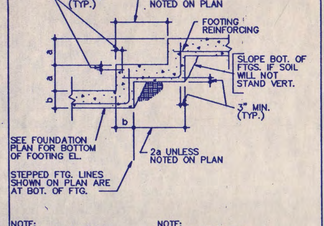
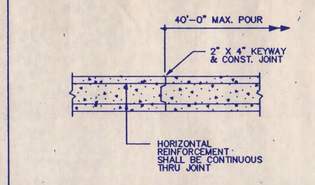


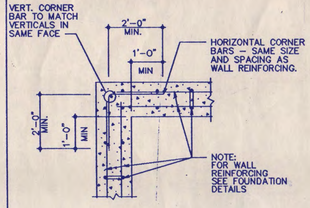
NOTE: SLOPED OR STEPPED FOOTINGS SHALL BE CAST AS A UNIT

NOTE: SEE WALL SECTIONS FOR FOOTING SIZE AND REINFORCEMENT

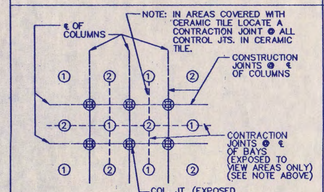
TYPICAL STEPPED WALL FOOTINGS



WALL CONSTRUCTION JOINT

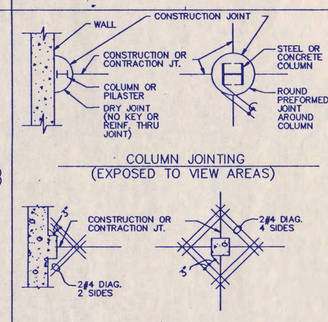


TYPICAL WALL CORNER



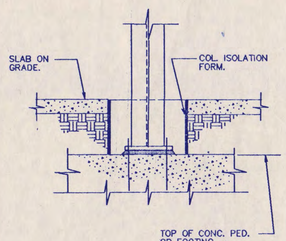
NOTES:
1. PANELS SHALL BE PLACED IN CHECKERBOARD PATTERN. 1 -POUR FIRST: 2 -POUR SECOND.
2. PANELS SHALL BE DIVIDED BY CONSTRUCTION JOINTS @ COLUMN LINES.
3. CONTRACTION JOINTS SHALL BE PERPENDICULAR TO LONGITUDINAL CONSTRUCTION JOINTS.
4. IN AREAS WHERE COLUMNS DO NOT OCCUR, PROVIDE CONTRACTION OR CONSTRUCTION JOINTS @ 30'-0" MAXIMUM.

METHOD OF PLACING SLAB ON GRADE

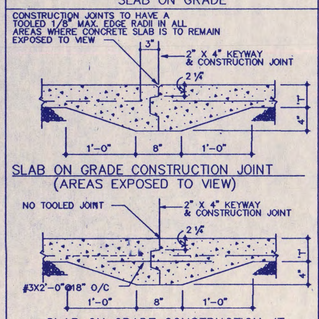


COLUMN JOINTING (EXPOSED TO VIEW AREAS)

COLUMN JOINTING (NOT EXPOSED TO VIEW AREAS)

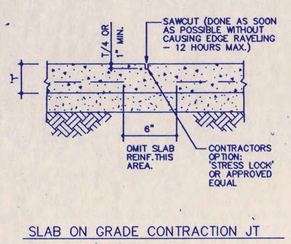


TYPICAL COLUMN ISOLATION JOINT

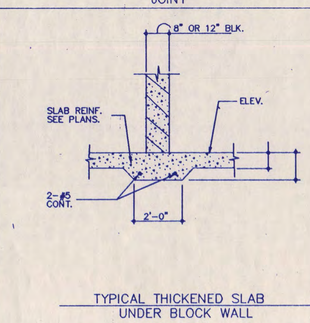


SLAB ON GRADE CONSTRUCTION JOINT (AREAS EXPOSED TO VIEW)

SLAB ON GRADE CONSTRUCTION JT (AREAS NOT EXPOSED TO VIEW)



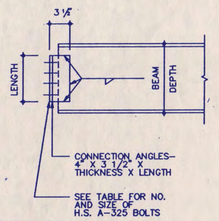
SLAB ON GRADE CONTRACTION JT



TYPICAL THICKENED SLAB UNDER BLOCK WALL

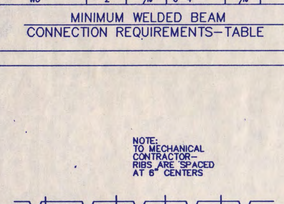
BEAM SIZE	NO. OF H.S. A-325 BOLTS	CONN. ANGLES THKNS	CONN. ANGLES LENGTH	1/4 DIA. H.S. BOLTS WELD SIZE	7/8 DIA. H.S. BOLTS WELD SIZE
W36	20	5/8"	2'-5 1/2"	1/4"	5/16"
W33	18	5/8"	2'-2 1/2"	1/4"	5/16"
W30	16	5/8"	1'-11 1/2"	1/4"	5/16"
W27	14	5/8"	1'-8 1/2"	1/4"	5/16"
W24	12	5/8"	1'-5 1/2"	1/4"	5/16"
W21	10	5/8"	1'-2 1/2"	1/4"	5/16"
W18	8	5/8"	0'-11 1/2"	1/4"	5/16"
W16 X 45 & ABOVE	8	5/8"	0'-11 1/2"	1/4"	5/16"
W16 X 40	8	5/16"	0'-11 1/2"	1/4"	1/4"
W16 X 36	8	5/16"	0'-11 1/2"	1/4"	1/4"
W16 X 31 & BELOW	8	5/16"	0'-11 1/2"	3/16"	
W14 X 34 & ABOVE	6	5/16"	0'-8 1/2"	1/4"	1/4"
W14 X 30 & BELOW	6	5/16"	0'-8 1/2"	3/16"	
W12 X 35 & ABOVE	6	5/16"	0'-8 1/2"	1/4"	1/4"
W12 X 30 & BELOW	6	5/16"	0'-8 1/2"	3/16"	
W10 X 30 & ABOVE	4	5/16"	0'-5 1/2"	1/4"	1/4"
W10 X 26 & BELOW	4	5/16"	0'-5 1/2"	3/16"	
W8 X 28 & ABOVE	4	5/16"	0'-5 1/2"	1/4"	1/4"
W8 X 24 & BELOW	4	5/16"	0'-5 1/2"	3/16"	
W6	2	5/16"	0'-4"	3/16"	

MINIMUM WELDED BEAM CONNECTION REQUIREMENTS-TABLE

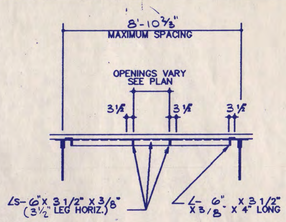


NOTES:
E70XX ELECTRODES MIN.
OUTSTANDING LEGS OF CONNECTION ANGLES MAY BE REDUCED TO 3" WHEN BEAM FRAMES INTO WS COLUMN WEB.

MINIMUM WELDED BEAM CONNECTION REQUIREMENTS-DETAIL



INSTRUCTIONS WHEN CUTTING OPENING IN METAL ROOF DECK



ANGLE FRAMING FOR OPENING IN METAL ROOF DECK

GENERAL STRUCTURAL NOTES

05005 GENERAL STRUCTURAL NOTES:

1. BUILDING CODES USED FOR DESIGN: 1985 UBC WITH MINNESOTA AMMENDMENTS.

2. FOUNDATIONS:

2.1 SOILS AND FOUNDATION ENGINEERING REPORT: This report is for informational purposes only and shall not be considered part of the contract documents. Furthermore, no warranty is made by the owner with regard to the completeness and accuracy of the subsurface investigation data, soil test data, statements and interpretations given in the report.

2.2 GROUND WATER: Water levels indicated on the boring logs are subject to seasonal and/or annual variations. A dewatering system of sufficient capacity shall be installed and operated to maintain the construction area free of water at all times.

2.3 SPREAD FOOTINGS: The bearing value of the soil was determined by field exploration and laboratory analysis. The foundation design is based on a total load pressure:

Spread Footings . . . . . 3000 PSF
Wall Footings . . . . . 3000 PSF

2.3.1 Prior to concrete placement, all footing excavations shall be inspected by a soils engineer to verify suitable bearing material of capacity as specified.

2.3.2 Notify the Owner's representative when additional excavation is required to reach suitable bearing material.

2.4 FOUNDATION COMPLETION: The soils engineer shall certify in writing that all foundations were placed and completed as specified.

3. DESIGN LOADS:

3.1 WIND:

3.1.1 Basic Wind Speed 80 mph

3.1.2 Importance Factor 1.15

3.1.3 Exposure C

3.2 DESIGN LIVE LOADS:

Public Areas . . . . . 100 PSF

Upper arena seating . . . . . 100 PSF

Lower arena seating . . . . . 50 PSF

Corridors and Stairs . . . . . 100 PSF

Mechanical . . . . . 125** PSF

Roofs not used as future floor 30*** PSF

3.2.1 **Or equipment weight if heavier.

3.2.2 ***Plus drifting and/or sliding snow.

4. DESIGN STRESSES:

4.1 CONCRETE:

Class	Strength at 28 days (PSI)	Type Mix	Location
A	4000	Std. Wt.	Interior Slabs & Walls
B	4000	Std. Wt.	Air-Entrained Exterior Slabs & Walls
D	4000	Std. Wt.	Footings/ Pile Caps
G	3000	Std. Wt.	Interior Topping

4.2 REINFORCING STEEL: Fy = 60 KSI

4.3 STRUCTURAL STEEL: Fy = 36 KSI and Fy = 50 ksi

4.4 CONCRETE MASONRY: F'm = 1500 PSI Type M or S Mortar

5. REINFORCING STEEL:

5.1 REFERENCE STANDARDS: Comply with the following unless noted otherwise:
CRSI MSP . . . "Manual of Standard Practice".
CRSI . . . . . "Placing Reinforcing Bars".
AWS D1.4 . . . "Structural Welding Code- Reinforcing Steel".

5.1.1 The reinforcing steel contractor shall fabricate all reinforcement and furnish all accessories, chairs, spacer bars and supports necessary to secure the reinforcement unless shown otherwise on the plans and/or details.

5.1.2 Reinforcing steel shall be ASTM A 615 (grade 60).

5.1.3 Reinforcing steel to be welded shall be ASTM A 706 (grade 60).

5.1.4 Welded wire fabric shall conform to ASTM A185.

5.1.5 Lap splices shall be a minimum of 36 bar diameters for concrete and 40 bar diameters for concrete masonry unless noted otherwise.

5.1.6 Compression dowel embedment shall be a minimum of 22 bar diameters.

5.1.7 Chemical analysis of the reinforcing bars to be welded shall be submitted with shop drawings.

5.2 CONCRETE COVERAGE FOR REINFORCING STEEL:

Footings. . . . . 3"
Foundation walls
Exterior face. . . . . 2"
Interior face. . . . . 1"
Columns . . . . . 1 1/2" to ties
Structural slab . . . . . 1" top and bottom
Beams . . . . . 1 1/2" to stirrups
Architectural concrete. . . . 2"
Slab on grade . . . . . center of slab

6. PRECAST CONCRETE FLOOR SYSTEM:

6.1 PRECAST PRESTRESSED CONCRETE PLANK AND SEATING ELLS: 8" thick planks, span direction as shown on plans plus 2" topping where required. See details for seating ell dimensions.

6.1.1 Design plank and seating ells for design live loads in accordance with those listed in the General Structural Notes.

6.1.2 Design plank and the seating ells for a superimposed dead load of 15 PSF plus the dead load of the masonry walls which bear on the plank or ells. Refer to Architectural drawings for location of walls.

6.1.3 The precast concrete supplier shall submit design calculations for all precast prestressed components for review by the Structural Engineer before production.

7. PRECAST CONCRETE WALL SYSTEM:

7.1 PRECAST PRESTRESSED CONCRETE WALL SYSTEM: See architectural drawings for dimensions and location.

7.1.1 Design wall system elements for design wind loads in accordance with those listed in the General Structural Notes.

7.1.2 The precast concrete supplier shall submit design calculations for all precast prestressed components for review by the Structural Engineer before production.

8. CONCRETE MASONRY WALL SYSTEM:

8.1 GENERAL:

8.1.1 Concrete Block: Hollow, load-bearing units conforming to ASTM C90, Grade N, Type I.

8.1.2 Mortar: ASTM C270, Type M or S.

8.1.3 Grout: ASTM C476. Grout solid all cells containing reinforcing and other walls as shown on the drawings.

8.1.4 Lintels and Bond Beams: Fill with 3500 psi concrete. Refer to Masonry Specifications. See Architectural drawings for lintels and bond beams--size and reinforcing.

8.1.5 Wall Reinforcing: Vertical reinforcing at block walls noted on Structural and/or architectural drawings. Place vertical bars at wall centerline unless noted otherwise. Refer to Architectural drawings and Specifications for horizontal joint reinforcing.

8.2 SPECIAL INSPECTION: Required per UBC Sections 306 and 2405.

9. STRUCTURAL STEEL:

9.1 REFERENCE STANDARD: Comply with the AISC "Manual of Steel Construction" unless noted otherwise.

9.2 CONNECTIONS:

9.2.1 Where connections or reactions are not shown on the drawings the fabricator shall provide connections to support one-half of the total uniform load capacity shown in the tables of Uniform Load Constants, Part 2 of the Reference Standard for the given beam, span and grade of steel specified.

9.2.2 Where slotted connection holes are used the Fabricator shall adjust the bolt values accordingly.

9.2.3 The following conditions shall be checked when designing beam connections: bolt shear, bolt bearing on connecting material, block web shear, shear on the net area of the connecting angles or plates and local bending stresses.

9.2.4 All bolts shall be 3/4 inch diameter A325N unless noted otherwise on the drawings.

9.2.5 Bolts shall be 1 inch diameter A325N for typical truss connections and 1 inch diameter A325F at detail S4-4/1.

9.2.6 Welds shall be made with appropriate E70xx electrodes.

9.3 ALL STEEL TO BE ASTM A36 UNLESS MARKED WITH AN ASTERISK "*" WHICH IS TO BE ASTM A572 GRADE 50.

10. STEEL JOISTS:

10.0.1 Welds shall be made with appropriate E70xx electrodes.

11. STEEL JOISTS:

11.1 GENERAL: All steel joists shall conform to the requirements of the Steel Joist Institute 'Standard Specifications. Joist fabricator shall be a member of the SJI or shall submit complete calculations and/or load test data conforming to SJI load test tables.

11.1.1 Bridging for LH and DLH series joists shall be diagonal cross bracing. Spacings and sizes as noted on the drawings. Diagonal bridging shall be bolted at intersections and to joists chords.

11.1.2 Header angles for steel joists shall be designed and furnished by the joist fabricator.

11.1.3 Joist manufacturer shall check joists for the special loads described in the joist loading diagram. Calculations verifying the joist design for these loads are to be submitted with the shop drawings. Note on the shop drawings any modifications of the standard joists that were required due to the hanging loads.

11.1.4 Joist manufacturer shall check joist design for a net uplift wind load of 5 psf. Joist manufacturer shall adjust bridging spacing and member sizes accordingly. Calculations verifying the joist design for these loads are to be submitted with the shop drawings. Note on the shop drawings any modifications of the standard joists that were required due to the uplift wind loads.

12. STEEL ROOF DECK:

12.1 REFERENCES: Comply with the Steel Deck Institute "Design Manual for Composite Decks, Form Decks and Roof Decks" unless noted otherwise.

12.1.1 Deck shall be 3" 18 gage, Type N.

12.1.2 End joints of deck shall be staggered with 2" minimum end laps.

12.1.3 Roof deck and deck attachment shall be capable of resisting, as a diaphragm, a force of 400 pounds per lineal foot.

13. BACKFILLING:

13.1 GENERAL: No backfilling and compacting of earth shall be permitted against foundation walls until supporting slabs have been poured and have reached 75% of their design strength or unless adequate bracing submitted for review is provided.

13.1.1 Both sides of foundation walls shall be backfilled simultaneously to prevent overturning or lateral movement of walls.

14. CONSTRUCTION JOINTS:

14.1 JOINTS: The contractor shall submit drawings showing the proposed construction joints for all areas. This includes walls, structural floor systems, slabs on grade, etc. This drawing shall be reviewed by the architect/engineer and returned to the contractor prior to pouring any concrete. The construction joint drawing shall be furnished to the fabricators before their shop drawings are submitted.

14.1.1 If the construction joints after being reviewed, are changed, revised drawings shall be submitted for review.

14.1.2 Construction joints shall be made as detailed on the drawings.

14.1.3 Construction joints in concrete foundation walls shall be located so no single pour is longer than 40 feet.

15. EXPANSION BOLTS:

15.1 BOLTS: All expansion bolts shall be Hilti Kwik-Bolts (or approved equal) as noted on the drawings. Minimum embedment unless otherwise noted shall be: 4" for 1/2" diameter, 5" for 5/8" and 3/4" diameter.

16. MISCELLANEOUS:

16.1 BOLTS: All anchor bolts for mechanical and electrical equipment are furnished and located by the respective contractors.

16.2 SLEEVES: All pipe sleeves are furnished by and located by the mechanical and electrical contractors unless noted otherwise.

16.3 VERIFICATIONS: Verify all opening sizes, pad sizes, and locations with the respective contractors.

16.4 CORE DRILLING: No reinforcing shall be cut. Verify location of reinforcing before core drilling. There shall not be any core drilling through beams or columns. Maximum core hole through slabs shall be outside pipe diameter plus 1".

17. NEW WORK IN CONJUNCTION WITH EXISTING CONSTRUCTION:

17.1 NOTIFICATION: The contractor shall notify the Architect/Engineer immediately of any discrepancies between construction documents and actual field conditions.

ABBREVIATIONS

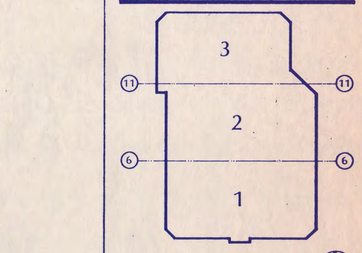
AB	ANCHOR BOLT
AD	AREA DRAIN
ADD	ADDENDUM
ADDL	ADDITIONAL
ALT	ALTERNATE
ARCH	ARCHITECT/ ARCHITECTURAL
BLDG	BUILDING
BM	BEAM
BOT	BOTTOM
BFE	BOTTOM FOOTING ELEVATION
BPE	BOTTOM PIER ELEVATION
BRG	BEARING
BRDG	BRIDGING
BSMT	BASEMENT
BTWN	BETWEEN
CANTIL	CANTILEVER
C/C	CENTER TO CENTER
C.J.	CONTROL JOINT
℄	CENTERLINE
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRACTOR
CT JT	CONTRACTION JOINT
CTR	CENTER
D	DEPTH
DEPR	DEPRESSION
DET	DETAIL
DIA OR Ø	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DJ	DOUBLE JOIST
DL	DEAD LOAD
DO	DITTO
DWG	DRAWING
DWLS	DOWELS
EF	EACH FACE
EW	EACH WAY
EA END/EE	EACH END
EXP JT	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EQUIP	EQUIPMENT
EXCT	EXACTION
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FDN	FOUNDATION
FD	FLOOR DRAIN
FIN	FINISH
FL	FLOOR
FP	FIREPROOFING
FRMG	FRAMING
FT	FOOT(FEET)
FTG	FOOTING
FUT	FUTURE
GR	GRADE
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GND	GROUND
GR BM	GRADE BEAM
HOR	HEADED
HS	HIGH STRENGTH
HT	HEIGHT
HORZ	HORIZONTAL
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCH(ES)
INT	INTERIOR
JST	JOIST
JT	JOINT
KWY	KEYWAY
KO	KNOCK OUT
LG	LENGTH/LONG
LT WT	LIGHTWEIGHT
LOC	LOCATION
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MAX	MAXIMUM
MB	MACHINE BOLT
MECH	MECHANICAL
MEMB	MEMBRANE
MEZZ	MEZZANINE
MFGR	MANUFACTURER
MIN	MINIMUM
MO	MASONRY OPENING
MONO	MONOLITHIC
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPNG	OPENING
OPP	OPPOSITE
PED	PEDESTAL
PL OR ℄	PLATE
PSF	POUNDS PER SQUARE FOOT
PROJ	PROJECTION
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
R	RISER/RADIUS
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCE/REINFORCING
REQD	REQUIRED
REV	REVISE/REVISION
RS	ROUGH SLAB
RT	RIGHT
SCHED	SCHEDULE
SECT	SECTION
SF	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
STL JST	STEEL JOIST
SPEC	SPECIFICATIONS
SPA	SPACES
SQ	SQUARE
STL	STEEL
STIFF	STIFFENERS
STD	STANDARD
STIR	STIRRUPS
STRUCT	STRUCTURAL
STR	STRAIGHT
SYMM	SYMMETRICAL
TAB	TOP AND BOTTOM
TFE	TOP OF FOOTING ELEVATION
TPE	TOP PIER ELEVATION
TSE	TOP SLAB ELEVATION
TEMP STL	TEMPERATURE STEEL
TJ	TRIPLE JOIST
TR	TREAD
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
WP	WATERPROOF
W PT	WORK POINT
WT	WEIGHT
WWF	WELDED WIRE FABRIC

Revision	Date	No.
C.D. REVIEW ISSUE	7-12-88	
ISSUED FOR BIDDING	9-9-88	

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Scott E. Sanders

Date 7/12/88 Reg. No. 10889



KEY PLAN N

NATIONAL HOCKEY CENTER

ST. CLOUD STATE UNIVERSITY

ST. CLOUD, MINNESOTA

Ellerbe

One Appletree Square
Minneapolis, MN 55425
612/853-2000

GENERAL STRUCTURAL NOTES & TYPICAL DETAILS

Scale NONE

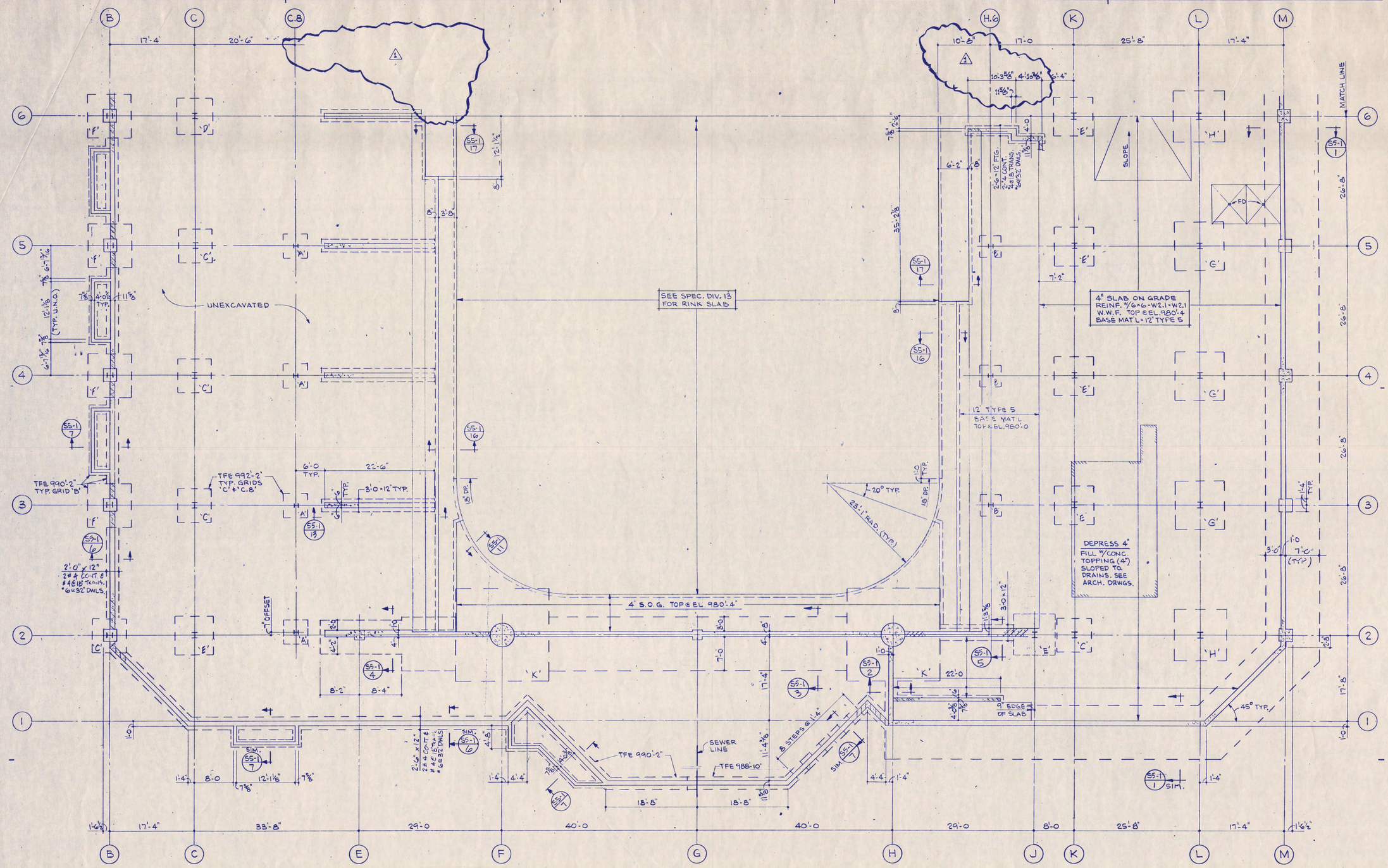
Date SEP. 9, 1988 Comm. No. 8766-871

In Charge SES

Drawn By RAS

Checked By SES

SO-1



FOOTING SCHEDULE			
NO.	SIZE	DEPTH	REINF.
A	5'-0" SQ.	15"	5#6 EW
B	5'-6" SQ.	18"	5#6 EW
C	7'-0" SQ.	18"	7#6 EW
D	7'-6" SQ.	18"	8#6 EW
E	8'-6" SQ.	21"	8#6 EW
F	9'-6" SQ.	21"	9#7 EW
G	10'-0" SQ.	24"	10#7 EW
H	10'-6" SQ.	24"	11#7 EW
J	11'-0" SQ.	24"	12#7 EW
K	19'-0" SQ.	36"	22#9 EW

Revision	Date	No.
P.D. REVIEW ISSUE	6-8-88	
C.D. REVIEW ISSUE	7-12-88	
ISSUED FOR BIDDING	9-9-88	
BULLETIN NO. 1	4-12-89	1

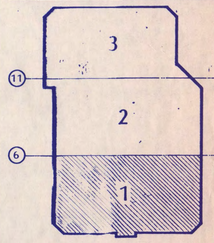
SHEET NOTES :

1. SEE SHEET S0-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
2. TFE INDICATES TOP OF FOOTING ELEVATION.
3. COLUMN FOOTINGS ARE CENTERED ON COLUMNS U.N.O.
4. SEE ARCH. PLANS FOR DIMENSIONS OF DEPRESSED & SLOPED AREAS.
5. SEE ARCH. DRAWINGS FOR SLAB FINISH.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Scott E. Sanders

Date 7/12/88 Reg. No. 10889



KEY PLAN

NATIONAL HOCKEY CENTER

ST. CLOUD STATE UNIVERSITY

ST. CLOUD, MINNESOTA

Ellerbe

One Appletree Square
Minneapolis, MN 55425
(612) 853-2000

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FOUNDATION & BASEMENT LEVEL FLOOR PLAN AREA 1

Scale 1/8" = 1'-0

Date SEP. 9, 1988 Comm. No. 8766-871

In Charge SES

Drawn By RAS

Checked By SES

S1-1

E-1988-1088

Revision	Date	No.
D.D. REVIEW ISSUE	6-8-88	
C.D. REVIEW ISSUE	7-12-88	
ISSUED FOR BIDDING	9-9-88	
BULLETIN NO. 1	3-10-89	1
BULLETIN NO. 2	4-12-89	2

SHEET NOTES:

1. SEE SHEET SO-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
2. TFE INDICATES TOP OF FOOTING ELEVATION.
3. COLUMN FOOTINGS ARE CENTERED ON COLUMNS. U.N.O.
4. SEE ARCH. PLANS FOR DIMENSIONS OF DEPRESSED & SLOPED AREAS.
5. SEE ARCH. DRAWINGS FOR SLAB FINISH.

NOTE: TOP OF FOOTING ELEVATION = 978'-2" U.N.O.

FOOTING SCHEDULE			
NO.	SIZE	DEPTH	REINF.
A	5'-0" SQ.	15"	5#6 EW
B	5'-6" SQ.	18"	5#6 EW
C	7'-0" SQ.	18"	7#6 EW
D	7'-6" SQ.	18"	8#6 EW
E	8'-6" SQ.	21"	8#6 EW
F	9'-6" SQ.	21"	9#7 EW
G	10'-0" SQ.	24"	10#7 EW
H	10'-6" SQ.	24"	11#7 EW
J	11'-0" SQ.	24"	12#7 EW
K	19'-0" SQ.	36"	22#9 EW

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Scott E. Saunders

Date 7/12/88 Reg. no. 10887

KEY PLAN

NATIONAL HOCKEY CENTER

ST. CLOUD STATE UNIVERSITY

ST. CLOUD, MINNESOTA

Ellerbe

One Appletree Square
Minneapolis, MN 55425
(612) 853-2000

FOUNDATION & BASEMENT LEVEL FLOOR PLAN — AREA 1

Scale 1/8" = 1'-0", ALTERNATE NO. 1

Date SEP. 9 1988 Comm. No. 8766-871

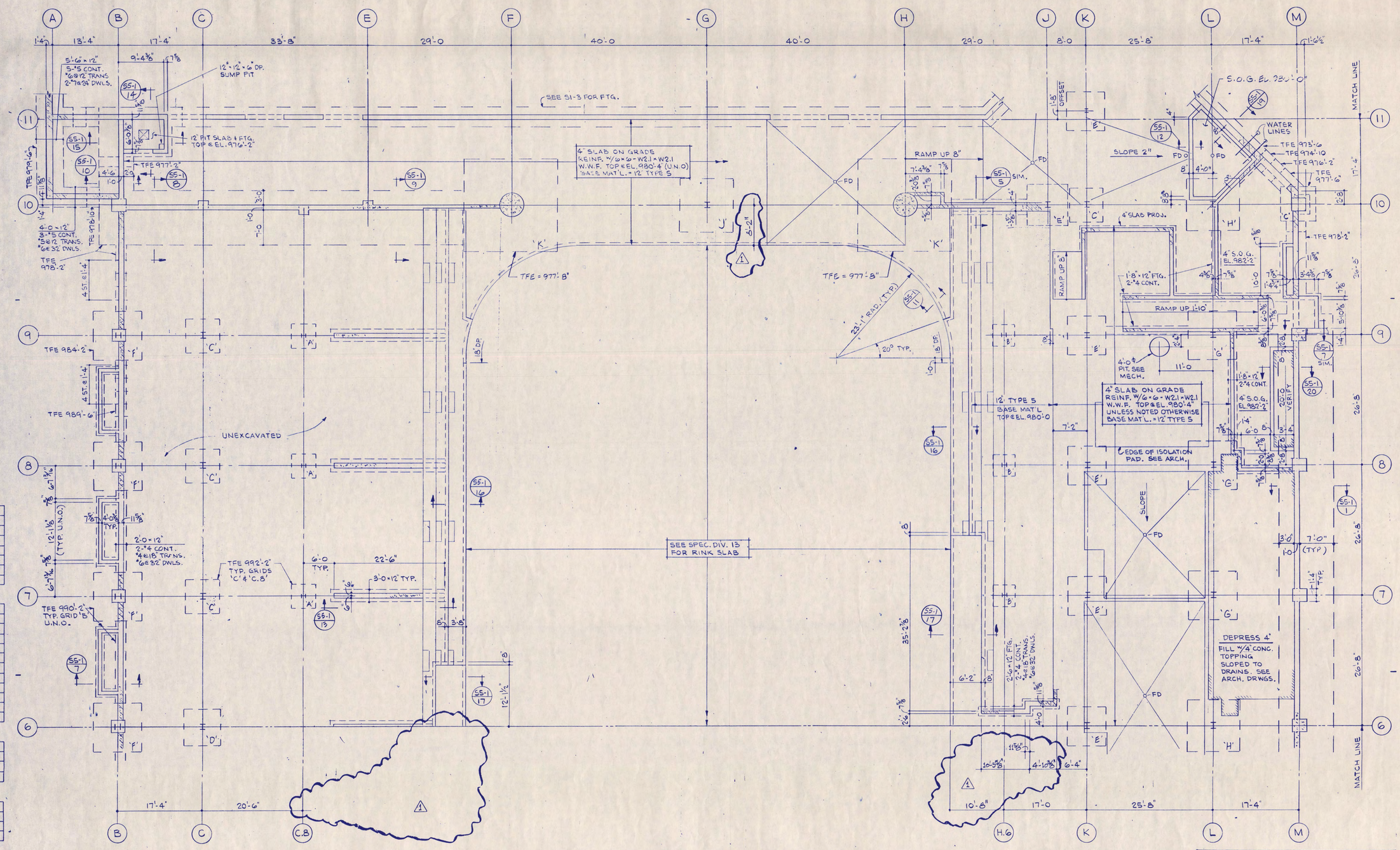
In Charge SES

Drawn By JTL

Checked By SES

S1-1A

E-1388-1/88



FOOTING SCHEDULE			
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Revision	Date	No.
D.D. REVIEW ISSUE	6-8-88	
C.D. REVIEW ISSUE	7-12-88	
ISSUED FOR BIDDING	9-9-88	
BULLETIN NO. 2	4-12-89	1

SHEET NOTES:

1. SEE SHEET SO-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
2. TFE INDICATES TOP OF FOOTING ELEVATION.
3. COLUMN FOOTINGS ARE CENTERED ON COLUMNS. U.N.O.
4. SEE ARCH. PLANS FOR DIMENSIONS OF DEPRESSED & SLOPED AREAS.
5. SEE ARCH. DRAWINGS FOR SLAB FINISH.

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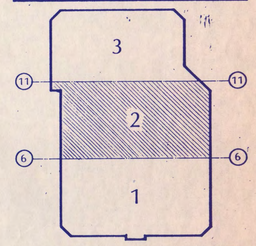
Date 7/12/88 Reg. No. 10889



KEY PLAN

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ST. CLOUD, MINNESOTA

Ellerbe

One Appletree Square
Minneapolis, MN 55425
(612) 853-2000

FOUNDATION & BASEMENT LEVEL FLOOR PLAN AREA 2

Scale 1/8" = 1'-0

Date SEP. 9, 1988 Comm. No. 8766-871

In Charge SES

Drawn By RAS

Checked By SES

S1.2

E-1386-168

Revision	Date	No.
D.D. REVIEW ISSUE	4-8-88	
C.D. REVIEW ISSUE	7-12-88	
ISSUED FOR BIDDING	9-9-88	
BULLETIN NO. 1	3-10-89	1
BULLETIN NO. 2	4-12-89	2

SHEET NOTES:

1. SEE SHEET SO-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
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4. SEE ARCH. PLANS FOR DIMENSIONS OF DEPRESSED & SLOPED AREAS.
5. SEE ARCH. DRAWINGS FOR SLAB FINISH.

NOTE: TOP OF FOOTING ELEVATION = 978'-2" U.N.O

FOOTING SCHEDULE			
NO.	SIZE	DEPTH	REINF.
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C	7'-0" SQ.	18"	7#6 EW
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F	9'-6" SQ.	21"	9#7 EW
G	10'-0" SQ.	24"	10#7 EW
H	10'-6" SQ.	24"	11#7 EW
J	11'-0" SQ.	24"	12#7 EW
K	19'-0" SQ.	36"	22#9 EW

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Scott E. Sanders

Date 7/12/88 Reg. No. 10887

KEY PLAN

NATIONAL HOCKEY CENTER

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Ellerbe

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Minneapolis, MN 55425
(612) 853-2000

FOUNDATION & BASEMENT LEVEL FLOOR PLAN AREA 2

Scale 1/8" = 1'-0 ALTERNATE NO. 1

Date SEP. 9, 1988 Comm. No. 8766-871

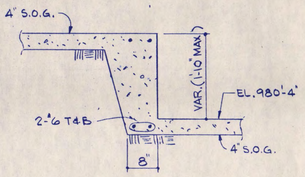
In Charge SES

Drawn By JTL

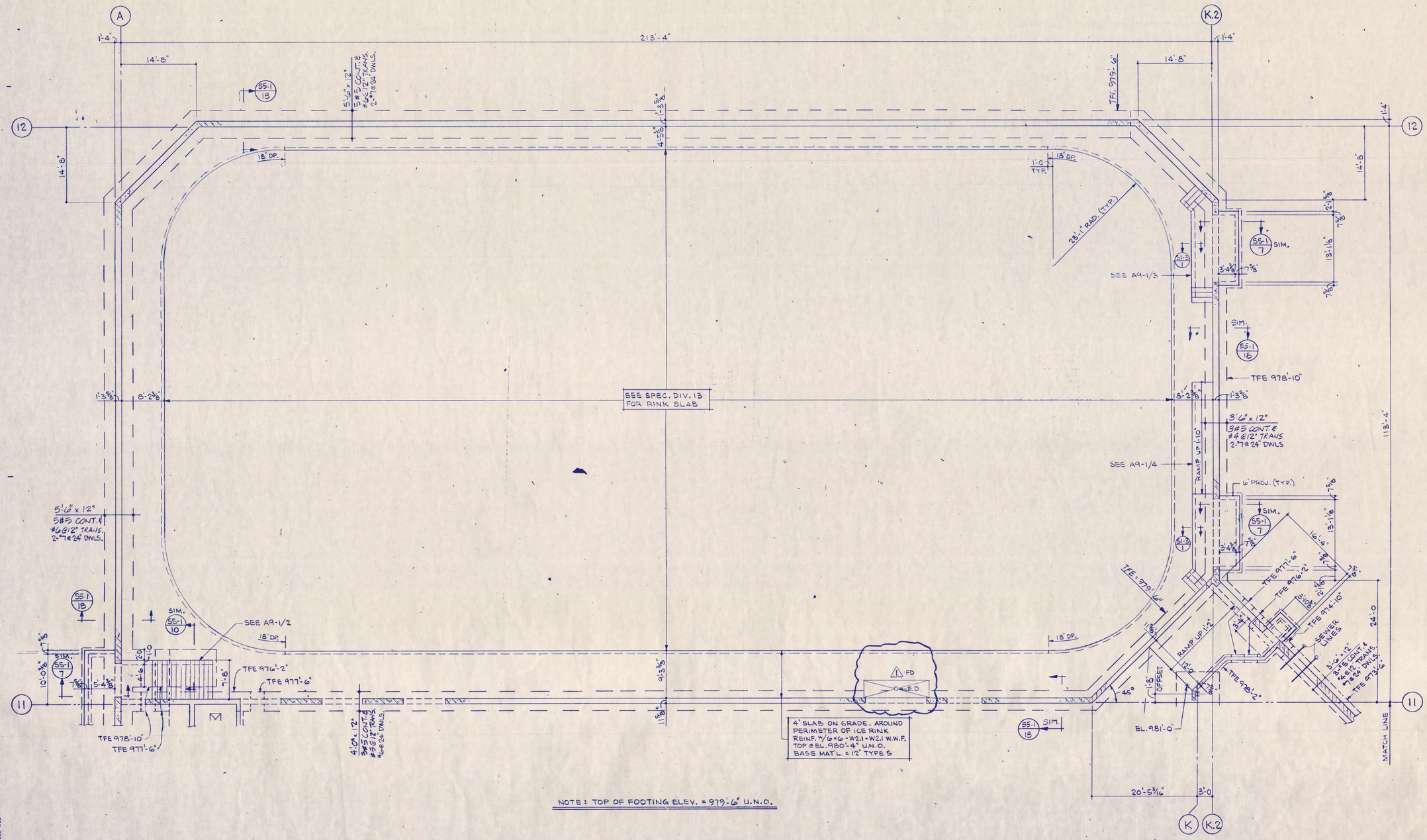
Checked By SES

S1.2A

E-1386-1/88



S1-3 / 1 SECTION
3/4" = 1'-0



NOTE: TOP OF FOOTING ELEV. = 979'-6" U.N.O.

Revision	Date	No.
D.D. REVIEW ISSUE	6-8-88	
C.D. REVIEW ISSUE	7-12-88	
ISSUED FOR BIDDING	9-9-88	

SHEET NOTES:

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5. SEE ARCH. DRAWINGS FOR SLAB FINISH.

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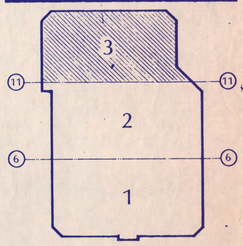
Scott E. Saunders

Date 7/14/88 Reg. No. 10889



KEY PLAN

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FOUNDATION & BASEMENT LEVEL FLOOR PLAN AREA 3

Scale 1/8" = 1'-0

Date SEP. 9, 1988 Comm. No. 8766-871

In Charge SES

Drawn By RAS

Checked By SES

S1-3

E-1386-1988

Revision	Date	No.
P.D. REVIEW ISSUE	6-6-88	
C.D. REVIEW ISSUE	7-12-88	
ISSUED FOR BIDDING	9-9-88	

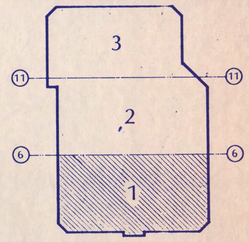
SHEET NOTES:

1. SEE SHEET SO-1 FOR GENERAL STRUCT. NOTES AND TYPICAL DETAILS.
2. ASTERISK * AFTER BEAM SIZE INDICATES A572 GRADE 50 STEEL.
3. SEE ARCH. DRAWINGS. FOR DIMENSIONS NOT GIVEN.
4. VERIFY SIZE & LOCATION OF MECH. OPNGS. W/MECH. CONTRACTOR.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

Scott E. Saunders

Date 9/12/88 Reg. No. 10889



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CONCOURSE LEVEL FLOOR FRAMING PLAN AREA 1

Scale 1/8" = 1'-0"

Date SEP. 9, 1988 Comm. No. 8766-871

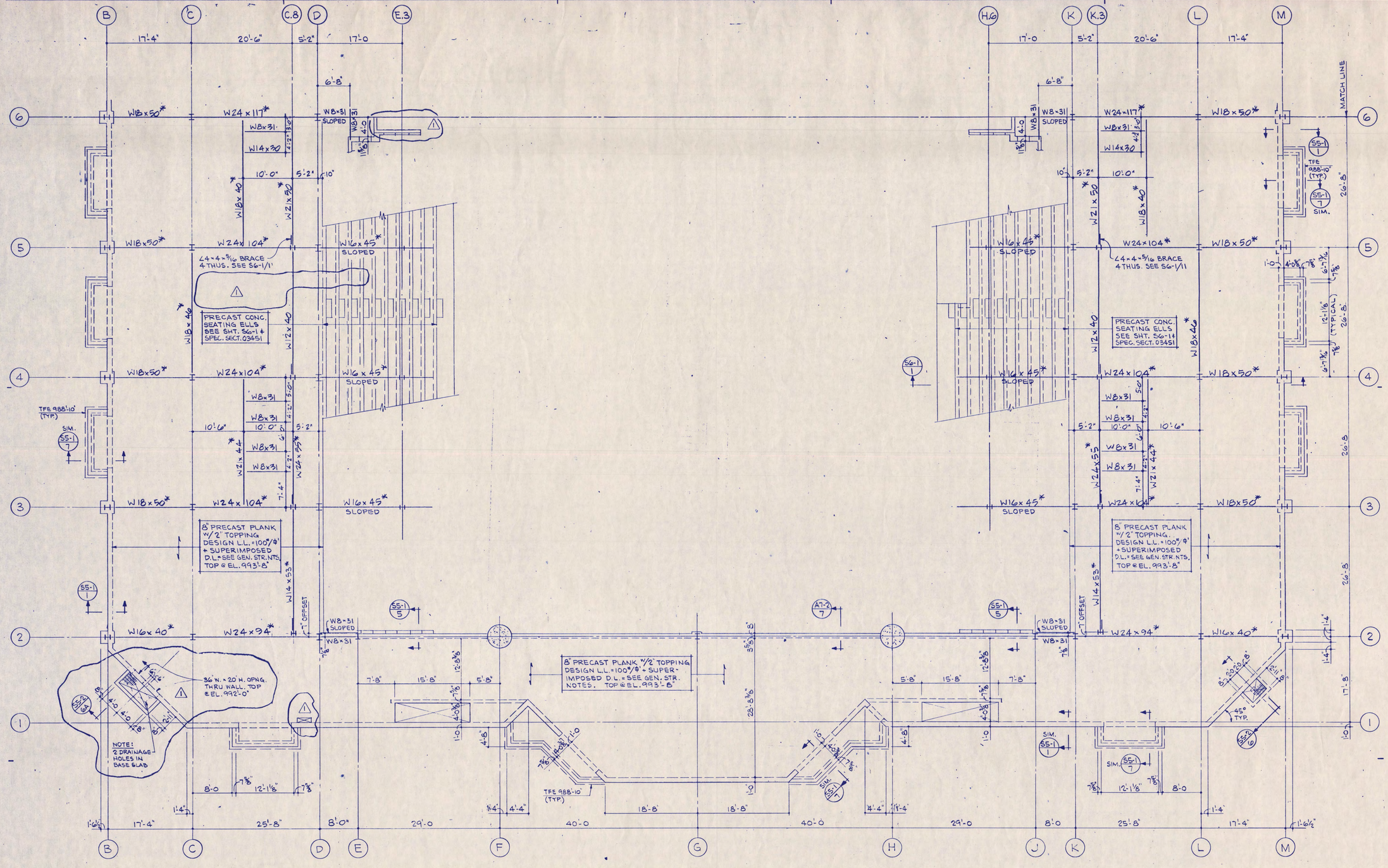
In Charge SES

Drawn By RAS

Checked By SES

S2-1

E-1386-1/88



Revision	Date	No.
D.D. REVIEW ISSUE	6-8-88	
C.D. REVIEW ISSUE	7-12-88	
ISSUED FOR BIDDING	9-9-88	
BULLETIN NO. 1	3-10-89	1

SHEET NOTES:

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3. SEE ARCH. DRAWINGS. FOR DIMENSIONS NOT GIVEN.
4. VERIFY SIZE & LOCATION OF MECH. OPNGS. W/MECH. CONTRACTOR.

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Scott E. Saunders

Date 7/12/88 Reg. No. 10859

KEY PLAN

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CONCOURSE LEVEL FLOOR FRAMING PLAN AREA 1

Scale 1/8"=1'-0 ALTERNATE NO. 1

Date SEP. 9, 1988 Comm. No. 8766-871

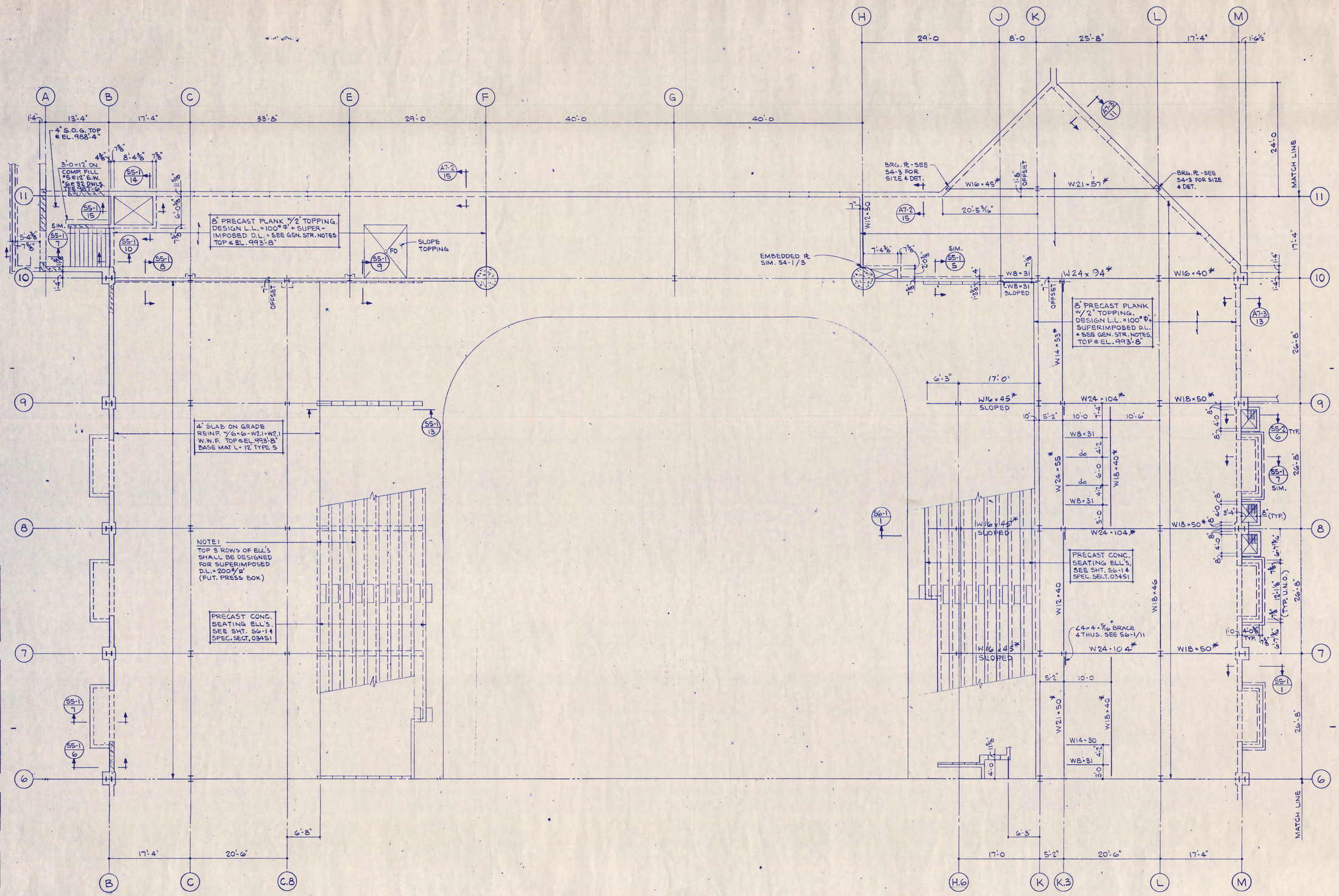
In Charge SES

Drawn By RAS/JTL

Checked By SES

S2.1A

E-1388-1088



Revision	Date No.
D.D. REVIEW ISSUE	6-8-88
C.D. REVIEW ISSUE	7-12-88
ISSUED FOR BIDDING	9-9-88

SHEET NOTES:

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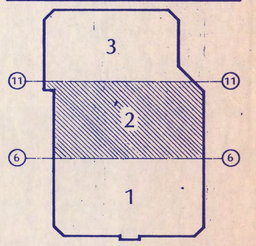
Scott E. Saunders

Date 9/12/88 Reg. No. 18889



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CONCOURSE LEVEL FLOOR FRAMING PLAN AREA 2

Scale 1/8" = 1'-0

Date SEP. 9, 1988 Comm. No. 8766-871

In Charge SES

Drawn By RAS

Checked By SES

S2·2

E-1986-1/88