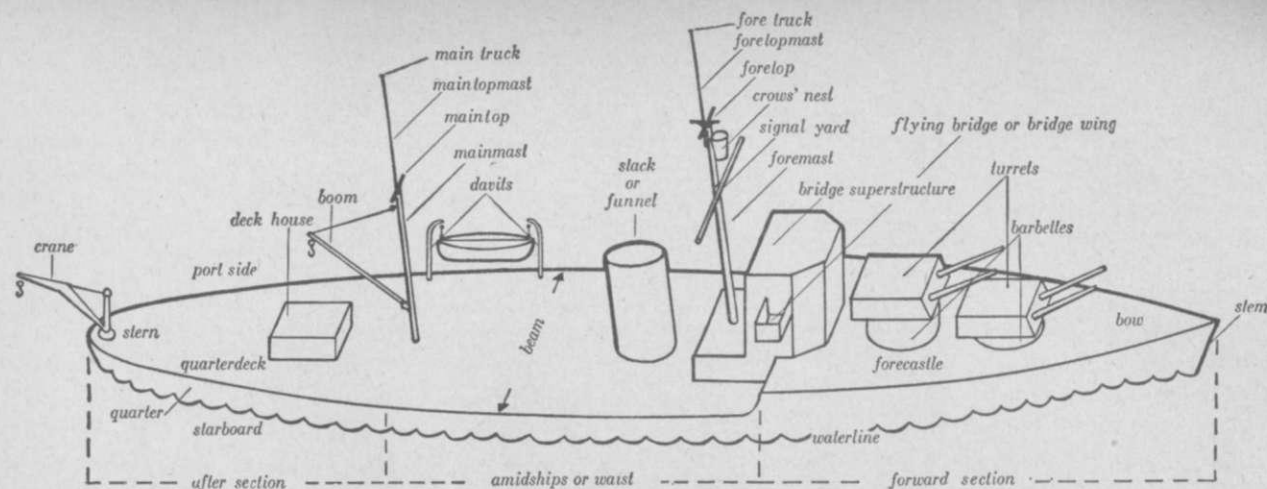


## TERMINOLOGY



NOTE: Terms later defined in the text of this section have been omitted in the following list.

**ABAFT**.. behind; toward stern from.

**ABEAM**.. at right angles to the keel.

**AMIDSHIPS**.. the middle portion of a vessel.

**ARMOR**.. steel plating designed to defeat shells, bombs, or underwater explosion.

**ARMOR BELT**.. band of armor extending along a ship's sides above and below water-line.

**ATHWART**.. across; from side to side; transversely.

**BEAM**.. extreme width of ship.

**BILGE**.. curved part of ship's hull where sides and flat bottom meet.

**BLISTER**.. a bulge built into a ship's side as a protection against torpedoes.

**BOOM**.. a free-swinging spar used to secure boats or to handle cargo, boats or aircraft.

**BREAK**.. the point at which upper decks are discontinued.

**BRIDGE**.. raised forward platform from which ship is conned and navigated.

**BULKHEAD**.. transverse or longitudinal partitions subdividing the interior of a ship.

**BULWARKS**.. light plating or wooden extension of ship's sides above upper deck.

**CASEMATE**.. armored gun mount built into the sides or superstructure of a ship.

**CLASS**.. vessels of the same type built to a common basic design.

**COMBINED OPERATIONS**.. joint operations conducted by nonhomogeneous forces or forces of different services and/or nationalities.

**COMPANIONWAY**.. hatchway providing access from one deck to another.

**COMPARTMENTATION**.. subdivision of a ship's hull by means of transverse and/or longitudinal bulkheads.

**CONNING TOWER**.. armored ship control station. In submarines, the main deck structure.

## TERMINOLOGY

**COUNTER**-- side of a vessel's quarter.

**COWL**-- a smoke baffle located on top of a funnel; opening of a ventilator.

**DAMAGE CONTROL**-- comprehensive term for all means of mitigating or offsetting effects of damage aboard ship.

**DEPTH CHARGE**-- explosive device projected or dropped from air or surface craft; detonated at predetermined depths by a hydrostatic mechanism.

**DISPLACEMENT**-- the weight of water displaced by a ship.

**FANTAIL**-- after section of the main deck.

**FORE**-- That part of a ship lying between bow and midship section.

**FORE AND AFT**-- lengthwise of a ship.

**FORECASTLE**-- deck; a forward upper deck extending to bow.

**FREEBOARD**-- height of a ship's sides from waterline to a weather deck.

**FLYING BRIDGE**-- a light self-supporting structure extending from side of ship's bridge.

**GUN HOUSE**-- a lightly protected, rotating mount for guns of lesser calibre.

**GUN SHIELD**-- any protection for gun crews which does not completely enclose mount.

**GUNWALE**-- upper edge of a vessel's or boat's side.

**HALYARDS**-- light lines used in hoisting signals, flags, etc.

**HATCH**-- opening in a deck.

**HAWSE PIPES**-- tubes leading anchor chains from deck down and forward through bow plating.

**HELM**-- the mechanism for operating the ship's rudder.

**HULL**-- main body of a vessel exclusive of elements of superstructure.

**ISLAND**-- a free-standing section of a ship's superstructure. On aircraft carriers, the ship's superstructure.

**KEEL**-- center line strength member running fore and aft along the bottom of a ship.

**KNOT**-- a unit of speed, equalling one nautical mile (6,080.20 feet) per hour.

**LIST**-- transverse inclination of a vessel.

**MAIN BATTERY**-- the heaviest calibre gun armament carried by a naval vessel.

**MAIN DECK**-- a ship's highest continuous deck.

**MINE**-- a device containing high explosive charge, free-floating or anchored at fixed depth, or resting on bottom; detonated by contact, or by electrical or magnetic impulse.

**MULTIPLE MAST**-- an exposed mast having one or more supporting elements.

**PEAK (fore and aft)**-- compartment at the extreme bow or stern of vessel below decks—usually a tank.

**PORT**-- left hand side of a vessel when looking towards bow; an opening.

**QUARTER**-- that portion of a vessel's side near the stern.

**QUARTER DECK**-- part of upper deck reserved for officers; also the deck near the stern.

**RADIO DIRECTION FINDER**-- device for determining direction of source of radio impulses.

**RAKE**-- fore and aft inclination from vertical.

**RANGEFINDER**-- optical instrument for determining distance to a target or other object.

**RECIPROCATING ENGINE**-- a steam actuated piston engine as distinguished from a turbine.

**RIGGING**-- collective term for ropes and chains employed to support masts, yards, and booms of vessel.

**SECONDARY BATTERY**-- the gun armament next in calibre to main battery.

**SHEER**-- longitudinal upward or downward curvature of deck or gunwale.

**SHEER LINE**-- line formed by intersection of deck and sides of a ship.

**SPLINTER SCREEN**-- light armor shields for protection of crew.

**STACK**-- exposed uptake from ship's boilers; funnel.

**STARBOARD**-- the right hand side of a vessel when looking towards bow.

**STEM**-- extreme forward line of bow.

**STERN POST**-- the main vertical post in the stern frame upon which the rudder is hung.

**SUPERSTRUCTURE**-- any structure built above a ship's hull.

**TASK FORCE**-- a naval force organized to carry out a specific mission.

**TURRET**-- a rotating mount enclosed by armor for guns of large calibre.

**TWIN TURRET**-- a turret housing two guns.

**TYPE**-- all vessels built or converted for the same purpose.

**WEATHER DECK**-- any deck exposed to weather.

**WELL**-- a lateral opening in a ship's hull or superstructure.

## ATTRIBUTES OF FIGHTING SHIPS

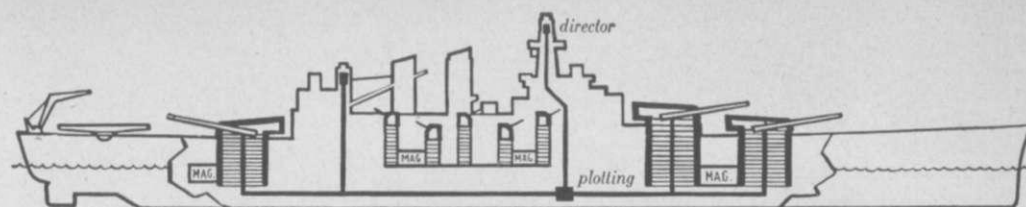
A ship, to be classed as a *fighting ship*, must be capable of inflicting damage and of sustaining or avoiding damage. She must possess sufficient speed and maneuverability to execute her mission and the capacity to proceed independently to a scene of action. The *type* of a warship is determined by the degree to which each of these qualities has been stressed in her design.

### ARMAMENT

Capacity to "dish it out" is a primary attribute of fighting ships. Ships may be designed to inflict damage by *shells* from their guns, *torpedoes* from their tubes, *bombs* from aircraft they may carry, or by *depth charges* or *mines*. Battleships and cruisers are essentially *gun ships*,

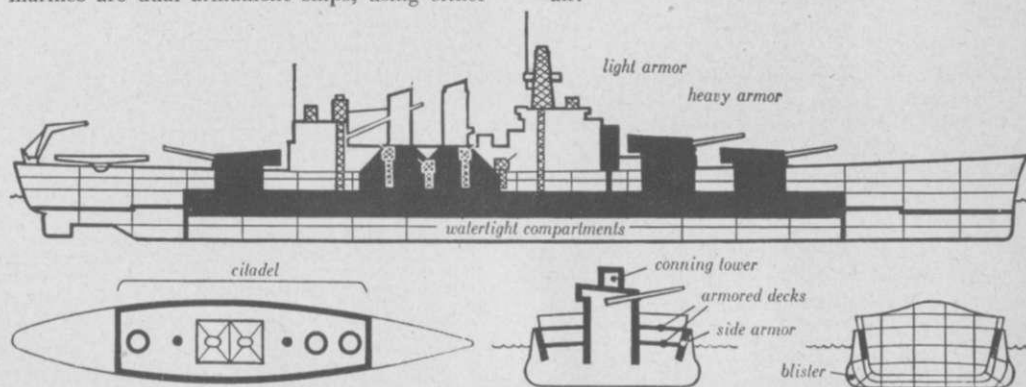
### PROTECTION

A fighting ship must also be able to "take it." A ship may be designed to absorb punishment, to mitigate its effect, or to avoid it. She may be provided with *armor*: heavy steel plate around vital parts to defeat shells, bombs, and torpedoes. Her hull will be subdivided into separate spaces, or provided with bulges or blisters, to confine the effects of flooding and explosion. This is called *compartmentation*. *Damage control* systems consisting of provisions for counterflooding, fire fighting, etc., are developed in varying degree in all types. Speed and



although they carry other weapons. Carriers, minelayers, and torpedo boats are designed for special attack functions, with guns provided largely for defense, while destroyers and submarines are dual armament ships, using either

guns or torpedoes. Larger types carry secondary batteries, primarily intended for defense against destroyers or submarines, or, if "dual purpose," for protection from attack from the air.



maneuverability in themselves constitute factors of protection in smaller types in which armament and protection have been sacrificed for these

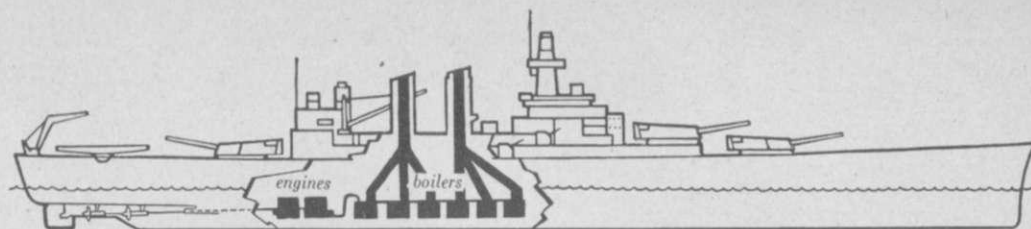
qualities, while submarines depend for protection largely on their ability to make themselves invisible by submerging.

## ATTRIBUTES OF FIGHTING SHIPS

### MOBILITY

Most fighting ships are propelled by high-pressure steam boilers and geared turbine engines, although Diesel or reciprocating engines are sometimes used in smaller types. Diesels are used in submarines when operating on the surface, electric storage battery motors when submerged.

Since a large proportion of total displacement and space is allotted to armament and protection in the design of battleships, these ships do not attain the high speeds of many smaller combat



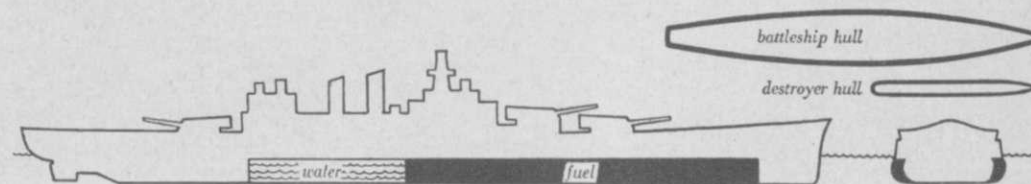
units. Carriers are designed for speed, with corresponding sacrifice of armor. Cruisers' speed will range from 30 knots, which will permit a heavy cruiser to operate with the fleet and outrun

most battleships, to speeds of over 40 knots in lighter types. Speed is essential to a destroyer's functions and new types are capable of attaining or bettering that of any cruiser.

### SEA KEEPING

Without the capacity to reach a scene of operations, execute a mission, and return to a base, even the fastest and most powerful fighting ship would be of little value.

To bring an enemy to action is the battleship's primary function, and these ships must carry crews and provisions necessary to take them into battle with enough shells and fuel and food aboard to permit them to fight and return. Since cruisers are often required to perform independent missions at great distances, *sea keeping* capacity is a vital consideration in their design. Carriers must also be designed to accommodate provision for extended operations and fuel for their aircraft. Destroyers, as they



often operate with battle fleets or in convoy, must also carry provisions for such work, subject to limitations of size, while submarines are required to remain in enemy waters for extended periods. It will, therefore, be seen that *sea keeping* is a very important factor in the design of all more important types of fighting ships.

The bulky hull of the battleship (above) reflects capacity to accommodate provision for sea repair and for storage of immense quantities of fuel, water, food, ships stores, and lubricating oil, while the proportions of destroyer hulls indicate limitations in sea-keeping capacity inherent in their type.



## TYPE DESIGNATIONS U. S. NAVAL VESSELS

### PRINCIPAL COMBATANT TYPES

BB BATTLESHIP  
CB LARGE CRUISER  
CV AIRCRAFT CARRIER  
CVL AIRCRAFT CARRIER (light)  
CVE AIRCRAFT CARRIER (escort)  
CA HEAVY CRUISER  
CL LIGHT CRUISER  
DD DESTROYER  
DE DESTROYER ESCORT VESSEL  
SS SUBMARINE  
SM MINELAYING SUBMARINE

### MINOR COMBATANT TYPES

CM MINELAYER  
DM LIGHT MINELAYER  
DMS HIGH-SPEED MINESWEEPER  
AM MINESWEEPER  
AN NET-LAYING SHIP  
PF FRIGATE  
PE EAGLE BOAT  
PG GUNBOAT  
PC SUBMARINE CHASER  
PCE PATROL CRAFT ESCORT  
PCS SUBMARINE CHASER (136')  
SC SUBMARINE CHASER (110')  
PT PTC MOTOR TORPEDO BOAT  
PY YACHT

### NAVAL AUXILIARIES

#### Tenders

AD DESTROYER TENDER  
AH HOSPITAL SHIP  
AS SUBMARINE TENDER  
ASR SUBMARINE RESCUE VESSEL  
AR REPAIR SHIP  
ARB BATTLE DAMAGE REPAIR SHIP

ARG INTERNAL COMBUSTION ENGINE REPAIR SHIP  
ARH HULL REPAIR SHIP  
ARL LANDING CRAFT REPAIR SHIP  
ARS SALVAGE VESSEL  
AV SEAPLANE TENDER  
AVD DESTROYER SEAPLANE TENDER  
AVP SMALL SEAPLANE TENDER  
AGP MOTOR TORPEDO BOAT TENDER

### CARGO AND FUEL SHIPS

AE AMMUNITION SHIP  
AF PROVISION STORESHIP  
AK CARGO SHIP  
AKA ATTACK CARGO SHIP  
AKS STORES ISSUE SHIP  
AO OILER  
AOG GASOLINE TANKER

### TRANSPORTS

AP TROOP TRANSPORT  
APA ATTACK TRANSPORT  
APD HIGH-SPEED TRANSPORT  
APH WOUNDED EVACUATION TRANSPORT  
APM MECHANIZED ARTILLERY TRANSPORT  
APR RESCUE TRANSPORT  
APV AIRCRAFT TRANSPORT  
AGC OPERATIONS AND COMMAND HEADQUARTERS SHIP

### LANDING CRAFT

LCC CONTROL LANDING CRAFT  
LCI INFANTRY LANDING CRAFT  
LCT TANK LANDING CRAFT  
LSO DOCK LANDING SHIP

LST TANK LANDING SHIP  
LCM MECHANIZED EQUIPMENT LANDING CRAFT  
LCV VEHICLE LANDING CRAFT  
LCS SUPPORT LANDING CRAFT  
LCP PERSONNEL LANDING CRAFT  
LVT TRACKED LANDING CRAFT  
LCR RUBBER LANDING CRAFT

### NAVAL AUXILIARIES

#### Base Craft

AB CRANE SHIP  
ABD ADVANCE BASE DOCK  
ABSO ADVANCE BASE SECTIONAL DOCK  
AFD MOBILE FLOATING DOCK  
APL BARRACKS SHIP  
APC COASTAL TRANSPORT  
ARDC CONCRETE REPAIR DOCK  
ARD FLOATING DRYDOCK  
AT OCEAN-GOING TUG  
ATR RESCUE TUG  
AVR AIRCRAFT RESCUE VESSEL  
AMB HARBOR MINESWEEPER

#### Miscellaneous

AG MISCELLANEOUS AUXILIARIES  
AGS SURVEYING SHIP  
IX UNCLASSIFIED

### DISTRICT CRAFT

YAG MISCELLANEOUS DISTRICT AUXILIARIES  
YMS MOTOR MINESWEEPER  
YMT MOTOR TUG  
YN NET TENDER  
YNG GATE TENDER  
YP DISTRICT PATROL VESSEL  
YT HARBOR TUG  
CMC COASTAL MINESWEEPER

### Barges

YCD FUELING BARGE  
YO FUEL-OIL BARGE  
YOS OIL STORAGE BARGE  
YPK PONTOON STORAGE BARGE  
YS STEVEDORING BARGE  
YSR SLUDGE REMOVAL BARGE  
YTT TORPEDO TESTING BARGE  
YW WATER BARGE

### LIGHTERS

YA ASH LIGHTER  
YC OPEN LIGHTER  
YCK OPEN CARGO LIGHTER  
YCV AIRCRAFT TRANSPORT LIGHTER  
YF COVERED LIGHTER  
YFT TORPEDO TRANSPORT LIGHTER  
YG GARBAGE LIGHTER  
YLA OPEN LANDING LIGHTER

### MISCELLANEOUS

YCF CAR FLOATS  
YD FLOATING DERRICK  
YDG DEGAUSSING VESSEL  
YDT DIVING TENDER  
YE AMMUNITION TENDER  
YFB FERRY BOAT  
YFD FLOATING DRYDOCK  
YHB HOUSEBOAT  
YHT HEATING SCOW  
YM DREDGE  
YPD FLOATING PILE DRIVER  
YR FLOATING WORKSHOP  
YRDH DRY DOCK WORKSHOP—HULL  
YSD SEAPLANE WRECK DERRICK  
YSP SALVAGE PONTOON

**UNITED STATES  
NAVAL VESSELS**



## AIRCRAFT CARRIERS CV-CVL-CVE

### LIGHT CRUISERS-CL



ATLANTA CLASS



OMAHA CLASS



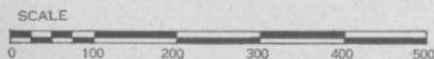
ST. LOUIS



BROOKLYN CLASS



CLEVELAND CLASS



SARATOGA—CV



ESSEX CLASS—CV



ENTERPRISE—CV



RANGER—CV



INDEPENDENCE CLASS—CVL



BOGUE, SANGAMON, PRINCE WILLIAM CLASSES—CVE



LONG ISLAND—CVE



CASABLANCA—CVE



CHARGER—CVE

## DESTROYERS—DD



MAHAN-DUNLAP CLASSES



GRIDLEY-BAGLEY CLASSES



BENHAM-SIMS CLASSES



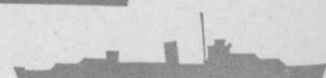
BENSON-LIVERMORE CLASSES



FLETCHER CLASS



PORTER CLASS



SOMERS CLASS



FARRAGUT CLASS



FLETCHER (CATAPULT) CLASS



FLUSH DECK TYPE



DE-1



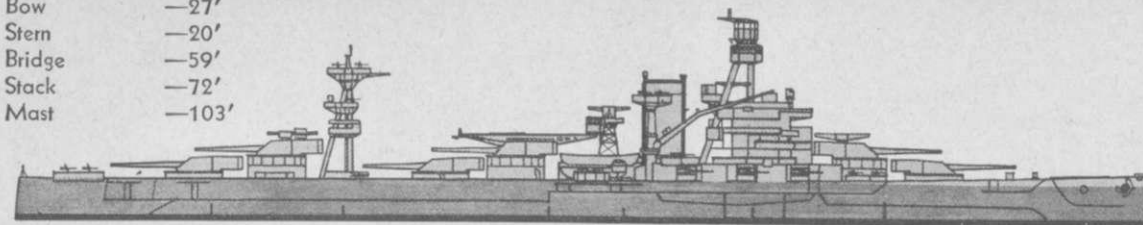
DE-51

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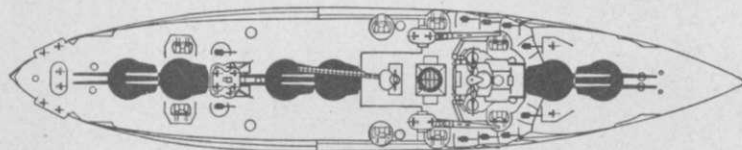
CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Supplement 4-8-4-43

Bow —27'  
Stern —20'  
Bridge —59'  
Stack —72'  
Mast —103'



Length o. a. —554'



1-2-43 ▼

## ARKANSAS—BB 33

Division of Naval Intelligence—Identification and Characteristics Section

Ships in Class:

ARKANSAS—BB 33

WYOMING—AG 17

Last unit of eight dreadnaughts completed in 1912. Rebuilt 1925-27, modernized in 1942. WYOMING (silhouette), partially demilitarized, serves as a Gunnery Training Ship.

Observer's Note:

- 2-A-2-2 main battery disposition (Japan's ISE Class similar)
- Low, widely spaced tripod masts (WYOMING retains original cage foremast)
- Catapult on No. 3 turret, flanked by prominent cranes.





ARKANSAS 7-1-43 ▲  
6-27-42 ▼





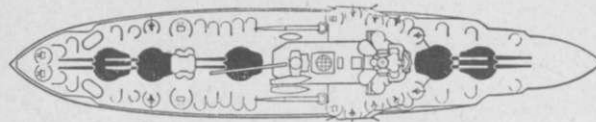
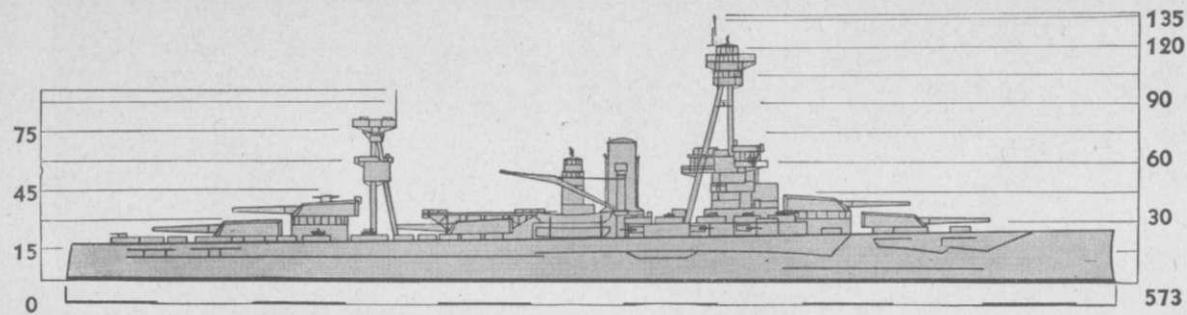
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CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

SUPPLEMENT 2-4/1/43

BB 34—NEW YORK (New York Class)

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



Ships in Class:

BB 34 NEW YORK

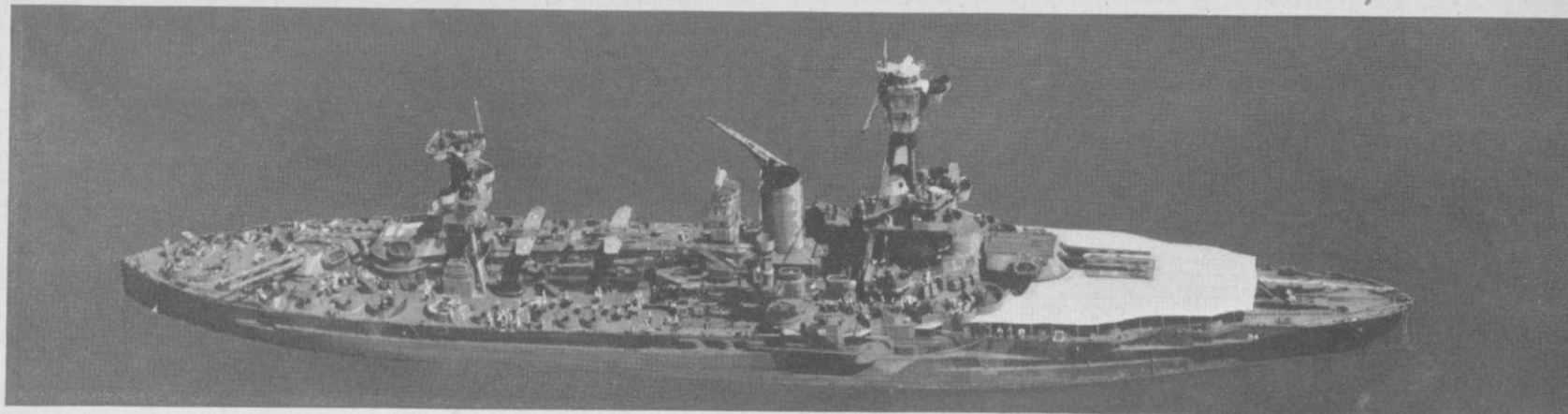
BB 35 TEXAS

Observer's note: Resembles—  
WYOMING (AG 17 U. S.)  
ARKANSAS (BB U. S.)



BB 34—Photo 8/12/42

BB 34



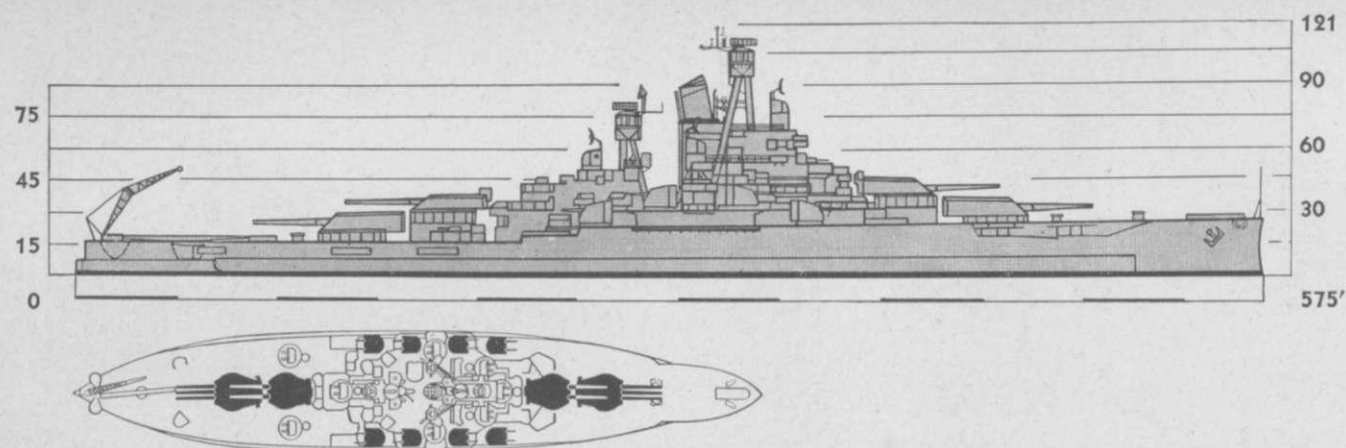
BB 34—Photo 8/12/42



BB 34—Photo 8/11/42

ONI 54-R • RESTRICTED CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57  
SUPPLEMENT 3-4/1/42

BB 36—NEVADA (Nevada Class)  
DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



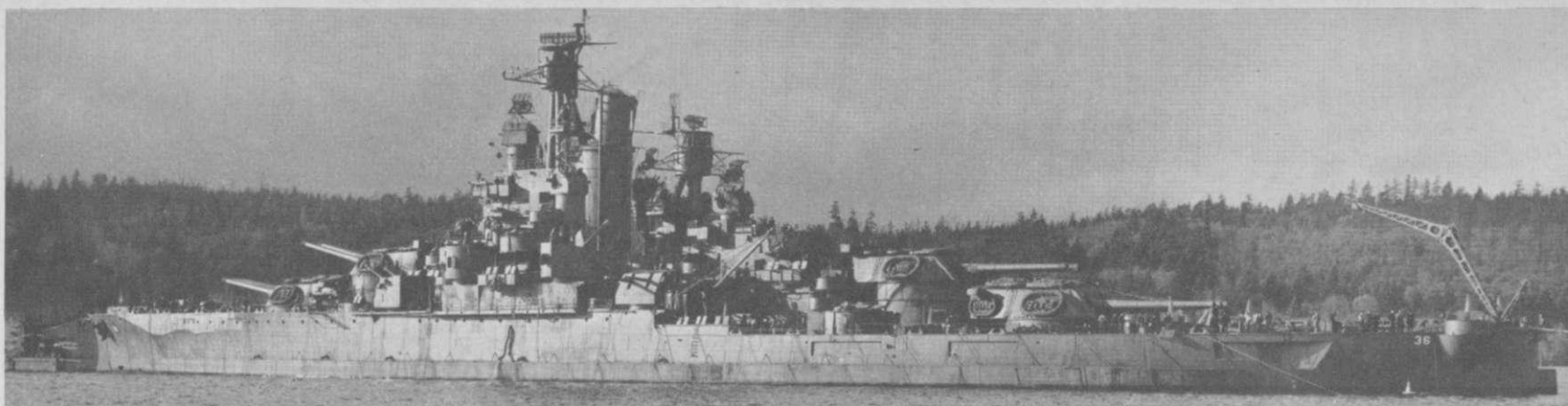
Ships in Class:  
BB 36 NEVADA

Observer's Note: Slight resemblance  
to SOUTH DAKOTA Class when  
seen at a distance.



BB 36—Photo 12/15/42

BB 36



BB 36—Photo 12/15/42



BB 36—Photo 12/14/42

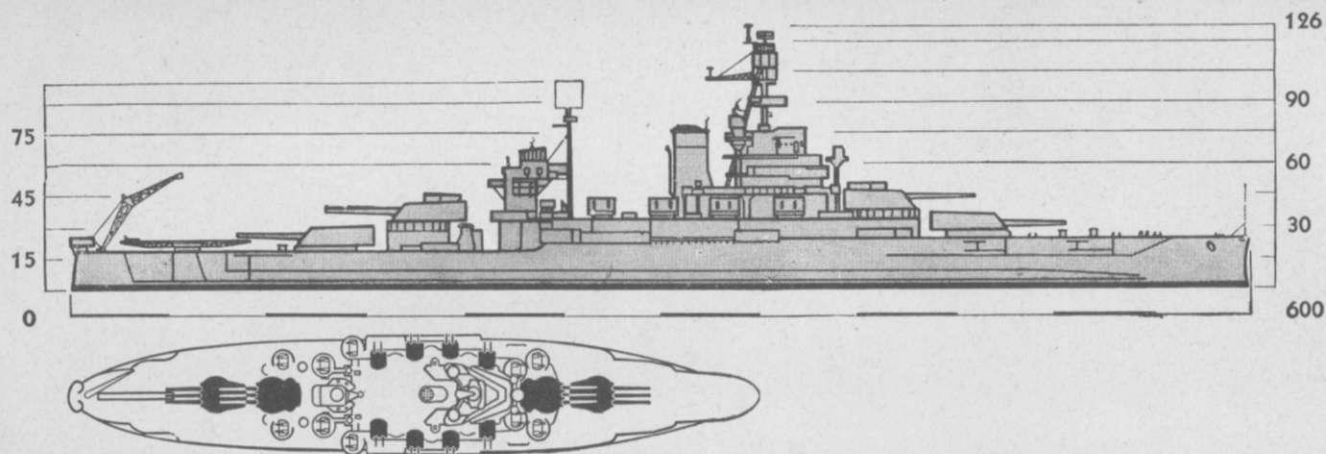
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SUPPLEMENT 2—3/1/43

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

BB 38 PENNSYLVANIA (Pennsylvania Class)

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



Ships in Class:

BB 38 PENNSYLVANIA

Observer's note: Resembles—  
ROYAL SOVEREIGN CI. (BB Br.)  
NAGATO CI. (BB Jap.)  
NEW MEXICO CI. (BB U. S.)

Note: Resemblances to the above  
are more apparent in quartering  
views.



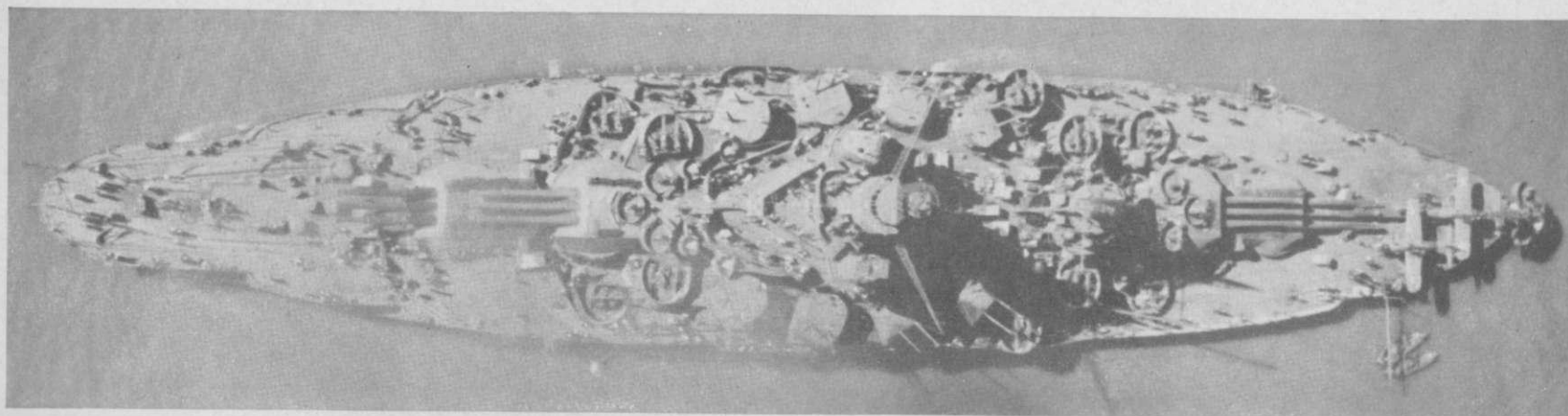
BB 38—Photo 2/1/43



BB 38



BB 38—Photo 2/5/43



BB 38—Photo 2/1/43

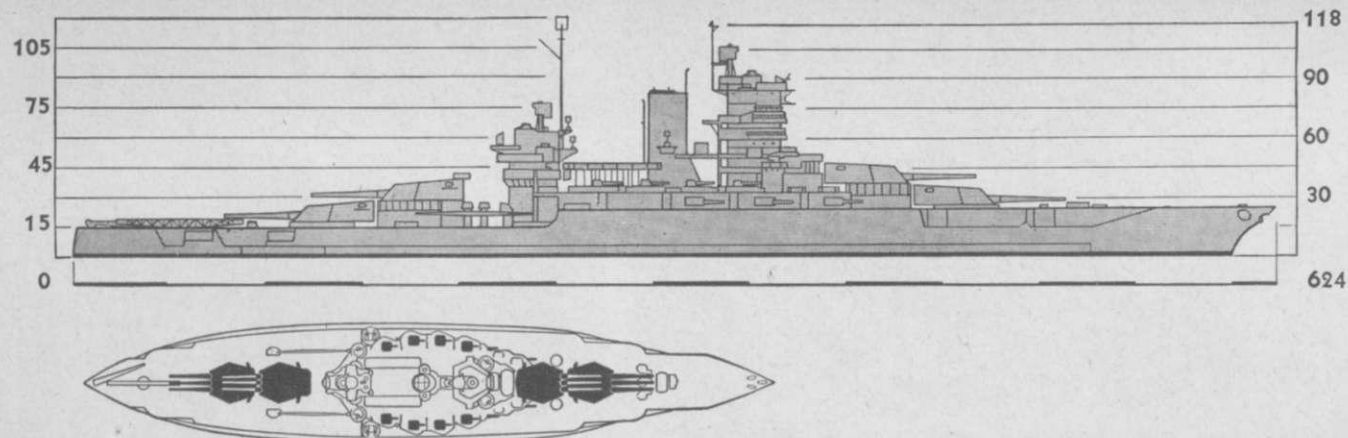
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CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-90V-57

SUPPLEMENT 2-4/1/48

BB 40—NEW MEXICO (New Mexico Class)

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



Ships in Class:

BB 40 NEW MEXICO

BB 41 MISSISSIPPI

BB 42 IDAHO

Observer's note: Resembles—  
NAGATO Cl. (BB Jap.)  
PENNSYLVANIA (BB U. S.)

Note: Compare bridge and anti-aircraft platform (abaft stack) with those of the IDAHO.



BB 40—Photo 12/1/42

BB 40



BB 40—Photo 12/4/42



BB 40—Photo 12/4/42

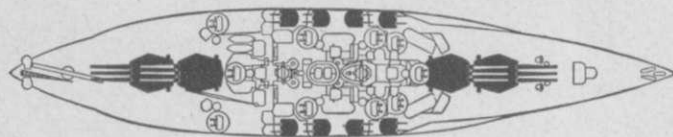
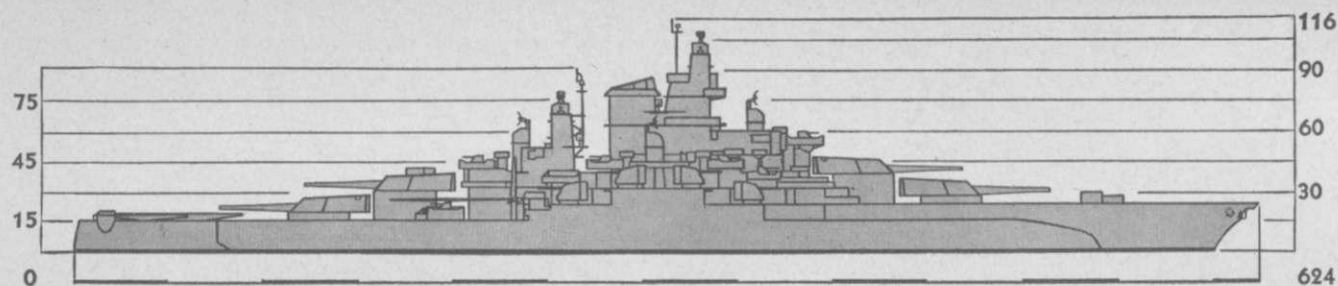
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CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

SUPPLEMENT B-2/48

BB 43—TENNESSEE (Tennessee Class)

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



Ships in Class:

BB 43 TENNESSEE

BB 44 CALIFORNIA

Observer's note: Like others,  
modernized to simulate South  
Dakota Class. Main arma-  
ment remains distinguishing  
feature.

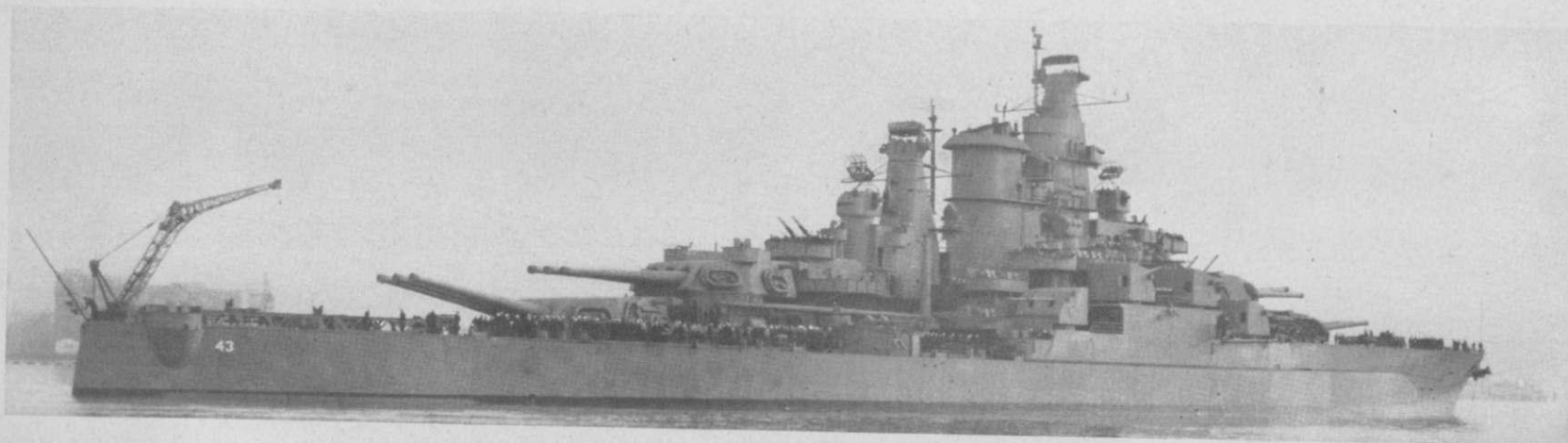


BB 43—Photo 5/8/43

BB 43



BB 43—Photo 5/8/43



BB 43—Photo 5/8/43

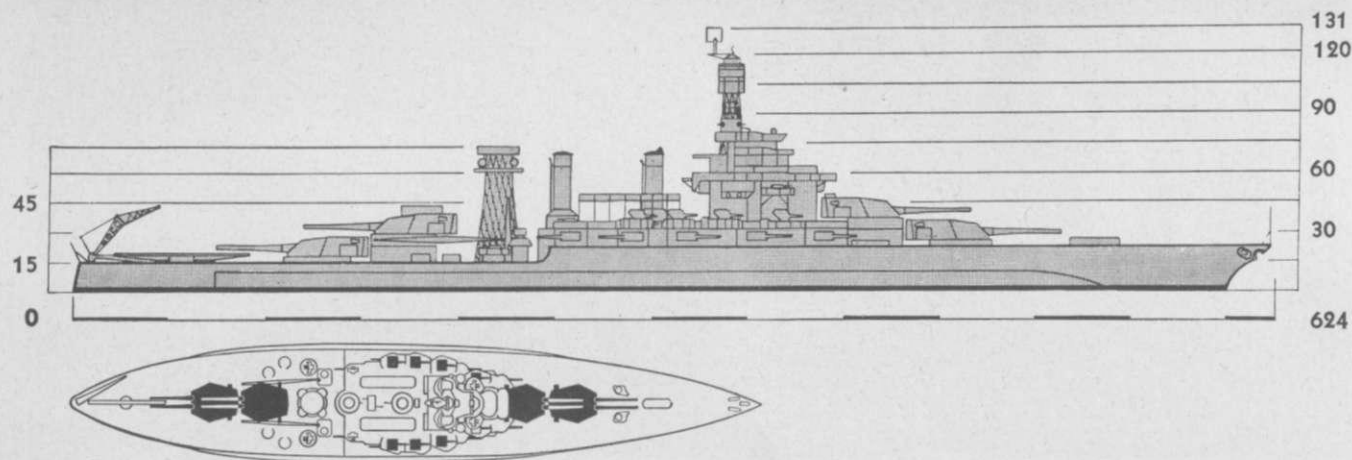


ONI 54-R • RESTRICTED  
SUPPLEMENT 3—4/1/42

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BB 45—COLORADO (Colorado Class)

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



Ships in Class:

BB 45 COLORADO  
BB 46 MARYLAND

Observer's note: Resembles own  
class only. Similar to MARY-  
LAND. WEST VIRGINIA  
differs radically.

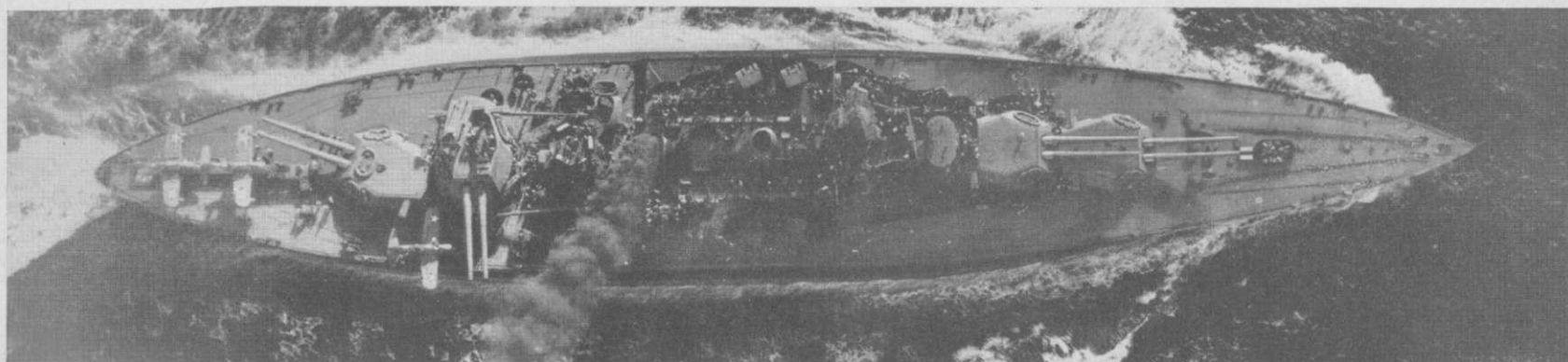


BB 45—Photo 11/8/42

BB 45



BB 45—Photo 11/8/42



BB 45—Photo 11/8/42

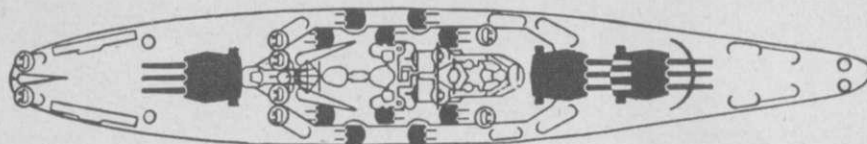
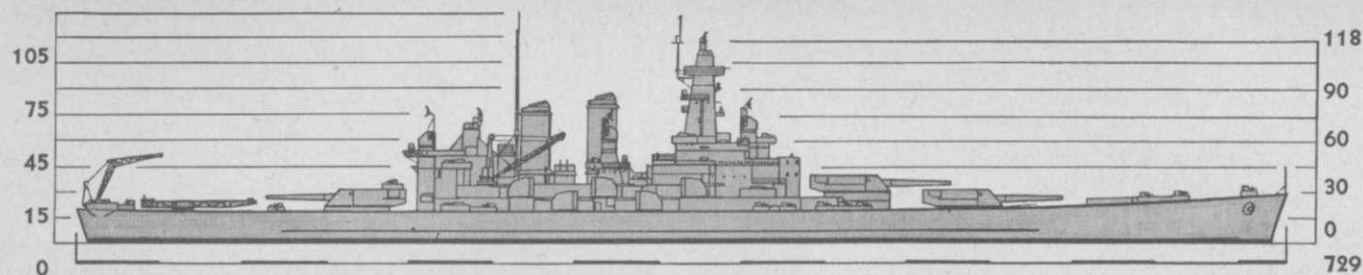
ONI 54-R • RESTRICTED

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

SUPPLEMENT 2—4/1/42

BB 55—NORTH CAROLINA (North Carolina Class)

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



Ships in Class:

BB 55 NORTH CAROLINA

BB 56 WASHINGTON

Observer's note: Resembles—

LITTORIO Cl. (BB It.)

DORIA Cl. (BB It.)

SOUTH DAKOTA Cl. (BB

U. S.)

IOWA Cl. (BB U. S.)

Note: Boat cranes removed. AA  
armament increased.

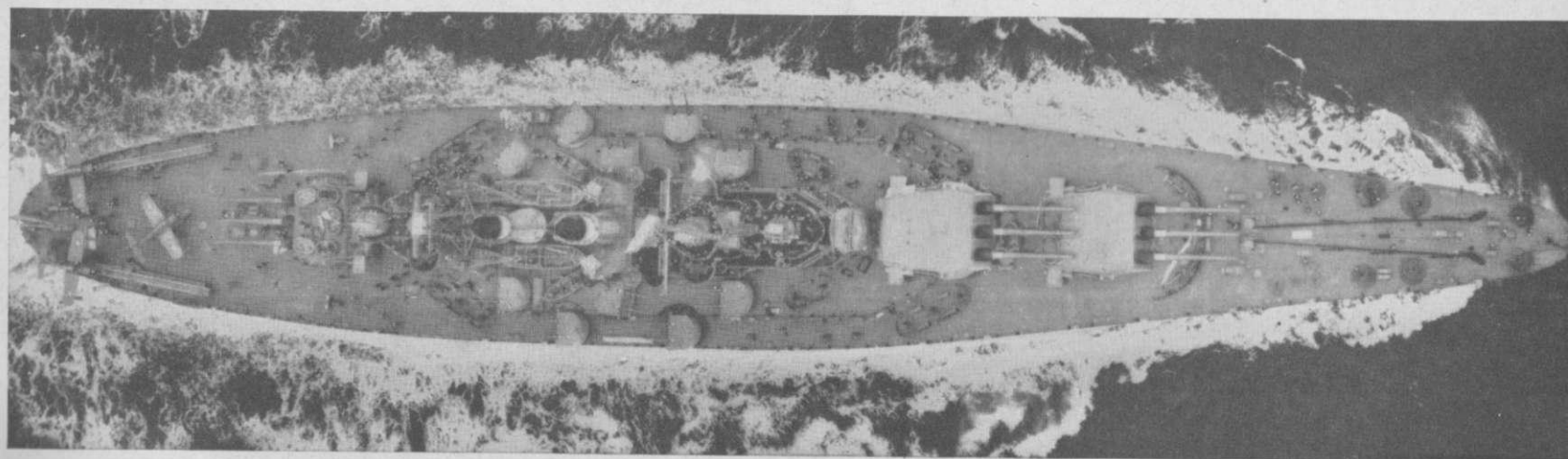


BB 55—Photo 6/4/42

BB 55



BB 55—Photo 11/16/42

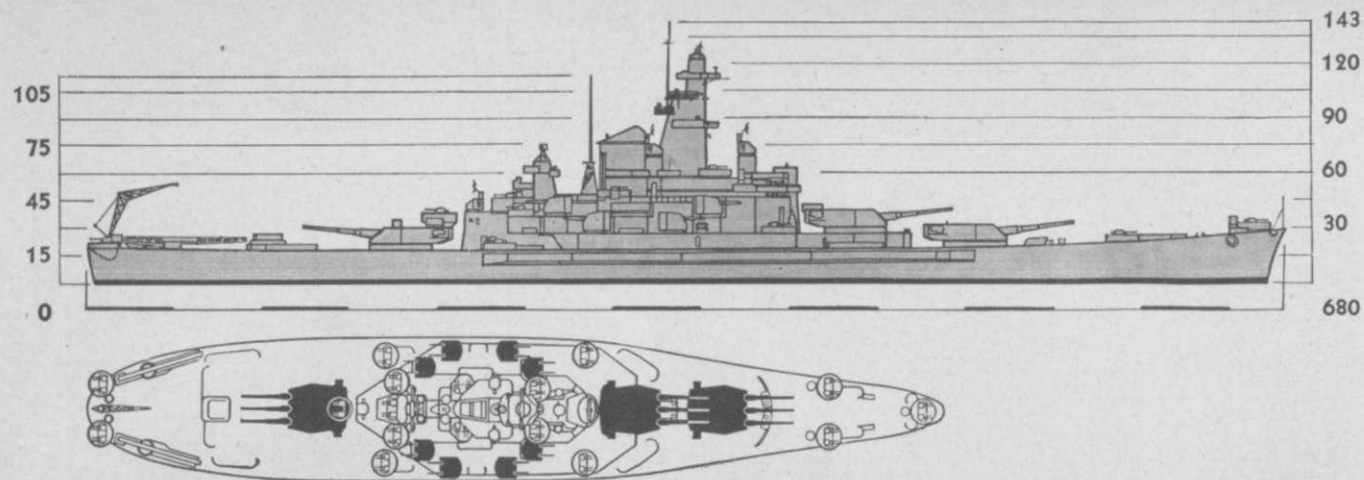


BB 55—Photo 6/4/42



BB 57—SOUTH DAKOTA (South Dakota Class)

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



**Ships in Class:**  
BB 57 SOUTH DAKOTA  
BB 58 INDIANA  
BB 59 MASSACHUSETTS  
BB 60 ALABAMA

**Observer's note:** Resembles—  
TIRPITZ (BB Ger.)  
GNEISENAU (BB Ger.)  
N. CAROLINA (BB U. S.)

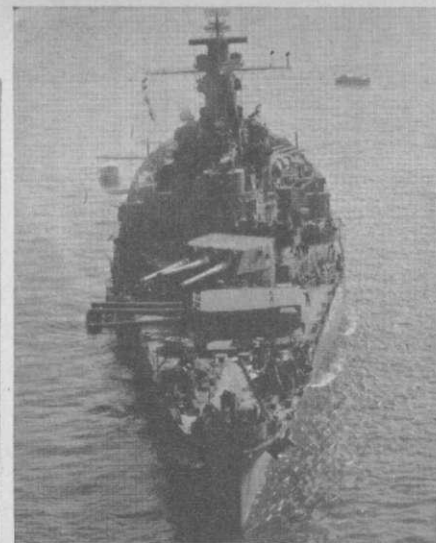
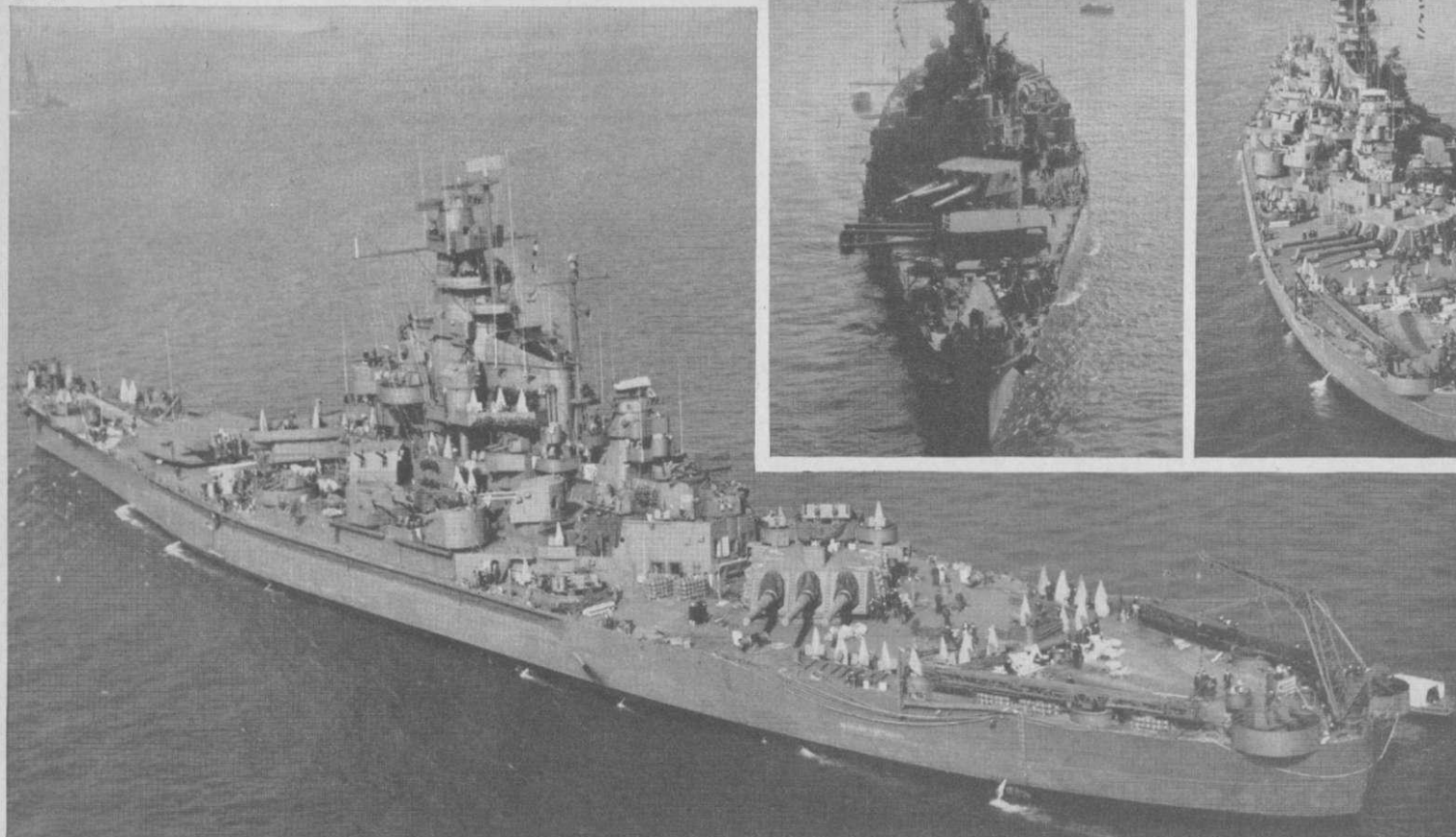
**Note:** 8 twin secondary mounts  
(compare other ships of class)



BB 57—Photo 2/23/43



BB 57



BB 57—All photographs 2/23/43

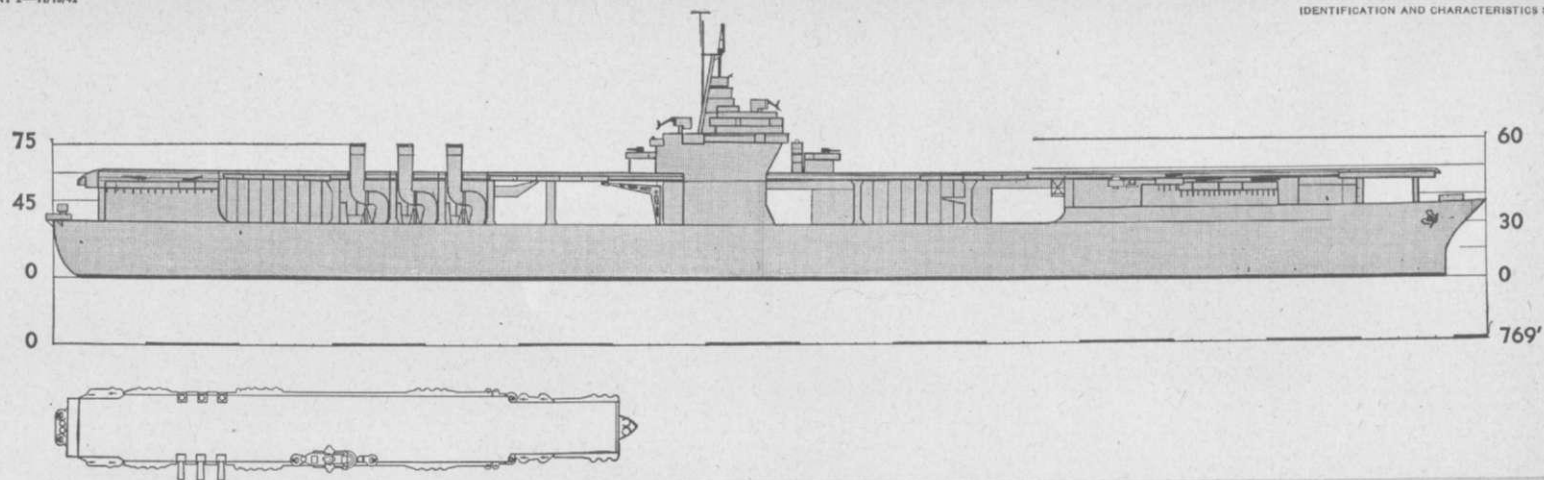
ONI 54-R • RESTRICTED

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

SUPPLEMENT 2—11/19/42

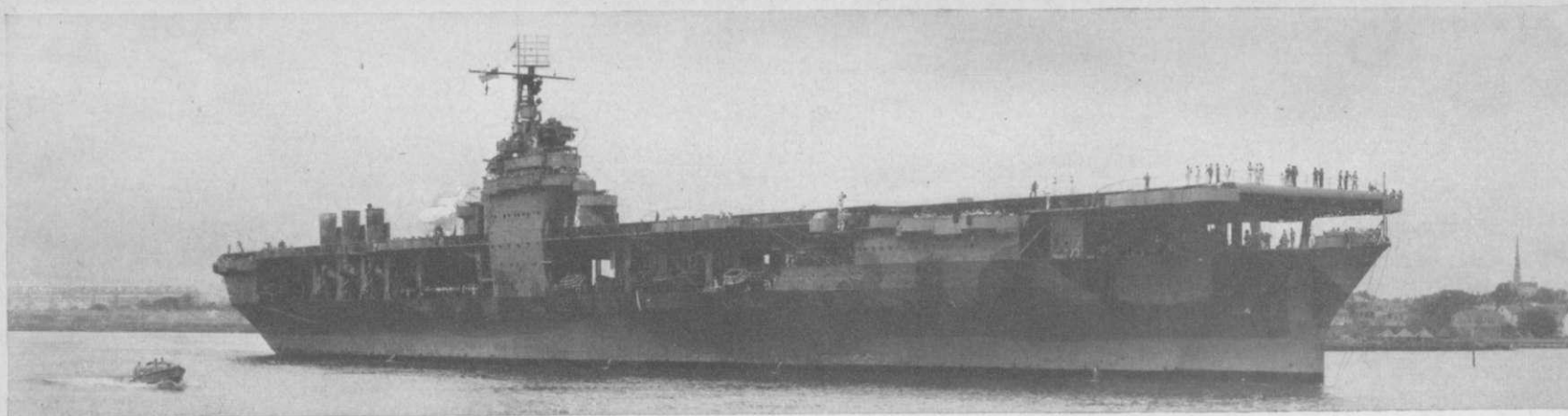
CV—RANGER

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



8/18/42

RANGER—8/18/42



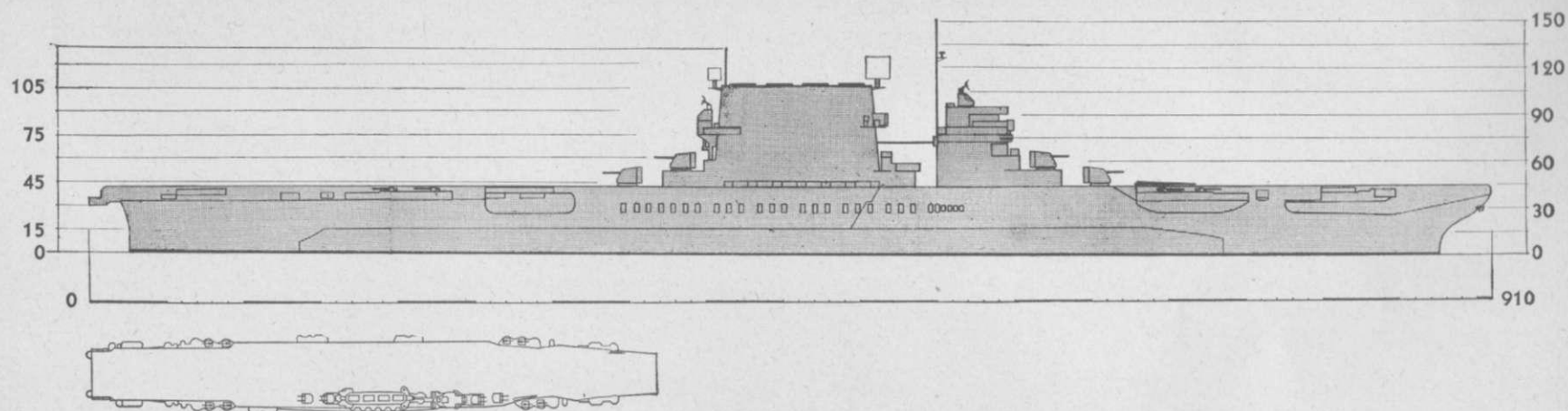
ONI 54-R • RESTRICTED

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

SUPPLEMENT 2--11/18/42

CV-SARATOGA

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



9/3/42

SARATOGA—9/3/42





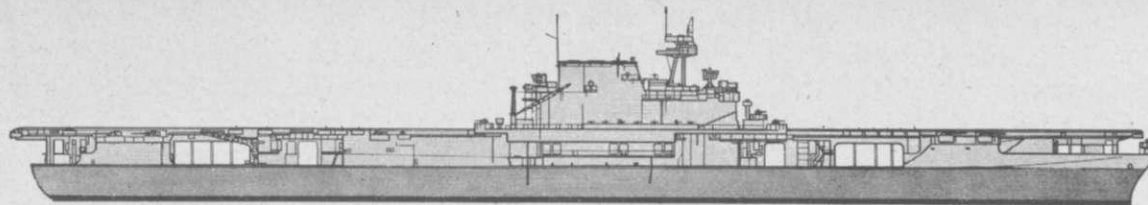
**ONI 54-R • RESTRICTED**

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-30V-57

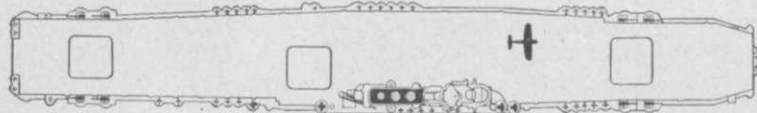
Supplement 4-8-4-43

**ENTERPRISE—CV 6**

Division of Naval Intelligence—Identification and Characteristics Section



Length o. a. —825



Height above w. l.

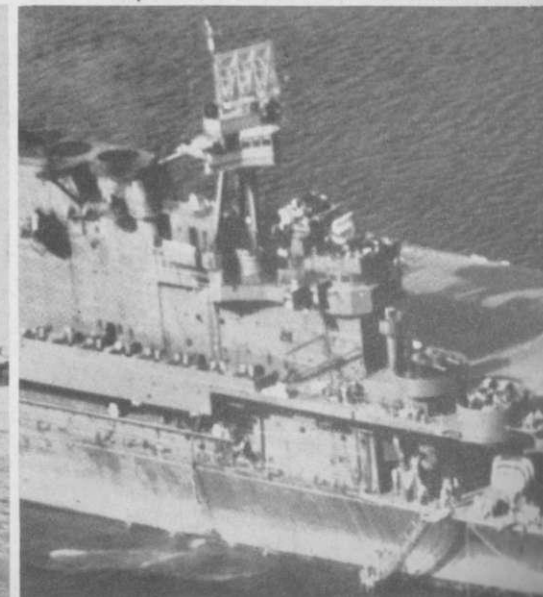
Deck	—55'
Bridge	—86'
Stack	—103'
Mast	—143'

▼ 6-7-43

▼ 6-7-43



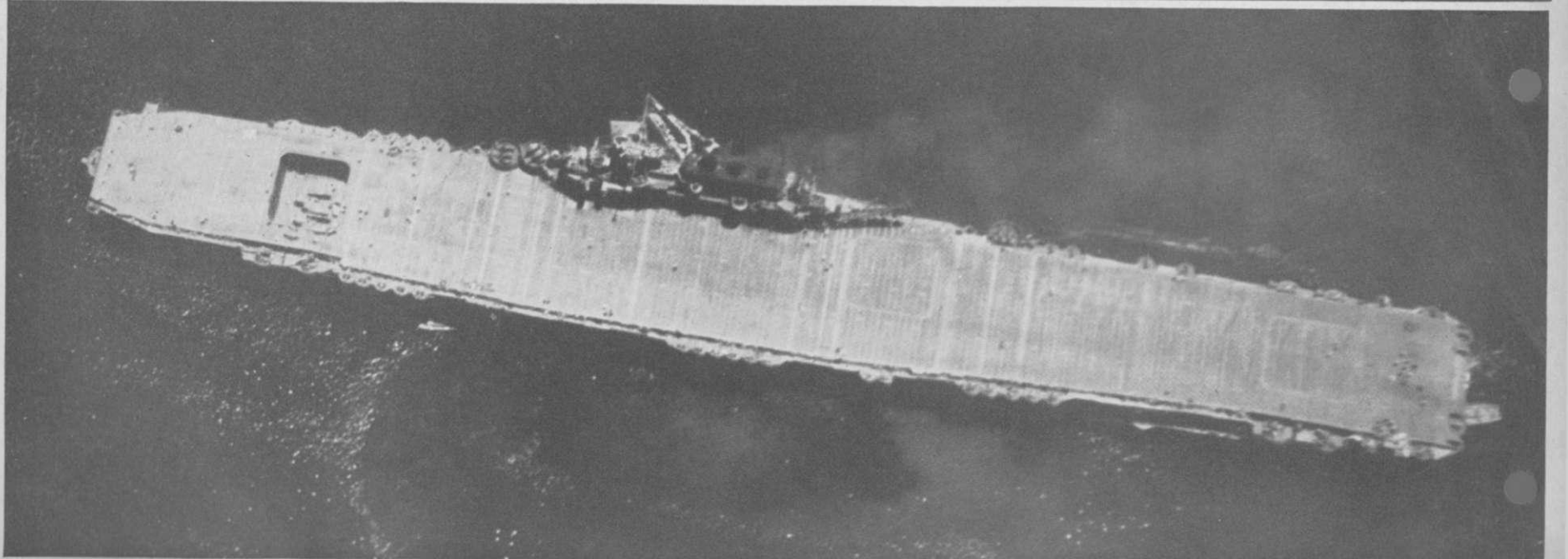
▼ 11-10-42 (Also full length views)



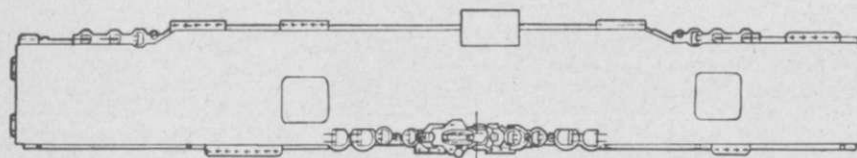
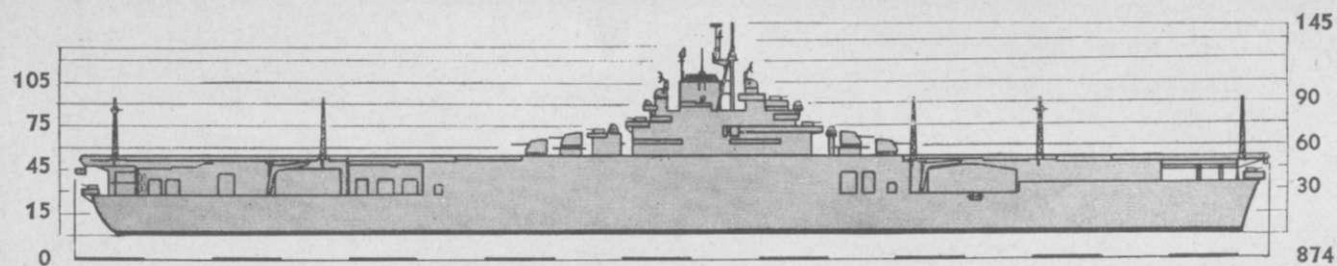
Designed as an enlarged, speedier RANGER, this ship was authorized under the N. R. A. and completed in 1938. Resembles the new ESSEX design.

**Observer's Note:**

- Long, low island superstructure combined with heavy stack.
- Light tripod foremast with stick mainmast stepped abaft stack.
- Full-length flight deck, broken freeboard.



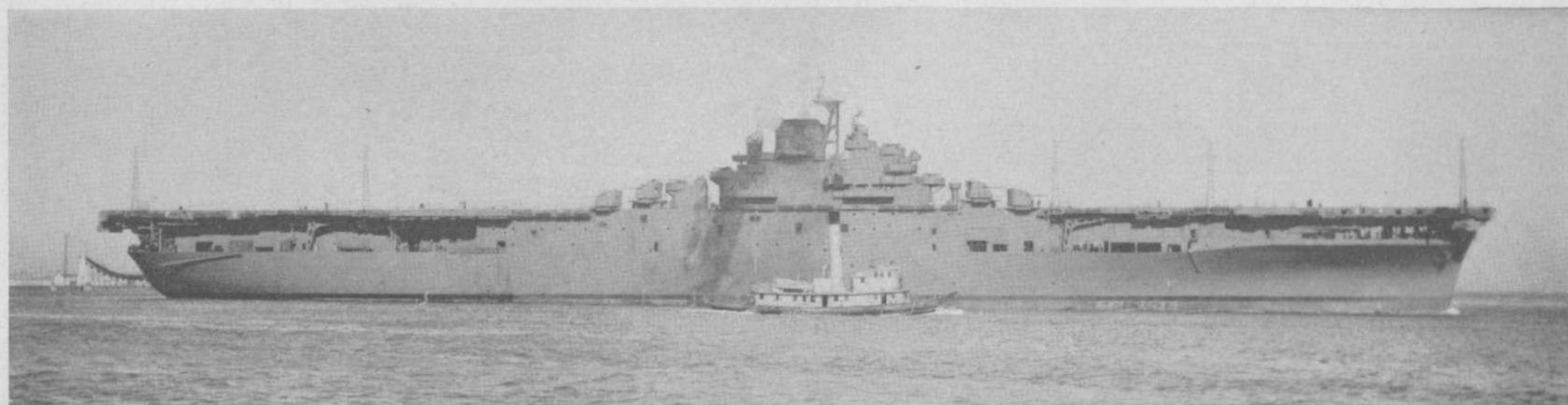
CV 9 ESSEX (Essex Class)  
DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



Ships in Class:

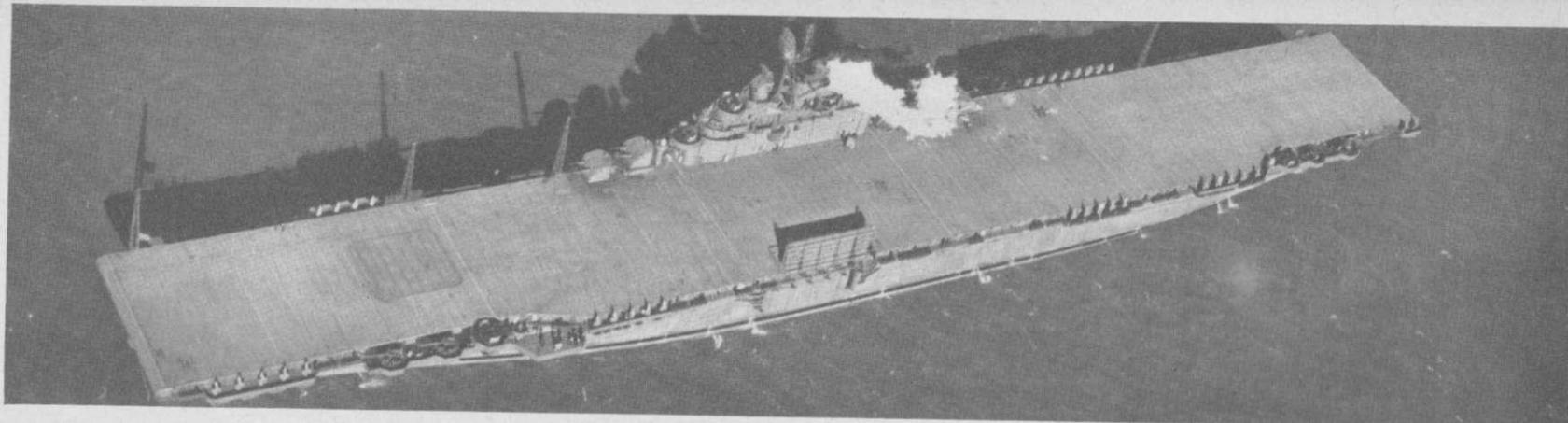
- CV 9 ESSEX
- CV 10 YORKTOWN
- CV 16 LEXINGTON
- CV 17 BUNKER HILL

Observer's note: Resembles—  
ENTERPRISE (CV U. S.)  
ILLUSTRIOUS Class (CV BR.)

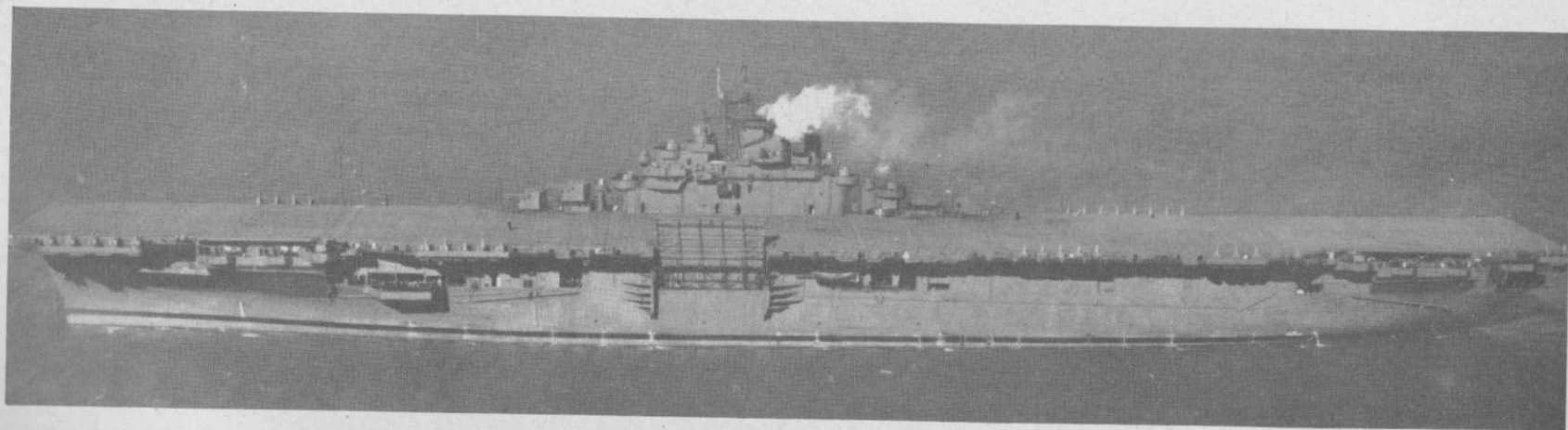


CV 9—Photo 12/31/42

CV 9



CV 9—Photo 2/1/43



CV 9—Photo 2/1/43

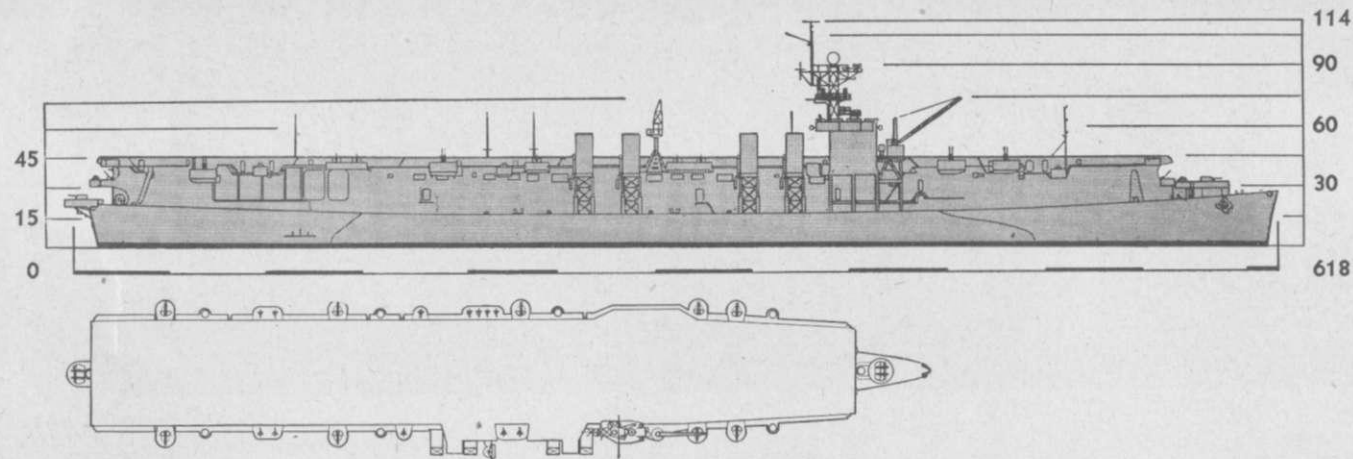
ONI 54-R • RESTRICTED

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

SUPPLEMENT 3—4/1/43

# CV 22—INDEPENDENCE (Independence Class)

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



## Ships in Class:

CV 22 INDEPENDENCE  
CV 23 PRINCETON  
CV 24 BELLEAU WOOD  
CV 25 COWPENS

Observer's note: Slight resemblance to RANGER (CV U.S.)  
Adjacent deck plan shows new authorized changes to Class such as—flight deck extensions over stacks and 40 mm. quads, bow and stern.



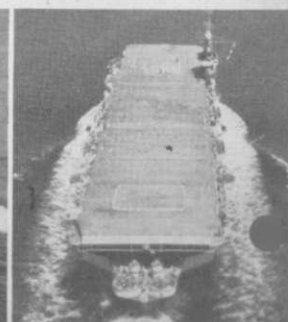
CV 22—Photo 3/12/43





▲ USS BARNES, photographed 7-1-43, while ferrying a load of Thunderbolts and dismantled Lightnings.

CROATAN photographed 5-20-43. ▼





# **ONI 54-R • RESTRICTED**

Supplement 4—8-4-43

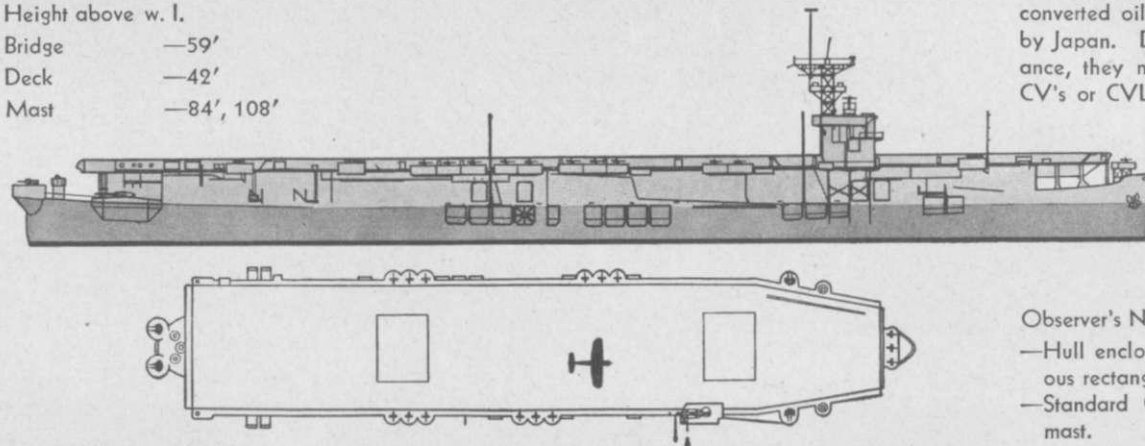
CONDENSED AND PRINTED FOR FM 30-56, NAVAER 00-80V-57

Height above w. l.

Bridge —59'

Deck —42'

Mast —84', 108'



Length o. a.—553'

9-19-42

# **SANGAMON Class—CVE 26**

Division of Naval Intelligence—Identification and Characteristics Section

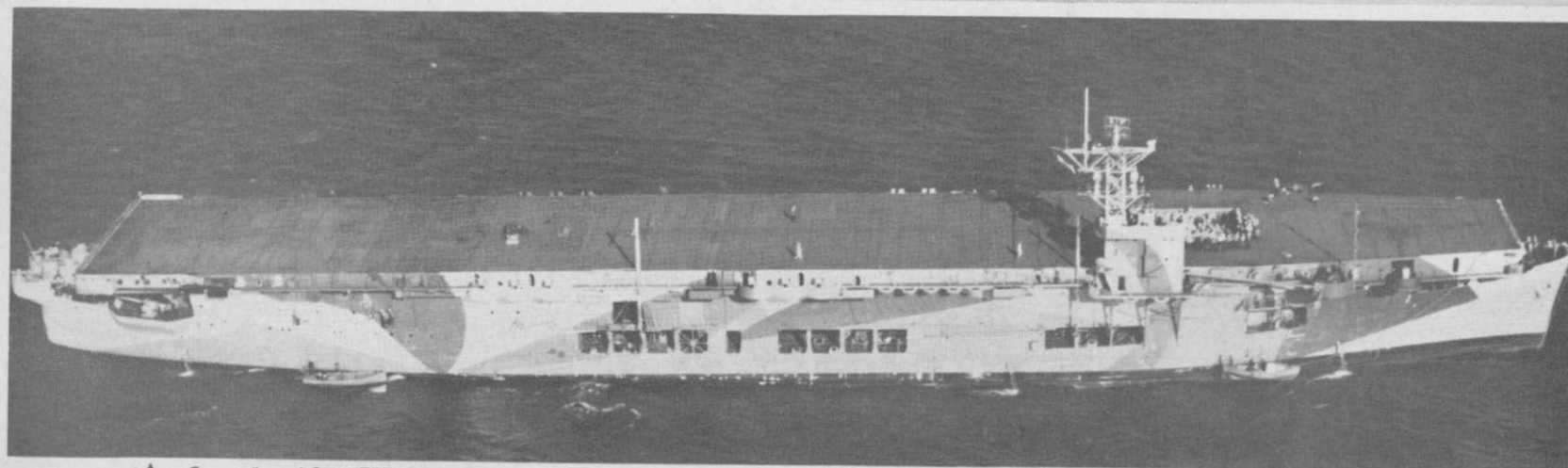
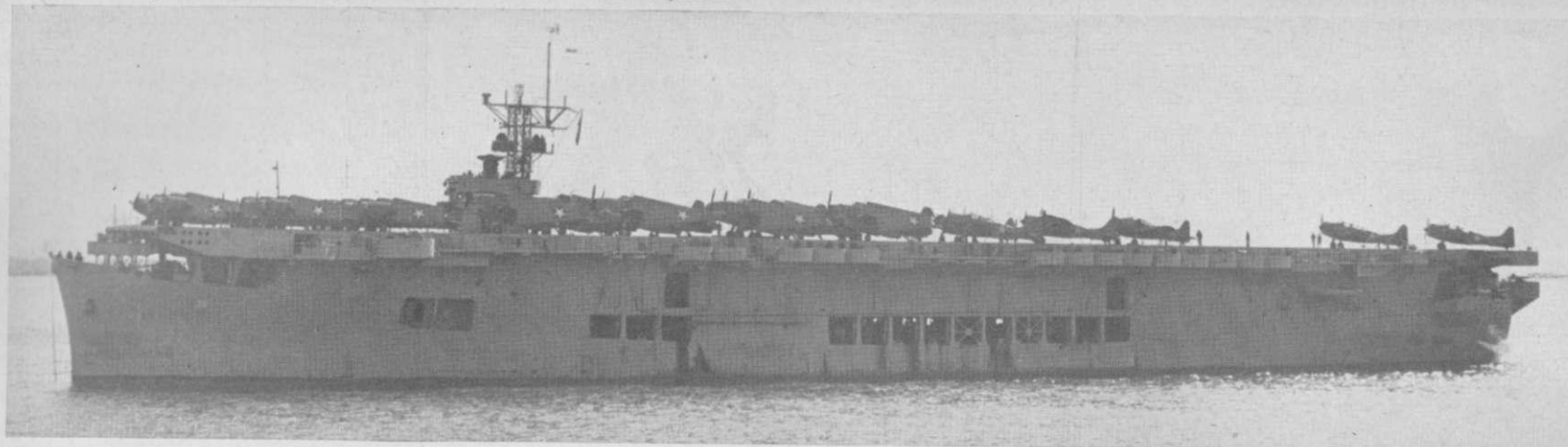
The largest type of CVE, these ships are converted oilers, an expediency also used by Japan. Due to their elongated appearance, they may easily be confused with CV's or CVL's.

## Observer's Note:

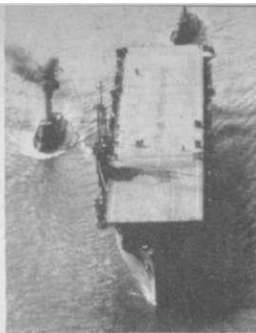
- Hull enclosed to flight deck, with numerous rectangular openings in freeboard.
- Standard CVE box bridge and trestle mast.



▼ SANGAMON, 9-11-42. Note TBF's, SBD's on flight deck.



▲ Camouflaged SANTEE 9-27-42.



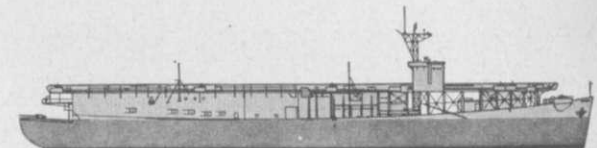
## CHARGER—CVE 30

Division of Naval Intelligence—Identification and Characteristics Section  
CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

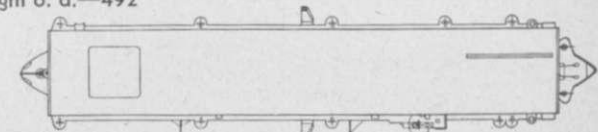
The first conversions of this war, these ships were developments of the LANGLEY design (the "old covered wagon"). Identical with the CHARGER is the British ARCHER Class CVE.

### Observer's Note:

- Freighter hull, enclosed to flight deck aft, open forward.
- Trestle mast on LONG ISLAND tops box bridge on CHARGER.
- Note CHARGER is the only CVE without a raised forecastle.

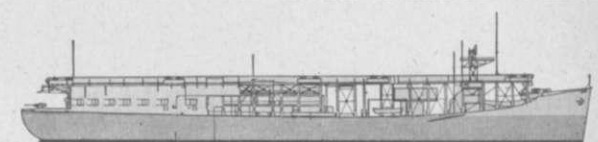


Length o. a.—492'

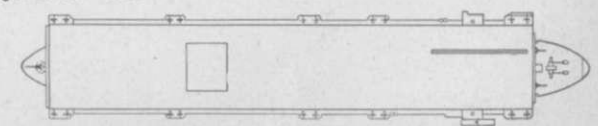


Height above w. l. Bridge—69' Deck—52' Mast—88'

## LONG ISLAND—CVE 1

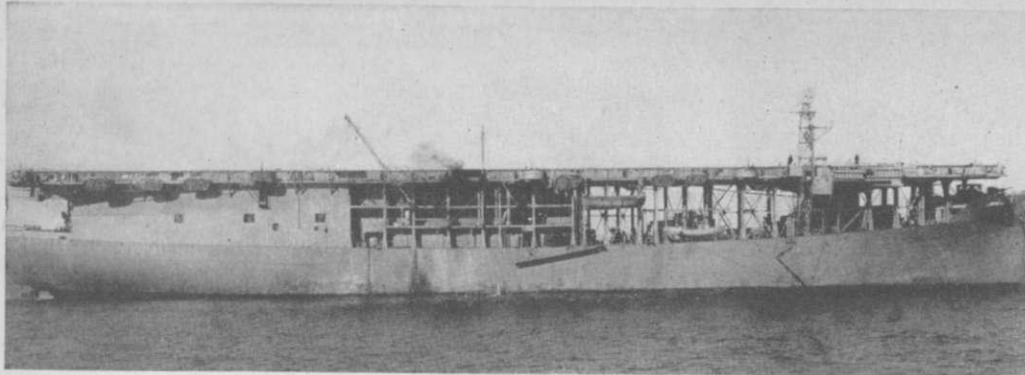


Length o. a.—492'

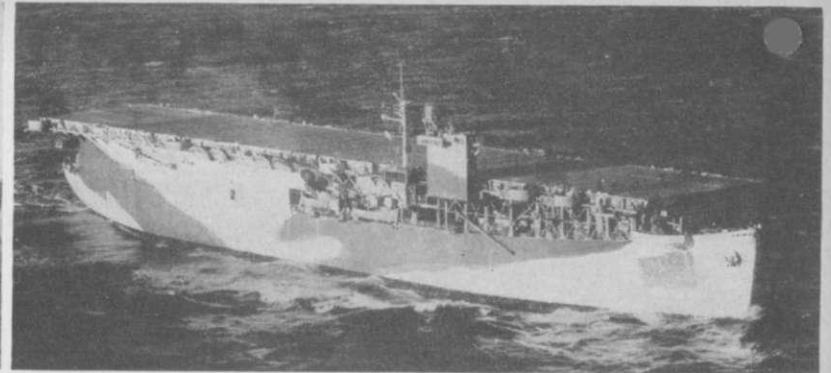


Height above w. l. Deck—58' Mast—69'





▲ British sister ship to the LONG ISLAND, HMS ARCHER, 12-41.  
All photographs of the LONG ISLAND, 12-19-42; of CHARGER, ▼ 9-24-42.



▲ HMS BITER is similar to the CHARGER.



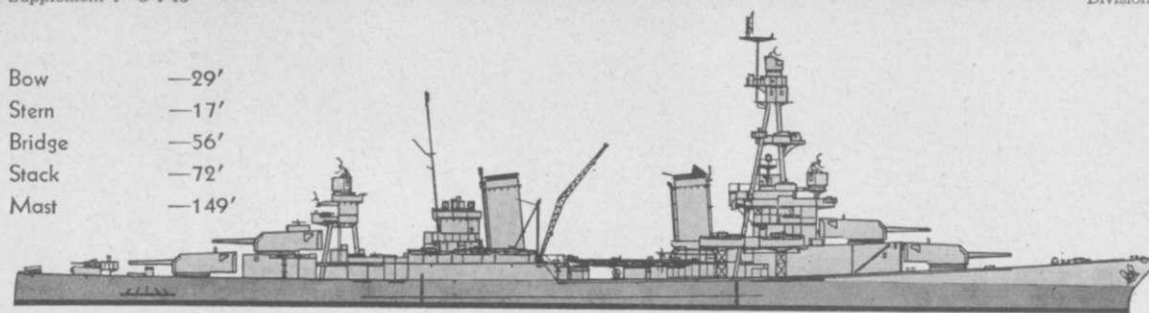


## ONI 54-R • RESTRICTED

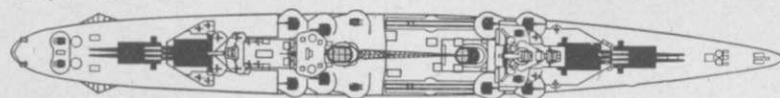
Supplement 4—8-4-43

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-20V-57

Bow —29'  
Stern —17'  
Bridge —56'  
Stack —72'  
Mast —149'



Length o. a.—585'



## PENSACOLA Class—CA 24, 25

Division of Naval Intelligence—Identification and Characteristics Section

### Ships in Class:

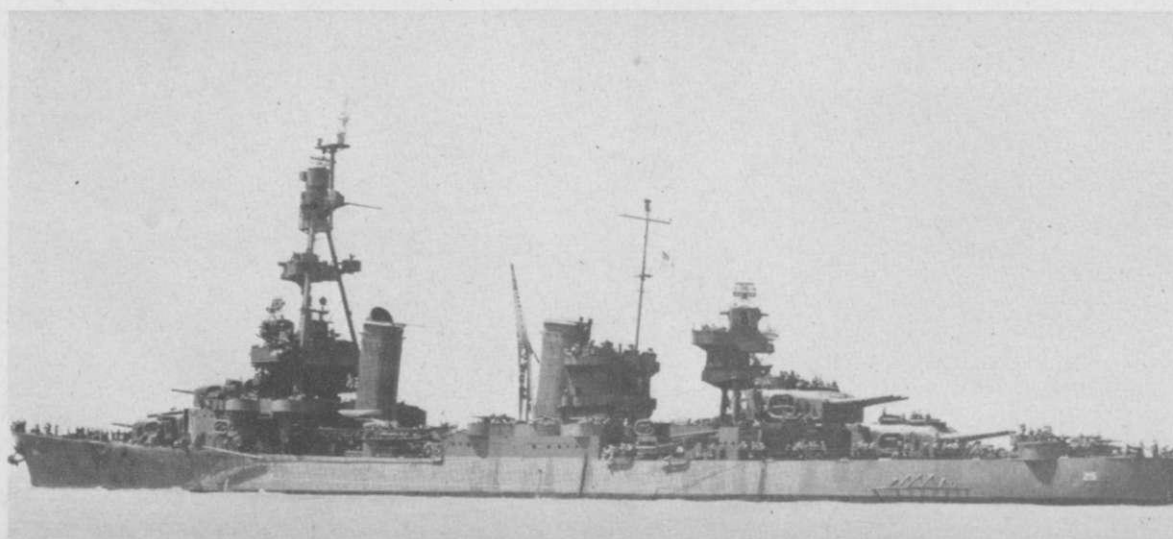
PENSACOLA —CA 24

SALT LAKE CITY—CA 25

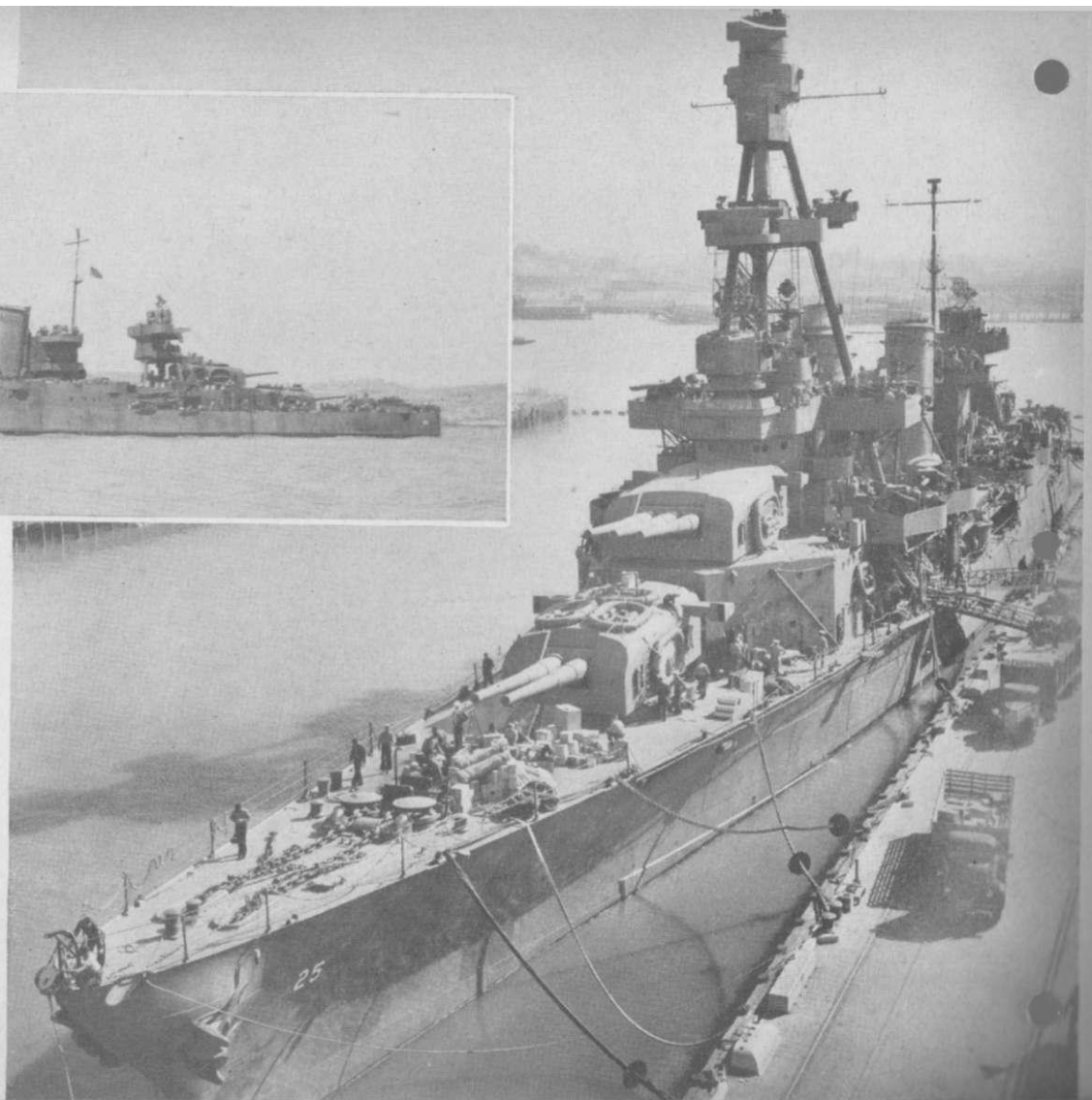
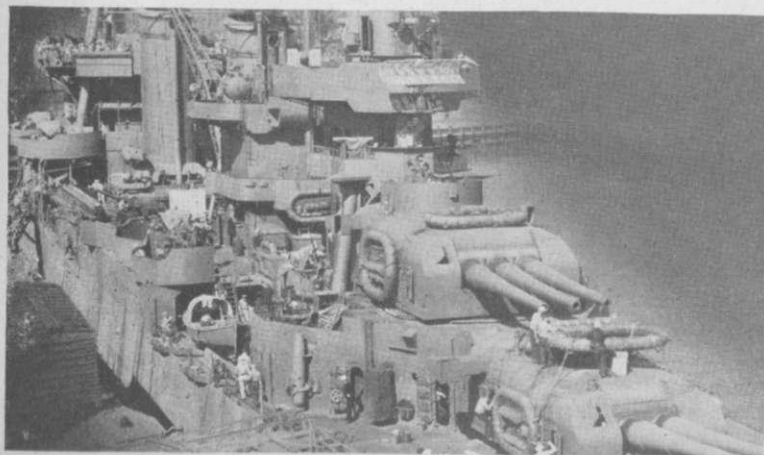
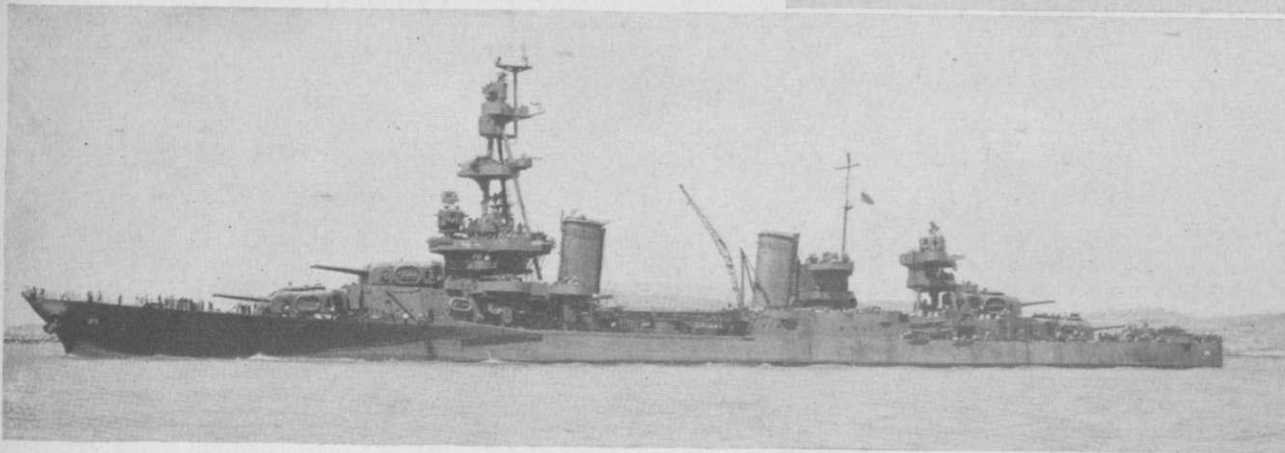
The first of our modern heavy cruisers, these ships were modified in the subsequent NORTHAMPTON-PORTLAND designs.

### Observer's Note:

- 2-A-2 main battery disposition (triples over twins).
- Tall tripod foremast, pole mainmast, plus a tripod control tower aft.
- Two heavy, widely separated raking stacks.
- Flush hull, catapults amidships.



All photos are of SALT LAKE CITY, 5-10-43.



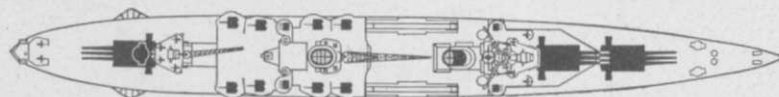
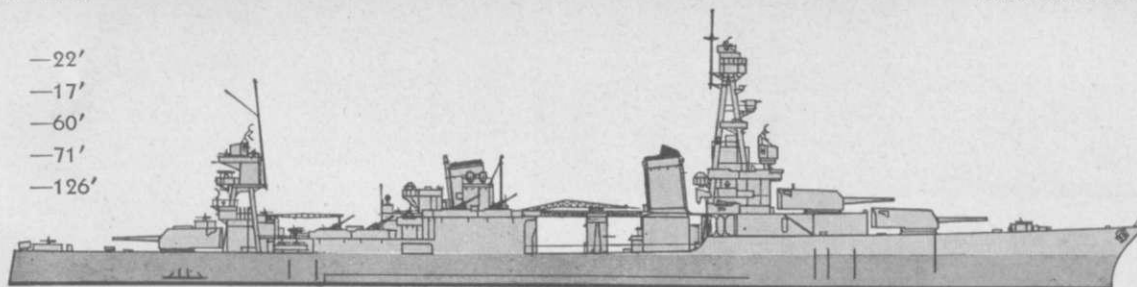
# ONI 54-R • RESTRICTED

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Supplement 4—8-4-43

Bow —22'  
Stern —17'  
Bridge —60'  
Stack —71'  
Mast —126'

Length o. a.—600'



## NORTHAMPTON Class—CA 27, 28, 31

Division of Naval Intelligence—Identification and Characteristics Section

### Ships in Class:

CHESTER —CA 27  
LOUISVILLE—CA 28  
AUGUSTA —CA 31

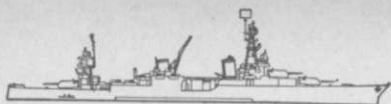
Completed in 1930-31, these cruisers were all fitted as Flagships. Ships are of the same basic design as the PENSACOLA and PORTLAND Classes.

### Observer's Note:

- Cruiser hull, deck line broken at catapult in AUGUSTA, at foremast in other units.
- Tall tripod foremast, heavy tripod mainmast.
- Two short, raking, combined stacks.

▼ LOUISVILLE, 11-42.





Classed separately, the AUGUSTA varies from the NORTHAMPTON in position of hull break and minor superstructure details.

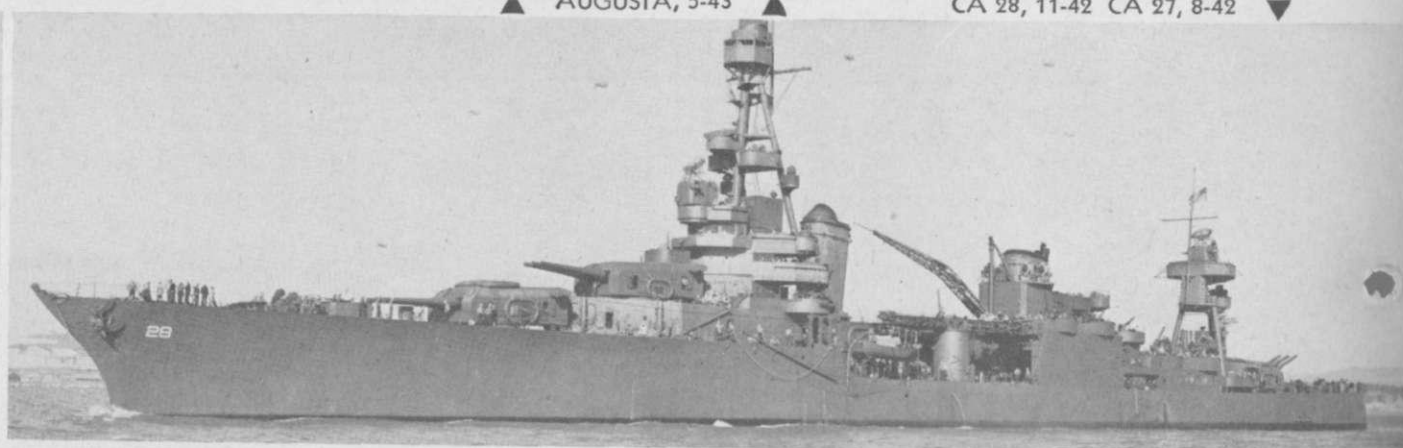
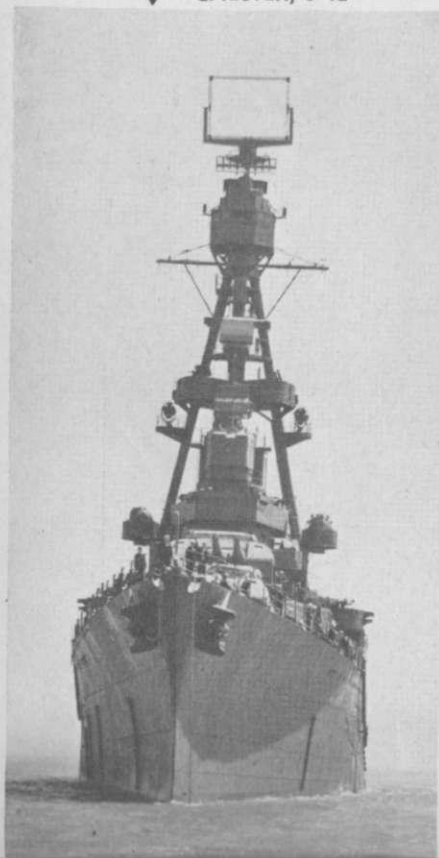
▼ CHESTER, 8-42



▲ AUGUSTA, 5-43



CA 28, 11-42 CA 27, 8-42 ▼





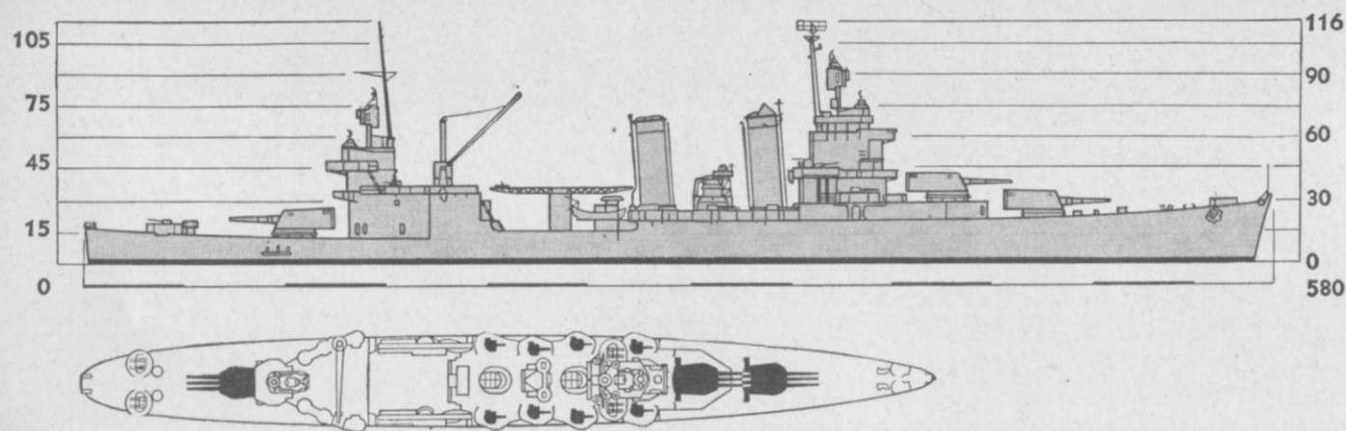
ONI 54-R • RESTRICTED

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

SUPPLEMENT 2—4/1/43

# CA—NEW ORLEANS Class

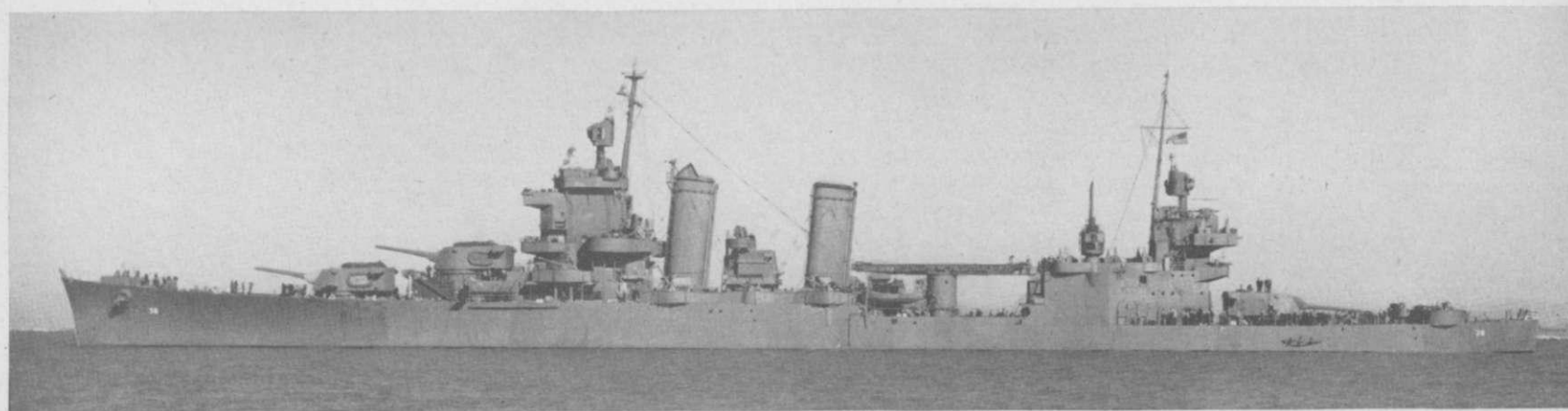
DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



## Ships in Class:

- CA 32 NEW ORLEANS
- CA 36 MINNEAPOLIS
- CA 37 TUSCALOOSA
- CA 38 SAN FRANCISCO

Observer's note: Resembles—  
WICHITA (CA U. S.)  
BROOKLYN Class (CL U. S.)  
PHOENIX Class (CL U. S.)  
KOLN Class (CL Ger.)



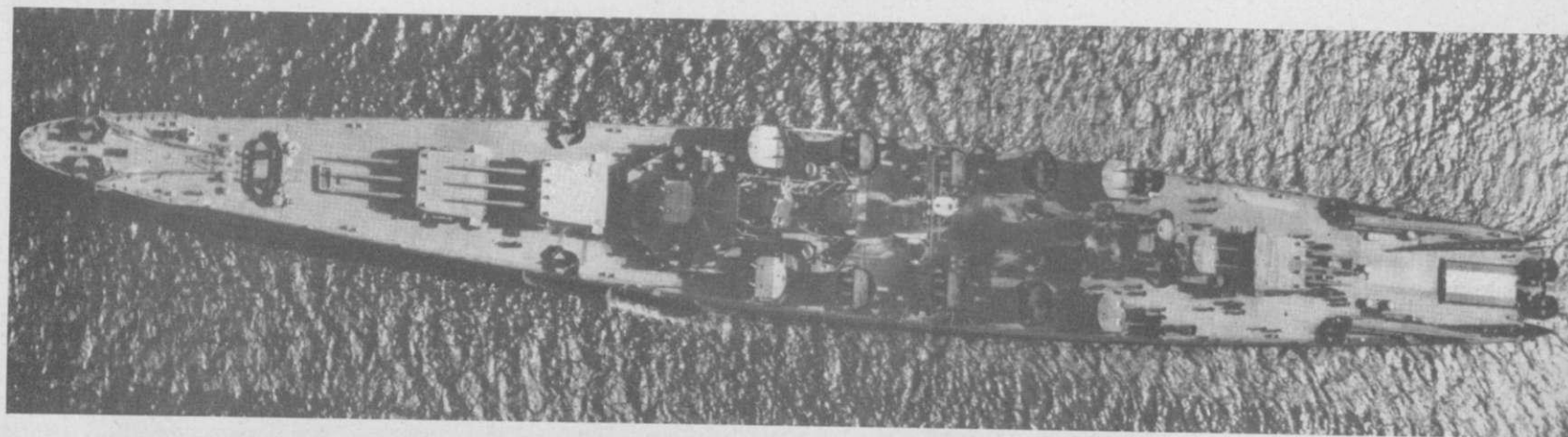
CA 38—Photo 2/15/43



CA 68



CA 68—Photo 4/15/43



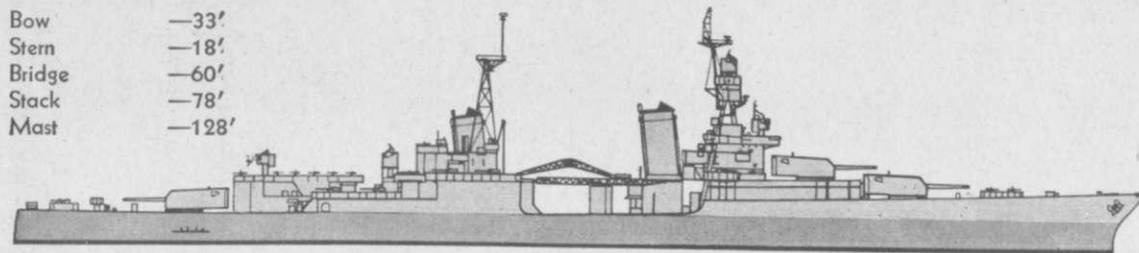
CA 68—Photo 4/15/43

**ONI 54-R • RESTRICTED**

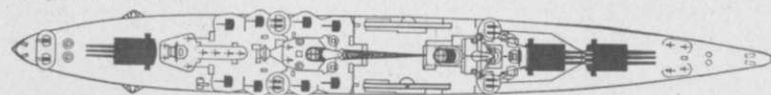
Supplement 4—8-4-43

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Bow —33'  
Stern —18'  
Bridge —60'  
Stack —78'  
Mast —128'



Length o. a.—610'

**PORTLAND Class—CA 33, 35**

Division of Naval Intelligence—Identification and Characteristics Section

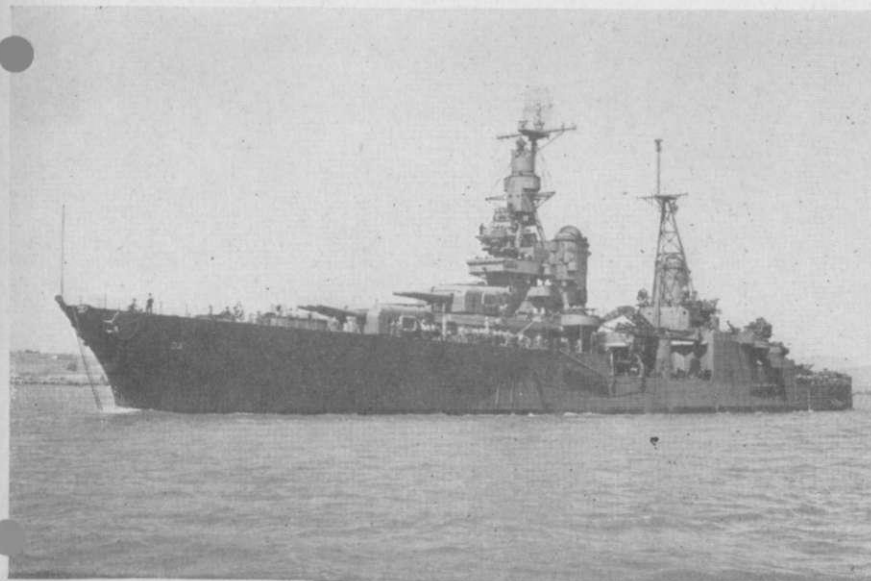
## Ships in Class:

PORTLAND —CA 33  
INDIANAPOLIS—CA 35

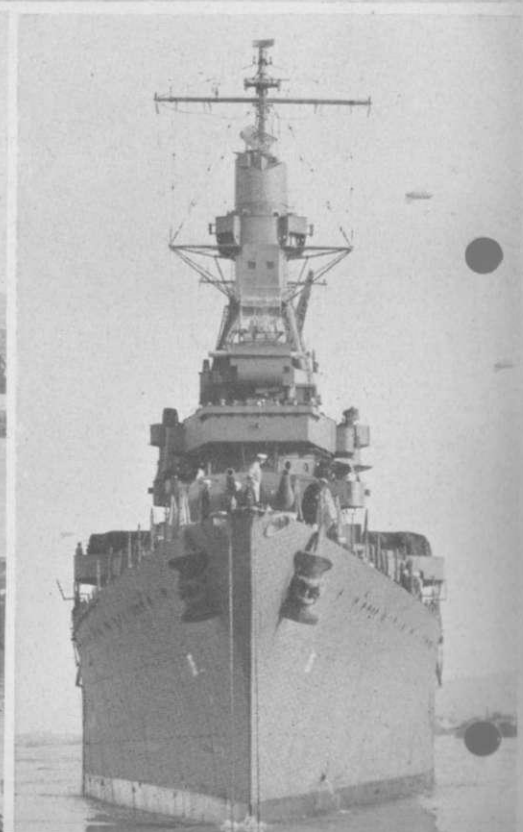
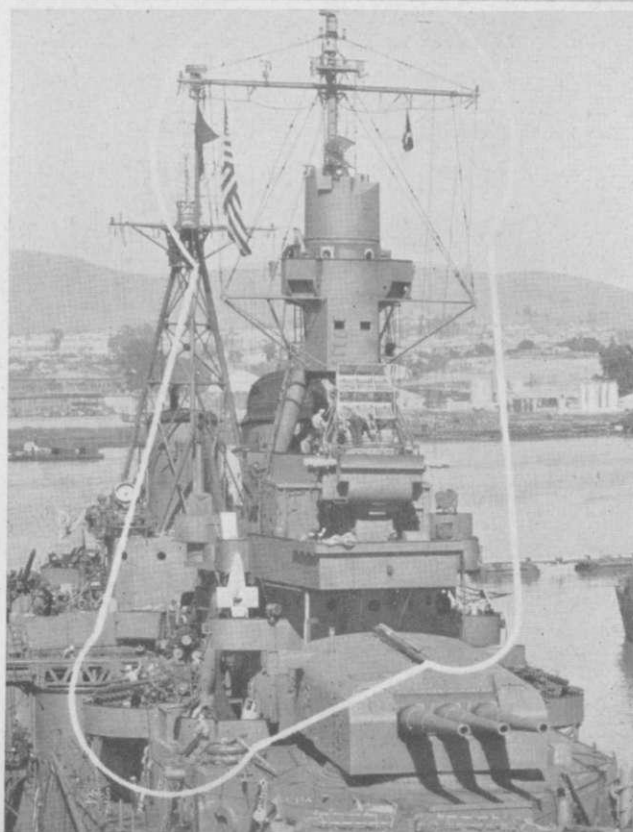
Improved NORTHAMPTON's, these two units were the last of the Washington Treaty group completed from 1929-1932. Both have had the light tripod mainmast moved forward.

## Observer's Note:

- Cruiser hull, deck line broken amidships.
- Two raked, flat sided stacks, separated by catapult well deck.
- Heavy, low tripod foremast, light tripod mainmast at No. 2 stack.



PORTLAND



Photos show both PORTLAND  
and INDIANAPOLIS, 5-43.

**ONI 54-R • RESTRICTED**

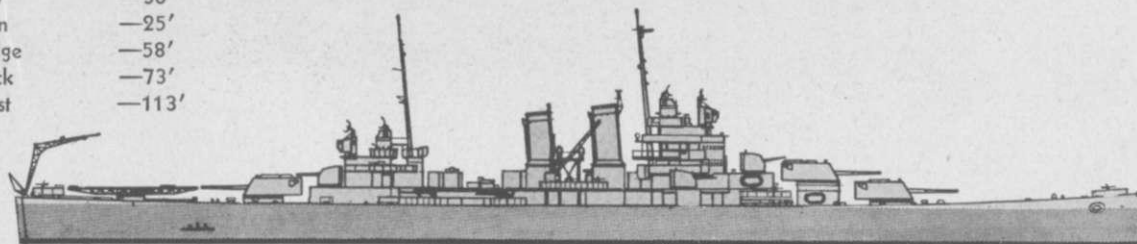
CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Supplement 4—8-4-43

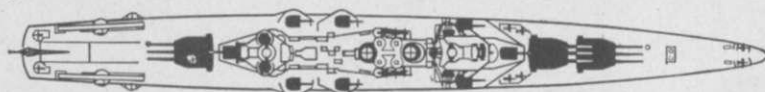
**WICHITA—CA 45**

Division of Naval Intelligence—Identification and Characteristics Section

Bow —30'  
Stern —25'  
Bridge —58'  
Stack —73'  
Mast —113'



Length o. a.—608'



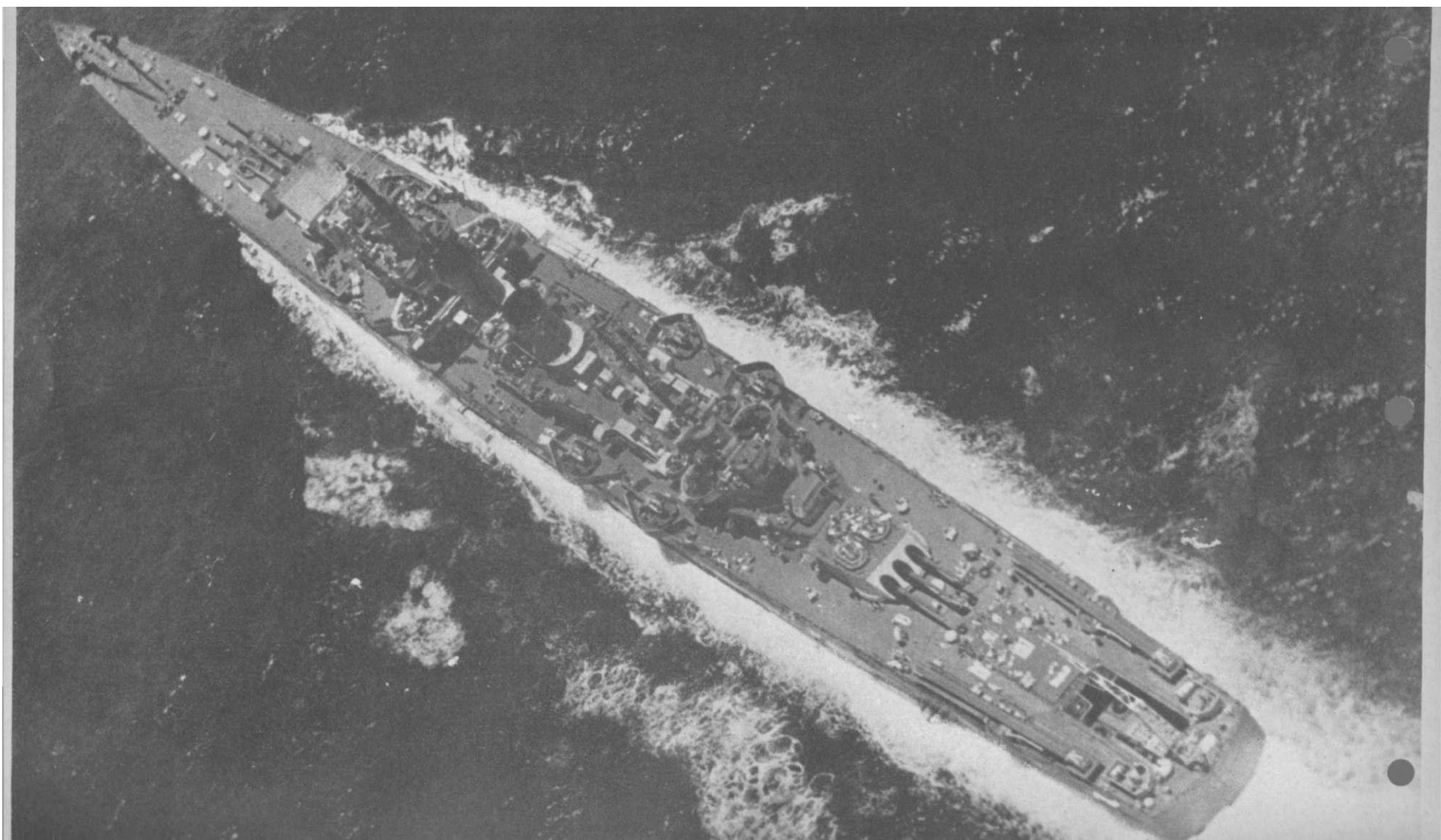
The last CA built under the London Treaty (1939), the WICHITA is an 8" gun version of the BROOKLYN Class.

**Observer's Note:**

- Flush hull, wide transom stern.
- Two closely spaced, raking stacks, pole masts.
- 2-A-1 main battery arrangement; note superimposed secondaries.





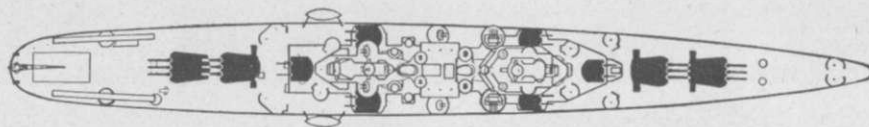
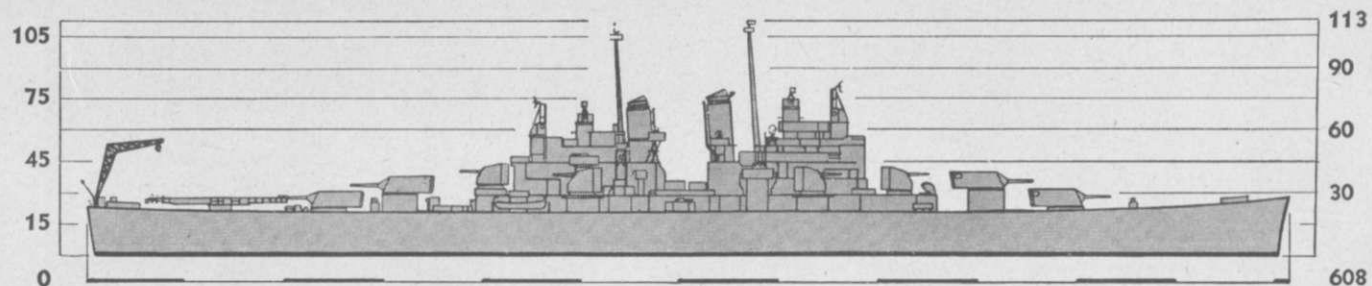




ONI 54-R • RESTRICTED CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57  
SUPPLEMENT 2-4/1/43

# CL—CLEVELAND Class

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



## Ships in Class:

- CL 55 CLEVELAND
- CL 56 COLUMBIA
- CL 57 MONTPELIER
- CL 58 DENVER
- CL 60 SANTA FE
- CL 62 BIRMINGHAM
- CL 63 MOBILE

Observer's note: Resembles—  
ATLANTA Class (CL U. S.)  
ST. LOUIS Class (CL U. S.)  
BALTIMORE Class (CA U. S.)

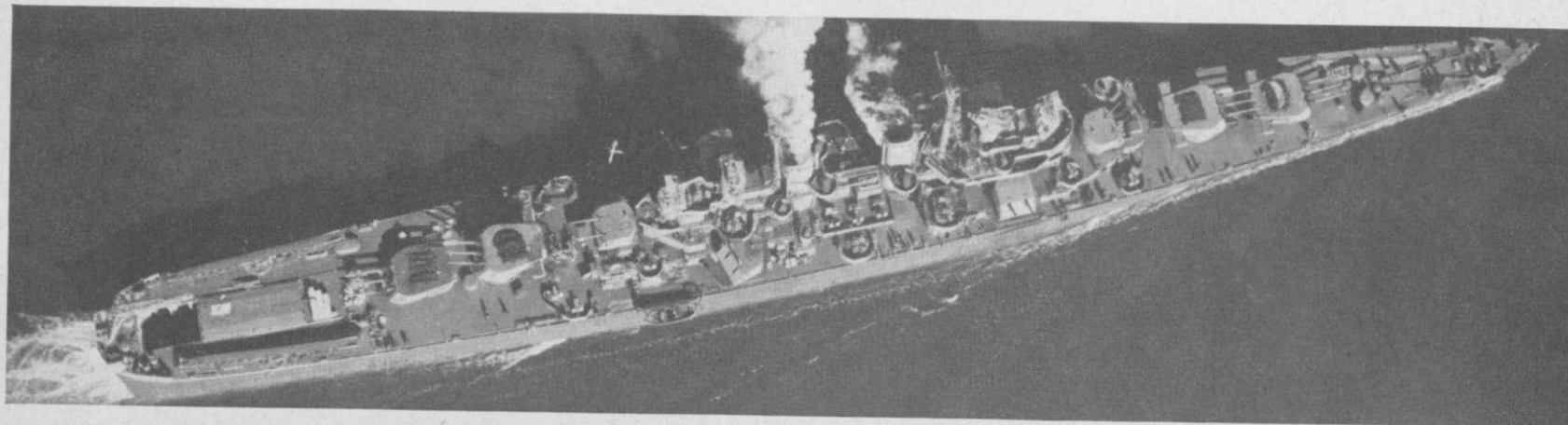


CL 60—Photo 3/7/43

CL 62



CL 62—Photo 2/20/43



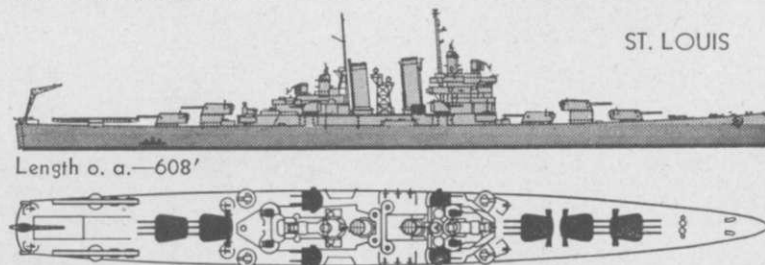
CL 62—Photo 2/20/43

## ONI 54-R • RESTRICTED

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 05-80V-57

Supplement 4-8-4-43

Altered to CL's to conform with the London Naval Treaty, these ships were completed in 1939, with WICHITA being the only ship to be completed in accordance with original designs. BROOKLYN and PHOENIX classes identical in appearance, vary from the ST. LOUIS in after superstructure and mainmast location.



### Observer's Note:

- Flush cruiser hull, wide transom stern.
- Two closely spaced, raking stacks.
- Low tower bridge and aft control.

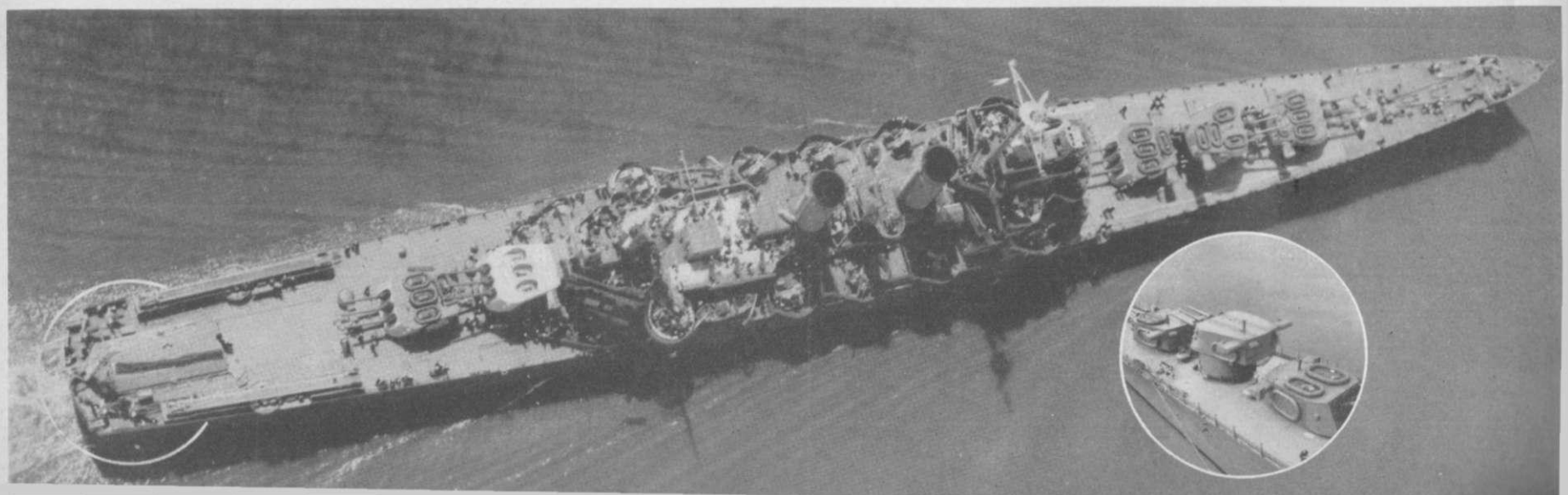
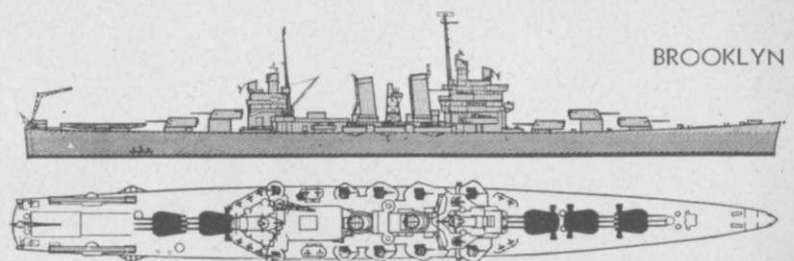
Bow —28'  
Stern —15'  
Bridge —58'  
Stack —67'  
Mast —108'

## BROOKLYN-PHOENIX Classes, ST. LOUIS—CL 40-49

Division of Naval Intelligence—Identification and Characteristics Section

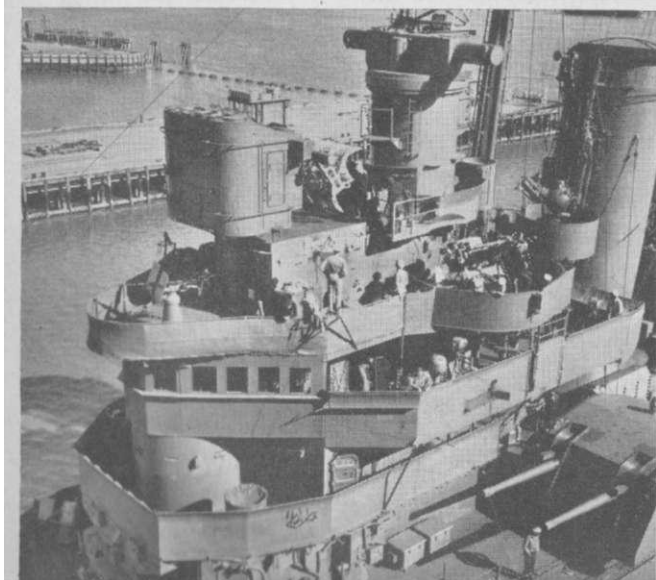
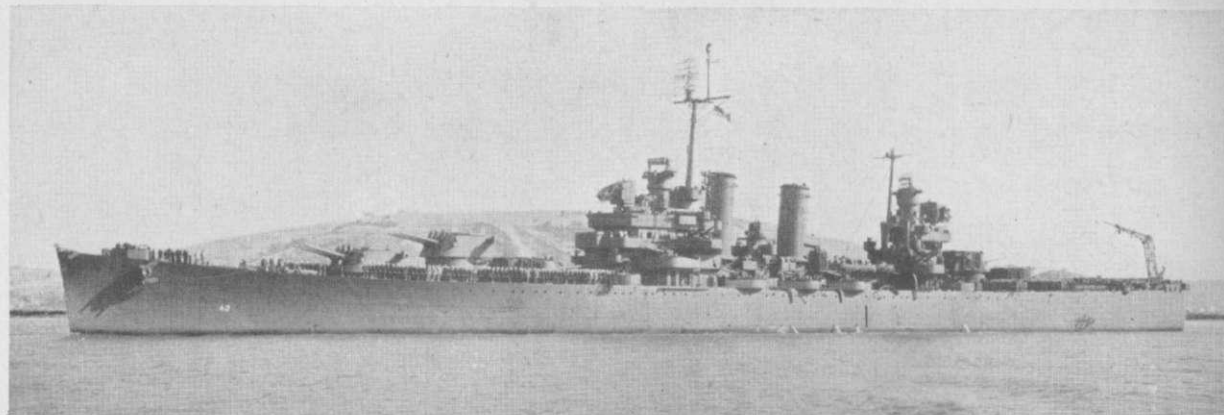
### Ships in Classes:

BROOKLYN	—CL 40	PHOENIX	—CL 46
PHILADELPHIA	—CL 41	BOISE	—CL 47
SAVANNAH	—CL 42	HONOLULU	—CL 48
NASHVILLE	—CL 43	ST. LOUIS	—CL 49

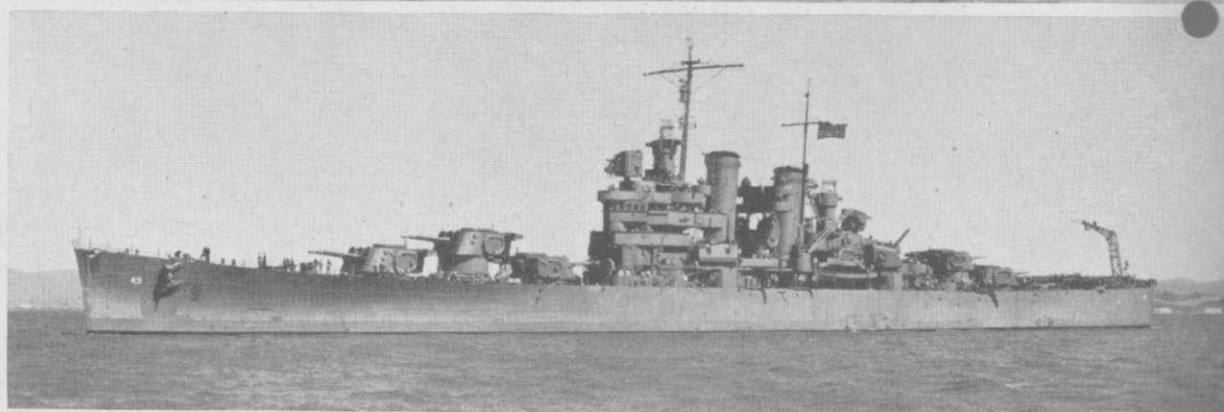




◀ NASHVILLE, 6-30-43 ▼



◀ ST. LOUIS, 3-6-42 ▶



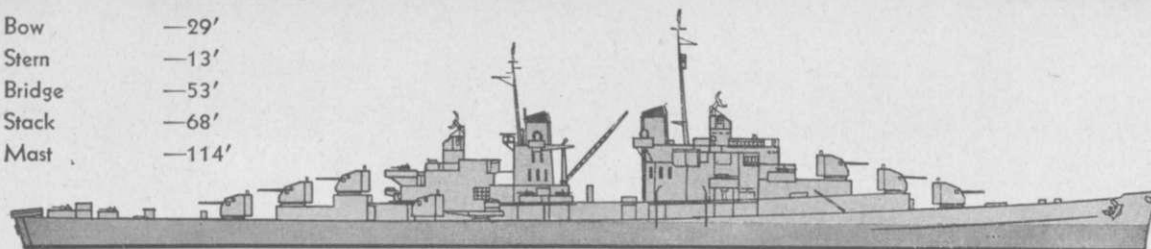


**ONI 54-R • RESTRICTED**

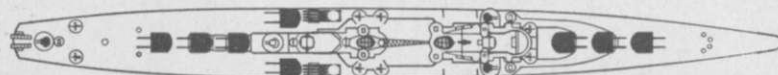
Supplement 4—8-4-43

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Bow —29'  
Stern —13'  
Bridge —53'  
Stack —68'  
Mast —114'



Length o. a.—541'



▼ SAN JUAN, 6-3-43.

**ATLANTA, OAKLAND Classes—CL 53, 54, 95-**

Division of Naval Intelligence—Identification and Characteristics Section

**Ships in Class:**

SAN DIEGO—CL 53

SAN JUAN—CL 54

OAKLAND—CL 95

Sister ships are building

**Observer's Note:**

—Flush hull with pronounced sheer forward.

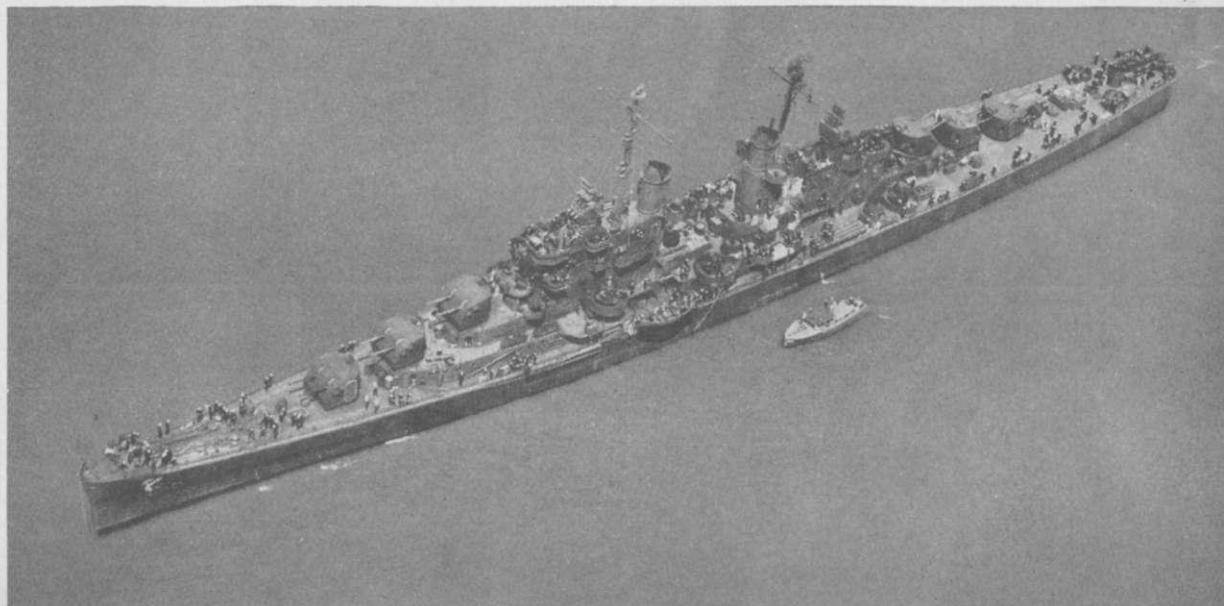
—3-A-3 main battery arrangement.

(Note: OAKLAND has no wing mounts.)

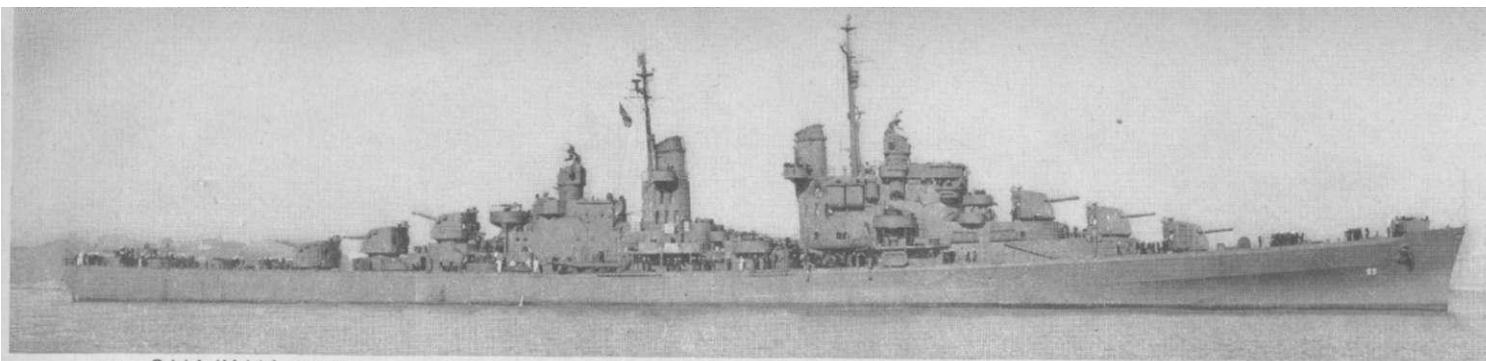
—Two thin stacks combined with superstructure.

—OAKLAND differs from ATLANTA in bridge details and minor armament variations.

OAKLAND, 8-2-43. ▼

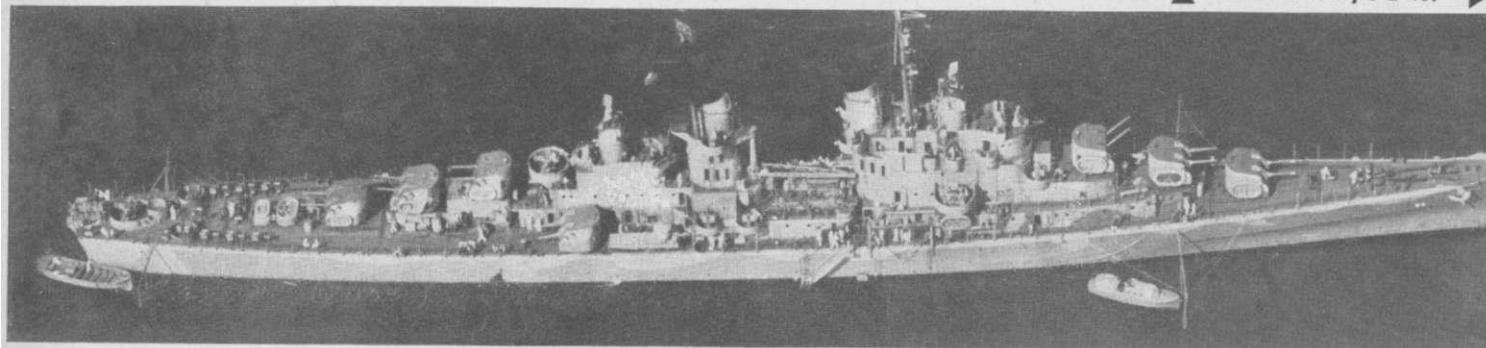




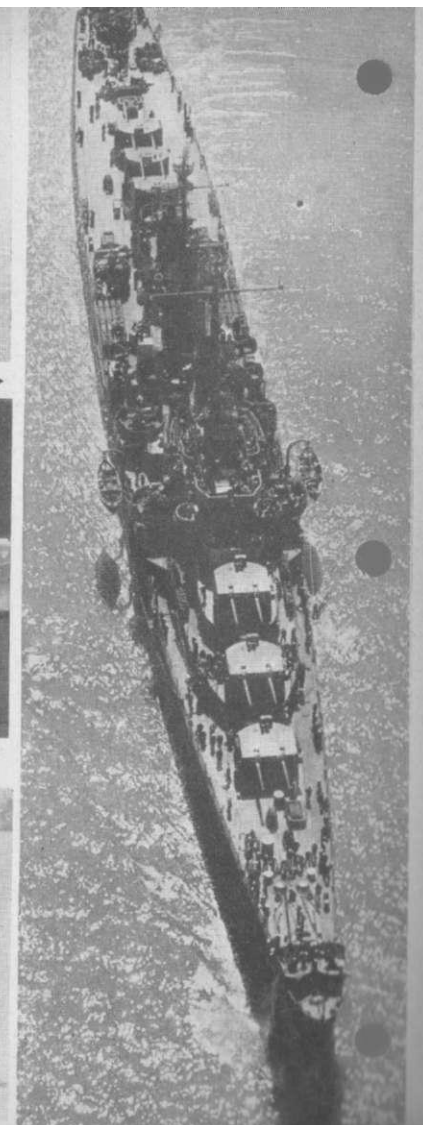
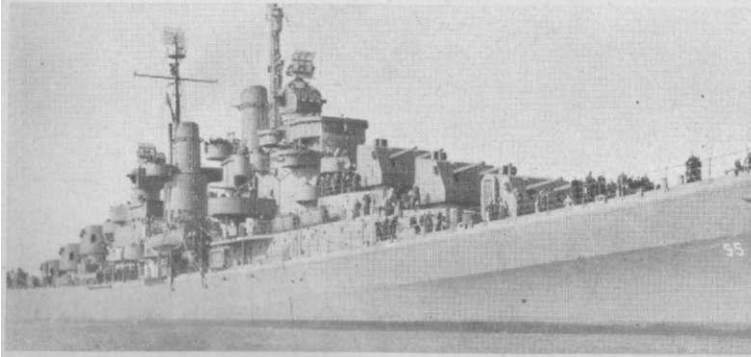


▼ SAN JUAN, 6-3-43.

▲ OAKLAND, 8-2-43. ►



▼ OAKLAND, 8-2-43. ▼



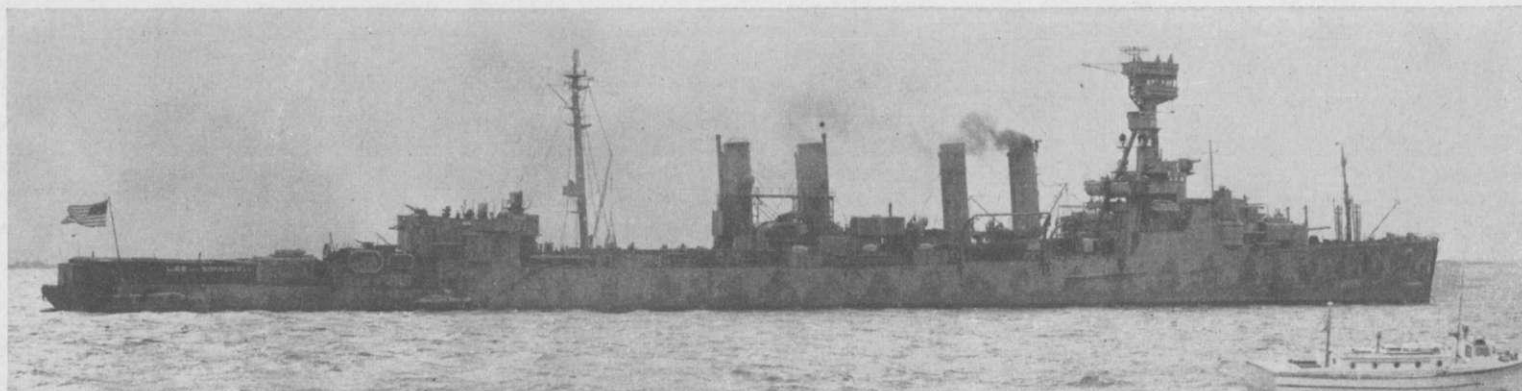
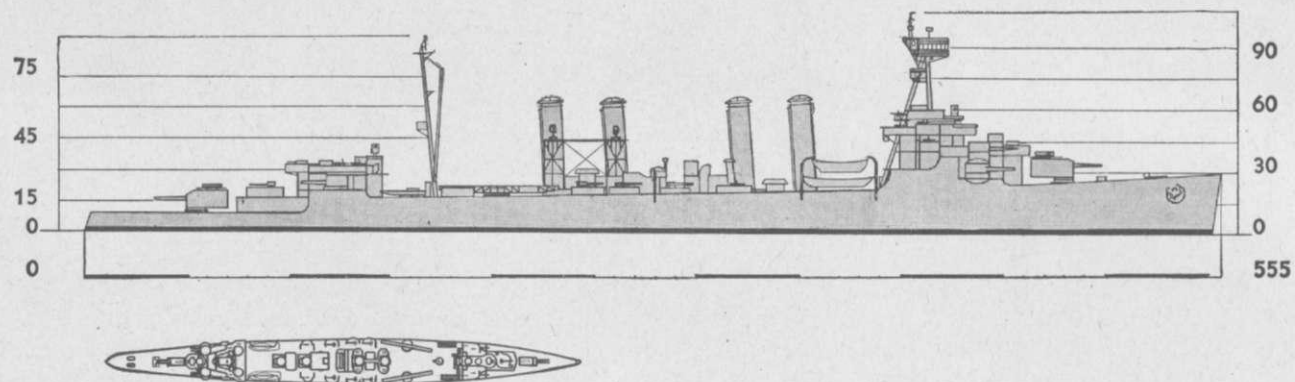
ONI 54-R • RESTRICTED

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

SUPPLEMENT 2-11/10/42

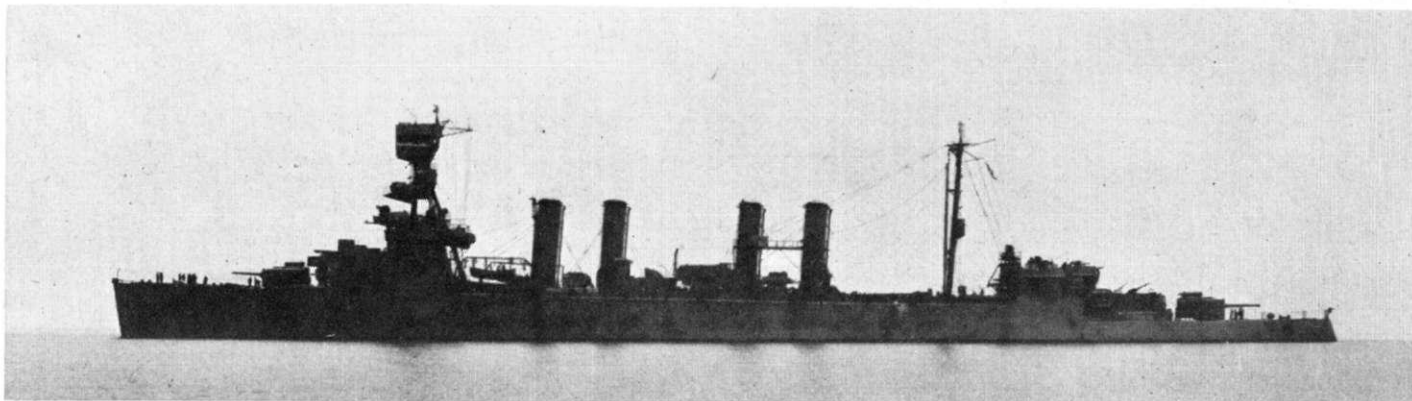
CL-OMAHA CLASS

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



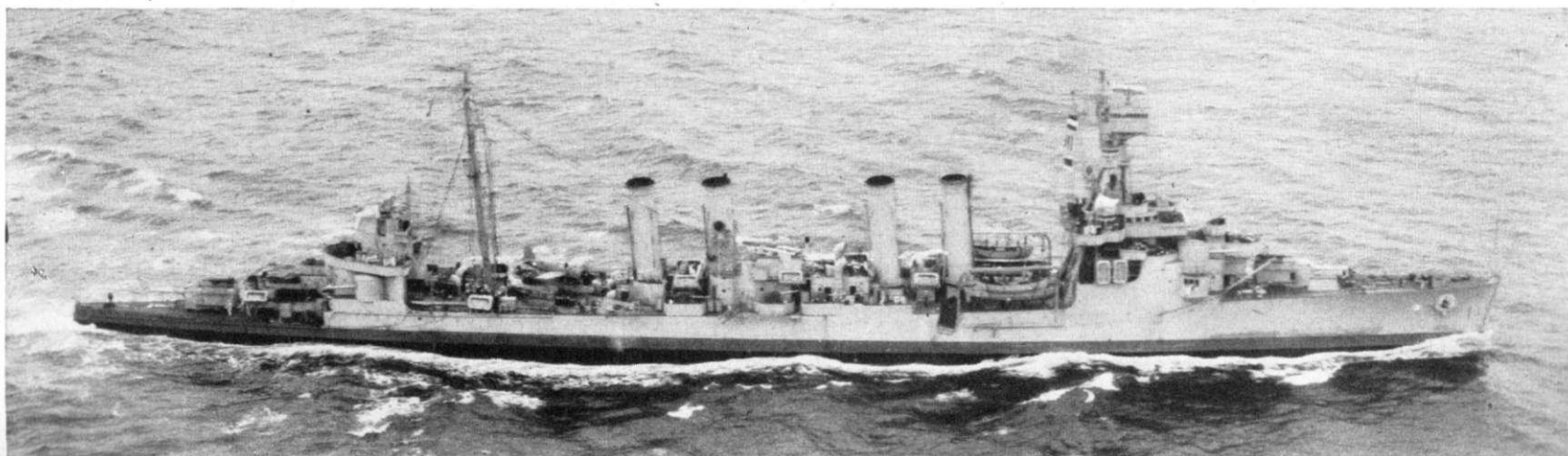
MILWAUKEE

OMAHA CLASS



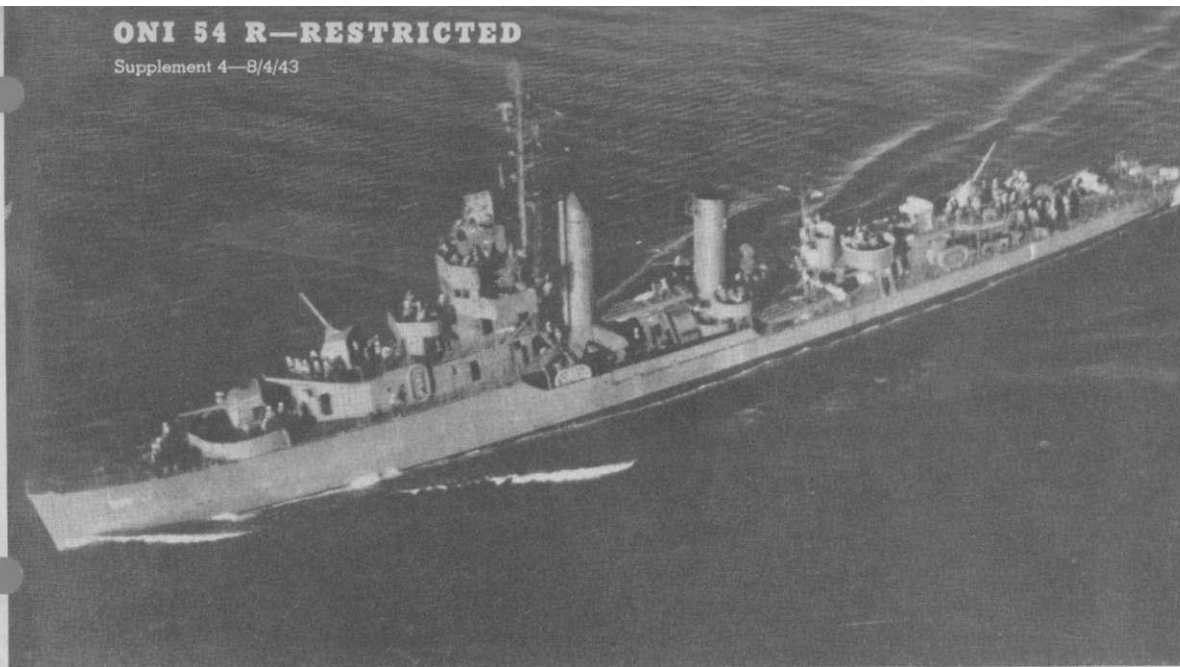
DETROIT →

MARBLEHEAD ↓



## ONI 54 R—RESTRICTED

Supplement 4—8/4/43



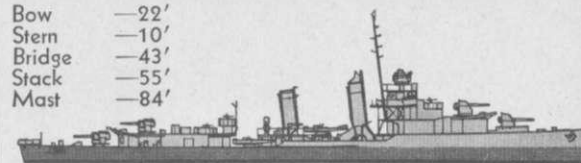
## MAHAN-DUNLAP Classes—DD

Division of Naval Intelligence—Identification and Characteristics

Section

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Bow —22'  
Stern —10'  
Bridge —43'  
Stack —55'  
Mast —84'



Length o. a.—341'



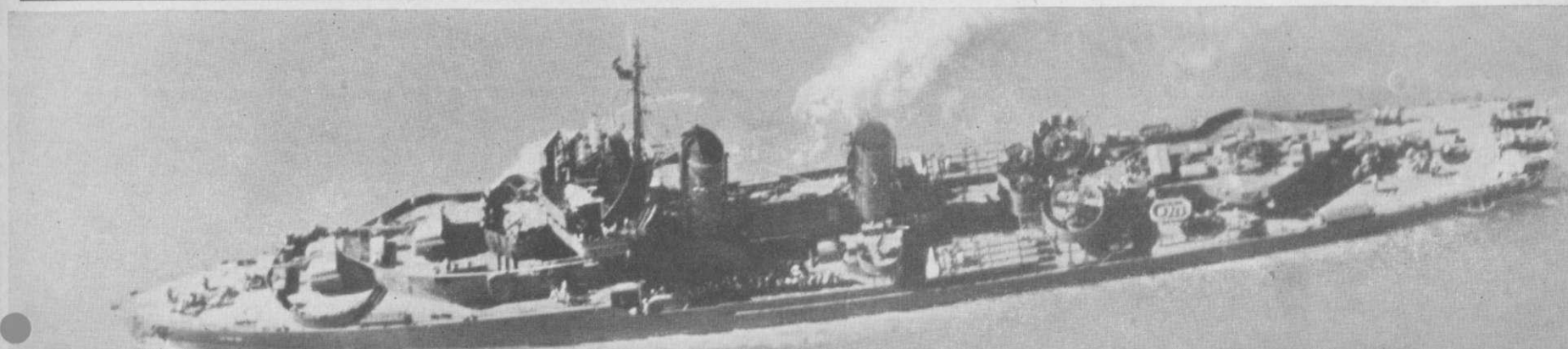
Completed in 1936-37 as improved FARRAGUT's, these ships are typical of our older two-stack destroyers.

### Observer's Note:

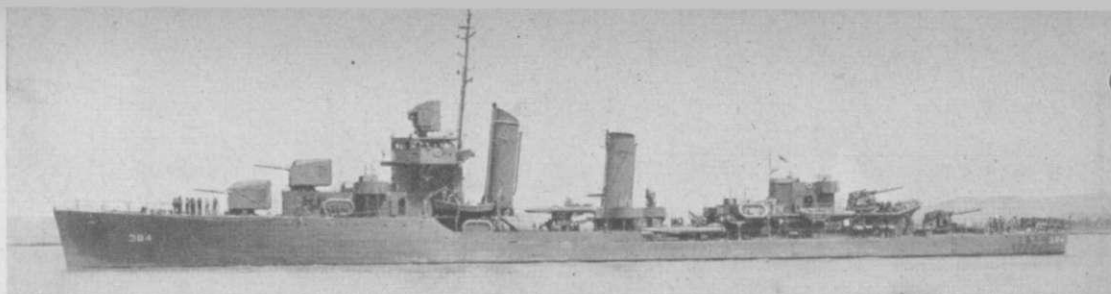
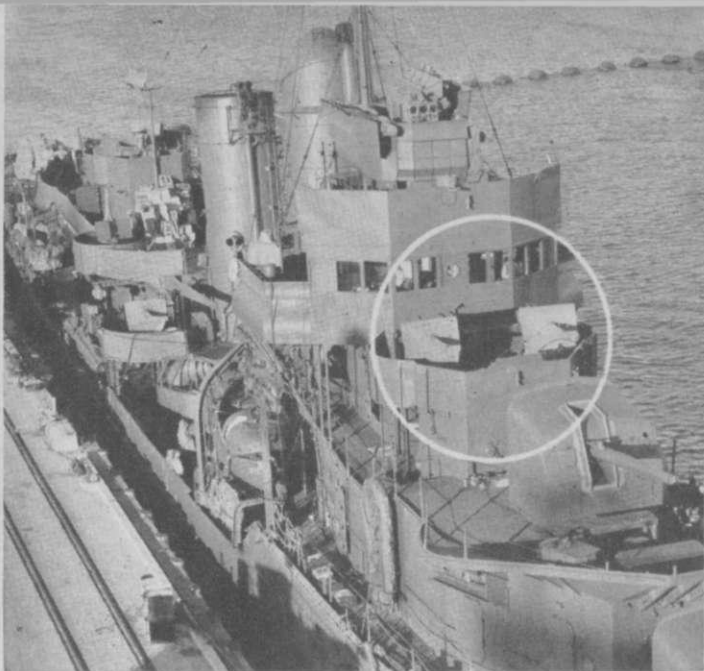
- Gunhouses forward differentiate DUNLAP from MAHAN Class (open gunshields).
- Very similar in appearance to PORTER, LIVERMORE, BENSON Classes; differentiated by armament disposition and stack spacing.

◀ CONYNGHAM, 1-42

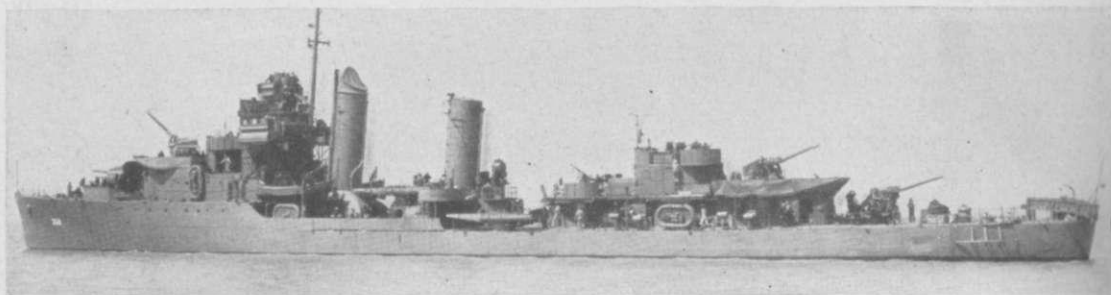
▼ FLUSSER, 1-43





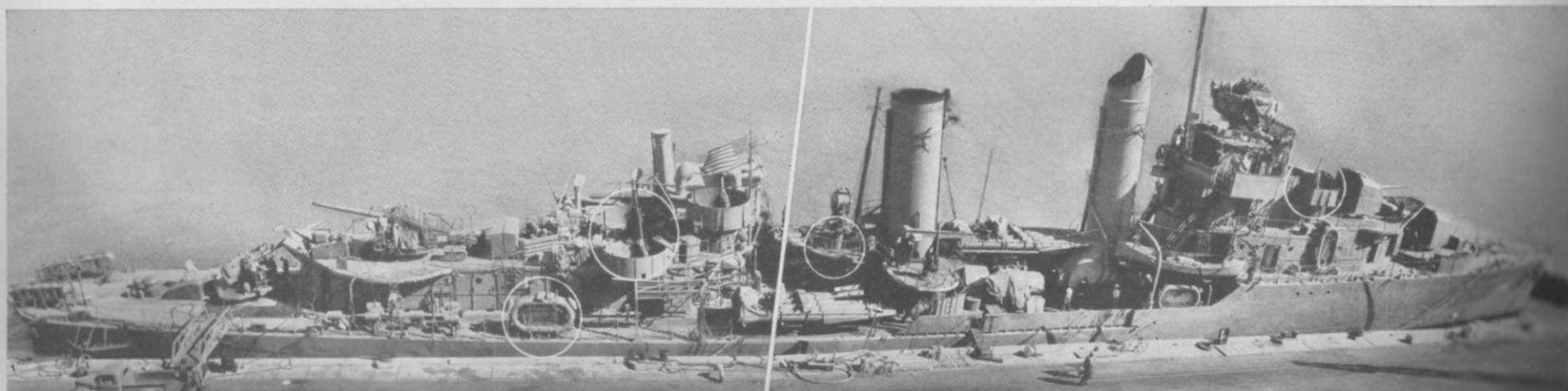


DUNLAP ▲, FLUSSER ▼ illustrate appearance differences in the two combined classes.



◀ CONYNGHAM, showing recent alterations, typical of the class.

▼ CUSHING





## ONI 54 R—RESTRICTED

Supplement 4—8/4/43

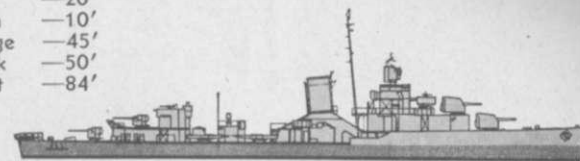


## BAGLEY Class—DD

Division of Naval Intelligence—Identification and Characteristics Section

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Bow —20'  
Stern —10'  
Bridge —45'  
Stack —50'  
Mast —84'



Length o. a. —341



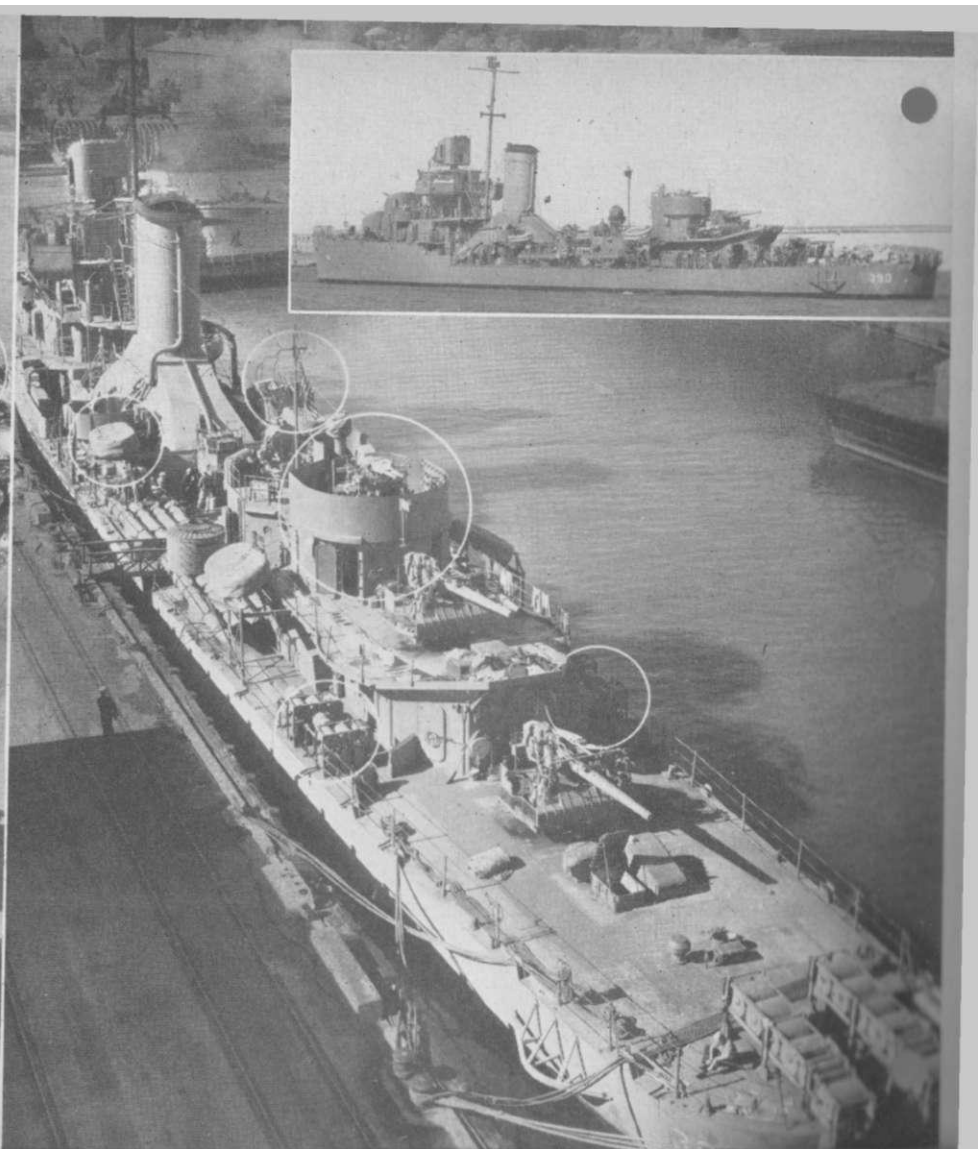
Like the GRIDLEY's, with which they are often classed, these ships are a development of the MAHAN design. They are the heaviest armed ships in torpedo battery.

Observer's Note:

- Widely split trunked stack and paired quadruple torpedo tubes differentiate these ships from the GRIDLEY, BENHAM-SIMS Classes.
- 2-A-2 gun arrangement—shields forward, open mounts aft.

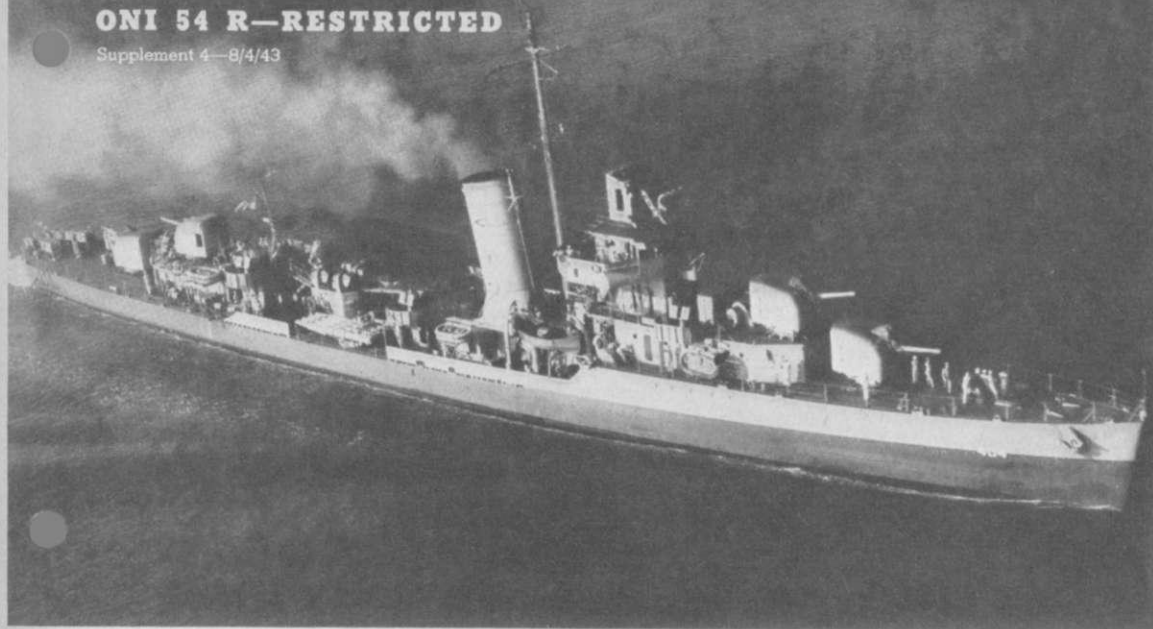
▼ RALPH TALBOT, 12-42.





## ONI 54 R—RESTRICTED

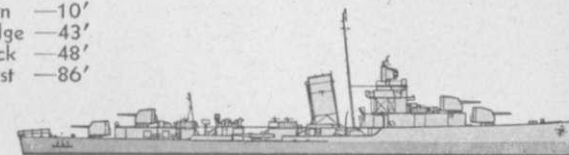
Supplement 4—8/4/43



## BENHAM Class—DD

Division of Naval Intelligence—Identification and Characteristics Section  
CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-60V-57

Bow —22'  
Stern —10'  
Bridge —43'  
Stack —48'  
Mast —86'



Length o. a.—341'



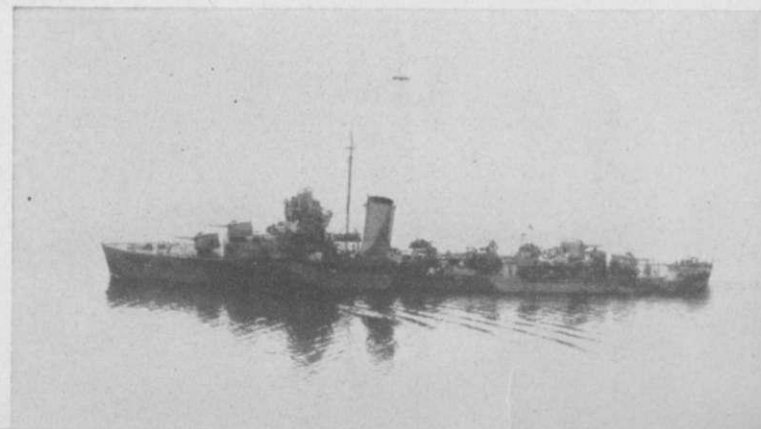
An improved MAHAN design, these units are very similar to SIMS Class ships. Both classes were completed 1939-40.

Observer's Note:

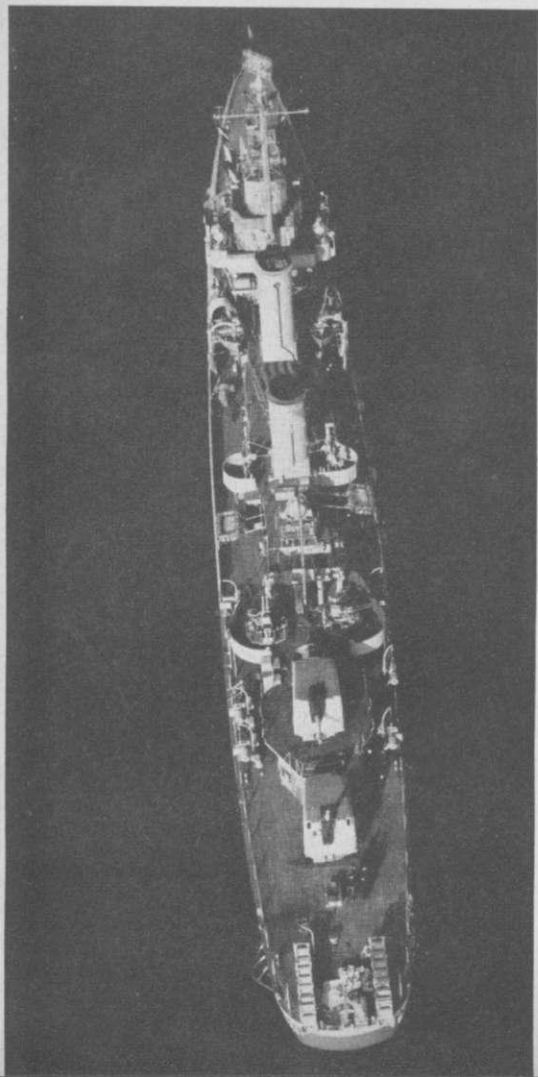
- Large single trunked stack (no stack cap).
- Amidships quadruple torpedo mount differentiate these ships from SIMS, GRIDLEY, BAGLEY Classes.

◀ RHIND, 9-17-42.

USS TRIPPE, 6-2-42. ▼



▼ JEFFERS, LIVERMORE Class, 1-43



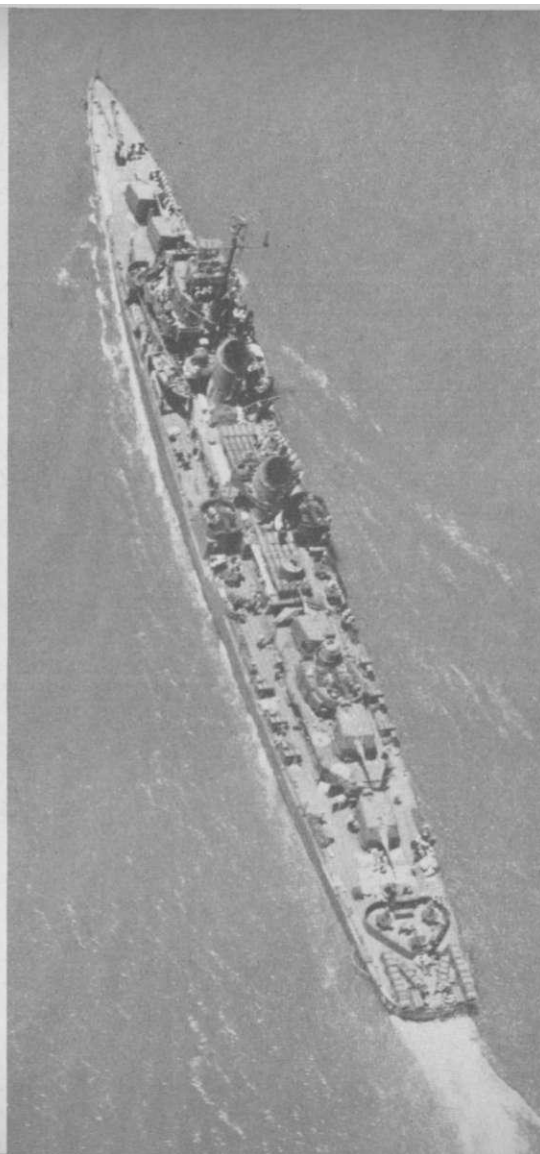
▼ KENDRICK, BENSON Class, 1-43



Supplement 4-8-4-43

**ONI 54-R • RESTRICTED**





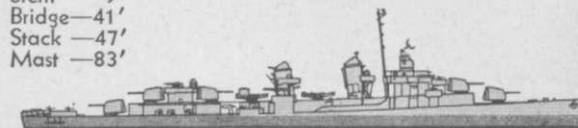
# **ONI 54-R • RESTRICTED** Supplement 4—8-4-43

## **FLETCHER Class—DD**

Division of Naval Intelligence—Identification and Characteristics Section

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Bow —19'  
Stern —9'  
Bridge—41'  
Stack —47'  
Mast —83'



Length o. a.—376'



A departure from previous designs, these destroyers follow closely the pattern found in our new BB's, CA's, and CL's. A variation occurs in those units equipped for handling aircraft.

### Observer's Note:

- Flush hull with pronounced bow sheer.
- Two broad, raking stacks.
- 2-A-1-A gunhouse disposition.

◀ TRATHEN, 6-42

▼ BULLARD, 4-43





## ONI 54 R—RESTRICTED

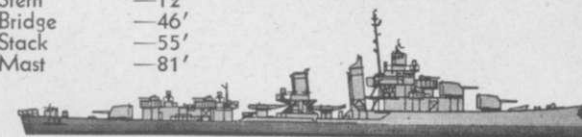
Supplement 4—8/4/43



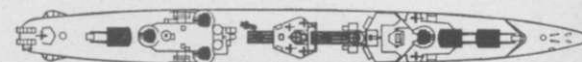
## PORTER Class—DD

Division of Naval Intelligence—Identification and Characteristics Section  
CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Bow	—24'
Stern	—12'
Bridge	—46'
Stack	—55'
Mast	—81'



Length o. a.—381'



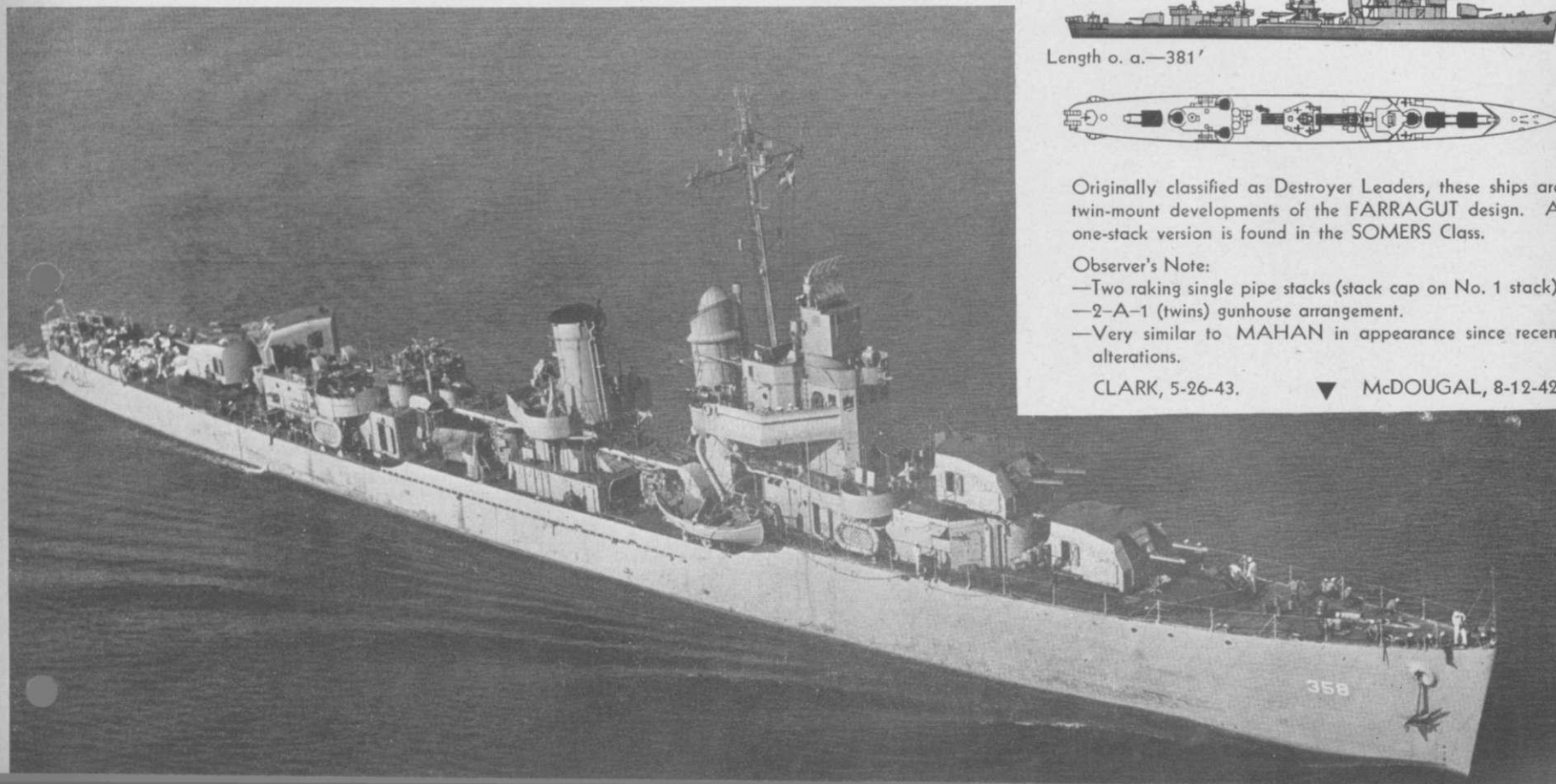
Originally classified as Destroyer Leaders, these ships are twin-mount developments of the FARRAGUT design. A one-stack version is found in the SOMERS Class.

### Observer's Note:

- Two raking single pipe stacks (stack cap on No. 1 stack).
- 2-A-1 (twins) gunhouse arrangement.
- Very similar to MAHAN in appearance since recent alterations.

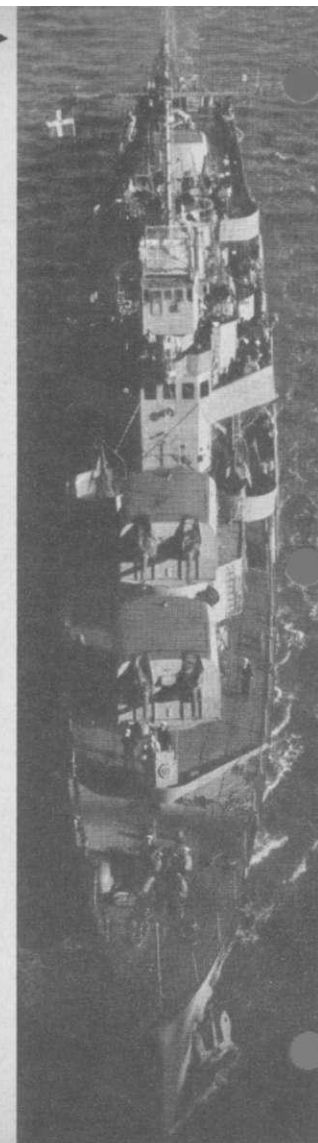
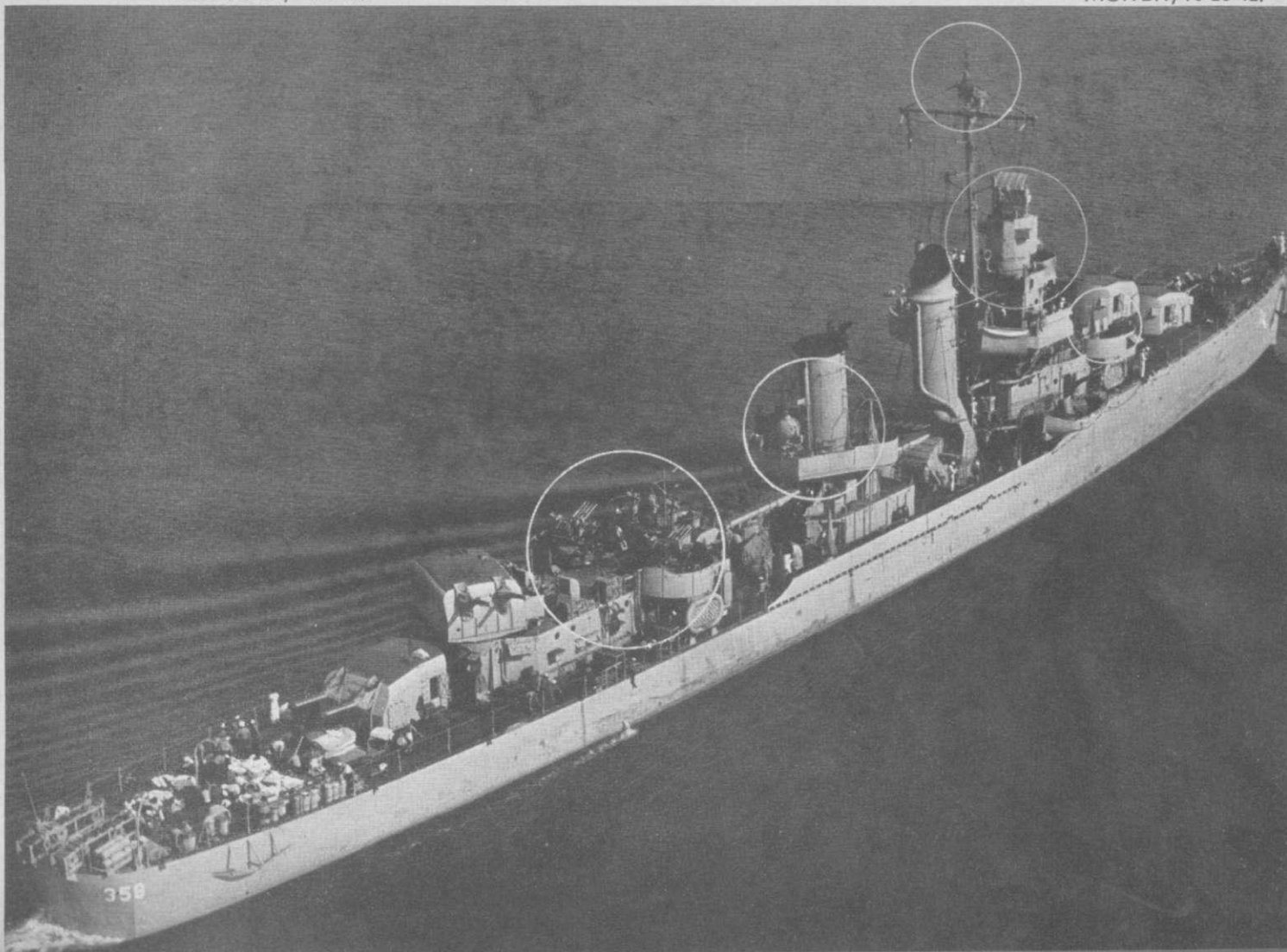
CLARK, 5-26-43.

▼ McDOUGAL, 8-12-42.



▼ McDOUGAL, 8-12-42.

MOFFETT, 10-28-42. ►



## ONI 54 R—RESTRICTED

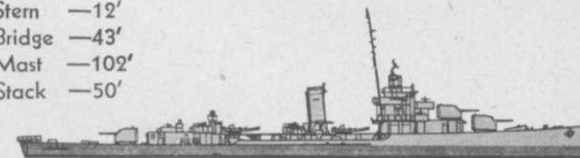
Supplement 4—8/4/43



## SOMERS Class—DD

Division of Naval Intelligence—Identification and Characteristics Section  
CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Bow —26'  
Stern —12'  
Bridge —43'  
Mast —102'  
Stack —50'



Length o. a.—381'

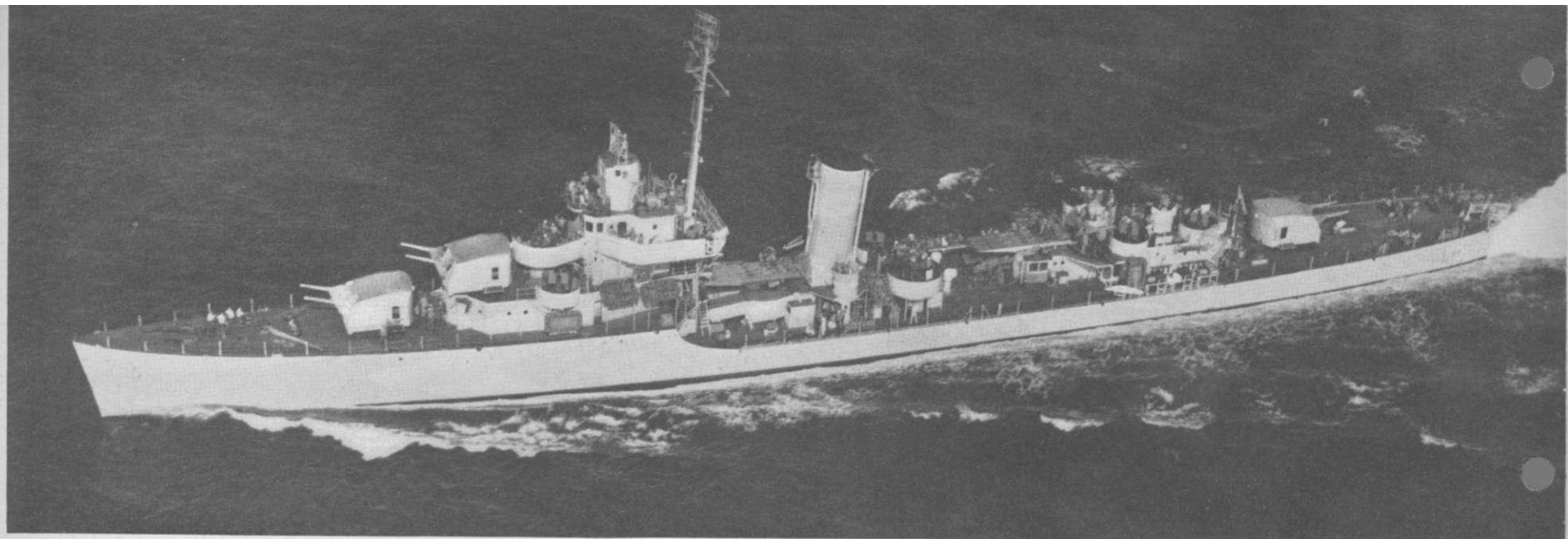


Completed in 1938-39, these ships were designed as improved PORTER's. As in other classes, they have recently undergone considerable armament changes.

### Observer's Note:

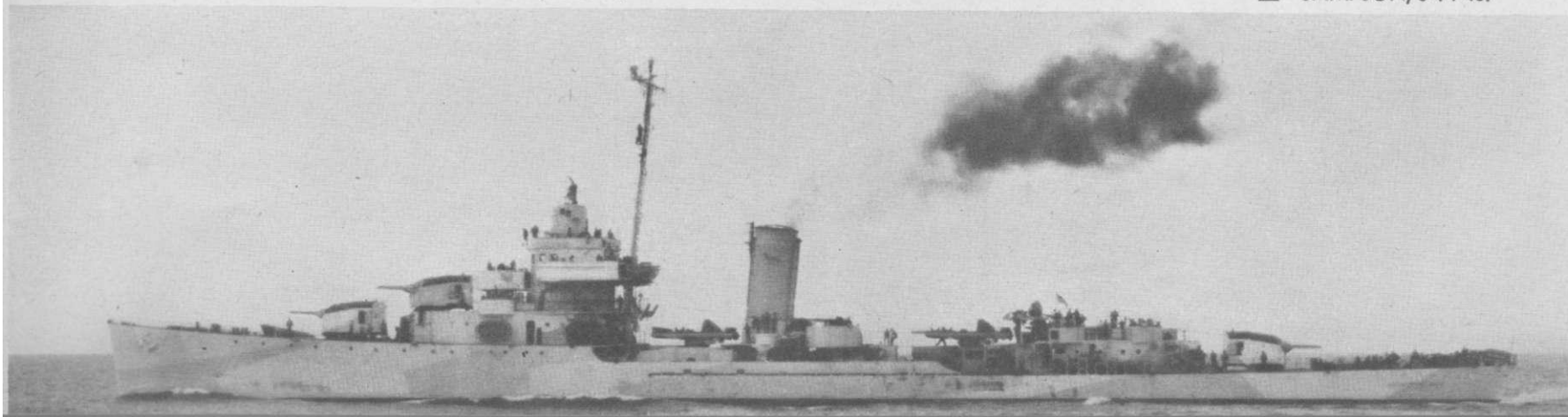
- Distinctive tall, raking, single-pipe stack.
- 2-A-1 gunhouse arrangement (twins).





Below and on front is illustrated the WARRINGTON, 4-23-43.

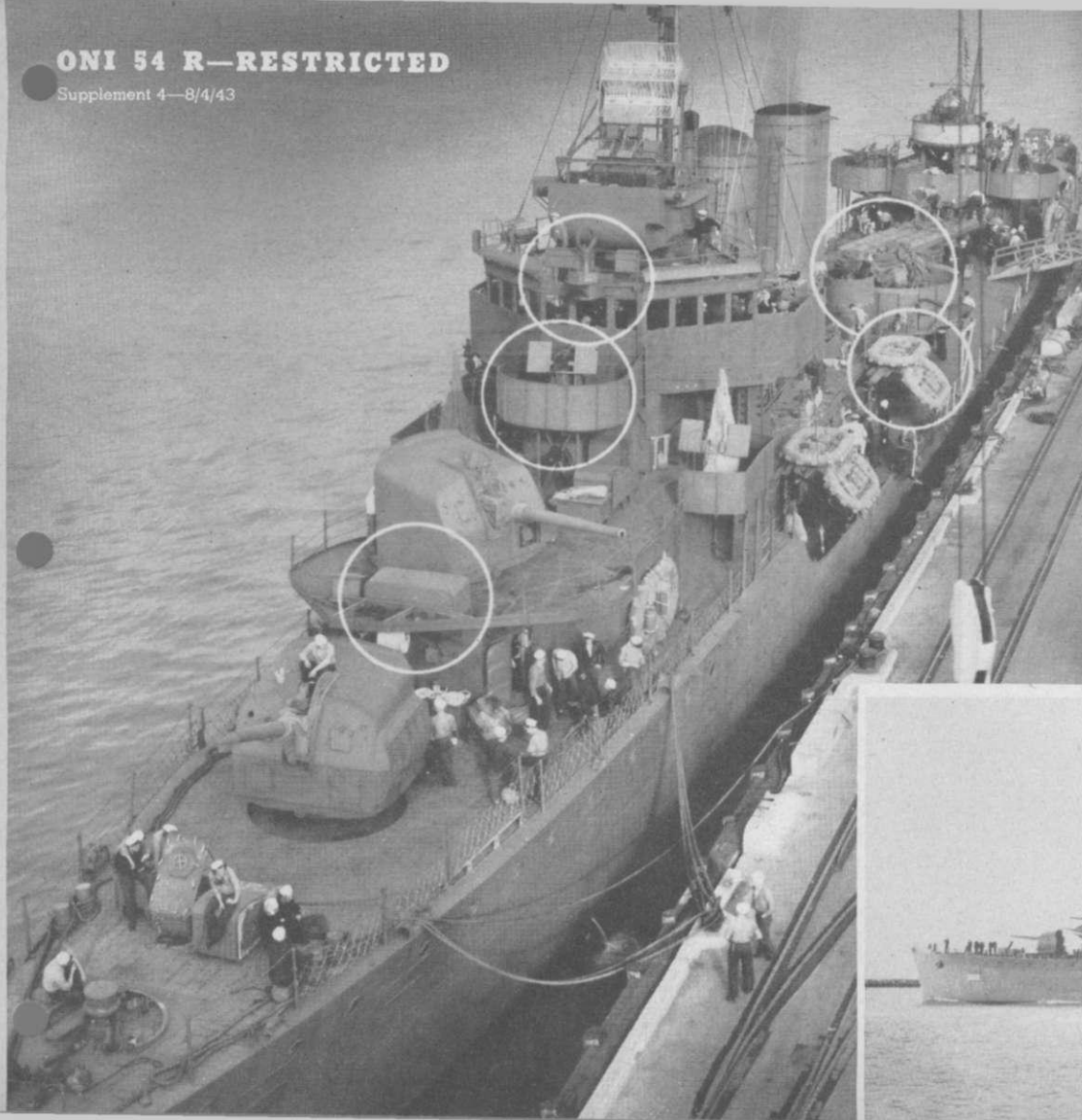
▲ SAMPSON, 3-14-43.





# ONI 54 R—RESTRICTED

Supplement 4—8/4/43

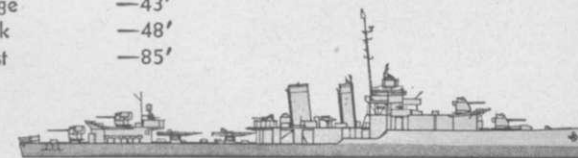


## FARRAGUT Class—DD

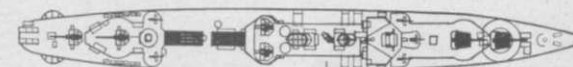
Division of Naval Intelligence—Identification and Characteristics Section

CONDENSED AND PRINTED FOR FM 30-50,  
NAVAER 00-80V-57

Bow	—21'
Stern	—10'
Bridge	—43'
Stack	—48'
Mast	—85'



Length o. a.—341'



The first of our post-war destroyers, completed in 1934-35. Their design follows the two-stack, British-inspired destroyer type found in most navies.

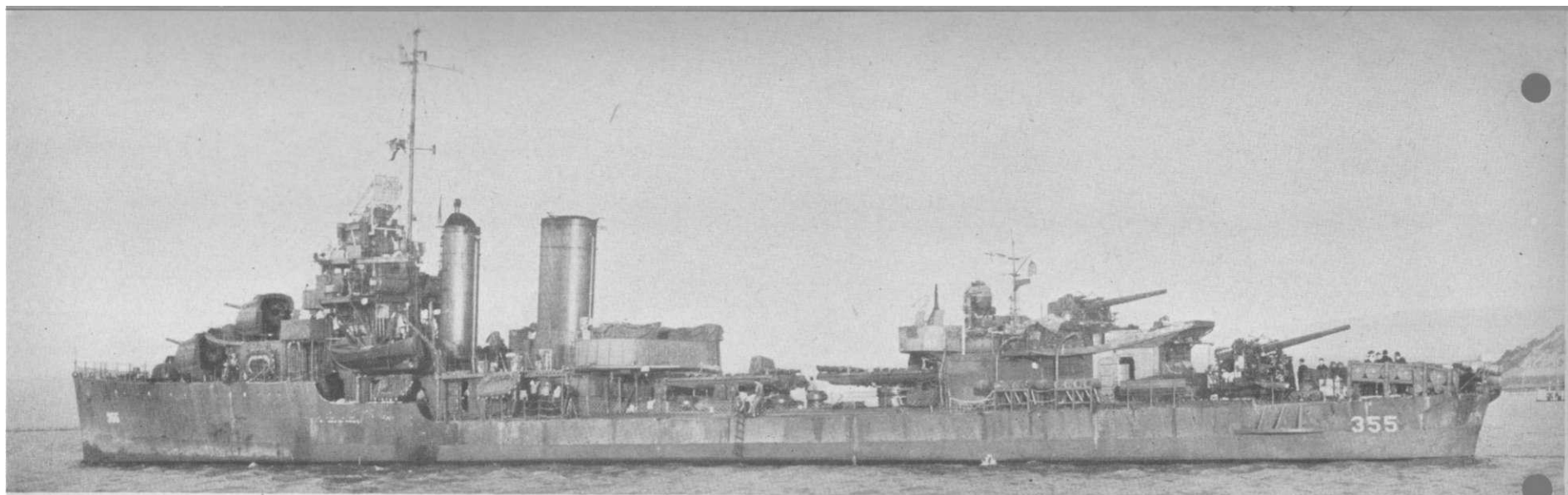
### Observer's Note:

- Two closely spaced stacks of unequal thickness.
- Shielded superimposed mounts forward, open guns aft.
- Two in-line torpedo mounts on main deck abaft stack.

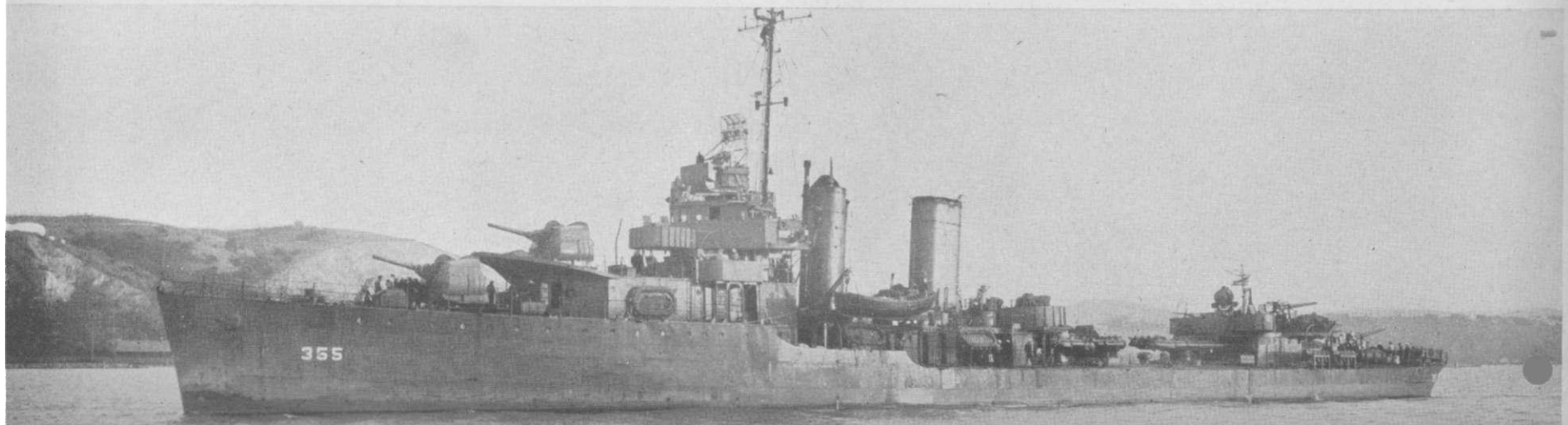
◀ DEWEY, 12-42.

▼ WORDEN, 1-43.





AYLWIN, L-43



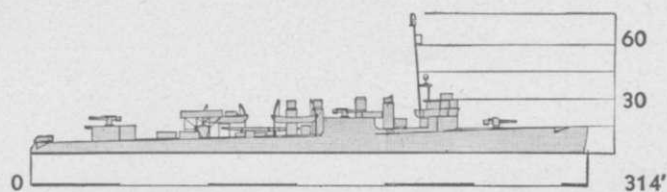
ONI 54-R • RESTRICTED

CONDENSED AND PRINTED FOR FM 30-56, NAVAER 00-80V-57

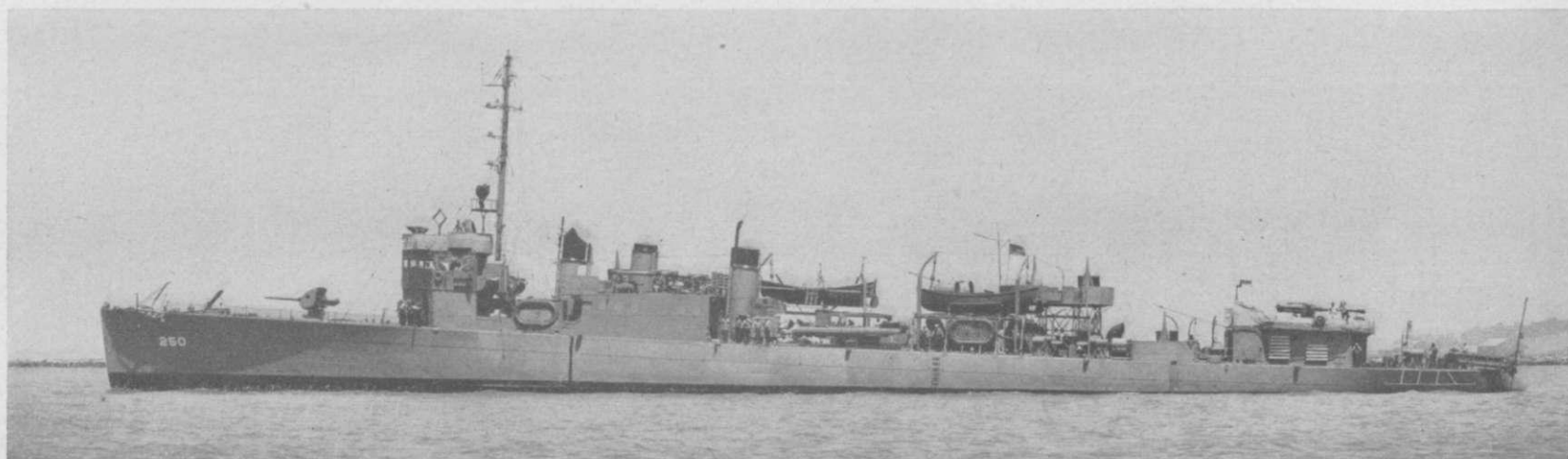
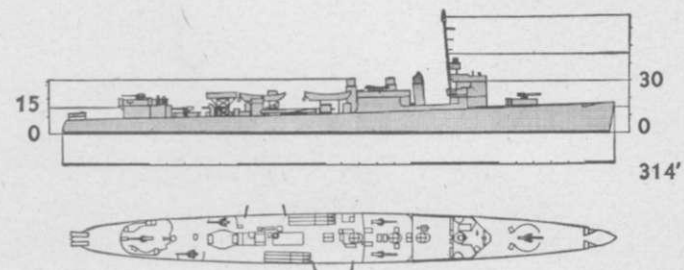
SUPPLEMENT 2—1/18/42

DD 66-347 CLASS

DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION

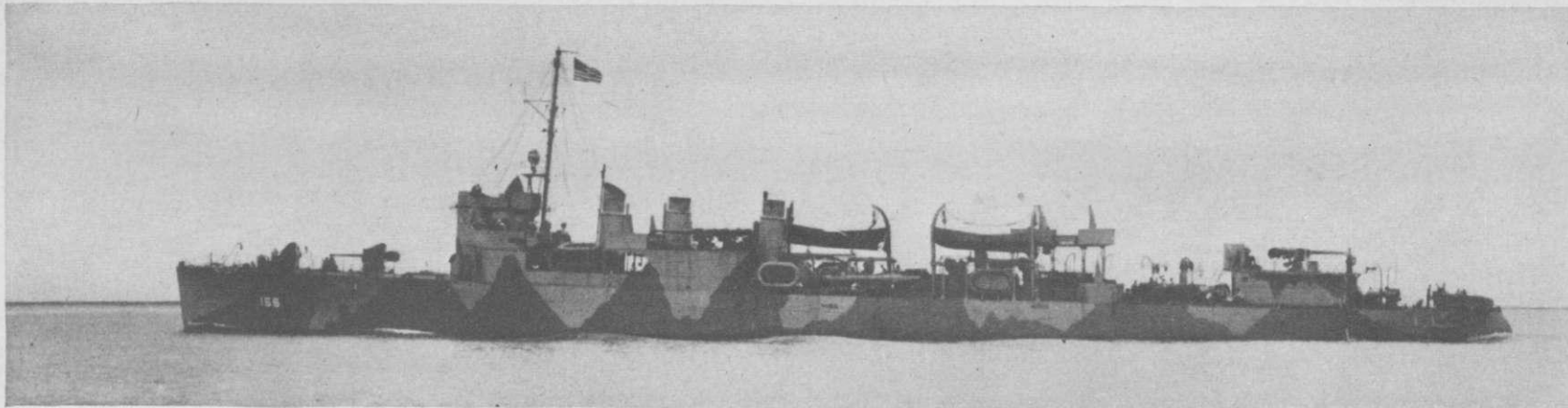


Although some of this class retain the above appearance,  
final conversion will be to 3 stacks.



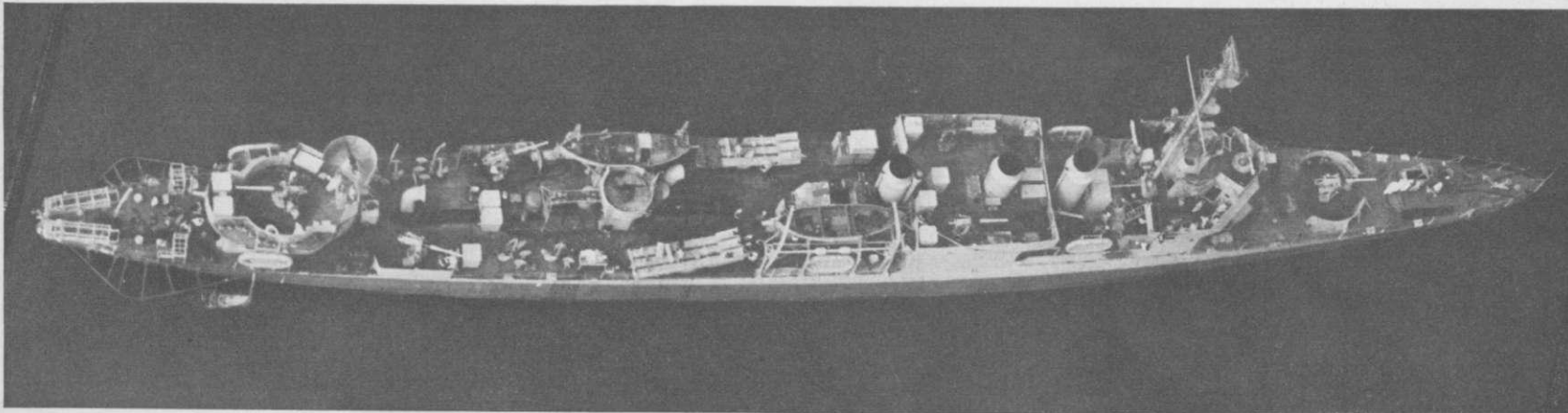
LAWRENCE

DD 66-347 CLASS



J. FRED TALBOT ↑

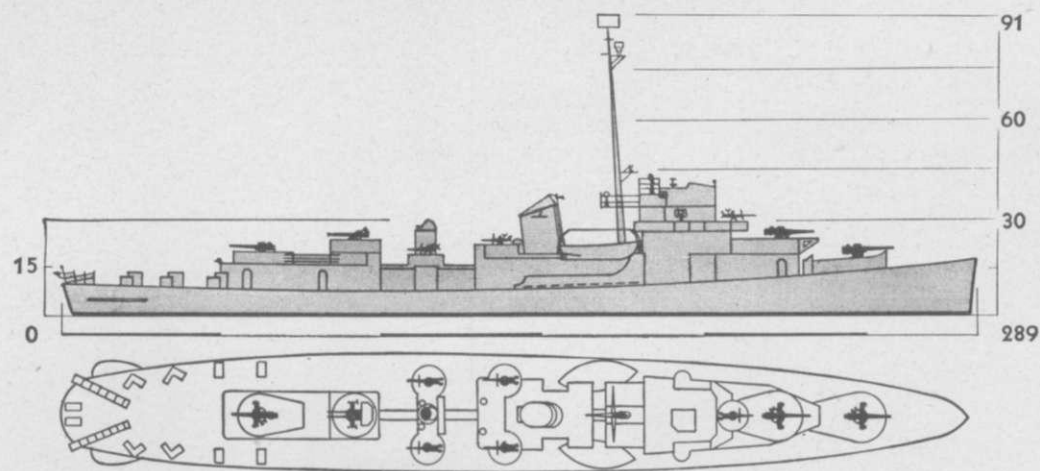
↓ ELLIS





# DESTROYER ESCORTS

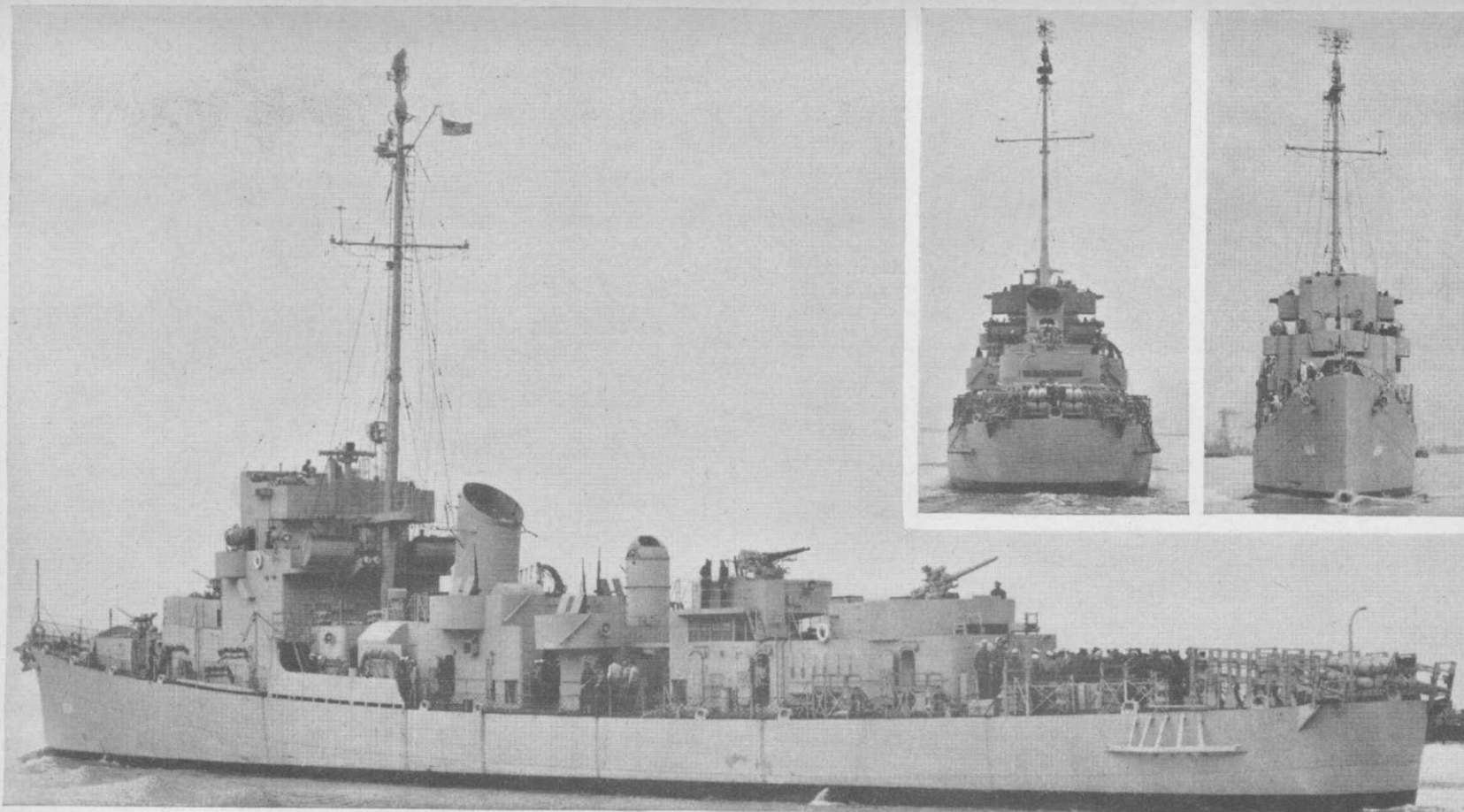
DIVISION OF NAVAL INTELLIGENCE  
IDENTIFICATION AND CHARACTERISTICS SECTION



**Ships in Class:** No class names have been officially assigned to the types of DEs now commissioned or building. Some ships of identical design and hull length differ radically in power and machinery. The type illustrated on this page is a short-hull DE being completed in numbers for both the United States and Great Britain (BDE).



DE 14—Photo 2/23/43



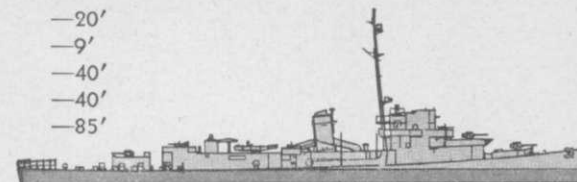
DE 14—All photographs 2/23/43



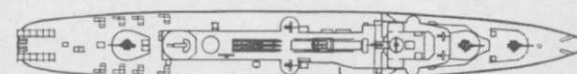
## BUCKLEY Class—DE

Division of Naval Intelligence—Identification and Characteristics Section  
CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

Bow —20'  
Stern —9'  
Bridge —40'  
Stack —40'  
Mast —85'



Length o. a.—306'



These ships still retain many of the attributes of the destroyers they replace in escort duties. Torpedo armament differentiates them from the short-hull DE's.

### Observer's Note:

—Long-hull DE's have either a raking single pipe or trunked stack, depending upon type of drive. Although no class differentiation is made, these ships are classified under four separate groups, according to builder and machinery.

◀ REUBEN JAMES, 4-43

▼ ACREE, 8-43





▲ BUCKLEY, 5-43



◀ McCONNELL, 6-43

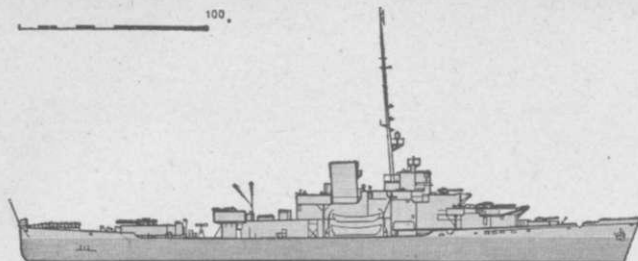




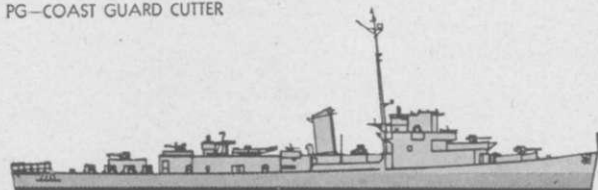
# **ONI 54 R • RESTRICTED**

Division of Naval Intelligence—Identification and Characteristics Section  
CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

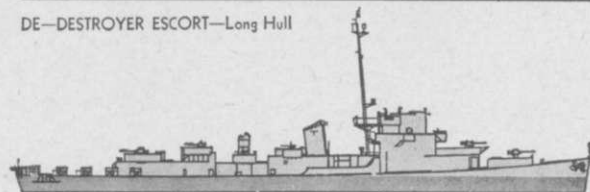
100'



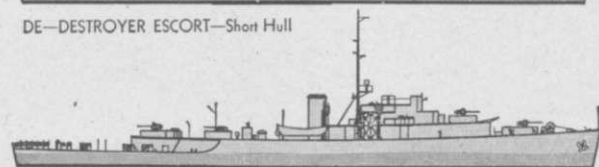
PG—COAST GUARD CUTTER



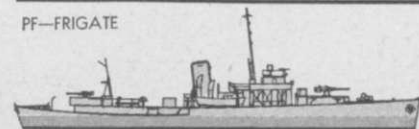
DE—DESTROYER ESCORT—Long Hull



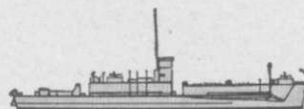
DE—DESTROYER ESCORT—Short Hull



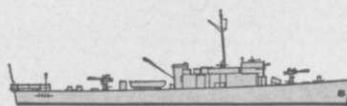
PF—FRIGATE



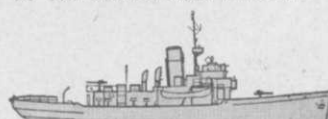
PG—CORVETTE



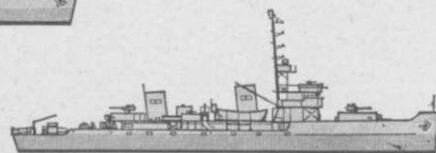
LCI—INFANTRY LANDING CRAFT



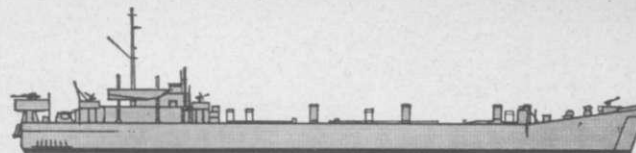
PC—SUBMARINE CHASER—Also AM



PG—COAST GUARD CUTTER—"A" Class



AM—MINE SWEEPER



LST—TANK LANDING CRAFT



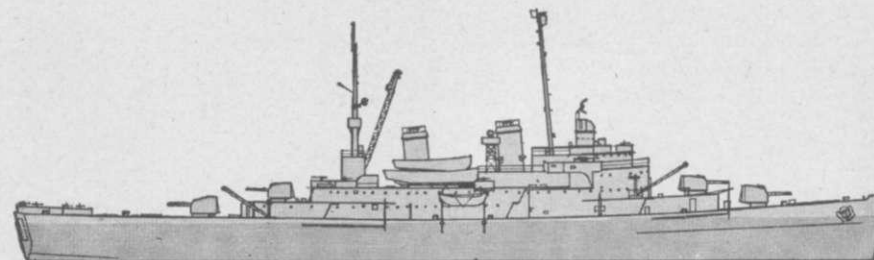
PCE—PATROL ESCORT—Also AM



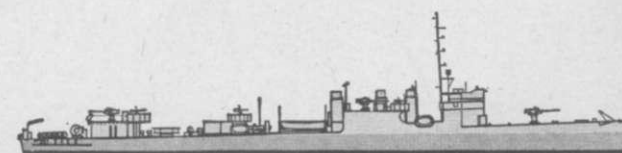
SC—SUBMARINE CHASER



PG—COAST GUARD CUTTER—"B" Class



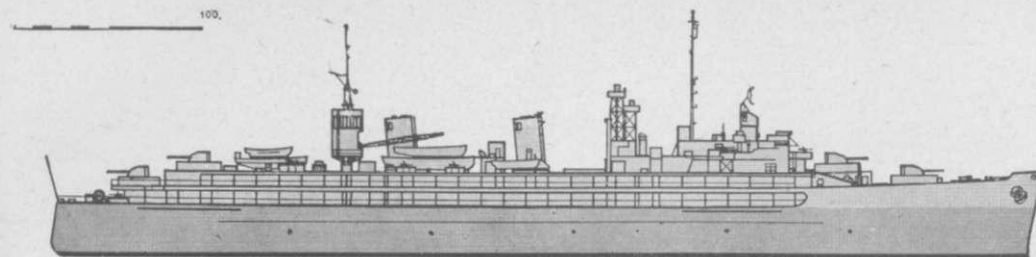
CM—MINE LAYER



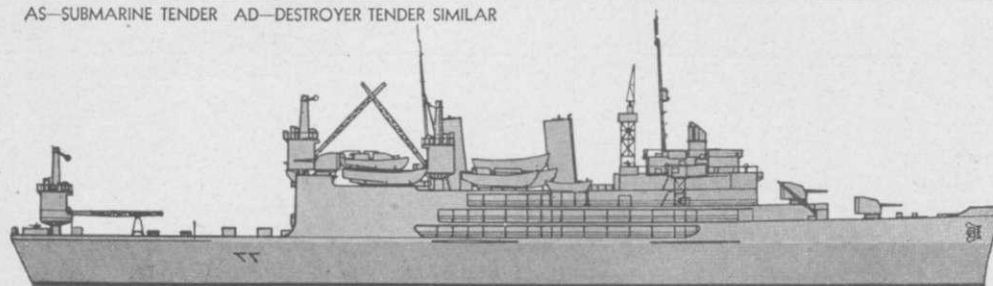
DM—DMS—DESTROYER MINELAYER / SWEEPER

# U.S. NAVAL AUXILIARIES

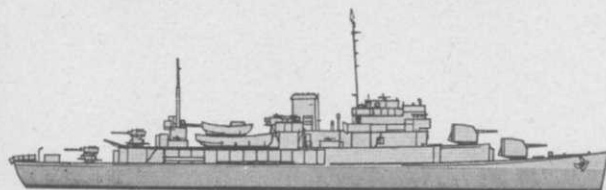
Supplement 4 · 8/4/43 ONI 54 R · RESTRICTED



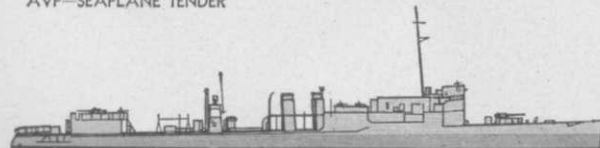
AS—SUBMARINE TENDER AD—DESTROYER TENDER SIMILAR



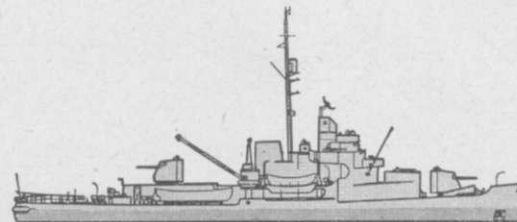
AV—SEAPLANE TENDER



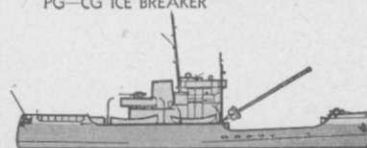
AVP—SEAPLANE TENDER



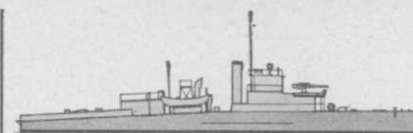
AVD—SEAPLANE TENDER  
A PD—DM—DMS SIMILAR



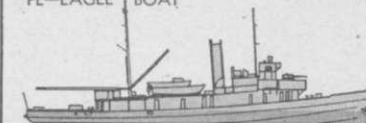
PG—CG ICE BREAKER



AGL—CG TENDER



PE—EAGLE BOAT



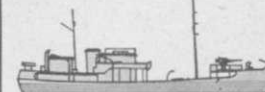
AM—AT—ASR—ARS—AVP



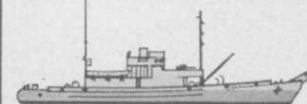
YMS—MOTOR MINE SWEEPER



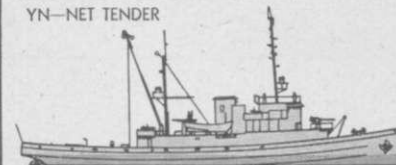
AMC—COASTAL MINE SWEEPER



YP—DISTRICT PATROL VESSELS—AM SIMILAR



YN—NET TENDER



AT—OCEANGOING TUG

# **ONI 54 R • RESTRICTED**

Division of Naval Intelligence—  
Identification and Characteristics Section

CONDENSED AND PRINTED FOR FM 30-50, NAVAER 00-80V-57

## **U. S. CONVERTED MERCHANT AUXILIARIES**

### **WORLD WAR 2**

### **WORLD WAR 1**

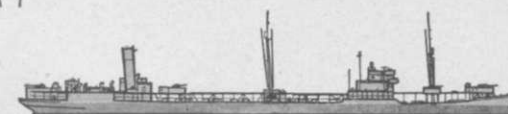
#### **OILER**



T2-SEA1

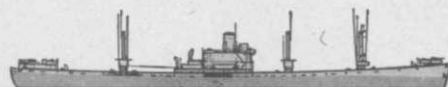


TANKER, T-2

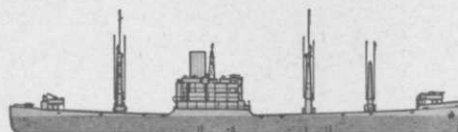


FLUSH-DECKERS

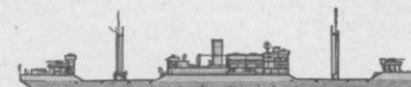
#### **CARGO**



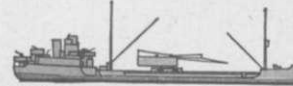
LIBERTY TYPE



C-2 TYPES

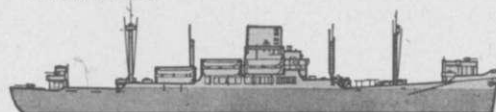


"HOG ISLAND" TYPE

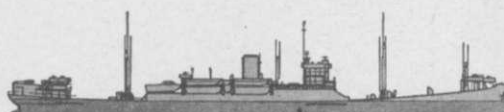


N-3

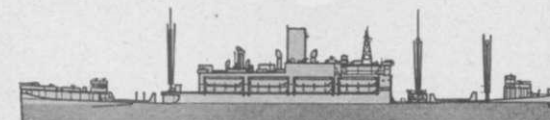
#### **TRANSPORT**



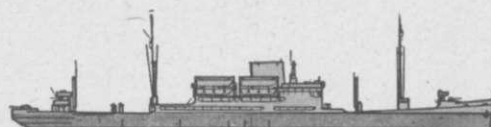
C-3 P&C



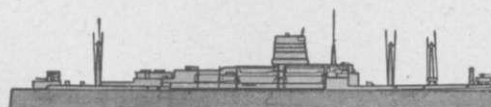
EX-BALTIMORE MAIL "CITY" TYPE



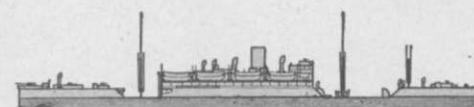
"PRESIDENT" TYPE



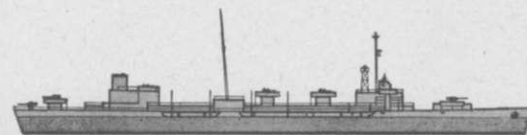
P&C



C-3 P&C

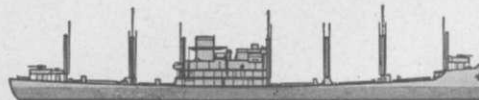


"HOG ISLAND 448" TYPE

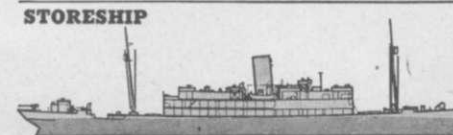


C4-SA2

100



C-3 SA2



EX-UNITED FRUIT LINE

#### **STORESHIP**