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UNIT F - PHARMACY AND NURSING FACILITY
HEALTH SCIENCES EXPANSION
UNIVERSITY OF MINNESOTA

PART I - PROJECT DESCRIPTION

A. PROJECT INTENT:

Unit F is a 10 story building project at the University of Minnesota which will house the College of Pharmacy and School of Nursing. The project is an expansion of the existing Health Sciences Complex and adjoins the complex on the North and East sides of Unit A. The project program is based upon the Pharmacy/Nursing Facilities report submitted to the Minnesota State Legislature in January 1977 in conjunction with the conditions of the Federal Construction Grant Award.

The Project Budget has been set at \$21,230,600 with the Construction Cost estimated at \$16,715,000. The building will use the same basic building components as used in Units A, B, C, E and K. The building's mechanical, electrical and structural systems will be modified as required to comply with current building codes and other applicable standards.

The project will employ phased construction involving four (4) separate construction contracts:

- (1) ECX - Mass Excavation
- (2) ECF - Footings (columns and foundation walls)
- (3) ECS - Steel Procurement and Fabrication
- (4) Prime - Basic Construction

Each of these contracts will be a separate Prime Contract.

The principal advantages of phased construction are earlier user occupancy and cost savings associated with cost escalation in an inflationary economy. The Architect will develop in sequence the separate contract document sets for bidding and construction in accordance with the project schedule presented in this report. Coordination of other associated Unit F Contracts will be the responsibility of the University. Phased construction requires careful scheduling and positive decision making by all parties.

B. PROJECT SCHEDULE:

The following target dates indicate the proposed schedule for the project. Included in this report is a chart which graphically presents this schedule and the associated responsibility and time relationships.

1977 TARGET DATES

- 1 Jun 1977 - Begin Design Phase
- 1 Jul 1977 - Begin ECX Contract Documents
- 15 Aug 1977 - Begin ECS Contract Documents
- 29 Aug 1977 - Begin Exterior Envelope for Prime Contract
- 2 Sep 1977 - Finish ECX C.D. for U of M review
- 8 Sep 1977 - Review ECX and Design Documents with ROFEC
- 9 Sep 1977 - ROFEC approval to bid ECX Contract
- 16 Sep 1977 - Finish Program and Planning Phase
- 19 Sep 1977 - Begin Final Design Phase Documents
- 29 Sep 1977 - Begin ECX Bid Period (21 days)
- 10 Oct 1977 - Begin Final Contract Documents for Prime Contract
- 20 Oct 1977 - Receive ECX Bids
- 27 Oct 1977 - ROFEC and U of M approval to award ECX Contract
- 28 Oct 1977 - Award ECX Contract
- 31 Oct 1977 - Finish Design Documents for U of M review approval
- 18 Nov 1977 - Finish U of M review of Design Documents
- 2 Dec 1977 - Issue final approved Design Documents

1978 TARGET DATES

- 27 Jan 1978 - Finish ECS C.D. for U of M review
- 13 Feb 1978 - Begin ECF Contract Documents
- 22 Feb 1978 - ROFEC approval to bid ECS Contract
- 16 Mar 1978 - Begin ECS Bid Period (26 days)
- 31 Mar 1978 - Finish ECF C.D. for U of M review
- 11 Apr 1978 - Receive ECS Bids
- 14 Apr 1978 - ROFEC approval to bid ECF Contract
- 30 Apr 1978 - ECX Contract complete
- 1 May 1978 - Finish C.D. for Prime Contract for U of M review
- 4 May 1978 - Begin ECF Bid Period (21 days)
- 5 May 1978 - ROFEC and U of M approval to award ECS Contract
- 12 May 1978 - Award ECS Contract
- 25 May 1978 - Receive ECF Bids
- 31 May 1978 - ROFEC approval to bid Prime Contract
- 15 Jun 1978 - ROFEC and U of M approval to award ECF Contract
- 23 Jun 1978 - Award ECF Contract
- 29 Jun 1978 - Begin Prime Contract Bid Period (49 days)
- 17 Aug 1978 - Receive Prime Contract Bids
- 31 Aug 1978 - ECF Contract complete
- 21 Sep 1978 - ROFEC and U of M approval to award Prime Contract
- 25 Sep 1978 - ECS Fabrication ready for erection
- 29 Sep 1978 - Award Prime Contract

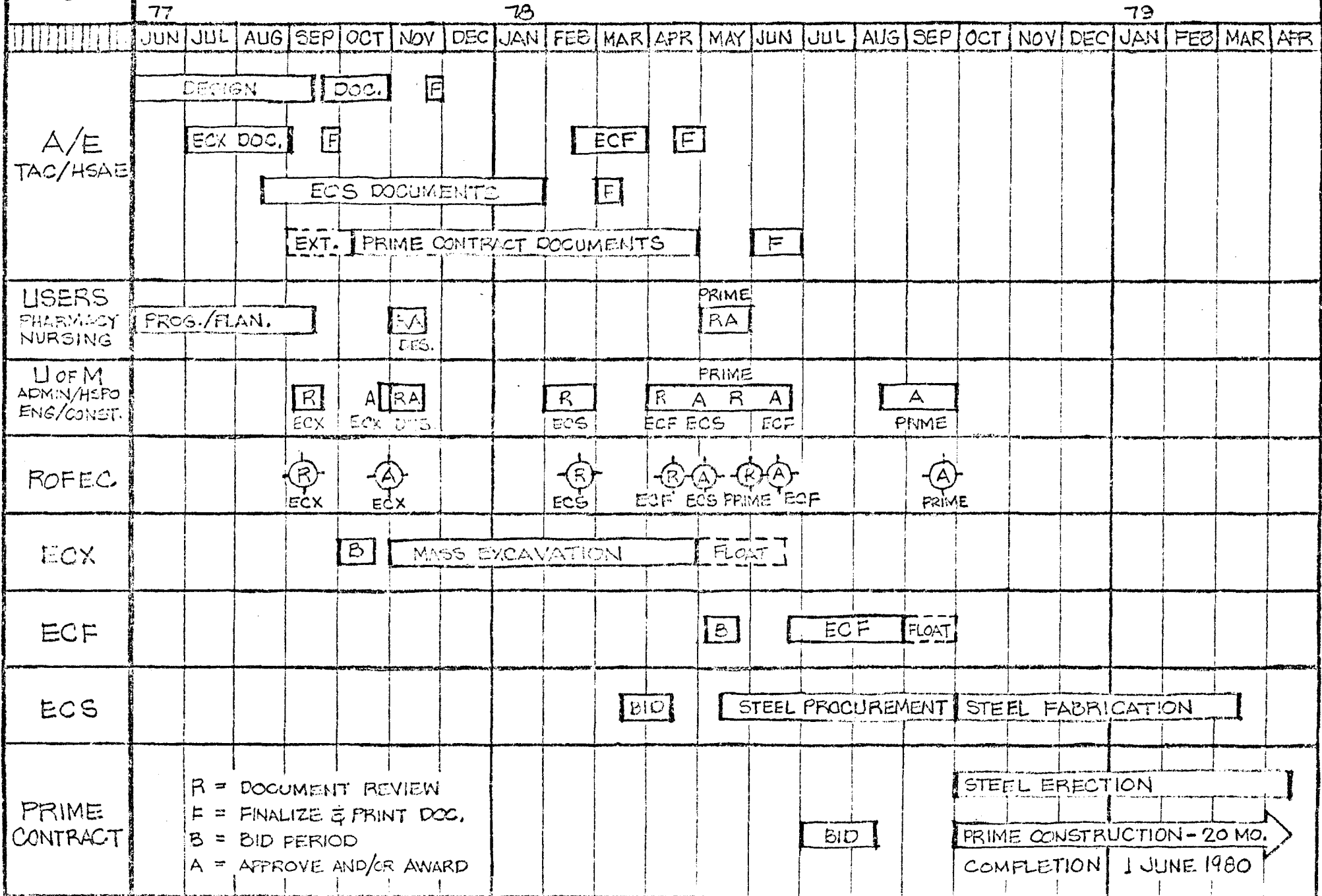
1979 TARGET DATES

- 15 Mar 1979 - ECS Contract (Fabrication) complete
- 15 Apr 1979 - Finish Steel Erection under Prime Contract

1980 TARGET DATES

- 15 Apr 1980 - Substantial completion date
- 1 Jun 1980 - Final completion of Prime Contract
- 1 Sep 1980 - Project ready for User occupancy

UNIT F - PROJECT RESPONSIBILITY/TIME SCHEDULE CHART



UNIT F - PHARMACY AND NURSING FACILITY
HEALTH SCIENCES EXPANSION
UNIVERSITY OF MINNESOTA

PART II - PLANNING PROVISIONS

A. GENERAL SITE CONDITIONS AND RESTRAINTS:

The building site is very restricted in size and access. The site is bound on the West by Unit A, on the South by the Church and on the North by Washington Avenue. Due to these restraints the site access will be limited to Harvard Street for most construction activities.

The Washington Avenue and Harvard Street sidewalks will remain in full use until the Prime Contract is awarded in the late summer of 1978. The sidewalks will then be closed for construction use and pedestrian safety.

The site limits under the ECX and ECF Contracts will be the same and will not include the Unit A Plaza Area. Access on and off the East end of the Plaza will be terminated. The ECS Contract does not include any on-site work. The site limits under the Prime Contract will be expanded to include one-third of the Unit A North Plaza Area. One-third of the above ground portion of Unit F is constructed over the Unit A North Plaza and below grade structure.

The exit doors of Unit A Stair Towers B and C open into the Unit F site area. These two exits must be maintained throughout the Unit F Construction Phase. These exits are indicated in the Phasing Study.

The South construction fence will be set North of the property line approximately 16 feet to provide a construction buffer zone for the Church and open access to the existing Unit A service dock.

B. ACCESS TO UNIT A SERVICE DOCK:

The Unit A service dock is to be eliminated under the long range plans when the Unit K/E service tunnel is completed as apart of Unit B/C and the overall materials management procedures are implemented using Unit E as the central receiving and distribution facility for the Health Sciences Complex.

An access road is to be provided to the Unit A service dock between the South construction fence and the Church property line. This access road can be used to service Unit A until the Health Sciences Materials Management System is fully operational.

C. STAGING AND STORAGE AREAS:

Maximum staging and storage areas should be provided for each construction phase to minimize costs associated with restricted construction sites.

The ECX and ECF staging and storage requirements are minimal and the construction site should be adequate for their basic activities. Office area for the ECX and ECF Contract activities will be accommodated in the existing Unit B/C Construction Offices. These facilities will be used for the Unit F Prime Contract also.

Staging and storage area are not required for the ECS Contract which does not include the steel erection. Staging and storage area will be required for the steel erection under the Prime Contract.

The Prime Contract will use both the construction site and the Delaware/Harvard Street site (original B/C office site) for staging and site storage. The Prime Contractor will backfill the excavated site as soon as possible to provide maximum site area adjacent to the structure. Parking area for construction workers will be required in addition to the site area discussed.

D. FIRE PROTECTION:

The construction plans for Unit F should be reviewed with the Minneapolis Fire Department to insure that all construction activities and site restraints related to the surrounding property are satisfactory to them.

UNIT F - PHARMACY AND NURSING FACILITY
HEALTH SCIENCES EXPANSION
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PART III - CONSTRUCTION CONTRACTS

A. DEMOLITION CONTRACT AND SITE CLEARANCE:

The Demolition Contract will be prepared and administered by the University such that the site will be available for the ECX Contractor on or about November 1, 1977.

B. EARLY CONTRACT EXCAVATION (ECX):

The ECX Contract will provide for the mass excavation of the site to the anticipated bedrock elevation of 791 feet. The excavation is adjacent to the East side of Unit A. No underpinning of existing structures is required under this contract or subsequent contracts. Earth support walls will be used on the North and East sides of the excavated hole with a sloped ramp on the South side. The contract will include the removal of all shale above the solid limestone.

The total quantity of soil to be removed under this contract, including the shale, is approximately 30,000 cubic yards. The minimum excavation time for this quantity of dirt removal, including the erection of the support walls, is three (3) months. The schedule has allowed six (6) months which should realize some cost savings to the Owner.

The final ECX site conditions will include an access ramp to the bottom of the excavated hole. The purpose of this ramp is to provide truck access to the bottom of the excavation for work under the ECF and Prime Contracts. The access ramp will be removed under the ECF Contract as required.

C. EARLY CONTRACT STEEL (ECS):

The ECS Contract will include all primary and secondary steel members associated with the above ground structure. The contract will be for the procurement, fabrication and site delivery of the subject steel members. Included with these steel members will be the structural components required for the precast concrete connections to the steel frame. The delivery schedule of the steel to the site will be the responsibility of the Prime Contractor.

The total quantity of steel included under this contract is estimated at 2,100 tons. The total time required for fabrication and erection are about the same and will be essentially parallel activities. Steel can be erected at a rate of 50 tons per day with 50% of the days acceptable for steel erection.

D. EARLY CONTRACT FOOTINGS (ECF):

The ECF Contract will include the column footings, perimeter foundation wall footings and associated rock excavation, including the elevator pit.

This Contract will insure that the steel can be erected under the Prime Contract at the earliest possible date along with the perimeter foundation walls.

E. PRIME CONTRACT (PRIME):

The Prime Contract will include all construction elements not included in the three (3) early contracts.

The steel erection will be the first construction step under this Contract. We anticipate that the steel will be erected in the following construction sequence:

1. All below grade steel will be erected first while the perimeter foundation wall is constructed. The below grade steel should be fully erected and plumbed before the foundation walls are poured to assure alignment of the steel. During this phase the erection crane (crawler type) will be located on the South excavation slope as shown in the Phasing Study.
2. The above grade steel will be erected by building tiers which will include the four associated service cores and their respective columns. The Phasing Study includes a site plan diagram showing the six construction tiers. The erection would be per the number sequence starting at the Northeast corner of Unit A and erecting the first three south tiers full height working towards the east. The precast concrete panels on Unit A adjacent to Tier No. 1 will be removed prior to the erection of Tier No. 1 steel. The Unit A Plaza will not be removed until the summer of 1979 except to set the Unit F columns associated with buildings Tiers 1 and 6.
3. After the first 3 tiers have been erected the erection will shift to the North side leaving the South site area for backfilling and general construction use.
4. The North side will be erected starting at the East tier moving West along Washington Avenue.

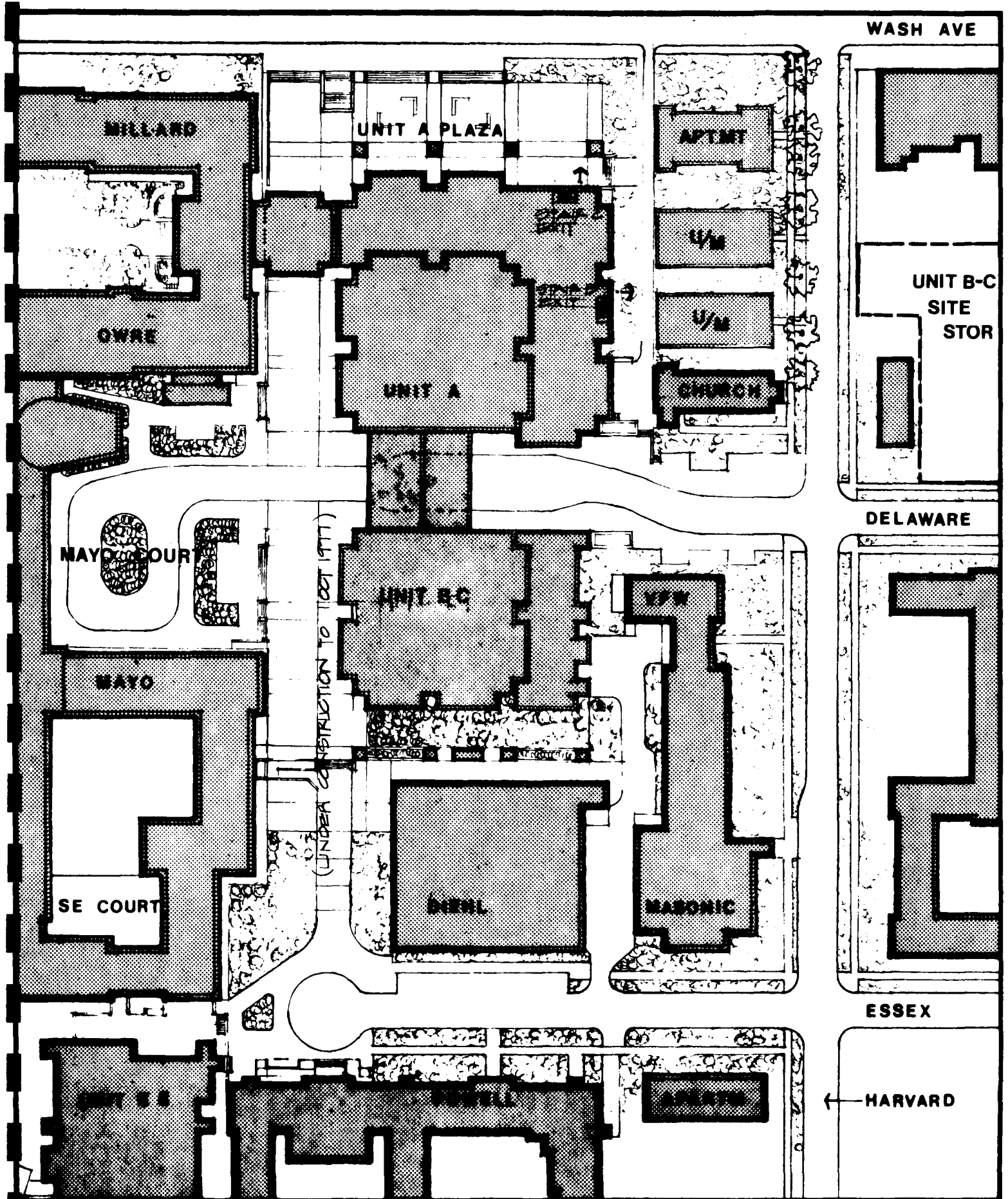
General Construction activities will commence with the construction of the below grade floors as the above grade steel is erected. Enclosure of the below grade portion of the structure will provide a major work area until enclosure of the upper structure occurs. The finishing sequence will be from the top floors down to grade and from the basement level up to grade.

Total construction time required for the Prime Contract is estimated at 18 to 20 months suggesting a substantial completion date prior to June 1, 1980. User occupancy of Floors 5 through 9 could be improved by using phased completion procedures under the Prime Contract. Completion of Floors 5 through 9 could be scheduled for March 1, 1980 with final completion to follow in 30 days. User access to Unit F would be from Unit A. Employing phased completion under the Prime Contract would probably add some cost to the project.

PHASING STUDY

PHARMACY AND NURSING FACILITY
HEALTH SCIENCES EXPANSION
UNIVERSITY OF MINNESOTA

15 AUGUST 1977



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 HARRIS, GREEN & ANTHONY, INC. ST. PAUL MINNESOTA
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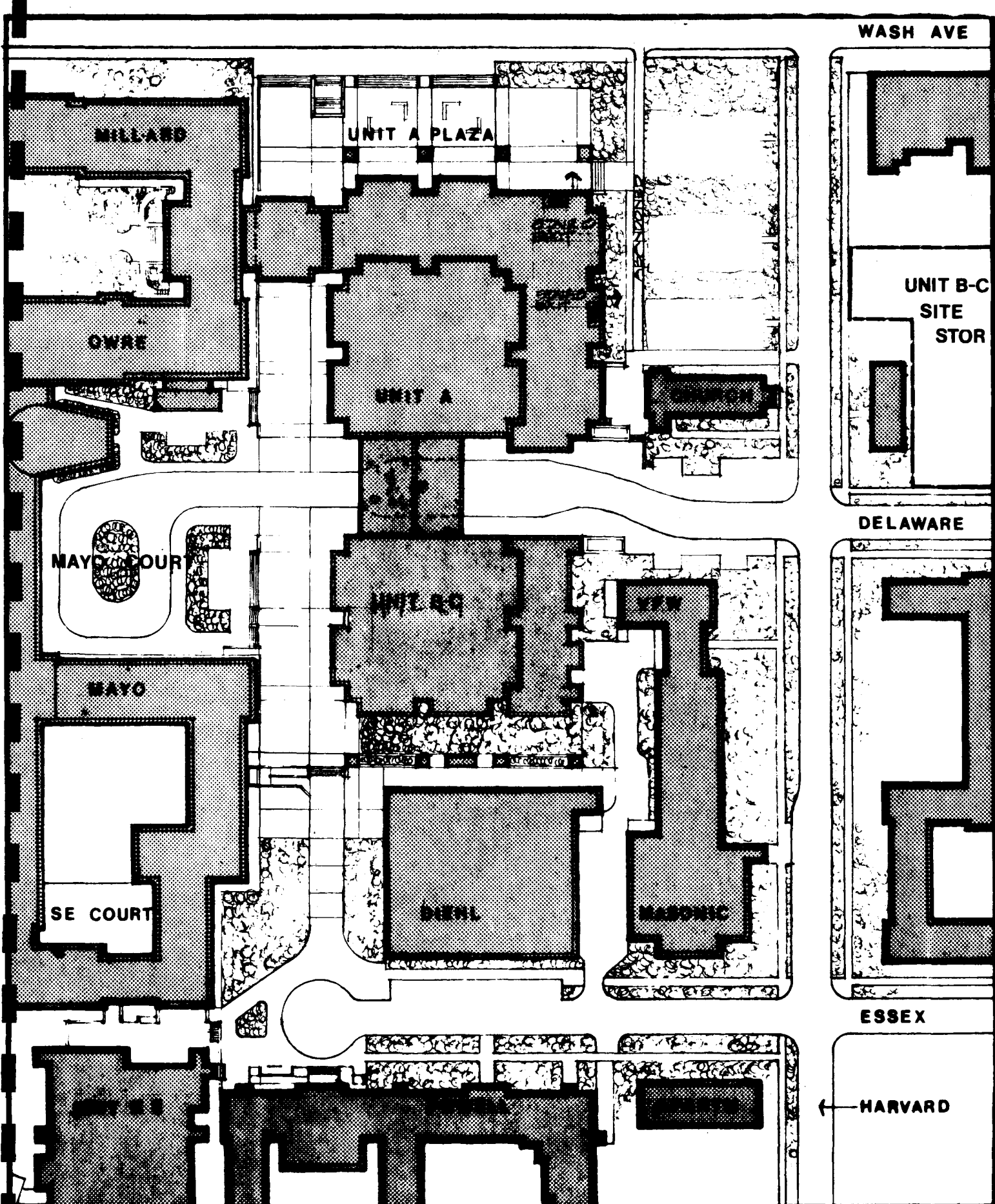
UNIT F
DESIGNER: ZBJ
CHECK: JPB
SCALE: 1/4" = 100'-0"
DATE: 15 AUG 1977

PHASING STUDY

EXISTING SITE CONDITIONS

DATE: JUNE 1977

SHEET NO.
1
OF 10

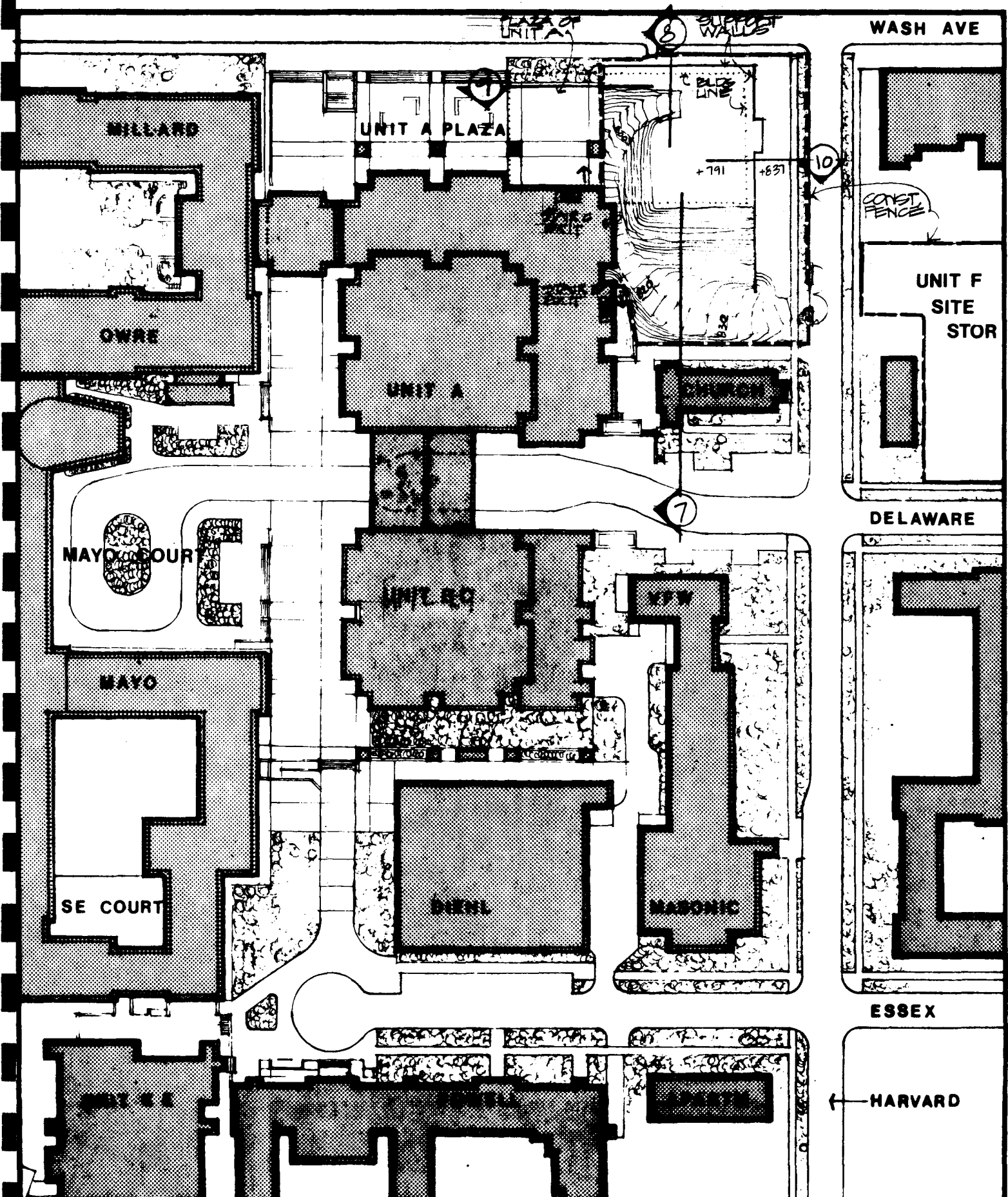


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UNIT F
 DRAWN: *EEB*
 CHECK: *DEB*
 SCALE: 1" = 100'-0"
 DATE: 15 AUG 1977

PHASING STUDY
 DEMOLITION CONTRACT
 FINISHED SITE CONDITION
 DATE: 28 OCT 1977

SHEET NO
2
 OF 10



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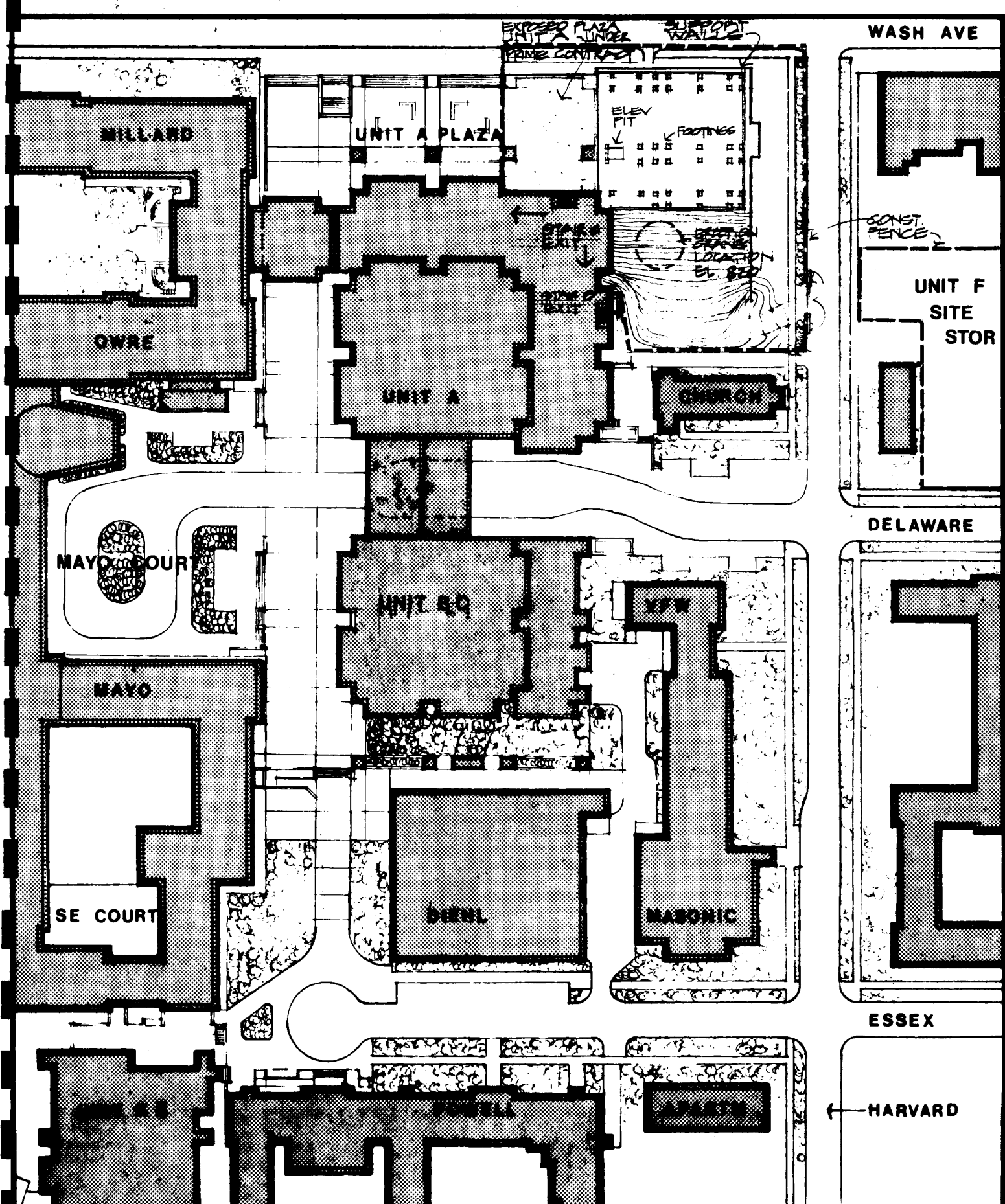
MINNEAPOLIS MINNEAPOLIS
ST. PAUL MINNEAPOLIS
MINNEAPOLIS MINNEAPOLIS

UNIT F
DATE: 15 AUG 1977

PHASING STUDY

ECX CONTRACT
FINISHED SITE CONDITION
DATE: 30 APR 1978

SHEET NO
3
OF 10

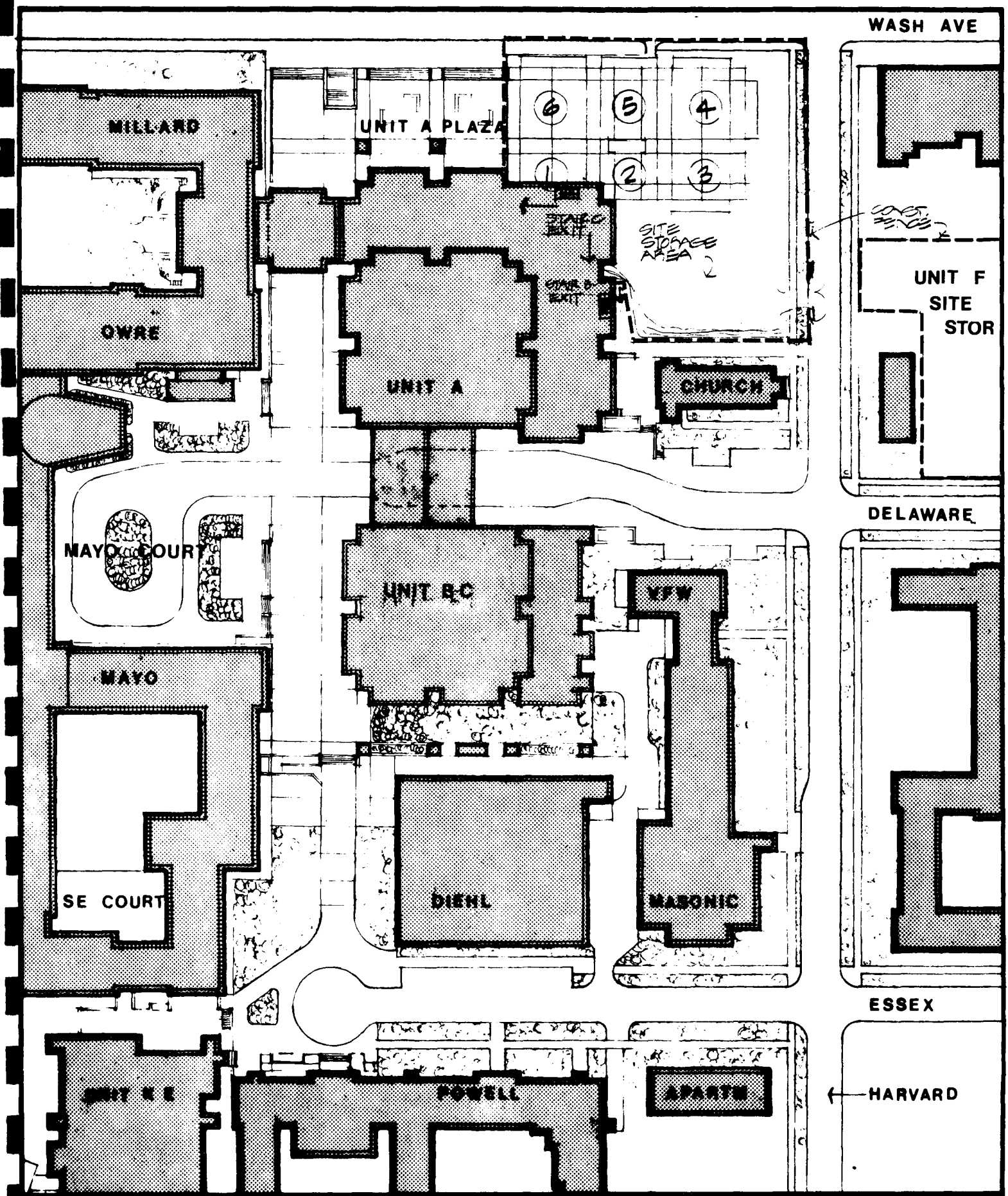


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 BETTER LEACH & LINDSTROM INC. MINNEAPOLIS MINNESOTA

UNIT F
 DRAWN: *EEJ*
 CHECK: *DEB*
 SCALE: 1"=100'-0"
 DATE: 15 AUG 1977

PHASING STUDY
 ECF CONTRACT
 FINISH SITE CONDITION
 DATE: 31 AUG 1978

SHEET NO. **4** OF 10



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BETTER LEACH & ANDERSON, INC.

MINNEAPOLIS, MINNESOTA
ST. PAUL, MINNESOTA
MINNEAPOLIS, MINNESOTA

JOB NO.	UNIT F
DRAWN BY	BEJ
CHECKED BY	DEB
SCALE	1" = 100' 0"
DATE	15 AUG 1977

PHASING STUDY

PRIME CONTRACT
STEEL ERECTION COMPLETE

DATE: 15 APR 1979

SHEET NO.
5
OF 10

WASH AVE

MILLARD

UNIT A PLAZA

UNIT F

OWRE

UNIT A

CHURCH

MAYO COURT

UNIT B-C

VFW

MAYO

SE COURT

DIENL

MASONIC

DELAWARE

ESSEX

HARVARD

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MINNEAPOLIS MINNESOTA ST PAUL MINNESOTA MINNEAPOLIS MINNESOTA

UNIT F

DES

DEB

SCALE 1" = 100'-0"

DATE 15 AUG 1977

PHASING STUDY

FINISHED SITE CONDITIONS

DATE: 1 JUNE 1980

SHEET NO

6

OF 10

UNIT A BEYOND

UNIT F EXPOSED WALL

MIN. FLR. ELEV. 844.0'

MIN. FLR. ELEV. 845.4'

INFLUATE EXPOSED WALL UNIT A

SLOPE

20' WIDE ROADED EX CONTRACT

SLOPE

15' WIDE PAVED RD TO UNIT A ROCK BY U OF M

CHURCH PROPERTY LINE

EL. 837



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MINNEAPOLIS MINNESOTA ST PAUL MINNESOTA MINNEAPOLIS MINNESOTA

JOB NO	UNIT F
DRAWN	BEJ
CHECK	DEB
SCALE	1/16" = 1'-0"
DATE	15 AUG 1977

PHASING STUDY

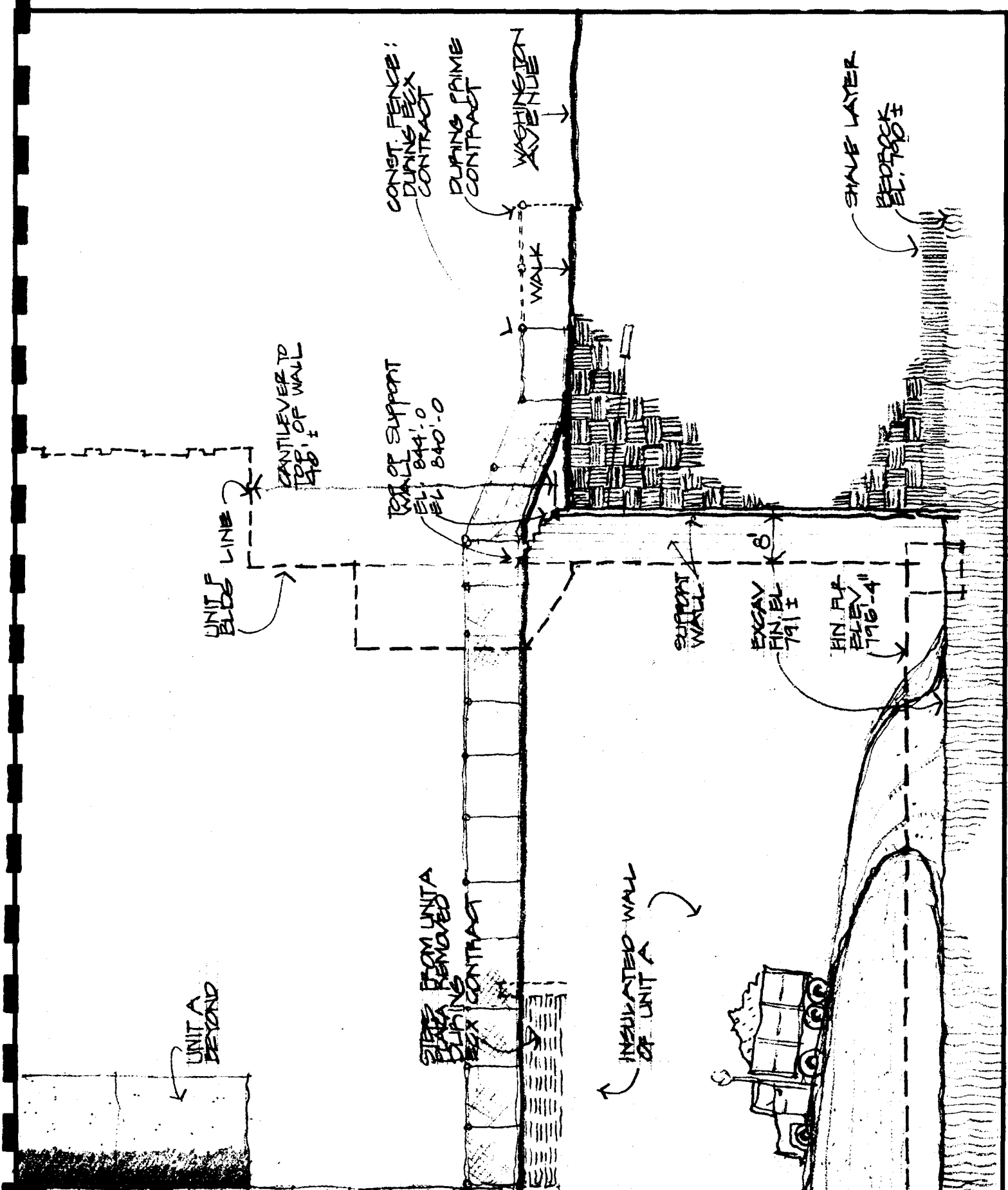
SECTION THRU SITE LOOKING WEST

EX CONTRACT

SHEET NO

7

OF 10



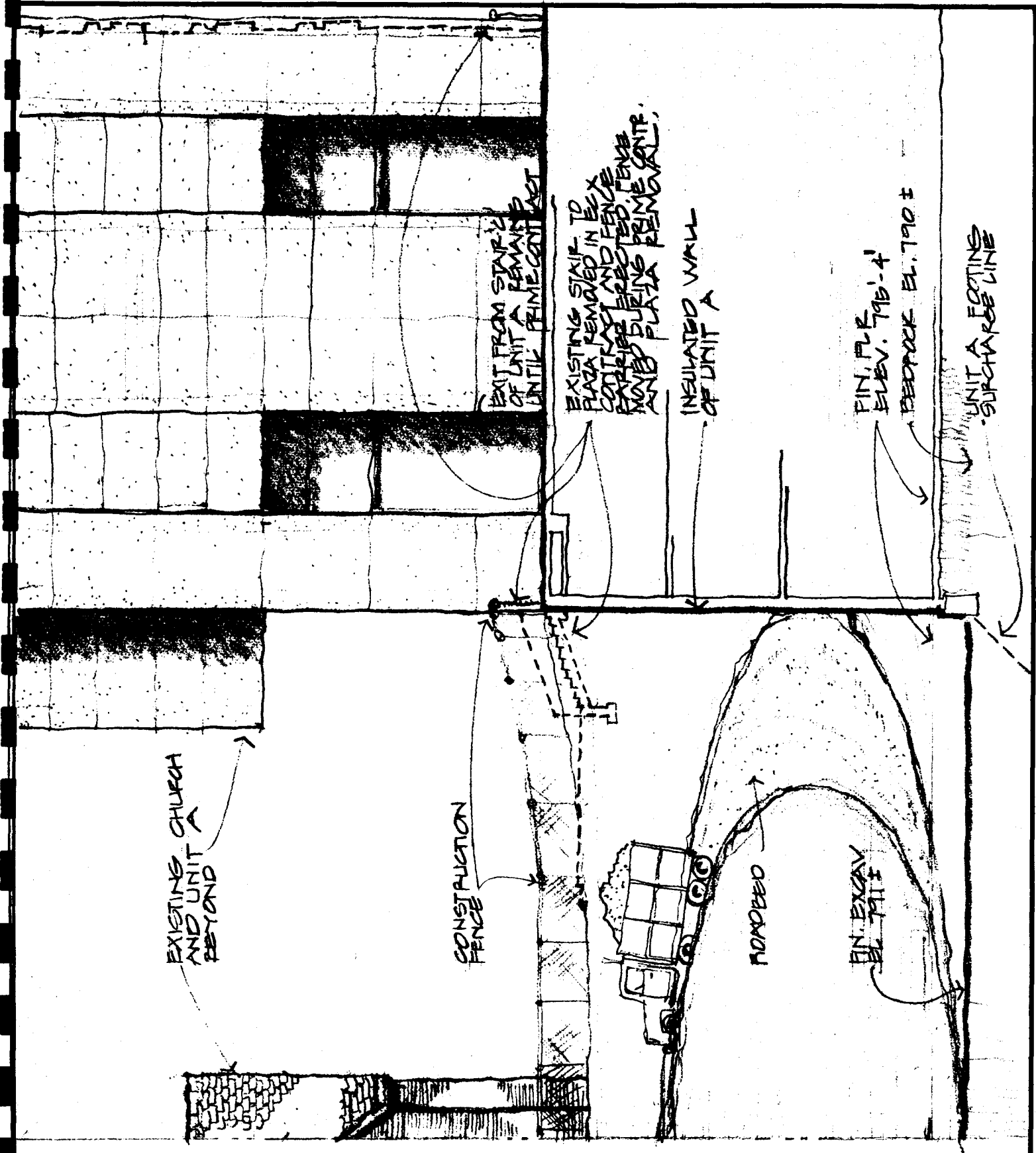
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 SETTER LEACH & LINDSTROM, INC. MINNEAPOLIS, MINNESOTA

JOB NO. UNIT P
 DRAWN BEJ
 CHECK DEB
 SCALE 1/16" = 1'-0"
 DATE 15 AUG 1977

PHASING STUDY
 SECTION THRU SITE
 LOOKING WEST
 EXX CONTRACT

SHEET NO
 8
 OF 10





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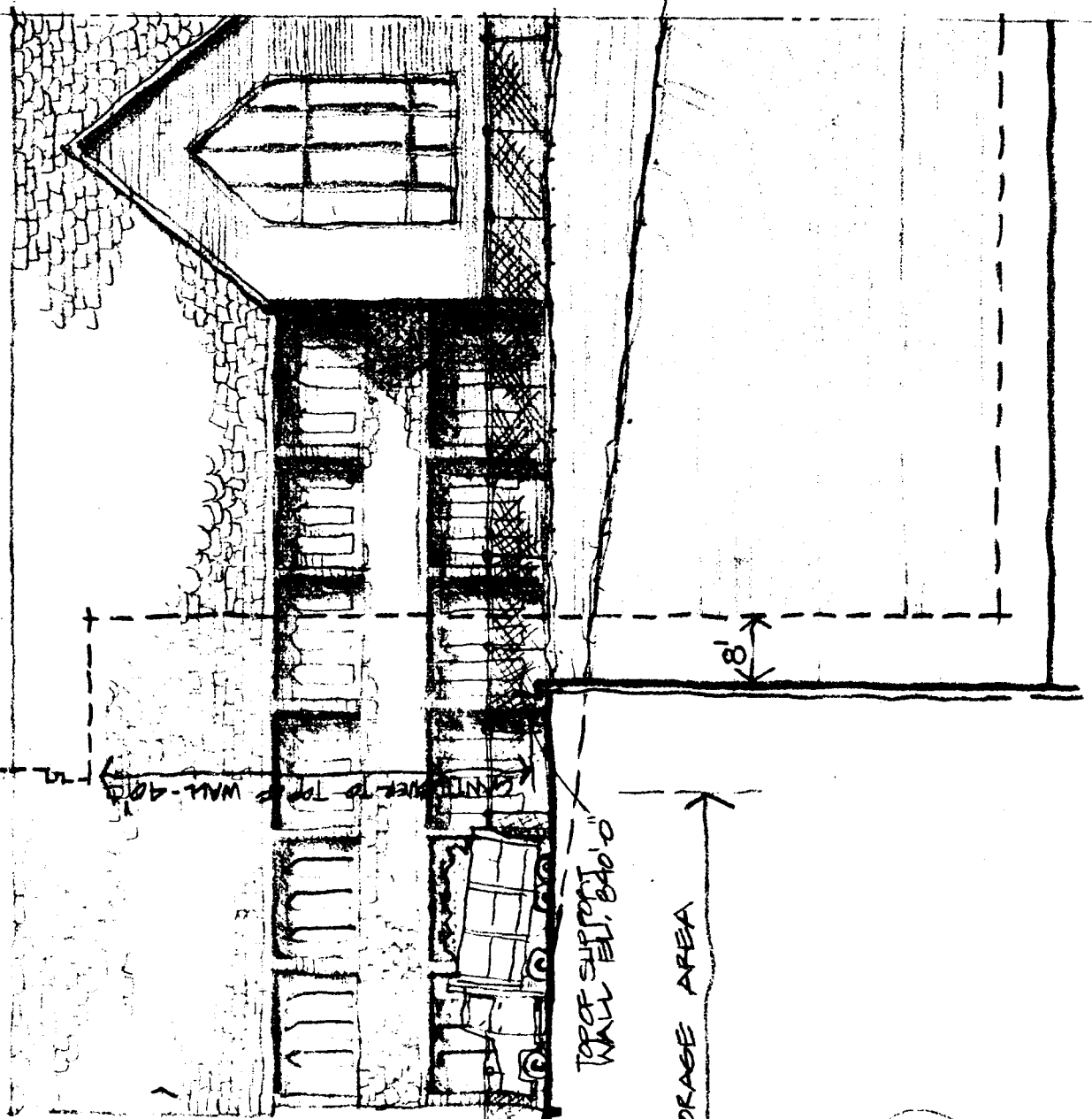
THE CERNY ASSOCIATES INC
HAMMILL GREEN & ABRAHAMSON INC
SETTER LEACH & LINDSTROM INC

MINNEAPOLIS MINNESOTA
ST PAUL MINNESOTA
MINNEAPOLIS MINNESOTA

JOB NO	UNIT A
DRAWN	BEJ
CHECK	DEB
SCALE	1/16" = 1'-0"
DATE	15 AUG 1977

PHASING STUDY
SECTION THRU SITE
LOOKING SOUTH
EXX CONTRACT

SHEET NO
9
OF 10



UNIT F LINE

EXISTING CHURCH BEYOND

EXISTING SIDEWALK

CONSTRUCTION FENCE

HARVARD STREET

TOP OF SHIPPIE WALL ELEV. 840.0

50' SITE STORAGE AREA

FIN. FLOOR ELEV. 796.4

SHALE LAYER

BEDROCK ELEV. 790.5

8'



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MINNEAPOLIS MINNESOTA ST PAUL MINNESOTA MINNEAPOLIS MINNESOTA

JOB NO	UNIT F
DRAWN	REJ
CHECK	DEB
SCALE	1/16" = 1'-0"
DATE	15 AUG 1977

PHASING STUDY

SECTION THRU SITE
LOOKING SOUTH
EXX CONTRACT

SHEET NO
10
OF 10