concession

The intention of this document is to define a border protection solution that involves the building of a wall by the USACE and the manning of a structured border protection solution by personnel from DHS that will NOT add significant taxpayer burden. Existing law and policy aside, personnel from the United States Army and/or Army National Guard could appropriately be assigned to protect the border with the same resultant success and savings, though this currently is not an option in the United States.

Physical Logistics

The wall would run from the Chula Vista (San Diego), California area to the Boca Chica (Cameron), Texas area with an actual border-following running length of approximately 1,950 miles. Approximately 1250 miles of the border follow the waterway of the Rio Grande, while approximately 700 miles exist over dry land.

The wall would be set back a given distance. In this document a setback of 100 feet from any actual geographical border marker or geolocation where the border crosses land is used. The wall would be set back a to-be-determined and possibly varying distance where the border runs along the Rio Grande, through mountainous or irregular terrain, through desert areas, or through urban areas. Acquisition of a small amount of land by eminent domain may be required in some urban or other areas.

There are legal, physical, and international issues relating to setback. The 100-foot setback specified here is arbitrary - this distance must be adjusted or reduced/increased as needed.

Approximately 50 existing land-based controlled border crossing Points of Entry exist along the border. Some of these crossings are for vehicle traffic, some are for pedestrian traffic, and some are either combination or special purpose crossings. The wall would be designed to accommodate, merge with, and enhance these Points of Entry. A number of rail crossings exist along the border. The wall would be designed to accommodate, merge with, and enhance these Points of Entry. There are multiple ferry/waterway crossings at the border. The wall would be designed to accommodate, merge with, and enhance these Points of Entry.

A viable and mildly effective wall would be made of concrete and rise 20 to 24 feet above ground level. The wall would be six feet wide at the base and two feet wide at the top with rounded corners. The wall would require at least a ten-foot-square four-foot-thick footer with an additional buried concrete spade extending six feet below the footer. The spade and footer are excavated and poured in place. The entire wall consists of precast interlocking sections that are placed on the footer like building blocks. These sections are precast but are cast locally, on or near location, to allow for the required customization of sections and to reduce handling and transportation costs and the associated increased lead times.

The ground upon which the wall is constructed is not flat. The irregularity of each discrete section of earth will require constant adjustment of the vertical slopes of the interlocking side-by-side edges of the wall sections as they are poured. The forms would accommodate these ongoing modification requirements. There would be installation areas where the vertical edges/sides of every single set of three cast wall sections must be adjusted to maintain an integral fit of the cast sections. On a case-by-case basis, decisions would be made at each section area relating to excavating or filling to level.

Associated structures must be erected and infrastructure must be built to support the business processes relating to the monitoring and securing of the border as delineated by the wall.

Once the wall is in place, increased border intrusion by sea will increase and must be dealt with accordingly. This is a separate issue that will not be addressed in this document.

Control Complexes

A Control Complex would be required at each end of the wall. Each of these two facilities would house approximately 100 to 200 executive, administrative, and operations personnel.

Supply Depots

Supply Depots would be required approximately every 50 miles, for a total of 40 Supply Depots along the wall. Each Supply Depot would be manned by two personnel from the Administration pool (about 80 administrative personnel in total), as well as approximately six warehouse and distribution personnel (another 240 personnel) and two drivers (another 80 personnel), for a total of 400 personnel manning the 40 Supply Depots.

Guard Houses

Guard Houses would be required approximately every half a mile, for a total of approximately 4000 Guard Houses along the wall. The area of the border demarcated by the wall must be manned and monitored 24 hours a day, 7 days a week. Each Guard House supports two monitoring personnel per shift for three shifts, for a total of six personnel per Guard House or a total of 24,000 monitoring personnel required to protect the border.

Block Houses

Monitoring must be performed at approximately 528-foot line-of-sight intervals along the entirety of the wall. Block Houses are small self-contained structures that gather all sensor output and monitoring images and information and relay that data to the Guard Houses. The wall is approximately 10,560,000 feet in length, which means that approximately 20,000 Block Houses (monitoring stations) will be required.

Service Road

A 40-foot-wide service road is required, running the length of the implementation on the US side of the wall. Excavated earth from the wall footer will be used to create an earthen mound on the US side of the 40-foot service road.

Manpower

Approximately 25,000 (24,800) personnel in total would need to be assigned to the border protection effort on a permanent, long-term, or rotating basis. Virtually all of these positions should be filled with personnel who are already on government payroll (DHS).

Implementation Logistics

The wall cannot be built until the Control Centers are in operation, and associated supporting structures must be built and manned simultaneously as sections of wall are installed.

Border Graphic

FIGURE 1

The graphic above is a representation of the border from Google Maps. The green boxes indicate the approximate locations of the two Control Complexes, and the red circles indicate the approximate locations of a few of the Supply Depots, which are positioned 50 miles apart along the border.

This is a representation meant only to assist with the visualization of the Control Complex locations and the horizontal spacing between Supply Depots.

Guard House Position Graphic

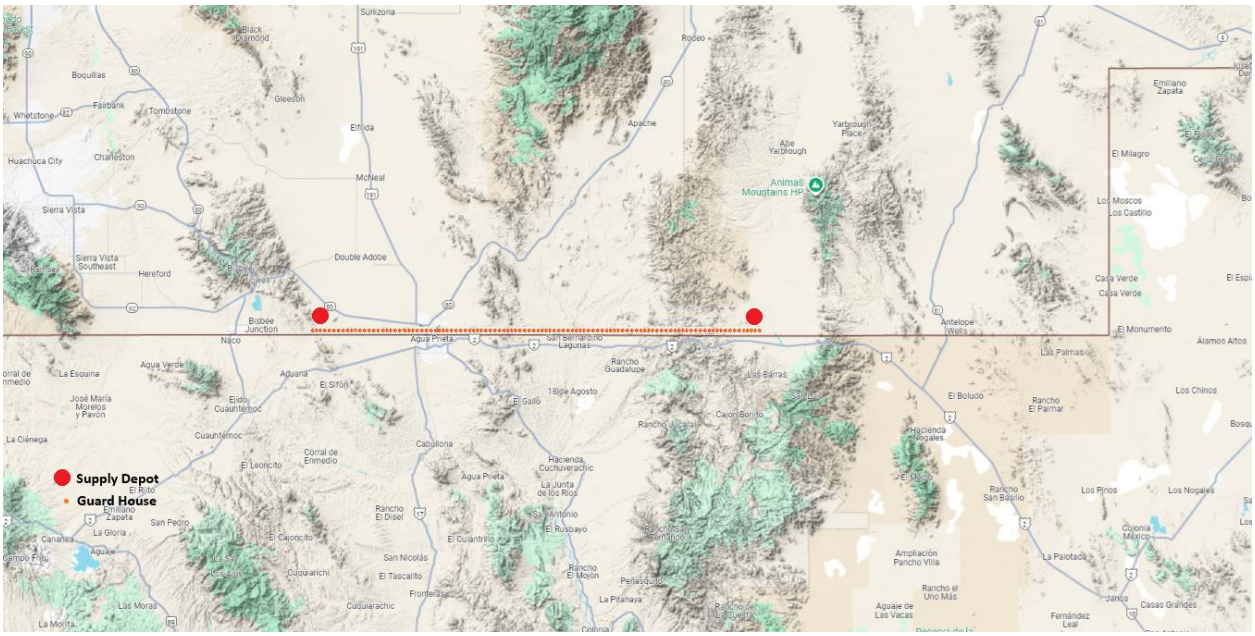

FIGURE 2

The graphic above is a representation of the border from Google Maps. The red circles indicate the approximate locations of two Supply Depots, which are positioned fifty miles apart along the border. The small orange dots represent Guard Houses, which are positioned every half a mile along the border.

This is a representation meant only to assist with the visualization of the Supply Depot locations and the horizontal spacing between Guard Houses.

Block House Position Graphic

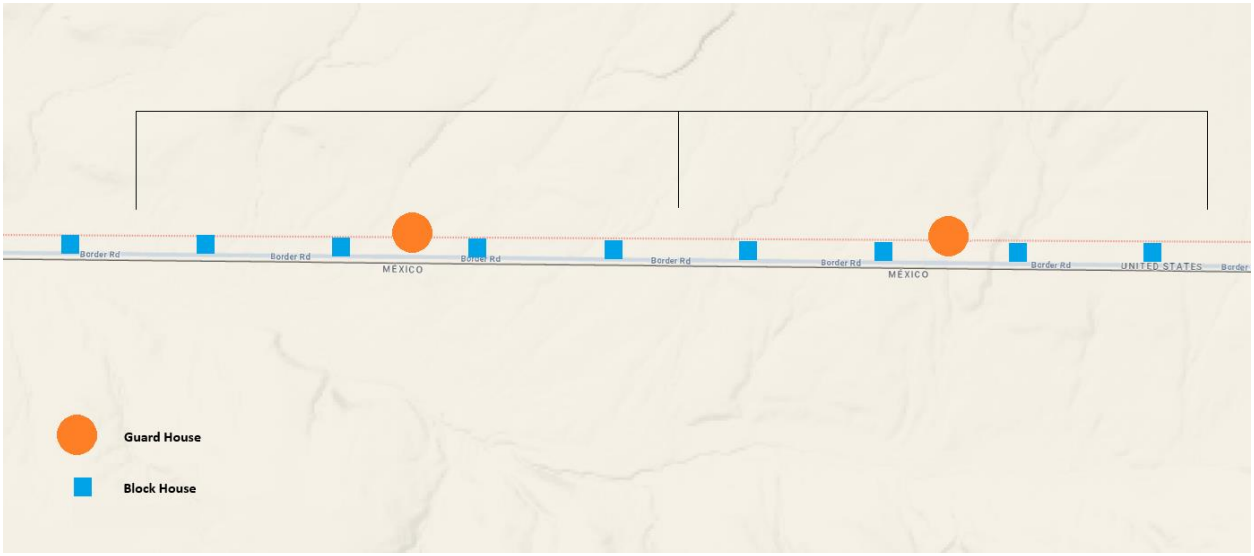

FIGURE 3

The graphic above is a representation of the border from Google Maps. The orange circles indicate the locations of two Guard Houses, which are positioned every half mile along the border. The blue boxes indicate the positions of Block Houses, which are located every 528 feet along the border.

Each Guard House monitors the information from four Block Houses. The black arrows indicate what the Block House assignment ranges might be for the Guard Houses in this particular arrangement. There are several possible options for Block House placement; this graphic represents one of those options.

This is a representation meant only to assist with the visualization of the Guard House locations and the horizontal spacing between Block Houses.

Wall Detail

The general structure and assembly of a viable wall solution is shown below.

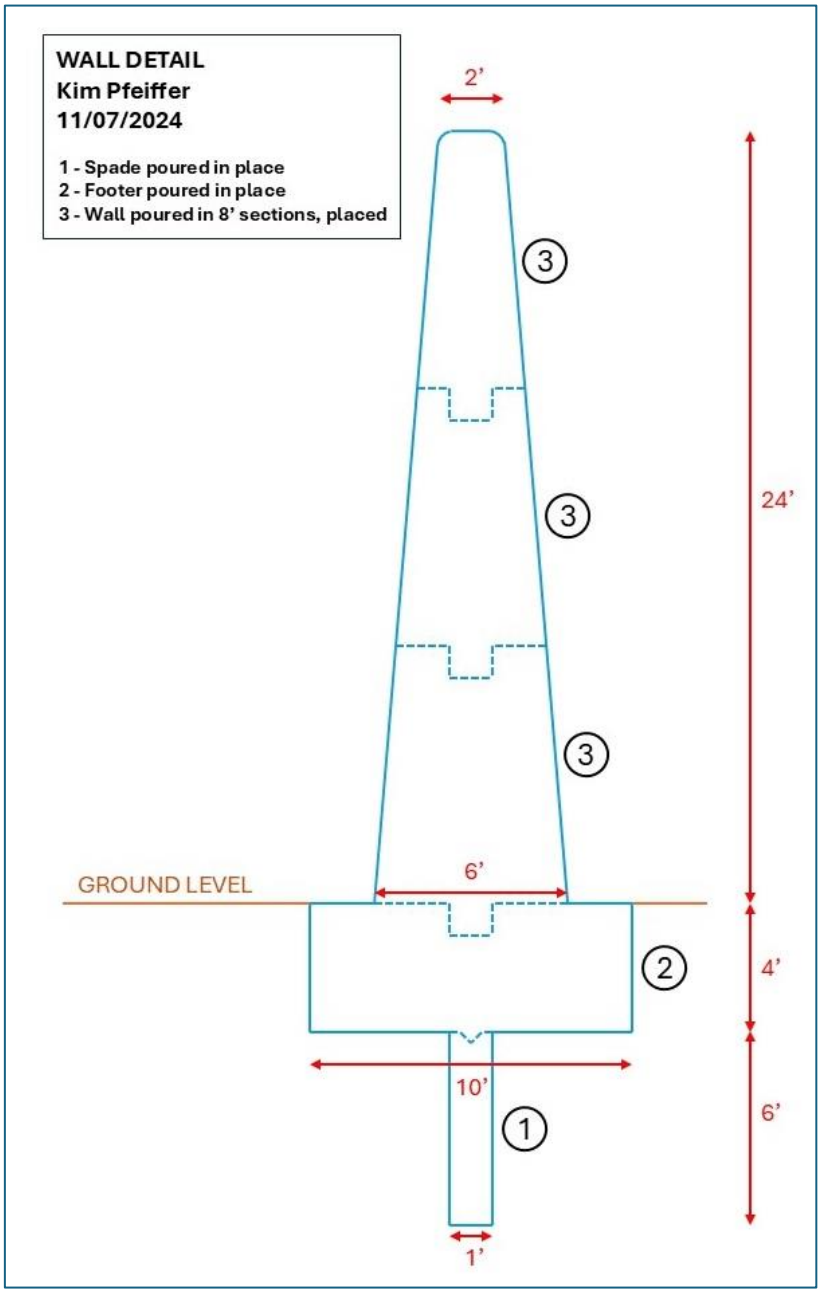

FIGURE 4

The wall is built by assembling three sections that are eight feet long, though longer sections could be poured (TBD).

The footer cavity is dug first. Then the spade trench is dug out in the bottom of the footer cavity with a trencher, rebar and wire is placed, and the trench is filled with concrete. The trench does not have to be "finished" – the rough trench is sufficient, and no forms are needed.

Next the footer is formed and reinforced and it is then poured.

Once the footer has sufficiently cured the wall sections are hoisted into place.

While this describes the process schematically, every section must be evaluated for mating edge slope adjustment due to the irregularity of the ground upon which the wall is being built.

Wall Geographic Detail

The geographic site plan of the wall is shown below.

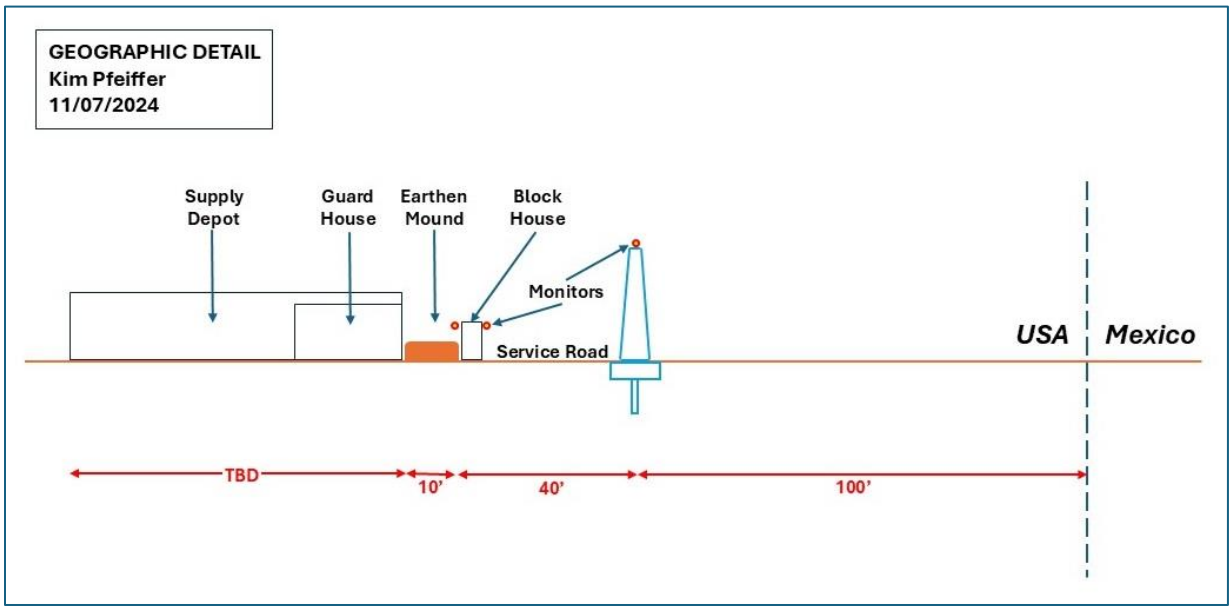

FIGURE 5

The wall is constructed with a pre-determined setback from the US/Mexico border (TBD) on land where possible. The area between the wall and the Mexican border should be cleared of large growth if on land and feasible. This distance will vary where the border is delineated by the Rio Grande and where irregular or urban areas are encountered. Various issues may require this setback to be a value other than 100 feet, though the above image indicates 100 feet; this setback must be determined.

The excavated soil from the footer is dumped and fashioned into a barrier mound 40 feet from the wall on the US side. The 40-foot area between this mound and the wall is where Block Houses are placed and becomes the active service road for border protection operation. This area will be graded and topped with rolled crushed stone and finished with asphalt. Depot transports will make use of this service road, as will personnel and support vehicles during daily operations.

Eminent Domain may be required to ensure government/military ownership of the 50-foot swath (or up to 250' swath where Guard Houses are located and up to 300' swath where Supply Depots are located) of land on the US side of the wall in some areas.

Wall Cost

Construction Steps

The wall itself is constructed in the following manner:

- Footer trench is excavated, soil transported to mound
- Spade trench is cut with trenching machine
- Spade trench is fixed with rebar and mesh
- Spade concrete is poured in place
- Footer preforms are set and area is fixed with rebar and mesh
- Footer concrete is poured in place
- Precast wall sections are lowered into place on footer

Cost Per Ten Feet

Cost of three precast 10' wall sections (forms + 36 yds + metal + labor) is estimated to be $10,000.

Cost per Ten Feet of Wall

Description	MH	Labor	M/E
Precast three wall sections, estimated (M+E)			$10,000
Clearing, transit, measuring, layout (E)	2	$70	$10
Excavation of ten foot wide 4-foot-deep footer (E)	2	$70	$25
Trench 6-foot-deep spade below footer (E)	1	$35	$10
Trench rebar and mesh (M)	2	$70	$100
Trench pour concrete 3 yds (M)	2	$70	$360
Footer pour concrete 16 yds (M)	4	$140	$2000
Place three wall sections by crane (E)	4	$140	$50
Grade, gravel (5 yds), roll service road (M+E)	4	$140	$300
Sensors, imagers, solar panels, and batteries AVG (E)	2	$70	$1800
TOTAL	21	$805.00	$14,655.00

= $15,460

MH = Man/Hours M/E = Material and/or Equipment $15,460 = Budgetary $16,000

The cost to asphalt the 40' wide service road might be about $500,000 per mile, or $1,000,000,000.

The wall is 10,560,000 feet long, so if the cost of a ten-foot section is $16,000, the cost of the wall will be approximately $16,896,000,000 plus $1,000,000,000 for paving the service road:

$17,896,000,000 [The Wall]

This budgetary estimate does not include legal, administrative, or other associated costs, which will be minimized by keeping the entire project under USACE control and designating the project as a government and/or military project required for the protection of the country. This also does not account for decisions and associated excavation over irregular terrain, which could double the wall cost in some locations.

Control Complexes

The Control Complexes are built at each end of the wall. Each Control Complex houses and supports between 100 and 200 personnel, most of whom will be employed government or military personnel. The Control Complexes include offices, lodging, and associated support for positions such as the following, all of whose sole purpose is to support the operations relating to protecting the border:

Accounting
Army Corps of Engineers (office on site)
Building Maintenance
Department of Commerce (office on site)
Department of Homeland Security (offices on site)
Department of State (office on site)
Detention Center (temporary holding)
Engineering Services
Fire Protection
Food Services
Groundskeeping
Hospitality (food and lodging)
Human Resources
Intelligence
Legal Counsel
Liaisons (Army, Reserves, National Guard, Air Force, Coast Guard, Navy, Public)
Linguistics
Medical and Healthcare
Munitions
Officers and Executives
Procurement
Public Affairs and Media
Purchasing (daily supplies)
Purchasing (equipment and maintenance)
Recruiting
Scheduling
Security
Tactical and Logistics
Technology (Communications)
Technology (Hardware)
Technology (Software)
Training
Transportation
Vehicle Maintenance
Warehouse and Inventory Management

Each Control Complex would require an 80,000 square foot building for work facilities only. There would need to be two buildings with a total of at least 150,000 square feet to include barracks. A budgetary estimate of $400,000,000 per complex is obtained including barracks (barracks may not be necessary). This uses a cost per square foot of $1000 and adds an additional $125,000,000 to each complex for initial infrastructure, supplies, equipment, and furnishings, so the targeted viability cost of two Control Complexes might be approximately:

$800,000,000 [Control Complexes (2)]

Supply Depots

Forty Supply Depots would be required, positioned about every 50 miles from one end of the wall to the other. The Supply Depots provide warehousing for all supplies required for the 4000 Guard Houses positioned along the wall. This includes food, clothing, medical supplies, replacement electronics, transportation, and more. Each Supply Depot also includes a communication repeater tower and at least two semi-tractor-trailers with refrigeration and one tanker for fuel delivery.

Each Supply Depot supports 100 Guard Houses with 600 personnel, providing food (perishable and non-perishable, including refrigerated and frozen), clothing, medical supplies, electronics, phone and computer equipment, batteries, toiletries, entertainment, munitions, and other supplies.

In addition, each Supply Depot will include fuel storage facilities and maintenance supplies and materials, and will also include a 200 foot safety circle helicopter landing zone.

Each Supply Depot includes living quarters for ten personnel, plus warehousing of dry goods, refrigerated storage, frozen storage, equipment storage, and fuel storage. The size requirement of each Supply Depot structure is estimated to be about 50,000 square feet, plus the same amount of parking/access/outside storage.

The Supply Depots are structures built against the far side (outside) of the earthen mound.

The cost of each Supply Depot, including living quarters and all equipment, facilities, and features, is approximately $50,000,000 (not including inventory). Forty Supply Depots are required to support the wall, so the total budgetary estimate for the cost of building the 40 Supply Depots is:

$2,000,000,000 [Supply Depots (40)]

Guard Houses

About 4000 Guard Houses will be required to properly support the wall, with one Guard House positioned every half a mile. The Guard House provides living quarters for six personnel who work three shifts, two to a shift, 24 hours a day, 7 days a week. The Guard House obtains supplies from the nearest Supply Depots on a regular basis.

Two options exist for Guard House power. A Guard House could be grid-connected, or it could be solar and/or wind powered with gas and/or propane backup power, with battery storage and fuel-based generators for intermittent use and emergency backup. Both options could be implemented as well. Each Guard House contains the monitoring receivers and equipment used to interface with the four Block Houses that serve as wall monitoring stations for that Guard House.

Each Guard House is provided with either 100-amp electrical service or 25,000-watt solar power and wind power with battery storage (or both), as well as gas or propane generators for emergency backup power. Each Guard House includes refrigeration and freezer capability and food preparation facilities. Each Guard House has a drilled water well and septic service.

Each Guard House includes all of the electronics, computers, and communication equipment required to receive, process, and store signals and images from the four Block Houses associated with the Guard House. Handheld monitoring equipment (imagers, etc) will be standard gear as well.

Each Guard House consists of approximately 3000 square feet of space, providing private living quarters for the six personnel as well as shared areas for cooking, bathing, and recreation.

Each Guard House includes a small barred and locked detention area. Detainees are generally immediately sent back across the border if they have no authorization paperwork or visa. Detainees are bussed to the nearest Port of entry for return to Mexico. Detention is employed only when there are validity questions or special circumstances (which must be predefined).

The Guard Houses are structures built against the far side (outside) of the earthen mound.

The Guard House construction cost estimate is $150,000, with another $15,000 for furnishings. Water well and septic add $50,000. Solar, wind, and generator options are estimated to add $35,000 to the cost of each Guard House. Running public or private grid power to each Guard House would vary but could add $50,000 to the cost of each unit, for a total of about $300,000 per Guard House.

The budgetary estimate for 4000 Guard Houses with non-grid power only is approximately:

$940,000,000 [Guard Houses Solar (4000)]

The budgetary estimate for 4000 Guard Houses with added grid connected power is approximately:

$1,200,000,000 [Guard Houses Grid (4000)]

Block Houses

The Block Houses are small self-contained structures that house the solar and wind-powered systems and transmitters that collect data and signals from the monitoring equipment mounted on the top of the wall and on the Block Houses and relay those signals to the receivers in the Guard Houses. A Block House is situated every 528 feet along the wall. About 20,000 Block Houses are required to properly monitor the border wall and handle the associated data gathering and transmission. Wall-mounted sensors and imagers are either wireless (susceptible to jamming) or wired, with lines running through PVC pipe buried under the service road.

The monitoring detectors include night vision/infrared vision, seismic and motion detection, and video cameras and other sensors, and all solar is over-powered by a factor of 10 with a corresponding battery reserve storage capacity as well.

Each Block House is a small four-foot by four-foot prefabricated structure. The Block Houses have low power requirements and run on over-sized solar and/or wind power only with over-sized battery reserve and generator backup.

The Block Houses are small structures built against the inside side of the earthen mound, on the US side of the service road. Monitoring devices are mounted on top of the wall, on the US side of the wall, and on the Block House itself.

The cost of the Block House construction is relatively low, at around $50,000 including all power and monitoring equipment.

The budgetary estimate for 20,000 Block Houses with equipment and including wall and Block House mounted cameras and sensors is approximately:

$1,000,000,000 [Block Houses (20,000)]

Port of Entry Interfaces

There are approximately 60 authorized Port of Entry points along the US/Mexico border, handling vehicle, pedestrian, rail, and ferry traffic.

A border wall and consolidated border protection system must properly interface with each of these Ports of Entry both physically and operationally.

Each Port of Entry Interface must be separately evaluated, designed, and implemented by Civil Engineers and government officials.

A placeholder value of $25,000,000 for each Port of Entry Interface is being used.

A **placeholder value** (not an estimate) for Port of Entry Interfaces is approximately (**this is not an estimate – this value must be calculated**):

$1,500,000,000 [Port of Entry Interfaces (60)]

Special Note

When unauthorized entry is encountered, the unauthorized individual(s) must immediately be returned to Mexico. From a logistical standpoint it appears that this return process should occur through the existing Ports of Entry. However, this actually may not be the best means and method of returning violators. The actual return process must be determined, developed, and established.

Demarcation Monuments at Block House Locations - Alternative

For the consideration of an alternative to a wall, whether as a temporary stop-gap measure or permanent solution, 16-foot-high Active Demarcation Monuments can be erected across from each Block House, on the opposite side of the service road, directly on the wall demarcation line. These Active Demarcation Monuments would contain the solar panels, batteries, electronics, sensors, and imagers required to collect the data that is sent to the Block Houses. There would be 20,000 Active Demarcation Monuments.

An additional three Passive Demarcation Monuments would be installed equally spaced between each of the Active Demarcation Monuments which have been installed across from the Block Houses, which would add another 60,000 monuments.

There would be a total of 80,000 Demarcation Monuments installed on the border demarcation line, spaced approximately 132 feet apart, with 20,000 of those monuments being Active Demarcation Monuments.

The Active Demarcation Monuments will contain solar panels and reserve battery storage that are oversized by a factor of 10, allowing the Active Demarcation Monument electronic sensors and imagers to continue operating for extended periods of time without solar charging.

Each Demarcation Monument (cement precasts or aluminum poles) would cost approximately $4500 with top fixturing included. Installation of each Monument, including footer creation and Monument raising, would add an additional $1000 to the cost. The sensors, imagers, solar power, and batteries add another $5000 to each Active Demarcation Monument. Barbed wire up to a height of 10 feet will require about 2 coils of barbed wire at $100 per coil plus installation, adding an additional $500 to the cost of each Monument. This brings the budgetary cost of a Passive Demarcation Monument to $6000 and the budgetary cost of an Active Demarcation Monument to about $11,000 each. The $11,000 figure is being used for all monuments for the purposes of this document.

The Demarcation Monuments could be formed onsite as precast concrete structures or fashioned from 10-inch square or round aluminum tube (this would be the preferred solution). While there could be significant cost differences and savings, the budgetary cost estimate remains the same for both options (concrete vs aluminum) for the purposes of this document.

The budgetary estimate for 80,000 Demarcation Monuments with equipment including cameras and sensors is approximately:

$880,000,000 [Demarcation Monuments (80,000)]

Monument Position Graphic

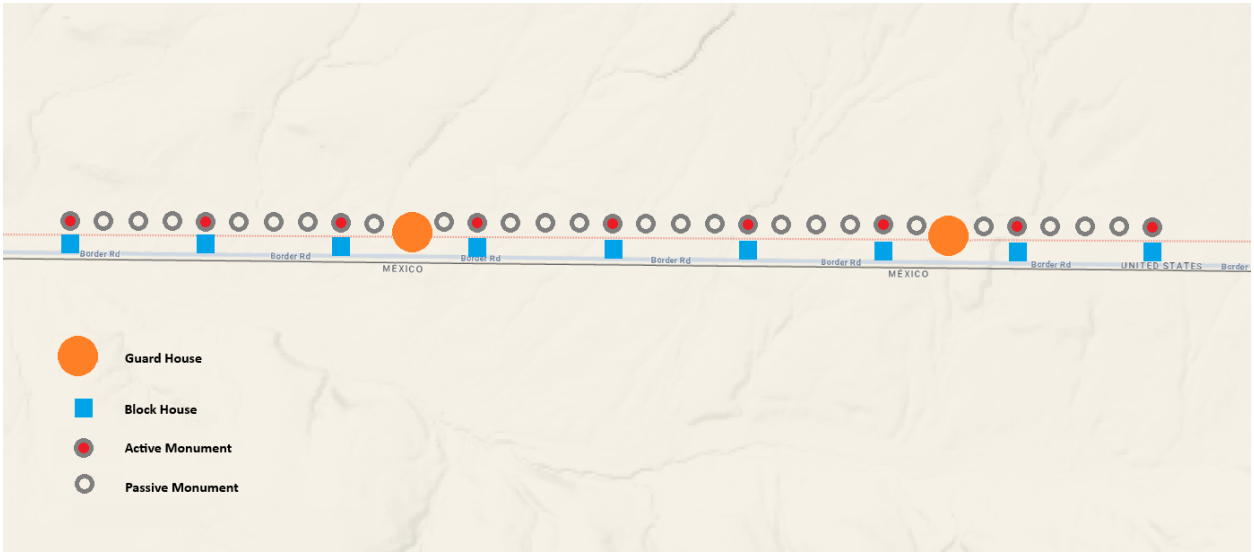

FIGURE 6

The graphic above is a representation of the border from Google Maps. The orange circles indicate the locations of two Guard Houses, which are positioned every half mile along the border. The blue boxes indicate the positions of Block Houses, which are located every 528 feet along the border. The gray circles indicate the placement of Monuments every 132 feet. The Monuments are strung with barbed wire.

The cray circles with red centers represent Active Monuments that include monitoring sensors and imagers. The gray circles with empty centers represent Passive Monuments.

There is a “hidden” Passive Monument behind each Guard House indicator (orange circle) in the image shown here.

This is a representation meant only to assist with the visualization of the Guard House and Block House locations and the horizontal spacing between Monuments.

Monument Detail

The general structure and assembly of a viable monument-based solution is shown below.

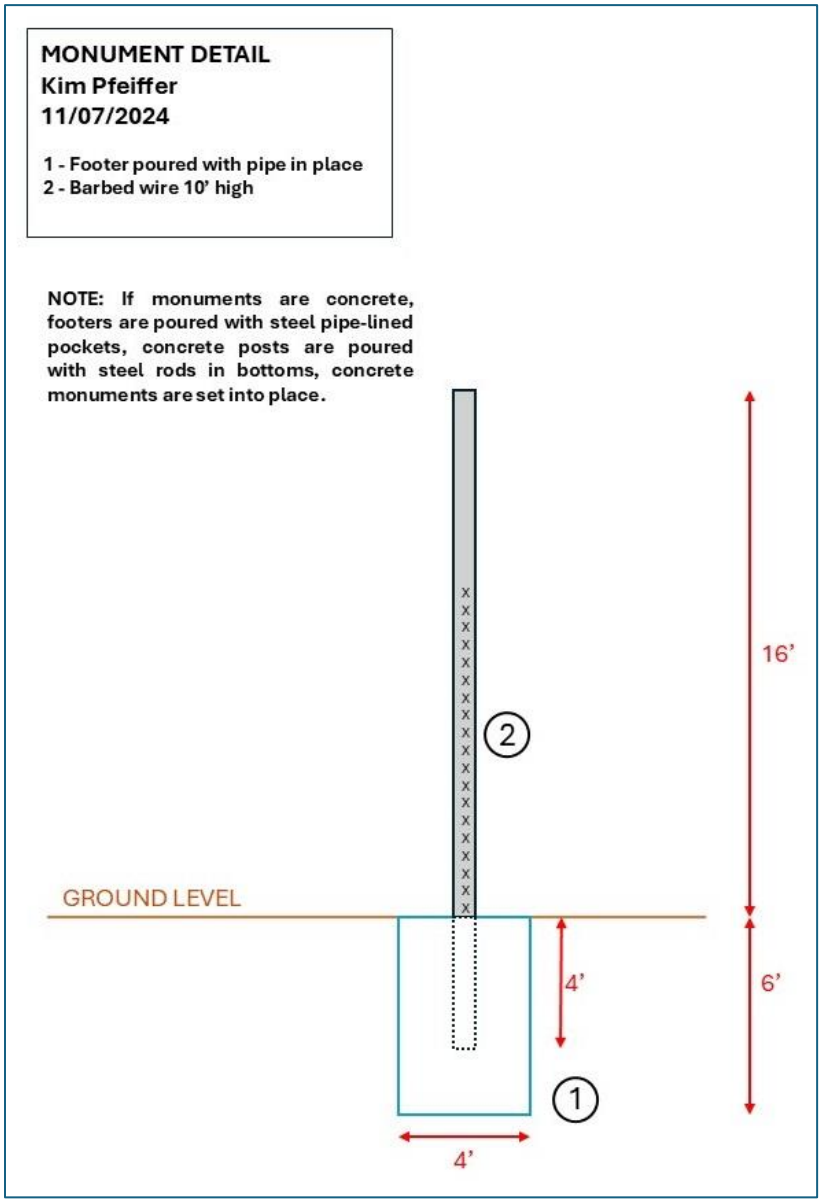

FIGURE 7

Metal Pipe Monuments

Holes for barbed wire and anchoring rods are drilled in the Monument pipe. Fixturing is attached for monitoring sensors and imagers (Active Monuments only).

The footer cavity is dug and the Monument pipe is lowered into the hole and "wired" into place plumb. The concrete is poured, anchoring the Monument pipe.

Concrete Monuments

The Monuments are precast separately from the installation process and include eyebolts for attaching barbed wire. Concrete Monuments will be tapered, wider at the base than at the top.

The footer is dug, the precast concrete Monument is placed and plumbed, rebar and wire will be placed, and the footer is poured.

Annual Recurring Costs

Annual recurring costs not covered by existing government agencies, such as utilities, supplies, expendables, and variable overhead for the border protection system itself must be calculated. This includes costs for the Control Complexes, Supply Depots, Guard Houses, and Block Houses.

A basic starting point for calculating recurring costs may include:

Heating and Cooling
Fuel and Delivery
Replacement Parts
Vehicle Maintenance
Wall Repair

All DHS employees are paid by the government and those costs do not affect the Annual Recurring Costs for border protection, but all other annual costs relating to the wall and wall support systems and operation must be accounted for.

A **placeholder value** (not an estimate) for recurring annual costs such as utilities, supplies, and support (above and beyond the costs of personnel which are already associated with and covered by DHS) is approximately (**this is not an estimate – this value must be calculated**):

$1,000,000,000 [Annual Recurring Costs]

Wall Funding

The total ONE-TIME cost of construction and implementation of a wall solution is estimated to be:

Wall	$18,000,000,000
Control Centers (2)	$ 800,000,000
Supply Depots (40)	$ 2,000,000,000
Guard Houses (4,000)	$ 1,200,000,000
Block Houses (20,000)	$ 1,000,000,000
Port of Entry Intf. (60)	$ 1,500,000,000

	$24,500,000,000

Very roughly, and rounded up/down , the latest (2023) IRS Tax Return AGI classifications and what those classifications might pay toward the building of the wall are:

AGI	**How Many**	**How Much**	
Less than $10,000	250,000 taxpayers	$0	
$10,000 - $49,999	35 million taxpayers	$50 x 35m =	$ 1,750,000,000 ($5 - $100)
$50,000 - $999,999	80 million taxpayers	$225 x 80m =	$18,000,000,000 ($100 - $1,000)
$1,000,000+	850,000 taxpayers	$7000 x 850t =	$ 5,950,000,000 ($1,000-$50,000)

			$25,700,000,000

Demarcation Monument Funding

The total ONE-TIME cost of construction and implementation of a Demarcation Monument solution is estimated to be:

Demarc Poles (80,000)	$ 880,000,000
Control Centers (2)	$ 800,000,000
Supply Depots (40)	$ 2,000,000,000
Guard Houses (4,000)	$ 1,200,000,000
Block Houses (20,000)	$ 1,000,000,000
Port of Entry Intf. (60)	$ 1,500,000,000

	$ 7,380,000,000

Very roughly, and rounded up/down , the latest (2023) IRS Tax Return AGI classifications and what those classifications might pay toward the building of the Demarcation Monument solution are:

AGI	**How Many**	**How Much**	
Less than $10,000	250,000 taxpayers	$0	
$10,000 - $49,999	35 million taxpayers	$10 x 35m =	$ 350,000,000 ($1 - $20)
$50,000 - $999,999	80 million taxpayers	$50 x 80m =	$ 4,000,000,000 ($20 - $100)
$1,000,000+	850,000 taxpayers	$3600 x 850t =	$ 3,060,000,000 ($100 -$9,000)

			$ 7,410,000,000

Recurring Cost Funding

Annual Recurring costs incurred from the operation of a border protection solution, assuming DHS personnel pay is already covered by the personnel provider(s), is currently an un-estimated PLACEHOLDER VALUE of $1,000,000,000, which would result in annual taxpayer contributions that are a fraction of the initial cost of a border protection solution:

AGI	**How Many**	**How Much**	
Less than $10,000	250,000 taxpayers	$0	
$10,000 - $49,999	35 million taxpayers	$1 x 35m =	$ 35,000,000 ($0.50 - $5)
$50,000 - $999,999	80 million taxpayers	$10 x 80m =	$ 800,000,000 ($5 - $100)
$1,000,000+	850,000 taxpayers	$250 x 850t =	$ 212,500,000 ($100 - $5,000)

			$ 1,047,500,000

Construction Methodology

Once the construction process begins along the established setback demarcation line of the border, completed construction must immediately be manned and operational.

This means that before construction begins, the entire system, process, and solution must be designed and documented, all legislation must be passed (if needed), all Control Centers must be completed and staffed, and border protection recruitment and assignments must be formalized and finalized.

If the construction of a wall (or the installation of Demarcation Monuments) begins in the middle of the border and works its way toward each end (toward the oceans), Guard Houses must be completed first, followed by associated Block Houses and monitoring processes, with live guards 24/7. Then wall sections are built (or Demarcation Monuments are installed) moving away from the starting point, and the Guard Houses and border monitoring processes are live immediately. This will result in a longer supply chain process early in the construction phase than will be realized with in-place Supply Depot servicing, but no construction can take place without armed protection – new work will simply be overrun and destroyed as it is built unless it goes live immediately upon completion.

If construction begins at each Control Center and works toward the middle of the border, it will be easier to provide service and supplies to both the Supply Depots and Guard Houses as they are completed and manned as the wall or Demarcation Monument construction/installation proceeds.

Regardless of the method, once construction in either direction reaches the 50-mile mark and a Supply Depot is completed, the construction process will become better supported and protected.

There may be other options as well, including many teams with construction occurring at many points along the border. What matters is that no matter how construction progresses, each Supply Depot, Guard House, and Block House must be manned and operational as it is built.

Operational Process

Signage on the Mexican side of the wall will read something like the following:

STOP
You are risking your life
Do not attempt to pass
You will be sent back

This sign will be posted every 100 feet in the following languages, preferably as close to the actual US/Mexico border as possible as opposed to being posted on the wall or demarcation line itself, though this would be acceptable as well (the cost of this signage must be added to the design):

Arabic
Bengali
Chinese
English
French
Hindi
Mandarin
Portuguese
Spanish
Tamil

If an unauthorized individual is on or touching the wall or fence or steps foot on the service road, they have illegally entered the country and must be processed and sent back to Mexico immediately. If a large group of individuals amasses on the Mexico side of the wall on the setback, they can be pushed back using non-lethal means. Technically individuals who have reached the wall are on the setback and are already on US soil. The setback distance and associated issues must be legally determined and resolved.

A detainee is photographed and finger-printed, and personal information is obtained and logged into the system. The detainee is then placed in temporary holding if needed, after which they will be bussed to the nearest Port of Entry and returned to Mexico.

No detainee is to be mistreated. Any Guard who mistreats any detainee who has not threatened life or limb shall be removed from service, punished, and imprisoned. The only time force or violence is warranted is if and when an unauthorized individual(s) threatens life or limb of an American citizen. No non-violent individual must ever be harmed.

If an individual is on or coming over or through the wall, they are violating the law but must not be mistreated. They must be stopped and returned. However, if an individual is causing damage to the wall or supporting structures, or acts in a violent manner or uncontrolled manner, or threatens the life or limb of an American citizen, the use of force is authorized to stop the action.

If an individual has authorized paperwork, he or she will typically cross into the US through one of the legal Ports of Entry. If someone breaches the wall but appears to have official authorization, they are placed in temporary holding, bussed to the nearest Port of Entry, and processed there.

Border Protection Summary

An economical blockade wall cannot provide border protection in and of itself. A blockade wall provides a visual demarcation of the barrier across which an unauthorized person is not allowed to traverse. A blockade wall provides partial, transient, and temporary impedance to certain border crossing activities.

Border protection is accomplished by implementing a system of control, supply, monitoring, and protection solutions afforded by the Control Centers, Supply Depots, Guard Houses, Block Houses and associated operations, services, and trained support personnel.

The installation of a cost-effective wall or of a physical demarcation solution combined with a system of control, supply, monitoring, and protection afforded by the Control Centers, Supply Depots, Guard Houses, Block Houses and associated equipment, technology, and operations, service, and support personnel, may afford a proper and effective method of protecting the border. Legislative changes may be required.

This proposal does not advocate hiring tens of thousands of individuals in order to implement the solution. This proposal does not advocate adding any new hires to DHS. This proposal is both based on and dependent upon the repurposing of existing personnel and resources in order to economically create a system that can protect the United States southern border in a controlled and systematic manner.

It might be possible to operate with only one Control Center, but there are multiple reasons for establishing two Control Centers. This includes oversight, accessibility, shared coverage of operational functionality over long distances, backup service provision, continuance of operations in the event of war or Act of God, and other similar scenarios.

The time it takes to design and construct either a wall, a border protection system, or both, is undetermined. A primary component of the due diligence tasks that are a part of the evaluation of these solutions involves discussions with the USACE to determine viability of the ideas and to determine resource requirements and time frame estimates.

Preventing unauthorized immigration into the country involves humanely returning any individual or individuals found on the US side of the wall or demarcation line back to the Mexican side of the wall. Force is authorized only when violence is encountered or life or limb is threatened.

The poor, victimized, and needy in the United States of America must be provided with aid before unauthorized individuals are supported, and the well-being and economic stability of the United States of America and its citizens must be ensured and protected above all else.

The next step is to initiate viability discussions with the USACE and DHS.

An idea has no value.

Only the design and execution of a successful solution has value.