

State of Alaska

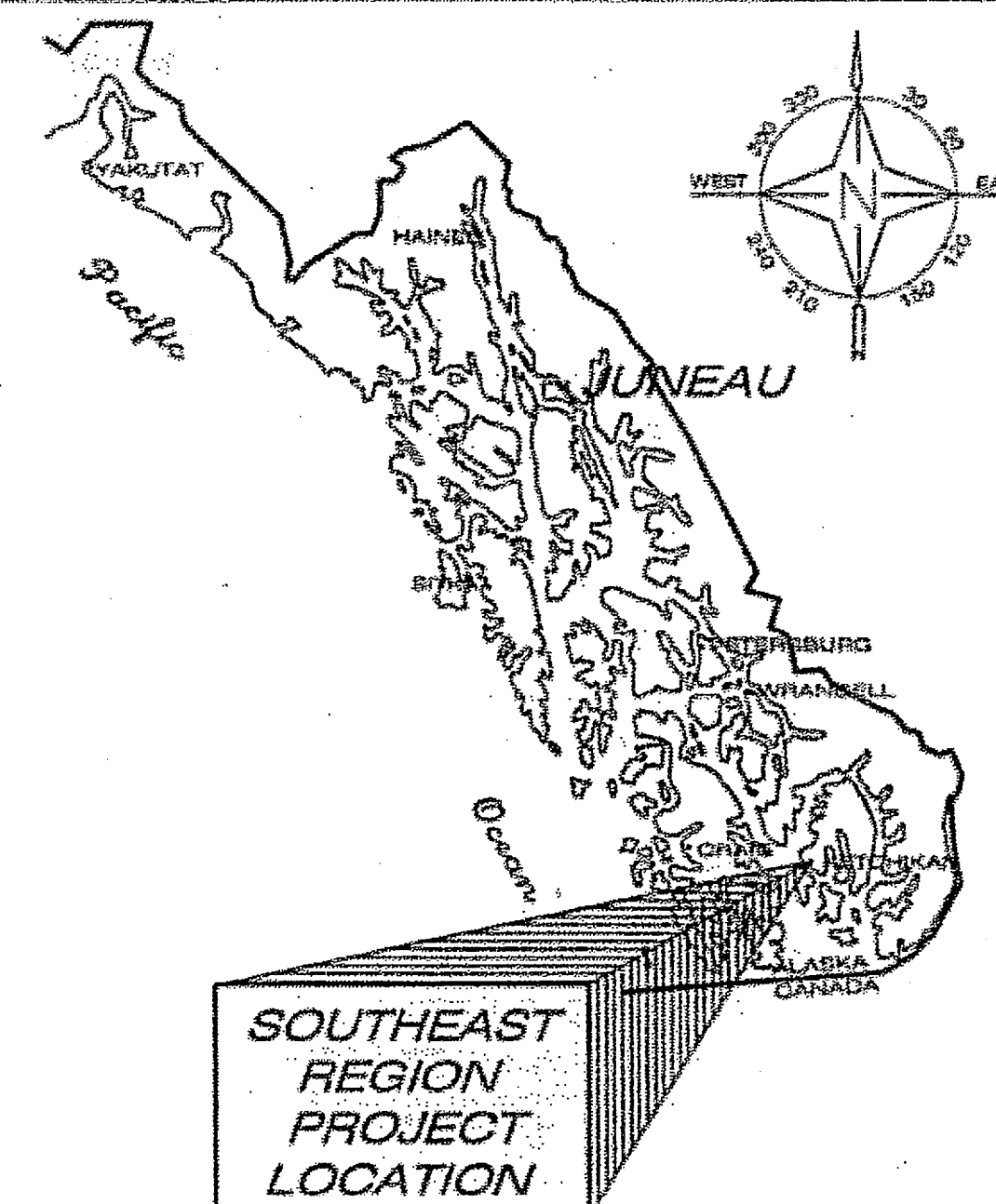
Department of Transportation and Public Facilities

Statewide Design and Engineering Services Division

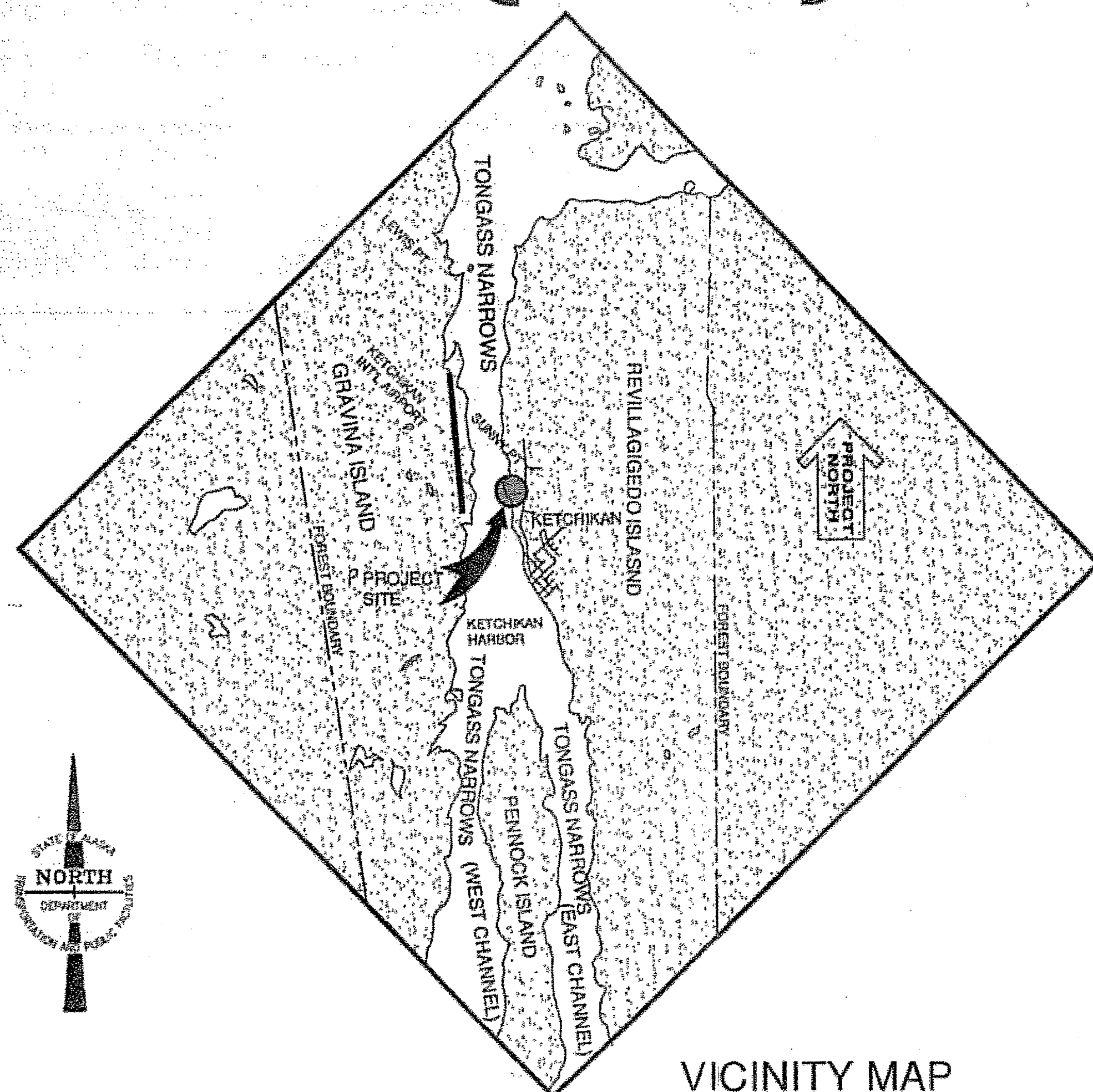
KETCHIKAN, ALASKA

KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION

TI-0003(116)~69113



VOLUME II - CONSTRUCTION AND REFERENCE DRAWINGS



VICINITY MAP

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION



As Built Plans
Project Engineer: Mark Figley
Contractor: Dawson Construction
Start: 8-24-2006
End: 3-13-2007

RECOMMENDED FOR APPROVAL:
Jack D. Beedle 7/24/06
JACK BEEDLE
REGIONAL PRE-CONSTRUCTION ENGINEER
DATE
APPROVED: Andy Hughes 7-24-06
ANDY HUGHES
DIRECTOR, SOUTHEAST REGION
MALCOLM A. MENZIES, P.E.
DATE
CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	TI-0003(116)	2006	G1	.

DESIGN DESIGNATIONS

PROJECT SUMMARY

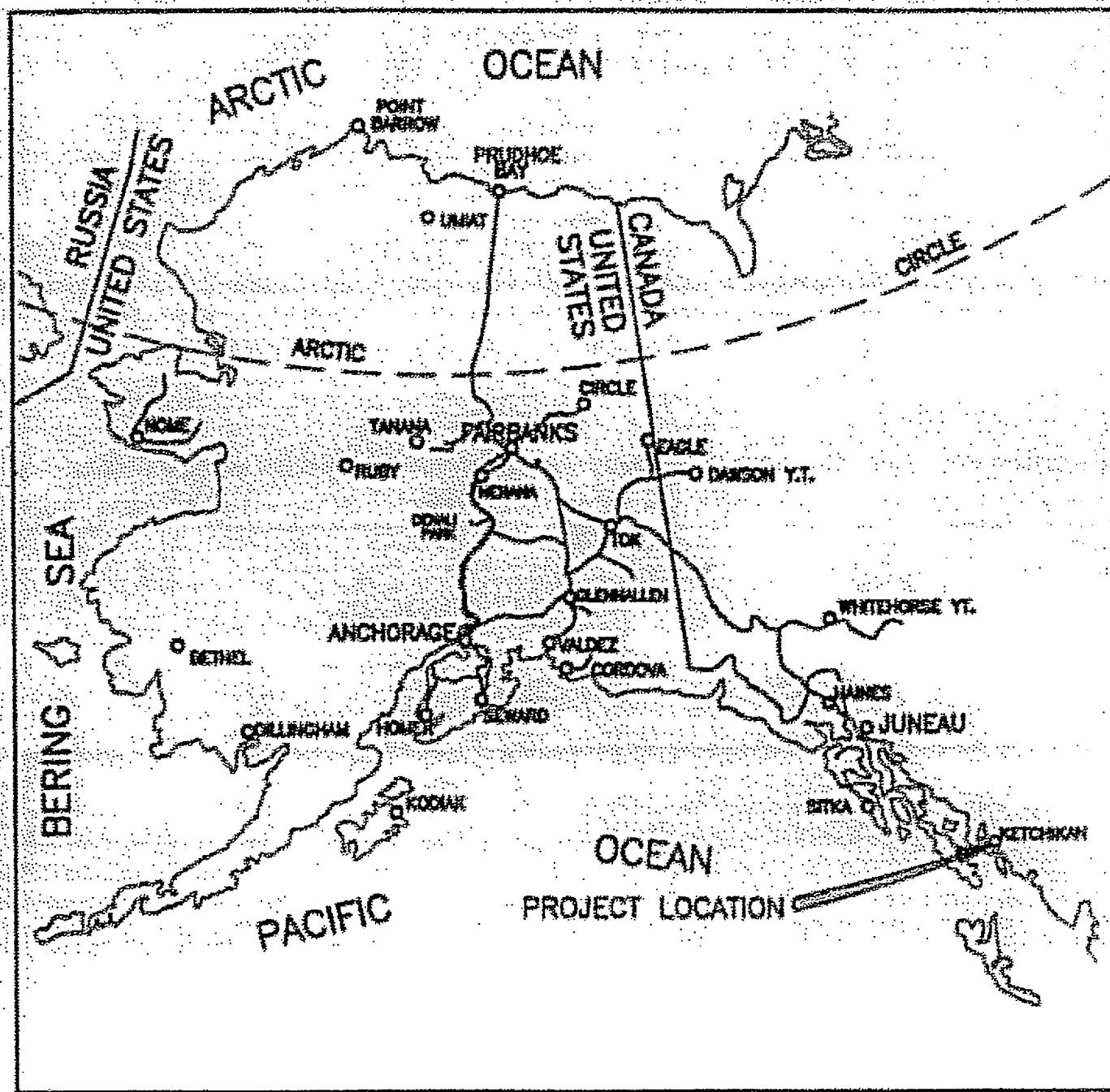
SEE SHEET A3

THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:

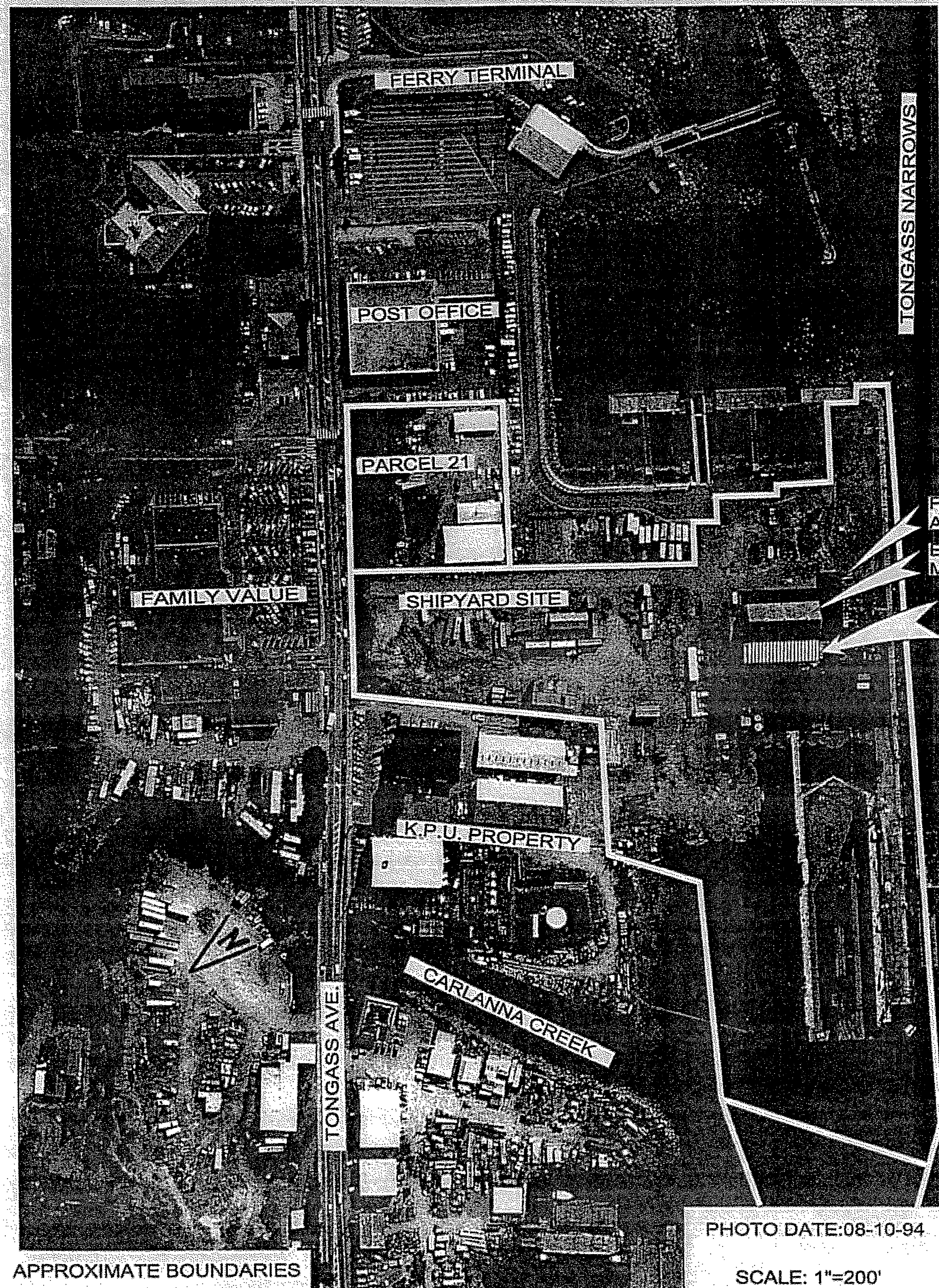
A-1
C-1.03
C-2.01

THE FOLLOWING REFERENCE DRAWINGS APPLY TO THIS PROJECT:

FP-1-REF EXISTING FIRE PROTECTION SITE PLAN, RISER DETAIL, LEGEND AND NOTES
FP-2-REF EXISTING FIRE PROTECTION FIRST FLOOR FIRE SPRINKLER PLAN
FP-3-REF EXISTING FIRE PROTECTION SECOND FLOOR, AND MEZZANINE FIRE SPRINKLER PLANS
FP-4-REF EXISTING FIRE PROTECTION SECTIONS



VICINITY MAP



APPROXIMATE BOUNDARIES

LOCATION MAP

PREVIOUS
ADDITION
EXISTING
MACHINE SHOP
PROJECT
LOCATION



PHOTO DATE:08-10-94

SCALE: 1"=200'

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: DHA



PLANS PREPARED BY:
R&M CONSULTANTS, INC.

CHECKED BY: JKM
DRAWN BY: MKA

PATH: Z:\project\1158.09\Acad\civil\acad\115809-G2.dwg Mon, 03/Jul/06 10:24AM
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION

KETCHIKAN SHIPYARD
MACHINE SHOP EXTENSION
PROJECT NO. 69113

LOCATION/MICINITY
MAPS

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						NO.	DATE	DESCRIPTION	TI-0003(116)		2006	G2	
REV.	DATE	NATURE OF REVISION				BY	CHKD.	APPD.					

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NOTES:

- 1 REMOVE EXISTING MOTOR OPERATED LOUVERS AND RELOCATE PER MECHANICAL PATCH HOLES WHERE LOUVERS REMOVED WITH SIDING MATERIALS TO MATCH EXIST.

EX SS MH TO REMAIN

ADJUST SAWCUT LINE AS DIRECTED TO ACCOMMODATE AC PAVEMENT TRANSITION TO PCC APRON

REMOVE AND DISPOSE AS DIRECTED ALL ASPHALTIC PVMT FOR NEW PRODUCTION FABRICATION ADD'N.

REMOVE AND DISPOSE AS DIRECTED PCC PAVEMENT APRON ALONG NORTH SIDE OF EXIST. MACHINE SHOP

REMOVE & DISPOSE AS DIRECTED CANOPIES ALONG NORTH SIDE OF EXISTING BLDG

REMOVE BOLLARDS ALONG NORTH SIDE OF EXISTING BLDG

REMOVE AND DISPOSE AS DIRECTED ALL ASPHALTIC PAVEMENT IN AREA OF NEW CONCRETE APRONS. SEE C-02 FOR REPLACEMENT AREAS

REMOVE AND DISPOSE AS DIRECTED GUTTER AND DOWNSPOUTS

REMOVE CONEX TO LOCATION ONSITE DESIGNATED BY OPERATOR

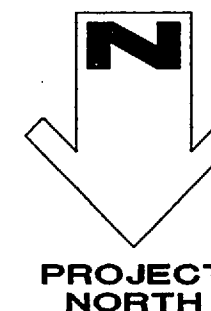
EXISTING CANOPY TO REMAIN PROTECT DURING CONSTRUCTION. IF DAMAGED- REPAIR OR REPLACE AS DIRECTED BY ENGINEER

REMOVE REFRIGERATED CONEX AND PLACE AT OPERATOR DESIGNATED LOCATION ON SITE

SALVAGE COVERED WORK AREA AND COLUMNS, REMOVE TO OPERATOR DESIGNATED LOCATION ON SITE

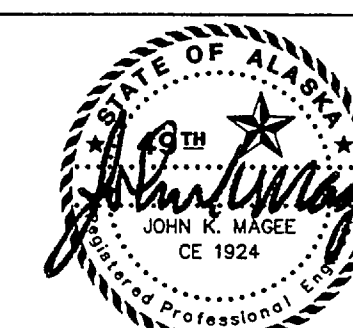
1 DEMOLITION PLAN 1/8" = 1'-0"

0 4 8 16 32
1/8"=1'-0" GRAPHIC SCALE IN FEET



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

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PLANS PREPARED BY:
R&M CONSULTANTS, INC.

CHECKED BY: JKM

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REVISIONS		PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE				

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION

KETCHIKAN SHIPYARD
MACHINE SHOP EXTENSION
PROJECT NO. 69113

**DEMOLITION
SITE PLAN**

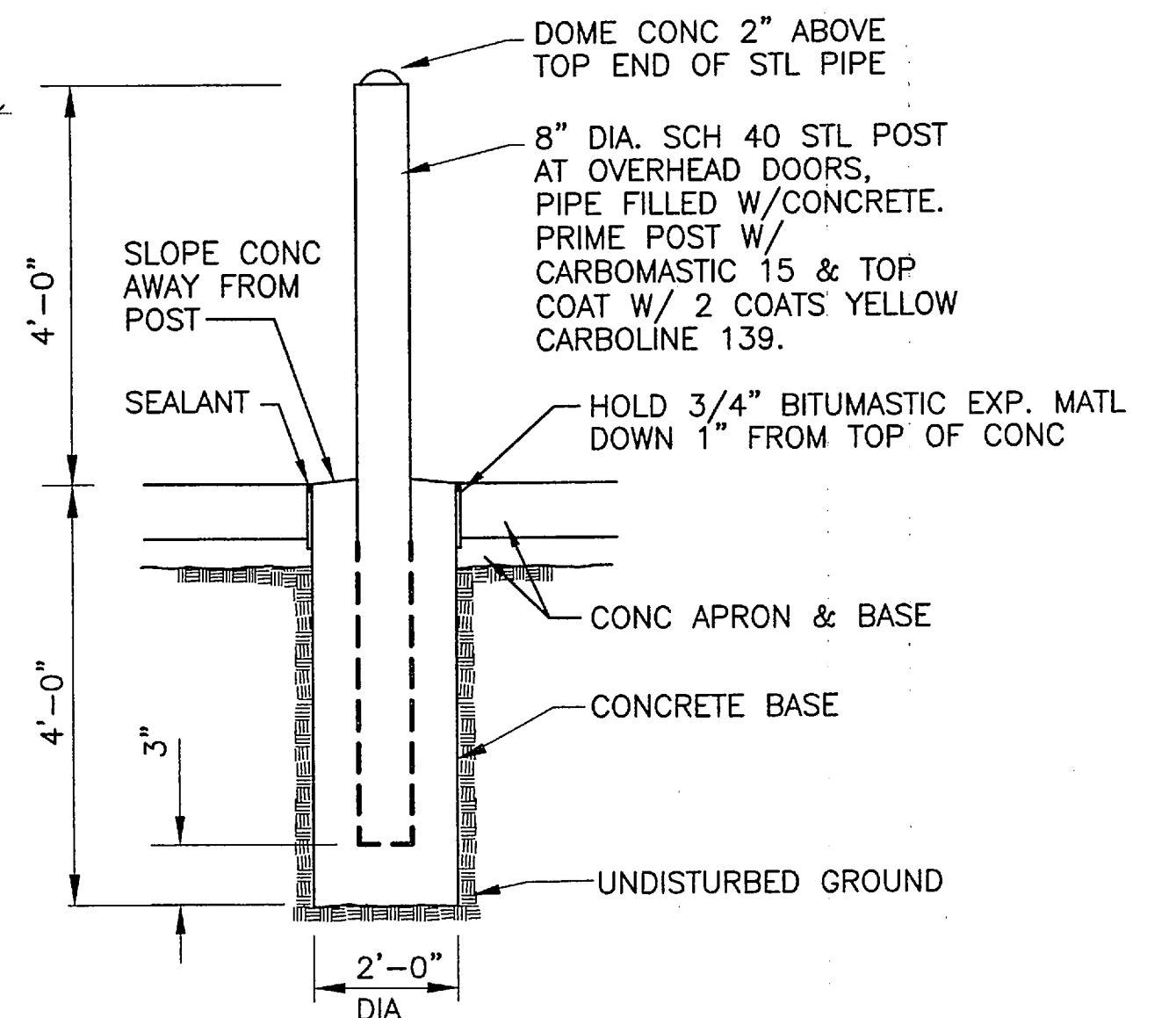
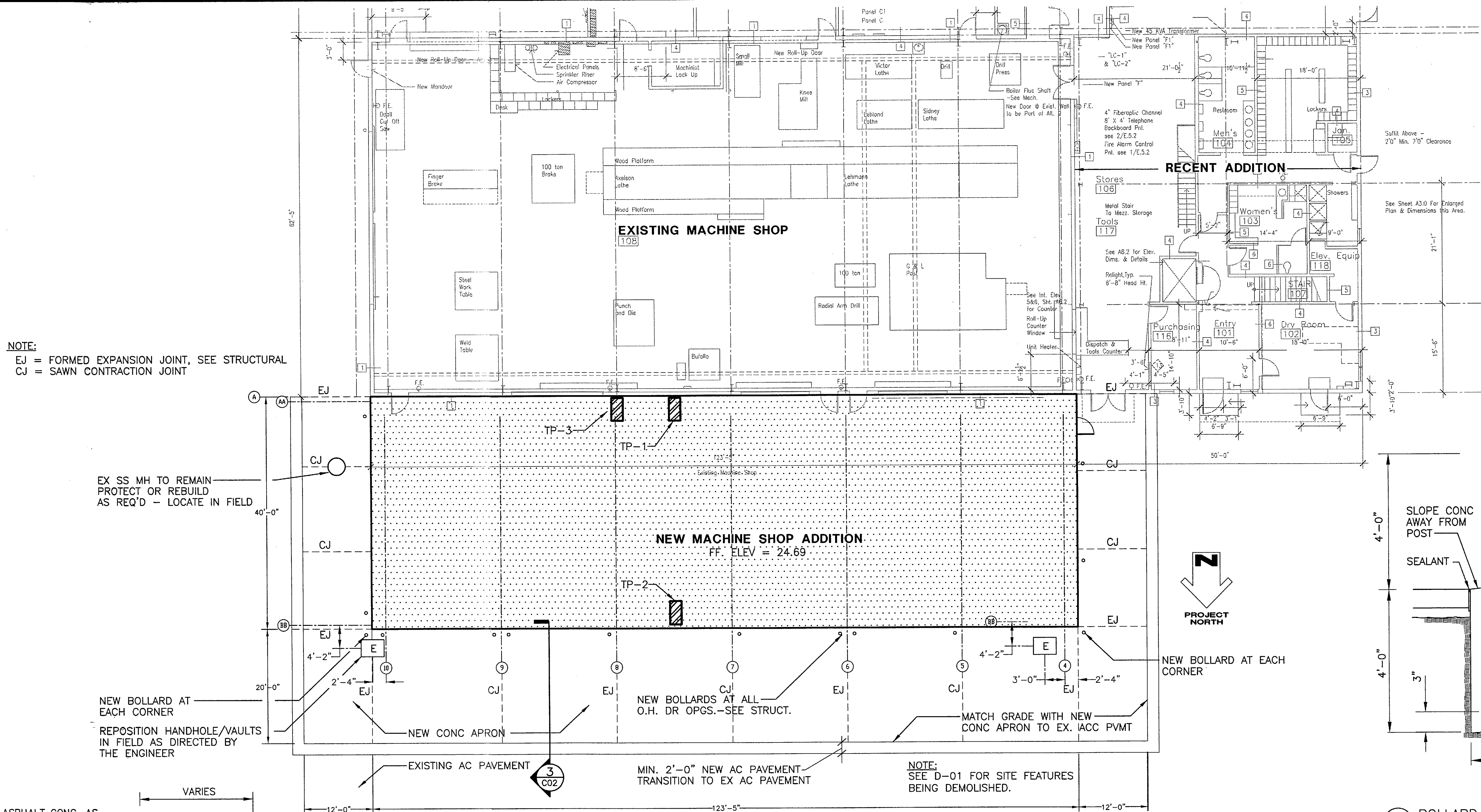
TI-0003(116)

2006

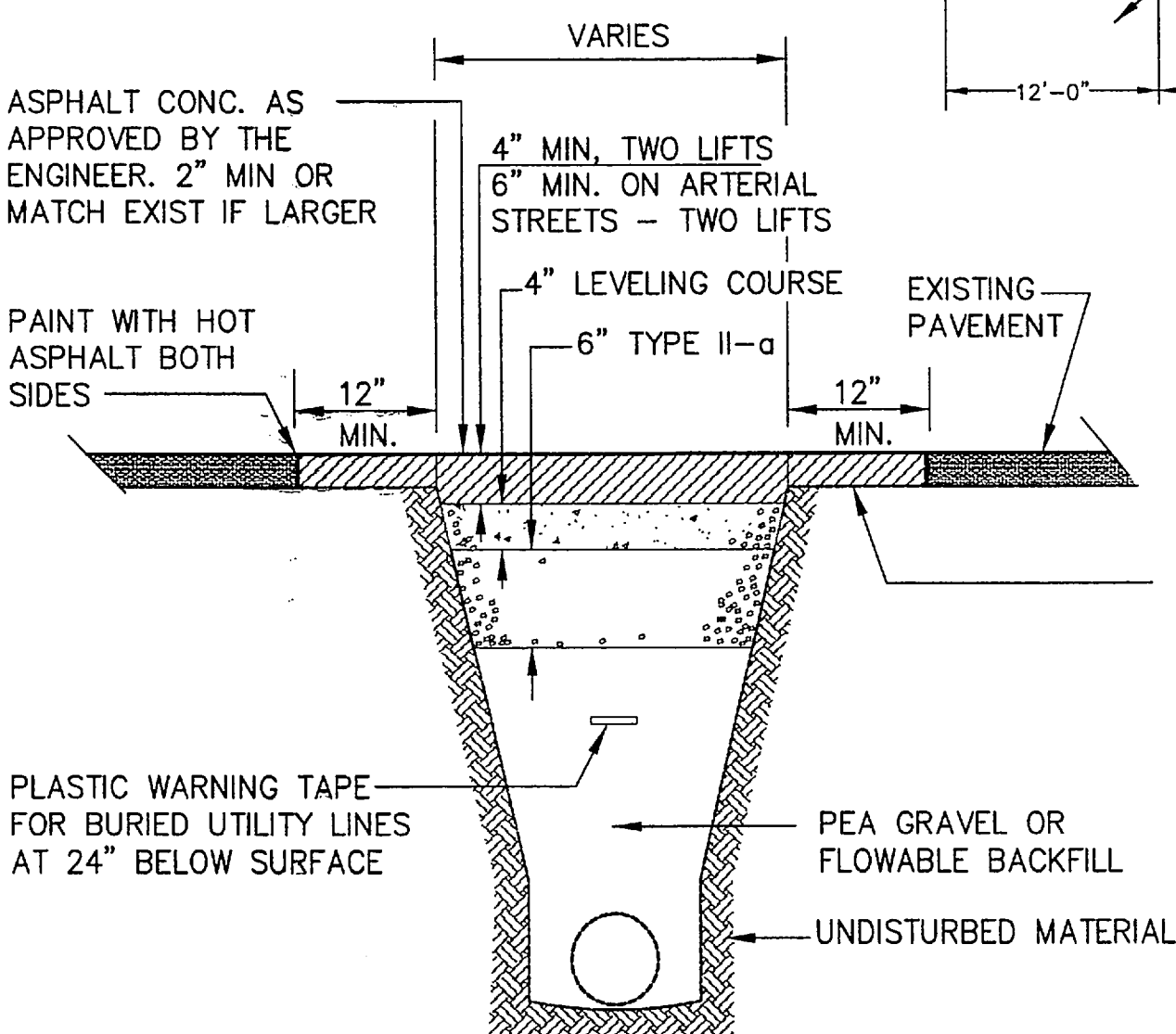
D1.0

REV.	DATE	NATURE OF REVISION	BY	CHKD.	APPD.
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NOTE:
EJ = FORMED EXPANSION JOINT, SEE STRUCTURAL
CJ = SAWN CONTRACTION JOINT



4 BOLLARD DETAIL
NTS



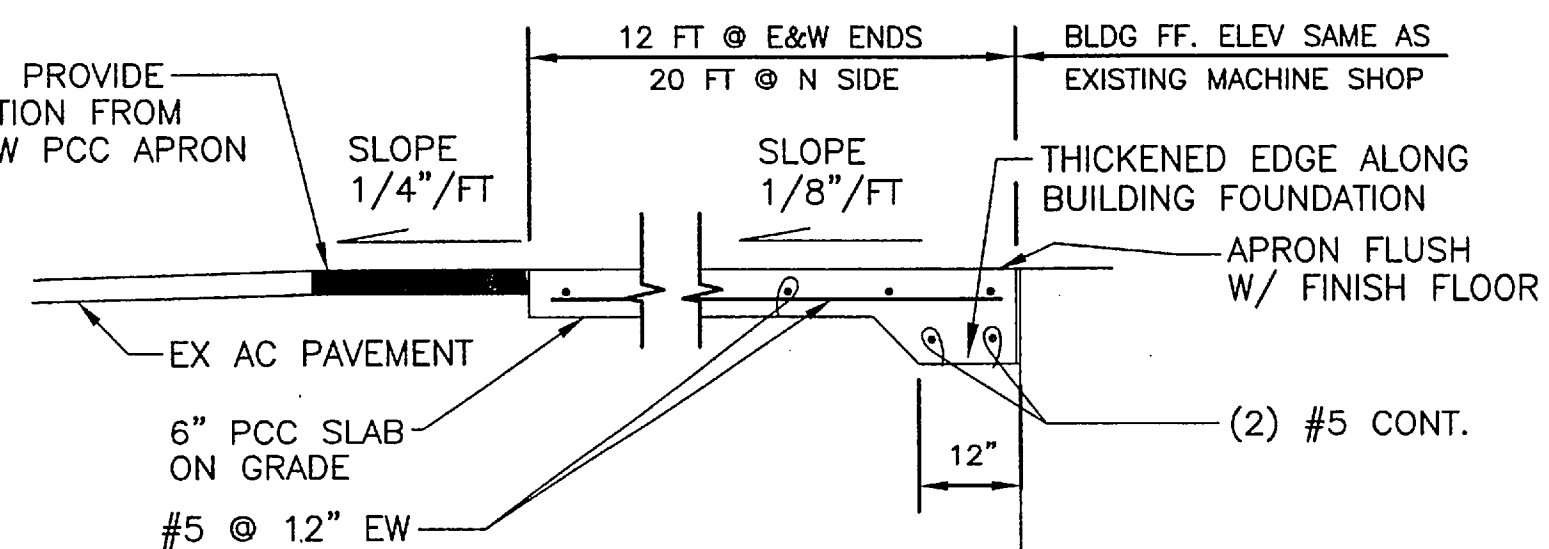
2 PAVEMENT CUT REPLACEMENT DETAIL
NTS

AFTER DITCH BACKFILL HAS BEEN COMPACTED AN ADDITIONAL 12" WILL BE REMOVED FROM EACH EDGE OF THE ORIGINAL CUT. THE ENGINEER MAY REQUIRE MORE THAN THE 12" ADDITIONAL CUT IF THE EXISTING PAVEMENT HAS BEEN LIFTED IN THE REMOVAL PROCESS OR IF THE JOINT DOES NOT OCCUR ON UNDISTURBED MATERIAL. CUTS MAY BE MADE WITH A SAW OR AIR CHISEL.

PAVEMENT CUT GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL & STATE CODES.
2. THE CONTRACTOR SHALL NOTIFY ALL AREA UTILITY COMPANIES PRIOR TO COMMENCEMENT OF EXCAVATION (LOCATE CALL CENTER OF ALASKA).

1 ENLARGED SITE PLAN
1" = 10'



3 EXTERIOR APRON SECTION
NTS

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		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION					
		KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113					
PLANS PREPARED BY: R&M CONSULTANTS, INC.		CIVIL ENLARGED SITE PLAN					
CHECKED BY: JKM DRAWN BY: MKA		PATH: Z:\project\1158.09\Acad\civil\acad\115809-C1.2.dwg PLOT: PSPACE 1=1KF					
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2003 INTERNATIONAL BUILDING CODE (IBC)

AUTOMATIC SPRINKLERED SYSTEM (section 903.2) * SUBSTITUTE FOR 1-HR (A) CONSTRUCTION

STRUCTURAL FRAME	1-HR *
BEARING WALLS	1-TH *
NON-BEARING WALLS	0
FLOOR CONSTRUCTION	1-HR *
ROOF CONSTRUCTION	1-HR *

FIRE RETARDANT TREATED WOOD IN NON-BEARING 2 HR. OR LESS WALLS
FIRE RETARDANT TREATED WOOD IN NON-RATED/NON-BEARING EXTERIOR WALLS
PROTECTED FOAM PLASTICS WITH FLAME SPREAD LESS THAN 26.
INTERIOR FLOOR FINISHES, TRIM MILLWORK, DOORS, FRAMES AND WINDOWS.

```
F1:  FACTORY INDUSTRIAL, MODERATE-HAZARD
S1:  STORAGE, MODERATE-HAZARD
A3:  ASSEMBLY (LUNCHROOM)
B1:  BUSINESS (OFFICE)
```

F1/S1: 3 HR
F1/A3: NONE
F1/B: NONE

NONE @ STORAGE ROOMS OVER 100 SF W/ SPRINKLERS
NONE @ REFRIG ROOM WITH SPRINKLERS
NONE @ FURNACE ROOM WITH SPRINKLERS-(13 ACC 50.020-18)

ACTUAL: 2 STORIES/38.5 FT (TO MID PT OF ROOF SLOPE)
49.33 FT (TO ROOF RIDGE)

BASIC ALLOWABLE (table 503)	15,500 SF
SEP. 4 SIDES - 0.75 X BASIC	11,625 SF
SPRINKLERS - 3 X BASIC (NA)	0

** NOTE: BUILDING IS SEPARATED ON ALL SIDES BY MORE THAN 60'-0" ALLOWING FOR UNLIMITED AREA; (sec 507.3)

2003 INTERNATIONAL BUILDING CODE (IBC)

ACTUAL EXISTING AREA:	20,551 SF (1ST FLOOR)
	3,370 SF (2ND LEVEL OFFICE)
	856 SF (STORAGE MEZZANINE)
	503 SF (FAN ROOM PLATFORMS)
	25,280 SF (TOTAL)

ACTUAL NEW AREA (F1):	5,000 SF (1ST FLOOR)
REMOVE EXISTING AREA (F1):	-900 SF (1ST FLOOR)
PROPOSED TOTAL AREA (EXIST + NEW):	29,380 SF (TOTAL ON 2 LEVELS)
	24,651 SF (TOTAL ON 1ST LEVEL)

** UNLIMITED AREA IF 60'-0" CLEARANCE MAINTAINED ON ALL SIDES

COMBUSTIBLES IN CONCEALED SPACE (SECTION 717.5 EXCEPTION):
AS ALLOWED PER SECTION 603.
AS ALLOWED PER INTERNATIONAL MECHANICAL AND PLUMBING CODE (IMC & IPC)
CLASS A FINISHES ALLOWED

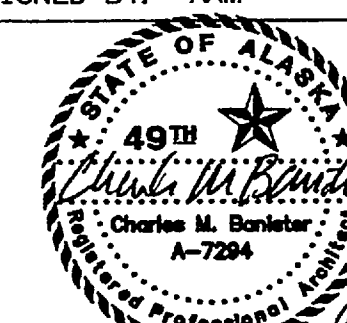
INTERIOR FINISH REQUIREMENTS:(table 803.5)	F1	S1	A3	B
STAIRS/EXIT PASSAGEWAYS (SPRINKLERED):	C	C	B	B
EXIT ACCESS CORRIDORS (SPRINKLERED):	C	C	B	C
ROOMS AND ENCLOSED SPACES (SPRINKLERED):	C	C	C	C

CORRIDOR WIDTH (section 1016.2): 44' MIN. WHERE CAPACITY IS 30 OR MORE.

DEADENDS (section 1016.3)w/ SPRINKLERS 20 FT. (S1 & A3) OR 2.5x LESS THAN CORRIDOR WIDTH
50 FT. (F1 & B) OR 2.5x LESS THAN CORRIDOR WIDTH

THIS CODE ANALYSIS IS BASED ON RECORD DOCUMENTS
DATED JUNE, 2003, FOR AKSAS 67862. THE JUNE, 2003,
ANALYSIS WAS UPDATED TO IBC 2003.

DESIGNED BY: AAM



REVIEW PREPARED BY:
kumin associates, inc.

CHECKED BY:	JKM
DRAWN BY:	MKA

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION

KETCHIKAN SHIPYARD
MACHINE SHOP EXTENSION
PROJECT NO. 69113

ARCHITECTURAL CODE REVIEW

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GENERAL STRUCTURAL NOTES

APPLIES UNLESS NOTED OTHERWISE

CODE:

INTERNATIONAL BUILDING CODE 2003.
ASCE STANDARD 7 - 02
AWS D1.1-2006 STRUCTURAL WELDING CODE-STEEL

DESIGN LOADS:

BUILDING IS DESIGNED ACCORDANCE WITH IBC 2003 AND ASCE 7
BUILDING CATEGORY CATEGORY II PER ASCE 7

DEAD LOADS:

WEIGHT OF STRUCTURE
ANCILIARY LOADS
MECH / ELEC 5 PSF

LIVE LOADS:

SHOP AREA FLOORS 250 PSF

SNOW LOADS:

MINIMUM ROOF SNOW LOAD 40 PSF
GROUND SNOW LOAD 55 PSF
DRIFTING LOADING AND UNBALANCED LOADING PER ASCE 7-02
IMPORTANCE FACTOR I = 1.0
UNBAL SNOW 70 PSF

WIND LOADS:

DESIGN WIND SPEED 120 MPH (3 SEC)
IMPORTANCE FACTOR I = 1.0
EXPOSURE CATEGORY D
BUILDING PARTIALLY ENCLOSED
OTHER α = 13'

SEISMIC LOADS:

PER IBC 2003
SEISMIC USE GROUP I
0.2 SECOND PERIOD SPECTRAL ACCELERATION Ss = 0.23g, Sds = 0.25g
1.0 SECOND PERIOD SPECTRAL ACCELERATION S1 = 0.142g, Sd1 = 0.21g
SITE CLASSIFICATION D
IMPORTANCE FACTOR I = 1.0
SEISMIC DESIGN CATEGORY D

SPECIAL LOADS:

TWO 15 TON BRIDGE CRANES.

BASIC SEISMIC FORCE RESISTING SYSTEM:

METAL BUILDING (MOMENT FRAME SPAN) R=3.5 (ORDINARY MOMENT FRAME)
ANALYSIS PROCEDURE SA or ELFP
20% ROOF SNOW LOAD INCLUDED IN THE DEAD LOAD FOR SEISMIC MASS.

CONCRETE:

TYPICAL CONCRETE COMPRESSIVE STRENGTHS		
CONCRETE	MINIMUM 28 DAY COMPRESSIVE STRENGTH	SLUMP AT PLACEMENT
UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL BE 4,000 PSI 4" MAXIMUM		

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" AND ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".

ADDITION OF WATER TO THE BATCH FOR MATERIAL WITH INSUFFICIENT SLUMP WILL NOT BE PERMITTED.

WELDED WIRE FABRIC PER ASTM A185. FURNISH IN FLAT SHEETS, NOT ROLLS.
LAP EDGES 1 ½ MESH MINIMUM.

GROUT:

GROUT - 8,000 PSI MINIMUM 7-DAY CUBE STRENGTH PER ASTM C109.
GROUT TO BE PREMIXED, NON-SHRINK, NON-METALLIC.
ICBO CERTIFICATION REQUIRED. USE SPECIFIC GROUT MIX RECOMMENDED BY MANUFACTURER FOR EACH GROUT APPLICATION AND FOLLOW MANUFACTURER'S INSTRUCTIONS.

ANCHOR BOLTS OR RODS: ANCHOR BOLTS, ASTM F1554 GR55. HOT DIP GALVANIZED. SPECIAL INSPECTION REQUIRED. SET ALL ANCHOR BOLTS BY TEMPLATE.

DRILL-IN EXPANSION BOLTS:

"KWIK-BOLT II" BY HILTI FASTENING SYSTEMS, "REDHEAD WEDGE ANCHOR" BY ITW REMSET/RED
MAX W/C=0.5 FOR GENERAL CONCRETE & W/C=1.45 FOR FLEXURAL SLAB CONCRETE. ADDITION
HEAD OR APPROVED EQUAL. ICBO CERTIFICATION REQUIRED.

DRILL-IN ADHESIVE BOLTS:

"HIT HY-20" ADHESIVE ANCHOR SYSTEM FOR UNREINFORCED MASONRY OR BRICK WITH CAVITIES;
"HIT-HY-150" ADHESIVE ANCHOR SYSTEM FOR CONCRETE OR SOLID MASONRY OR BRICK, BY HILTI
FASTENING SYSTEMS, OR APPROVED EQUAL. ICBO CERTIFICATION REQUIRED.

STEEL REINFORCING FOR CONCRETE:

TYPICAL REINFORCING BAR STRENGTHS	
TYPICAL	ASTM A615 (GR60) DEFORMED
WELDED WIRE FABRIC	ASTM A185, WIRE PER ASTM A82

TYPICAL CLEAR CONCRETE COVERAGES	
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER	#6 AND LARGER 2" #5 AND SMALLER 1.5"
FORMED CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND :	
SLABS AND WALLS	#14 AND LARGER 1.5" #11 AND SMALLER 1"
ALL OTHERS PER LATEST EDITION OF ACI 318.	

LAP SPLICES IN CONCRETE:

UNLESS NOTED OTHERWISE, LAP SPLICES IN CONCRETE FOOTINGS, STEM WALLS, BEAMS, WALLS, AND SLABS SHALL BE TENSION LAP SPLICES AND LAP SPLICES IN CONCRETE COLUMNS SHALL BE STANDARD COMPRESSION LAP SPLICES PER LATEST EDITION OF ACI 318. LAPS IN WELDED WIRE FABRIC SHALL BE MADE SO THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF CROSS WIRES PLUS 2".

ALL SPLICE LOCATIONS SUBJECT TO APPROVAL. PROVIDE BENT CORNER BARS TO MATCH AND LAP WITH HORIZONTAL BARS AT CORNERS AND INTERSECTIONS OF FOOTINGS AND WALLS. REINFORCING BAR SPACINGS GIVEN ARE MAXIMUM ON CENTERS. ALL BARS PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERTICAL REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE. CONCRETE COLUMN DOWEL EMBEDMENT SHALL BE A STANDARD COMPRESSION DOWEL EMBEDMENT LENGTH ACCORDING TO THE LATEST EDITION OF ACI 318.

STRUCTURAL STEEL:

MEMBER PROPERTIES

STRUCTURAL STEEL W AND WT SHAPES — ASTM A992 GRADE 50

MISCELLANEOUS PLATES AND SHAPES OTHER THAN W AND WT SHAPES — ASTM A36 (Fy = 36 KSI)
PIPE STEEL — ASTM A501 (Fy = 42 KSI) OR ASTM A53, TYPE E OR S, GRADE B (Fy = 35 KSI)
TUBULAR STEEL — ASTM A500 GRADE "C" (Fy = 46 KSI) UNLESS NOTED OTHERWISE
BOLTS — ASTM A325, ALL HIGH STRENGTH BOLTS SHALL BE TIGHTENED TO THE MINIMUM TENSION SPECIFIED BY AISC USING ALTERNATE DESIGN FASTENERS. WHERE ALTERNATE DESIGN FASTENERS CANNOT BE USED DUE TO LIMITED SPACE AT CONNECTION, DIRECT TENSION INDICATORS OR LOAD INDICATING WASHERS MAY BE USED.
ROD BRACES — ASTM A572 GRADE 50 WITH THREADED ENDS

LATEST AISC AND AWS CODES APPLY. ALL CONSTRUCTION PER LATEST AISC HANDBOOK

SLAG SHALL BE REMOVED FROM ALL COMPLETED WELDS, AND THE WELD AND ADJACENT BASE METAL SHALL BE CLEANED IN ACCORDANCE WITH AWS D1.1.

COLD-FORMED STEEL FRAMING (GIRTS & PURLINS):

ALL COLD-FORMED STEEL FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS BY THE AMERICAN IRON AND STEEL INSTITUTE.

STEEL FOR ALL ZEE AND CEES SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 PSI. STEEL SHALL BE GALVANIZED AND COIL COATED PER SPECIFICATIONS.

FOUNDATIONS:

FOUNDATION DESIGN BASED ON SOIL BEARING CAPACITY OF 3000 PSF.

ABBREVIATIONS

AB	ANCHOR BOLT
AC	ASPHALTIC CONCRETE
AFF	ABOVE FINISH FLOOR
ASSY	ASSEMBLY
ATCH	ATTACH
BLDG	BUILDING
BM	BEAM
BOTT	BOTTOM
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CONC	CONCRETE
COL	COLUMN
CONFIG	CONFIGURATION
CONN	CONNECTION
DET	DETAIL
DP	DEEP
DR	DOOR
E	EAST
EJ	EXPANSION JOINT
ELEC	ELECTRIC
ELEV	ELEVATION
EMB	EMBEDMENT
EW	EACH WAY
EX	EXISTING
EXP	EXPANSION
FF	FINISH FLOOR
FLR	FLOOR
FOC	FACE OF CONCRETE
INSUL	INSULATION
JT	JOINT
MECH	MECHANICAL
MTL	METAL
N	NORTH
OC	ON CENTER
OH	OVERHEAD
OPNG	OPENING
PCC	PORTLAND CEMENT CONCRETE
PENN	PENETRATION
PL	PLATE
PLWD	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PVMT	PAVEMENT
REQD	REQUIRED
S	SOUTH
SHT	SHEET
STD	STANDARD
STIF	STIFFENER
STL	STEEL
SUPT	SUPPORT
T	TOP
T&B	TOP & BOTTOM
TOT	TOTAL
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
W	WEST
W/	WITH

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: DHA	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION					
	KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113					
PLANS PREPARED BY: R&M CONSULTANTS, INC.	STRUCTURAL GENERAL NOTES					
CHECKED BY: JKM	Mon, 03/Jul/06 10:40AM					
DRAWN BY: MKA	TAB: DETAIL					
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PLOT: PSPACE 1=1(F)		PROJECT DESIGNATION			2006	SO.1
REV. DATE		DESCRIPTION				
NATURE OF REVISION		BY		CHKD. APPD.		

XREF: 115809-BD02

project\1158.09_civil\115809-S.00, I=96, 07/03/06 at 10:39 by mka

XREF: 115809-BD02

project\1158.09\civil\115809-S.00, 1=96, 07/03/06 at 10:39 by mka

(ADDITIONAL) GENERAL STRUCTURAL NOTES

APPLIES UNLESS NOTED OTHERWISE

GENERAL:

THE STRUCTURAL CONSTRUCTION DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION.

CONTRACTOR SHALL BE REPOSNSIBLE FOR VERIFICATION OF ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO START OF CONSTRUCTION.

RESOLVE ANY DISCREPANCY WITH THE ARCHITECT/ENGINEER. NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

FOR BIDDING-PURPOSES, WHERE ANY MEMBER IS SHOWN BUT NOT CALLED TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON THE PLANS, BUT SHALL APPLY UNLESS NOTED OTHERWISE.

REFER TO ARCHITECTURAL DRAWINGS FOR WALL OPENINGS, ARCHITECTURAL TREATMENT AND DIMENSIONS NOT SHOWN.

REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF DUCT OPENINGS, PIPING, CONDUITS, ETC., NOT SHOWN. SHOP DRAWINGS SHALL BE SUBMITTED AND RECEIVED PRIOR TO FABRICATION.

VERIFY ALL DIMENSIONS AND CONDITIONS AT THE PROJECT SITE PRIOR TO STARTING WORK AND NOTIFY THE OWNER IMMEDIATELY OF ANY DISCREPANCIES.

SHOP DRAWINGS:

SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS IN ADDITION TO ITEMS REQUIRED BY ARCHITECTURAL SPECIFICATIONS. CONSTRUCTION DOCUMENTS SHALL NOT BE REPRODUCED FOR USE AS SHOP DRAWINGS. NO MORE THAN THREE SETS OF BLUELINES AND ONE SET OF REPRODUCIBLES WILL BE REVIEWED FOR ANY SUBMITTAL.

THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMITTAL. ITEMS NOT IN ACCORDANCE WITH CONTRACT DOCUMENTS SHALL BE FLAGGED UPON HIS REVIEW. VERIFY ALL DIMENSIONS WITH ARCHITECT.

ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE CLOUDED BY MANUFACTURER OR FABRICATOR. ANY OF THE AFOREMENTIONED WHICH ARE NOT CLOUDED OR FLAGGED BY SUBMITTING PARTIES, SHALL NOT BE CONSIDERED ALLOWED AFTER ENGINEER'S REVIEW, UNLESS NOTED ACCORDINGLY BY THE ENGINEER OF RECORD.

CONTRACTOR QC & QA:

CONTRACTOR SHALL RETAIN AN INDEPENDENT TESTING AGENCY TO PERFORM QUALITY TESTS AND INSPECTIONS AS NOTED IN SPECIFICATIONS.

INSPECTIONS AND TESTING ARE REQUIRED FOR:

- 1. FOUNDATION PREP
- 2. CONCRETE
- 3. STRUCTURAL STEEL WELDING AND BOLTING

REFERENCE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

SPECIAL INSPECTIONS:

THE OWNER SHALL PERFORM SPECIAL INSPECTION. DURING THE FOLLOWING OPERATIONS OVER AND ABOVE TESTING AND INSPECTION REQUIRED BY SPECIFIC TRADES:

CONCRETE: SPECIAL INSPECTIONS OF STRUCTURAL CONCRETE TO INCLUDE THE FOLLOWING (IN ACCORDANCE WITH TABLE 1704.4 OF 2003 IBC):
1. VERIFY THE USE OF REQUIRED DESIGN MIX.
2. AT THE TIME FRESH CONCRETE IS PLACED, OBSERVE PREPARATION OF TEST SPECIMENS FOR STRENGTH TESTS, OBSERVE PREPARATION OF SLUMP AND AIR CONTENT TESTS, AND DETERMINE TEMPERATURE OF THE CONCRETE.
3. INSPECT FOR PROPER CONCRETE PLACEMENT.
4. INSPECT FOR MAINTENANCE OF SPECIFIED CURING TECHNIQUES AND TEMPERATURES.

BOLTS INSTALLED IN CONCRETE: PRIOR TO AND DURING THE PLACEMENT OF CONCRETE AROUND BOLTS TO ENSURE PROPER PLACEMENT AND ALIGNMENT OF BOLTS AND ADJACENT REINFORCING STEEL.

REINFORCING STEEL PRIOR TO PLACING CONCRETE IN REINFORCED CONCRETE TO ENSURE PROPER SIZE, PLACEMENT, AND DIMENSIONS OF REINFORCING STEEL AND ANY REQUIRED WELDING OF REINFORCING STEEL.

WELDING: DURING ALL STRUCTURAL WELDING

HIGH STRENGTH BOLTING: OBSERVATION OF PREINSTALLATION TESTING AND CALIBRATION PROCEDURES WHEN SUCH PROCEDURES ARE REQUIRED BY THE PLANS OR SPECIFICATIONS. MONITORING OF THE INSTALLATION OF BOLTS TO DETERMINE THAT ALL PLIES OF CONNECTED MATERIAL HAVE BEEN DRAWN TOGETHER AND THAT THE SELECTED PROCEDURE IS PROPERLY USED TO TIGHTEN ALL BOLTS IN ACCORDANCE WITH AISC

EXPANSION BOLTS AND ADHESIVE ANCHORS: DURING THE DRILLING AND INSTALLATION OF EXPANSION BOLTS AND ADHESIVE ANCHORS TO ENSURE REQUIREMENTS OF CONTRACT DOCUMENTS ARE MET AND MANUFACTURER'S RECOMMENDED PROCEDURES ARE FOLLOWED.

FOUNDATIONS: DURING EARTHWORK EXCAVATIONS, GRADING AND FILLING OPERATIONS, SUBGRADE PREPARATION.

DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:

- 1. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK REQUIRING SPECIAL INSPECTION FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS.
- 2. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE GENERAL CONTRACTOR AND THE CONTRACTING OFFICER. ALL DISCREPENCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN IF UNCORRECTED, TO THE CONTRACTING OFFICER.
- 3. UPON COMPLETION OF THE ASSIGNED WORK, THE SPECIAL INSPECTOR SHALL COMPLETE AND SIGN A FINAL REPORT CERTIFYING THAT TO THE BEST OF HIS KNOWLEDGE, THE WORK IS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS, AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.

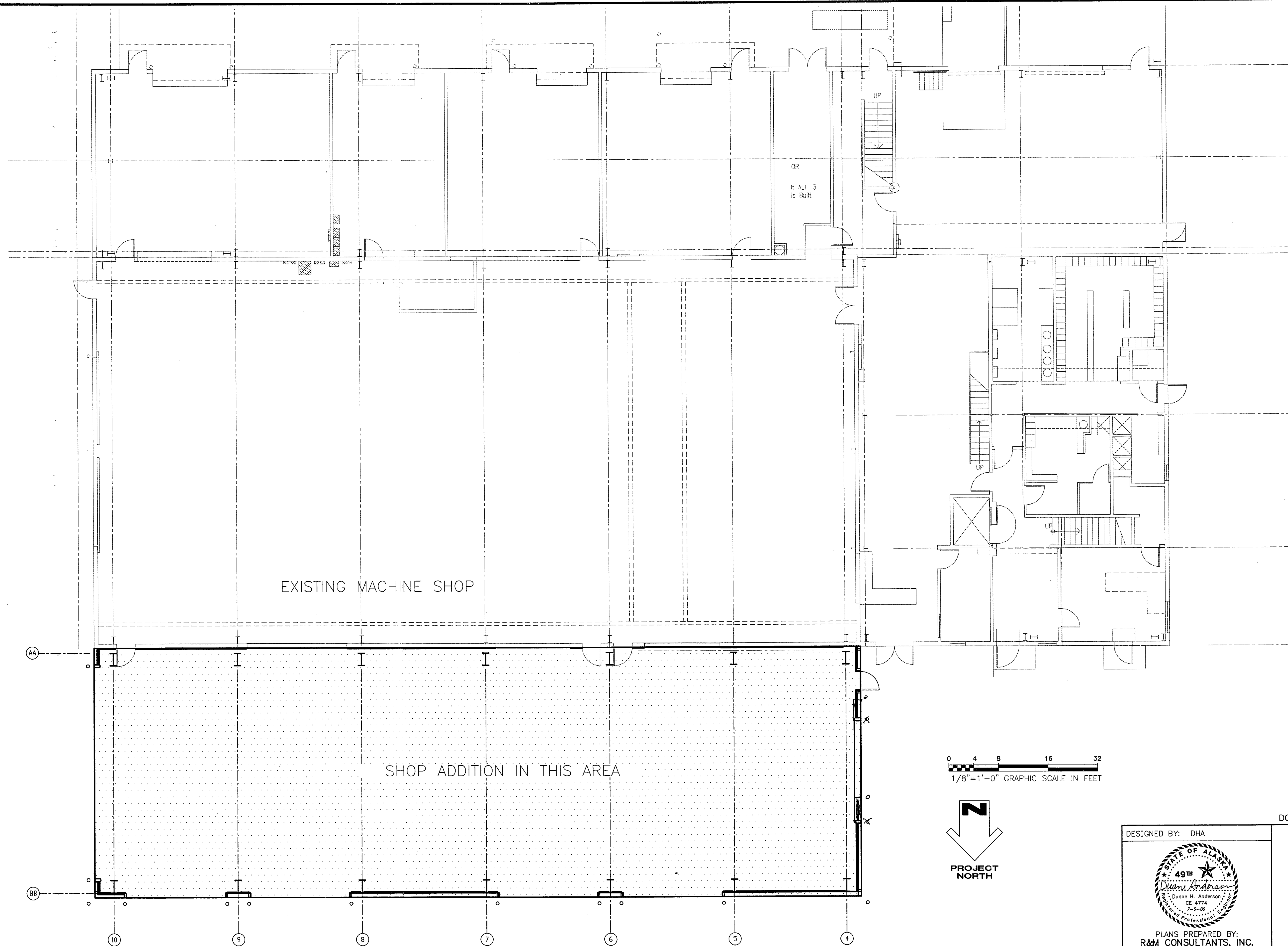
DUTIES AND RESPONSIBILITIES OF THE CONTRACTOR:

- 1. FOR INSPECTION OF CONCRETE, BOLTS IN CONCRETE, REINFORCING STEEL, EXPANSION BOLTS, ADHESIVE ANCHORS, STRUCTURAL MASONRY, WELDING, HIGH STRENGTH BOLTING AND FOUNDATIONS, NOTIFY THE SPECIAL INSPECTOR FROM THE RESPONSIBLE MATERIALS TESTING LAB THAT WORK IS READY FOR INSPECTION AT LEAST ONE WORKING DAY (24 HOURS MINIMUM) BEFORE SUCH INSPECTION IS REQUIRED.
- 2. ALL WORK REQUIRING SPECIAL STRUCTURAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT IS OBSERVED BY THE SPECIAL STRUCTURAL INSPECTOR.

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: DHA		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION										
		KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113										
PLANS PREPARED BY: R&M CONSULTANTS, INC.		STRUCTURAL GENERAL NOTES										
CHECKED BY: JKM		PATH: T:\Temp\BGPlot_1204\115809-S.00.dwg Mon, 03/Jul/06 10:41AM										
DRAWN BY: MKA		PLOT: PSPACE 1=1(f) TAB: DETAIL										
REV.		DATE		NATURE OF REVISION		BY	CHKD.	APPD.	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
									TI-0003(116)	2006	S0.2	

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1 BUILDING CONTRACT PLAN
1/8" = 1'-0"

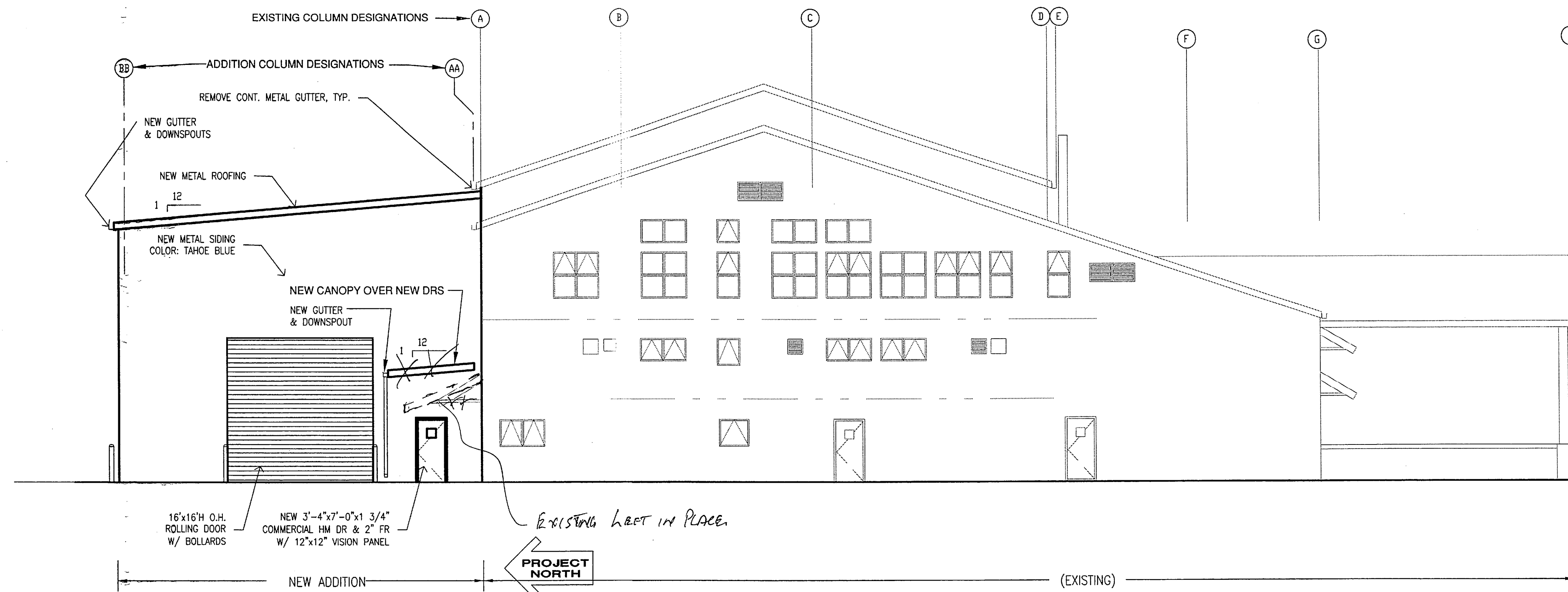
REV.	DATE	NATURE OF REVISION	BY	CHKD.	APPD.

DESIGNED BY: DHA		
		
PLANS PREPARED BY: R&M CONSULTANTS, INC.		
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DRAWN BY: MKA		
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REVISIONS		
NO. DATE DESCRIPTION		

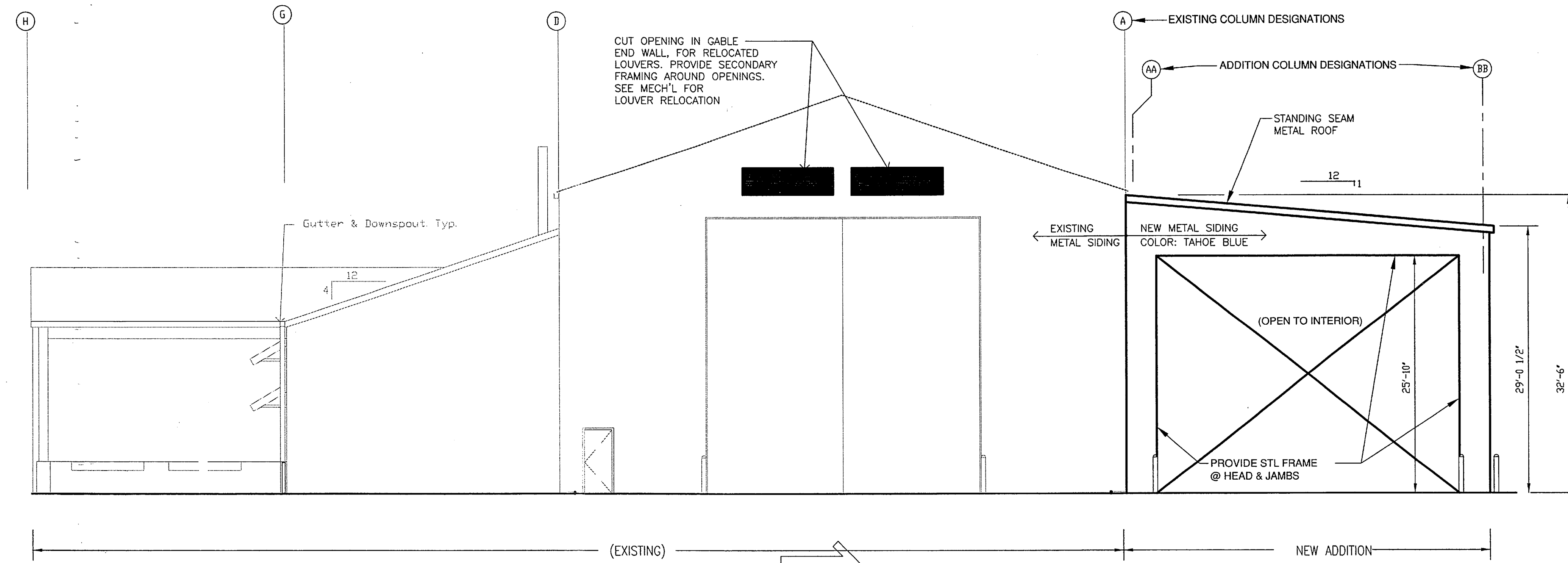
DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS				
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION				
KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113				
BUILDING CONTRACT AREA				
PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS	
TI-0003(116)	2006	S1.1		

Mon, 03/Jul/06 10:43AM
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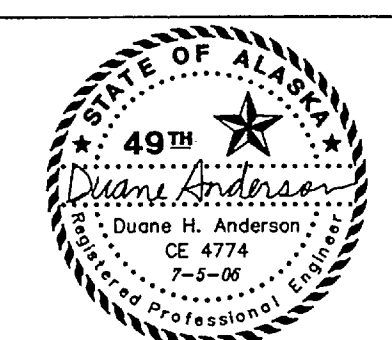
2 WEST ELEVATION
1/8" = 1'-0"



1 EAST ELEVATION
1/8" = 1'-0"

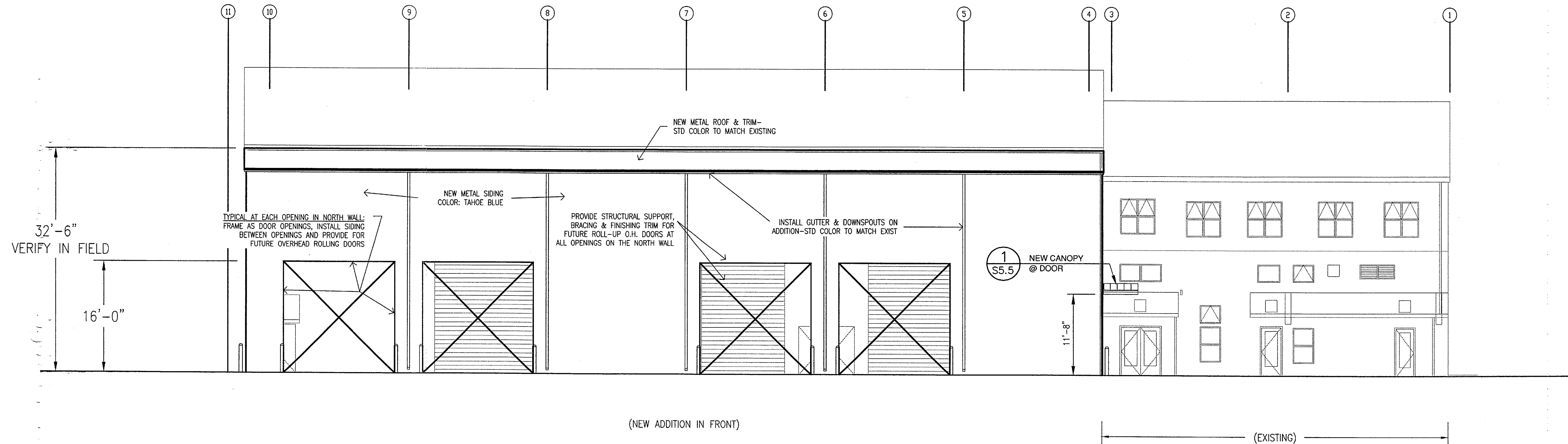


DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: DHA		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION					
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		PLANS PREPARED BY: R&M CONSULTANTS, INC.					
CHECKED BY: JKM		Mon, 03/Jul/06 10:55AM					
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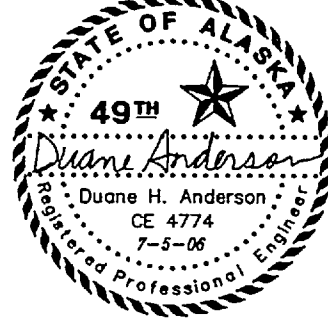
REV.	DATE	NATURE OF REVISION	BY	CHKD.	APPD.

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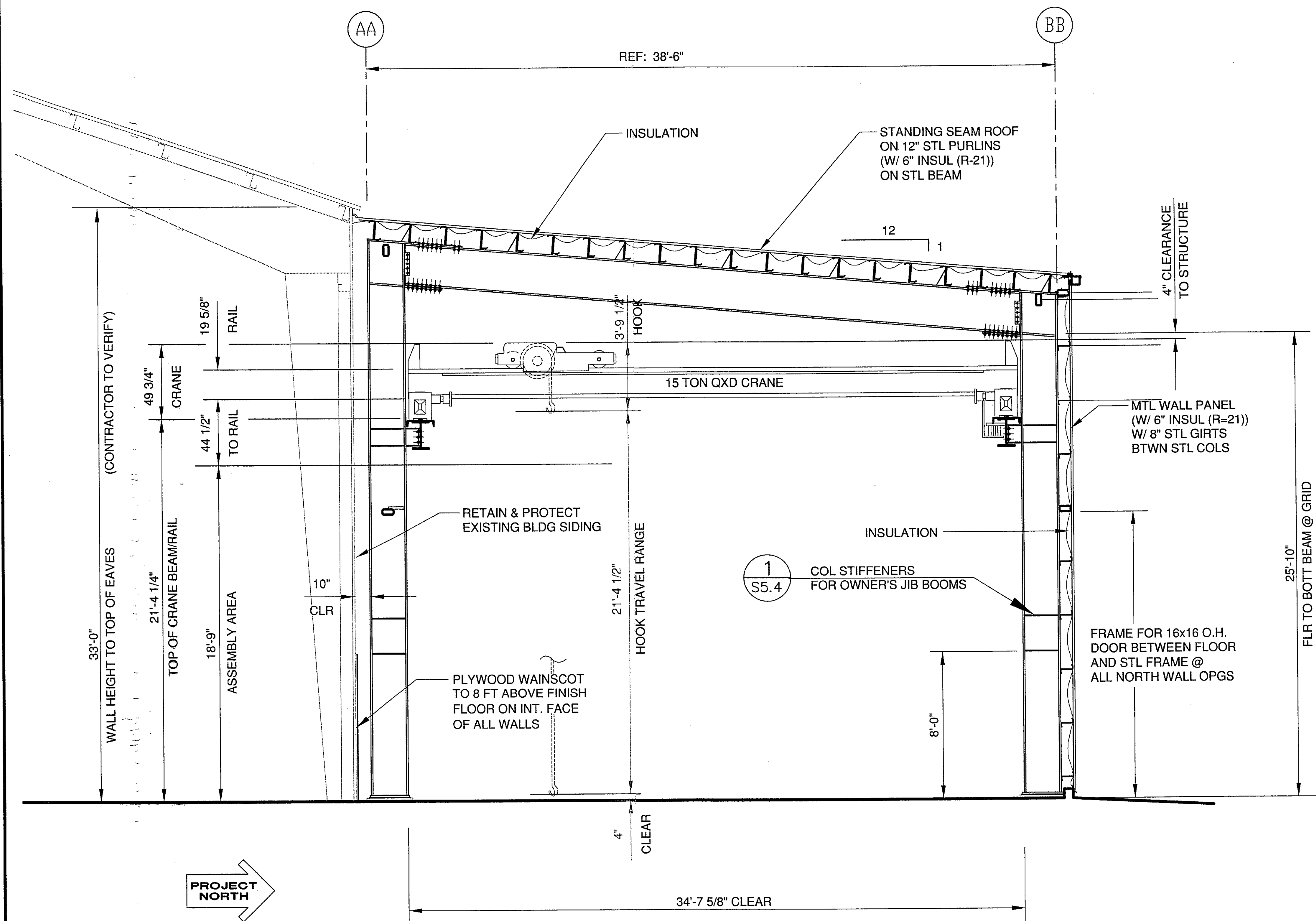
1 NORTH ELEVATION
1/8" = 1'-0"

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

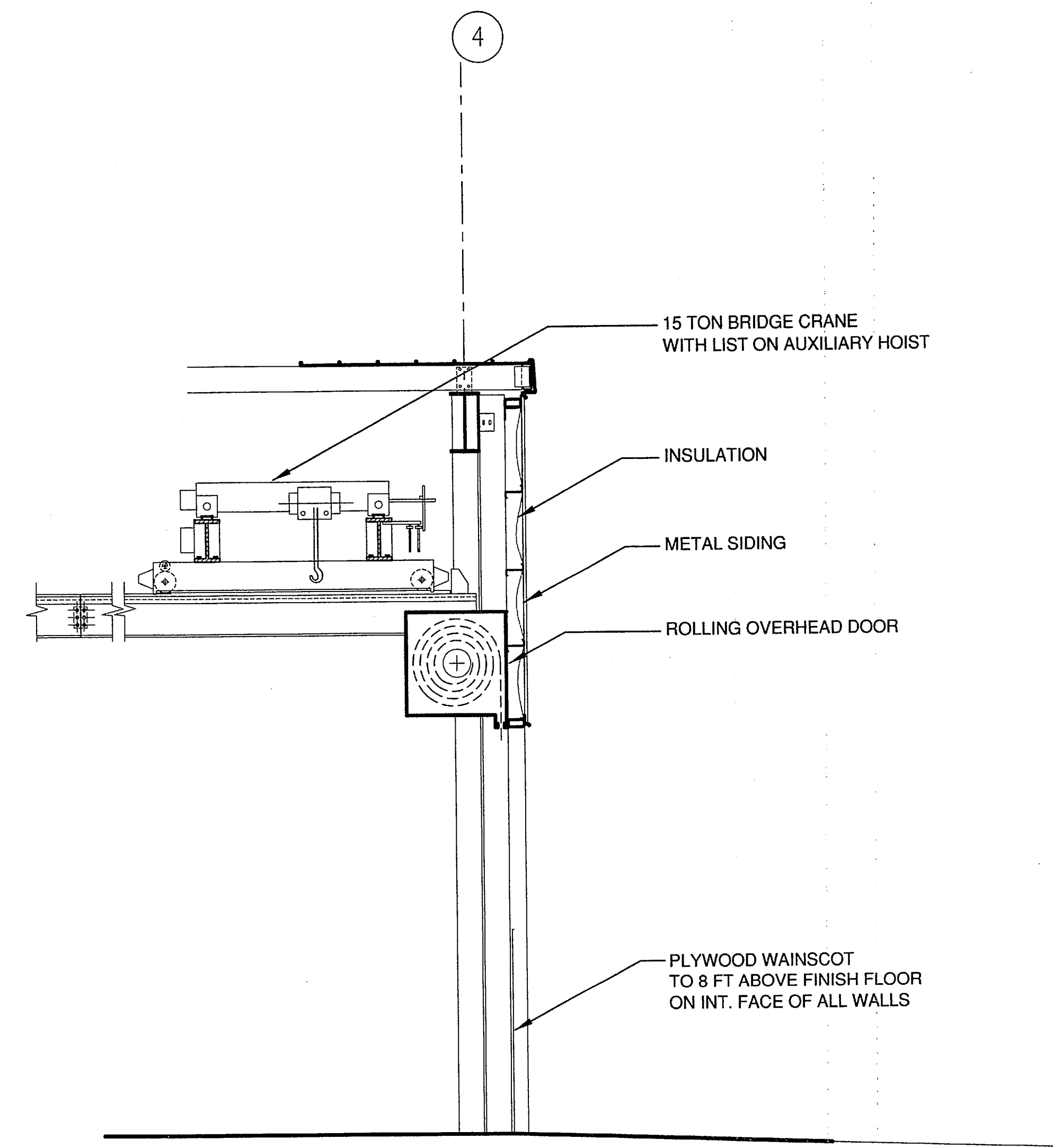
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	KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113				
PLANS PREPARED BY: R&M CONSULTANTS, INC.	BUILDING ELEVATION				
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REV.	DATE	NATURE OF REVISION	BY	CHKD.	APPD.

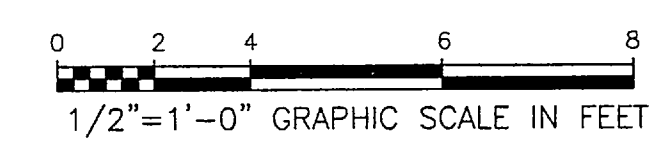
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1 BUILDING ADDITION SECTION
1/4" = 1'-0"



2 WEST END PARTIAL SECTION
1/4" = 1'-0"



REV.	DATE	NATURE OF REVISION	BY	CHKD.	APPD.

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PLANS PREPARED BY:
R&M CONSULTANTS, INC.

CHECKED BY: JKM
DRAWN BY: MKA

PATH: T:\Temp\BGPlot_1264\1381-S1.4.dwg
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION

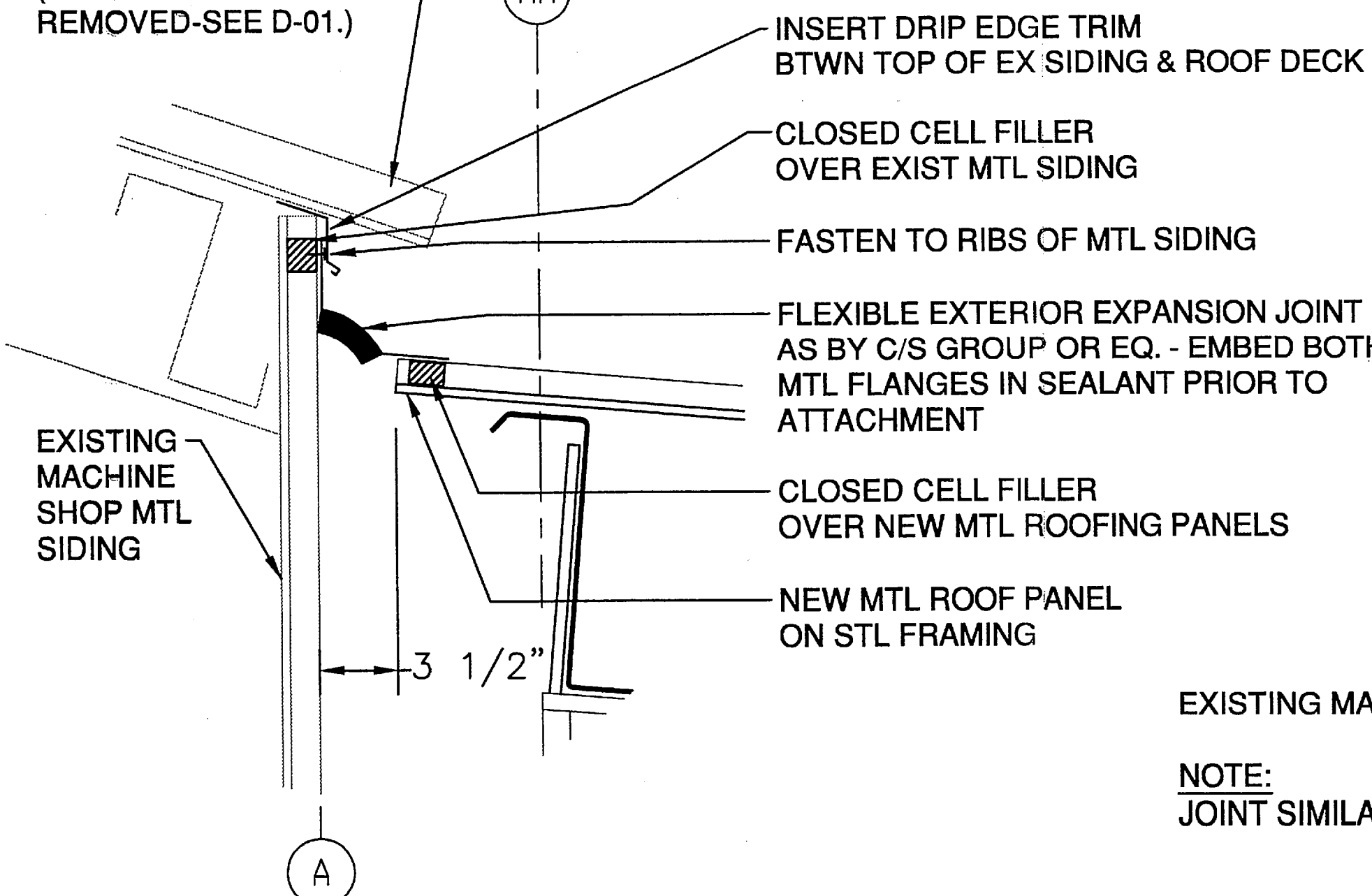
**KETCHIKAN SHIPYARD
MACHINE SHOP EXTENSION
PROJECT NO. 69113**

**BUILDING
SECTIONS**

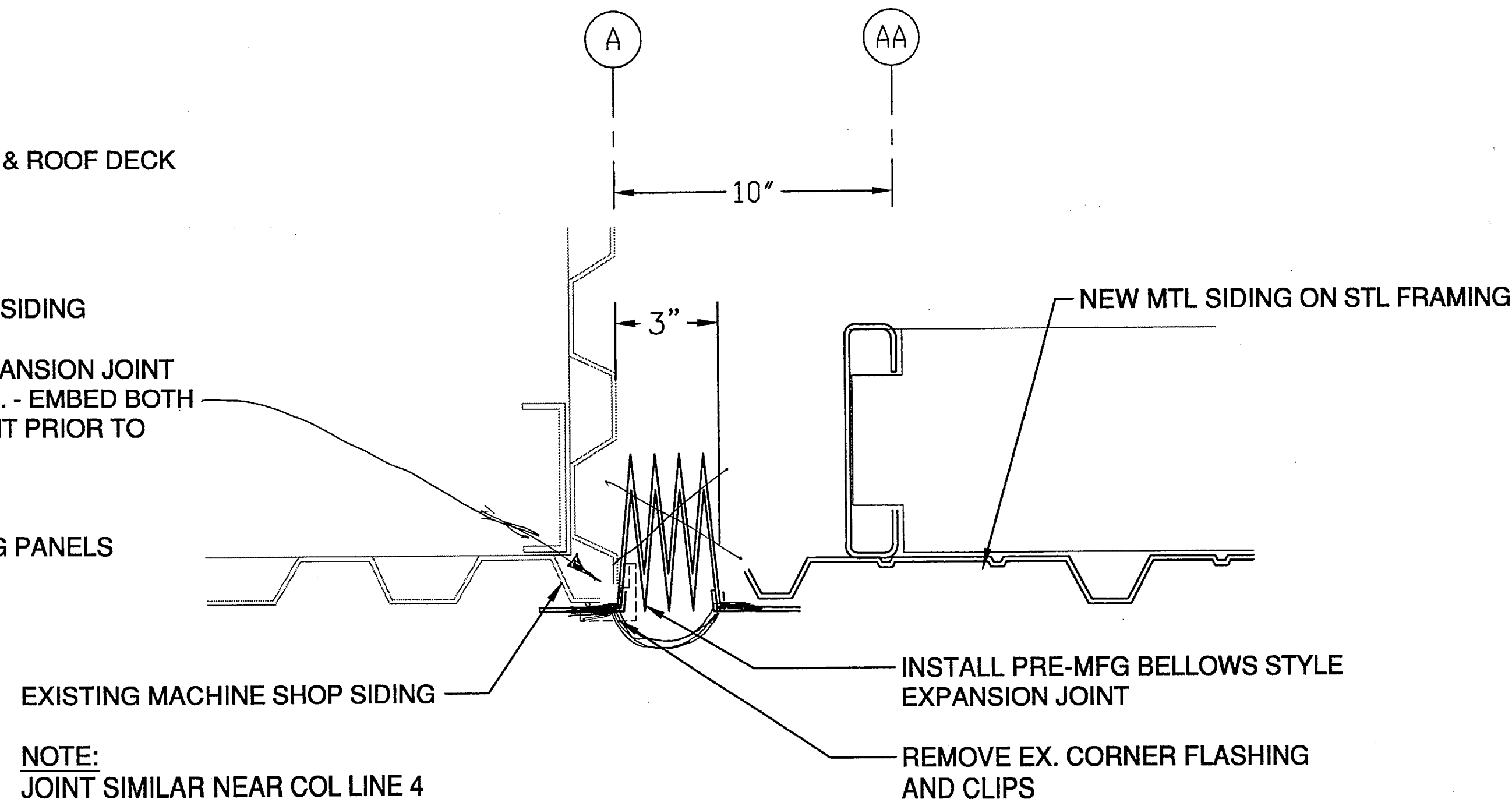
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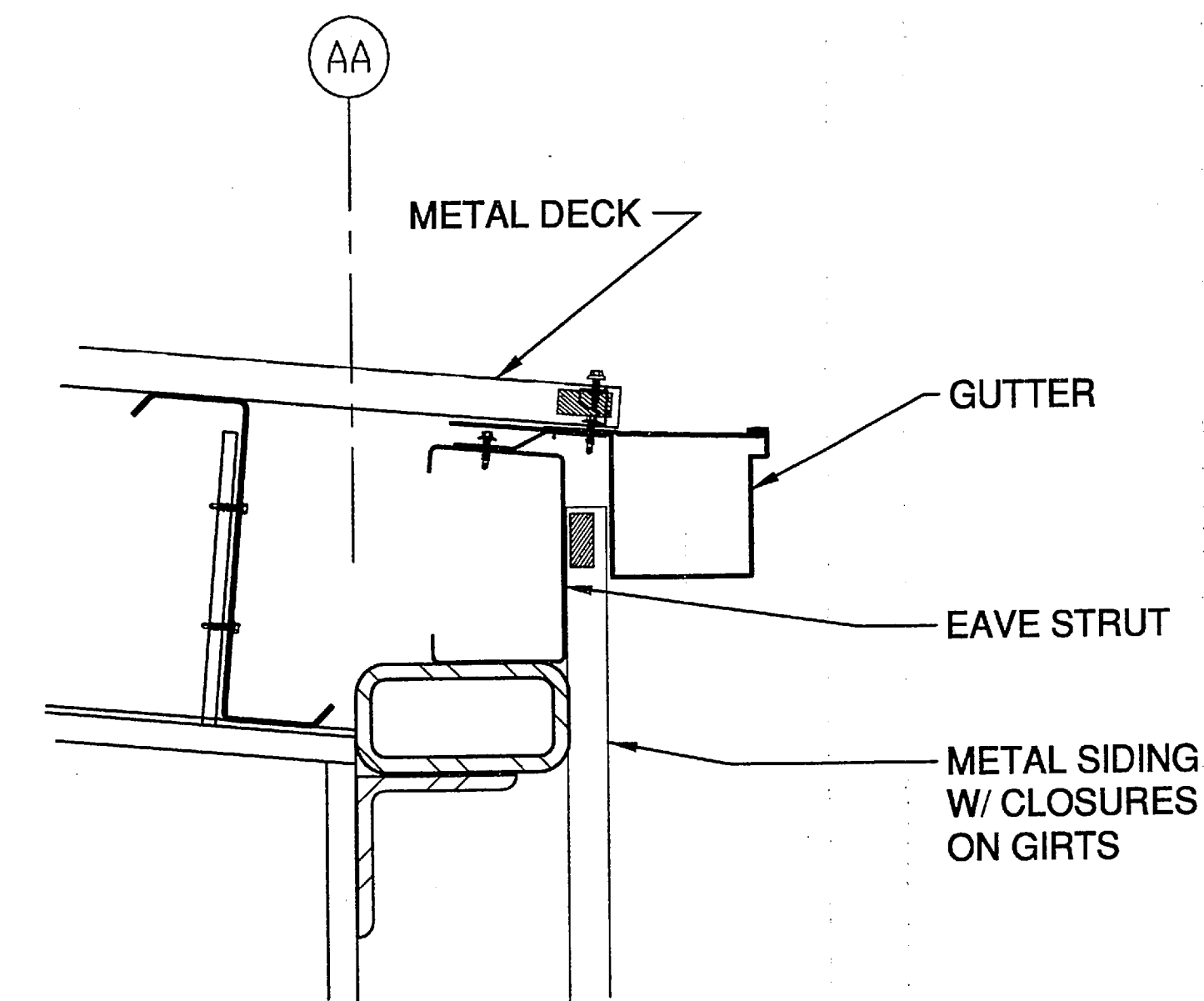
VERIFY
CLEARANCES IN FIELD
PRIOR TO FABRICATION
(EX. GUTTER TO BE
REMOVED-SEE D-01.)



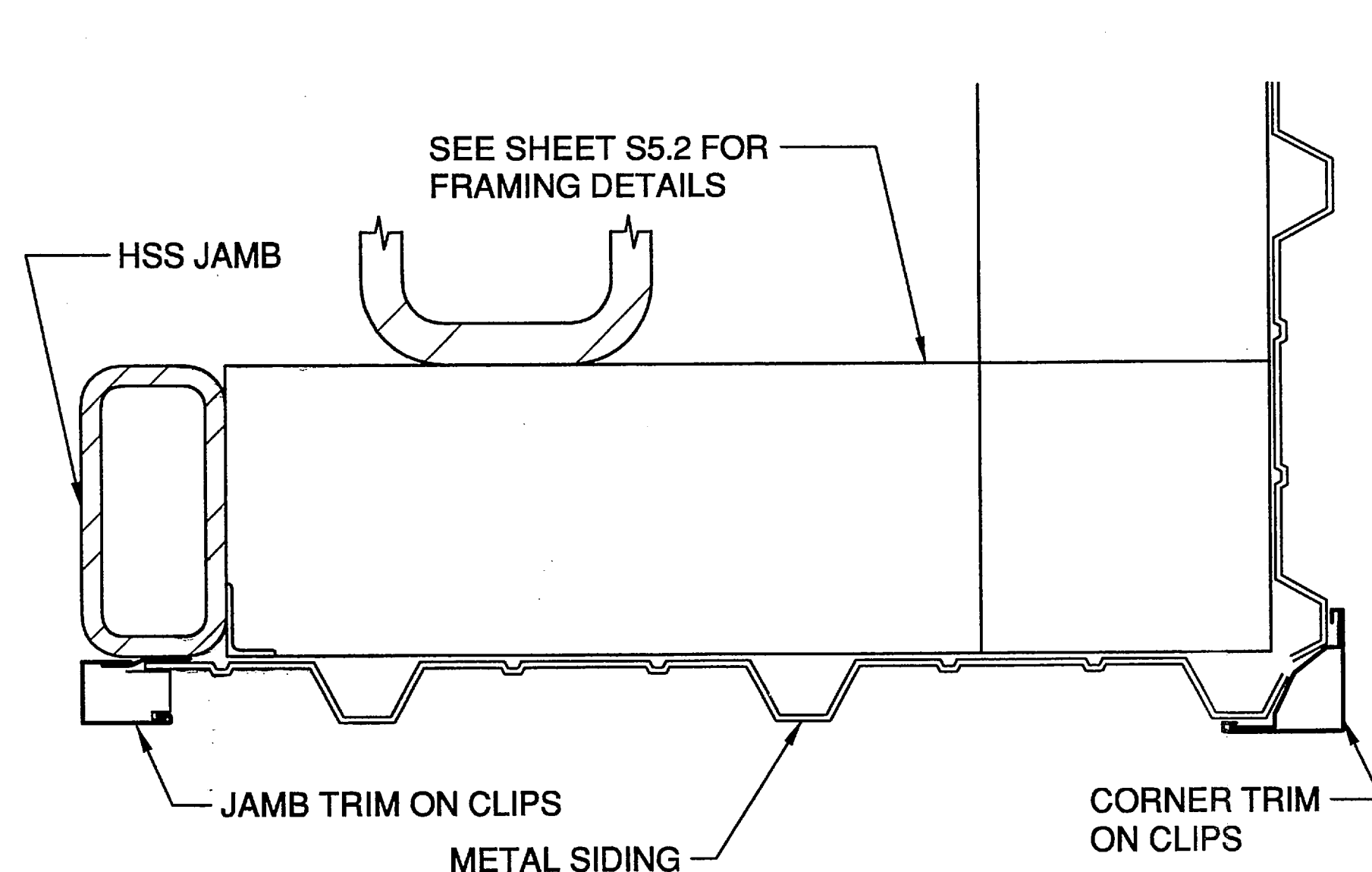
1 EXPANSION JOINT SECTION AT ROOF
1" = 6"



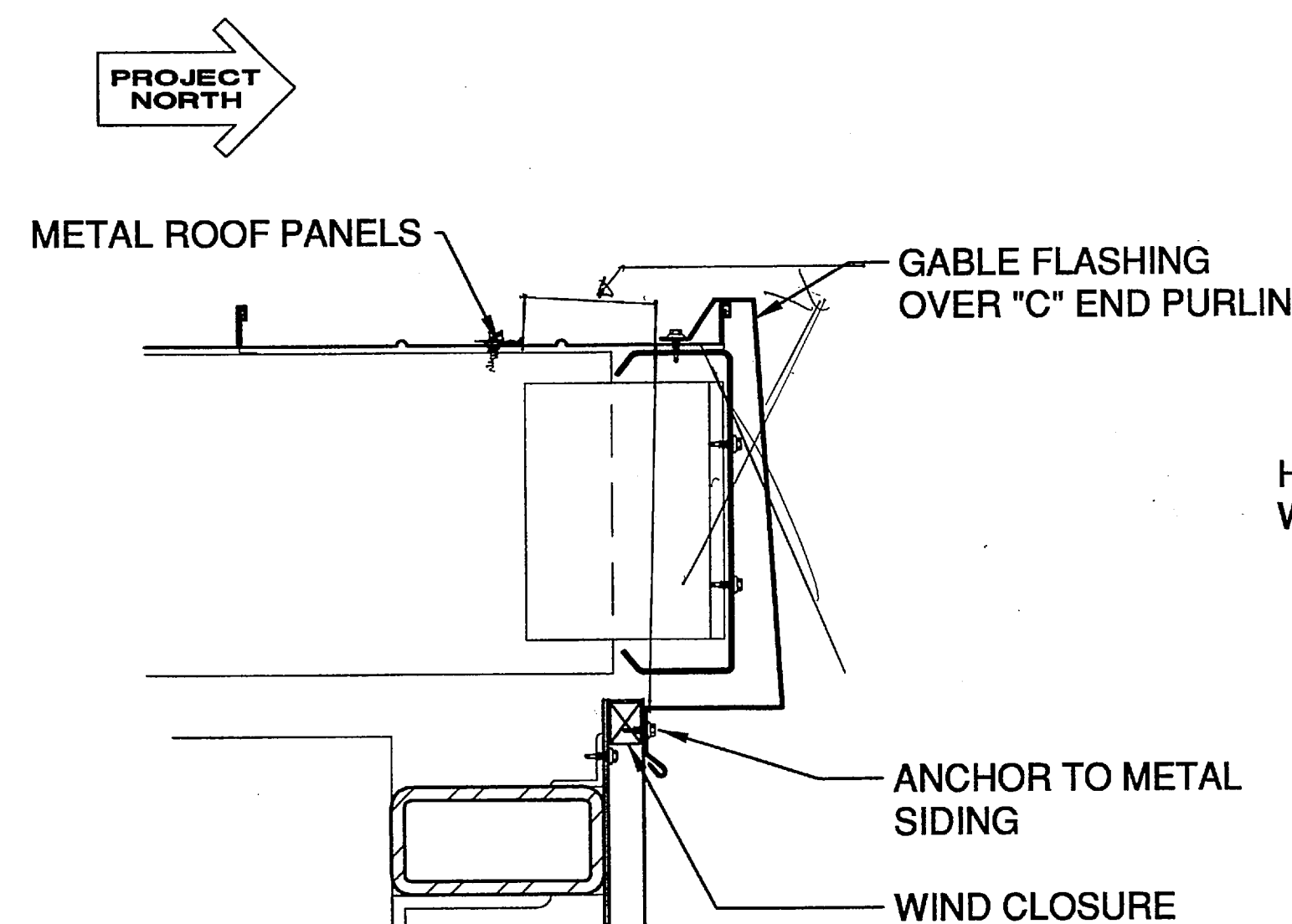
2 EXPANSION JOINT PLAN DETAIL
1" = 6"



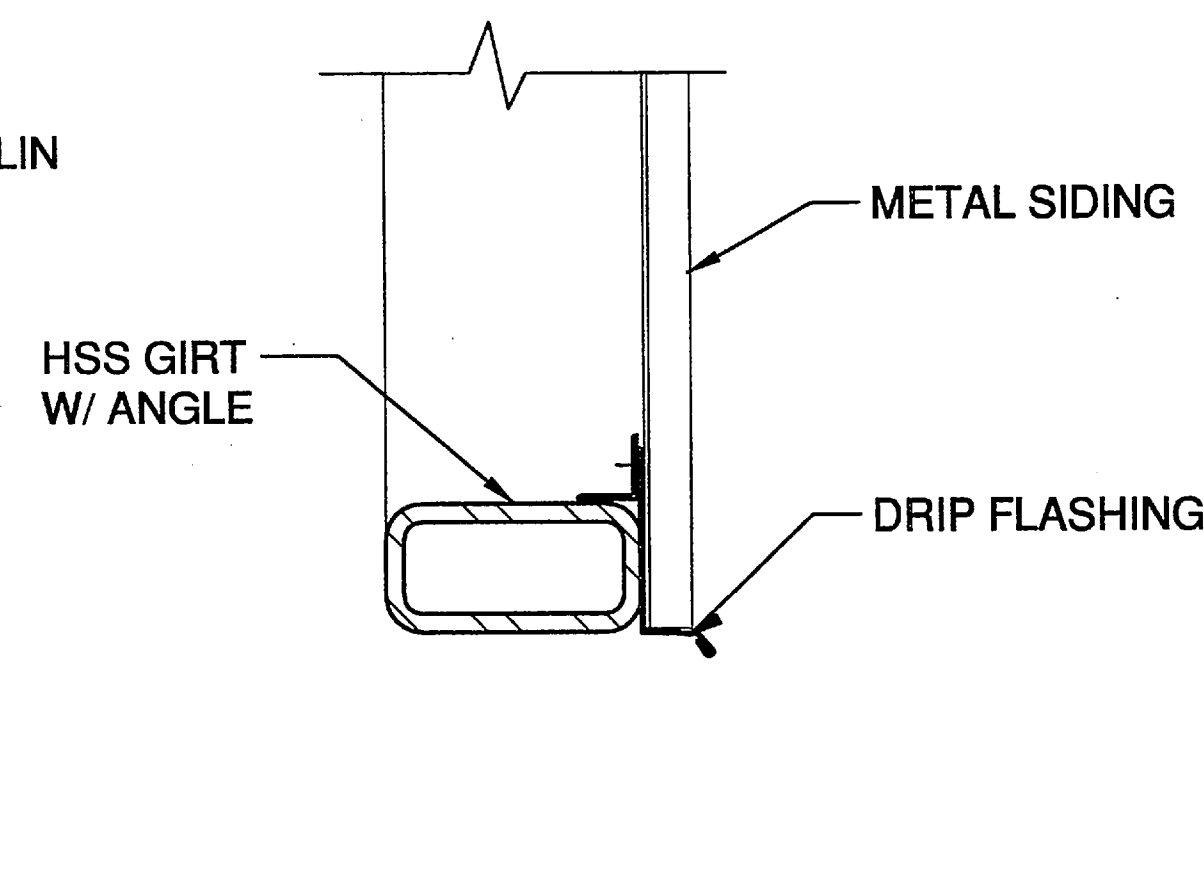
3 GUTTER DETAIL
1" = 6"



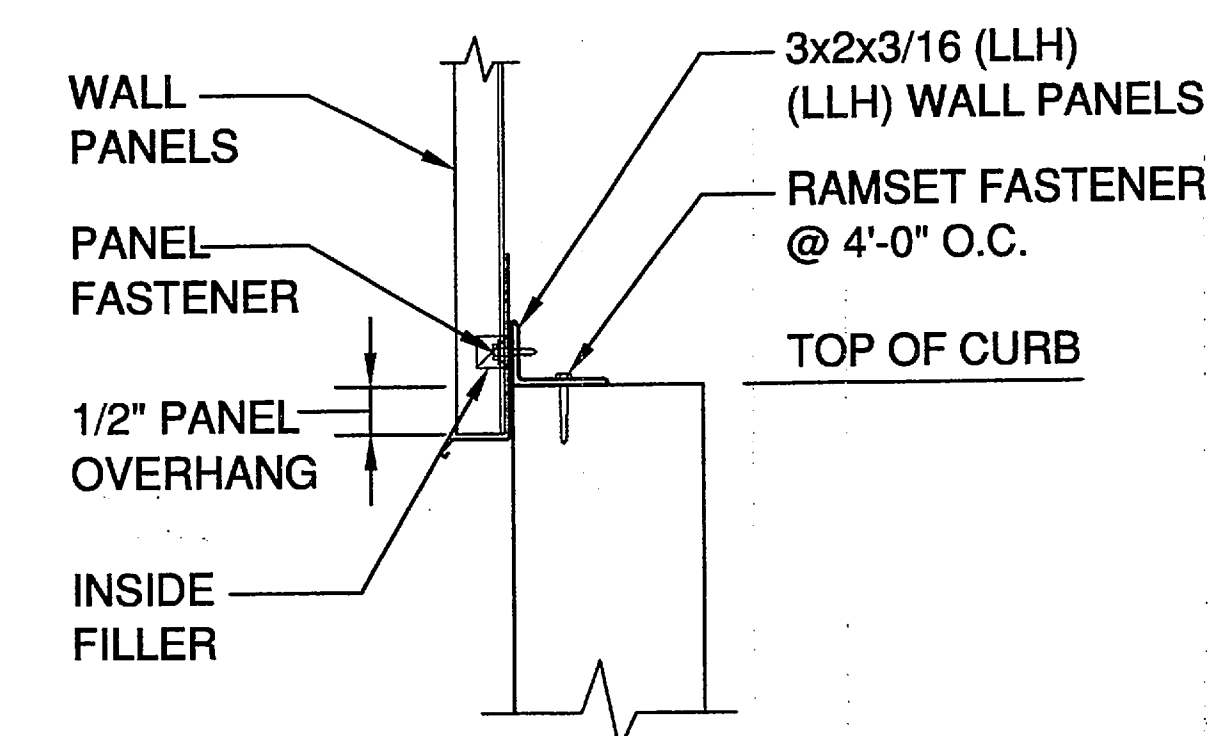
4 FLASHING DETAIL
1" = 6"



5 GABLE FLASHING DETAIL
1" = 6"



6 DR HEAD FLASHING DETAIL
1" = 6"



6 DR HEAD FLASHING DETAIL
1" = 6"

NOTE:
INSTALLATION OF ALL FLASHINGS & EXPANSION JOINTS TO ALLOW FOR WINDBLOWN RAIN AND SEISMIC MOVEMENT.



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DESIGNED BY: MKA



PLANS PREPARED BY:
R&M CONSULTANTS, INC.

CHECKED BY: JKM
DRAWN BY: MKA

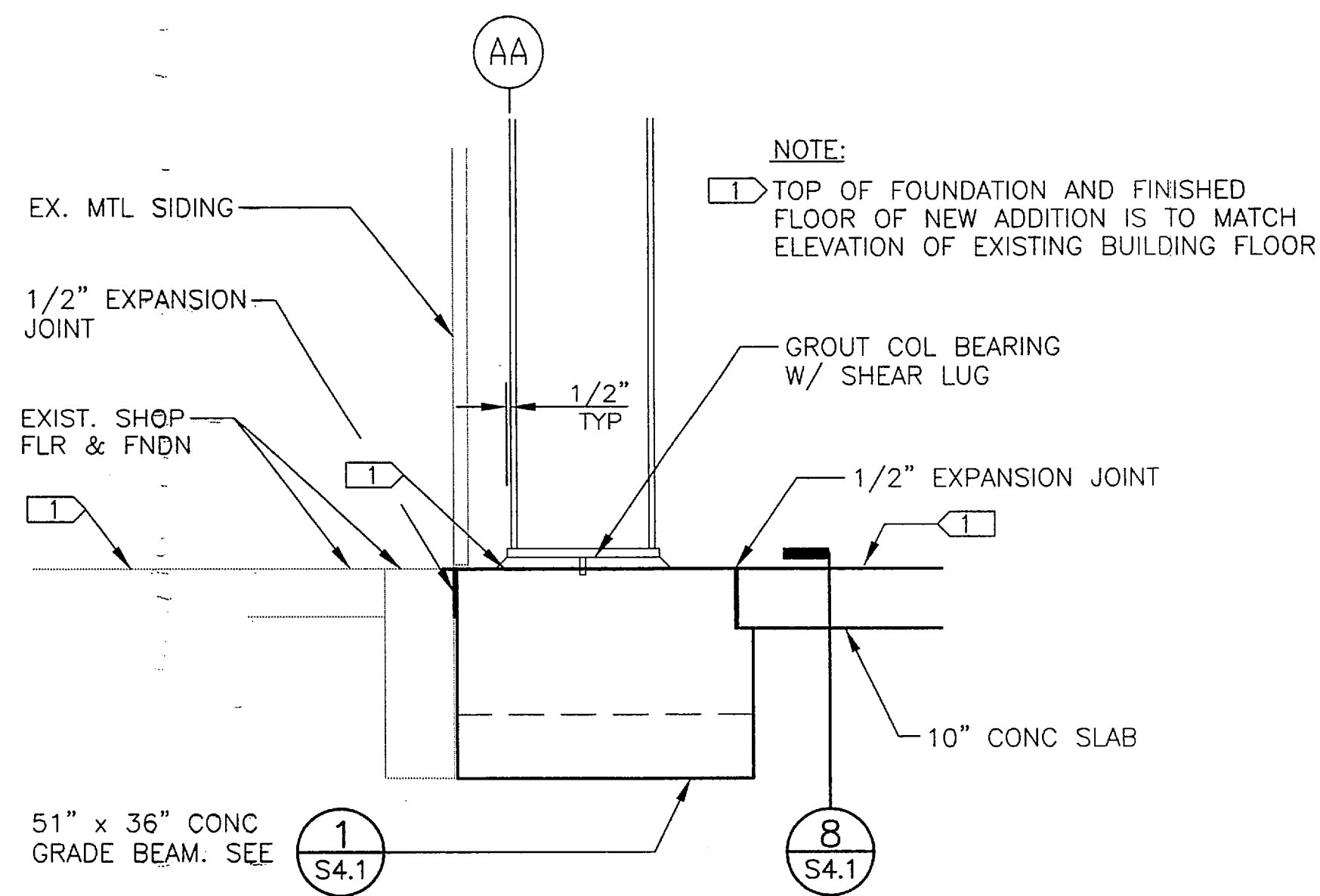
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION

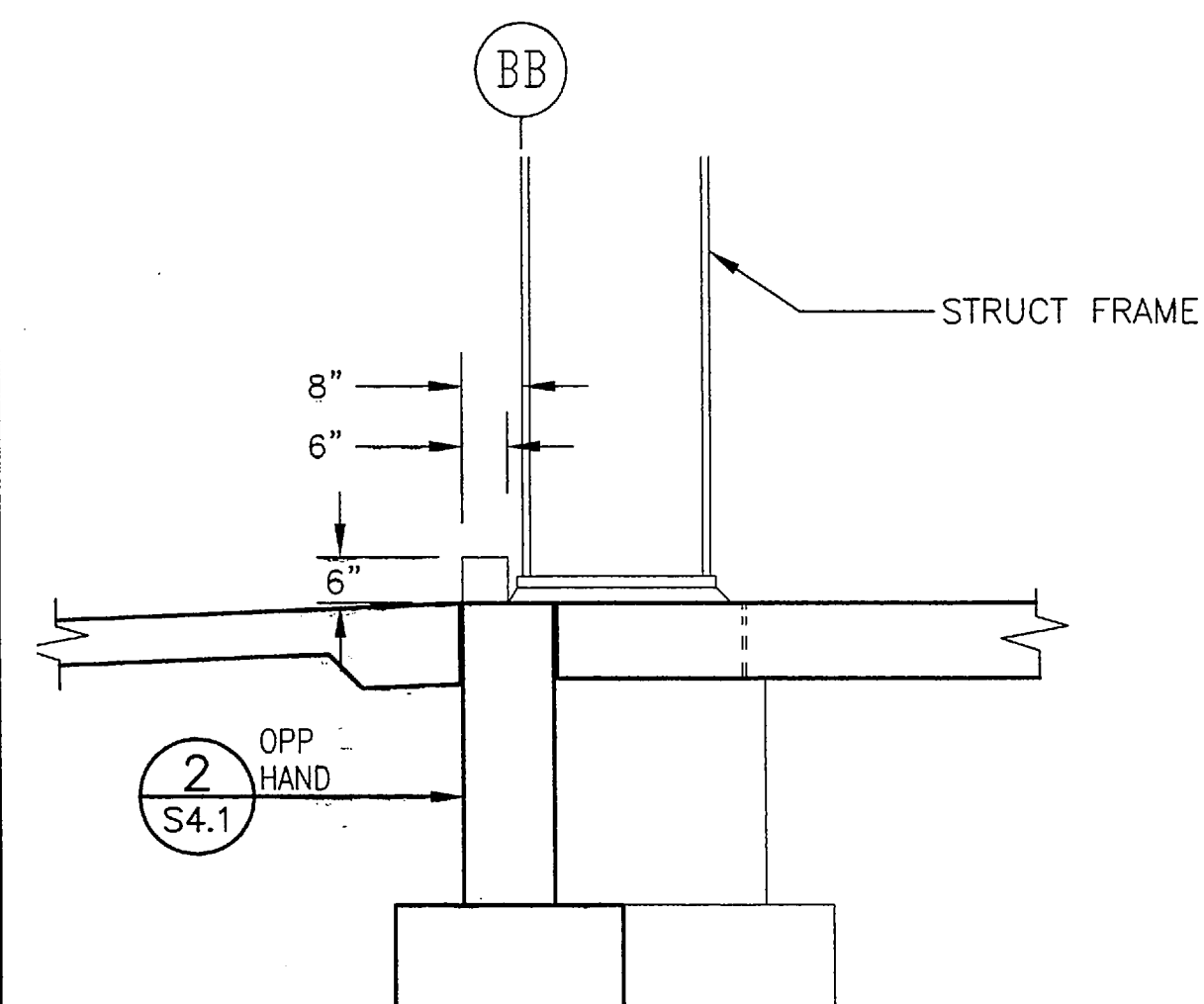
KETCHIKAN SHIPYARD
MACHINE SHOP EXTENSION
PROJECT NO. 69113
**ROOFING & WALL CLADDING
DETAILS**

REVISIONS				PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION					
				TI-0003(116)	2006	S1.5	

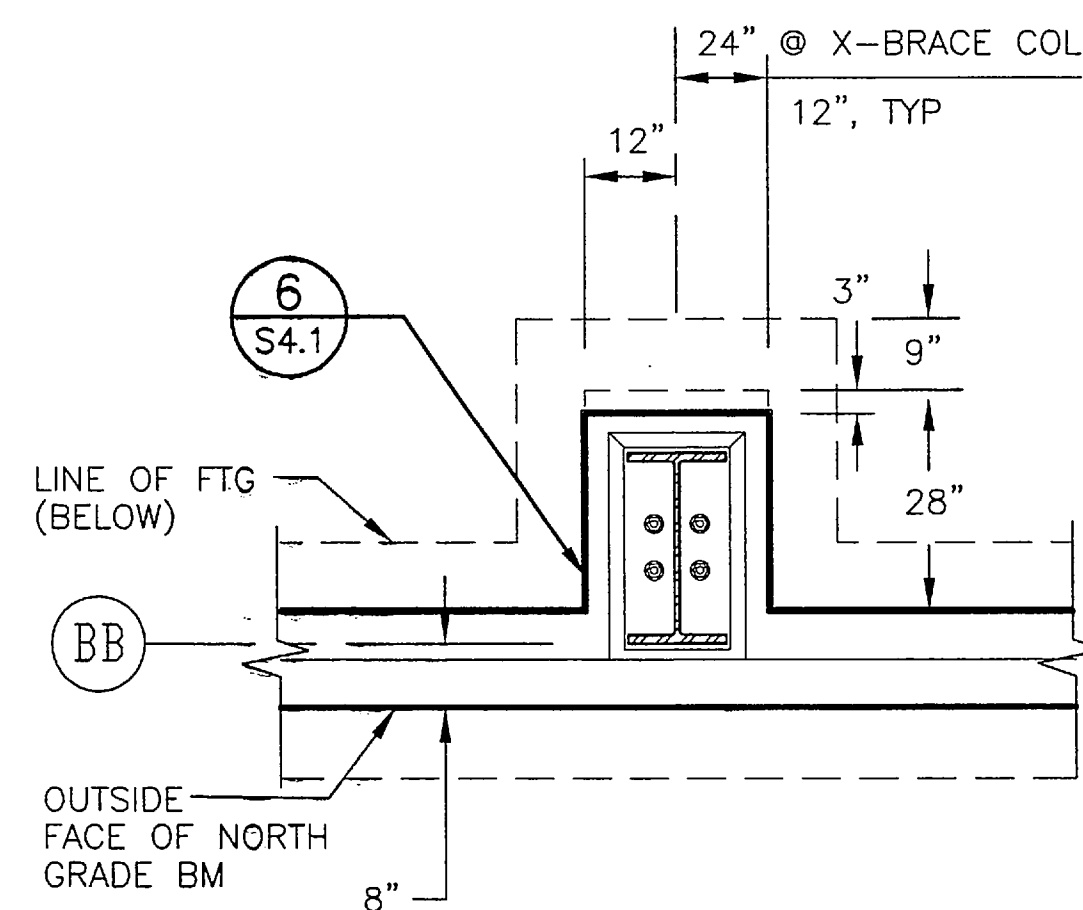
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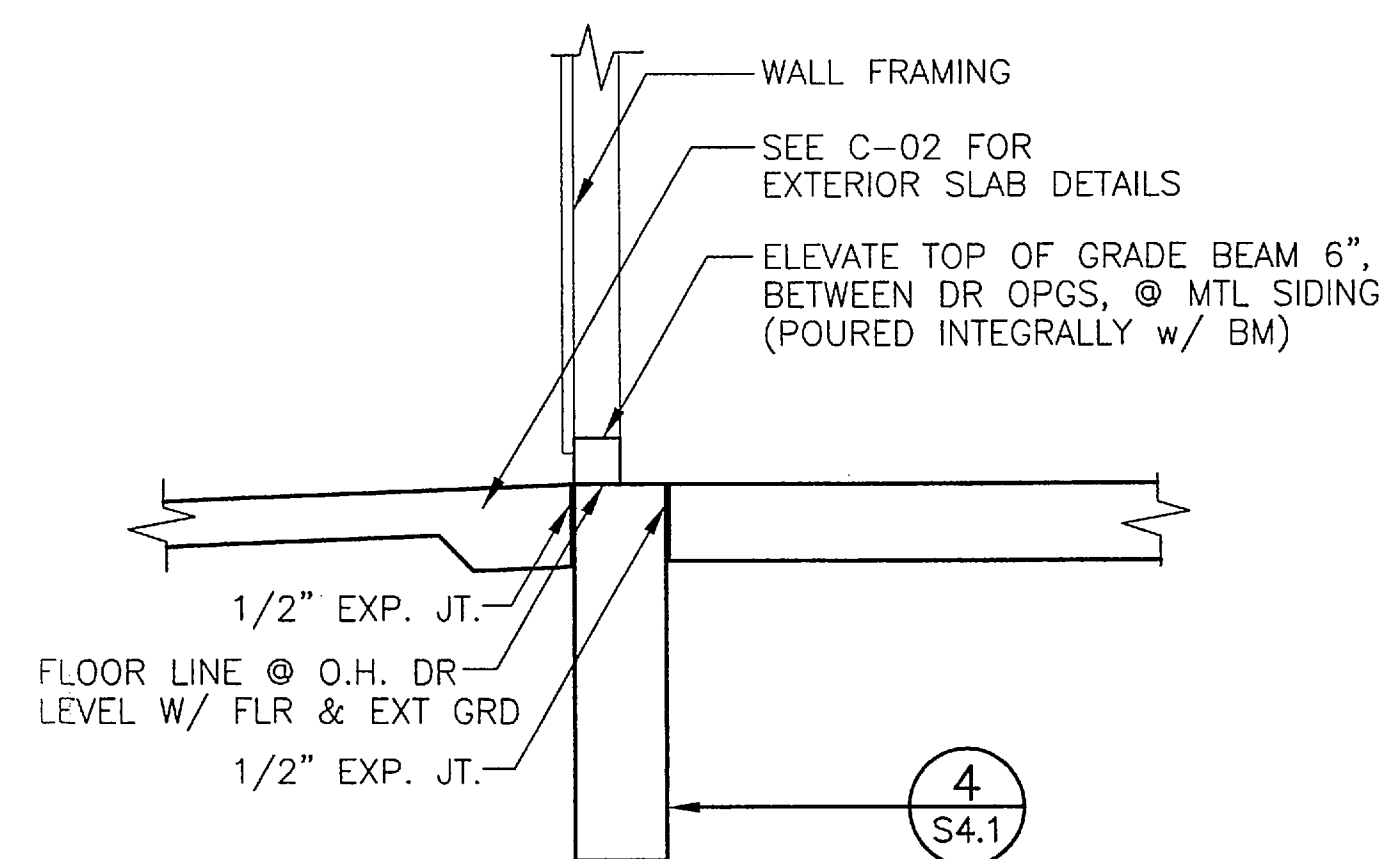
2 FOUNDATION GRADE BEAM DETAIL — GRID AA
1/2" = 1'-0"



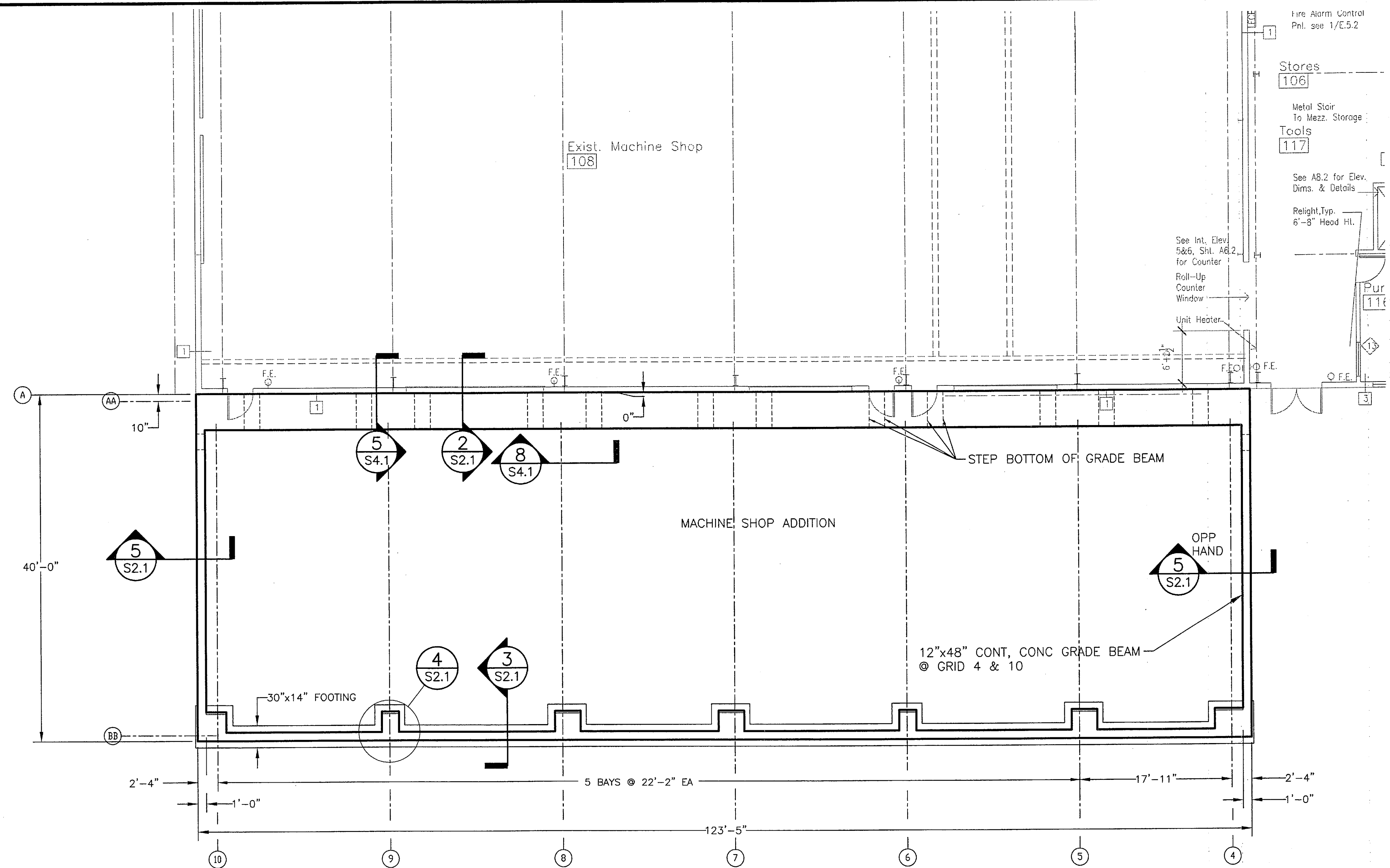
3 NORTH WALL DETAIL
1/2" = 1'-0"



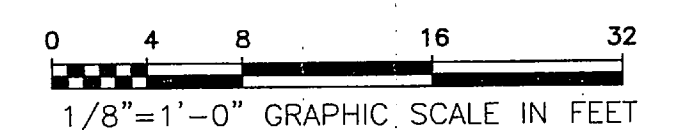
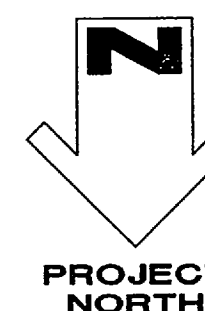
4 TYPICAL DETAILED PLAN @ COLUMN LINE BB
1/2" = 1'-0"



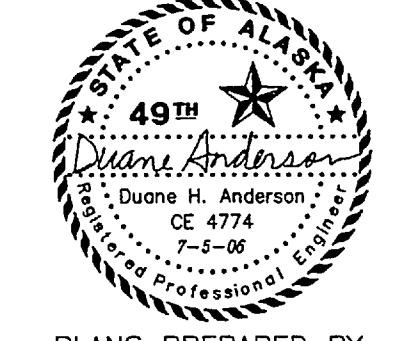
5 TYPICAL @ E & W END WALLS
1/2" = 1'-0"

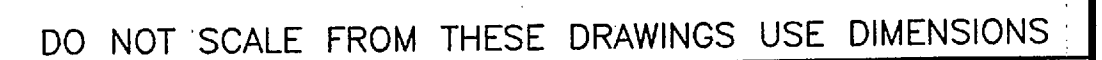


1 FOUNDATION PLAN
1/8" = 1'-0"



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DESIGNED BY: DHA		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION					
 PLANS PREPARED BY: R&M CONSULTANTS, INC.		KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113 STRUCTURAL FOUNDATION PLAN					
CHECKED BY: JKM DRAWN BY: MKA		PATH: T:\Temp\BGPlot_1204\115809-S2.1.dwg PLOT: PSPACE 1=1(F) Mon, 03/Jul/06 04:11PM TAB: DETAIL					
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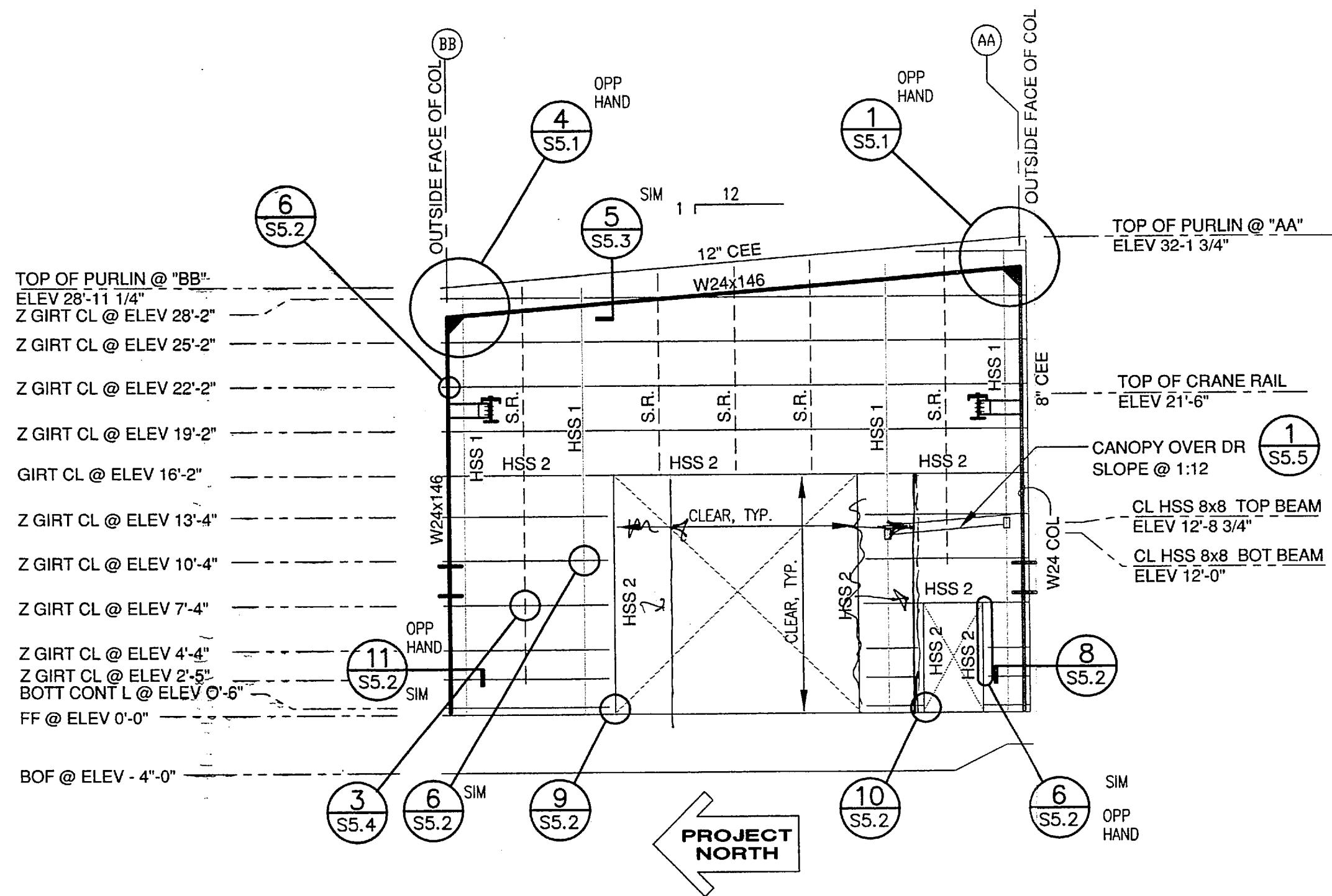


STATE OF ALASKA
49TH
Duane Anderson
Duane H. Anderson
CE 4774
7-5-06
Registered Professional Engineer

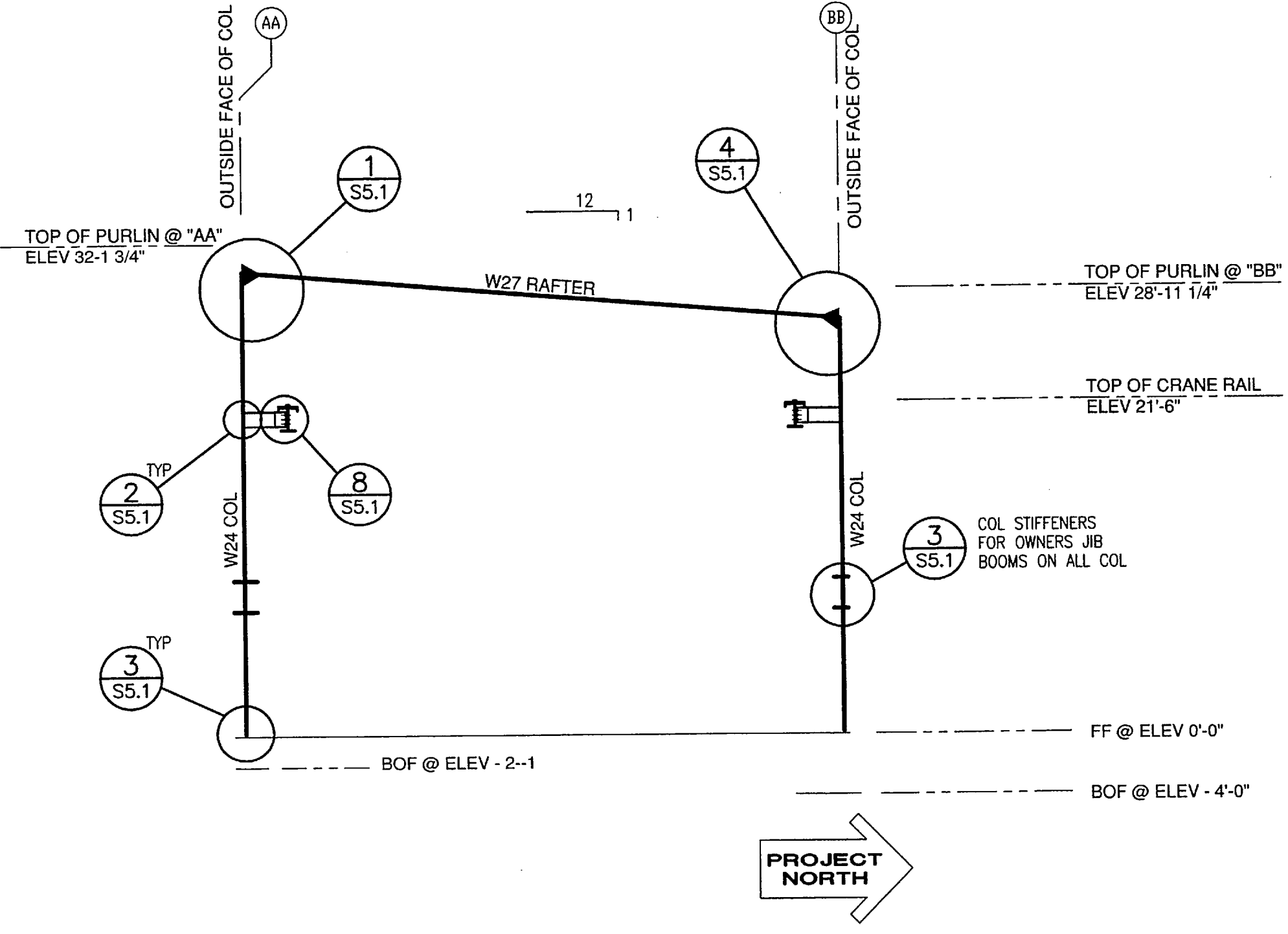
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REV.	DATE	NATURE OF REVISION	BY	CHKD.	APP.

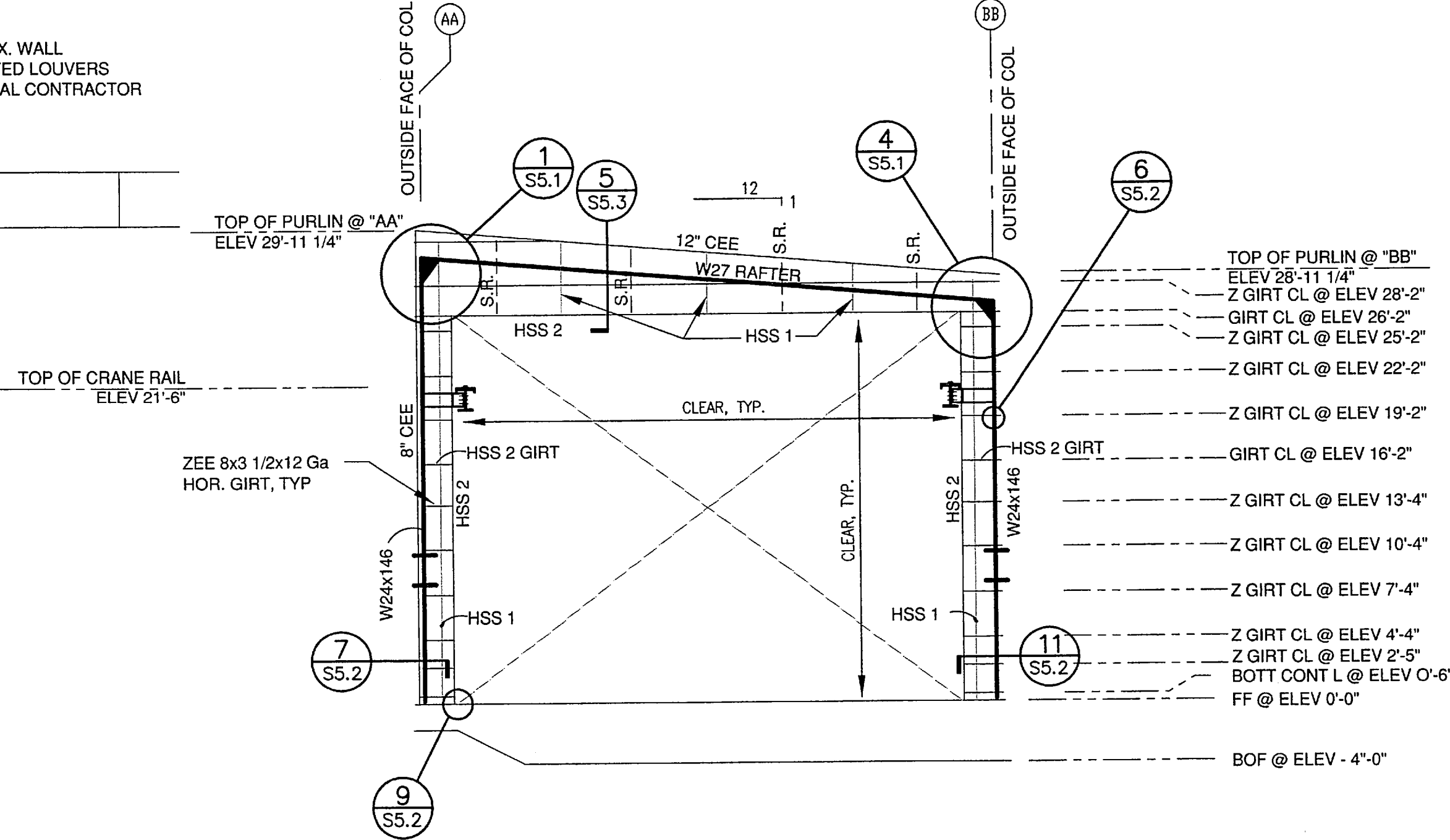
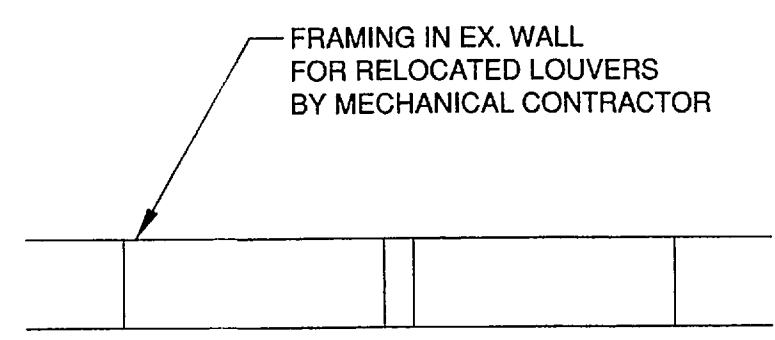
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XREF: 115809-BD02, EXIST-BLDG-ELEV, EXIST-FLR-PLN



1 WEST FRAME ELEVATION - GRID 4
1/8" = 1'-0"



2 EAST FRAME ELEVATION - GRIDS 5 THRU 9
1/8" = 1'-0"



3 EAST FRAME ELEVATION - GRID 10
1/8" = 1'-0"

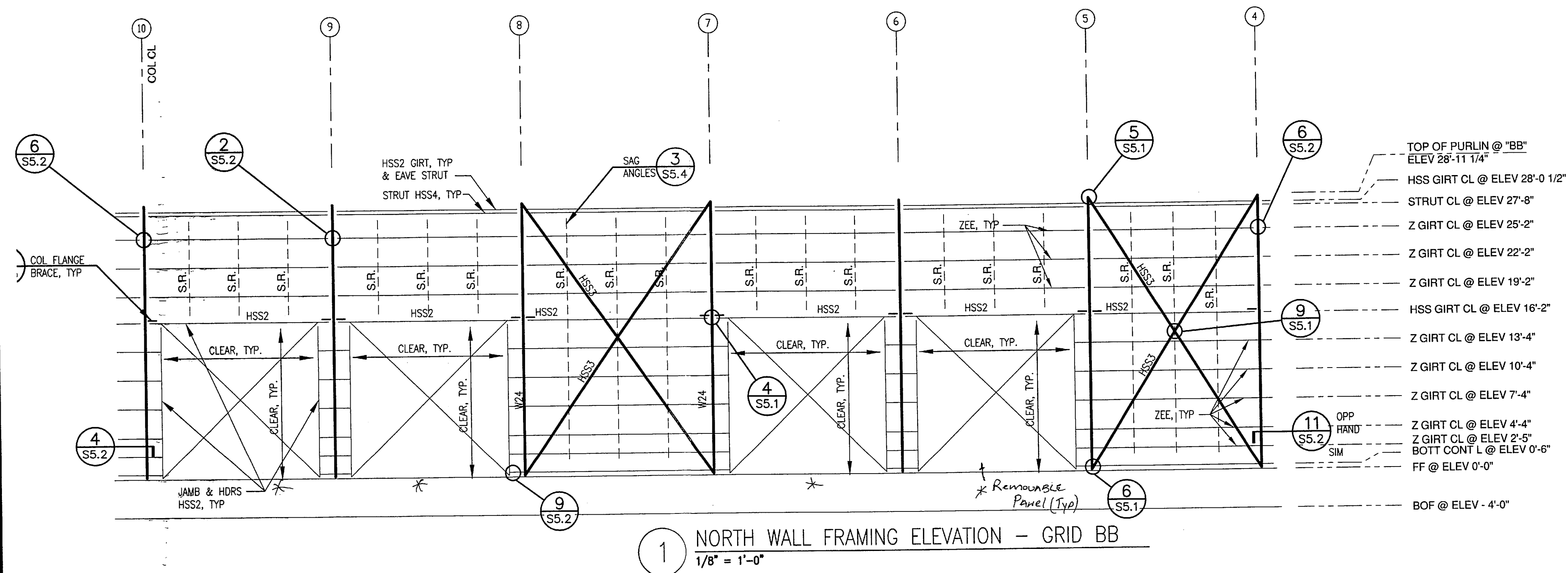
FRAMING MEMBERS	
NAME	DESCRIPTION
HSS 1	HSS 12x8x3/8 - COL OR HANGER SUPPORT
HSS 2	HSS 8x4x5/16 - GIRT/WALL FRAMING
HSS 3	HSS 4-1/2x4-1/2x5/16 - X-BRACE
HSS 4	HSS 6x4x5/16 - STRUT
ZEE	8x3-1/2x12GA - WALL GIRT
S.R.	SAG ROD (ANGLE) 1"x1"x12 Ga

NOTE:
HORIZONTAL HSS 2 PER DET 9/S5.3

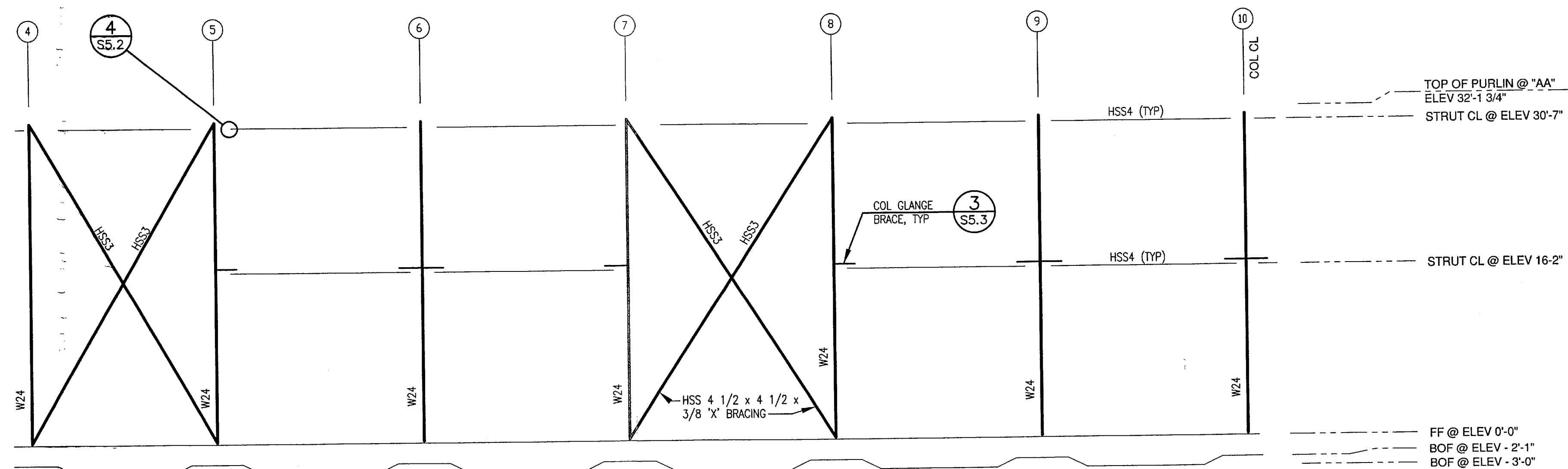


DESIGNED BY: DHA		DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS				
		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION				
		KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113 STRUCTURAL FRAMING ELEVATIONS				
CHECKED BY: JKM DRAWN BY: MKA		PATH: Z:\project\1381.01\Acad\Structural\Acad\1381-S3.1.dwg PLOT: PSPACE 1=1(F)				
THU, 06/JUL/06 10:03AM TAB: DETAIL		REV. DATE NATURE OF REVISION BY CHKD. APPD.				
NO. DATE DESCRIPTION		PROJECT DESIGNATION		YEAR	SHEET NO.	TOTAL SHEETS
		TI-0003(116)		2006	S3.1	

project\1381.01\Structural\1381-S3.1, 1=96, 07/05/06 at 10:34 by mka
XREF: 115809-BD02, EXIST-BLDG-ELEV, EXIST-FLR-PLN



1 NORTH WALL FRAMING ELEVATION - GRID BB
1/8" = 1'-0"

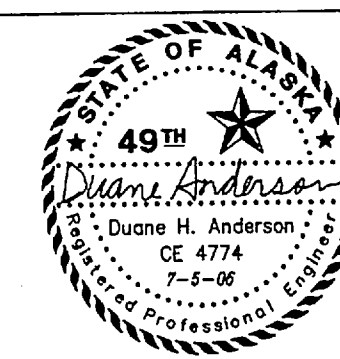


2 SOUTH WALL FRAMING ELEVATION - GRID AA
1/8" = 1'-0"



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: DHA



PLANS PREPARED BY:
R&M CONSULTANTS, INC.

CHECKED BY: JKM
DRAWN BY: MKA

PATH: T:\Temp\BGPlot_1264\1381-S3.1.dwg
PLOT: PSPACE 1=1(F)

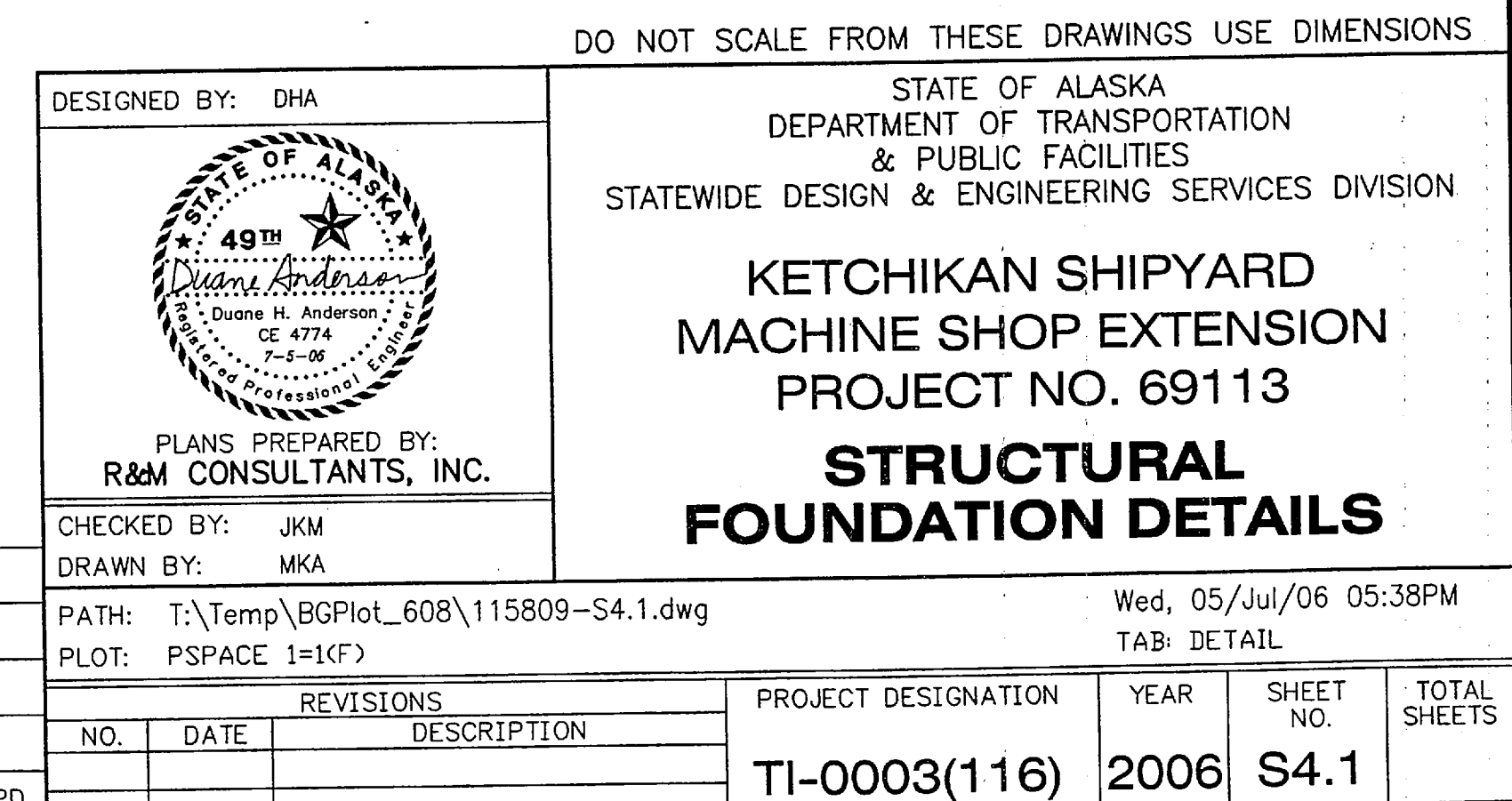
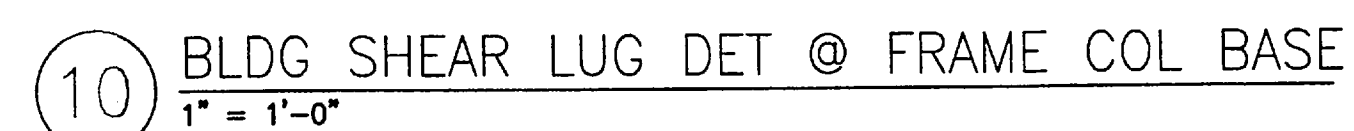
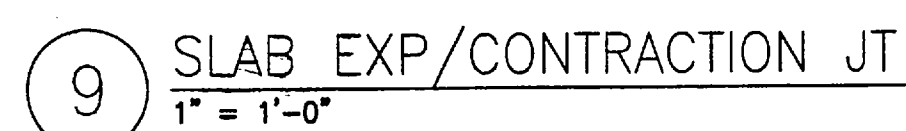
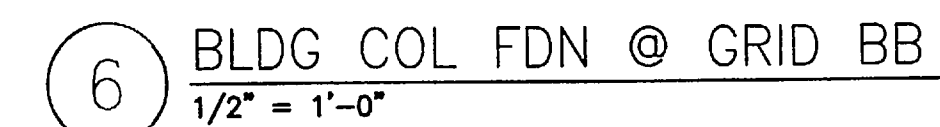
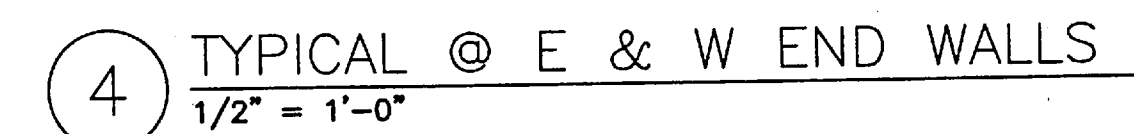
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION

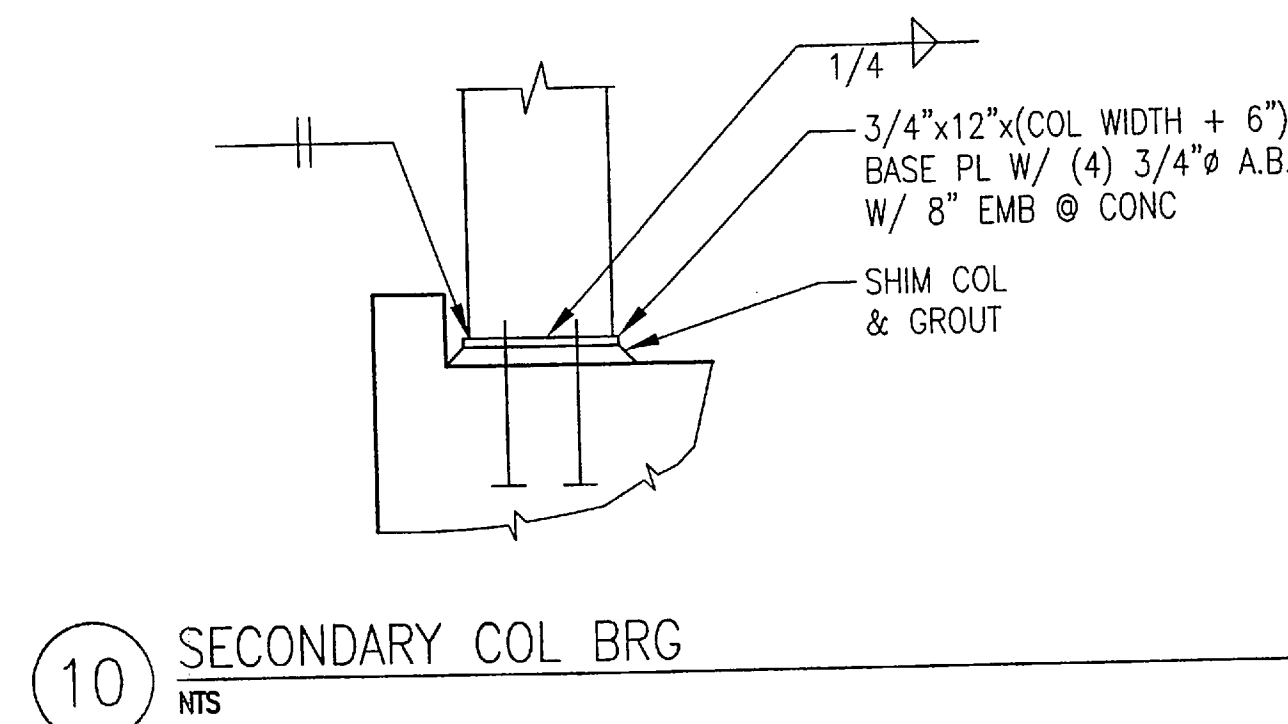
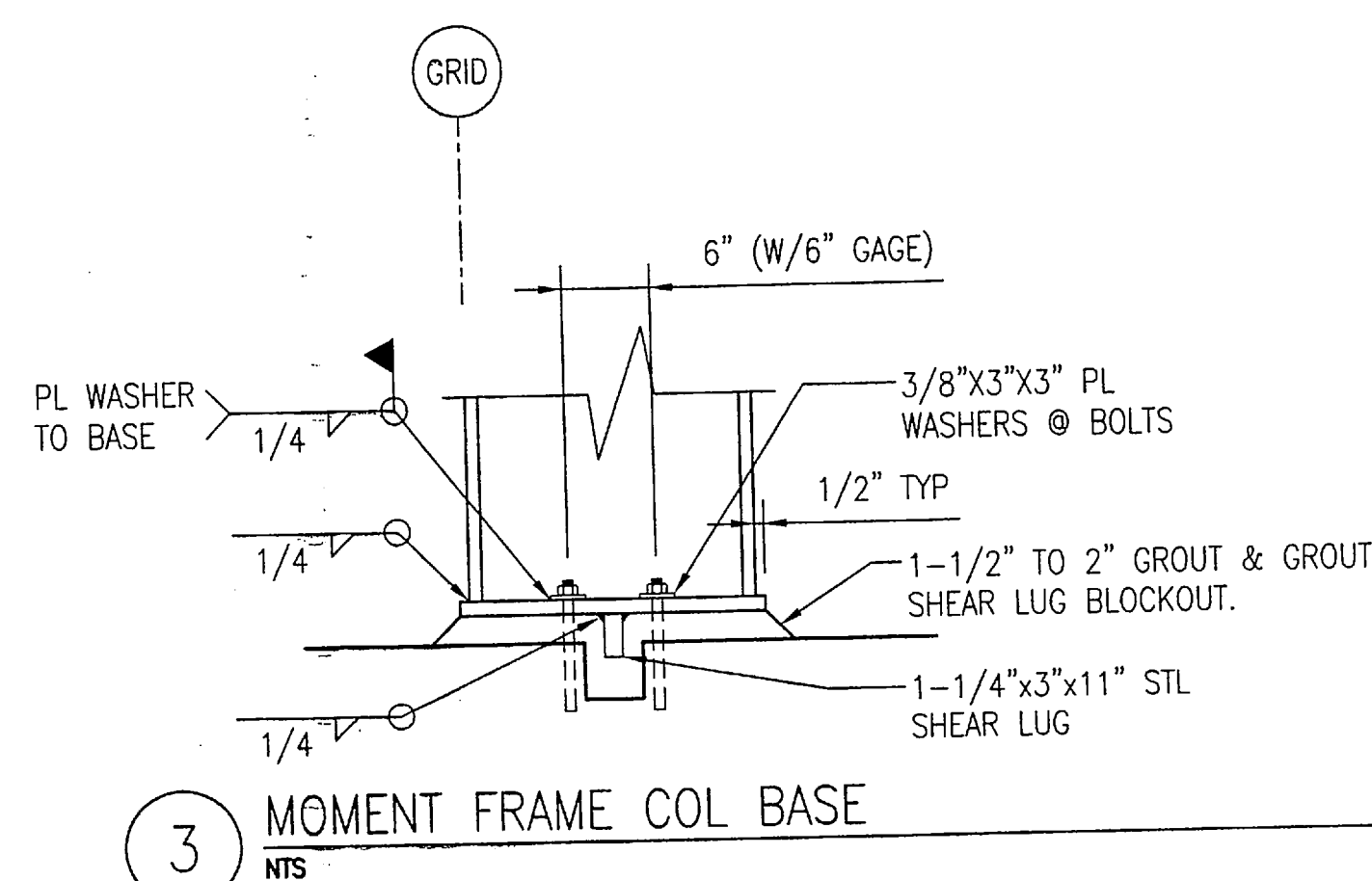
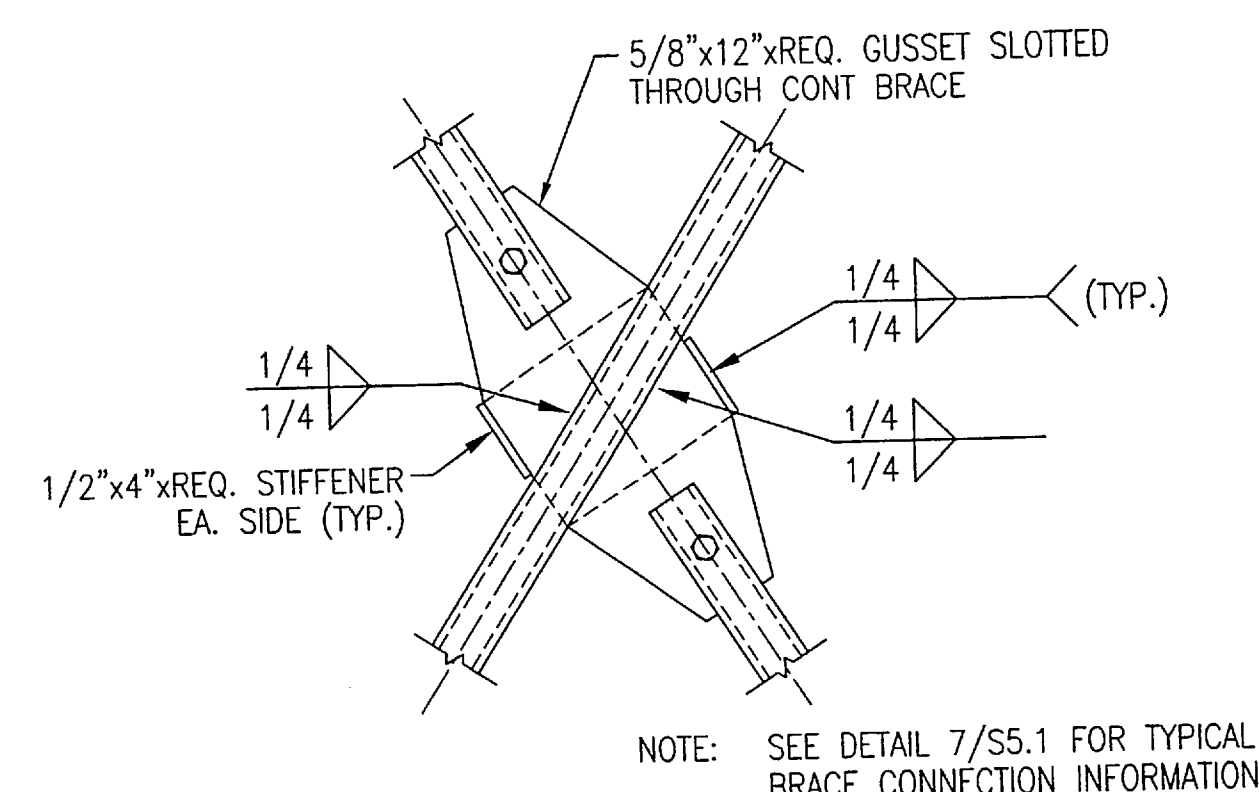
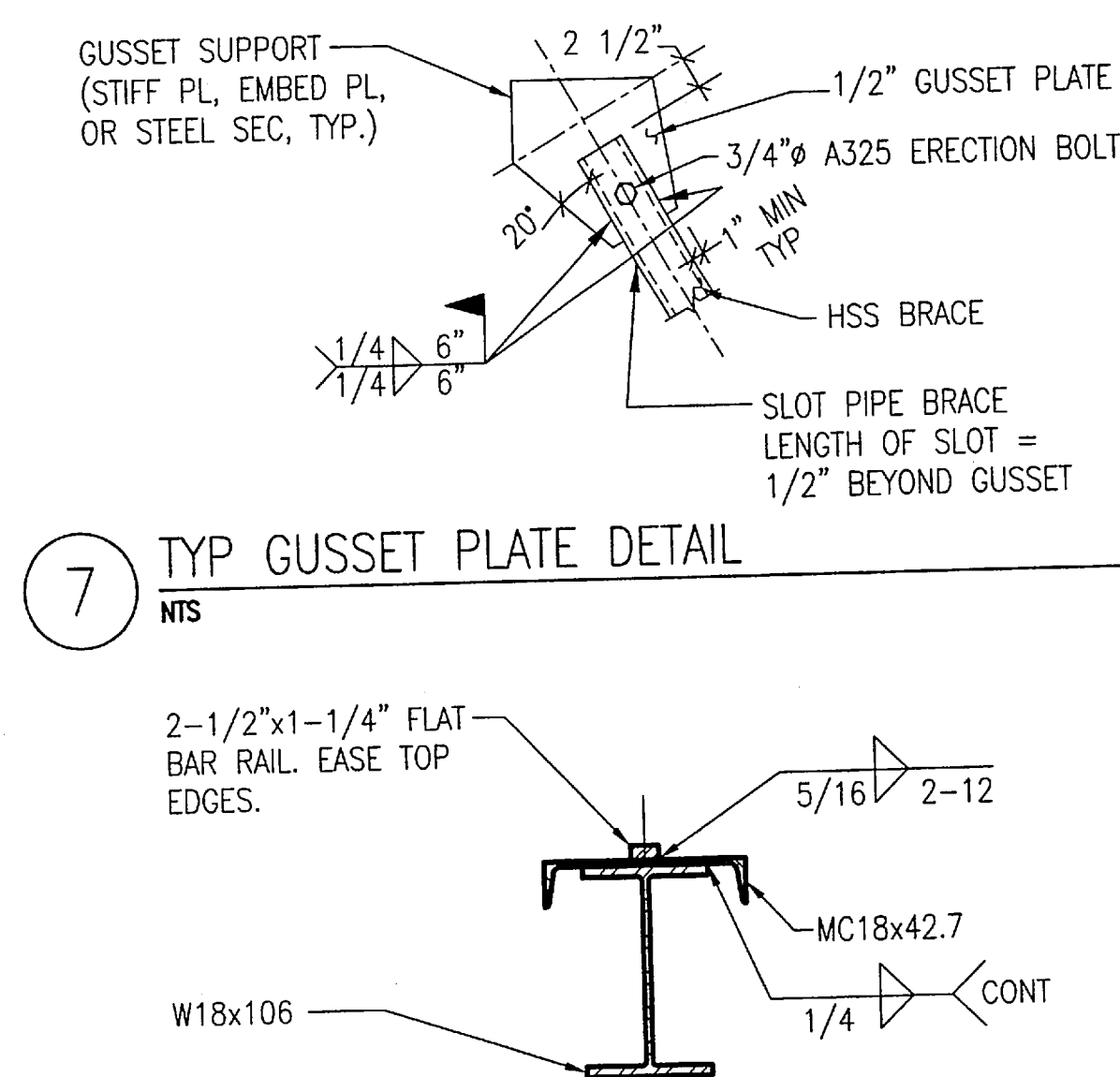
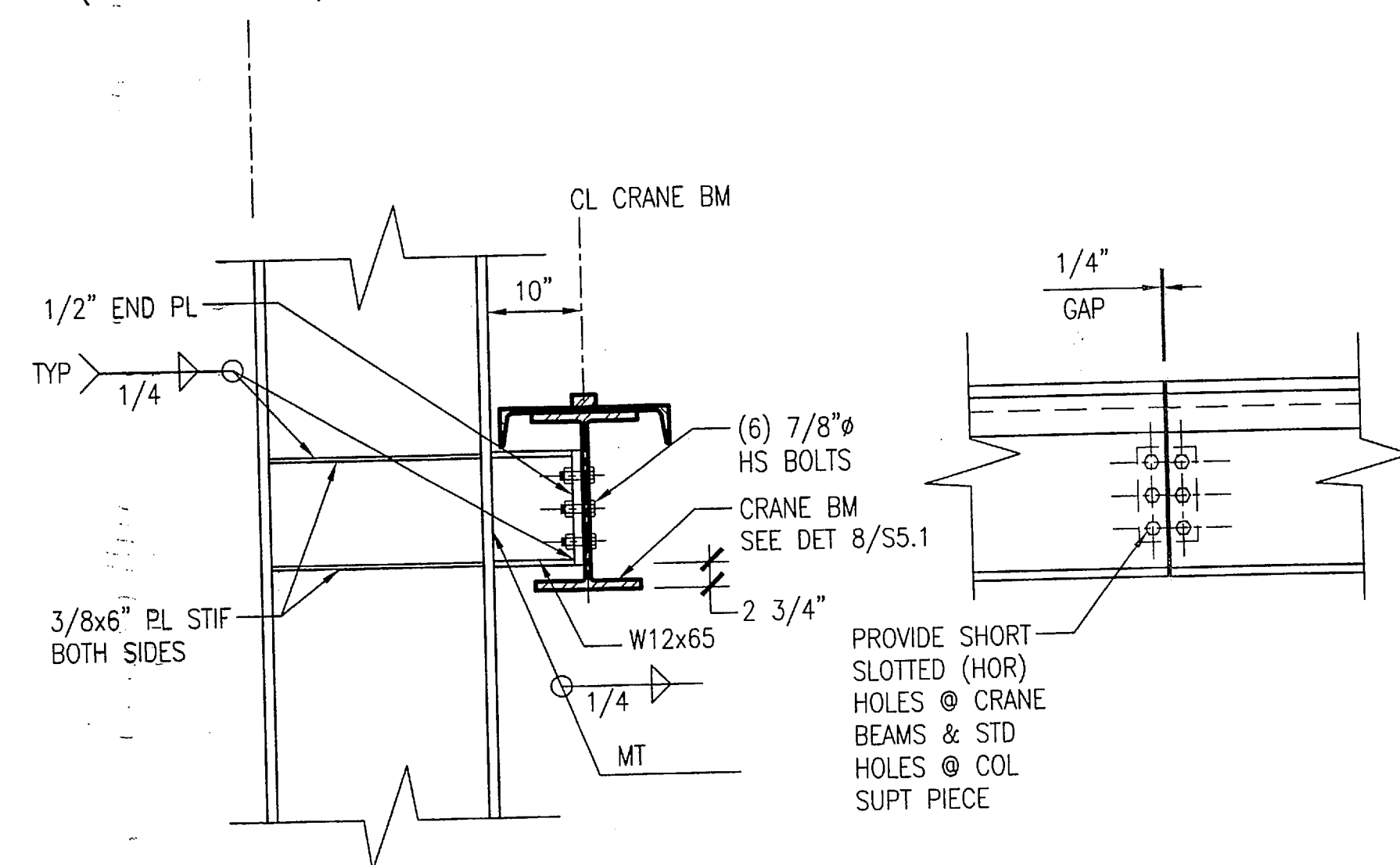
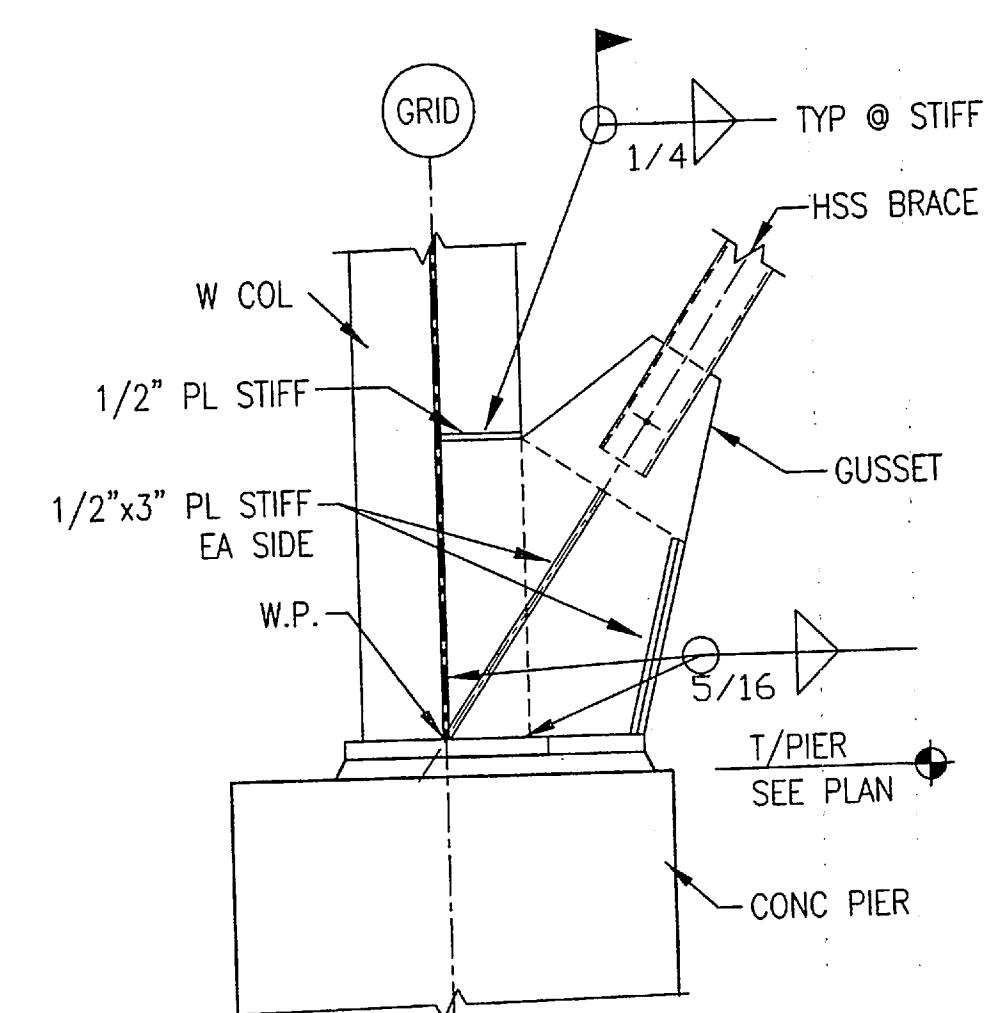
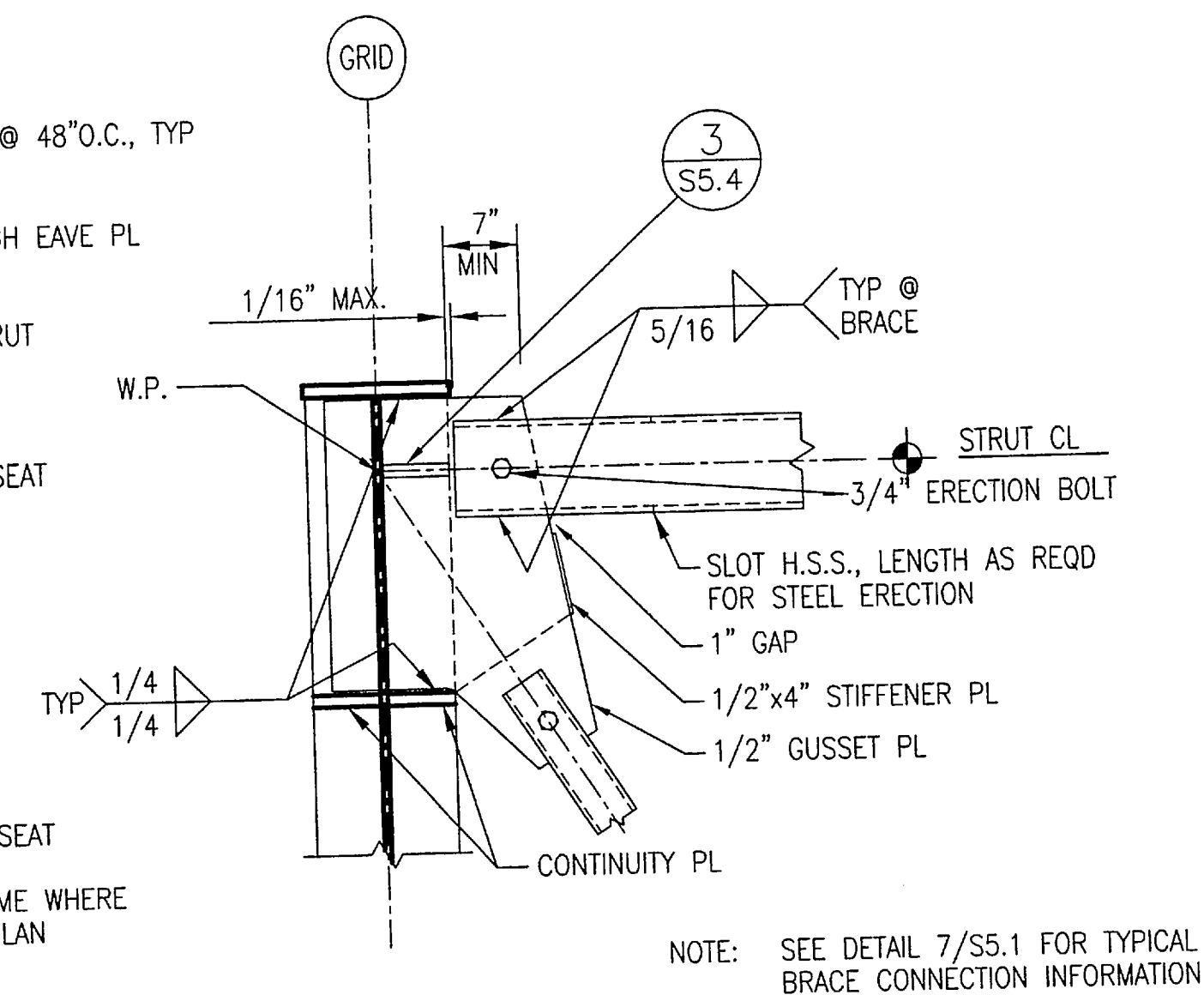
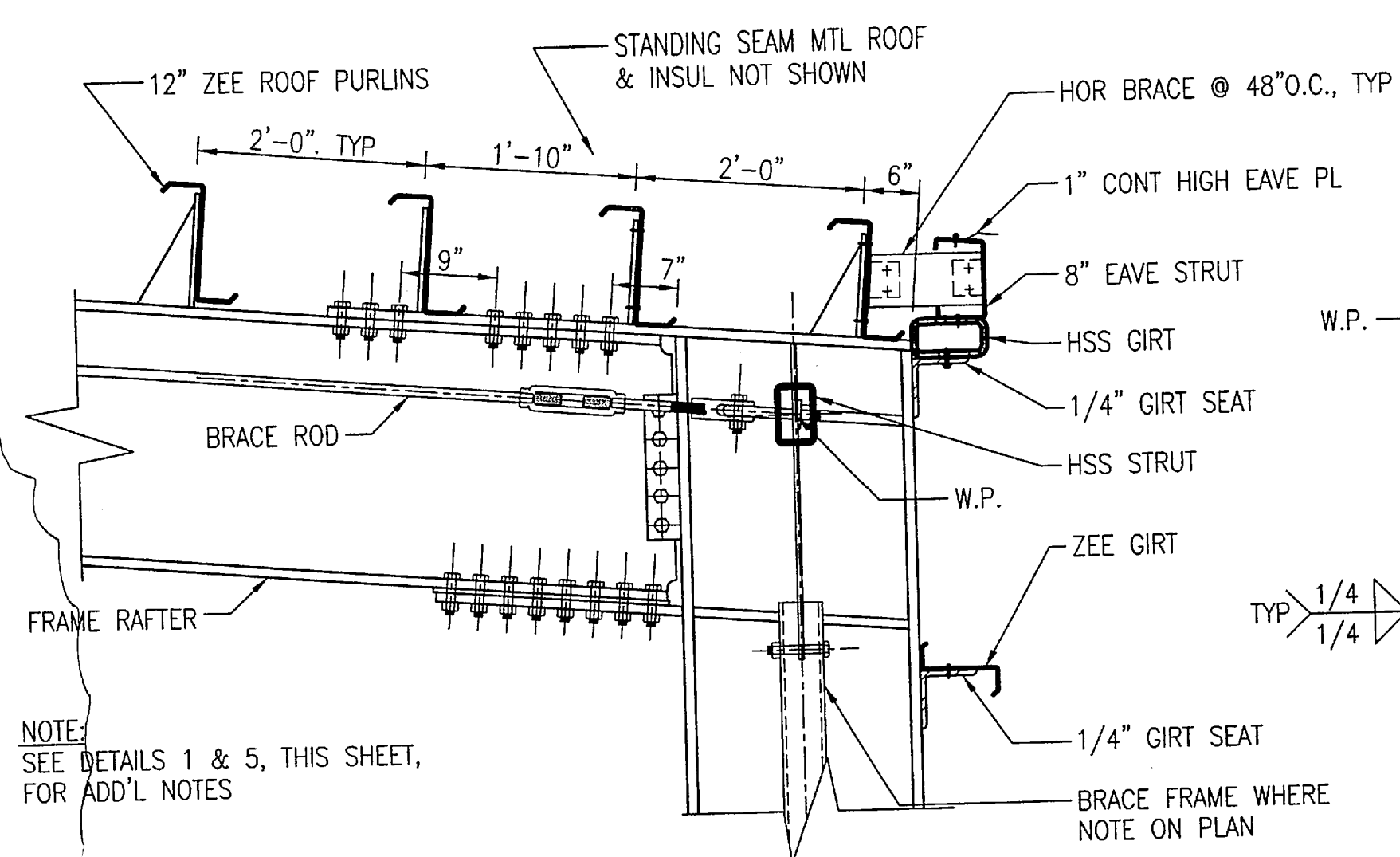
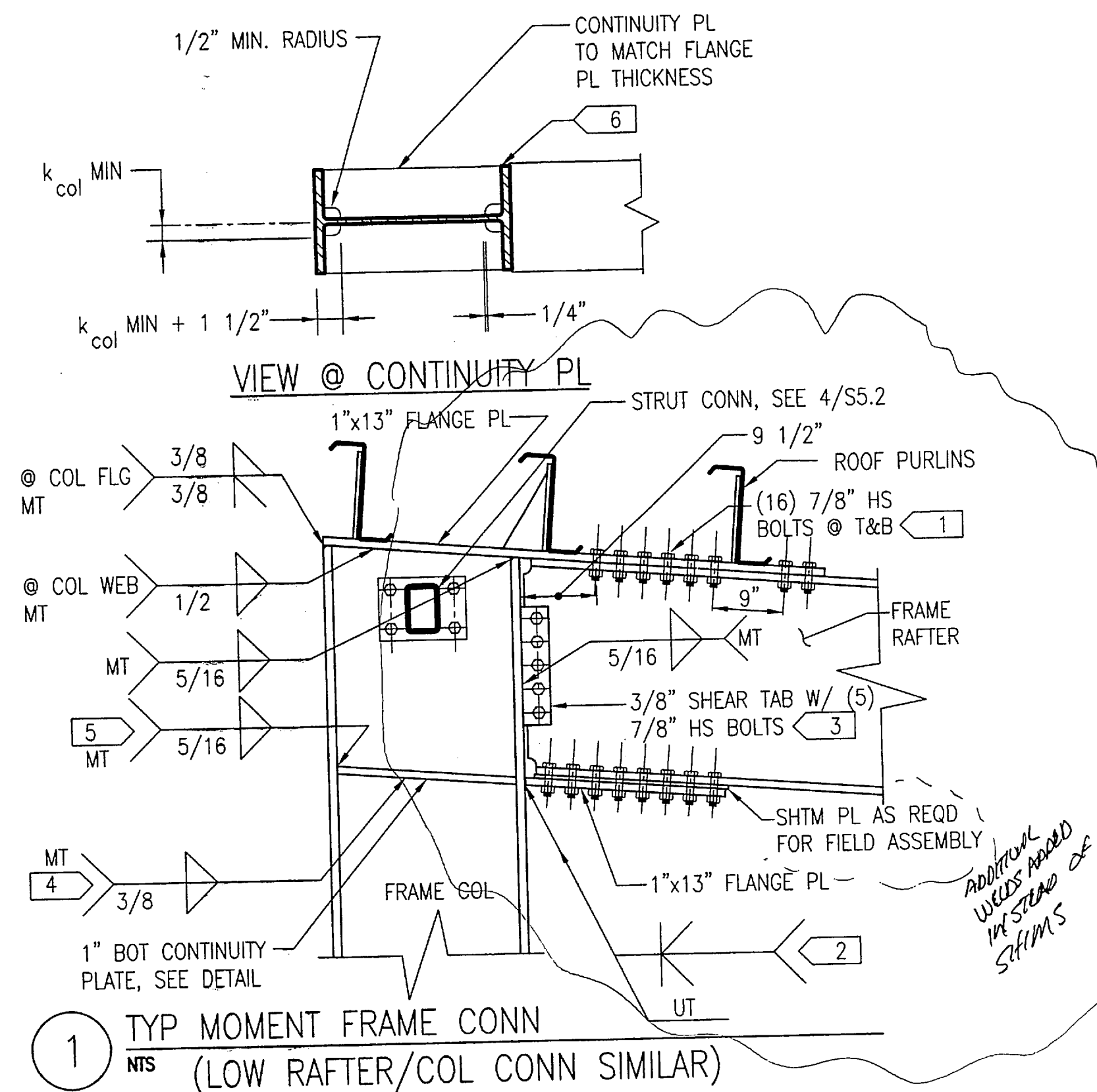
KETCHIKAN SHIPYARD
MACHINE SHOP EXTENSION
PROJECT NO. 69113

**STRUCTURAL
FRAMING ELEVATIONS**

Wed, 05/Jul/06 10:35AM
TAB: DETAIL

REV.	DATE	NATURE OF REVISION	BY	CHKD.	APPD.	REVISIONS		PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
						NO.	DESCRIPTION				
								TI-0003(116)	2006	S3.2	





- ## TYP MOMENT FRAME NOTES

- 1 BOLT HOLES IN FLANGE PLATE ARE OVERSIZE HOLES. USE STANDARD HOLES IN BEAM FLANGE.
- 2 'CJP' GROOVE WELD, SINGLE OR DOUBLE BEVEL. WHEN USING DOUBLE BEVEL WELD, BACKGOUGE FIRST WELD BEFORE WELDING OTHER SIDE. WELD QC/QA UT.
- 3 BOLT HOLES IN SHEAR TAB ARE SHORT- SLOTTED- HORIZONTAL; HOLES IN WEB ARE STANDARD. WELD QC/QA MT.
- 4 @ COL WEB. QC/QA MT.
- 5 @ COL FLG. 'CJP' TYPICAL. QC/QA MT. FOR EXTERIOR BEAM-COLUMN CONNECTIONS (BEAM ONE SIDE ONLY), WELD OF CONTINUITY PLATE TO COLUMN FLANGE AT FREE SIDE MAY BE FILLET WELDS AT TOP AND BOTTOM FACE OF PLATE.
- 6 REMOVE WELD TABS TO 1/4" MAX. FROM EDGE OF CONTINUITY PLATE. GRIND END OF WELD SMOOTH, NOT FLUSH. DO NOT GOUGE COLUMN FLANGE.

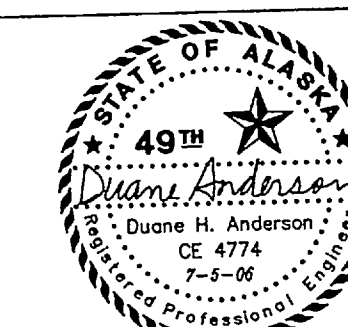
DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION

KETCHIKAN SHIPYARD
MACHINE SHOP EXTENSION
PROJECT NO. 69113

STRUCTURAL - MOMENT & BRACED FRAME DETAILS

DESIGNED BY: DHA



PLANS PREPARED BY:
R&M CONSULTANTS, INC.

CHECKED BY: JKM

DRAWN BY: MK

PATH: T:\Temp\BGPlot_1804\1381-S5.1.dwg

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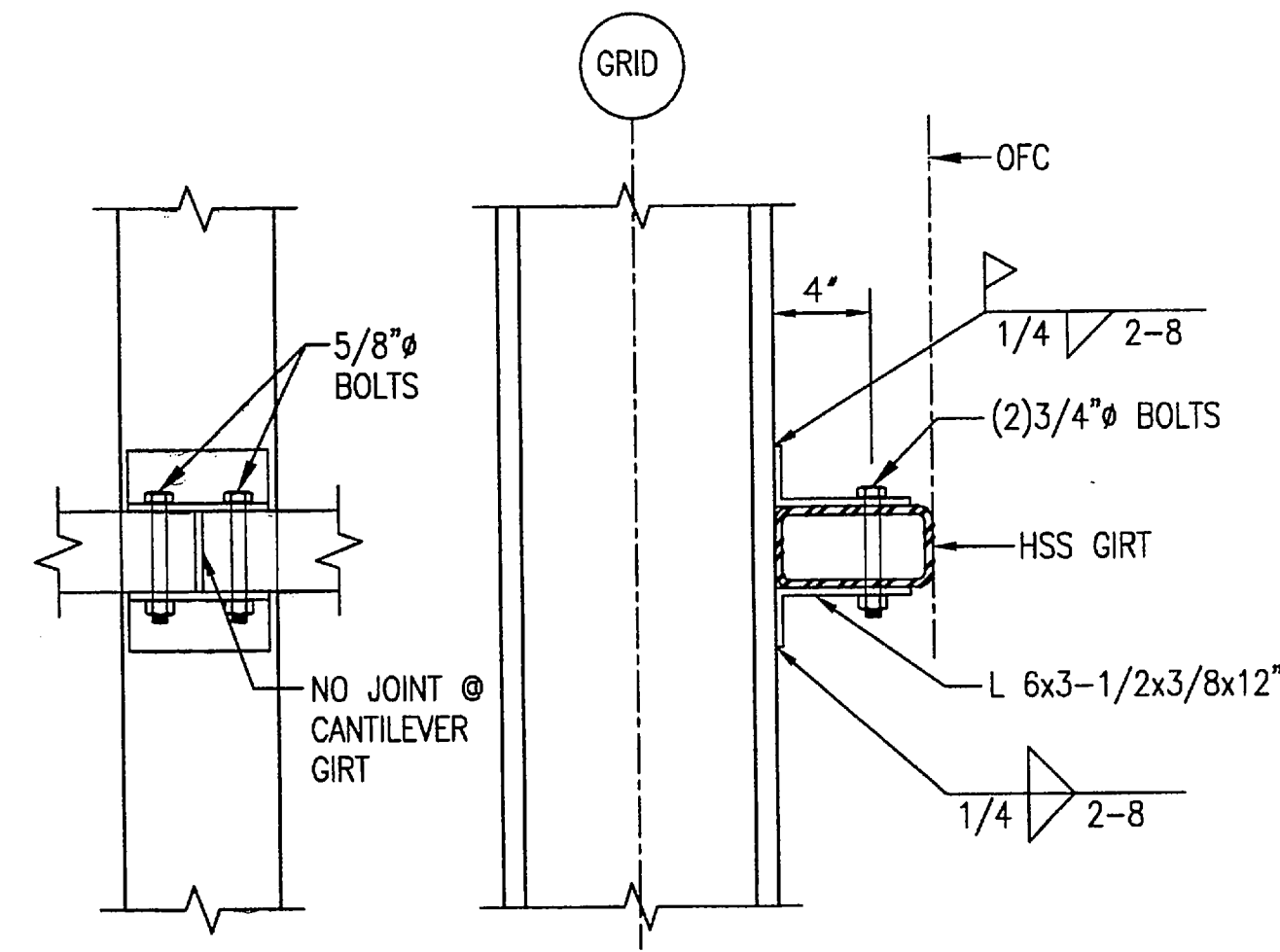
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Thu, 06/JUL/01
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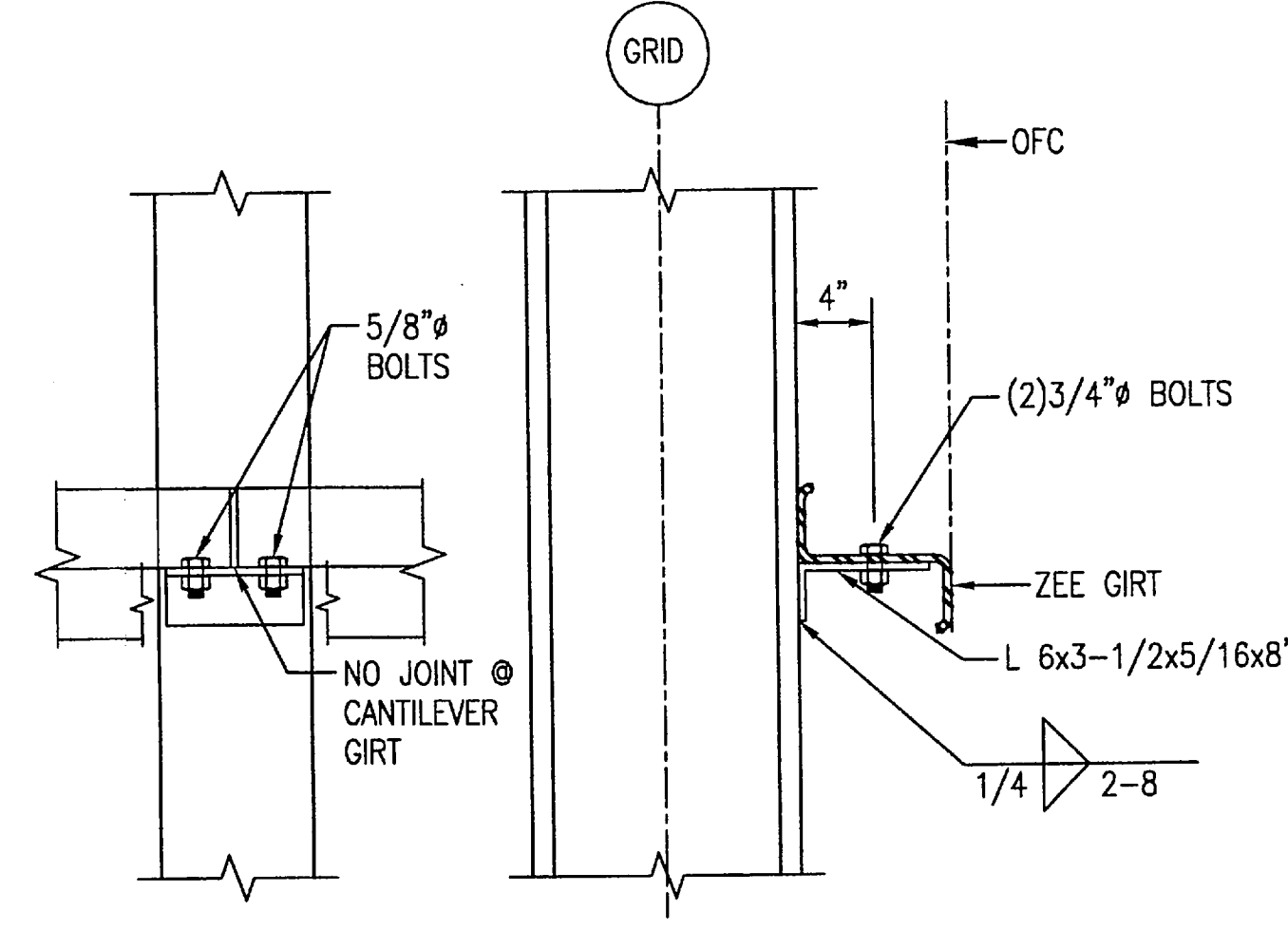
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NO. DATE DESCRIPTION						
PD.			TI-0003(116)	2006	S5.1	

XREF: 115809-BD02

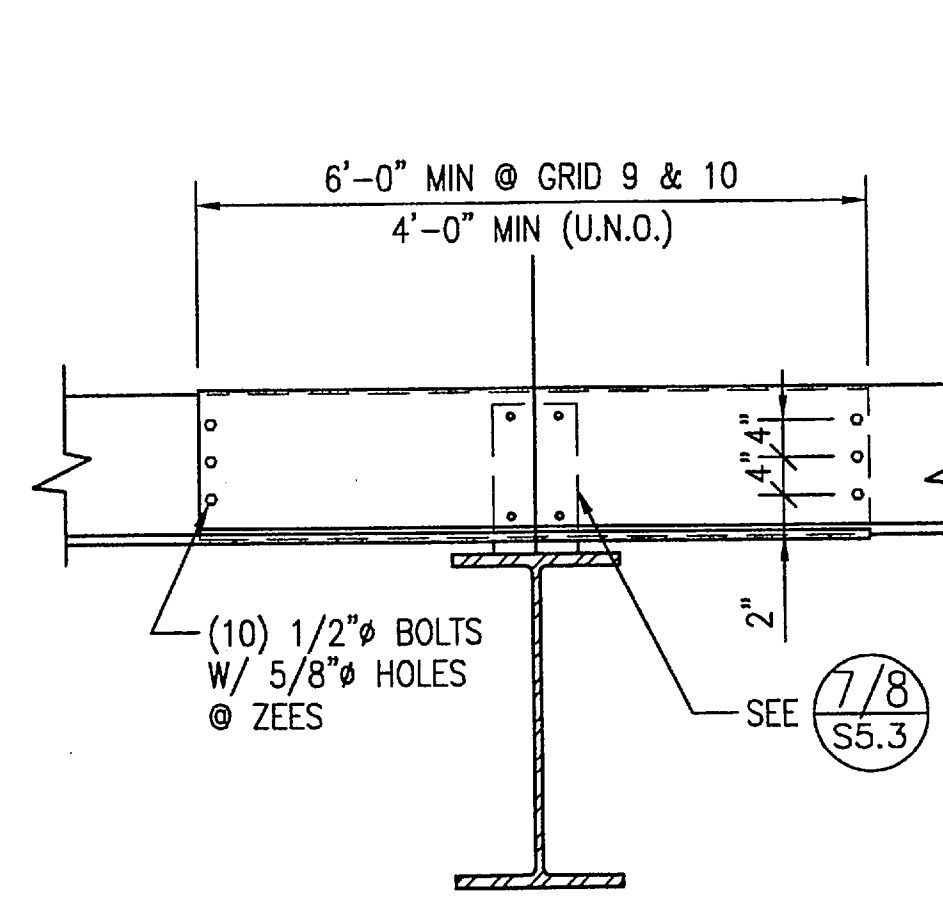
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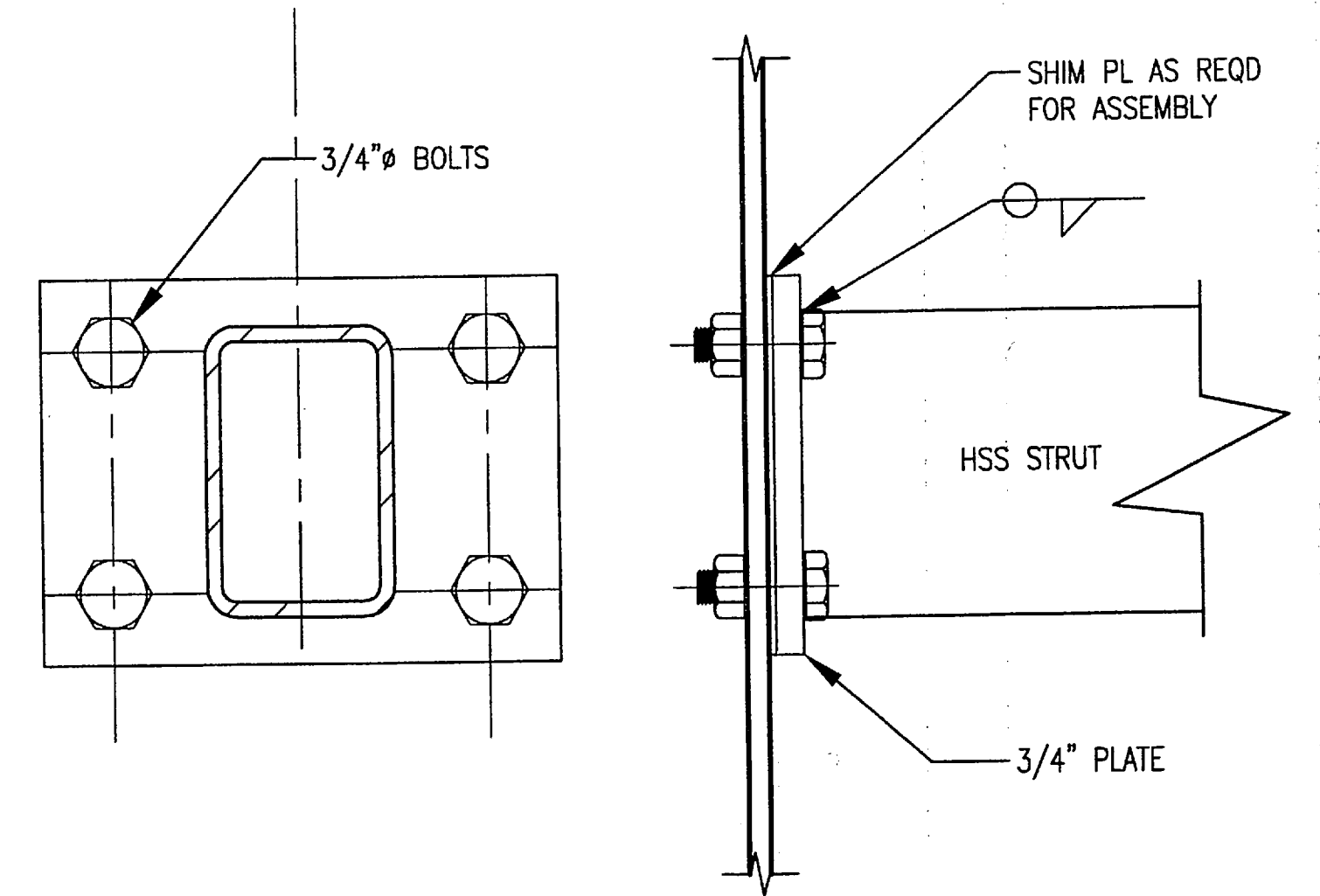
1 TYPICAL HSS GIRT CONNECTION
NTS



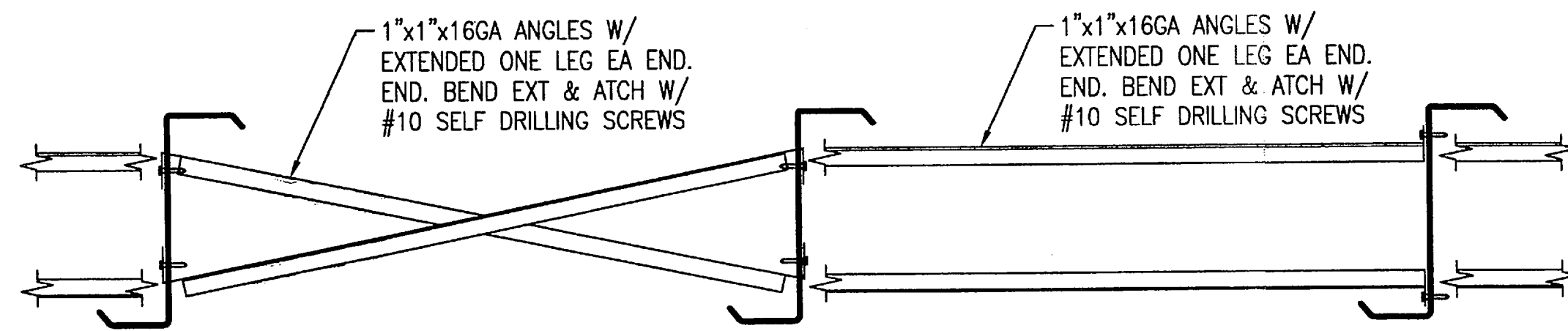
2 TYPICAL ZEE GIRT CONNECTION
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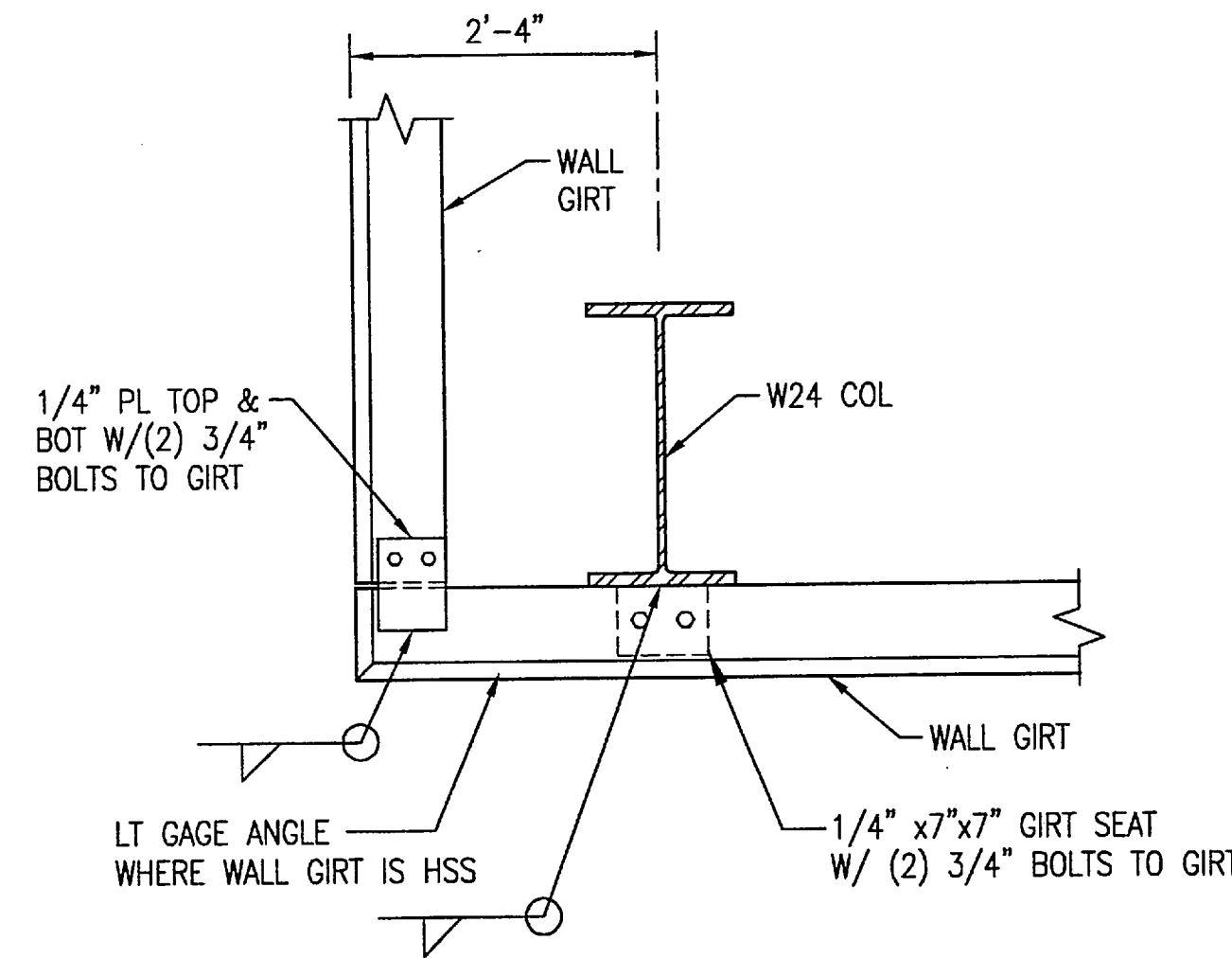
3 PURLIN LAP CONN @ RAFTER
NTS



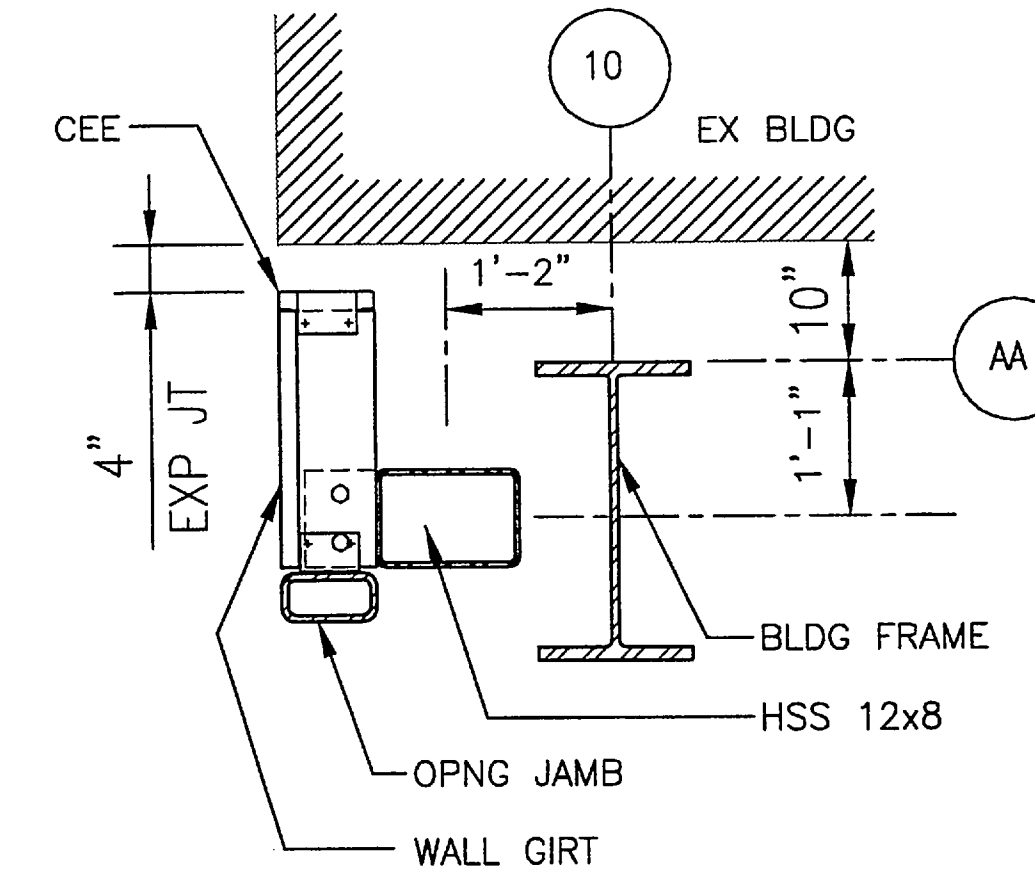
4 STRUT CONN, TYP (EXCEPT @ BRACED BAYS)
NTS



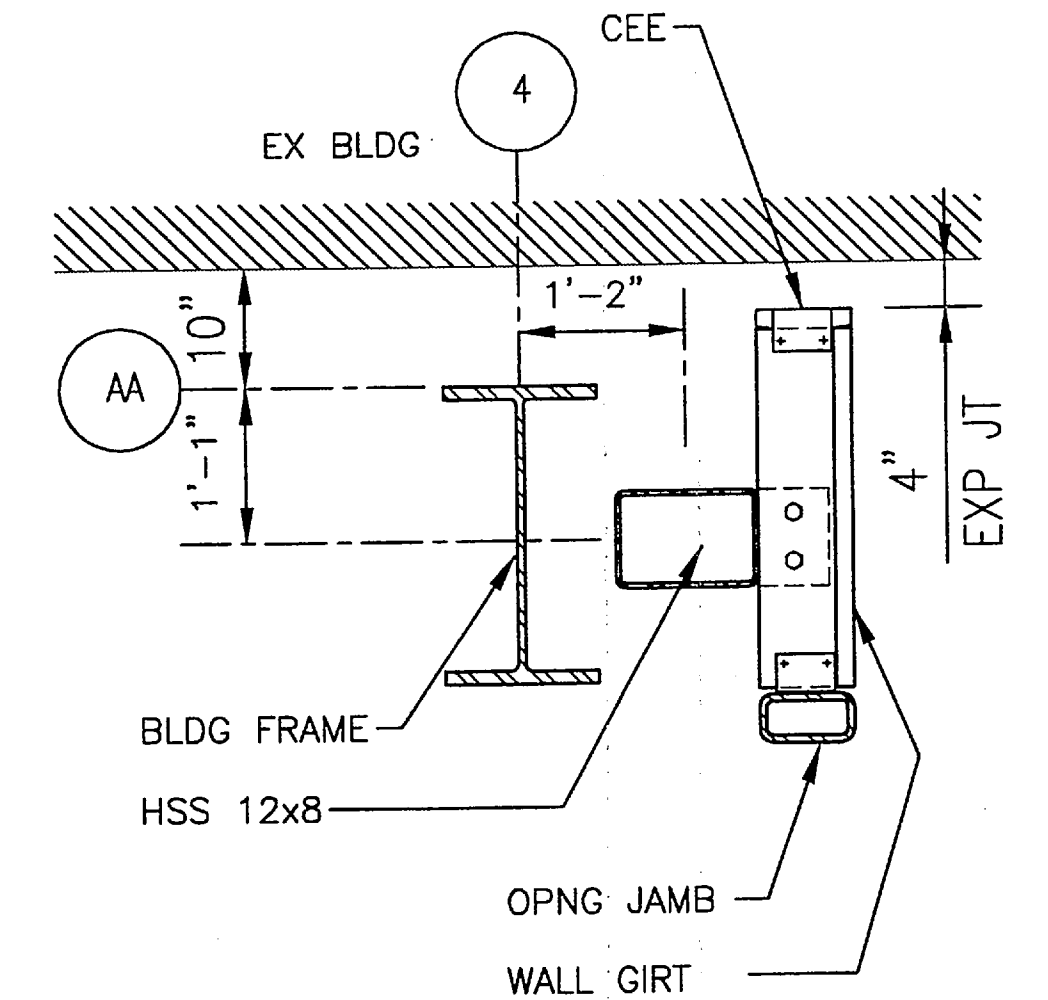
5 ZEE PURLIN BRACING
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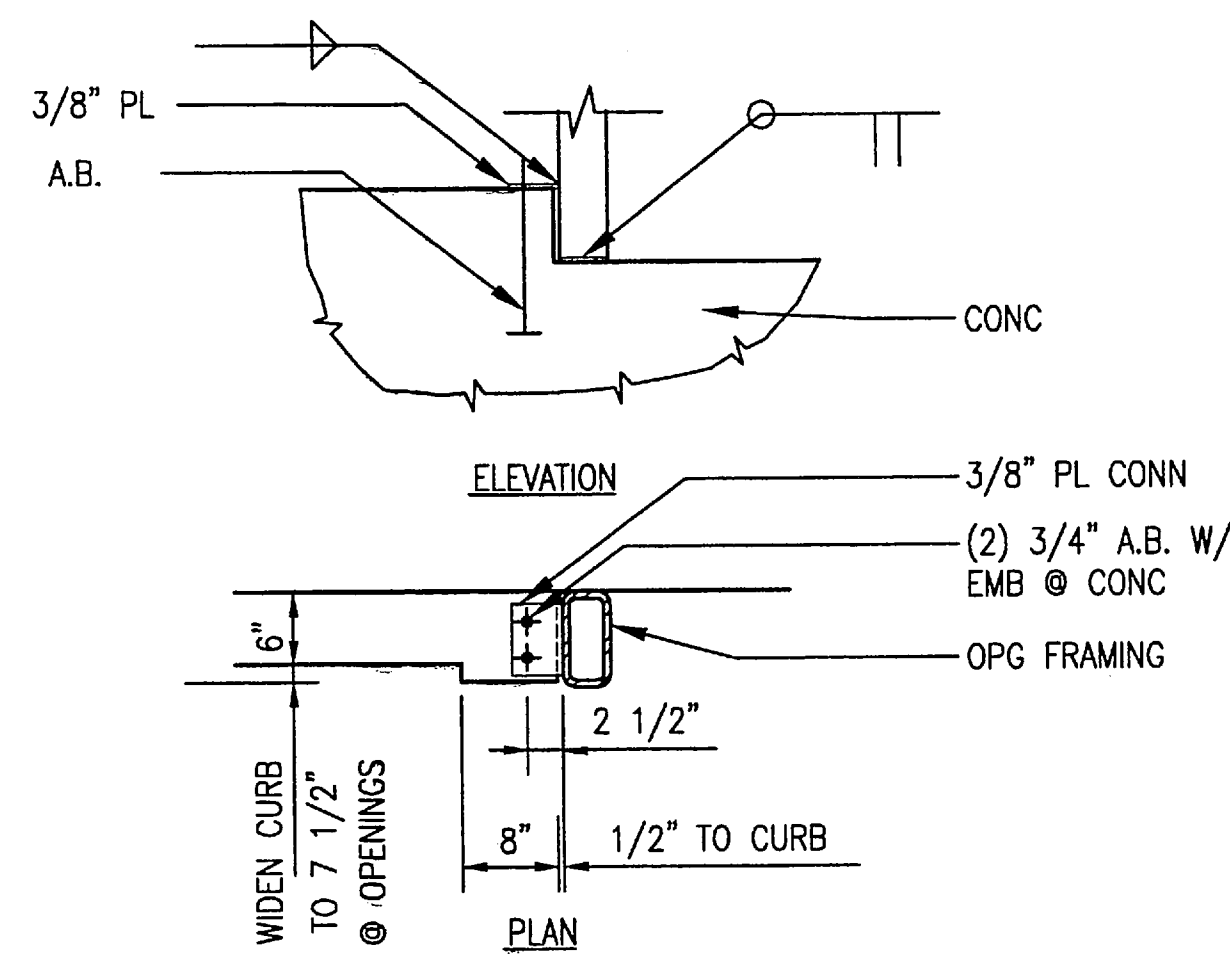
6 GIRT CONN @ CORNERS
NTS



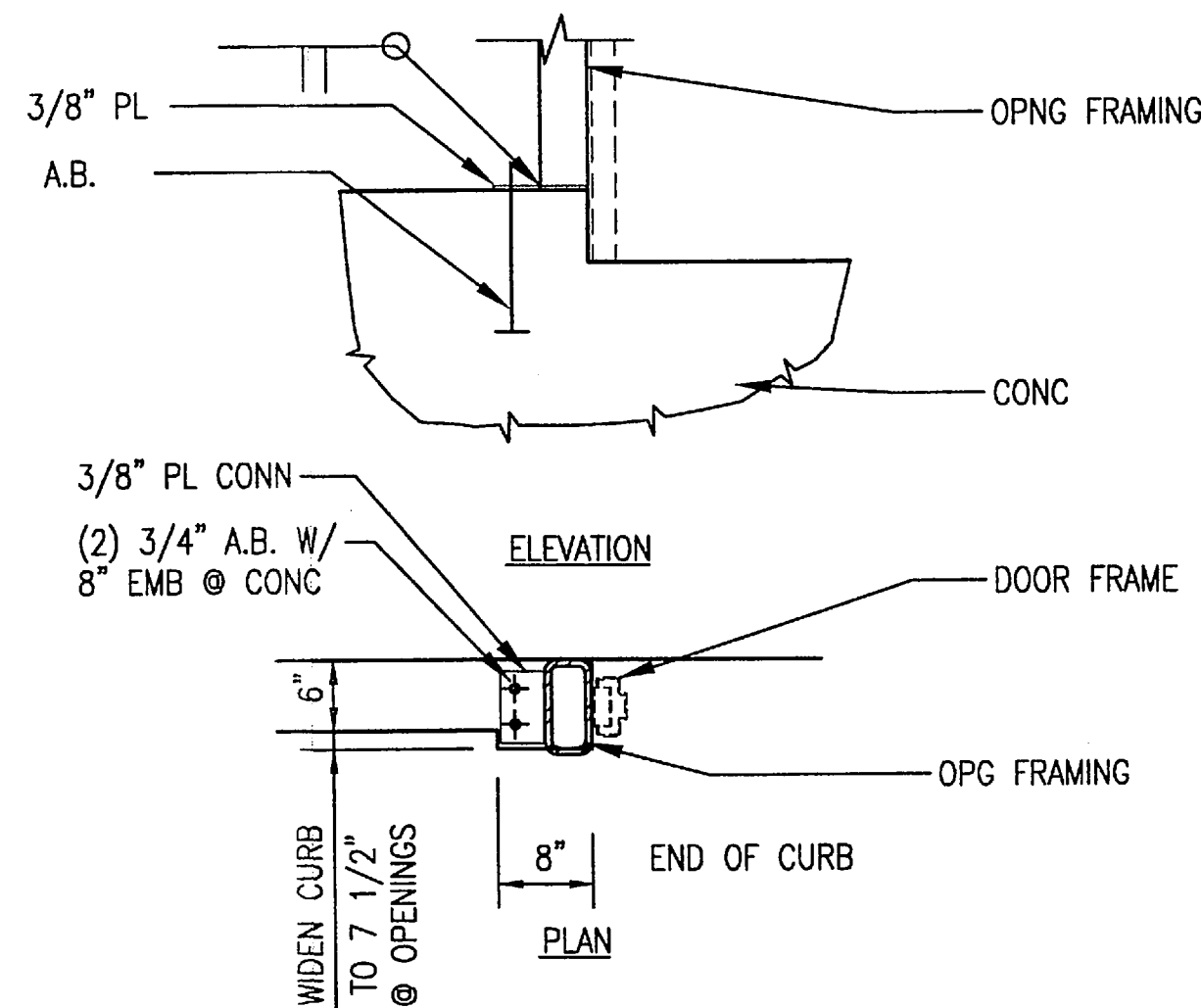
7 GIRT CONN @ GRID 10-AA
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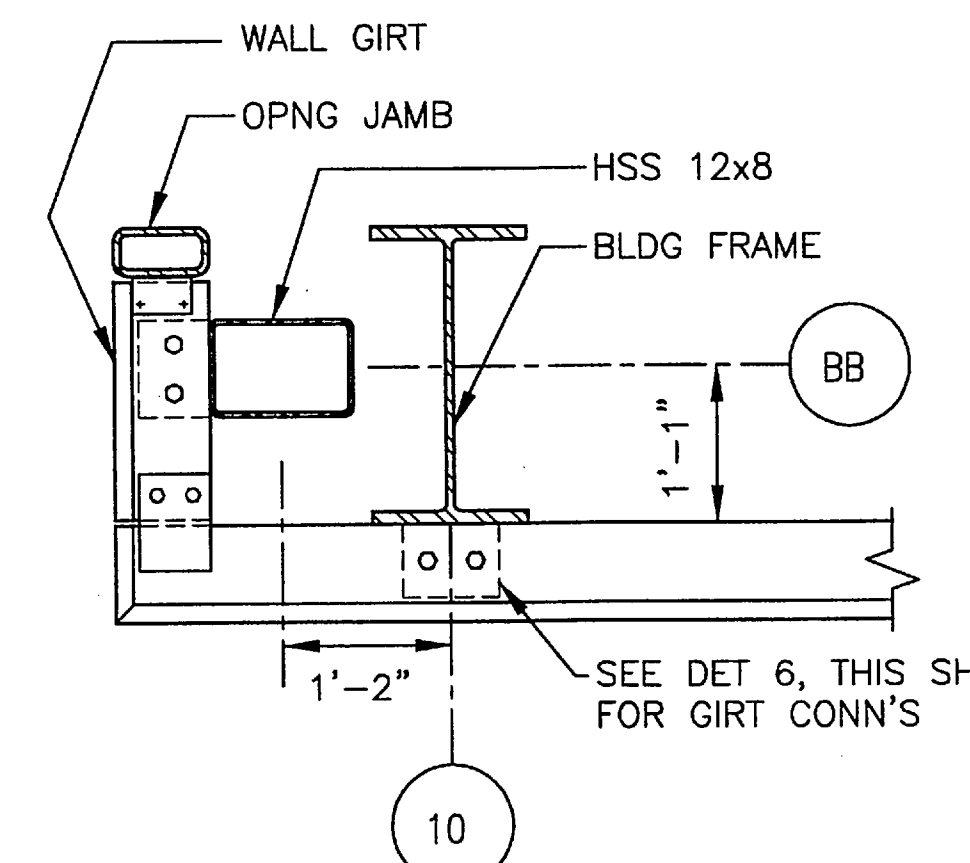
8 GIRT CONN @ GRID 4-AA
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9 LARGE OPENING FRAMING @ FLOOR
NTS



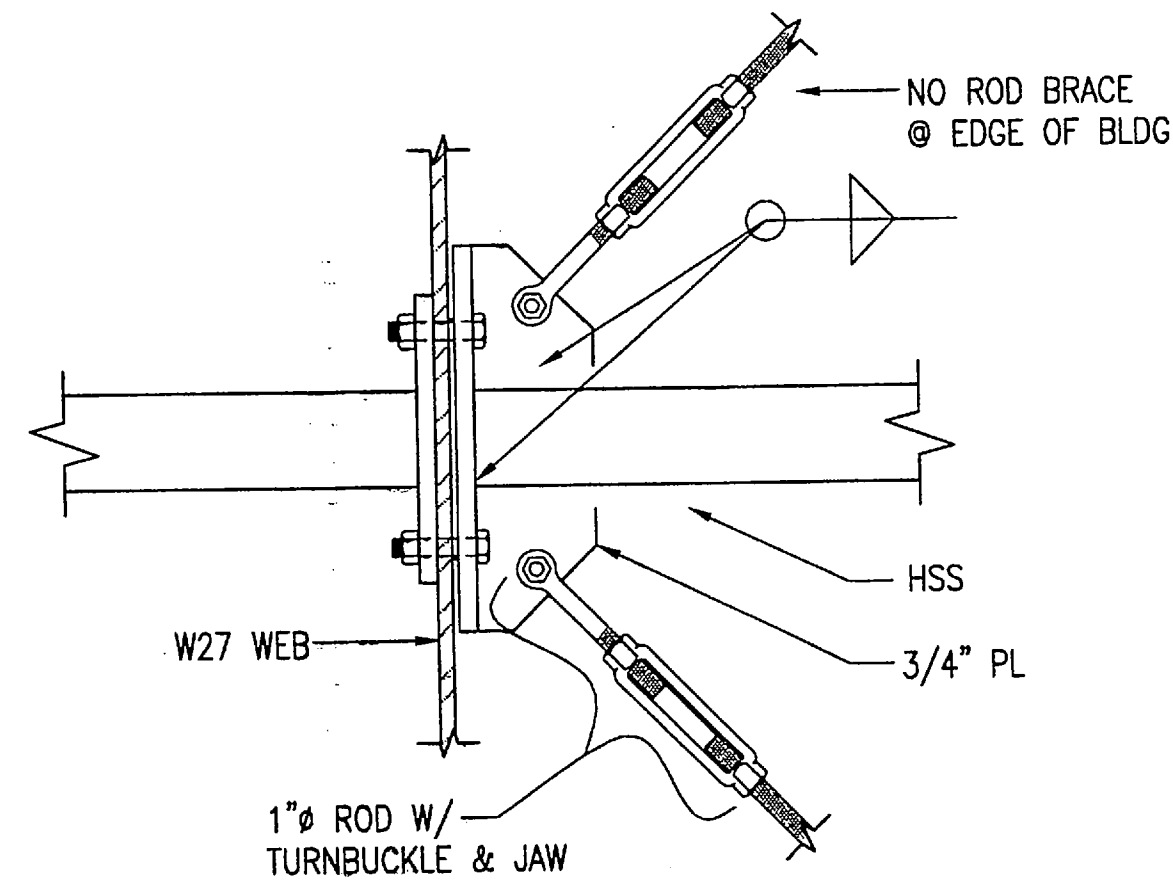
10 PERSONEL DOOR FRAME @ FLOOR
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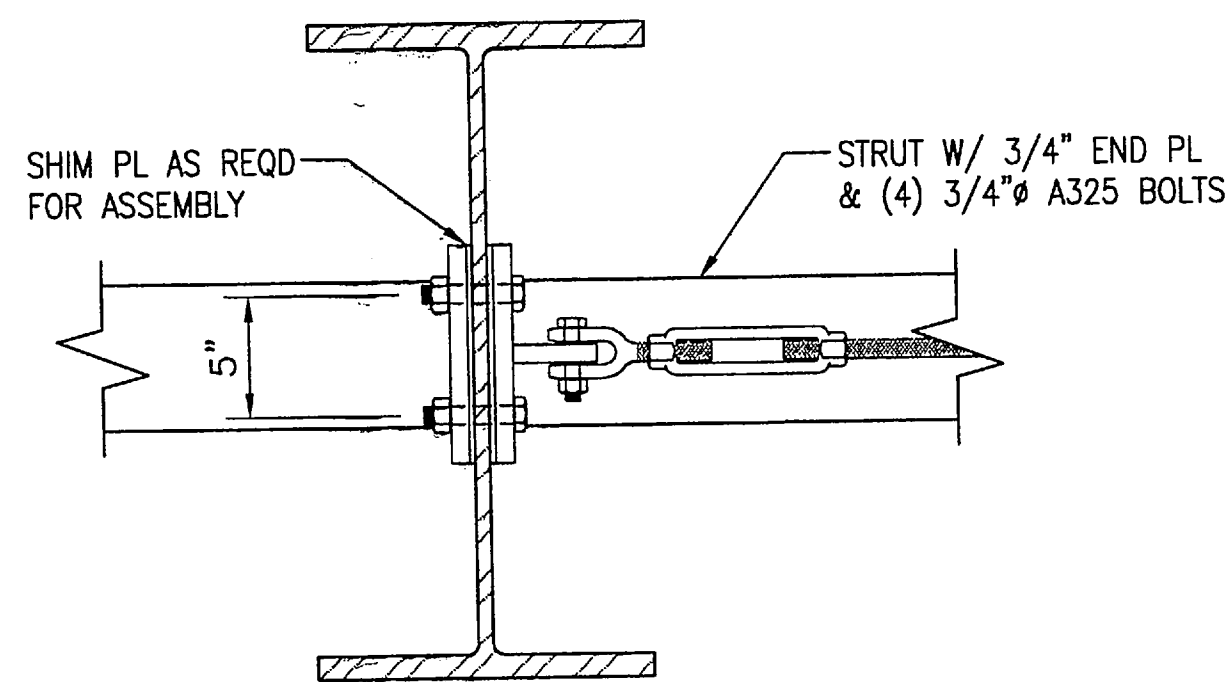
11 GIRT CONN @ GRID 10-BB
NTS

REV.	DATE	NATURE OF REVISION	BY	CHKD.	APPD.

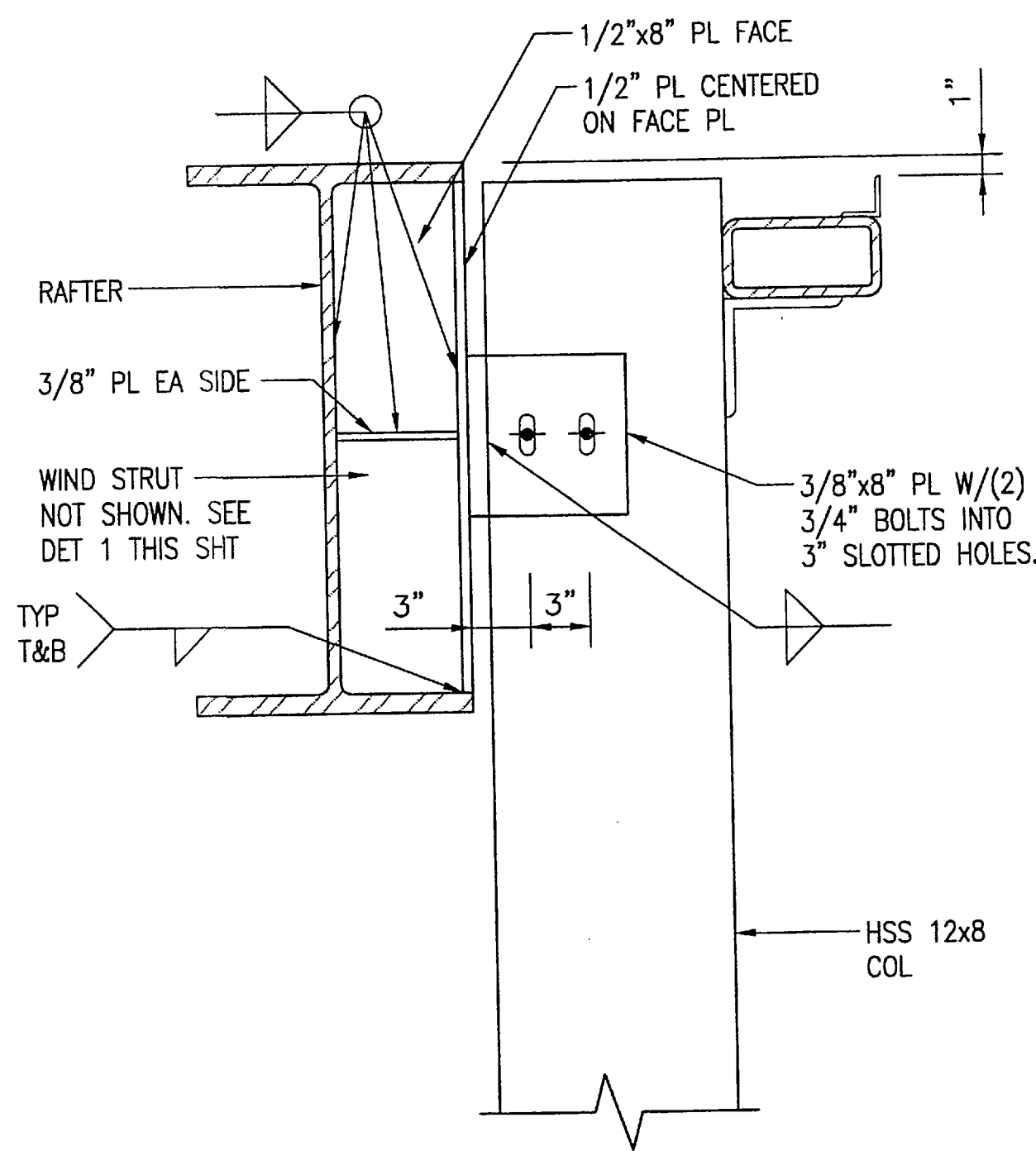
DESIGNED BY: DHA		DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS			
		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION			
		KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113 STRUCTURAL FRAMING DETAILS			
CHECKED BY: JKM DRAWN BY: MKA		PATH: Z:\project\1381.01\Acad\Structural\Acad\1381-S5.1.dwg PLOT: PSPACE 1=1(F)		Thu, 06/Jul/06 02:07PM TAB: DETAIL	
REVISIONS		PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO. DATE DESCRIPTION		TI-0003(116)	2006	S5.2	



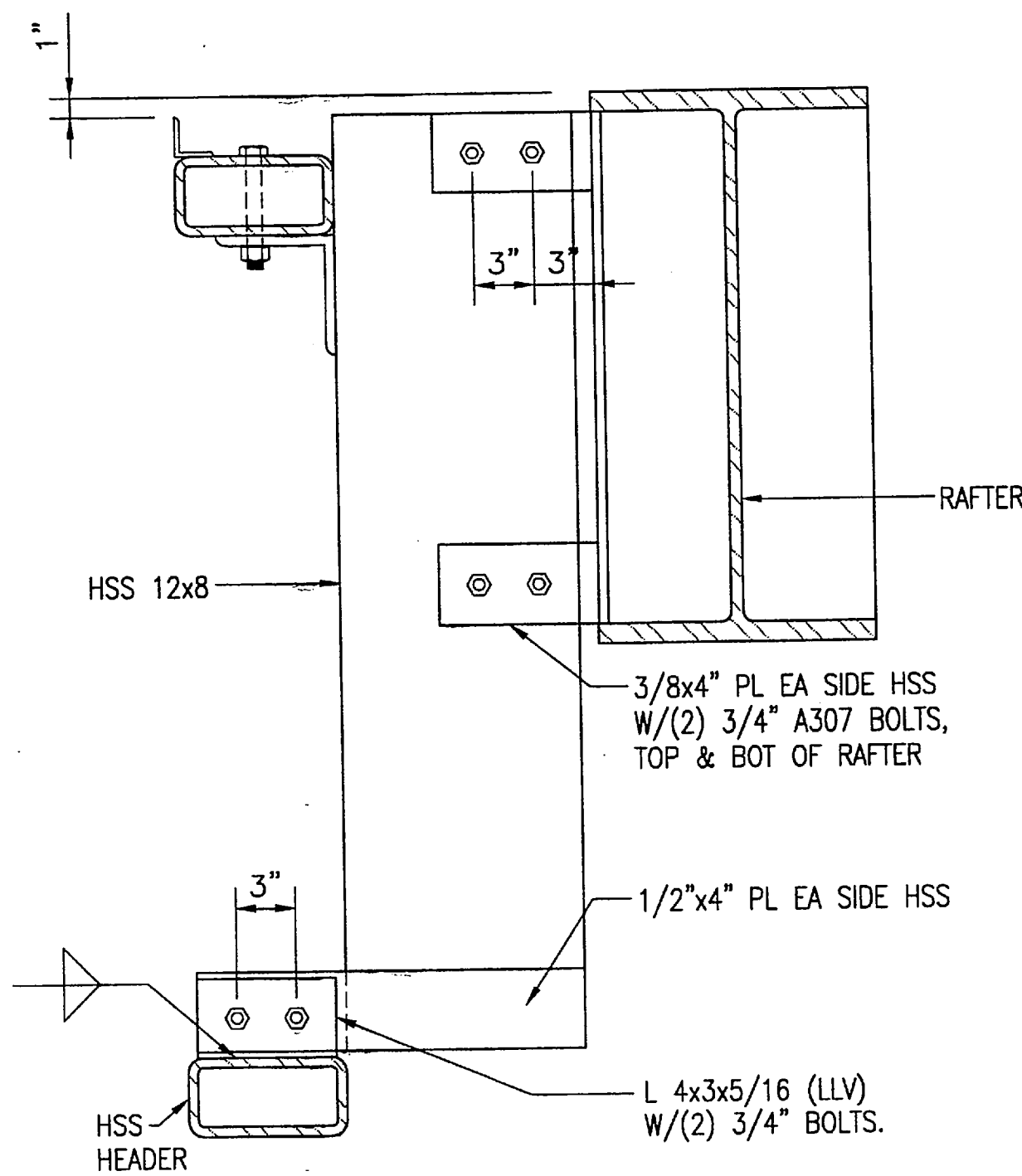
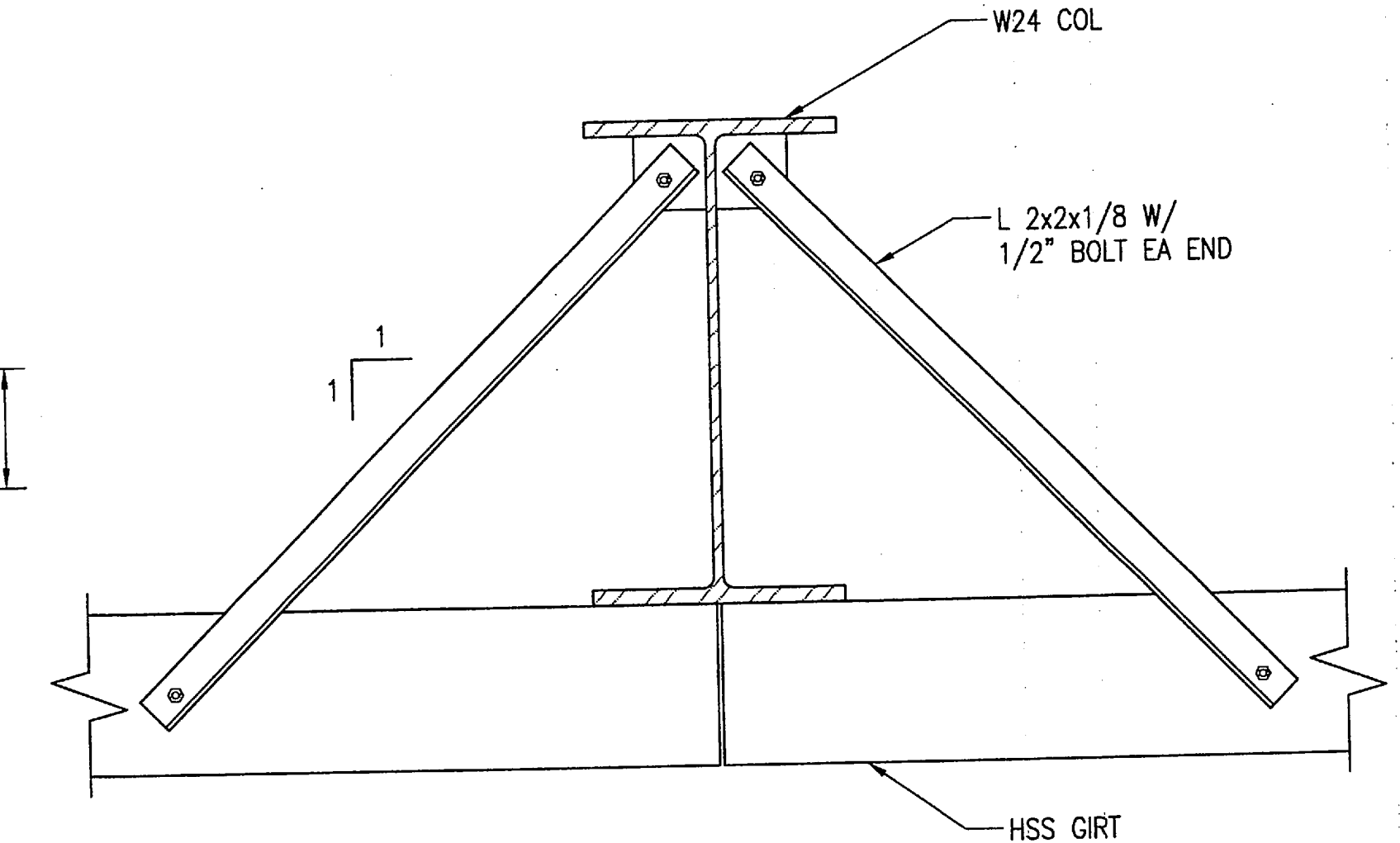
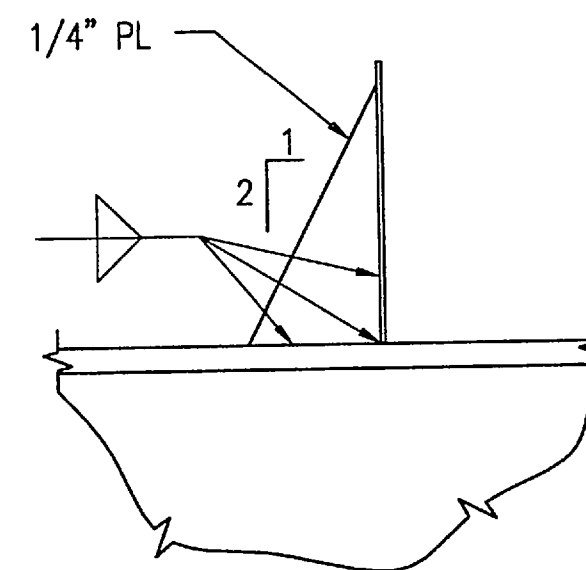
1 SECTION @ WIND STRUT
1-1/2" = 1'-0"



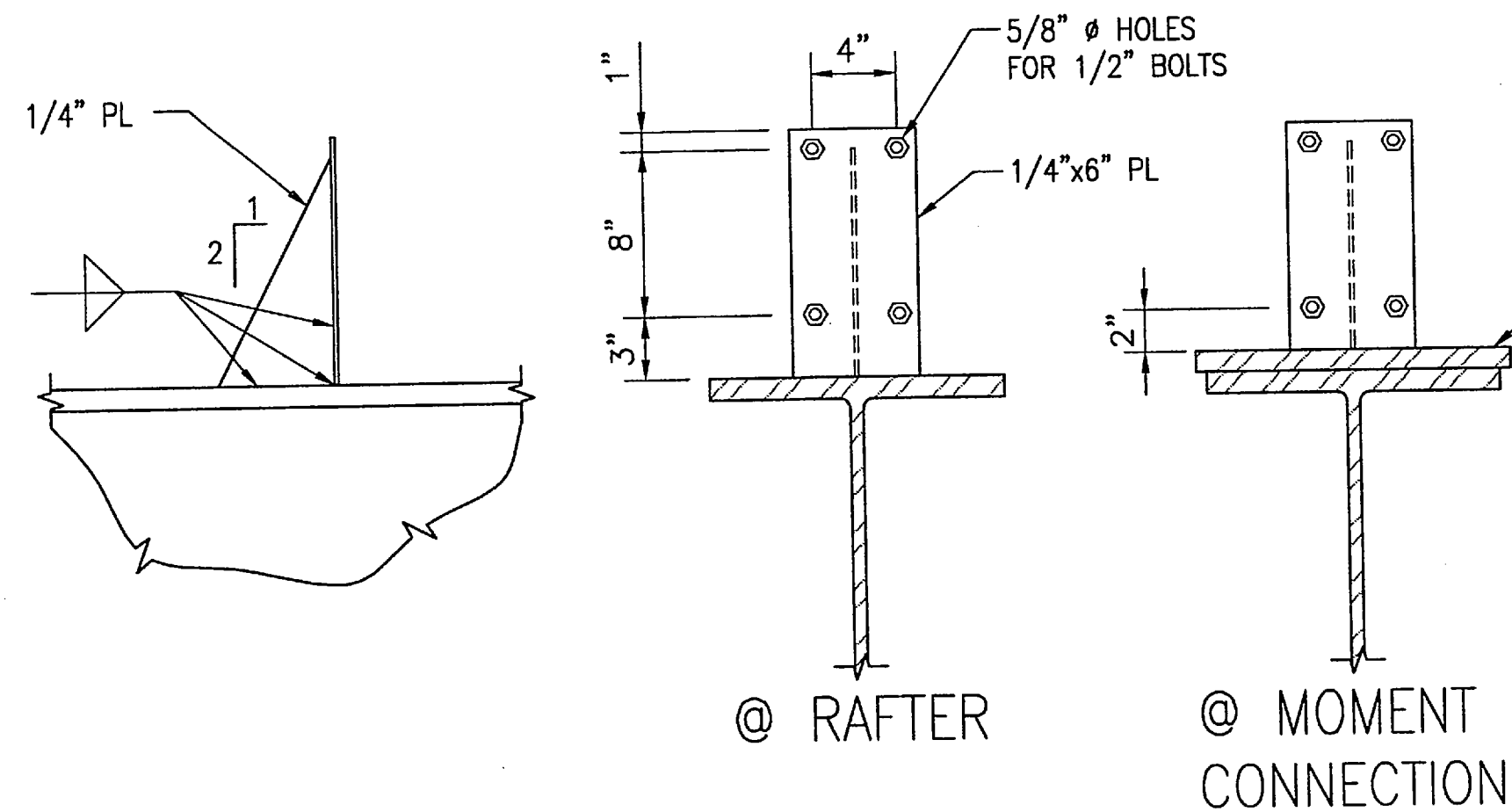
2 RAFTER TO END WALL CONNECTION
1-1/2" = 1'-0"



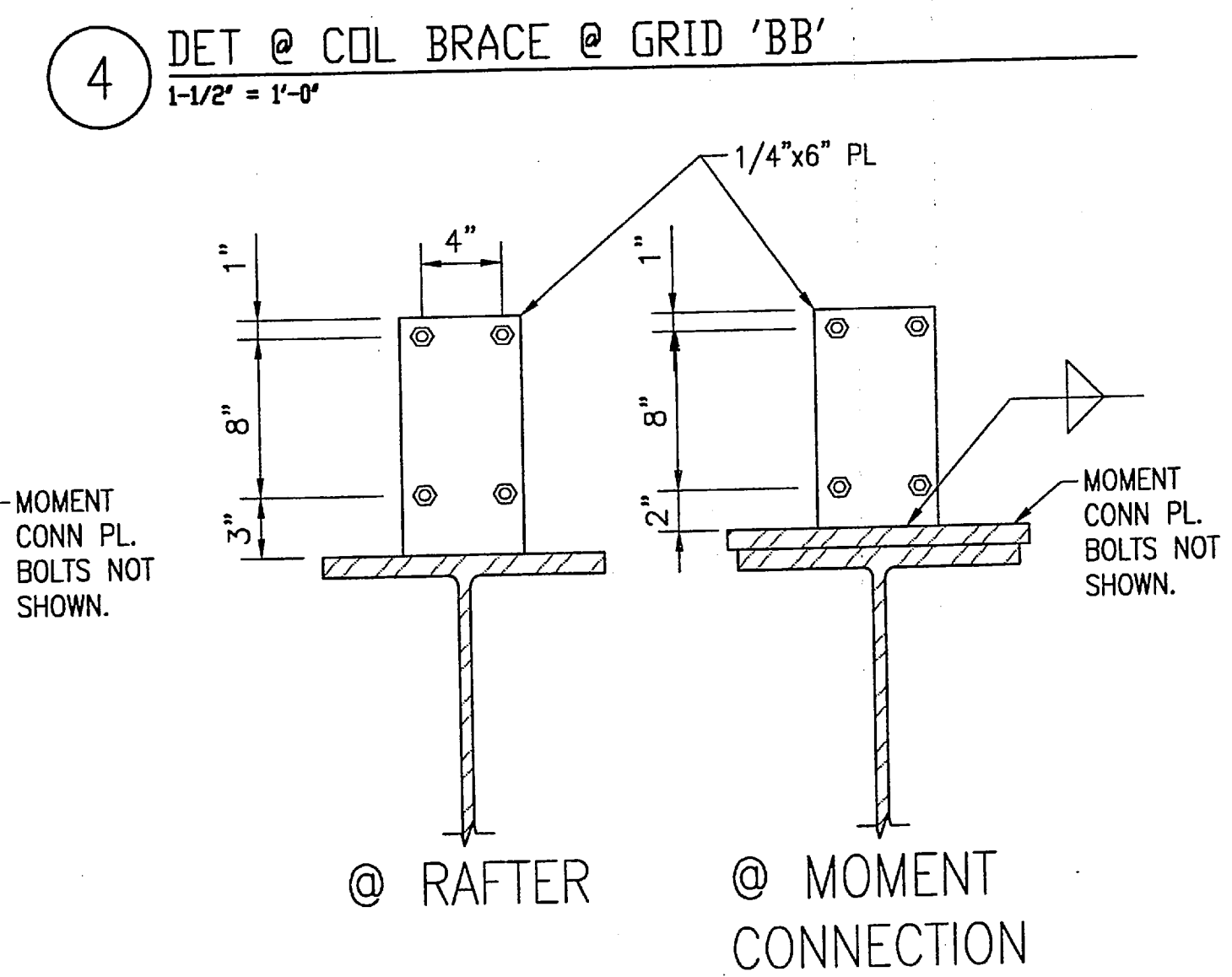
3 DET @ COL BRACE @ GRID 'AA'
1-1/2" = 1'-0"



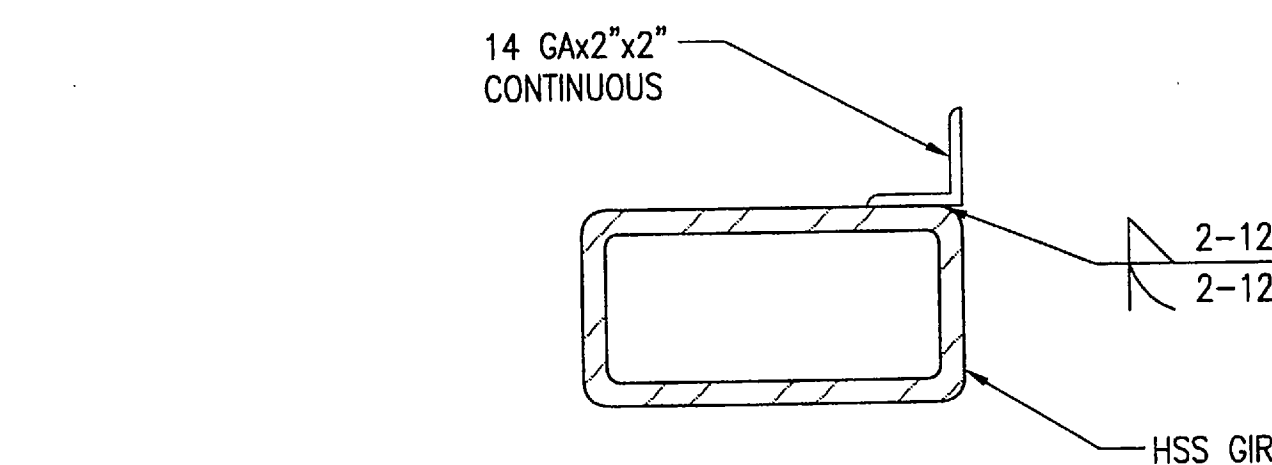
6 OPENING FRAMING DETAIL
1-1/2" = 1'-0"



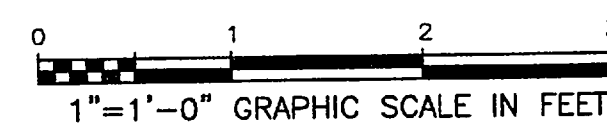
7 ANTI-ROLL PURLIN/RAFTER CONNECTION
1-1/2" = 1'-0"



8 PURLIN/RAFTER CONNECTION
1-1/2" = 1'-0"

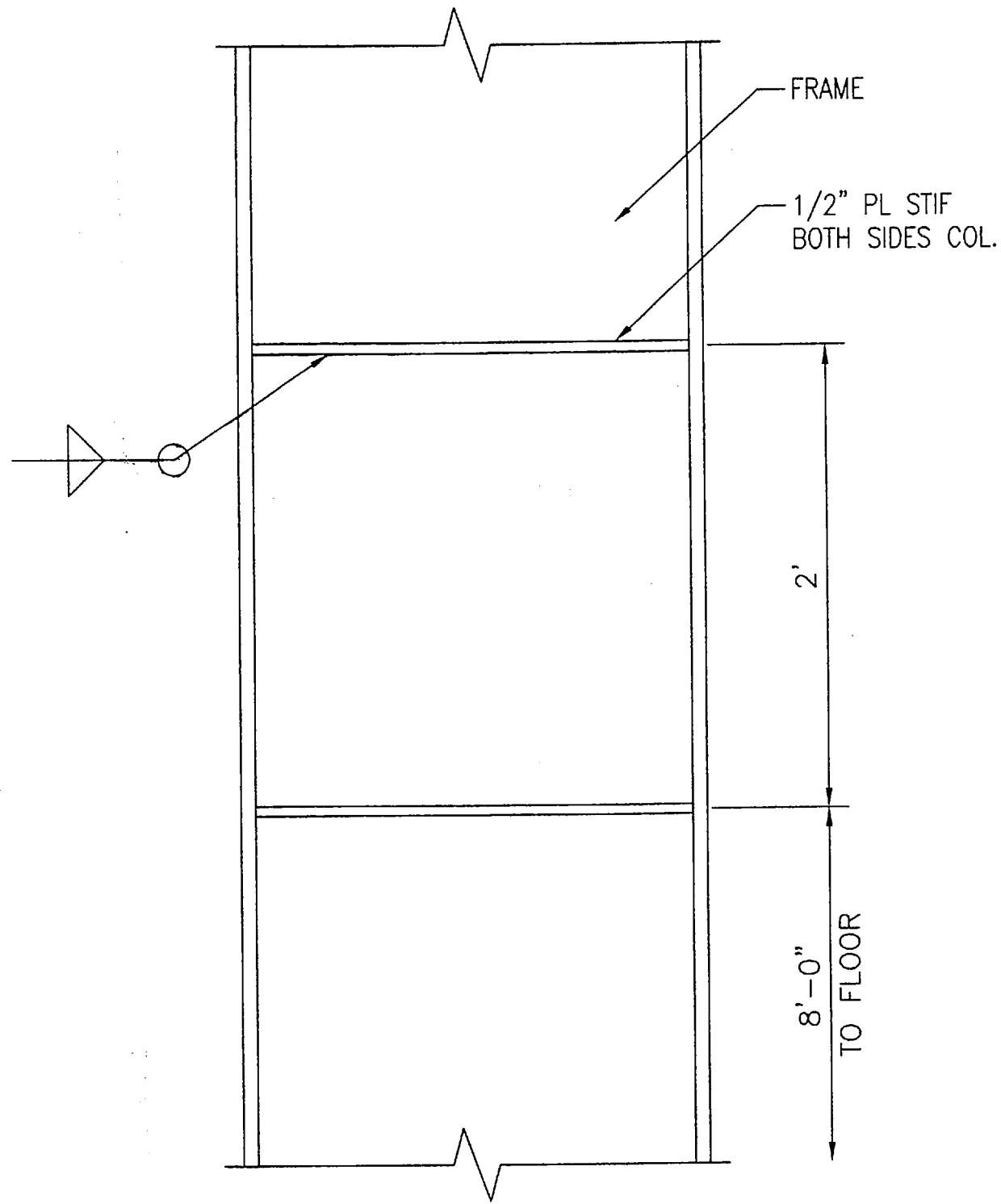


9 GIRTS SECTION
3" = 1'-0"

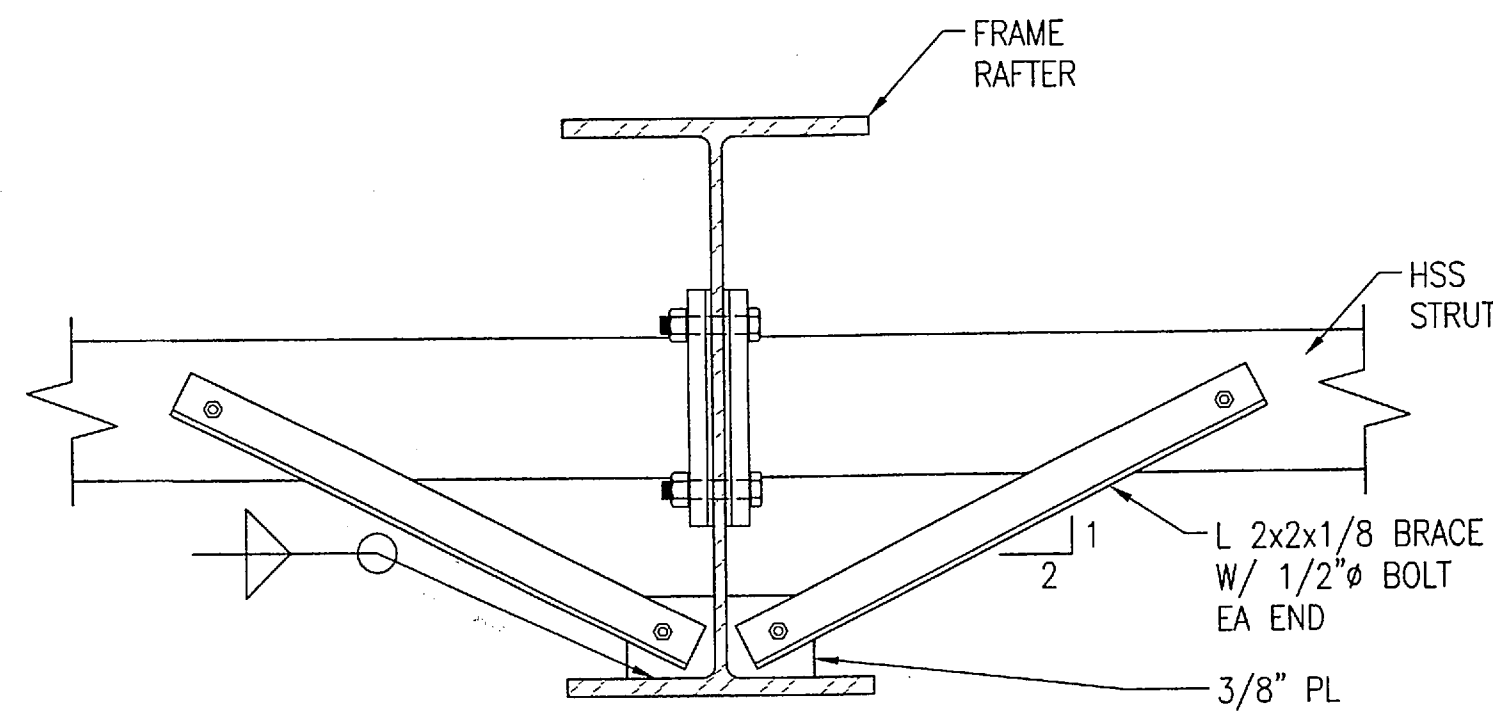


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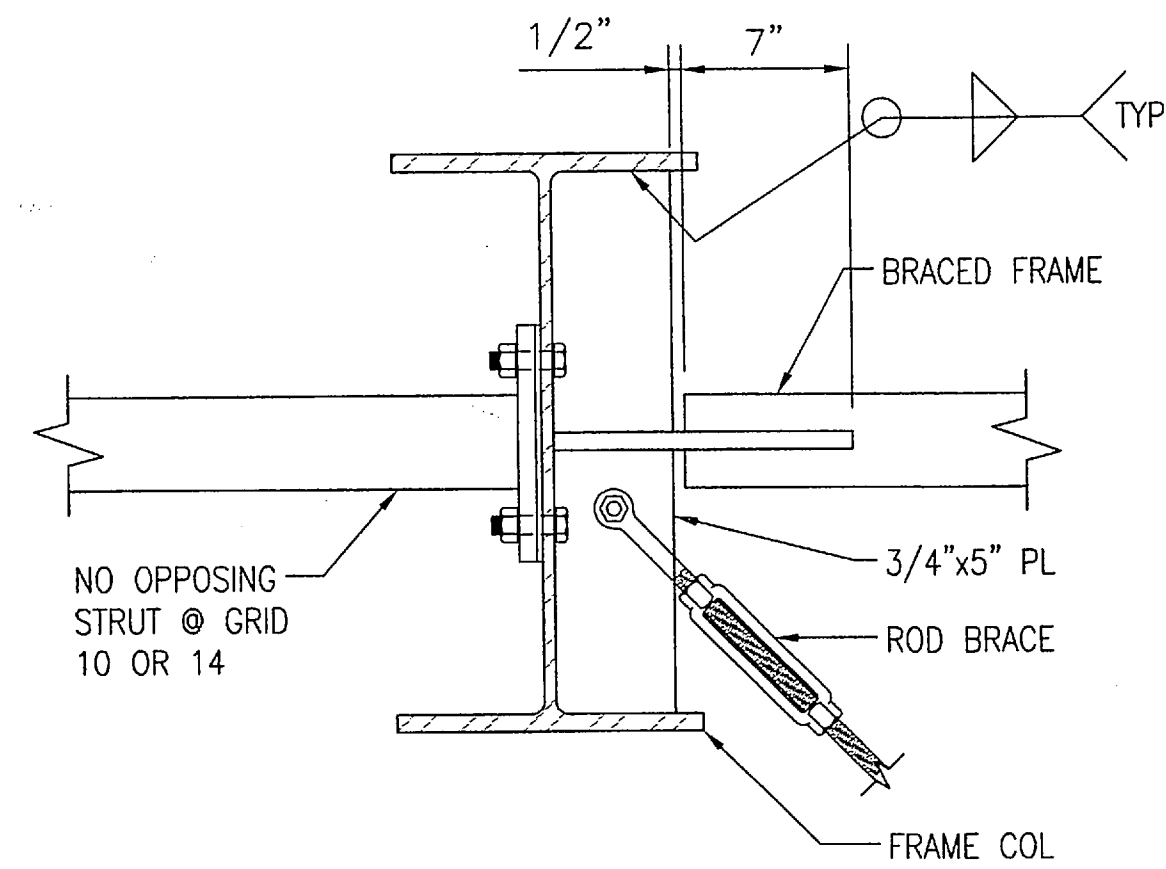
DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS																					
DESIGNED BY: DHA	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION																				
	KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113																				
PLANS PREPARED BY: R&M CONSULTANTS, INC.	STRUCTURAL BRACING DETAILS																				
CHECKED BY: JKM																					
DRAWN BY: PMH																					
PATH: Z:\project\1381.01\Acad_Structural\Acad\1381-S5.3.dwg	Thu, 06/Jul/06 12:11PM																				
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REVISONS			PROJECT DESIGNATION	YEAR					SHEET NO.	TOTAL SHEETS											
NO.	DATE	DESCRIPTION																			
			TI-0003(116)	2006	S5.3																
D.																					



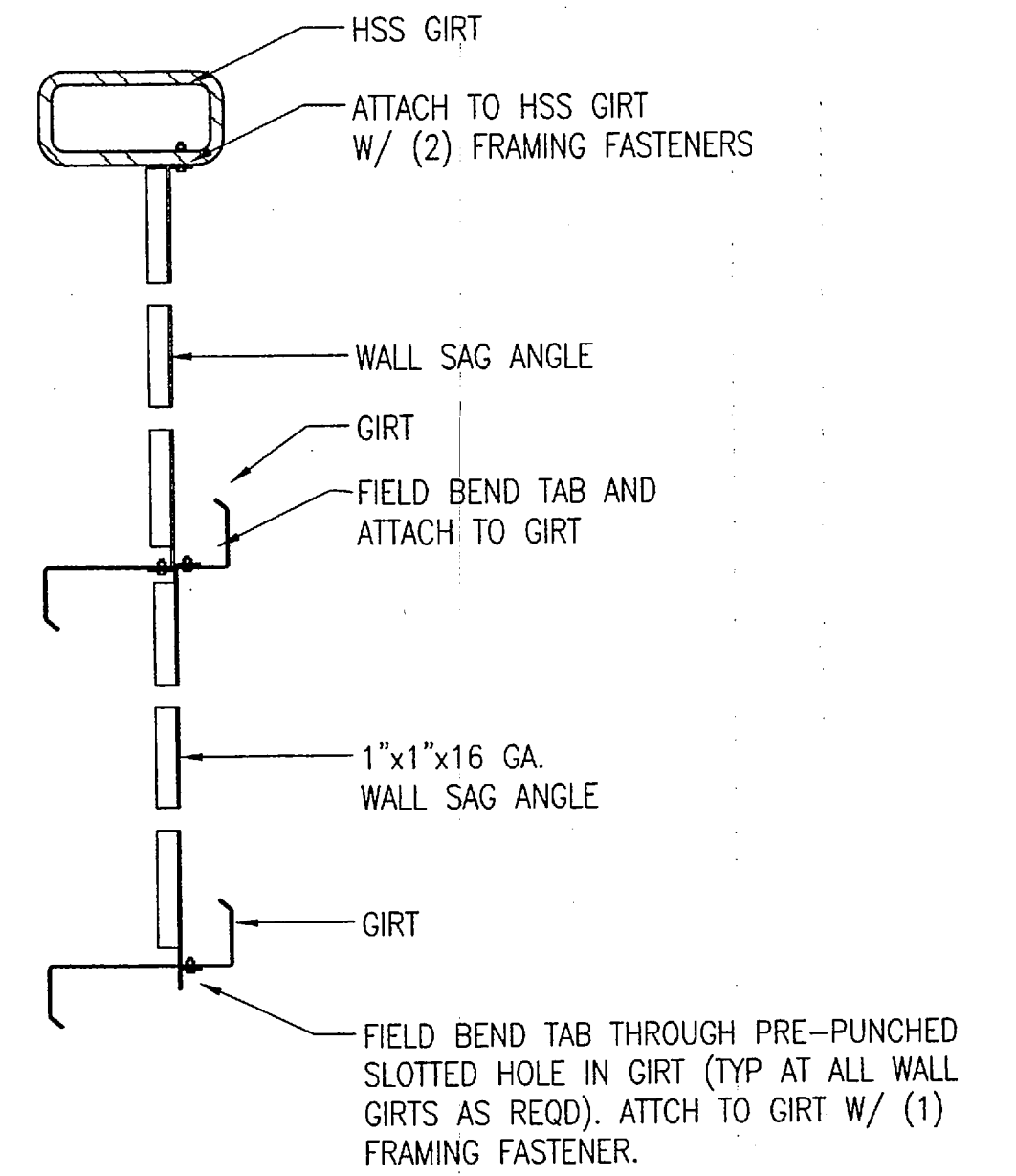
1 COL STIFFENER FOR OWNER JIB BOOM
1-1/2' = 1'-0"



2 RAFTER FLANGE BRACE
1-1/2' = 1'-0"



3 BRACE ROD CONN @ VERT BRACE
1-1/2' = 1'-0"



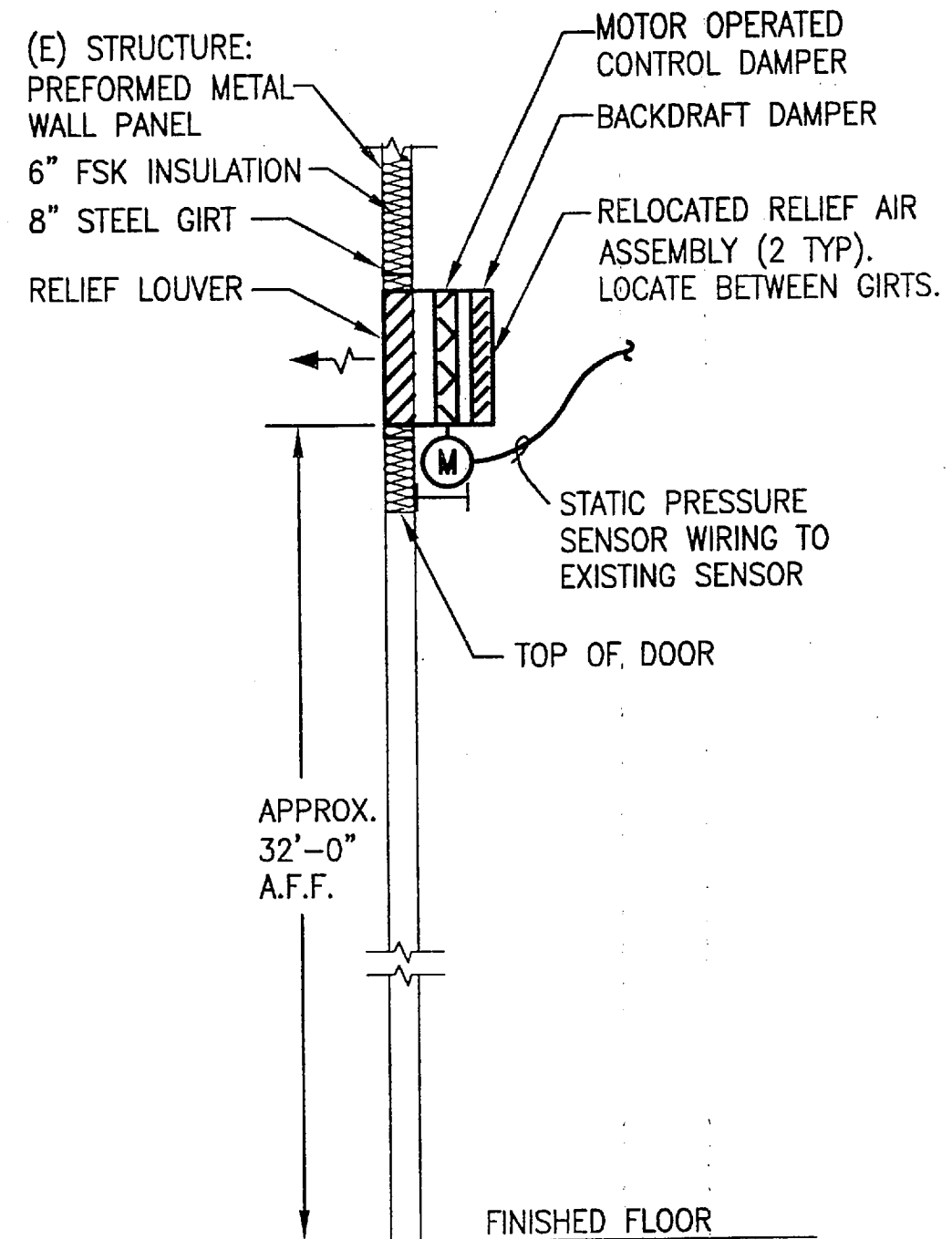
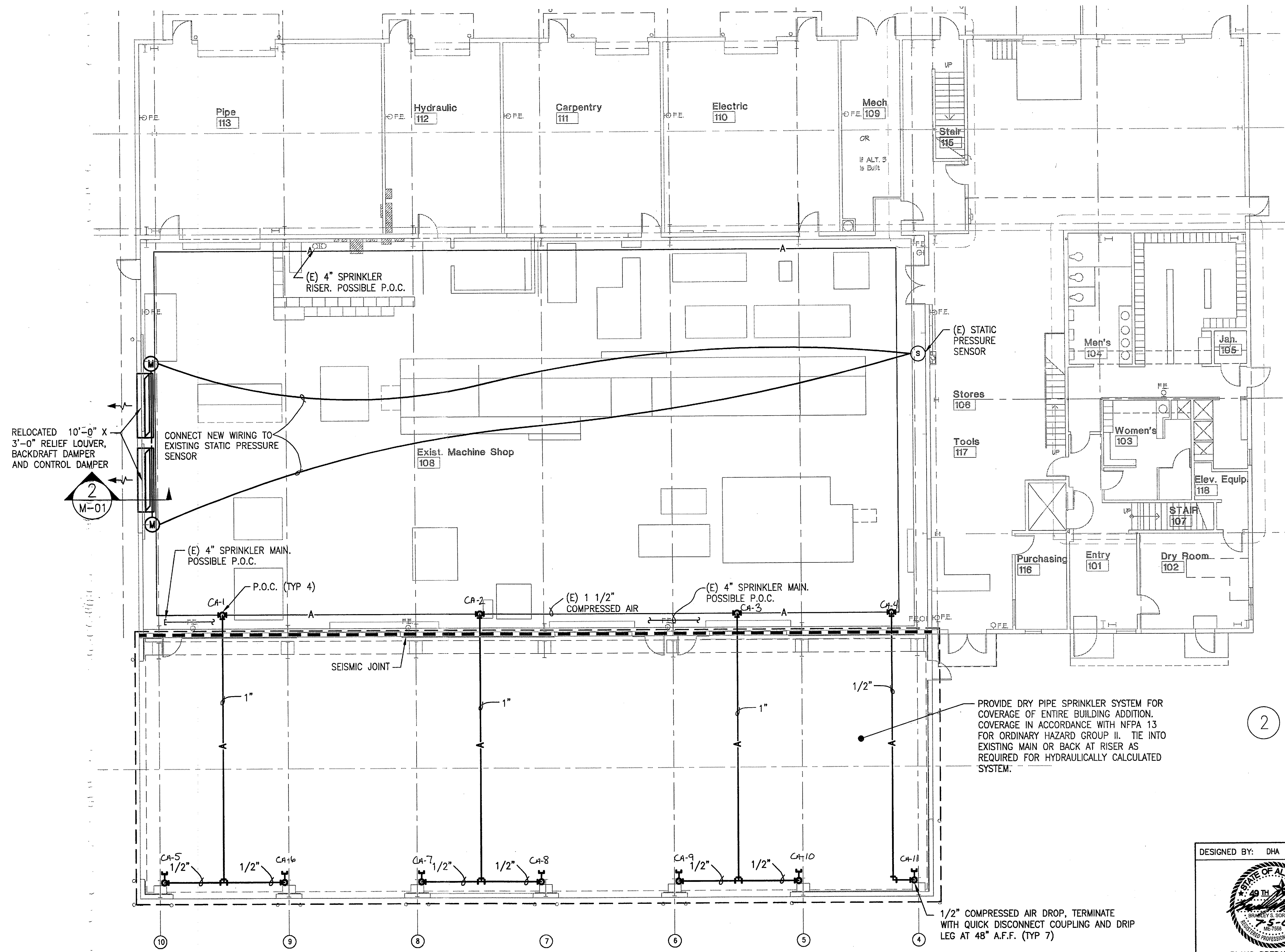
4 WALL SAG ANGLE DETAIL @ SIDEWALL
1-1/2' = 1'-0"



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DESIGNED BY: DHA		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION					
		KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113					
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				TI-0003(116)	2006	S5.4	

project\\115809\\civil\\115809-M.01, 1=96, 04/26/06 at 17:02 by mka



2 RELIEF SECTION
1/4" = 1'-0"

SEE ATTACHED PLAN SHEETS FP 1A & FP 2A

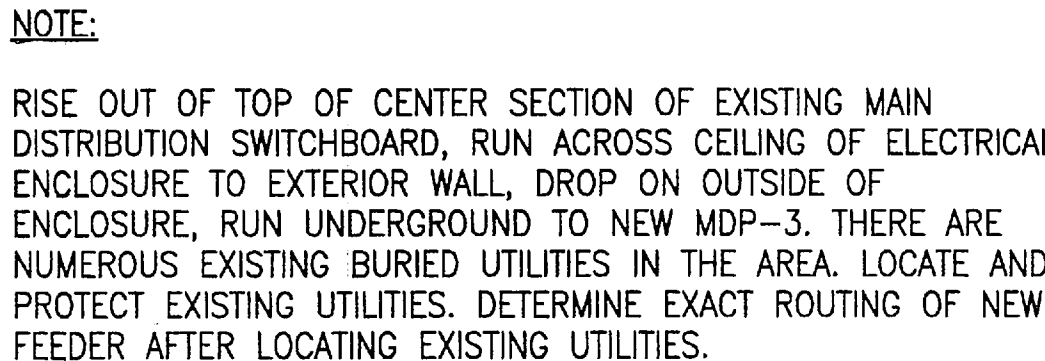
1 MECHANICAL FLOOR PLAN
1/8" = 1'-0"

Note: ALL VALVES ARE Red and White 600 psi.



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113			
		MECHANICAL FLOOR PLAN			
DESIGNED BY: DHA		PLANS PREPARED BY: MBA CONSULTING ENGINEERS, INC.		CHECKED BY: BSS DRAWN BY: TC	
PATH: G:\06022KSA-Ketchikan Shipyard Add\M-Working\115809-M.01.dwg		PLOT: PSPACE 1=1(F)		Wed, 05/Jul/06 09:55AM TAB: DETAIL	
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NO. DATE		DESCRIPTION		PROJECT DESIGNATION TI-0003(116)	
YEAR		SHEET NO. M-01		TOTAL SHEETS	



•	•	•		•	•
REV.	DATE	NATURE OF REVISION		BY	CHKD. APPD.

THIS IS A STANDARD LEGEND, ALL SYMBOLS SHOWN ON LEGEND ARE NOT
NECESSARILY ON THE DRAWING(S).

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION
KETCHIKAN SHIPYARD
MACHINE SHOP EXTENSION
PROJECT NO. 69113

ELECTRICAL SITE PLAN

DESIGNED BY: REA

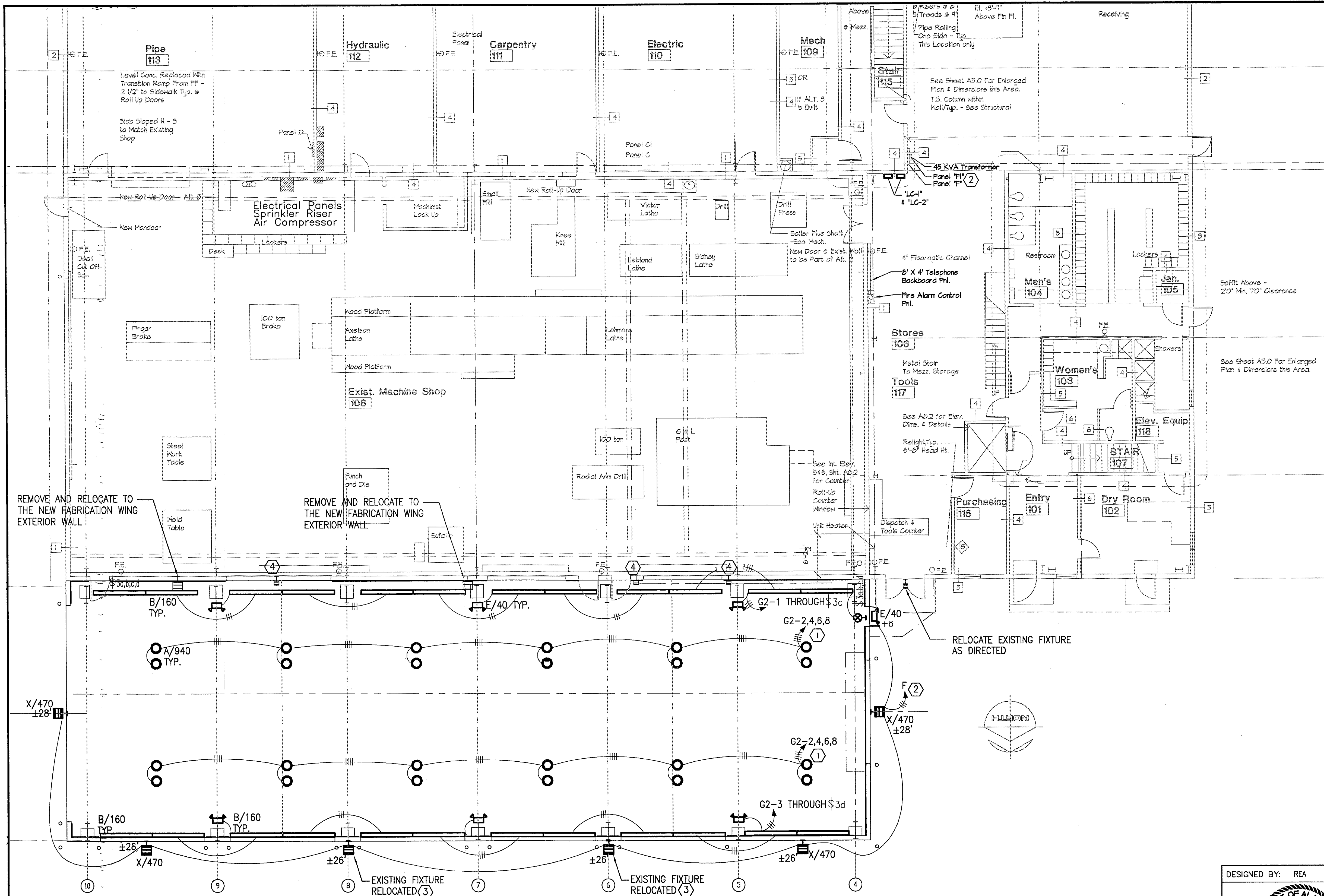


PLANS PREPARED BY:
MBA CONSULTING ENGINEERS, INC.

CHECKED BY: GWB
DRAWN BY: SNS

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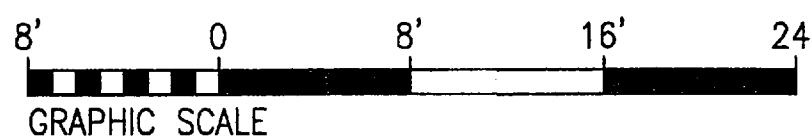
project\\1158.09\\civil\\115809-E.01, 1=96, 04/26/06 at 16:59 by mka



- NOTES:
- 1 THROUGH CONTACTOR. SEE LIGHTING CONTROL DIAGRAM
 - 2 PROVIDE NEW 20/1 CIRCUIT BREAKER IN EXISTING PANEL F. CONNECT NEW EXTERIOR LIGHTS THROUGH SPARE CONTACT IN EXISTING EXTERIOR LIGHTING CONTROL CONTACTOR. CONNECT EMERGENCY LIGHT TO UNSWITCHED CONDUCTOR.
 - 3 PROVIDE NEW WALL MOUNTING BRACKET.
 - 4 REMOVE AND SAVE, HANDOVER TO THE OWNER.
5. ALL WIRING FOR 20A CIRCUITS TO BE MIN; #10 CONDUCTOR.

1 FIRST FLOOR LIGHTING PLAN

1/8" = 1'-0"



DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: REA

STATE OF ALASKA
49th
Michael J. Love
MICHAEL J. LOVE
7/15/2005
EE-5818
REGISTERED PROFESSIONAL ENGINEER

PLANS PREPARED BY:
MBA CONSULTING ENGINEERS, INC.

CHECKED BY: GWB
DRAWN BY: SNS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION
KETCHIKAN SHIPYARD
MACHINE SHOP EXTENSION
PROJECT NO. 69113

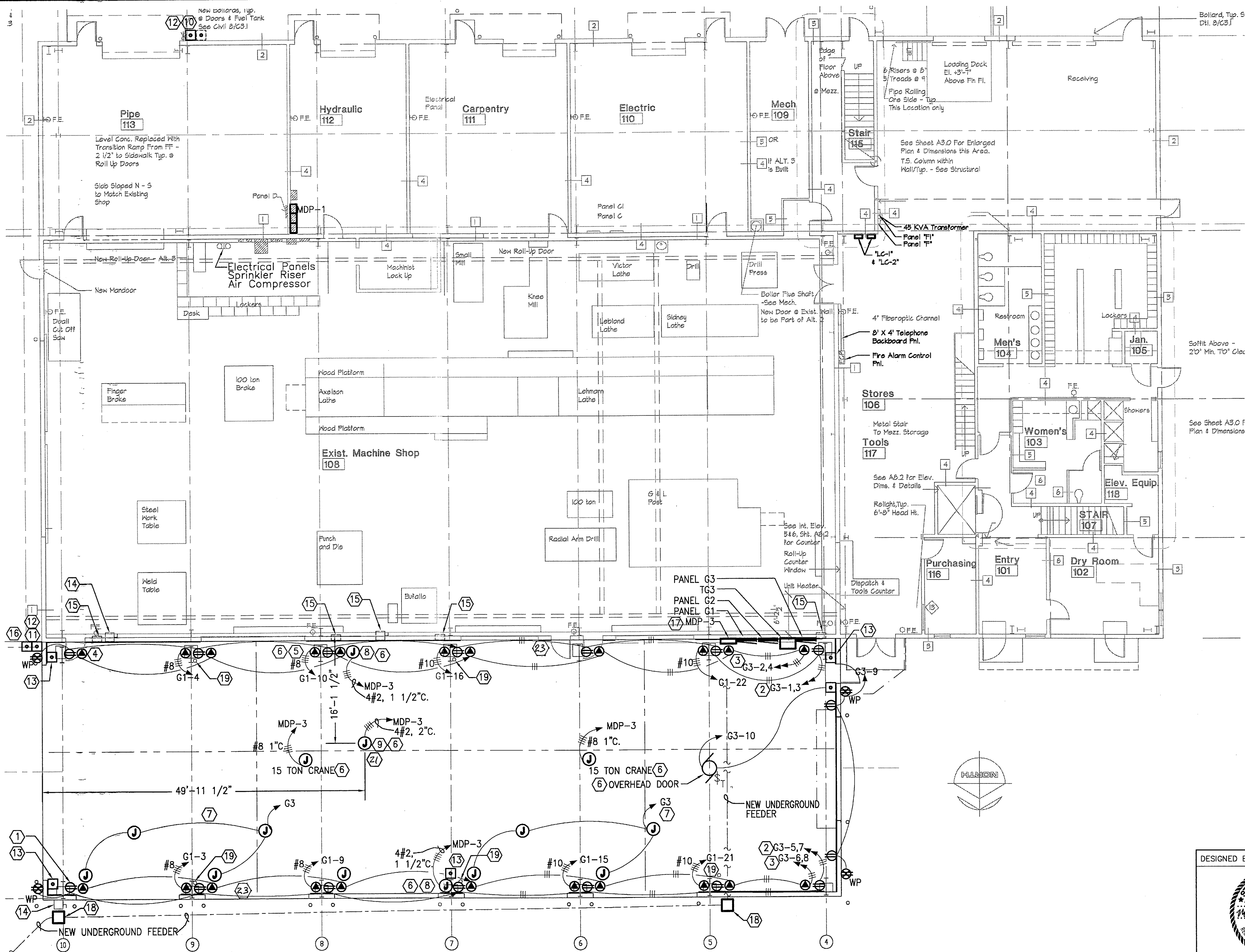
ELECTRICAL LIGHTING PLAN

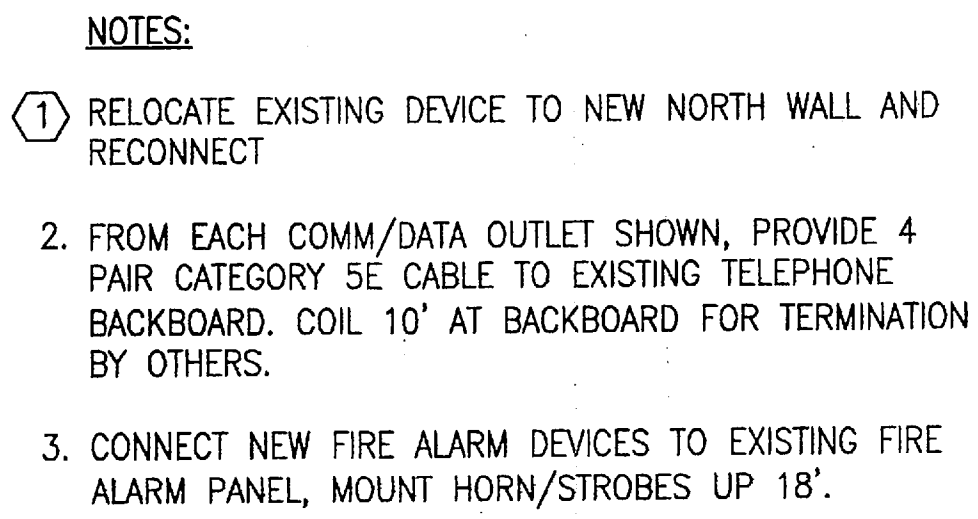
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			PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			TI-0003(116)	2006	E.02	

project\\115809-01\\civil\\115809-E.01, 1=96, 04/26/06 at 16:59 by mka



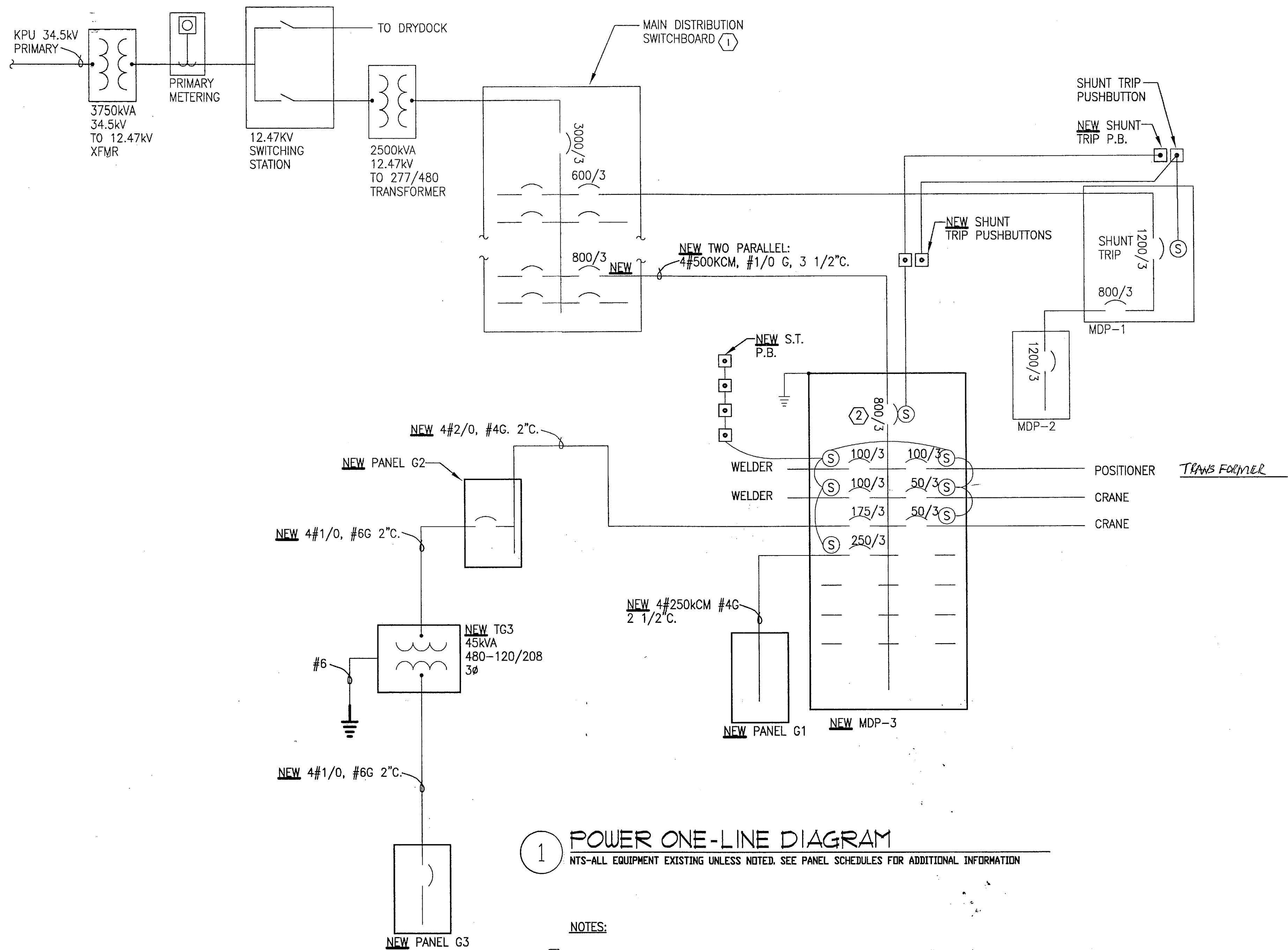


SEE ATTACHED SHEETS 00, 01, & 03R.

----- SWING TIE
 _____ CONDUIT RUN (POWER)
 BURIED IN GRADE.

DESIGNED BY: REA		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC UTILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113				
 PLANS PREPARED BY: MBA CONSULTING ENGINEERS, INC.		ELECTRICAL SPECIAL SYSTEMS PLAN				
CHECKED BY: GWB						
DRAWN BY: SNS						
PATH: G:\06022KSA-Ketchikan Shipyard Add\E-Working\06022_E.04.dwg PLOT: PSPACE 1=1(F)		Wed, 05/Jul/06 04:55PM TAB: DETAIL				
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NO.	DATE	DESCRIPTION	TI-0003(116)	2006	E.04	

					CHECKED BY: GWS DRAWN BY: SNS		SPECIAL SYSTEMS PLAN				
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REV.	DATE	NATURE OF REVISION			BY	CHKD.	APPD.	TI-0003(116)	2006	E.04	



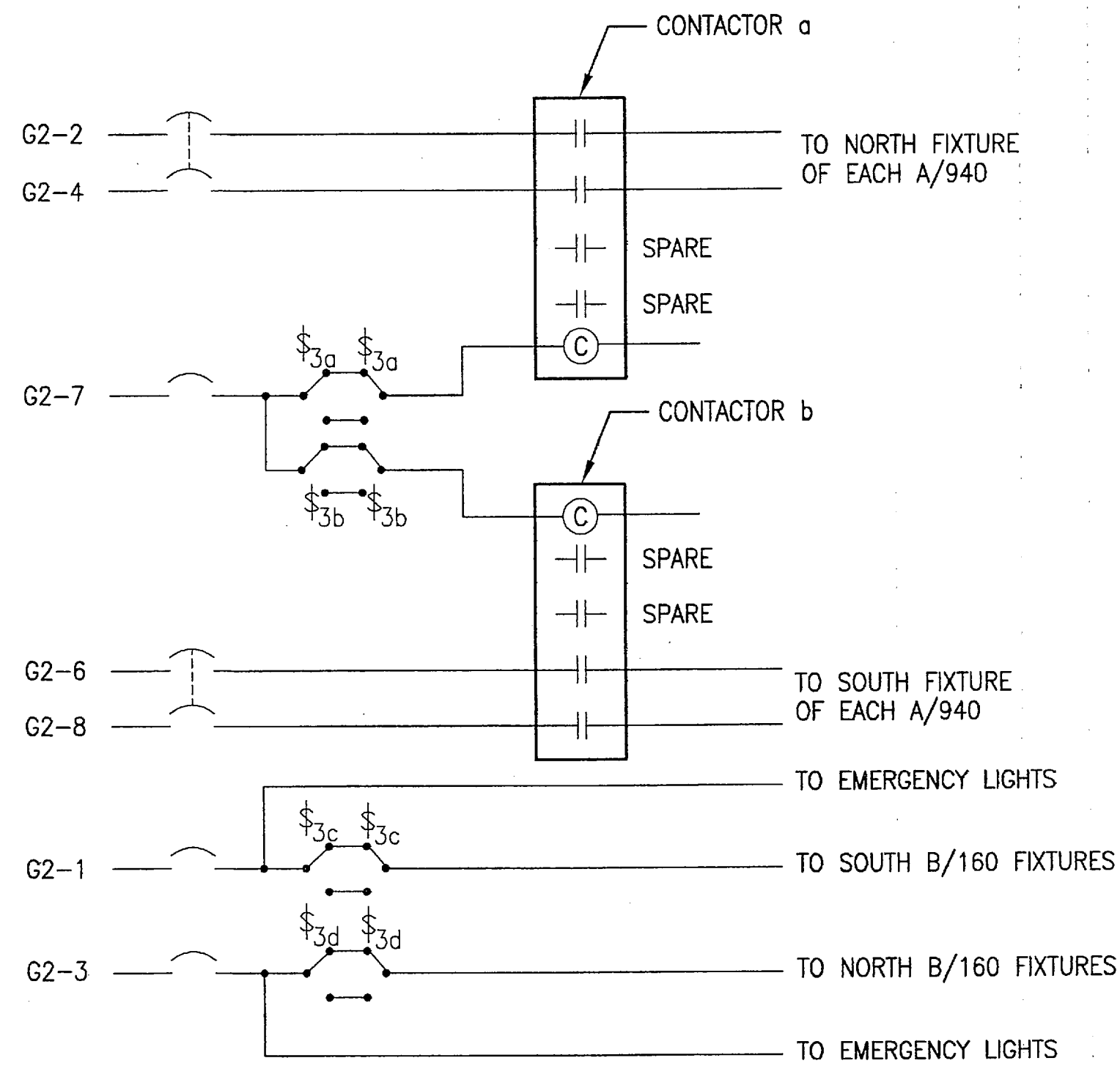
1 POWER ONE-LINE DIAGRAM
NTS-ALL EQUIPMENT EXISTING UNLESS NOTED. SEE PANEL SCHEDULES FOR ADDITIONAL INFORMATION

NOTES:

- 1 MAIN DISTRIBUTION SWITCHBOARD IS A G.E. TYPE AV-2, ORDER #179-59890N1. PROVIDE NEW G.E. TYPE THKMA 800AMP CIRCUIT BREAKER WITH 35,000 A.I.C. LOCATE IN LOWER PORTION OF MIDDLE SWITCHBOARD SECTION.
- 2 ADJUST MAIN BREAKER IN MDP-3 TO TRIP BEFORE 800 AMP BREAKER IN MAIN DISTRIBUTION SWITCHBOARD.

HIGHEST KPU 12 MONTH MEASURED DEMAND AT PRIMARY METER: 1638kVA
ADDED LOAD: 356kVA
TOTAL PRIMARY LOAD: 1994kVA

HIGHEST LOAD MEASURED BY ASD AT 3000 AMP MAIN IN MDS : 878kVA
ADD FOR SHIP LOADS NOT IN USE DURING MEASUREMENTS 665kVA
1543kVA
1543kVA X 1.25 (NEC 220.87(2)) = 1929kVA
ADDED LOAD 356kVA
2285kVA=2749AMPS AT MDS.



2 INTERIOR LIGHTING CONTROL DIAGRAM
NTS

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

DESIGNED BY: REA	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113						
	ELECTRICAL ONE-LINE DIAGRAMS						
PLANS PREPARED BY: MBA CONSULTING ENGINEERS, INC.							
CHECKED BY: GWB							
DRAWN BY: SNS							
PATH: G:\06022KSA-Ketchikan Shipyard Add\E-Working\06022_E.05.dwg		Wed, 05/Jul/06 04:55PM					
PLOT: PSPACE 1=1(F)		TAB: DETAIL					
REV. DATE NATURE OF REVISION BY CHKD. APPD.		REVISIONS		PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
		NO. DATE DESCRIPTION		TI-0003(116)	2006	E.05	

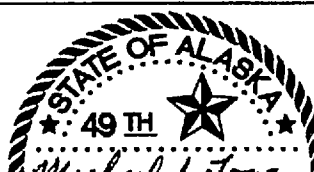
277/480 VOLTS		3 PH	4 WIRE	800 AMP	2200 AIC		
CIRCUIT DESCRIPTION	KVA	AMP	CKT	CKT	AMP	KVA	CIRCUIT DESCRIPTION
SPACE		100	1	2	100		SPACE
SUBARC WELDER (1) " SPACE	66.5	19	3	4	19	31.9	POSITIONER (1) " "
SUB ARC WELDER " SPACE		13	5	6	3		
SUBARC WELDER (1)	66.5	100	7	8	100	16.7	15 TON CRANES
"			9	10	/		15 TON CRANE (1) " "
SUB ARC WELDER		3	11	12	3		
PANEL G2 " "	39.9	100	13	14	50	16.7	POSITIONER
" " " "		13	15	16	/		15 TON CRANE (1) " "
" " " "		13	17	18	3		
PANEL G2		175	19	20	50		SPARE (50 AMP)
PANEL G1 (1) " "	~~179.2~~	1	21	22	"		"
" " " "		3	23	24	"		"
SPACE PANEL G1	179.2	250	25	26			SPACE
SPACE " " "		/	27	28			SPACE
SPACE " " "		/	29	30			SPACE
SPACE MAIN Disconnect		800	31	32			SPACE
SPACE " " "		/	33	34			SPACE
SPACE " " "		/	35	36			SPACE
SPACE " " "		/	37	38			SPACE
SPACE " " "		/	39	40			SPACE
SPACE " " "		/	41	42			SPACE
CONNECTED LOAD:	417.4 KVA	502.3 A	REMARKS: SHUNT TRIP SQUARE D FULL FUNCTION				
DEMAND LOAD:	351.9 KVA	423.5 A	MICROLOGIC MAIN BREAKER				
DEMAND + CONT.	356.3 KVA	428.8 A	(1) SHUNT TRIP BREAKER				
DATE:	PROVIDE PM820 POWER METER ON MAIN						
REV:							

277/480 VOLTS		3 PH		4 WIRE		225 AMP		22000 AIC	
CIRCUIT DESCRIPTION		KVA	AMP	CKT	CKT	AMP	KVA	CIRCUIT DESCRIPTION	
FLUORESCENT LIGHTS	1.9		20 1/2	1	2	20/	5.6	METAL HALIDE LIGHTS	
FLUORESCENT LIGHTS	1.9		20 1/2	3	4	/2			
SPARE			20 1/2	5	6	20/	5.6	METAL HALIDE LIGHTS	
~~4000 LIGHTING CONTROL SPARE~~	0.1		20 1/2	7	8	/2			
SPARE			20 1/2	9	10	20/		SPARE	
SPARE			20 1/2	11	12	/2		"	
SPARE			125	13	14			SPARE	
PANEL G3 TRANSFORMER	22.2		/	15	16			SPARE	
			3	17	18			SPARE	
SPACE				19	20			SPACE	
SPACE				21	22			SPACE	
SPACE				23	24			SPACE	
SPACE				25	26			SPACE	
SPACE				27	28			SPACE	
SPACE				29	30			SPACE	
SPACE				31	32			SPACE	
SPACE				33	34			SPACE	
SPACE				35	36			SPACE	
SPACE				37	38			SPACE	
SPACE				39	40			SPACE	
SPACE				41	42			SPACE	
CONNECTED LOAD:	37.3	KVA	44.9	A	REMARKS:				
DEMAND LOAD:	37.3	KVA	44.9	A					
DEMAND + CONT.	41.1	KVA	49.4	A					
DATE:									
REV:									

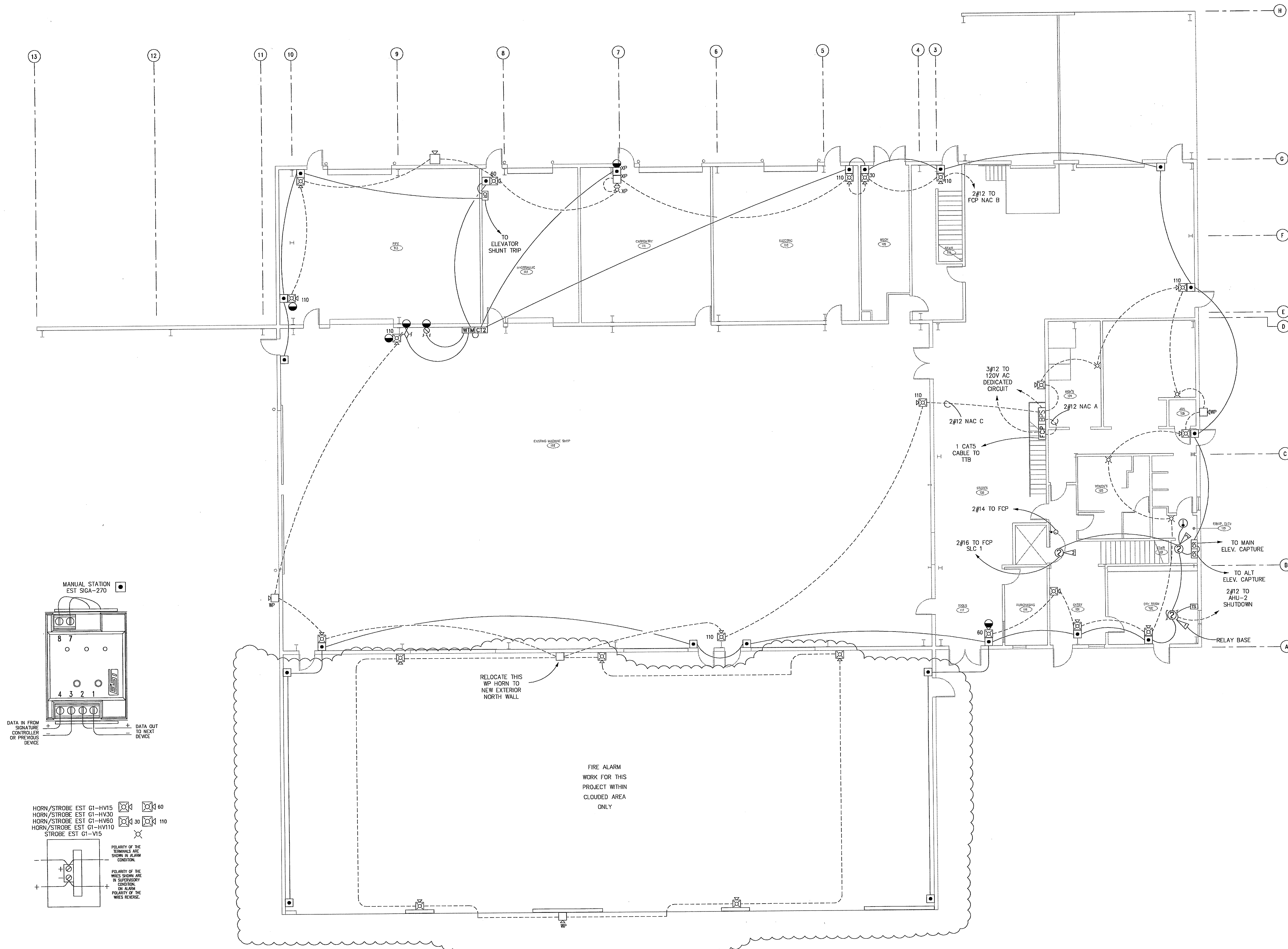
277/480 VOLTS		3 PH		4 WIRE		250 AMP		22000 AIC	
CIRCUIT DESCRIPTION		KVA	AMP	CKT	CKT	AMP	KVA	CIRCUIT DESCRIPTION	
XMT 465 WELDER		22.4	30	1	2	30	22.4	XMT 465 WELDER	
			3	3	4	3			
			3	5	6	3			
XMT 465 WELDER		22.4	30	7	8	30	22.4	XMT 465 WELDER	
			/	9	10	/			
			3	11	12	3			
XMT 465 WELDER		22.4	30	13	14	30	22.4	XMT 465 WELDER	
			/	15	16	/			
			3	17	18	3			
			30	19	20	30			
XMT 465 WELDER		22.4	/	21	22	/	22.4	XMT 465 WELDER	
			3	23	24	3			
SPACE WELDER		60	25	26	60			SPACE WELDER	
SPACE "		"	27	28	"			SPACE "	
SPACE "		"	29	30	"			SPACE "	
SPACE			31	32				SPACE	
SPACE			33	34				SPACE	
SPACE			35	36				SPACE	
SPACE			37	38				SPACE	
SPACE			39	40				SPACE	
SPACE			41	42				SPACE	
CONNECTED LOAD:	179.2 KVA	215.6 A	REMARKS: Each Welder uses (3) places						
DEMAND LOAD:	133.5 KVA	160.6 A							
DEMAND + CONT.	133.5 KVA	160.6 A							
DATE:									
REV:									

120/208 VOLTS	3 PH	4 WIRE	125 AMP	10000 AIC			
CIRCUIT DESCRIPTION	KVA	AMP	CKT	CKT	AMP	KVA	CIRCUIT DESCRIPTION
20 AMP RECEPTACLES	0.8	20/1	1	2	30/1	1.5	30 AMP RECEPTACLES
20 AMP RECEPTACLES	0.8	20/1	3	4	30/1	1.5	30 AMP RECEPTACLES
20 AMP RECEPTACLES	0.8	20/1	5	6	30/1	1.5	30 AMP RECEPTACLES
20 AMP RECEPTACLES	0.8	20/1	7	8	30/1	2.0	30 AMP RECEPTACLES
1 OVERHEAD DOOR	0.8	20/1	9	10	30/1	1.6	OVERHEAD DOOR
SPARE FUTURE OVERHEAD DOOR		20/1	11	12	—	1.6	FUTURE OVERHEAD DOOR
SPARE 20 AMP RECEPTACLES		20/1	13	14	—	1.6	FUTURE OVERHEAD DOOR
SPARE FUTURE OVERHEAD DOOR		20/1	15	16	—	1.6	FUTURE OVERHEAD DOOR
SPARE		20/1	17	18	—	1.6	FUTURE OVERHEAD DOOR
SPACE		—	19	20	—	1.6	FUTURE OVERHEAD DOOR
SPACE		—	21	22	—	1.6	FUTURE OVERHEAD DOOR
SPACE		—	23	24	—		SPACE
SPACE		—	25	26	—		SPACE
SPACE		—	27	28	—		SPACE
SPACE		—	29	30	—		SPACE
SPACE			31	32			SPACE
SPACE			33	34			SPACE
SPACE			35	36			SPACE
SPACE			37	38			SPACE
SPACE			39	40			SPACE
SPACE			41	42			SPACE
CONNECTED LOAD:	22.2 KVA	61.7 A	REMARKS:				
DEMAND LOAD:	22.2 KVA	61.7 A					
DEMAND + CONT.	22.2 KVA	61.7 A					
DATE:							
REV:							

KEY	LAMPS		MTG. HT.	DESCRIPTION	MANUFACTURERS NO.
	NO.	TYPE			
A/940	2	400W MH	26'-6" ABOVE FLOOR TO BOTTOM OF FIXTURE	TOTALLY ENCLOSED HIGH BAY INDUSTRIAL FIXTURE, ALUMINUM HOUSING, TEMPERED GLASS LENS, WITH TWIN MOUNTING BAR, TWO COMPLETE FIXTURES ON EACH BAR. SWITCH THE TWO FIXTURES SEPERATELY. PENDANT MOUNT BAR FROM STRUCTURE.	LITHONIA # TE-400M-E22C-480-SCK-TMB-CF
B/160	2	F96 T-8HO	18' ABOVE FLOOR	DAMP/WET LOCATION ENCLOSED INDUSTRIAL, 8' HIGH OUTPUT. PROVIDE UNISTRUT WALL MOUNTING BRACKET. -20'F ELECTRONIC BALLAST,	LITHONIA # DM 2.96TBHO AR 277
X/470	1	400W HPS	AS INDICATED ON DRAWING	HEAVY-DUTY CORROSION-RESISTANT FIBERGLASS REINFORCED POLYESTER HOUSING. ENCLOSED GASKETED AND ACTIVATED-CHARCOAL FILTERED OPTICAL. PROVIDE WALL MOUNT BRACKET	GE #HLUF40SOA16X5DBK
E/40	2	12V 20W	16' ABOVE FLOOR	INDUSTRIAL EMERGENCY LIGHT WITH TWO UNIT MOUNTED ADJUSTABLE BEAM HEADS, COLD WEATHER OPTION DAMP LOCATION, TIME DELAY	LITHONIA #IND 1250-H2012-SD- CW277-TD
H ⊗		LED	OVER DOOR	CORROSION RESISTANT LED EXIT SIGN, WHITE FACE, RED LETTERS, 277 VOLT, NI CAD BATTERY	LITHONIA # LQM-S-W-1-R- 120/277-ELN

DESIGNED BY: REA	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES STATEWIDE DESIGN & ENGINEERING SERVICES DIVISION KETCHIKAN SHIPYARD MACHINE SHOP EXTENSION PROJECT NO. 69113
 PLANS PREPARED BY: MBA CONSULTING ENGINEERS, INC.	ELECTRICAL FIXTURE SCHEDULE AND PANEL SCHEDULES
CHECKED BY: GWB DRAWN BY: SNS	PATH: G:\06022KSA-Ketchikan Shipyards Add\E-Working\06022_E.06.dwg PLOT: PSPACE 1=1(f)
Wed, 05/Jul/06 04:56PM TAB: DETAIL	

REV.	DATE	NATURE OF REVISION	BY	CHKD.	APPD.



1ST FLOOR PLAN
SCALE = 1/8" = 1'-0"

GRINNELL / AUDIO-VIDEO
Fire & Security / Protection
t4co
2275 BRADY AVE. SUITE #1
ANCHORAGE, ALASKA 99503
(907) 769-4449 FAX (907) 769-4110
STATE OF ALASKA FIRE ALARM PERMIT NUMBER 94-005
NATIONAL INSTITUTE FOR CERTIFICATION
IN FIRE ALARM SYSTEMS
NICEET

CONTRACTOR/INSTALLER
CHANNEL ELECTRIC
KETCHIKAN ALASKA
AS BUILT (05/14/02)
REVISION DESCRIPTION
#

KETCHIKAN SHIPYARD IMPROVEMENTS
KETCHIKAN ALASKA
PROJECT NAME: MAIN BUILDING
AREA: FIRE ALARM DEVICE LAYOUT
SYSTEM: FIRE ALARM AND VIDEO SURVEILLANCE SYSTEM
DESIGNED BY: GRINNELL
DRAWN BY: GRINNELL
CHECKED BY: GRINNELL
APPROVED BY: GRINNELL
DATE: 05/14/02
SCALE: 1/8" = 1'-0"
JOB NUMBER: 250.200043-R9
CAD FILENAME: 250-200043-01

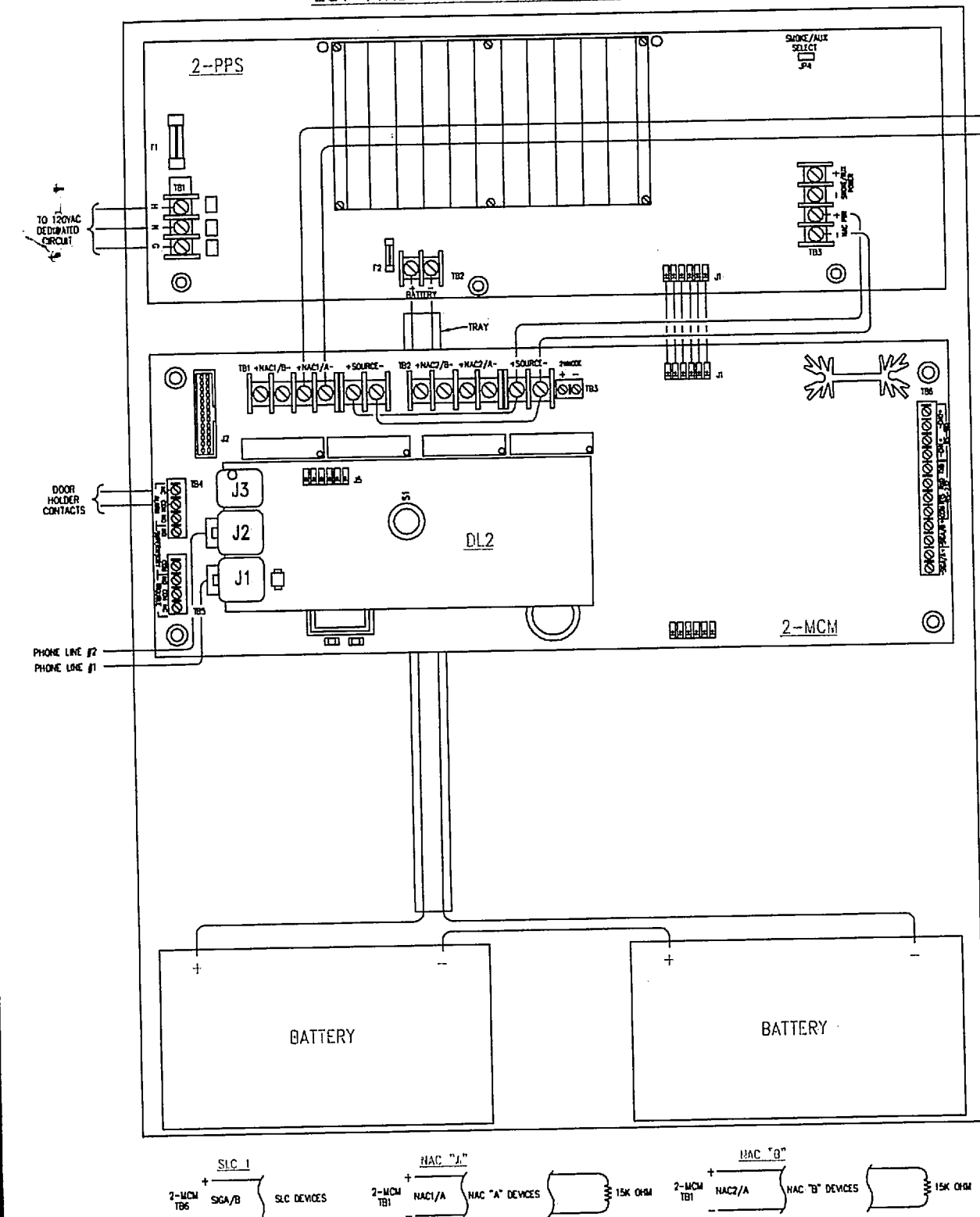
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DRAWN BY: DJM
APPROVED BY: [Signature]
DATE CREATED: 02-26-01
REVISED DATE: 05/14/02
SCALE: 1/8" = 1'-0"
JOB NUMBER: 250.200043-R9
CAD FILENAME: 250-200043-01

CATEGORY: OFFICE: YEAR:
FA 250 2001
SHEET NUMBER:
01

2nd day Marine 2nd

EST FIRE ALARM CONTROL PANEL EST-2

REMOTE BOOSTER POWER SUPPLY EST BPS6



EST-2
BATTERY CALCULATION

Supervisory Time 24 Hours
Alarm Ring Time 5 Minutes

Panel Current Requirements

Module Type	Current in Amps	Qty in Panel	Qty in Alarm	Total Currents in Amps
2-1211	0.150	1	1	0.150
SLC LOAD	0.042	1	1	0.042
DL2 MODULE	0.010	1	1	0.010
Total (Amps)				0.202

External Load	Current in Amps	Qty in Panel	Qty in Alarm	Total Currents in Amps
GI-HV15	0.000	6	6	0.000
GI-HV30	0.000	1	1	0.000
GI-HV60	0.000	2	2	0.000
GI-HV110	0.000	4	4	0.000
GI-V15	0.000	4	4	0.000
757-1A-1	0.000	2	2	0.000
855D-AW	0.000	1	1	0.000
970EXC-GW	0.000	1	1	0.000
Total (Amps)				0.000

Total Amps Required

Panel current (Super) + Field devices current (Super) = Super Current
Super Current 0.202 Amps

Panel current (Alarm) + Field devices current (Alarm) = Alarm Current
Alarm Current 4.042 Amps

Amphour Calculation

Super current (Amps) X Sby Time (hours) = Amphours Required
0.202 X 24 = 4.848

Alarm current (Amps) X Sby Time (hours) = Amphours Required
4.042 X 24 = 96.992

(Super Amphours + Alarm Amphours) X Safety Factor = Amphours Required
96.992 X 1.15 = 111.531

7 Amphour Batteries Supplied

JOB NAME
BPS6 BATTERY CALCULATION

Supervisory Time 24 Hours
Alarm Ring Time 5 Minutes

Panel Current Requirements

Module Type	Current in Amps	Qty in Panel	Qty in Alarm	Total Currents in Amps
BPS6	0.070	1	1	0.070
Total (Amps)				0.070

External Load	Current in Amps	Qty in Panel	Qty in Alarm	Total Currents in Amps
GI-HV15	0.000	15	15	0.000
GI-HV30	0.000	3	3	0.000
GI-HV60	0.000	3	3	0.000
GI-V15	0.000	2	2	0.000
757-1A-1	0.000	4	4	0.000
855D-AW	0.000	1	1	0.000
970EXC-GW	0.000	1	1	0.000
Total (Amps)				0.000

Total Amps Required

Panel current (Super) + Field devices current (Super) = Super Current
Super Current 0.070 Amps

Panel current (Alarm) + Field devices current (Alarm) = Alarm Current
Alarm Current 4.444 Amps

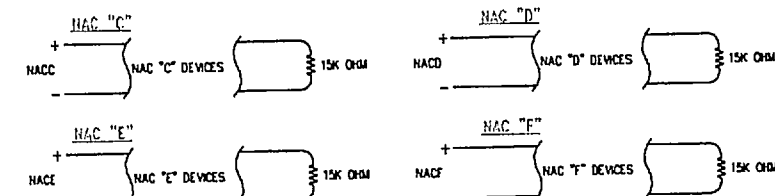
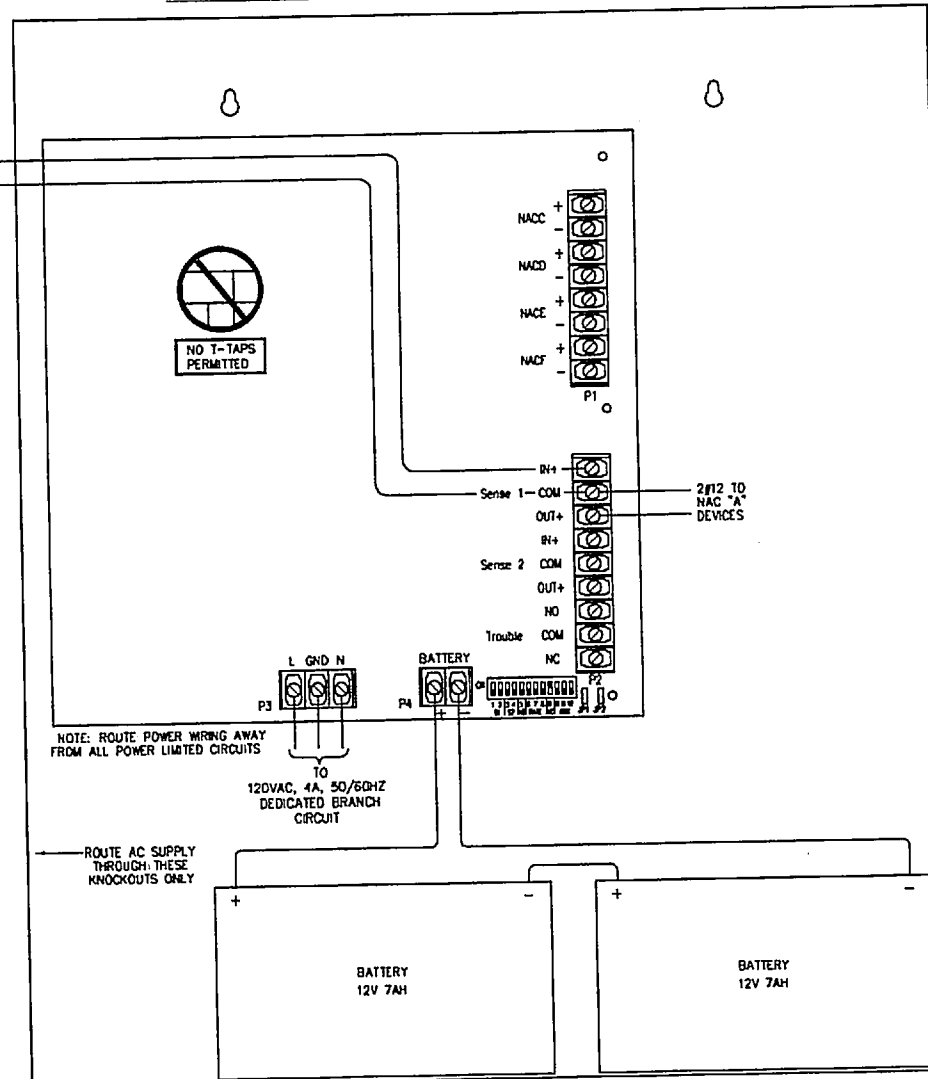
Amphour Calculation

Super current (Amps) X Sby Time (hours) = Amphours Required
0.070 X 24 = 1.680

Alarm current (Amps) X Sby Time (hours) = Amphours Required
4.444 X 24 = 106.656

(Super Amphours + Alarm Amphours) X Safety Factor = Amphours Required
106.656 X 1.15 = 122.654

7 Amphour Batteries Supplied



NOTIFYING APPLIANCE CIRCUIT(VAC) VOLTAGE DROP CALCULATIONS

V = VOLTAGE DROP
R = RESISTANCE OF WIRE (LENGTH X OHMS/1000 FT.)
I = CURRENT DRAW OF CIRCUIT (PER DEVICE X NO. OF DEVICES)

FORMULA IS: $V = I \times R$ (VOLTAGE DROP)

DEVICE TYPE	GI-HV15	GI-HV30	GI-HV60	GI-HV110	GI-V15	757-1A-1	855D-AW	970EXC-GW	BPS6	I =	CKT.	WIRE LENGTH	R =	VOLTAGE DROP
NAC "A"	0.000	0.123	0.172	0.201	0.000	0.040	0.160	0.000	0.000	1	1	1.284	0.208	0.043
NAC "B"	0.000	0.123	0.172	0.201	0.000	0.040	0.160	0.000	0.000	1	1	1.284	0.208	0.043
NAC "C"	0.000	0.123	0.172	0.201	0.000	0.040	0.160	0.000	0.000	1	1	1.284	0.208	0.043
NAC "D"	0.000	0.123	0.172	0.201	0.000	0.040	0.160	0.000	0.000	1	1	1.284	0.208	0.043
NAC "E"	0.000	0.123	0.172	0.201	0.000	0.040	0.160	0.000	0.000	1	1	1.284	0.208	0.043
NAC "F"	0.000	0.123	0.172	0.201	0.000	0.040	0.160	0.000	0.000	1	1	1.284	0.208	0.043
TOTAL	0.000	0.123	0.172	0.201	0.000	0.040	0.160	0.000	0.000	1	1	1.284	0.208	0.043

GRINNELL / AUDIO-VIDEO

2735 WILSON LANE SUITE #1
JUNEAU, ALASKA 99801

(907) 789-4443 FAX (907) 789-4110

STATE OF ALASKA FIRE ALARM PERMIT NUMBER 94-005



CONTRACTOR/INSTALLER

FIRST CITY ELECTRIC

KETCHIKAN ALASKA

KETCHIKAN SHIPYARD IMPROVEMENTS

KETCHIKAN ALASKA

FIRE ALARM RISER & DETAILS

PROJECT NAME:

DATE:

SYSTEM:

D.P.S.:

D-8

DRAWN BY:

D.A.M.

APPROVED BY:

DATE CREATED:

02-28-01

REVISION DATE:

10-13-06

SCALE:

JOB NUMBER:

250 200043-10

CAG FILENAME:

250-200043-050

CATEGORY:

OFFICE:

YEAR:

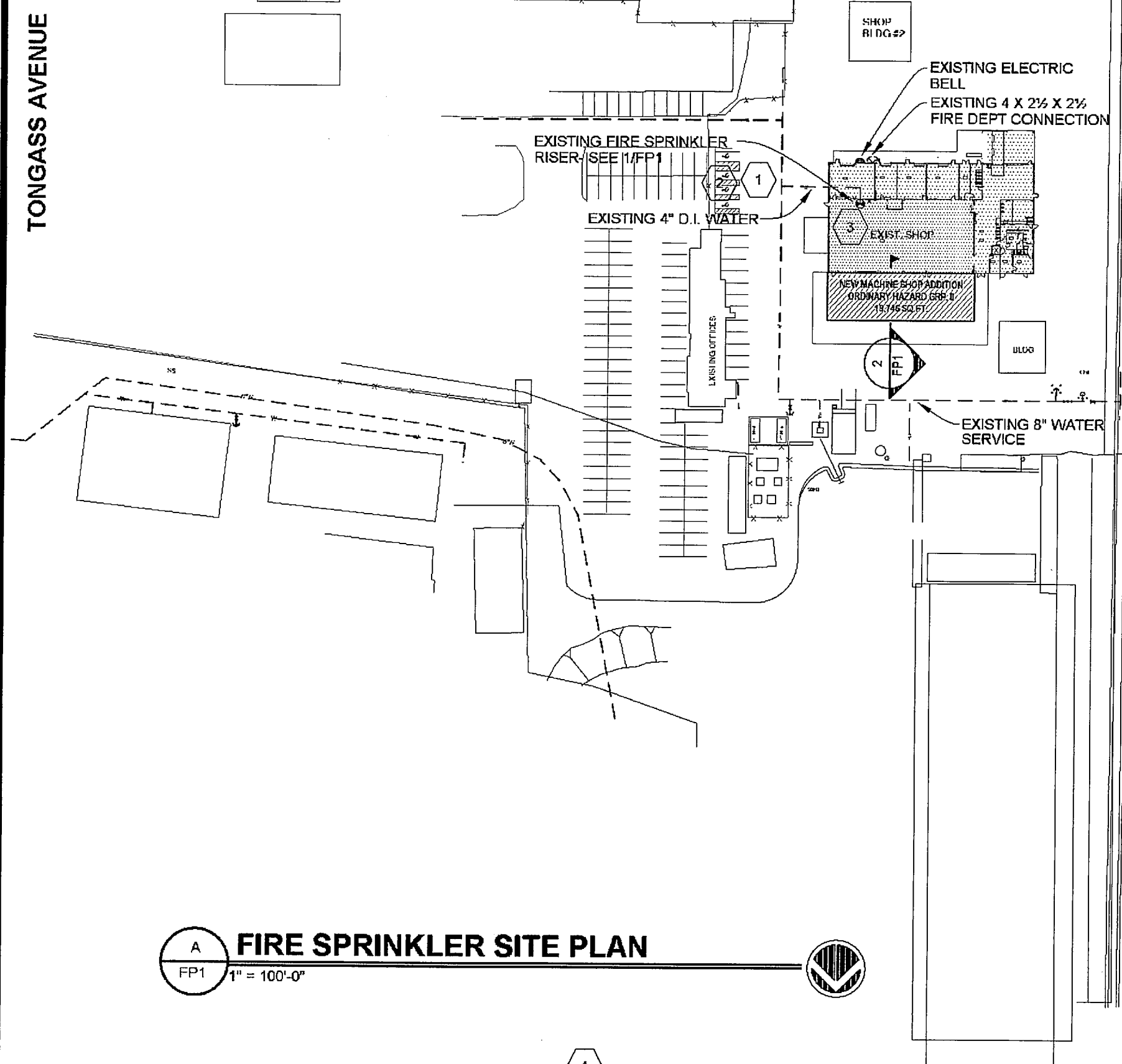
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2001

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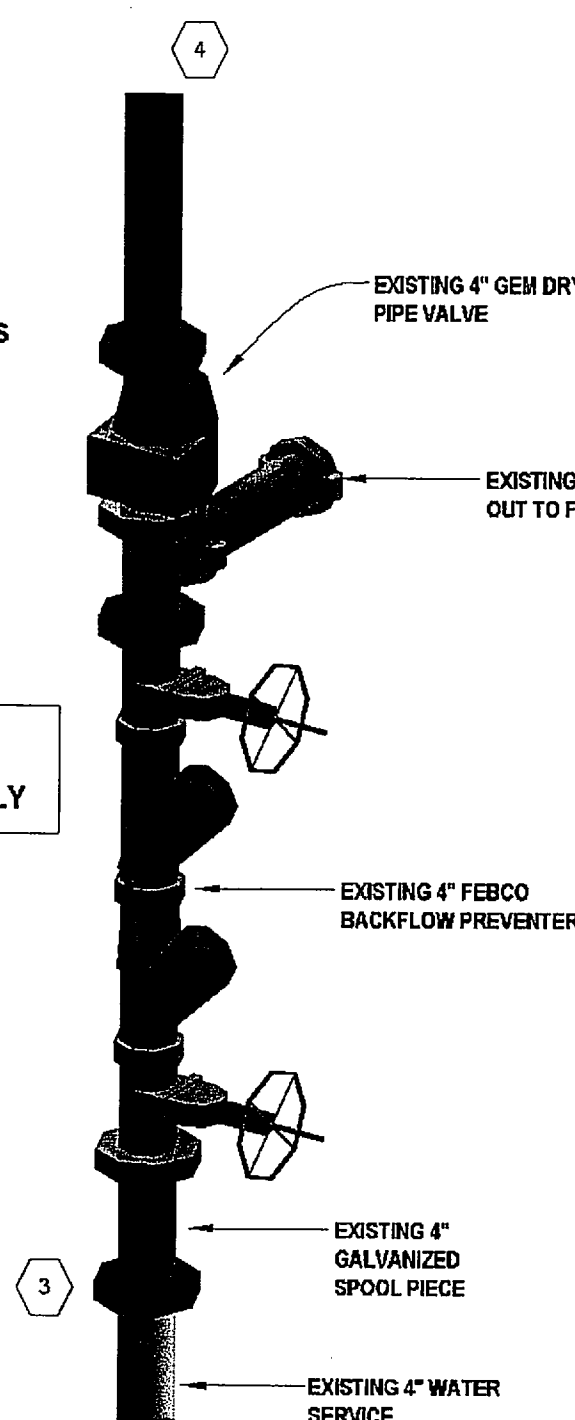
03R

1. ALL MATERIALS & INSTALLATIONS TO BE U.L. LISTED & SHALL CONFORM TO NFPA 13.
2. THRUST BLOCKS & RODDING SHALL CONFORM TO NFPA 13.
3. ALL WATER LINES FOR FIRE SPRINKLER SYSTEMS SHALL BE TESTED AT 200 psi FOR TWO (2) HOURS MINIMUM.
4. DUCTILE IRON PIPE SHALL BE USED WHEN PIPE PASSES UNDER BUILDING FOUNDATION OR FOOTING.
5. UNDERGROUND PIPING SHALL BE FLUSHED PER NFPA 13 BEFORE CONNECTING TO THE OVERHEAD FIRE SPRINKLER SYSTEM PIPING.



FIRE SPRINKLER SITE PLAN

NOTE: VALVE MONITORING, WATER-FLOW ALARM, AND TROUBLE SIGNALS SHALL BE AUTOMATICALLY TRANSMITTED TO AN APPROVED CENTRAL STATION. THIS WORK IS BY OTHERS.



EXISTING RISER DETAIL

PARAMETERS

SPACING OF LATERAL BRACES:	40 FT.
SPACING OF LONGITUDINAL BRACES:	80 FT.
LARGEST PIPE SIZE TO BE BRACED:	4" SCHEDULE 10
SHAPE AND SIZE OF BRACE:	1" SCH. 40 PIPE
MAXIMUM LENGTH FOR $L/r = 200$:	7'-0"
MINIMUM ANGLE FROM VERTICAL:	45° - 59° DETAIL E OF TABLE 6-4.5.9
FASTENER TO STRUCTURE (TYPE & SIZE):	CONNECTIONS TO STEEL WITH AFCON 088

NOTE: BOTH LATERAL AND LONGITUDINAL SWAY BRACES ARE SIZED AND FASTENED TO THE STRUCTURE SUCH THAT HORIZONTAL LOAD ASSIGNED TO THE BRACES DO NOT EXCEED THE MAXIMUM ALLOWABLE LOADS ON THE BRACES AND FASTENERS, PER N.F.P.A. 13, 1999, 6-4.5.9

PIPE SIZE TO BE BRACED	ASSIGNED LOAD	BRACE MAX HORIZONTAL LOAD	FASTENER MAX LOAD
4" SCHEDULE 10	429 lbs	2,500 lbs	1265 lbs

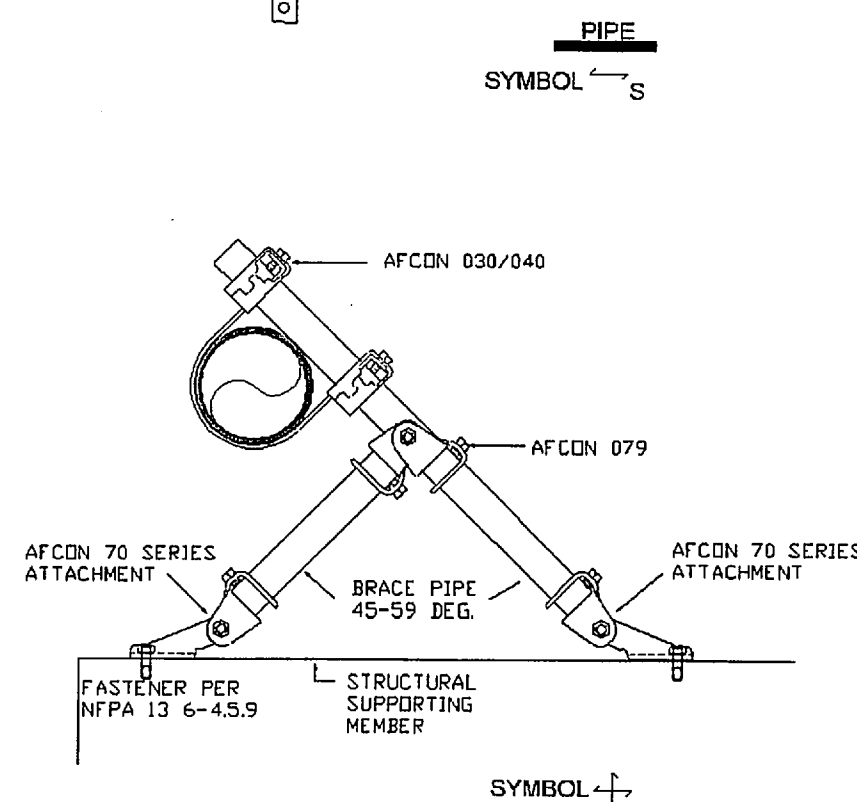
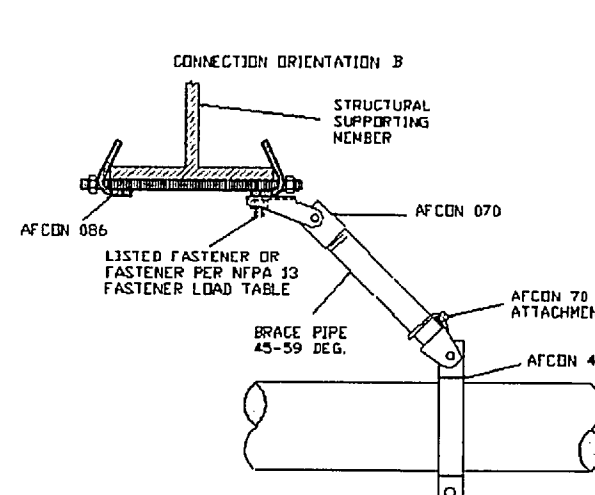
$$429 \text{ lbs} = 80'-0" \text{ 4" D.F.} \times 10.72 \text{ (WEIGHT)} \times .5$$

$$\text{WT/FT. H}_2\text{O} + 1\text{FT PIPE} = 10.72$$

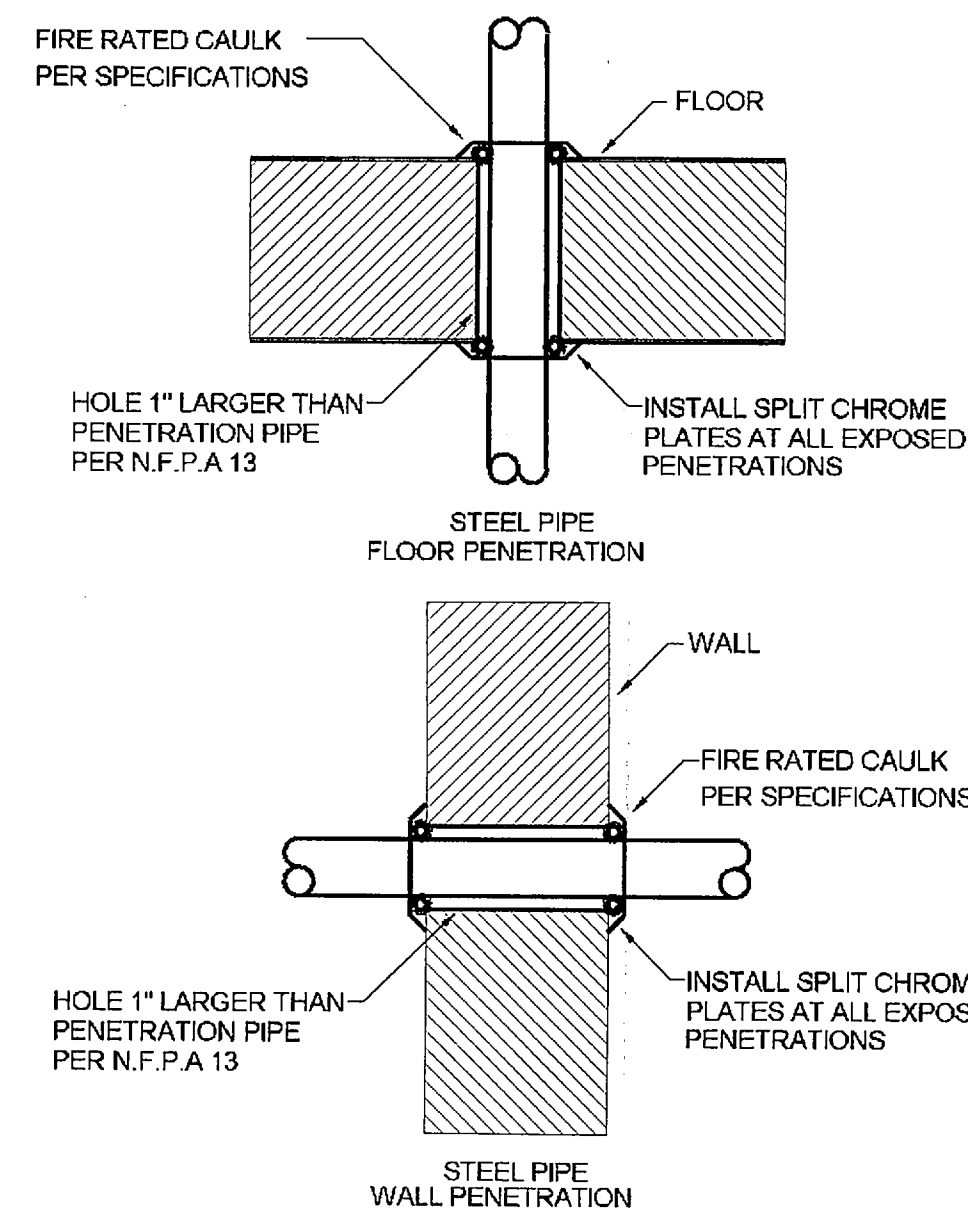
NOTE: ASSIGNED LOAD DOES NOT EXCEED THE MAXIMUM LOAD, THEREFORE BRACE AND FASTENER SIZING IS ACCEPTABLE PER N.F.P.A. 13, 1999.

- * NFPA 13, 1999, TABLE 6-4.5.6
** NFPA 13, 1999, TABLE 6-4.5.
*** NFPA 13, 1999, FIG. 6-4.5.9

Diagram illustrating a structural supporting member assembly. The assembly includes a horizontal member labeled "STRUCTURAL SUPPORTING MEMBER" and a vertical member labeled "Connection Orientation B". A fastener is shown connecting the horizontal member to a vertical member labeled "AFCON 070". The fastener is labeled "LISTED FASTENER OR FASTENER PER NFPA 13 6-4.5.9". A brace pipe is shown connecting the horizontal member to a vertical member labeled "AFCON 030/040". The brace pipe is labeled "BRACE PIPE 45-59 DEG.".



EXISTING SYSTEM:	680.0 GALLONS
PORTION OF SYSTEM NEVER INSTALLED:	- 111.0 GALLONS
PORTION OF SYSTEM DEMOLISHED:	- 12 GALLONS
NEW SYSTEM ADDITION:	+ 113 GALLONS
DRY SYSTEM TOTAL	670 GALLONS



FIRE STOP DETAIL

4 HAN
FP1 NO SCALE

NOMINAL PIPE SIZE (IN.)	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
STEEL PIPE	N/A	12-0	12-0	15-0	15-0	15-0	15-0	15-0	15-0
THREADED LIGHTWALL	N/A	12-0	12-0	12-0	12-0	12-0	12-0	N/A	N/A
COPPER TUBE	8-0	8-0	10-0	10-0	12-0	12-0	12-0	15-0	15-0
CPVC	5-6	6-0	6-6	7-0	8-0	9-0	10-0	N/A	N/A

FIGURE A-6-2.3.3(a) DISTANCE FROM SPRINKLER TO HANGER

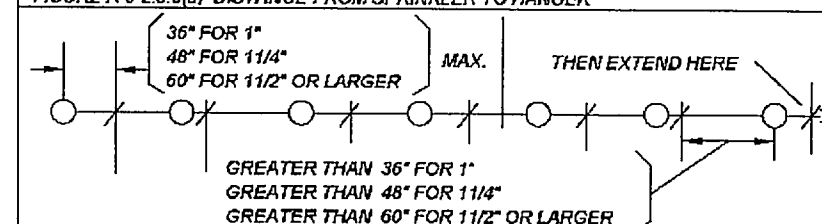
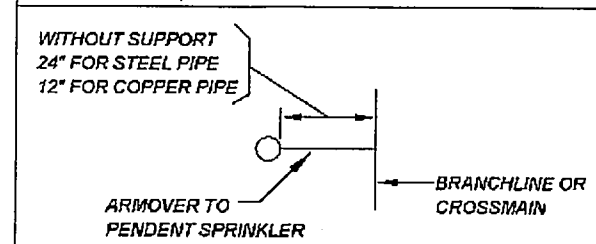


TABLE 6-1.4.1 HANGER ROD SIZE

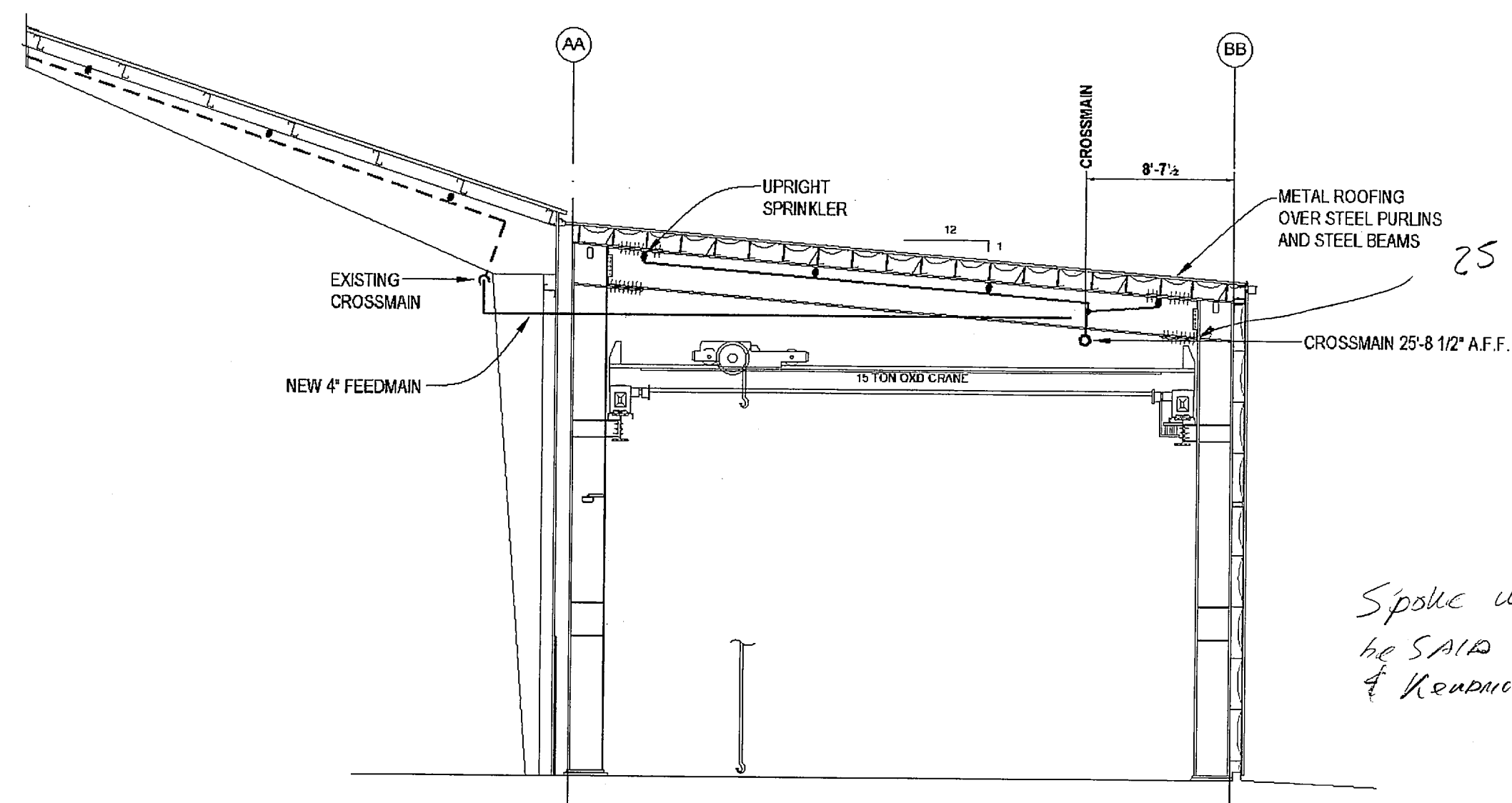
PIPE SIZE	DIAM. OF ROD	PIPE SIZE	DIAM. OF ROD
UP TO AND INCLUDING 4"	3/8"	6" AND 8"	1/2"

FIGURE A-6-2.3.4(a) UNSUPPORTED ARMOR



FIRE STOP DETAIL

3 FIRE
FP1 NO SCALE

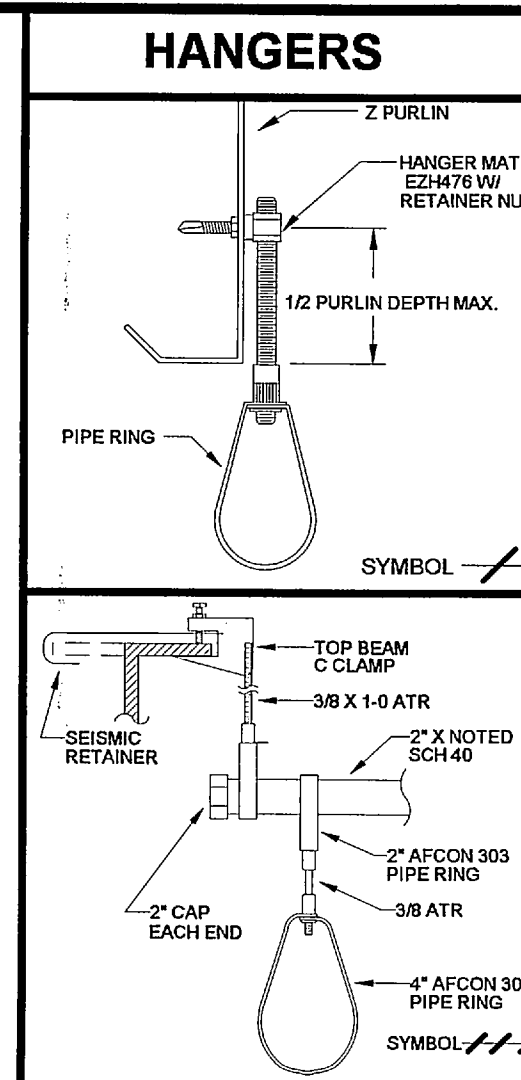
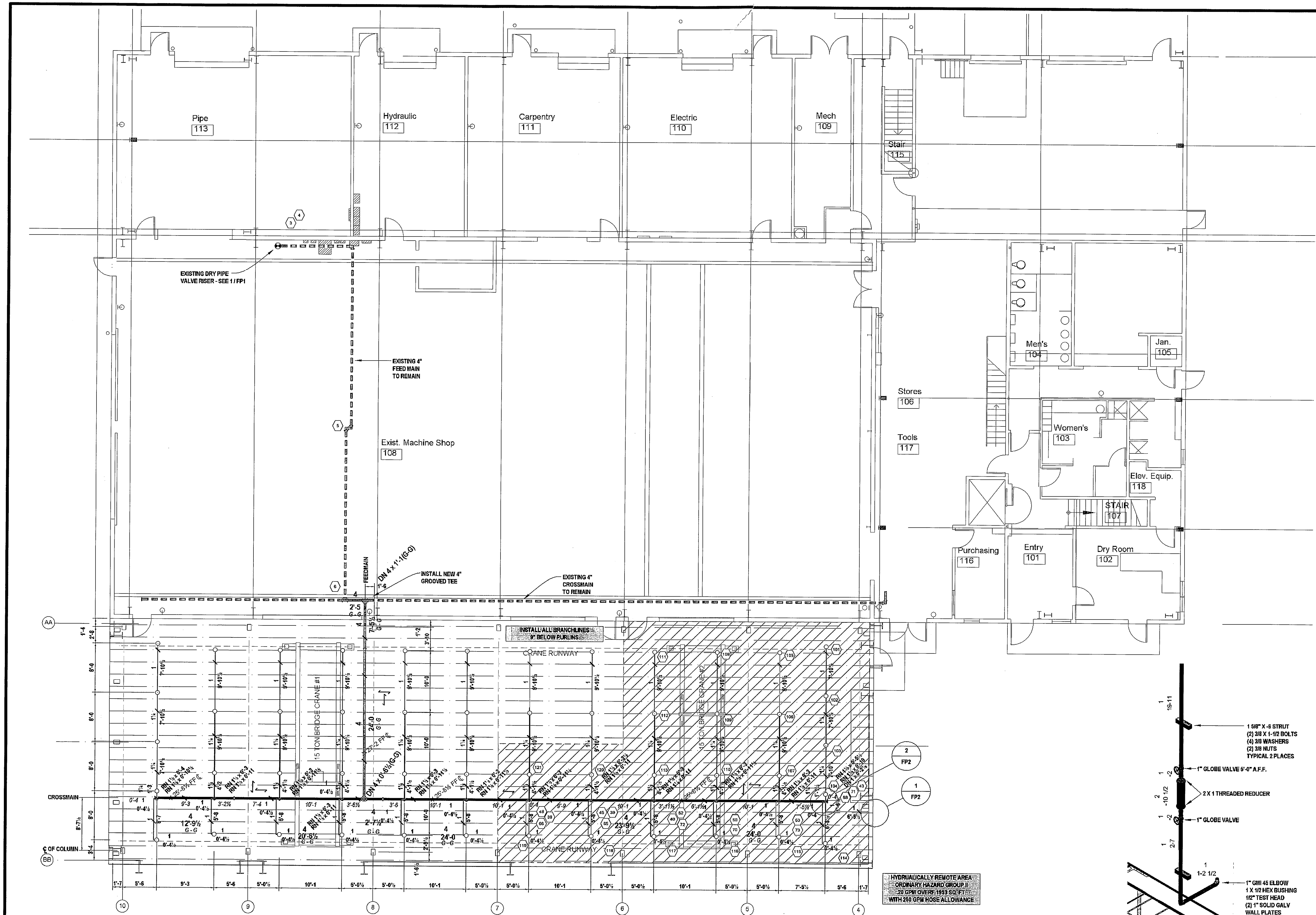


BUILDING SECTION

1. FIRE PROTECTION SYSTEM TO COMPLY WITH NFPA 13 1999, AND ALL APPLICABLE STATE AND LOCAL CODES.
2. NO INSTALLATION OF ANY PART OF THE SYSTEM DEPICTED IN THESE DRAWINGS SHALL OCCUR PRIOR TO ADHERING TO AND OBTAINING ALL PERMITS, LICENSES AND GOVERNMENT REQUIREMENTS.
3. FINAL INSPECTION AND APPROVAL BY LOCAL FIRE DEPARTMENT, AND INSURANCE UNDERWRITER.
5. CUTTING OF STRUCTURAL AND/OR ARCHITECTURAL MEMBERS TO BE DONE ONLY WITH THE WRITTEN APPROVAL OF THE APPROVING ENGINEER.
6. FLOW TEST INDICATES 101 P.S.I. STATIC PRESSURE WITH RESIDUAL PRESSURE OF 80 P.S.I. @ 1410 G.P.M., AT THE PROJECT SITE, BY THE KETCHIKAN WATER DEPT.
7. PIPE ROUTING SHOWN SHALL BE USED AND ANY ADDITIONAL OFFSETS OR FITTINGS REQUIRED FOR PROPER INSTALLATION, COORDINATION WITH OTHER TRADES, AND/OR TO MAINTAIN PROPER CLEARANCES SHALL BE PROVIDED. VERIFY EXISTING STRUCTURAL, MECHANICAL, ELECTRICAL INSTALLATIONS AND AVOID ANY ALL OBSTRUCTIONS OR INTERFERENCES WITH FIRE PROTECTION PIPE ROUTING.
8. FIRE STOP ALL PENETRATIONS OF SMOKE/FFIE WALLS, CEILINGS, FLOORS, ROOFS, ETC. PER 301P1.
9. ACCESS PANELS TO ALL VALVES ABOVE NON-ACCESSIBLE CEILINGS AND CHASES ARE BY THE GENERAL CONTRACTOR.
10. SPRINKLER HEADS ARE TO BE COORDINATED WITH ALL EXISTING NEW DIFFUSERS, SPEAKERS, LIGHTING FIXTURES AND CEILING SYSTEMS.
11. PROVIDE STOCK OF EXTRA SPRINKLERS IN ACCORDANCE WITH N.F.P.A. 13-3.167.
12. METHODS OF HANGING PIPES, HEADERS AND BRANCHES SHALL BE IN ACCORDANCE WITH N.F.P.A. 13. AND HANGER CHART AT 41P1
13. AUTOMATIC SPRINKLER TEMPERATURE RATINGS OF FUSIBLE ELEMENTS TO BE IN ACCORDANCE WITH N.F.P.A. 13.
14. ALL VALVES FOR FIRE SERVICE SHALL BE LISTED BY THE UNDERWRITER'S LABORATORIES, INC. AND THE FACTORY MUTUAL LABORATORIES. VALVES SHALL BE FACTORY MARKED "UL" AND "FM", 175 WORKING PRESSURE.
15. ALL VALVES ON THE FIRE PROTECTION SYSTEM TO BE ELECTRICALLY SUPERVISED. TYPE AND EXACT LOCATION OF FLOW, PRESSURE AND SUPERVISORY SWITCHES SHALL BE ACCOMPLISHED THROUGH THE DIFFERENT RESPONSIBLE TRADES.
16. ALL WIRING SHALL BE ACCOMPLISHED UNDER THE ELECTRICAL CONTRACT. COORDINATE ALL ELECTRICAL ITEMS WITH ELECTRICAL CONTRACTOR AND INSURE PROPER COORDINATION.
17. PROVIDE A PERMANENTLY ATTACHED NAME TAG STATING THE REQUIRED DESIGN CRITERIA FOR EACH HYDRAULICALLY DESIGNED SYSTEM.
18. SPRINKLERS SHALL COVER THE ENTIRE AREA OF THE ROOM INCLUDING ALCOVES. SPRAY SHALL NOT BE BLOCKED BY WALLS OR PARTITIONS.
19. ALL SPRINKLER HEADS MOUNTED IN CEILING SHALL BE LOCATED A MINIMUM OF 4" AWAY FROM ANY WALLS, CEILING HEIGHT CHANGES OR ANY OTHER VERTICAL INTERSECTING SURFACE.
20. PIPE SHALL BE REAMED AND CLEANED BEFORE ASSEMBLY
21. MAINTAIN A MINIMUM OF 18 INCHES FROM THE BOTTOM OF THE SPRINKLER DEFLECTOR TO THE TOP OF STORAGE/PILE STORAGE.
22. PROVIDE SYSTEM(S) WITH FLUSHING CONNECTION(S).
23. PROVIDE SPRINKLERS ABOVE AND BELOW EXPOSED DUCTWORK 4 FEET OR WIDER.
24. IT IS THE INTENT OF THESE CONTRACT DOCUMENTS TO PROVIDE AN ACCURATE CONCEPT FOR INSTALLATION PURPOSES. IT IS THE RESPONSIBILITY OF THIS FIRE SPRINKLER SUB-CONTRACTOR TO FIELD SURVEY THE SYSTEM SHOWN AND PROVIDE REVISIONS NECESSARY FOR A SMOOTH INSTALLATION. ADDITIONALLY, IT IS THE RESPONSIBILITY OF THE FIRE SPRINKLER SUB-CONTRACTOR TO INSURE THE CODE COMPLIANCE OF ANY SYSTEM INSTALLATION. THIS DESIGNER WILL NOT BE HELD RESPONSIBLE FOR ANY FORSEEN, OR UNFORSEEN CONFLICTS. THESE CONFLICTS INCLUDE, BUT ARE NOT LIMITED TO, ACCURACY OF PIPE CUTS, OFFSETS, FITTINGS, VALVES, OR ANY OTHER ADDITION TO THIS SYSTEM REQUIRED BY CODE, OR LOCAL JURISDICTIONS.

[illegible]

08/30/06 16:06:22 0647COVER



HANGER NOTES
HANG PIPE AT ELEVATION NOTED WITH HANGER MATTE, 3/8 X C/F ATR AND RING

- GENERAL NOTES**
- 1) *** DENOTES DISTANCE FROM BOTTOM OF PURLINS TO CENTER LINE OF PIPE.
 - 2) HANG PIPE AT ELEVATION NOTED THUS: *0'-0" FF C.
 - 3) SLOPE CROSSMAIN TO DRAIN 1/4" PER 10'-0".
 - 4) INSTALL APPROVED FIRE CAULK AT ALL FULL HEIGHT WALL PENETRATIONS PER 3/FP1
 - 5) 1"-2" PIPE SHALL BE SCHEDULE 40 GALVANIZED WITH G.M.I. SCREWED FITTINGS.
 - 6) 4" PIPE SHALL BE SCHEDULE 10 GALVANIZED WITH C.I. GROOVED FITTINGS.

25 6 1/2 25 6

FIRE SPRINKLER PLAN
FP2 1/8" = 1'-0"

INSPECTOR'S TEST / DRAIN DETAIL
FP2 3/4" = 1'-0"

RISER NIPPLE DETAIL
FP2 1/2" = 1'-0"

NOTICE		DESIGNER	APPROVALS & COORDINATION			HYDRAULIC DESIGN DATA			SPRINKLER HEADS									
IT IS THE OWNERS RESPONSIBILITY TO PROVIDE ADEQUATE HEAT TO PREVENT FREEZING THROUGHOUT WET PIPE SPRINKLER SYSTEM AREAS AND IN ENCLOSURES FOR DRY PIPE AND OTHER TYPES OF VALVES CONTROLLING WATER SUPPLIES TO SPRINKLER SYSTEMS.		 BRYAN J. KENDRICK Certification Number 088444 - LEVEL IV ALASKA PERMIT #03-022	ORGANIZATION	CONTACT	PHONE	HAZARD CLASSIFICATION: ORDINARY GROUP II	SYSTEM AREA: 2,551 SQ. FT.	MANUFACTURER	MODEL	SIN #	TYPE	FINISH	ORIFICE	DROP	CANOPY	TEMP	SYMBOL	QTY.
			ALASKA STATE FIRE MARSHAL	JERRY GENTILE	907/465-4331	HYDRAULIC DESIGN DATA: .20 GPM/SQ. FT.	113 SQ. FT./HD. MAX	VICTAULIC	V3402	V3402	SSU	BRASS	3/4" K=8.0	-	-	286°	○	50
						AREA OF APPLICATION: 1953 SQ. FT.	HOSE ALLOW: 250 GPM											
						TOTAL SYSTEM REQUIREMENTS:												
						616.4 GPM AT 81.5 PSI AT CONNECTION TO MAIN												
			SYSTEM TYPE			WATER SUPPLY INFORMATION												
			WET			STATIC PRESSURE: 101 PSI												
			DRY X			RESIDUAL PRESSURE: 80 PSI WITH 1,410 GPM FLOWING												
						TEST TAKEN AT: SITE	BY: KETCHIKAN WATER	DATE: APRIL 2001										
									TOTAL									TOTAL 50

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JUNEAU, ALASKA 99801
PHONE: (907) 586-3190
FAX: (907) 586-4129
1-800-478-3190

REVISIONS			CONTRACT NAME:		SCALE: 1/8"=1'-0"
NO.	DATE	DESCRIPTION	KETCHIKAN SHIPYARD MACHINE SHOP ADDITION 3801 TONGASS AVENUE PROJECT NO. 89113 KETCHIKAN, ALASKA 99901		
			CONTRACT WITH:		DRAWN BY: B. KENDRICK CHECKED BY: J. DUVERNAY DATE: 08/30/06 CONTRACT NO.: NWSO NO.: 0847 SHEET NO.:
			Dawson Construction 405 32nd Street, Suite 110 Bellingham, WA 98225		
			FIRE SPRINKLER PLAN		

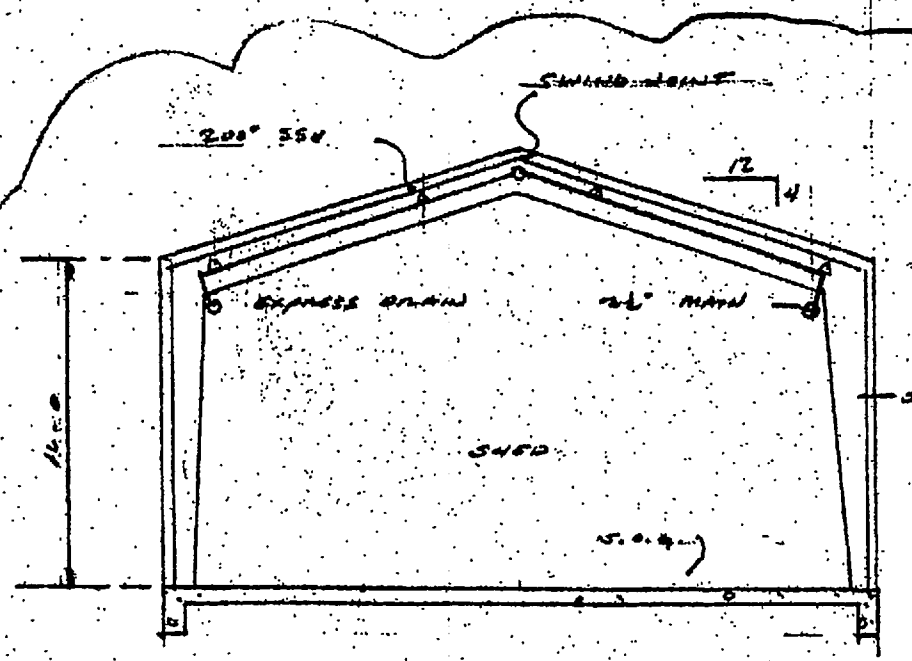
FP2 of 2



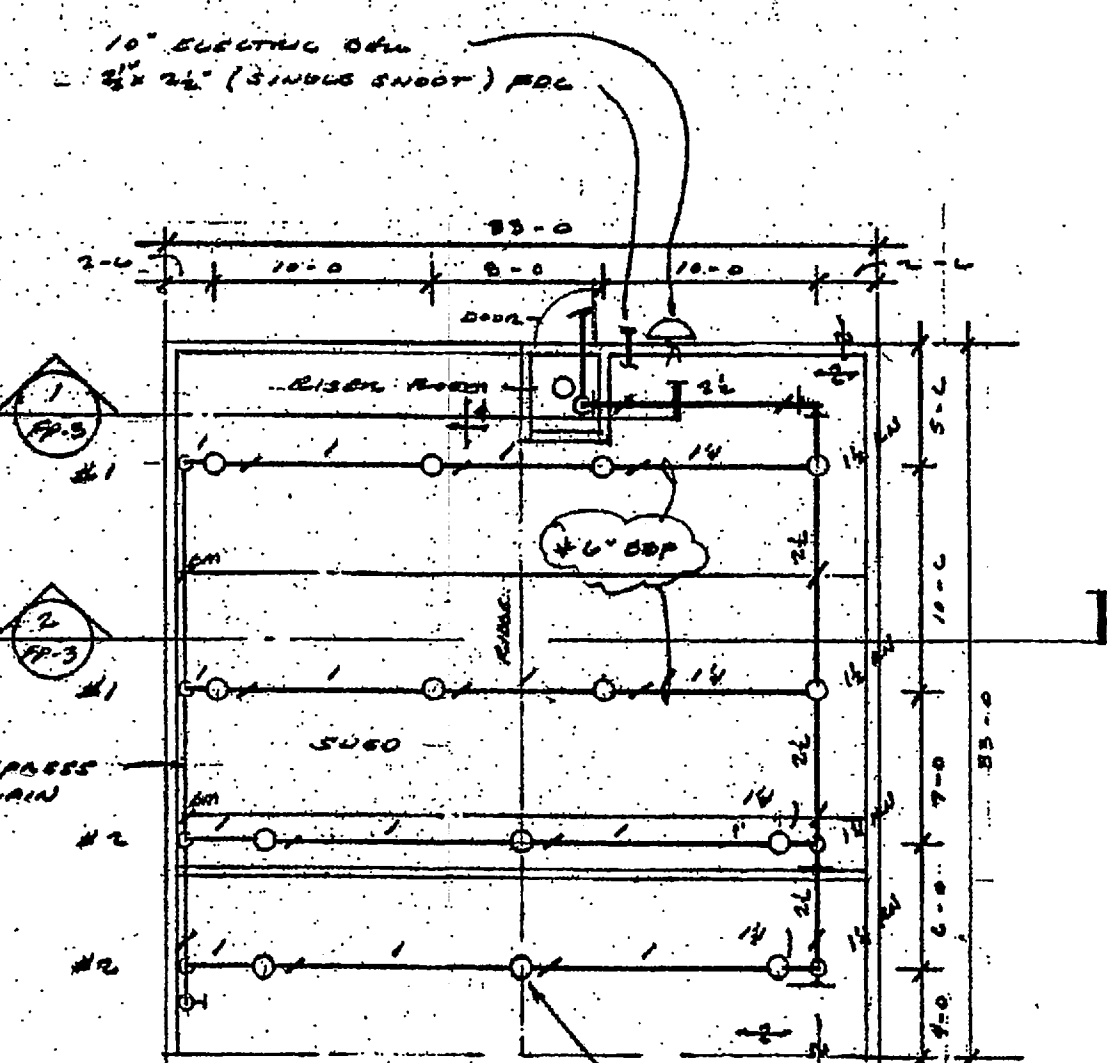
FP-1
OF 4

FP-1 MECHANICAL - REFERENCE DRAWING – FIRE PROTECTION

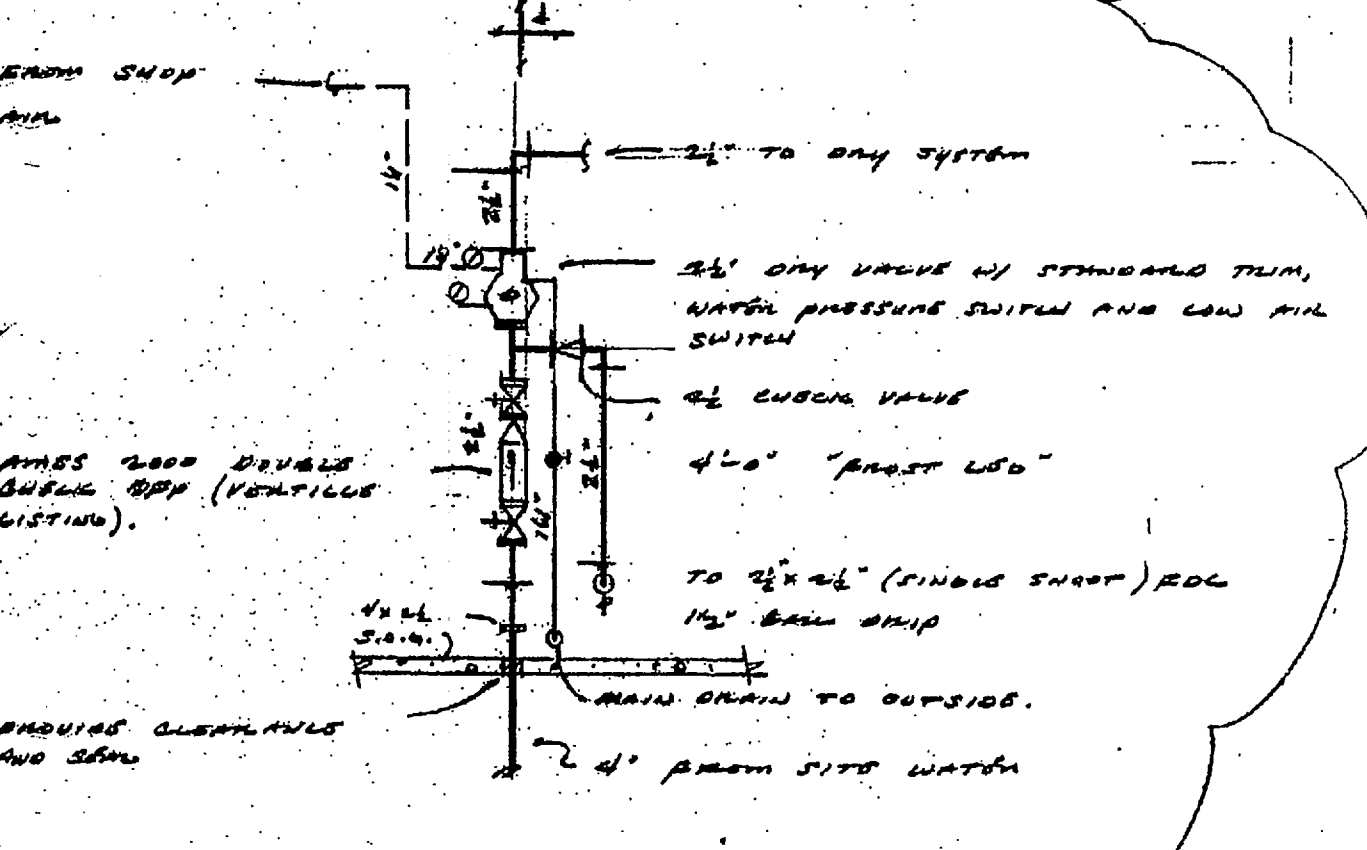
CV01-491 1/8" KSPF-3



2 BUILDING SECTION
1/8" = 1'-0"

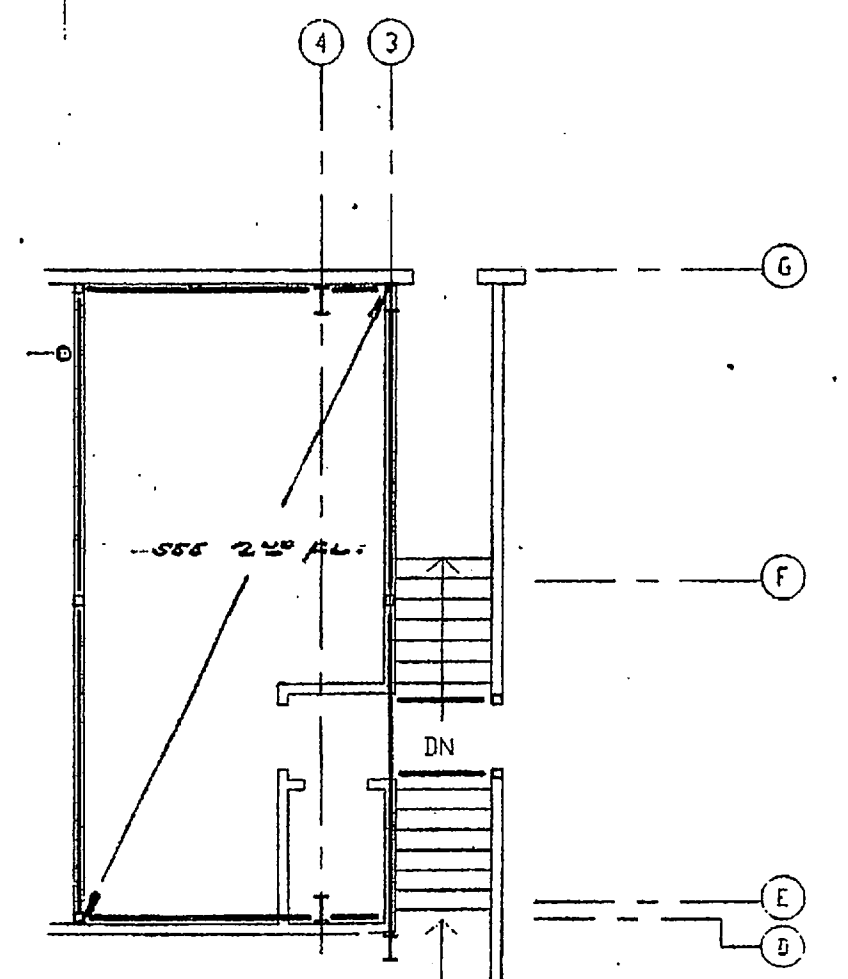
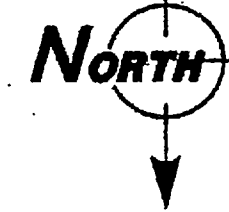


HAZARDOUS WASTE BUILDING
1/8" = 1'-0"

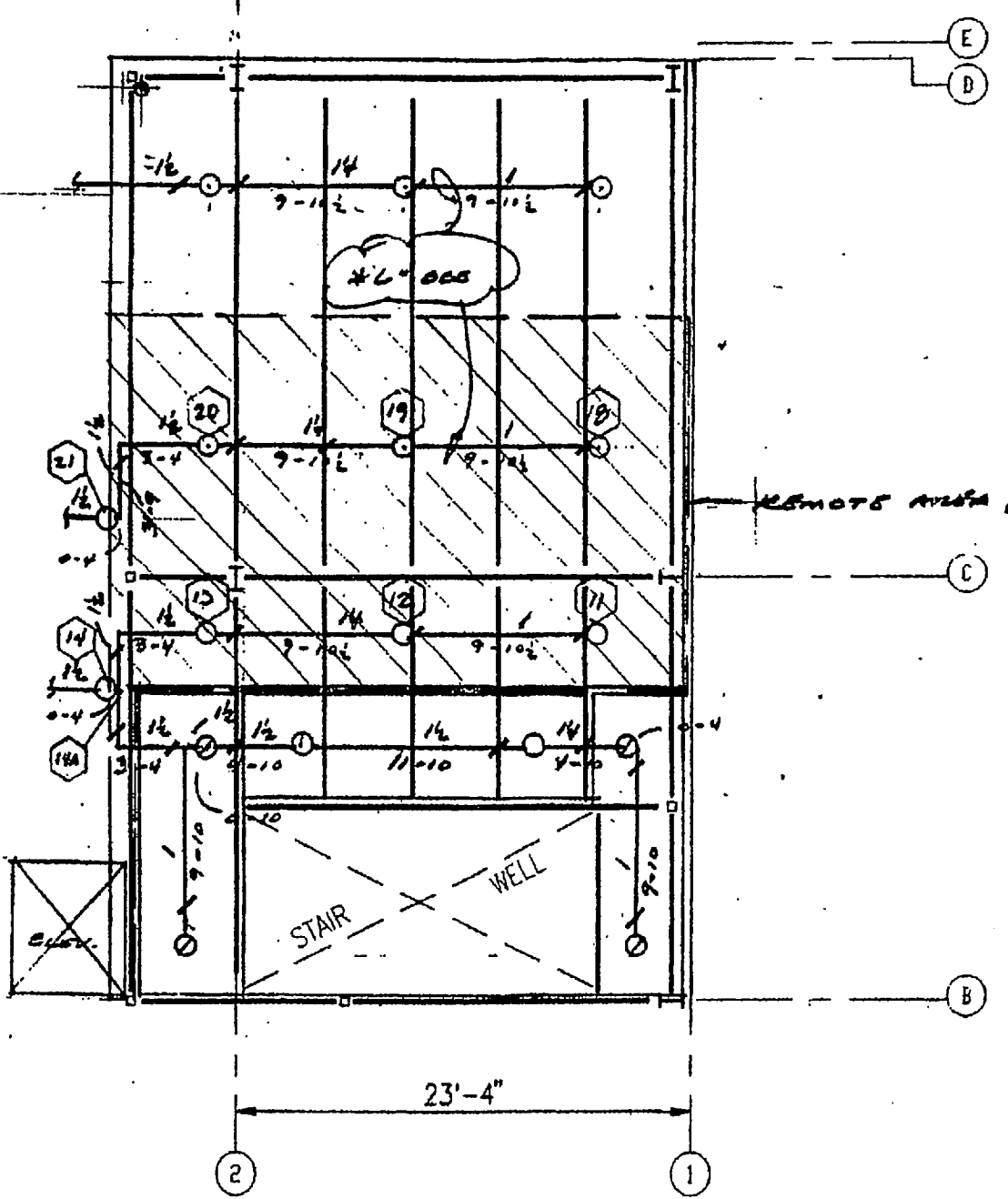
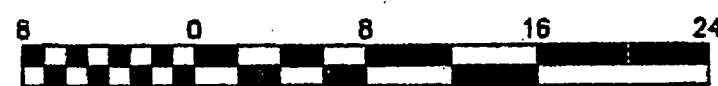


1 RISER SECTION
NO SCALE

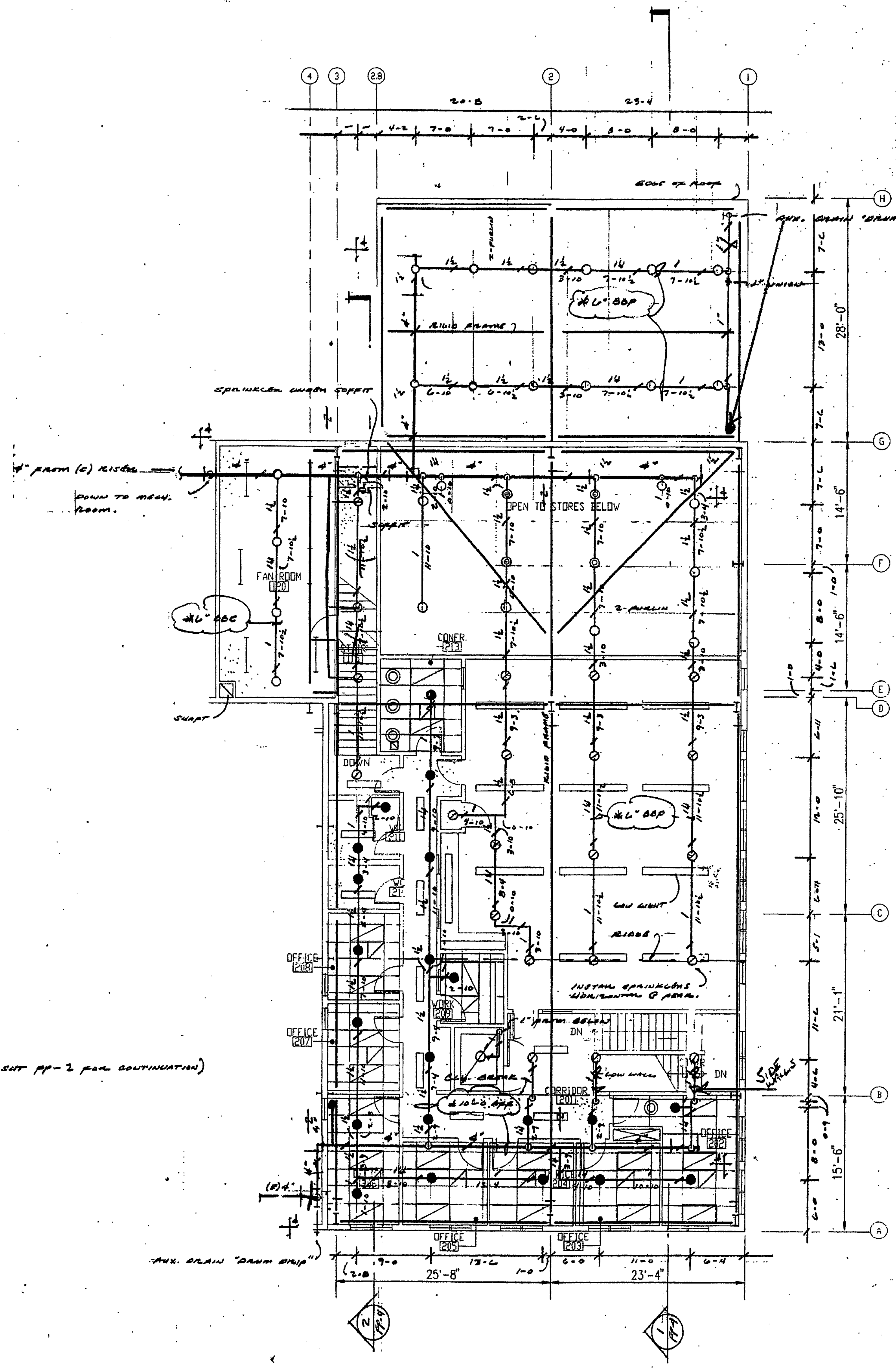
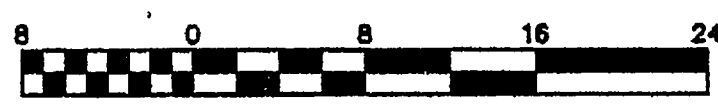
ALL CONTROL VALVES TO HAVE THROTTLE SWITCH.
PROVIDE PREVIOUS COUPLING @ TOP & BOTTOM OF RISER.



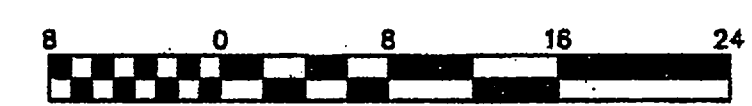
MEZZANINE at MECH. FAN ROOM
FIRE SPRINKLER PLAN



MEZZANINE FIRE SPRINKLER PLAN



SECOND FLOOR FIRE SPRINKLER PLAN



CEILING HEIGHT - 8'-0" (EXCEPT WHERE NOTED OTHERWISE)

FP-3 MECHANICAL - REFERENCE DRAWING - FIRE PROTECTION

SYM	DESCRIPTION	SIZE	QTY	FIN.	QTY
○	PIPE 1/2" DIA.	1/2"	37	1/2"	37
●	PIPE 1/4" DIA.	1/4"	21	1/4"	21
⊙	PIPE 3/8" DIA.	3/8"	12	3/8"	12
⊗	PIPE 1/2" DIA.	1/2"	12	1/2"	12
⊠	PIPE 3/4" DIA.	3/4"	5	3/4"	5
⊡	PIPE 1" DIA.	1"	2	1"	2
⊢	PIPE 1 1/2" DIA.	1 1/2"	1	1 1/2"	1
⊣	PIPE 2" DIA.	2"	1	2"	1
⊤	PIPE 2 1/2" DIA.	2 1/2"	1	2 1/2"	1
⊥	PIPE 3" DIA.	3"	1	3"	1
⊦	PIPE 3 1/2" DIA.	3 1/2"	1	3 1/2"	1
⊧	PIPE 4" DIA.	4"	1	4"	1
⊨	PIPE 4 1/2" DIA.	4 1/2"	1	4 1/2"	1
⊩	PIPE 5" DIA.	5"	1	5"	1
⊪	PIPE 5 1/2" DIA.	5 1/2"	1	5 1/2"	1
⊫	PIPE 6" DIA.	6"	1	6"	1
⊬	PIPE 6 1/2" DIA.	6 1/2"	1	6 1/2"	1
⊭	PIPE 7" DIA.	7"	1	7"	1
⊮	PIPE 7 1/2" DIA.	7 1/2"	1	7 1/2"	1
⊯	PIPE 8" DIA.	8"	1	8"	1
⊰	PIPE 8 1/2" DIA.	8 1/2"	1	8 1/2"	1
⊱	PIPE 9" DIA.	9"	1	9"	1
⊲	PIPE 9 1/2" DIA.	9 1/2"	1	9 1/2"	1
⊳	PIPE 10" DIA.	10"	1	10"	1
⊴	PIPE 10 1/2" DIA.	10 1/2"	1	10 1/2"	1
⊵	PIPE 11" DIA.	11"	1	11"	1
⊶	PIPE 11 1/2" DIA.	11 1/2"	1	11 1/2"	1
⊷	PIPE 12" DIA.	12"	1	12"	1
⊸	PIPE 12 1/2" DIA.	12 1/2"	1	12 1/2"	1
⊹	PIPE 13" DIA.	13"	1	13"	1
⊺	PIPE 13 1/2" DIA.	13 1/2"	1	13 1/2"	1
⊻	PIPE 14" DIA.	14"	1	14"	1
⊼	PIPE 14 1/2" DIA.	14 1/2"	1	14 1/2"	1
⊽	PIPE 15" DIA.	15"	1	15"	1
⊾	PIPE 15 1/2" DIA.	15 1/2"	1	15 1/2"	1
⊿	PIPE 16" DIA.	16"	1	16"	1
⋈	PIPE 16 1/2" DIA.	16 1/2"	1	16 1/2"	1
⋉	PIPE 17" DIA.	17"	1	17"	1
⋊	PIPE 17 1/2" DIA.	17 1/2"	1	17 1/2"	1
⋋	PIPE 18" DIA.	18"	1	18"	1
⋌	PIPE 18 1/2" DIA.	18 1/2"	1	18 1/2"	1
⋍	PIPE 19" DIA.	19"	1	19"	1
⋎	PIPE 19 1/2" DIA.	19 1/2"	1	19 1/2"	1
⋏	PIPE 20" DIA.	20"	1	20"	1
⋐	PIPE 20 1/2" DIA.	20 1/2"	1	20 1/2"	1
⋑	PIPE 21" DIA.	21"	1	21"	1
⋒	PIPE 21 1/2" DIA.	21 1/2"	1	21 1/2"	1
⋓	PIPE 22" DIA.	22"	1	22"	1
⋔	PIPE 22 1/2" DIA.	22 1/2"	1	22 1/2"	1
⋕	PIPE 23" DIA.	23"	1	23"	1
⋖	PIPE 23 1/2" DIA.	23 1/2"	1	23 1/2"	1
⋗	PIPE 24" DIA.	24"	1	24"	1
⋘	PIPE 24 1/2" DIA.	24 1/2"	1	24 1/2"	1
⋙	PIPE 25" DIA.	25"	1	25"	1
⋚	PIPE 25 1/2" DIA.	25 1/2"	1	25 1/2"	1
⋛	PIPE 26" DIA.	26"	1	26"	1
⋜	PIPE 26 1/2" DIA.	26 1/2"	1	26 1/2"	1
⋝	PIPE 27" DIA.	27"	1	27"	1
⋞	PIPE 27 1/2" DIA.	27 1/2"	1	27 1/2"	1
⋟	PIPE 28" DIA.	28"	1	28"	1
⋠	PIPE 28 1/2" DIA.	28 1/2"	1	28 1/2"	1
⋡	PIPE 29" DIA.	29"	1	29"	1
⋢	PIPE 29 1/2" DIA.	29 1/2"	1	29 1/2"	1
⋣	PIPE 30" DIA.	30"	1	30"	1
⋤	PIPE 30 1/2" DIA.	30 1/2"	1	30 1/2"	1
⋥	PIPE 31" DIA.	31"	1	31"	1
⋦	PIPE 31 1/2" DIA.	31 1/2"	1	31 1/2"	1
⋧	PIPE 32" DIA.	32"	1	32"	1
⋨	PIPE 32 1/2" DIA.	32 1/2"	1	32 1/2"	1
⋩	PIPE 33" DIA.	33"	1	33"	1
⋪	PIPE 33 1/2" DIA.	33 1/2"	1	33 1/2"	1
⋫	PIPE 34" DIA.	34"	1	34"	1
⋬	PIPE 34 1/2" DIA.	34 1/2"	1	34 1/2"	1
⋭	PIPE 35" DIA.	35"	1	35"	1
⋮	PIPE 35 1/2" DIA.	35 1/2"	1	35 1/2"	1
⋯	PIPE 36" DIA.	36"	1	36"	1
⋰	PIPE 36 1/2" DIA.	36 1/2"	1	36 1/2"	1
⋱	PIPE 37" DIA.	37"	1	37"	1
⋲	PIPE 37 1/2" DIA.	37 1/2"	1	37 1/2"	1
⋳	PIPE 38" DIA.	38"	1	38"	1
⋴	PIPE 38 1/2" DIA.	38 1/2"	1	38 1/2"	1
⋵	PIPE 39" DIA.	39"	1	39"	1
⋶	PIPE 39 1/2" DIA.	39 1/2"	1	39 1/2"	1
⋷	PIPE 40" DIA.	40"	1	40"	1
⋸	PIPE 40 1/2" DIA.	40 1/2"	1	40 1/2"	1
⋹	PIPE 41" DIA.	41"	1	41"	1
⋺	PIPE 41 1/2" DIA.	41 1/2"	1	41 1/2"	1
⋻	PIPE 42" DIA.	42"	1	42"	1
⋼	PIPE 42 1/2" DIA.	42 1/2"	1	42 1/2"	1
⋽	PIPE 43" DIA.	43"	1	43"	1
⋾	PIPE 43 1/2" DIA.	43 1/2"	1	43 1/2"	1
⋿	PIPE 44" DIA.	44"	1	44"	1
⋿	PIPE 44 1/2" DIA.	44 1/2"	1	44 1/2"	1
⋿	PIPE 45" DIA.	45"	1	45"	1
⋿	PIPE 45 1/2" DIA.	45 1/2"	1	45 1/2"	1
⋿	PIPE 46" DIA.	46"	1	46"	1
⋿	PIPE 46 1/2" DIA.	46 1/2"	1	46 1/2"	1
⋿	PIPE 47" DIA.	47"	1	47"	1
⋿	PIPE 47 1/2" DIA.	47 1/2"	1	47 1/2"	1
⋿	PIPE 48" DIA.	48"	1	48"	1
⋿	PIPE 48 1/2" DIA.	48 1/2"	1	48 1/2"	1
⋿	PIPE 49" DIA.	49"	1	49"	1
⋿	PIPE 49 1/2" DIA.	49 1/2"	1	49 1/2"	1
⋿	PIPE 50" DIA.	50"	1	50"	1
⋿	PIPE 50 1/2" DIA.	50 1/2"	1	50 1/2"	1
⋿	PIPE 51" DIA.	51"	1	51"	1
⋿	PIPE 51 1/2" DIA.	51 1/2"	1	51 1/2"	1
⋿	PIPE 52" DIA.	52"	1	52"	1
⋿	PIPE 52 1/2" DIA.	52 1/2"	1	52 1/2"	1
⋿	PIPE 53" DIA.	53"	1	53"	1
⋿	PIPE 53 1/2" DIA.	53 1/2"	1	53 1/2"	1
⋿	PIPE 54" DIA.	54"	1	54"	1
⋿	PIPE 54 1/2" DIA.	54 1/2"	1	54 1/2"	1
⋿	PIPE 55" DIA.	55"	1	55"	1
⋿	PIPE 55 1/2" DIA.	55 1/2"	1	55 1/2"	1
⋿	PIPE 56" DIA.	56"	1	56"	1
⋿	PIPE 56 1/2" DIA.	56 1/2"	1	56 1/2"	1
⋿	PIPE 57" DIA.	57"	1	57"	1
⋿	PIPE 57 1/2" DIA.	57 1/2"	1	57 1/2"	1
⋿	PIPE 58" DIA.	58"	1	58"	1
⋿	PIPE 58 1/2" DIA.	58 1/2"	1	58 1/2"	1
⋿	PIPE 59" DIA.	59"	1	59"	1
⋿	PIPE 59 1/2" DIA.	59 1/2"	1	59 1/2"	1
⋿	PIPE 60" DIA.	60"	1	60"	1
⋿	PIPE 60 1/2" DIA.	60 1/2"	1	60 1/2"	1
⋿	PIPE 61" DIA.	61"	1	61"	1
⋿	PIPE 61 1/2" DIA.	61 1/2"	1	61 1/2"	1
⋿	PIPE 62" DIA.	62"	1	62"	1
⋿	PIPE 62 1/2" DIA.	62 1/2"	1	62 1/2"	1
⋿	PIPE 63" DIA.	63"	1	63"	1
⋿	PIPE 63 1/2" DIA.	63 1/2"	1	63 1/2"	1
⋿	PIPE 64" DIA.	64"	1	64"	1
⋿	PIPE 64 1/2" DIA.	64 1/2"	1	64 1/2"	1
⋿	PIPE 65" DIA.	65"	1	65"	1
⋿	PIPE 65 1/2" DIA.	65 1/2"	1	65 1/2"	1
⋿	PIPE 66" DIA.	66"	1	66"	1
⋿	PIPE 66 1/2" DIA.	66 1/2"	1	66 1/2"	1
⋿	PIPE 67" DIA.	67"	1	67"	1
⋿	PIPE 67 1/2" DIA.	67 1/2"	1	67 1/2"	1
⋿	PIPE 68" DIA.	68"	1	68"	1
⋿	PIPE 68 1/2" DIA.	68 1/2"	1	68 1/2"	1
⋿	PIPE 69" DIA.	69"	1	69"	1
⋿	PIPE 69 1/2" DIA.	69 1/2"	1	69 1/2"	1
⋿	PIPE 70" DIA.	70"	1	70"	1
⋿	PIPE 70 1/2" DIA.	70 1/2"	1	70 1/2"	1
⋿	PIPE 71" DIA.	71"	1	71"	1
⋿	PIPE 71 1/2" DIA.	71 1/2"	1	71 1/2"	1
⋿	PIPE 72" DIA.	72"	1	72"	1
⋿	PIPE 72 1/2" DIA.	72 1/2"	1	72 1/2"	1
⋿	PIPE 73" DIA.	73"	1	73"	1
⋿	PIPE 73 1/2" DIA.	73 1/2"	1	73 1/2"	1
⋿	PIPE 74" DIA.	74"	1	74"	1
⋿	PIPE 74 1/2" DIA.	74 1/2"	1	74 1/2"	1
⋿	PIPE 75" DIA.	75"	1	75"	1
⋿	PIPE 75 1/2" DIA.	75 1/2"	1	75 1/2"	1
⋿	PIPE 76" DIA.	76"	1	76"	1
⋿	PIPE 76 1/2" DIA.	76 1/2"	1	76 1/2"	1
⋿	PIPE 77" DIA.	77"	1	77"	1
⋿	PIPE 77 1/2" DIA.	77 1/2"	1	77 1/2"	1
⋿	PIPE 78" DIA.	78"	1	78"	1
⋿	PIPE 78 1/2" DIA.	78 1/2"	1	78 1/2"	1
⋿	PIPE 79" DIA.	79"	1	79"	1
⋿	PIPE 79 1/2" DIA.	79 1/2"	1	79 1/2"	1
⋿	PIPE 80" DIA.	80"	1	80"	1
⋿	PIPE 80 1/2" DIA.	80 1/2"	1	80 1/2"	1
⋿	PIPE 81" DIA.	81"	1	81"	1
⋿	PIPE 81 1/2" DIA.	81 1/2"	1	81 1/2"	1
⋿	PIPE 82" DIA.	82"	1	82"	1
⋿	PIPE 82 1/2" DIA.	82 1/2"	1	82 1/2"	1
⋿	PIPE 83" DIA.	83"	1	83"	1
⋿	PIPE 83 1/2" DIA.	83 1/2"	1	83 1/2"	1
⋿	PIPE 84" DIA.	84"	1	84"	1
⋿	PIPE 84 1/2" DIA.	84 1/2"	1	84 1/2"	1
⋿	PIPE 85" DIA.	85"	1	85"	1
⋿	PIPE 85 1/2" DIA.	85 1/2"	1	85 1/2"	1
⋿	PIPE 86" DIA.	86"	1	86"	1
⋿	PIPE 86 1/2" DIA.	86 1/2"	1	86 1/2"	1
⋿	PIPE 87" DIA.	87"	1	87"	1
⋿	PIPE 87 1/2" DIA.	87 1/2"	1	87 1/2"	1
⋿	PIPE 88" DIA.	88"	1	88"	1
⋿	PIPE 88 1/2" DIA.	88 1/2"	1	88 1/2"	1
⋿	PIPE 89" DIA.	89"	1	89"	1
⋿	PIPE 89 1/2" DIA.	89 1/2"	1	89 1/2"	1
⋿	PIPE 90" DIA.	90"	1	90"	1
⋿	PIPE 90 1/2" DIA.	90 1/2"	1	90 1/2"	1
⋿	PIPE 91" DIA.	91"	1	91"	1
⋿	PIPE 91 1/2" DIA.	91 1/2"	1	91 1/2"	1
⋿	PIPE 92" DIA.	92"	1	92"	1
⋿	PIPE 92 1/2" DIA.	92 1/2"	1	92 1/2"	1
⋿	PIPE 93" DIA.	93"	1	93"	1
⋿	PIPE 93 1/2" DIA.	93 1/2"	1	93 1/2"	1
⋿	PIPE 94" DIA.	94"	1	94"	1
⋿	PIPE 94 1/2" DIA.	94 1/2"	1	94 1/2"	1
⋿	PIPE 95" DIA.	95"	1	95"	1
⋿	PIPE 95 1/2" DIA.	95 1/2"	1	95 1/2"	1
⋿	PIPE 96" DIA.	96"	1	96"	1
⋿	PIPE 96 1/2" DIA.	96 1/2"	1	96 1/2"	1
⋿	PIPE 97" DIA.	97"	1	97"	1
⋿	PIPE 97 1/2" DIA.	97 1/2"	1	97 1/2"	1
⋿	PIPE 98" DIA.	98"	1	98"	1
⋿	PIPE 98 1/2" DIA.	98 1/2"	1	98 1/2"	1
⋿	PIPE 99" DIA.	99"	1	99"	1
⋿	PIPE 99 1/2" DIA.	99 1/2"	1	99 1/2"	1
⋿	PIPE 100" DIA.	100"	1	100"	1
⋿	PIPE 100 1/2" DIA.	100 1/2"	1	100 1/2"	1
(NOTE: ALL SPRINGERS SUBJECT TO MECHANICAL CHANGE TO MATCH THIS DRAWING)					
SHEET TOTAL					87

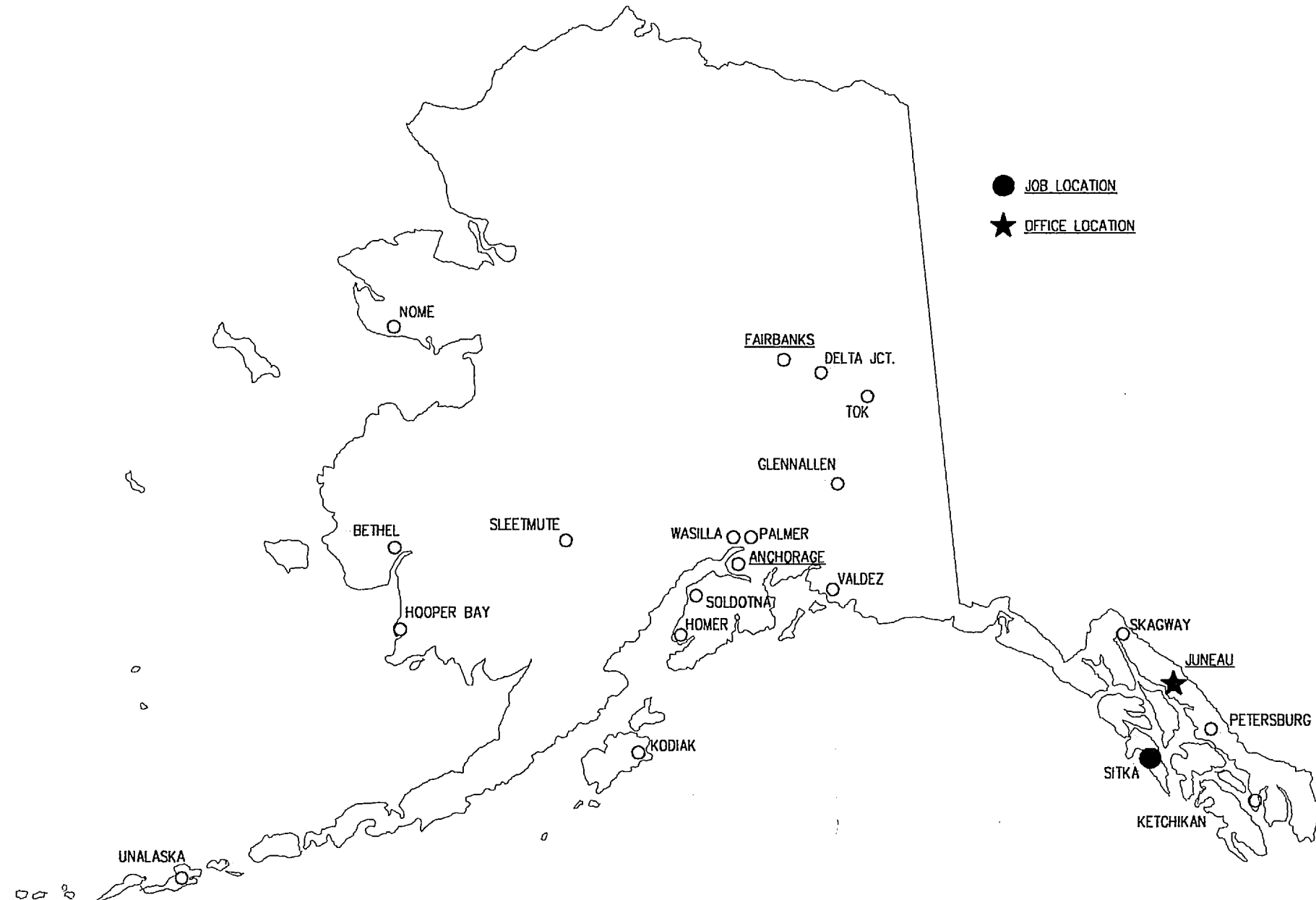
SimplexGrinnell

1901 ANKA STREET
JUNEAU, ALASKA 99801

PH: (907) 789-4449 FAX: (907) 789-4110

GENERAL NOTES:

- 1.) THIS DRAWING DEPICTS GENERAL LOCATIONS OF LIFE SAFETY EQUIPMENT & FIELD DEVICES. EXACT ROUTING OF CONDUITS TO BE DETERMINED IN THE FIELD BY THE INSTALLING CONTRACTOR TO SUIT CONDITIONS. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE MOST CURRENT RECORD DRAWINGS PROVIDED BY SIMPLEXGRINNELL.
- 2.) THERE MUST BE AT LEAST 6" OF LEAD WIRE FROM THE BOX TO THE DEVICE. ALL SPLICES ARE TO BE MADE IN AN ACCESSIBLE JUNCTION BOX. DO NOT SPLICE THE WIRE INSIDE WIREWAYS. ALL BOXES ARE TO BE SIZED PER NEC (NFPA 70) ARTICLE.
- 3.) ALL CONDUIT, ELECTRICAL BOXES, AND CONNECTORS SHALL BE SUPPLIED AND INSTALLED BY JOB SITE ELECTRICIANS.
- 4.) ALL WIRING AND CABLING SHALL BE INSTALLED BY JOB SITE ELECTRICIAN. ALL WIRING INSTALLED IN CONDUIT SHALL MEET NEC FILL REQUIREMENTS.
- 5.) JOB SITE ELECTRICIAN SHALL TERMINATE ALL FIELD DEVICES AS SHOWN IN THIS DRAWING PACKAGE. PRIOR TO CONNECTING FIELD DEVICES, THE WIRING SHALL BE CHECKED BY THE JOB SITE ELECTRICIAN FOR GROUND, OPENS, AND SHORTS.
- 6.) ANY DEVIATIONS OR CHANGES TO THESE DRAWINGS MUST BE APPROVED BY SIMPLEXGRINNELL PRIOR TO THE CHANGES BEING PERFORMED.
- 7.) ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.
- 8.) INSTALL SMOKE DETECTOR AT LEAST 1' FROM SPRINKLER HEADS AND AT LEAST 3' FROM SUPPLY AIR DIFFUSERS. AREA SMOKE DETECTORS INSTALLED IN ROOMS WITH HIGH AIR VELOCITY SHOULD BE RATED FOR THAT ENVIRONMENT.
- 9.) ALARM INDICATING APPLIANCES ARE TO BE HEARD THROUGHOUT THE AREA OF PROTECTION WITH A MINIMUM SOUND LEVEL OF 15 DECIBELS ABOVE AMBIENT.
- 10.) ALL NEWLY INSTALLED FIRE ALARM DEVICES ARE TO BE COVERED UNTIL THE FIRE ALARM HAS BEEN INSPECTED BY THE AHJ AND IS READY TO TURN OVER TO THE BUILDING OWNER.
- 11.) ALL FIRE SPRINKLER DEVICES SHOWN ON THESE DRAWINGS SHOULD BE FIELD VERIFIED WITH THE FIRE SPRINKLER CONTRACTORS.
- 12.) THE FCP (FIRE ALARM CONTROL PANEL) OR RCP (RELEASING CONTROL PANEL) SHALL NOT BE USED AS A TERMINAL CABINET.
- 13.) A MINIMUM OF 48 HOURS NOTICE SHALL BE REQUIRED FOR ANY INSPECTION AND/OR TESTING.
- 14.) DO NOT PUT 120VAC CONDUCTORS IN THE SAME CONDUIT WITH FIRE ALARM WIRING.
- 15.) THIS SYSTEM MEETS NFPA REQUIREMENTS FOR OPERATION AT 0-49°C/32-120°F AND AT A RELATIVE HUMIDITY OF 85% RH (NON-CONDENSING) AT 30°C/86°F. HOWEVER, THE USEFUL LIFE OF THE SYSTEM'S STANDBY BATTERIES AND THE ELECTRIC COMPONENTS MAY BE ADVERSELY AFFECTED BY EXTREME TEMPERATURE RANGES AND HUMIDITY. THEREFORE, IT IS RECOMMENDED THAT THIS SYSTEM AND ITS PERIPHERALS BE INSTALLED IN AN ENVIRONMENT WITH A NOMINAL ROOM TEMPERATURE OF 15-27°C/60-80°F.
- 16.) PER NFPA 72 8-5.3.2.1.1 A DACT (WHEN REQUIRED) SHALL BE CONNECTED TO THE PUBLIC SWITCHED TELEPHONE NETWORK UPSTREAM OF ANY PRIVATE TELEPHONE SYSTEM AT THE PROTECTED PREMISES. IN ADDITION, THE CONNECTIONS TO THE PUBLIC SWITCHED TELEPHONE NETWORK SHALL BE UNDER THE CONTROL OF THE SUBSCRIBER FOR WHOM SERVICE IS BEING PROVIDED BY THE SUPERVISING STATION FOR ALARM SYSTEM. SPECIAL ATTENTION SHALL BE REQUIRED TO ENSURE THAT THIS CONNECTION IS MADE ONLY TO A LOOP START TELEPHONE CIRCUIT AND NOT TO A GROUND START TELEPHONE CIRCUIT.
- 17.) COMPLIANCE WITH APPLICABLE CODES TO BE MAINTAINED AND VERIFIED WITH SIMPLEXGRINNELL.
- 18.) AS WITH ALL SOLID STATE ELECTRONIC DEVICES, THIS SYSTEM MAY OPERATE ERRATICALLY OR CAN BE DAMAGED WHEN SUBJECTED TO LIGHTNING INDUCED TRANSIENTS. ALTHOUGH NO SYSTEM IS COMPLETELY IMMUNE FROM LIGHTNING TRANSIENTS AND INTERFERENCE, PROPER GROUNDING WILL REDUCE SUSCEPTIBILITY. OVERHEAD OR OUTSIDE AERIAL WIRING IS NOT RECOMMENDED, DUE TO AN INCREASED SUSCEPTIBILITY TO NEARBY LIGHTNING STRIKES. CONSULT WITH SIMPLEXGRINNELL IF ANY PROBLEMS ARE ANTICIPATED OR ENCOUNTERED.
- 19.) DISCONNECT BATTERIES, THEN AC POWER, PRIOR TO REMOVING OR INSERTING CIRCUIT BOARDS. FAILURE TO DO SO MAY DAMAGE CIRCUITS.
- 20.) REMOVE ALL ELECTRONIC ASSEMBLIES PRIOR TO DRILLING, FILING, REAMING, OR PUNCHING OF THE ENCLOSURE. WHEN POSSIBLE, MAKE ALL CABLE ENTRIES FROM THE SIDES OR REAR. BEFORE MAKING MODIFICATIONS, VERIFY THAT THEY WILL NOT INTERFERE WITH BATTERY, TRANSFORMER, AND PRINTED CIRCUIT BOARD LOCATIONS.
- 21.) DO NOT TIGHTEN SCREW TERMINALS MORE THAN NINE IN-LBS. OVER TIGHTENING MAY DAMAGE THREADS, RESULTING IN REDUCED TERMINAL CONTACT PRESSURE AND DIFFICULTY WITH SCREW TERMINAL REMOVAL.
- 22.) THIS SYSTEM CONTAINS STATIC-SENSITIVE COMPONENTS. ALWAYS GROUND YOURSELF WITH A PROPER WRIST STRAP BEFORE HANDLING ANY CIRCUITS SO THAT STATIC CHARGES ARE REMOVED FROM THE BODY. USE STATIC SUPPRESSIVE PACKAGING TO PROTECT ANY ELECTRONIC ASSEMBLY REMOVED FROM THE UNIT.
- 23.) WIRE USED: #12AWG THHN/THWN, 1.98 OHMS PER 1000 FEET, AND/OR #16AWG THHN/THWN, 4.99 OHMS PER 1000 FEET.
- 24.) MOUNT SMOKE & HEAT DETECTORS WITHIN 3 FEET OF CEILING PEAK.
- 25.) DO NOT MOUNT SMOKE DETECTORS WITHIN 3 FEET OF DIFFUSERS.
- 26.) DO NOT RUN ANY 120VAC IN THE SAME CONDUIT AS FIRE ALARM WIRING.
- 27.) CLASS "A" IN & OUT WIRING MUST BE IN SEPARATE CONDUITS, FOR EXCEPTIONS SEE NFPA 72.
- 28.) IF CEILING BEAMS, JOISTS, SHEDS OR PEAKS NOT SHOWN ON THESE PLANS ARE PRESENT CONTACT SIMPLEXGRINNELL FOR PLACEMENT & MOUNTING INSTRUCTIONS.
- 29.) DO NOT MOUNT ANY SIGA SERIES DETECTORS WITHIN 36" OF AN ELECTRONIC BALLAST.
- 30.) DO NOT USE SHIELDED WIRE FOR FIRE ALARM SYSTEM, UNLESS DIRECTED TO BY SIMPLEXGRINNELL.
- 31.) MANUAL PULL STATIONS TO BE MOUNTED WITHIN 5 FEET OF DOOR EXITS.
- 32.) ALL CONDUITS ENTERING FIRE ALARM CONTROL PANEL MUST BE SEALED FROM OUTSIDE ELEMENTS.



KETCHIKAN SHIPYARD MACHINE SHOP ADDITION

SIMPLEXGRINNELL CONTACT LIST

JOB NUMBER: 918674901
DATE CREATED: 9/24/06
REVISION DATE:

PROJECT MANAGER: LUCAS TURI
CONSTRUCTION MANAGER: LUCAS TURI
DRAWN BY: KBCAD
REVIEWED BY: LUCAS TURI

PHONE NUMBER: 907-561-1911
FAX NUMBER: 907-561-4650

CONTRACTOR INFORMATION

CONTRACTOR: FIRST CITY ELECTRIC
PERSON OF CONTACT:
PHONE NUMBER:
FAX NUMBER:

REVISION DESCRIPTION

1.) N/A

DRAWING INDEX

SHEET #00 - COVER SHEET
SHEET #01 - FIRE ALARM DEVICE LAYOUT & WIRING FIRST FLOOR

FIRE ALARM LEGEND

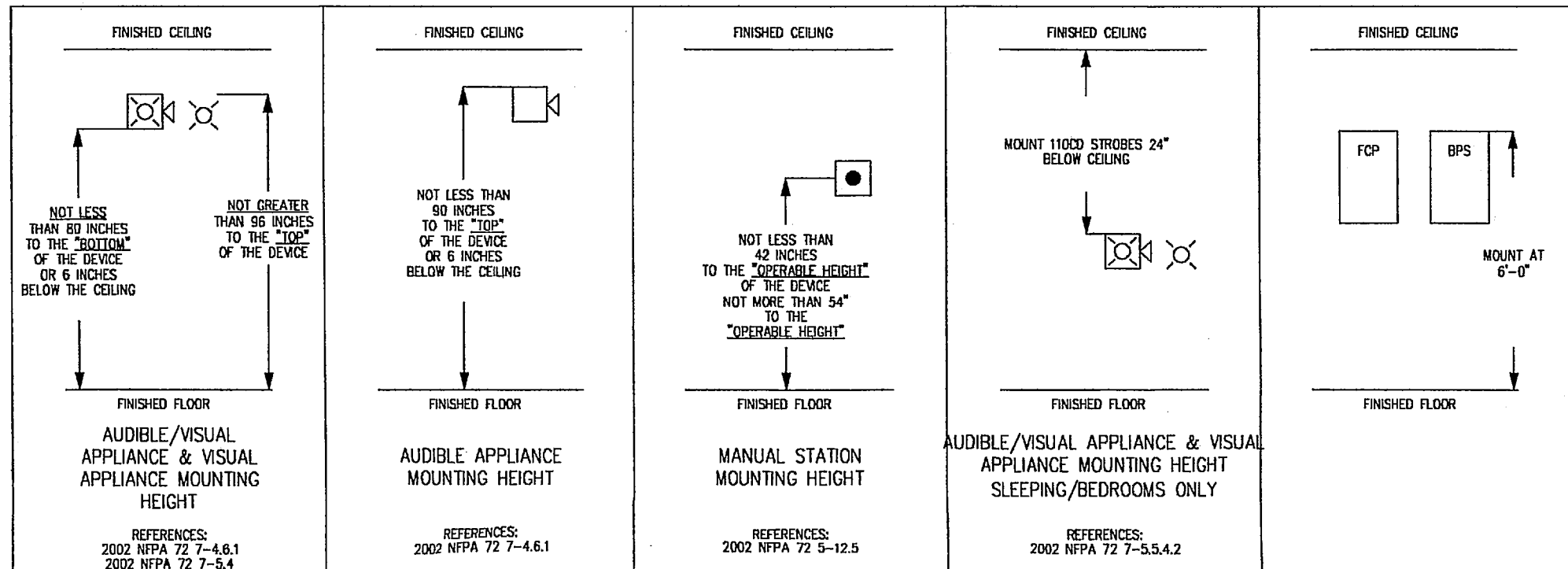
SYMBOL	MANUFAC.	DESCRIPTION	P/N	BACK BOX
EST	EST	INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR W/ STANDARD DETECTOR BASE	SIGA-PS SIGA-SB	4-0
EST	EST	INTELLIGENT FT/ROR HEAT DETECTOR W/ STANDARD DETECTOR BASE	SIGA-HRS SIGA-SB	4-0
EST	EST	INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR W/ DUCT SMOKE DETECTOR HOUSING W/ DETECTOR RELAY BASE W/ AIR SAMPLING TUBE 78" LONG W/	SIGA-PS SIGA-DH SIGA-RB 6261-006	N/A
EST	EST	DUCT SMOKE DETECTOR TEST STATION	SIGA-DTS	4-SQ 1-1/2" DEEP
EST	EST	MANUAL STATION, ACTION CAST	SIGA-270	4-SQ W/1-G MUD RING 2-1/2" DEEP
EST	EST	CONTROL RELAY MODULE	SIGA-CR	4-SQ W/1-G MUD RING 1-1/2" DEEP
EST	EST	DUAL INPUT MODULE	SIGA-CT2	4-SQ W/1-G MUD RING 1-1/2" DEEP
EST	EST	COMBINATION WATERFLOW/TAMPER MODULE	SIGA-WTM	4-SQ W/1-G MUD RING 1-1/2" DEEP
EST	EST	HORN/STROBE, TEMP/SYN. 94db/15cd 86ma	G1-HV15	4-SQ W/1-G MUD RING
EST	EST	HORN/STROBE, TEMP/SYN. 94db/30cd 123ma	G1-HV30	4-SQ W/1-G MUD RING
EST	EST	HORN/STROBE, TEMP/SYN. 94db/60cd 172ma	G1-HV60	4-SQ W/1-G MUD RING
EST	EST	HORN/STROBE, TEMP/SYN. 94db/110cd 204ma	G1-HV110	4-SQ W/1-G MUD RING
EST	EST	STROBE, SYN. 15cd 58ma	G1-V15	4-SQ W/1-G MUD RING
EST	EST	HORN, TEMPORAL 98db 40ma W/ WEATHERPROOF BACKBOX, CAST - RED	757-1A-T	757A-WB
EST	EST	FIRE ALARM CONTROL PANEL	EST2	INCLUDED
EST	EST	REMOTE BOOSTER POWER SUPPLY PANEL	BPS6	INCLUDED
SEN	SEN	DOOR HOLDER, 24/120 SEMI-FLUSH	DHF24120C	4-SQ W/1-G MUD RING
PYR	PYR	EXPLOSION PROOF MANUAL STATION	MSM-EXP	INCLUDED
EST	EST	EXPLOSION PROOF HORN 160ma	889D-AW	3/4" NPT
EST	EST	EXPLOSION PROOF STROBE 1.4A	97DEXC-GW	3/4" NPT
(BY OTHERS)	(BY OTHERS)	FLOW SWITCH	N/A	N/A
(BY OTHERS)	(BY OTHERS)	TAMPER SWITCH	N/A	N/A

ABBREVIATIONS

A.F.F.	- ABOVE FINISHED FLOOR	GRA	- FIRE ALARM GRAPHIC ANNUNCIATOR
AQU	- NETWORK CONTROLLER	ICH	- INTERCOM HEAD END EQUIPMENT
AHJ	- AUTHORITY HAVING JURISDICTION	IDC	- INITIATING DEVICE CIRCUIT
ANN	- FIRE ALARM ANNUNCIATOR	J-BOX	- JUNCTION BOX
BPS	- FIRE ALARM BOOSTER POWER SUPPLY	NAC	- NOTIFICATION APPLIANCE CIRCUIT
BR	- BEAM DETECTOR RECEIVER	NCH	- NURSE CALL HEAD END EQUIPMENT
BT	- BEAM DETECTOR TRANSMITTER	P.T.Z.	- PAN, TILT, ZOOM CAMERA
CATV	- CABLE TELEVISION	RIM	- REMOTE INPUT MODULE
CCTV	- CLOSED CIRCUIT TELEVISION	RRM	- REMOTE RELAY MODULE
CPS	- CLOCK POWER SUPPLY	RTE	- REQUEST TO EXIT
CR	- CONTROL RELAY MODULE	RTS	- REMOTE TEST STATION
CT1	- SINGLE INPUT CONTROL MODULE	SEC	- SECURITY CONTROL PANEL
CT2	- DUAL INPUT CONTROL MODULE	SLC	- SIGNALING LINE CIRCUIT
DVR	- DIGITAL VIDEO RECORDER	SCHE	- SOUND SYSTEM HEAD END EQUIPMENT
EX	- EXPLOSION PROOF	TIB	- TELEPHONE TERMINAL BOARD
EZM	- ZONE EXPANDER MODULE	TYP.	- TYPICAL OF ALL DEVICES
FA	- FIRE ALARM SYSTEM	VP	- VANDAL PROOF
FCP	- FIRE ALARM CONTROL PANEL	WG	- WIRE GUARD
FOV	- FIELD OF VIEW	WP	- WEATHER PROOF
FSD	- FIRE SMOKE DAMPER	WTM	- WATER FLOW & TAMPER MODULE

*** ATTENTION ***

THE PLACEMENT OF THE FIRE ALARM HORN/STROBES, STROBES, AND/OR BELLS MUST BE STRICTLY FOLLOWED IN ORDER TO MEET ADA REQUIREMENTS.
THESE DEVICES MUST NOT BE INTERCHANGED IN ANY WAY. THE DEVICE TYPES SHOWN MUST BE INSTALLED IN THE EXACT LOCATIONS SHOWN ON THESE PLANS.



WIRE/CABLE SCHEDULE

SGR TYPE	WEST PENN	DESCRIPTION	O.D.	LINE TYPE
C CIRCUIT	N/A	16 AWG WIRE - 2C	N/A	
C CIRCUIT	N/A	12 AWG WIRE - 2C	N/A	

Underwriters Laboratories Inc.
Listed for Fire Alarm Applications
Certification Number 56253 UL1015

NATIONAL INSTITUTE FOR CERTIFICATION
OF FIRE ALARM SYSTEMS
IN FIRE ALARM SYSTEMS
NICEET

tyco
Fire & Security
SimplexGrinnell

PROJECT NAME: KETCHIKAN SHIPYARD
LOCATION: KETCHIKAN, ALASKA
CONTRACTOR NAME: FIRST CITY ELECTRIC
LOCATION: KETCHIKAN, ALASKA
THE DRAWING AND THE INFORMATION AND OTHER APPLICATIONS HEREON CONTAINED IS THE PROPERTY OF SIMPLEXGRINNELL AND IS LOANED TO YOU WITHOUT ANY GUARANTEE AS TO THE ACCURACY OF THE INFORMATION. NO PART SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM SIMPLEXGRINNELL.

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PROJECT MANAGER: LUCAS TURI
CONST. MANAGER: LUCAS TURI
APPROVED BY: LUCAS TURI