

GENERAL NOTES

- PUBLIC INTERSECTION - THE PUBLIC INTERSECTION OCCURS AT THE PROPERTY LINE OF THE BASE. THE INTERSECTION MAY OCCUR AS A 4-WAY INTERSECTION BETWEEN TWO MAJOR ROADS, A 3-WAY INTERSECTION BETWEEN THE BASE ROAD AND A THROUGH ROAD, OR AN EXTENSION OF A SIDE ROAD.
- APPROACH ZONE - THE LENGTH OF THE APPROACH ZONE WILL VARY DUE TO THE LAND AVAILABLE, THE SPEED OF ONCOMING VEHICLES, THE AMOUNT OF WEAVING REQUIRED TO SORT OUT INCOMING TRAFFIC, AND THE MEANS USED TO CONTROL THE SPEED OF INCOMING TRAFFIC. THE LENGTH OF THIS ZONE AND THE VOLUME OF TRAFFIC WILL DETERMINE THE NUMBER OF LANES REQUIRED TO PROVIDE ADEQUATE STACKING ROOM TO MINIMIZE CONGESTION IN THE PUBLIC INTERSECTION.
- CHECKPOINT - THIS AREA INCLUDES THE ENTRY CONTROL POINT (ECP), THE VISITOR CONTROL CENTER (VCC), AND THE SECTIONS OF ROAD USED TO CHECK ENTRY PASSES AND INSPECT VEHICLES.
- EXPLOSIVE HAZARD ZONE - THE EXPLOSIVE HAZARD ZONE IS THE DISTANCE BETWEEN THE CHECKPOINT AND THE VEHICLE BARRIER. THIS DISTANCE IS NECESSARY TO PROTECT THE GUARDS AT THE CHECKPOINT FROM AN EXPLOSION AT THE VEHICLE BARRIER. THE DISTANCE IS DETERMINED BY THE WEIGHT OF THE EXPLOSIVE CHARGE (REFER TO TABLE I ON SHEET II), AND/OR THE HARDENING LEVEL OF THIS E.C.P. SPECIAL PROTECTION FOR THE GUARDS MAY BE NECESSARY IF THESE DISTANCES CANNOT BE OBTAINED (REFER TO SHEET III). THIS DISTANCE MUST ALSO BE GREAT ENOUGH TO PROVIDE ADEQUATE REACTION TIME FOR THE GUARDS AND BARRIERS TO RESPOND TO A FORCED ENTRY. IF THIS DISTANCE IS NOT GREAT ENOUGH, THEN THE VEHICLE BARRIERS SHOULD BE DEPLOYED EXCEPT WHEN AUTHORIZED VEHICLES ARE ALLOWED TO PASS. IF THIS DISTANCE BECOMES TOO GREAT, THE GUARDS AT THE CHECKPOINT MAY NOT BE ABLE TO CONTROL THE ACTIVITIES OF PERSONS STOPPED AT THE VEHICLE BARRIER.
- SAFETY ZONE - THE SAFETY ZONE IS THE DISTANCE FROM THE VEHICLE BARRIER AND ANY INHABITED BUILDING, PUBLIC OR OUTDOOR RECREATION AREA. THIS DISTANCE EXTENDS IN ALL DIRECTIONS AROUND THE VEHICLE BARRIERS AND IS NECESSARY TO PROTECT BASE PERSONNEL FROM AN EXPLOSION AT THE VEHICLE BARRIER. THE DISTANCE IS DETERMINED BY WEIGHT OF THE EXPLOSIVE CHARGE AND THE FACILITY OR PERSONNEL TO BE PROTECTED. REFER TO TABLE I ON SHEET II FOR ADDITIONAL INFORMATION ON THIS DISTANCE. IF ADEQUATE DISTANCE IS NOT AVAILABLE, IT MAY BE NECESSARY TO PROTECT FACILITIES AGAINST THE EFFECTS OF A BLAST (SEE SHEET III).
- INSTALLATION PERIMETER - THE INSTALLATION PERIMETER SHOWN ON THESE DRAWINGS IS THE OUTERMOST SECURED PERIMETER OF THE INSTALLATION. THIS PERIMETER MUST BE SECURED AGAINST THE IDENTIFIED THREAT. IF THE INSTALLATION PERIMETER AT THESE ACCESS POINTS IS NOT CAPABLE OF EXCLUDING THE SAME THREAT AS THE ACCESS POINTS, ADDITIONAL PASSIVE BARRIERS MAY BE REQUIRED TO KEEP THE THREAT ON THE ROADWAY.
- ENTRY CONTROL POINT (ECP) - DRAWING OF AN ECP MAY BE FOUND ON SHEET 13. THE GUARDS IN AN ECP ARE ONLY ABLE TO OBSERVE TO 4 LANES OF TRAFFIC. ADDITIONAL BARRIERS WILL BE REQUIRED IF THERE ARE ADDITIONAL LANES OF TRAFFIC, IF THE VOLUME OF TRAFFIC IS HEAVY DURING PERIODS OF THE DAY, OR IF THE LEVEL OF SECURITY REQUIRES CLOSE CHECKING OF INCOMING TRAFFIC. THE ECP PROVIDES THE GUARDS A POSITION SECURE AGAINST THE HAZARDS OF TRAFFIC AND HIGH POWERED RIFLE FIRE. ONE ECP SHOULD BE PROVIDED TO THE LEFT OF EACH INCOMING LANE OF TRAFFIC FOR THE BEST PROTECTION. ELECTRICAL CONTROLS FOR THE VEHICLE BARRIERS ARE ALSO HOUSED IN THE ECP.
- VISITOR CONTROL CENTER (VCC) - THE VISITOR CONTROL CENTER IS THE CONTROL CENTER FOR THE ACCESS POINT (SEE SHEET 14). THE CONTROLS FOR THE INTRUSION DETECTION EQUIPMENT, SURVEILLANCE MONITORS, VEHICLE BARRIERS, SECURITY LIGHTING, AND THE COMMUNICATION EQUIPMENT FOR THE ACCESS POINT ARE LOCATED IN THIS FACILITY. PERSONNEL IN THE VISITOR CONTROL CENTER ALSO HANDLE THE SPECIAL CASES OF VISITORS AND TRUCKS TRYING TO GAIN ENTRY TO THE INSTALLATION.
- PASSIVE BARRIERS - PASSIVE BARRIERS MAY BE NATURAL FEATURES OF THE TERRAIN OR MAN MADE DEVICES TO PROHIBIT THE PASSAGE OF A VEHICLE. IN THESE CONCEPTS, THESE BARRIERS ARE IDENTIFIED AS PASSIVE BARRIERS WITHOUT SPECIFYING ANY SPECIFIC DEVICE. VARIOUS PASSIVE BARRIERS ARE SHOWN ON SHEET 9. SPECIFIC DEVICES SHALL BE SELECTED AFTER CONSIDERING THE THREAT, THE LOCAL CONDITIONS, AND THEIR RELATIVE COSTS.
- VEHICLE BARRIERS - VARIOUS VEHICLE BARRIERS ARE CURRENTLY BEING MANUFACTURED. SOME OF THESE BARRIERS ARE SHOWN ON SHEETS 10 & 11. SPECIFIC VEHICLE BARRIERS SHALL BE SELECTED AFTER CONSIDERING THE THREAT, THE LOCAL CONDITIONS, AND THEIR RELATIVE COSTS. THE FORCE OF ANY VEHICLE RAMMING MOST OF THESE DEVICES AT SPEEDS ABOVE 20 MPH MAY BE LETHAL TO THE OCCUPANTS OF THAT VEHICLE. THEREFORE, EXTREME CAUTION MUST BE EXERCISED TO ENSURE THAT THESE DEVICES ARE NOT ACTIVATED AT THE WRONG TIME.
- WARNING LIGHTS - WARNING LIGHTS SHALL BE PLACED ABOVE ALL VEHICLE BARRIERS. WHEN THE BARRIERS OBSTRUCT TRAFFIC, A RED STOP LIGHT SHALL BE DISPLAYED. AT OTHER TIMES A GREEN LIGHT SHALL BE DISPLAYED.
- WARNING STRIPS - A SERIES OF SMALL BUMPS IN THE ROAD SURFACE SHALL BE USED IN TWO OR MORE LOCATIONS PRECEDING THE VEHICLE BARRIER TO SERVE AS A WARNING TO ALL DRIVERS.
- GATE - A GATE, CRASH BEAM, OR VEHICLE CONTROL ARM MAY BE USED TO DEFINE THE STOPPING ZONE FOR VEHICLES GOING THROUGH THE CHECKPOINT. THE GATE IS NOT EXPECTED TO PREVENT PASSAGE OF A HIGH SPEED VEHICLE - HOWEVER, FORCING PASSAGE THROUGH THE GATE MAY BE USED TO ACTIVATE A VISUAL OR AUDIBLE ALARM OR EVEN THE VEHICLE BARRIERS.
- PLANTERS - PLANTERS MAY BE USED AS PASSIVE BARRIERS TO PROTECT THE ECP AND VISITOR CONTROL CENTER AGAINST BEING RAMMED BY A VEHICLE. DETAILS OF PLANTERS ARE ON SHEET 9.
- FRICTION DEVICES - CONTRARY TO GOOD HIGHWAY DESIGN, A SERIES OF DEVICES MAY BE USED TO IMPED THE FLOW OF VEHICLES MOVING ALONG A HIGHWAY. THESE FRICTION DEVICES INCLUDE: NARROW TRAFFIC LANES, BARRIER CURBS, SIDE OBSTRUCTIONS AT THE EDGE OF THE PAVEMENT, DIPS OR WARNING STRIPS. DESIGNERS AND SECURITY PLANNERS SHOULD CONSIDER SNOW REMOVAL PROBLEMS WHEN SELECTING FRICTION DEVICES.
- SPEED/DIRECTION DETECTORS - SEVERAL ELECTRONIC DEVICES INCLUDING RADAR, DETECTION LOOPS AND LIGHT BEAMS MAY BE USED TO DETECT VEHICLES TRAVELING AT EXCESSIVE SPEEDS OR VEHICLES TRAVELING IN THE WRONG DIRECTION. SEE SHEET 7.

Symbol	Description	Date	Approved
△	GENERAL REVISIONS - SHEET REDRAWN	2/7/88	AF

U.S. ARMY ENGINEER DIVISION,
HUNTSVILLE
CORPS OF ENGINEERS
HUNTSVILLE, ALABAMA

Site adapt A/E :
Dwn. by : RDP
Ckd. by : AF
ENTRY POINTS
FOR
U.S. ARMY INSTALLATIONS
CONCEPTS A & B

Reviewed by :
Date : 27 FEB 89
Sheet reference number : 2
Design file no. :
Rev. 1
Approved by :
Drawing code : DEF 872-50-01
Sheet 2 of 14

CONCEPT A

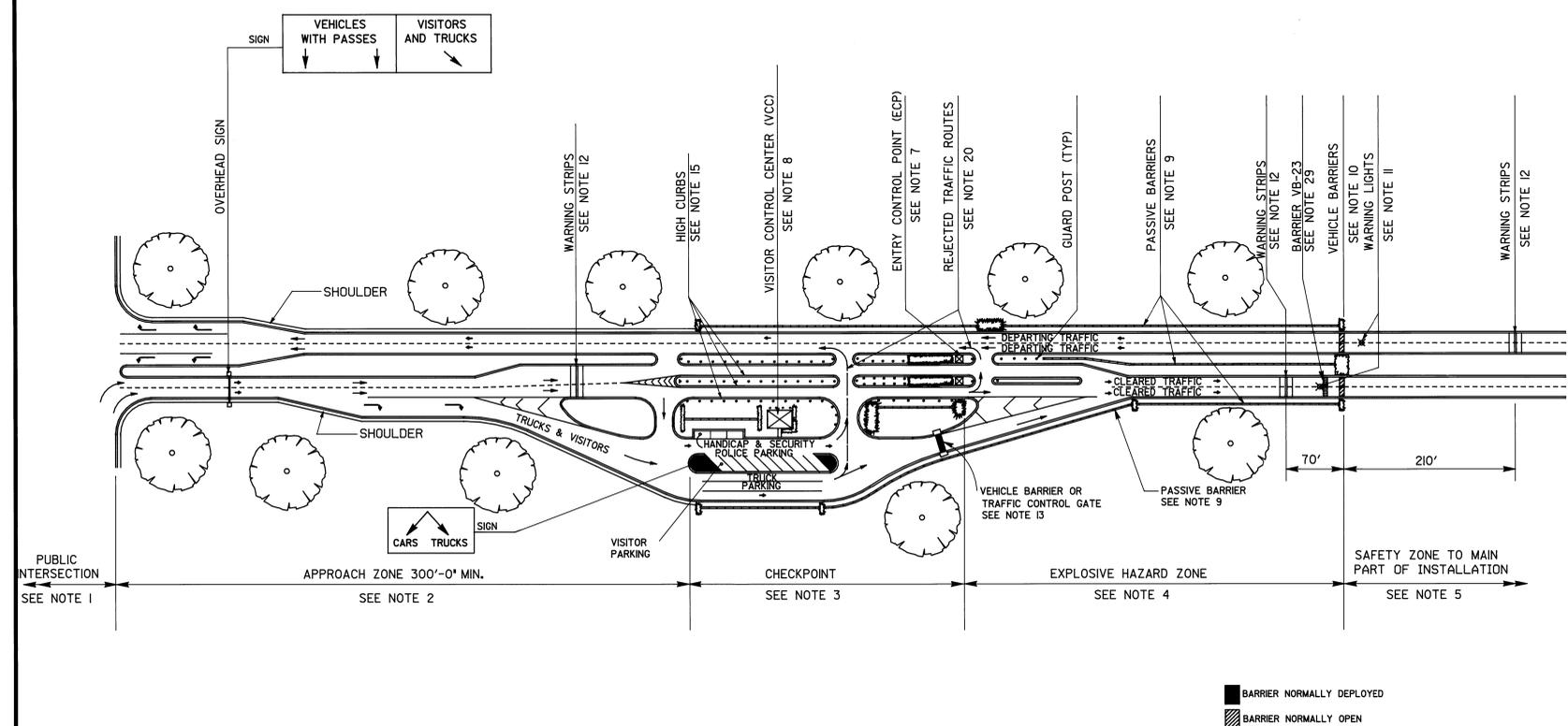
PREMISE: SLOW TRAFFIC BY USING TRAFFIC FRICTION DEVICES THE NARROW TRAFFIC LANES WILL MAKE IT VERY DIFFICULT FOR A SPEEDING VEHICLE TO PASS WITHOUT COLLIDING WITH A FIXED OBJECT.

OPERATION: A SERIES OF FRICTION DEVICES ARE USED TO SLOW TRAFFIC. THESE DEVICES INCLUDE WARNING AND SPEED BUMPS, REDUCTION IN THE NUMBER AND WIDTH OF LANES, BARRIERS CURBS, LATERAL OBSTRUCTIONS, AND OVERHEAD OBSTRUCTIONS. THESE DEVICES SLOW NORMAL TRAFFIC WHICH WILL ALSO OBSTRUCT A SPEEDING VEHICLE. TRAFFIC DETECTION DEVICES SUCH AS RADAR WILL IDENTIFY VEHICLES ENTERING THE EXIT LANES. THE VEHICLE BARRIERS ON THE MAIN ROADS ARE NOT DEPLOYED NORMALLY. BOTH BARRIERS IN A SINGLE ROADWAY MUST BE DEPLOYED TO STOP A VEHICLE. HOWEVER, IT IS NOT NECESSARY TO DEPLOY ALL FOUR BARRIERS TO STOP A SINGLE ENTERING VEHICLE.

APPLICATION: THE CONCEPT IS VERY FLEXIBLE IN APPLICATION AND DOES NOT DEPEND UPON HIGH TECHNOLOGY FOR ITS EFFECTIVENESS.

LIMITATIONS: THE FRICTION DEVICES ARE POTENTIAL SAFETY HAZARDS TO NORMAL TRAFFIC. THIS CONCEPT REQUIRES AN APPROACH ZONE LONG ENOUGH TO ACCOMMODATE BACKED UP TRAFFIC.

SEE SHEETS 1-6 FOR ADDITIONAL NOTES



CONCEPT A

SCALE 1" = 80'

CONCEPT B

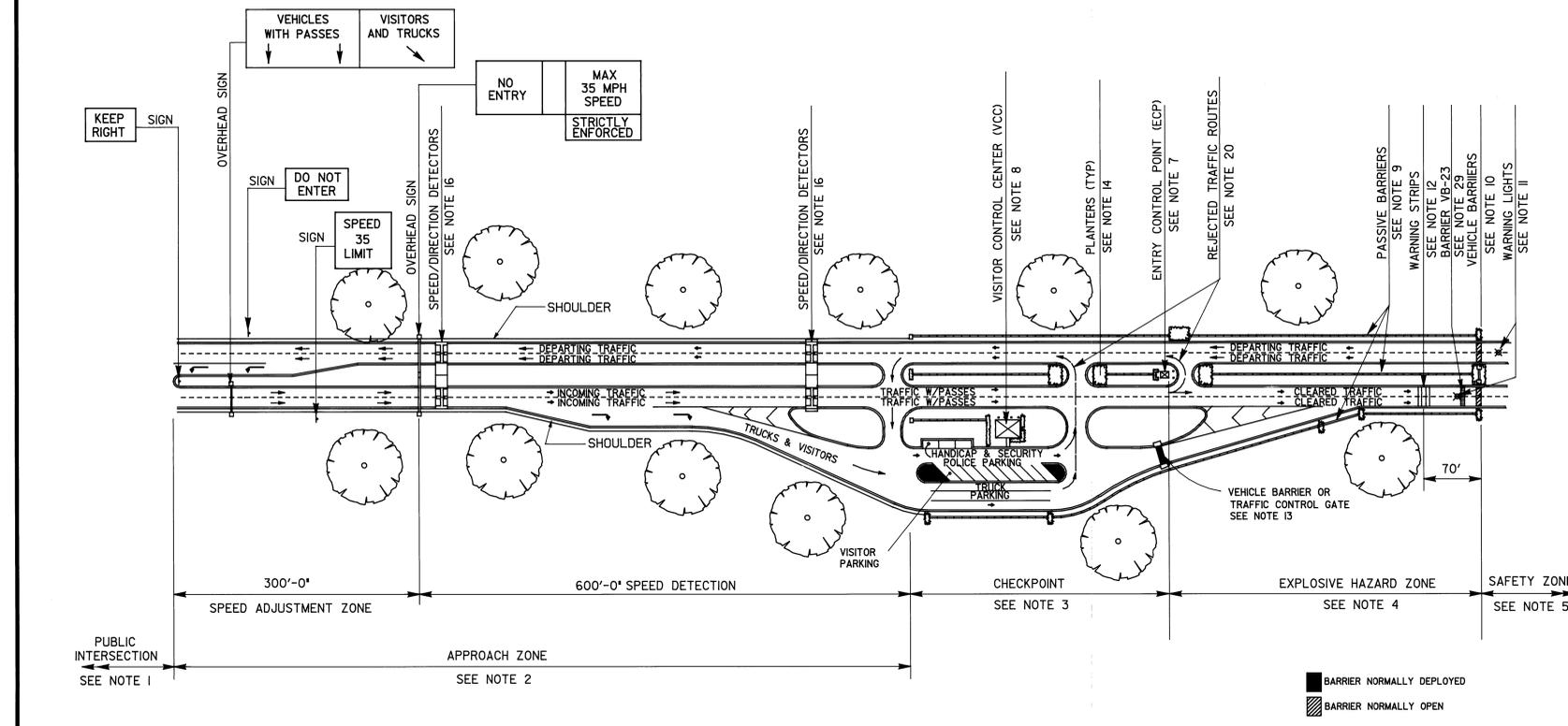
PREMISE: USE SPEED DETECTORS TO IDENTIFY THREATENING VEHICLES AND SOUND THE ALARM.

OPERATION: DEVICES, SUCH AS RADAR, DETECTION LOOPS, OR LIGHT BEAMS, DETECT VEHICLES SPEEDING OR ENTERING THE EXIT LANES AND AUTOMATICALLY DEPLOY RELATIVELY LIGHTWEIGHT TRAFFIC CONTROL GATES. IF THE VEHICLE CRASHES THROUGH THE FIRST GATE, AN ALARM WILL SOUND. AT THE GUARD'S OPTION, THE VEHICLE BARRIERS FURTHER DOWN THE ROAD MAY ALSO BE DEPLOYED. THE PURPOSE OF THE TRAFFIC CONTROL GATES, WHICH ARE OPEN NORMALLY, IS TO PROVIDE A BARRIER WHOSE PENETRATION IDENTIFIES FORCEFUL ENTRY INTENT, BUT WHICH WILL NOT BE DEADLY TO DRIVERS, SUCH AS SPEEDERS OR MISCHIEVOUS TEENAGERS, WHO DO NOT INTEND FORCEFUL ENTRY. THE VEHICLE BARRIERS ARE DEPLOYED AS DESCRIBED FOR CONCEPT A.

APPLICATION: A RELATIVELY LONG APPROACH WILL BE REQUIRED FOR VEHICLE SPEED ADJUSTMENT PRIOR TO SPEED MONITORING.

LIMITATIONS: BECAUSE SIGNAGE IS NOT AS RELIABLE AS PHYSICAL FEATURES FOR SLOWING TRAFFIC, FALSE ALARMS ARE PROBABLE.

SEE SHEETS 1-6 FOR ADDITIONAL NOTES



CONCEPT B

SCALE 1" = 80'