

GENERAL NOTES

- VERIFY ALL CONDITIONS COVERING OR AFFECTING THE STRUCTURAL WORK. OBTAIN AND VERIFY ALL DIMENSIONS TO ENSURE THE PROPER STRENGTH, FIT AND LOCATION OF THE STRUCTURAL WORK. REPORT TO THE ENGINEER ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK.
- THIS CONTRACTOR SHALL MAKE ALL NECESSARY FIELD MEASUREMENTS AS REQUIRED FOR CONNECTIONS TO EXISTING WORK. CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND RELATIONS SHOWN ON THE DRAWINGS BEFORE COMMENCING WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE OWNER'S RESIDENT ENGINEER.
- ALL CONSTRUCTION SHALL COMPLY FULLY WITH THE APPLICABLE PROVISIONS OF NATIONAL OCCUPATIONAL SAFETY AND HEALTH REQUIREMENTS, THE LOCAL BUILDING CODE, LATEST EDITION, AND ALL REQUIREMENTS SPECIFIED IN THE CODE SHALL BE ADHERED TO AS IF THEY WERE CALLED FOR OR SHOWN ON THE DRAWINGS. THIS SHALL NOT BE CONSTRUED TO MEAN THAT ANY REQUIREMENTS SET FORTH ON THE DRAWINGS MAY BE MODIFIED BECAUSE THEY ARE MORE STRINGENT THAN THE CODE REQUIREMENTS OR BECAUSE THEY ARE NOT SPECIFICALLY REQUIRED BY CODE.
- ANY EXISTING CONSTRUCTION TO BE MODIFIED AS A PART OF THIS CONTRACT, SHALL BE RESULT AS REQUIRED, TO THE SATISFACTION OF THE ENGINEER.
- EXISTING CONSTRUCTION NOT UNDERGOING ALTERATION IS TO REMAIN UNDISTURBED. WHERE SUCH CONSTRUCTION IS DISTURBED AS A RESULT OF THE OPERATION OF THIS CONTRACT, IT SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS REQUIRED AND TO THE SATISFACTION OF THE ENGINEER.
- ALL WORK SHOWN ON THESE DRAWINGS MAY BE CHECKED BY AN INDEPENDENT TESTING AGENCY RETAINED BY OWNER OR PRIME CONTRACTOR TO ENSURE COMPLIANCE WITH THE REQUIREMENTS SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL PROVIDE ACCESS AS REQUIRED FOR TESTING PURPOSES.
- ALL WORK SHALL CONFORM TO THE MOST RESTRICTIVE STANDARDS OF THE FOLLOWING CODES:
 - A) THE BOCA NATIONAL BUILDING CODE - 1996, HIGHRISE BUILDING CODE 2000
 - B) SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN, 4TH EDITION, AISC.
 - C) AISC 360, 1989 "STRUCTURAL STEEL DESIGN - STEEL" BY AISC.
 - D) AISC 358, 1994 "STEEL METAL JOINTS CODE - STEEL" BY AISC.

STRUCTURAL STEEL - UNLESS OTHERWISE NOTED

- ALL STRUCTURAL STEEL SHALL BE DETAILED, SHOP PRIME PAINTED, PIECE MARKED, FURNISHED, FABRICATED AND DELIVERED ACCORDING TO THE AISC "SPECIFICATION FOR STRUCTURAL STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN AND PLASTIC DESIGN" DATED JUNE 1, 1989, AND TO THE AISC "CODE OF STANDARD PRACTICE".
- STRUCTURAL SHAPES SHALL CONFORM TO ASTM A992 GRADE 50 (Fy=50 KSI), PLATES AND ANGLES SHALL CONFORM TO ASTM A-588 (Fy=50KSI). STRUCTURAL TUBES SHALL CONFORM TO ASTM A-500 GRADE 48 (Fy=48 KSI). COLD FORMED SHAPES SHALL CONFORM TO ASTM A-653 (Fy=50 KSI).
- ALL CONNECTIONS SHALL BE HIGH STRENGTH BOLTED, AS NOTED ON THE DESIGN DRAWINGS.
- ALL STEEL SHALL BE SHOP PRIME PAINTED. FIELD TOUCH UP ALL EXPOSED STEEL OR DAMAGED PRIME PAINTED SURFACES.
- STRUCTURAL STEEL SHALL NOT BE ALTERED IN THE FIELD FROM THAT SHOWN ON THE DESIGN DRAWINGS. MISMATCHED HOLES SHALL BE REAMED TO A LARGER DIAMETER. CUTTING, BURRS, OR FIELDS NOT SHOWN ON DESIGN DRAWINGS SHALL NOT BE PERFORMED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE ENGINEER.

FIELDS

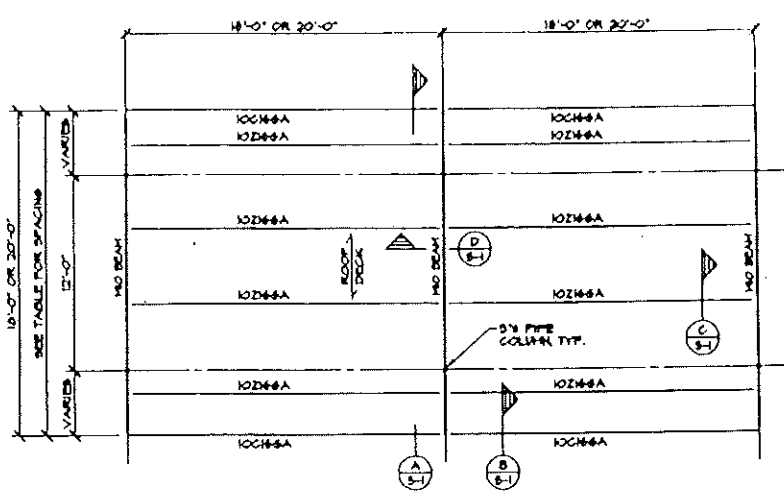
- FIELDS SHALL BE IN ACCORDANCE WITH "STRUCTURAL JOINTS - STEEL" D11-48 AMERICAN WELDING SOCIETY DATED NOV. 15, 1947. ELECTRODES FOR WELDING SHALL BE IN ACCORDANCE WITH AWS 51 OR 55, E70XX.
- ALL WELDED JOINTS SHALL BE MADE USING THOSE PREQUALIFIED OR QUALIFIED PER CHAPTER 9 OF THE STRUCTURAL JOINTS CODE OF THE AMERICAN WELDING SOCIETY (AWS). ALL QUALIFIED JOINTS ARE LIMITED TO THOSE MADE BY THE FOLLOWING WELDING PROCEDURES:
 - MANUAL SHIELDED METAL ARC, SUBMERGED ARC, GAS METAL ARC (EXCEPT SHORT CIRCUITING TRANSFER), AND FLUX-CORED ARC.
- WELDS SHALL BE MADE ONLY BY WELDERS AND WELDING OPERATORS WHO HAVE BEEN PREVIOUSLY QUALIFIED BY TESTS AS PRESCRIBED BY THE STRUCTURAL JOINTS CODE OF THE AMERICAN WELDING SOCIETY AND HAVE CURRENT PAPERS FOR THE TYPE OF JOINT TO BE WELDED.
- CONTRACTOR TO SUBMIT CURRENT WELDER QUALIFICATION CERTIFICATION TO ENGINEER PRIOR TO COMMENCING INSTALLATION.
- THE MINIMUM SIZE PELLET WELD SHALL BE 5/16" RICH UNID. THE SIZE AND LENGTH OF ALL PELLETS SHALL BE PROPORTIONED NOT TO LOCALLY OVERSTRESS THE CONNECTED MEMBERS.
- BEFORE WELDING MEMBERS TO EXISTING BEAMS OR COLUMNS, THOROUGHLY CLEAN ALL SURFACES TO REMOVE RUST, PAINT, DIRT OR OTHER FOREIGN MATTER IN THE AREA OF WELD.
- WHERE WELDING IS USED, THE OWNER OR PRIME CONTRACTOR MAY DECIDE TO MAKE NON-DESTRUCTIVE TESTS OF THE WELDS USING RADIOGRAPHY, ULTRASONIC TESTING, MAGNETIC PARTICLE TESTING AND DIE PENETRANT TESTING IN COMBINATION OR SEPARATELY. THE NON-DESTRUCTIVE INVESTIGATION WILL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY QUALIFIED IN THIS TYPE OF WORK. THE COST OF THIS INVESTIGATION WILL BE ASSUMED BY THE OWNER OR PRIME CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ACCESS AS REQUIRED FOR TESTING LAB PERSONNEL.
- WELD ACCEPTABILITY SHALL BE BASED ON AWS D11.48 "STRUCTURAL JOINTS - STEEL". IN THE EVENT THE WELDING IS NOT ACCEPTABLE, THE CONTRACTOR SHALL REMOVE ALL REJECTED WELDING AND REWELD ALL SUCH AREAS. THE CONTRACTOR WILL THEN ASSUME ALL COSTS IN CONNECTION WITH THE REWELDING AND RE-EXAMINATION OF THE RE WELDED CONNECTIONS, UNTIL WELDING IS ACCEPTED.

CONCRETE NOTES

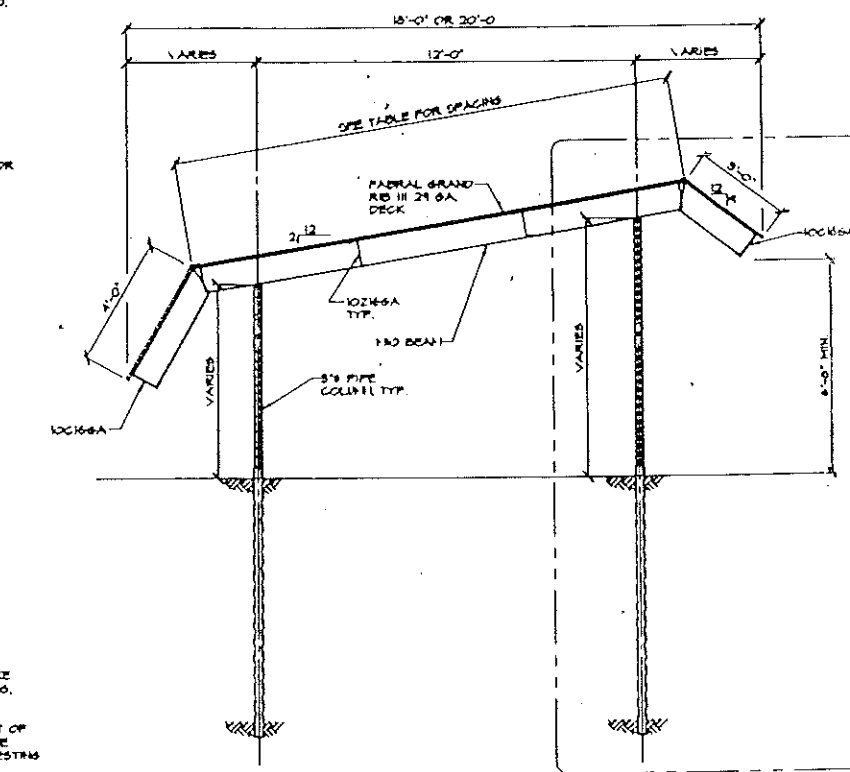
- CONCRETE - IN - PLACE CONCRETE
- ALL CONCRETE SHALL BE IN ACCORDANCE WITH ACI 308 LATEST EDITION
- ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
- MAXIMUM SLEEF SHALL BE 4". ENTRAPMENT SHALL BE 4" IN. SUB-CONTRACTOR SHALL SUBMIT PROPOSED MIX DESIGN FOR APPROVAL AS WELL AS PROVIDE TEST CYLINDERS TO THE BUILDER AT THE OF CONSTRUCTION. CONCRETE SHALL BE PORTLAND CEMENT COMPLYING WITH ASTM DESIGNATION C-150 "STANDARD SPECIFICATION FOR PORTLAND CEMENT", TYPE I NORMAL PORTLAND CEMENT, FOR GENERAL CONSTRUCTION.

FOOTINGS

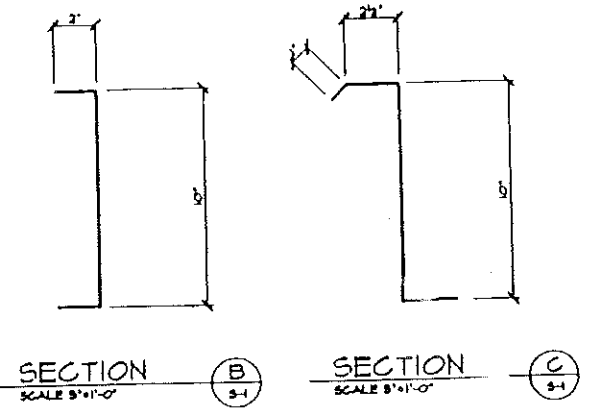
- CONTRACTOR SHALL VERIFY ALL CONDITIONS, INCLUDING UNDERGROUND UTILITIES AND FIELD MEASUREMENTS AT JOB SITE AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
- COMPLY FULLY WITH REQUIRED ENDS OF USMA AND OTHER REGULATORY AGENCIES FOR SAFETY PROVISIONS.
- MINIMUM DEPTHS OF FOOTINGS ARE AS SHOWN ON THE DRAWINGS. IN ALL CASES FOOTINGS ARE TO BEAR ON UNDISTURBED NATURAL SOILS HAVING A MINIMUM NET ALLOWABLE BEARING CAPACITY OF 5000 PSF. ALL FOOTING DEPTHS ARE SUBJECT TO THE REVIEW OF THE ENGINEER'S REPRESENTATIVE.



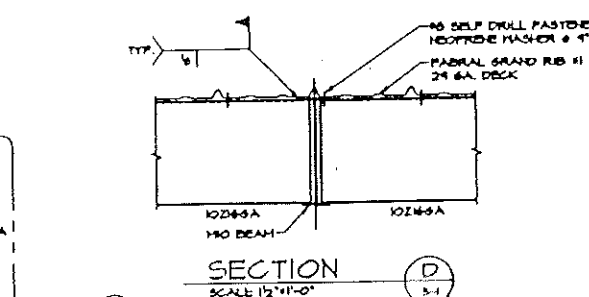
TYPICAL 20'-0" X 20'-0" BAY FRAMING PLAN
SCALE 3/8"=1'-0"



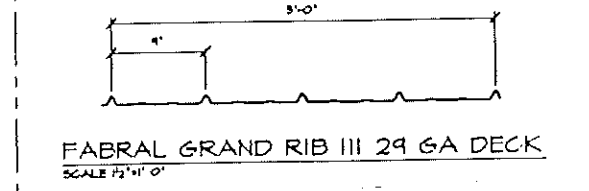
SECTION A
SCALE 3/8"=1'-0"



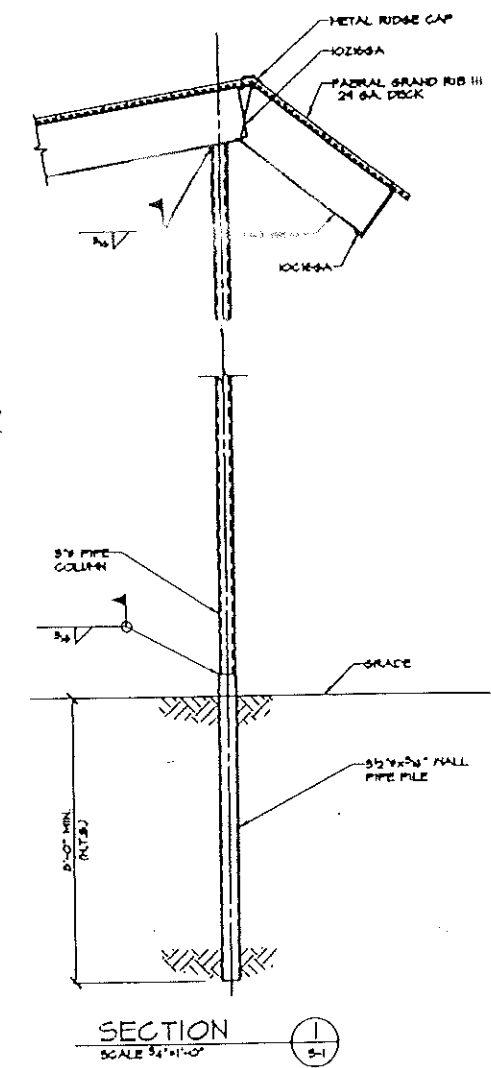
SECTION B SCALE 3/4"=1'-0" SECTION C SCALE 3/4"=1'-0"



SECTION D SCALE 1/2"=1'-0"



FABRAL GRAND RIB III 29 GA DECK
SCALE 1/2"=1'-0"



SECTION I SCALE 3/4"=1'-0"

MANSARD 18'-0" M x 20'-0" D
USE FOR 10'-0" x 18'-0" AND 10'-0" x 20'-0" LAYOUTS

| GROUND SNOW LOAD P _g | 20 PSF | 25 PSF | 30 PSF | 35 PSF | 40 PSF | 45 PSF | 50 PSF | 55 PSF | 60 PSF | 65 PSF | 70 PSF |
|---------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| DESIGN SNOW LOAD P _f | 14 PSF | 18 PSF | 21 PSF | 25 PSF | 28 PSF | 32 PSF | 35 PSF | 39 PSF | 42 PSF | 46 PSF | 49 PSF |
| BEAM SIZE | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 |
| MAXIMUM PURLIN SPACING | 60" | 60" | 60" | 54" | 48" | 42" | 36" | 30" | 24" | 18" | 12" |
| COLUMN SIZE (FRONT) | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" |
| COLUMN SIZE (REAR) | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" |
| COLUMN AXIAL | 3.4 | 3.5 | 4.1 | 4.8 | 5.4 | 6.0 | 6.7 | 7.4 | 8.1 | 8.8 | 9.5 |
| MIN FILE DEPTH (IN) | XX" | XX" | XX" | XX" | XX" | XX" | XX" | XX" | XX" | XX" | XX" |

MANSARD 20'-0" M x 20'-0" D
USE FOR 10'-0" x 18'-0" AND 10'-0" x 20'-0" LAYOUTS

| GROUND SNOW LOAD P _g | 20 PSF | 25 PSF | 30 PSF | 35 PSF | 40 PSF | 45 PSF | 50 PSF | 55 PSF | 60 PSF | 65 PSF | 70 PSF |
|---------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| DESIGN SNOW LOAD P _f | 14 PSF | 18 PSF | 21 PSF | 25 PSF | 28 PSF | 32 PSF | 35 PSF | 39 PSF | 42 PSF | 46 PSF | 49 PSF |
| BEAM SIZE | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 | 14x8 |
| MAXIMUM PURLIN SPACING | 60" | 58" | 50" | 44" | 38" | 32" | 26" | 20" | 14" | 8" | 2" |
| COLUMN SIZE (FRONT) | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" |
| COLUMN SIZE (REAR) | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" | 3" OD x 4" |
| COLUMN AXIAL | 3.3 | 3.4 | 4.1 | 4.8 | 5.4 | 6.0 | 6.7 | 7.4 | 8.1 | 8.8 | 9.5 |
| MIN FILE DEPTH (IN) | XX" | XX" | XX" | XX" | XX" | XX" | XX" | XX" | XX" | XX" | XX" |



Carport Structures Corp.
1505 Weymouth Road
Orford, Michigan 48171
Tel: (248) 628-5571 Fax: (248) 628-5260

CS²
CORPORATE
STRUCTURAL
SERVICES, INC.
ONE COLE BLVD
ORFORD MI 48171
TEL: (248) 628-5571
FAX: (248) 628-5260

XXXXXXXX XXXXXX
XXXXXXXX XXXXXX
XXXX XXXXXX XX
XXXXXXXX XXXXXX
FRAMING PLAN,
SECTIONS & DETAILS
9'-0" x 18'-0", 9'-0" x 20'-0"
10'-0" x 18'-0", 10'-0" x 20'-0"
MANSARD CARPORT

| | |
|-------------|-----|
| Drawn by | DAH |
| Checked by | DAW |
| Reviewed by | DAW |
| Project No. | |

CSS-008

S-1

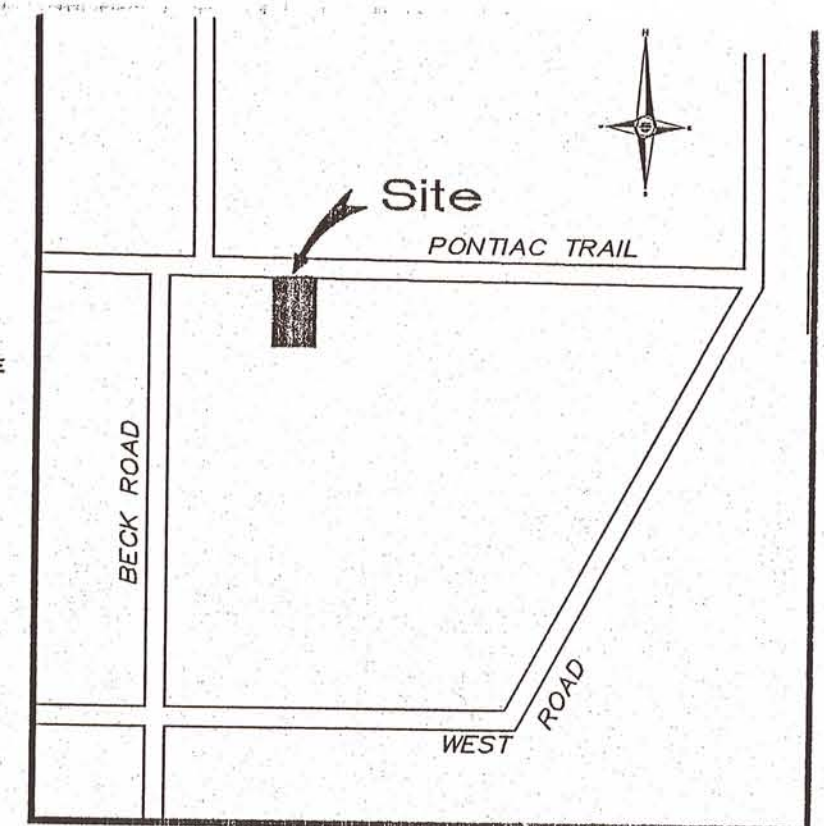
N.W. COR. SEC. 4
T.1N., R.8E.
CITY OF NOVI
N89°16'52"E
360.45'

S.W. COR. SEC. 33
T.1N., R.8E.
COMMERCE TWP.
N89°30'00"E
590.80'

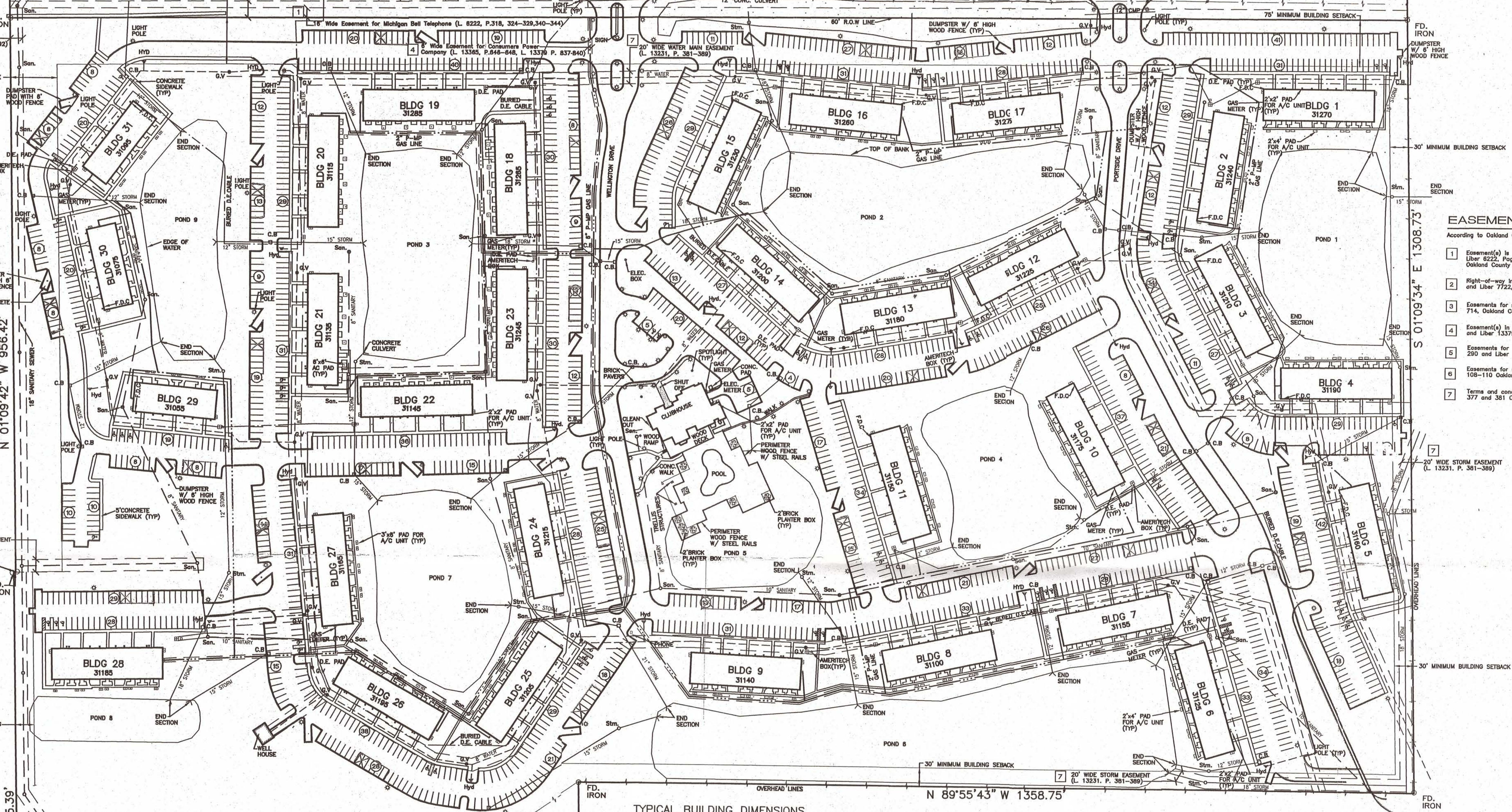
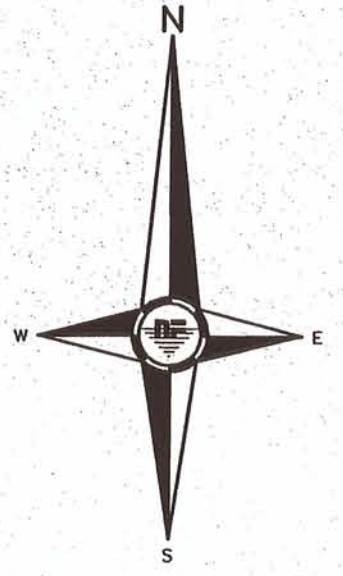
N 89°30'00" E 1716.95'
Pontiac Trail
(120' Wide)

N 89°30'00" E 554.10'

N 89°30'00" E
2114.10'



Location Map
N.T.S.



EASEMENT RECORDING INFORMATION AND KEY

- According to Oakland County, Michigan records and First American Title Insurance Company's Title Commitment No. 177604.
- 1 Easement(s) in favor of Michigan Bell and Ameritech as disclosed by instrument(s) recorded in Liber 6222, Page 318, Liber 6222, Page 324, Liber 6222, Page 325, Liber 6222, Page 325, Liber 6222, Page 340 and Liber 6222, Page 342, Oakland County Records.
 - 2 Right-of-way in favor of Michigan Bell and Ameritech as disclosed by instrument(s) recorded in Liber 7722, Page 224 and Liber 7722, Page 225, Oakland County Records.
 - 3 Easements for sanitary sewer in favor of the City of Novi as disclosed by instrument(s) recorded in Liber 11562, Page 714, Oakland County Records.
 - 4 Easement(s) in favor of Consumers Power Company as disclosed by instrument(s) recorded in Liber 13365, Page 646 and Liber 13379, Page 637, Oakland County Records.
 - 5 Easements for sanitary sewer in favor of the City of Novi as disclosed by instrument(s) recorded in Liber 18000, Page 290 and Liber 18142, 360 County Records.
 - 6 Easements for sanitary sewer in favor of the City of Novi as disclosed by instrument(s) recorded in Liber 19468, Page 105-110 Oakland County Records.
 - 7 Terms and conditions of Easement Declaration and Agreement as disclosed in instrument recorded in Liber 13231, Page 377 and 381 Oakland County Records.

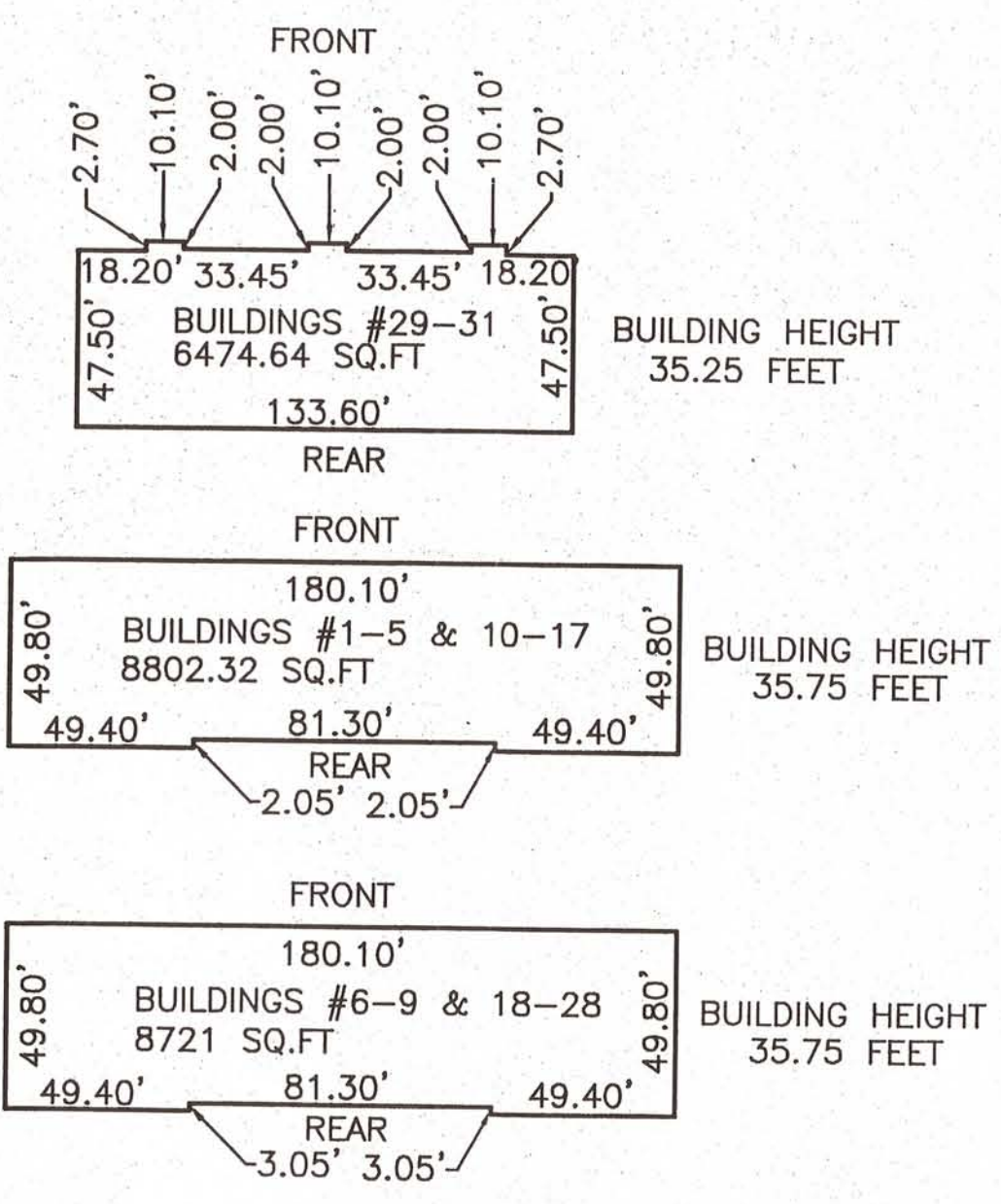
Flood Hazard Note

This property is not located within the flood hazard area indicated by Flood Insurance Rate Map (FIRM) Community Panel No. 260175 005 C. Dated: 05-03-93

Legend

- Asph. = Asphalt Pavement
 - Conc. = Concrete Pavement
 - C.B. = Catch Basin
 - M.H. = Manhole
 - G.V. = Gate Valve
 - C.O. = Clean Out
 - Hyd. = Fire Hydrant
 - U.P.; P.P. = Utility Pole; Power Pole
 - L.P. = Light Pole
 - OH Line = Overhead Lines
 - L/S = Landscape
 - P.H. = Physically Handicapped Parking
 - San. = Sanitary Sewer
 - Stm. = Storm Sewer
 - W.M.; W.S. = Water Main; Water Service
 - R.O.W. = Right of Way
 - P/L = Property Line
 - C.L. = Center Line
 - C.L.F. = Fence (Chain Link Fence)
 - Gas Main = Gas Main
 - F.D.C. = Fire Department Connection
 - D.E. = Detroit Edison Electric
 - S.I. = Set Iron
 - F.I. = Found Iron
 - S.P.K. = Set PK Nail
 - F.H. = Found Monument
 - "X" in Conc. = Chiseled "X" in Concrete
- All Utilities are underground unless otherwise noted.

TYPICAL BUILDING DIMENSIONS



LEGAL DESCRIPTION

Part of the North 1/2 of Section 4, town 1 north, range 8 east, City of Novi, Oakland County, Michigan, being more particularly described as: Commencing at the Northwest corner of Section 4, town 1 north, range 8 east; thence North 89 degrees 16 minutes 52 seconds East, 360.45 feet along the North line of said Section 4, also being the centerline of Pontiac Trail to the southwest corner of Section 33, town 2 north, range 8 east, Commerce Township, Oakland County, Michigan; thence continuing along said North line and centerline North 89 degrees 30 minutes 00 seconds East, 590.80 feet to the point of beginning; thence continuing along said North line and centerline, North 89 degrees 30 minutes 00 seconds East, 1716.95 feet to the North 1/4 corner of said Section 4; thence continuing along said North line and centerline, North 89 degrees 30 minutes 00 seconds East, 554.10 feet; thence South 01 degree 09 minutes 34 seconds East, 1308.73 feet; thence North 89 degrees 55 minutes 43 seconds West, 1358.75 feet; thence South 01 degree 05 minutes 33 seconds East, 581.84 feet; thence South 89 degrees 11 minutes 58 seconds West, 1862.94 feet; thence along the West line of Section 4, also being the centerline of Beck Road, North 01 degree 09 minutes 42 seconds West, 30.00 feet; thence North 89 degrees 11 minutes 58 seconds East, 948.21 feet; thence North 01 degree 09 minutes 42 seconds West, 905.39 feet; thence North 89 degrees 11 minutes 58 seconds East, 3.01 feet; thence North 01 degree 09 minutes 42 seconds West, 956.42 feet to the point of beginning. Containing 3,523,612 square feet or 80.8607 acres and subject to easements and restrictions of record.

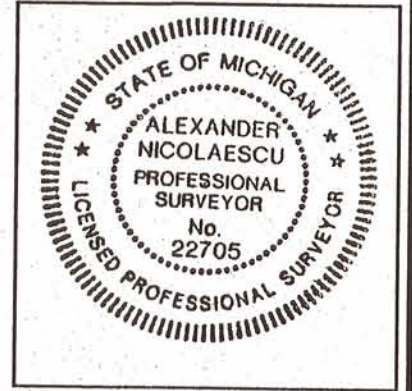
Surveyor's Certificate

CERTIFIED TO: Occidental Development, LTD., A Michigan Limited Partnership
First American Title Insurance Company
Massachusetts Mutual Life Insurance Company
and its Successors and Assigns

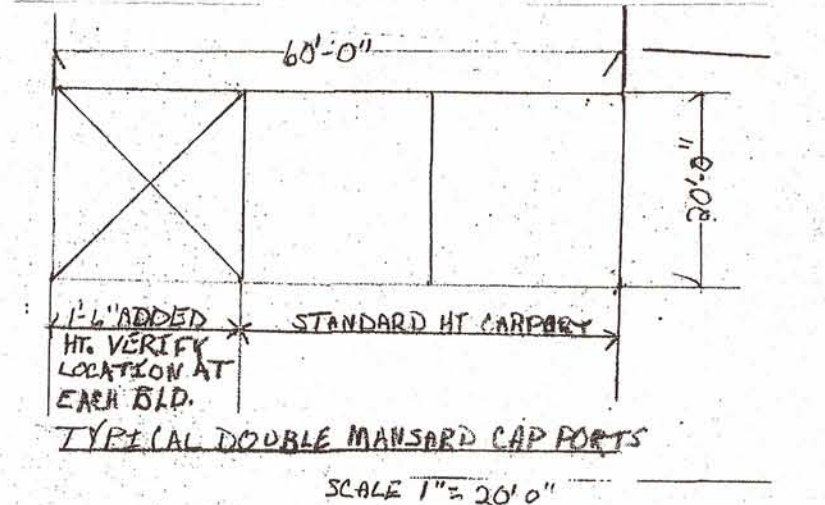
This is to certify that this map or plot and the survey on which it is based were made (i) in accordance with "Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys" jointly established and adopted by ALTA, ACSM and NSPS in 1997 and (ii) includes items 1 through 4, 6, 7a, 7b, 8 through 11, and 13 through 18, 18, and 19 of Table A thereof, pursuant to the Accuracy Standards (as adopted by ALTA and ACSM and in effect on the date of this certification) of an Urban survey.

Alex Nicolaescu, P.S. Dated 6-16-2000
No. 12705

FOR MOETARAGE
CLOSINGS 11/00
12/8/00



ZONING RM-1
LOW DENSITY MULTIPLE-FAMILY RESIDENTIAL



NOTE:
PARKING PROVIDED 1777 SPACES
+63 SPACES (BARRIER FREE)
1840 TOTAL
REQUIRED BY ZONING ORDINANCE = 1788 SPACES
(2 PER UNIT X 894 UNITS) = 1788 TOTAL

N01°09'42" W 30.00'

N89°11'58" E 948.21'
N89°11'58" W 1862.94'

N 01°09'42" W 905.39'

S 01°05'33" E 591.84'

N 89°55'43" W 1358.75'

| | |
|---------|-------------------------------------|
| 9/29/00 | REVISED PER TITLE COMPANY/ ATTORNEY |
| 9/07/00 | REVISED PER CLIENT |
| 8/30/00 | REVISED PER CLIENT |
| 7/31/00 | REVISED PER CLIENT |
| 7/20/00 | REVISED PER CLIENT |
| DATE | REVISIONS |

NOWAK & FRAUS
Civil Engineers Land Surveyors
1310 N. Stephenson Highway Tel. (248) 399-0886
Royal Oak, Michigan 48067-1508 Fax. (248) 399-0805

ALTA/ACSM SURVEY
PORTSMOUTH APARTMENT COMPLEX
PART OF THE NORTH 1/2 OF SECTION 4,
TOWN 1 NORTH, RANGE 8 EAST,
CITY OF NOVI, OAKLAND COUNTY, MICHIGAN

CLIENT: OCCIDENTAL DEVELOPMENT, LTD

| | | |
|------------|---------------|--------------|
| SCALE | DESIGNED | JOB NUMBER |
| 1" = 100' | DRAWN | 3-6617-03 |
| ISSUE DATE | D. MCCONKEY | SHEET NUMBER |
| 06-16-2000 | APPROVED | 1 of 1 |
| | A. NICOLAESCU | |