

## Document-Index System

November 1986

A numbering system for documents has been designed to be used for filing, information retrieval, budgeting, scheduling and accounting purposes. (This note will be concerned only with filing and information retrieval.)

The document-index system is intended for use with computer storage. It is a permanent system, covering initial construction of the Laboratory and the operation and research program.

The Master Document-Index Number File will be maintained by the Publications Office. They should be contacted for any additional numbers or questions on X6017.

Every technical document will be identified and listed with the following information: Author, title, serial number and category number.

The first three items are self-explanatory, except that key words can be added or used instead of a title for filing and retrieval when the title is felt not to explain the nature of the work completely. The serial and category numbers are described below. It is to be emphasized that the serial and category numbers are independent. The document number consists of both the category and serial numbers.

## Serial Number

The serial number is unique to a document. It consists of a two or three place alphanumeric prefixes followed by a number. The letter prefix gives the distribution and file. The number is given serially to all such documents, with records kept by the appropriate section from number blocks of numbers assigned. The documents themselves will be kept on microfilm, with prints available as needed. The serial number is capable of indefinite expansion.

The following series of prefixes are in current use:

FERMILAB	External Report
FN	Physics Note (including engineering); limited external distribution
TM	Technical Memo; internal distribution
SS	Summer Study Document
C	Commercial Part (internal distribution only)
CD	Criteria Development Memo (old DUSAF)
Bn	Printed Circuit Board, size n (artwork, master drawing, assembly drawing, outline drawing, parts list, n = P, i.e., BP)
Mn	Mechanical Drawing, size n ( $A \leq n \leq F$ ) PC and front panel artwork
En	Electrical Drawing, size n
Ln	Layout Drawing, size n
MM	Memorandum (includes management, planning, cost budget and scheduling documents and reports to DOE)
P	Parts List
ES	Engineering Specifications, covering materials and processes
TS	Technical Specification, covering basic site and construction parameters, e.g., the site coordinate system
SD	Engineering Standard
SA	Slide, 2 in. v 2 in.
SL	Slide, 3.5 in. v 4 in.
FG	Photograph
A	Art Work (Technical illustrations and lecture slides)
WL	Wiring List (1997)

Even though drawings will be filed on microfilm, size information is needed for making prints.

Revisions of drawings and documents will be denoted by a letter suffix A, B, etc. The "as built" drawing will uniformly have the suffix Z.

Each document type will be numbered sequentially, type by type, with a serial number to be provided by the appropriate section. Blocks of numbers have been assigned the various sections for their use. The present assignment of these numbers is as follows:

Ln, Mn, En, ES	1	-	1,999	Main Accelerator
	14,000	-	16,999	Main Accelerator
	84,000	-	85,999	Main Accelerator
	260,000	-	260,999	Main Accelerator
	119,000	-	119,999	Reverse Injection for Main Ring
Ln, Mn, En, ES	53,000	-	54,999	Energy Doubler/Saver
	91,000	-	92,999	Energy Doubler/Saver
	96,000	-	97,999	Energy Doubler/Saver
	103,000	-	103,999	Energy Doubler/Saver
	106,000	-	107,999	Energy Doubler/Saver
	122,000	-	128,999	Energy Doubler/Saver
	257,000	-	258,999	Accelerator Cryogenics
	136,000	-	137,999	Extraction Channel (A0)
	138,000	-	138,999	Colliding Beam (B0)
	139,000	-	140,999	Beam Abort (C0)
	141,000	-	141,999	Extraction (D0)
	142,000	-	142,999	Injection (E0)
	143,000	-	143,999	RF (F0)
	144,000	-	144,999	Magnet Measurements
	213,000	-	213,999	Magnet Measurements
	148,000	-	148,999	Dipole Cordwood Production
	157,000	-	157,999	Dipole Cordwood Production
	158,000	-	159,999	Dipole Cordwood Production
	160,000	-	160,999	Magnet Support
Ln, Mn, En, ES	2,000	-	2,999	Booster
	19,000	-	20,999	Booster
	36,000	-	37,999	Booster
Ln, Mn, En, ES	3,000	-	4,999	Linac
	60,000	-	61,999	Linac
Ln, Mn, En, ES	83,000	-	83,999	Nucleon Therapy Medical Facility
Ln, Mn, En, ES	5,000	-	5,999	Radio Frequency
	21,000	-	22,999	Radio Frequency
	62,000	-	63,999	Radio Frequency
	180,000	-	182,999	Radio Frequency
Ln, Mn, En, ES	6,000	-	6,999	Beam Transfer
	12,000	-	12,999	Beam Transfer
	23,000	-	24,999	Beam Transfer

Ln, Mn, En, ES	69,000	-	69,999	Accelerator Switchyard
	70,000	-	70,999	Switchyard
	256,000	-	256,999	Switchyard
	111,000	-	112,999	Switchyard Cryogenic Equipment and Superconducting Devices
	171,000	-	171,999	Switchyard Cryogenic Components
	195,000	-	195,999	Switchyard Quench Protection System
Ln, Mn, En, ES	7,000	-	7,999	Experimental Facilities
	32,000	-	32,999	Experimental Facilities
Ln, Mn, En, ES	8,000	-	11,999	Research Equipment
Ln, Mn, En, ES	13,000	-	13,999	Physics Research
Ln, Mn, En, ES	17,000	-	18,999	Radiation Physics
Ln, Mn, En, ES	38,000	-	39,999	Meson Laboratory
	52,000	-	52,999	Meson Laboratory
	94,000	-	95,999	Meson Laboratory
	120,000	-	121,999	Meson Laboratory
	174,000	-	175,999	Meson Laboratory
Ln, Mn, En, ES	25,000	-	26,999	15-ft. Bubble Chamber
	33,000	-	33,999	15-ft. Bubble Chamber
	86,000	-	86,999	15-ft. Bubble Chamber
Ln, Mn, En, ES	27,000	-	28,999	Technical Services
	98,000	-	99,999	Technical Services
	117,000	-	118,999	Technical Services
	155,000	-	155,999	Technical Services
Ln, Mn, En, ES	196,000	-	197,999	Technical Support
Ln, Mn, En, ES	226,000	-	226,999	Technical Support – Engineering
Ln, Mn, En, ES	227,000	-	227,999	Technical Support – Tooling
	225,000	-	225,999	Tech. Support – Conventional Magnets
	71,000	-	71,999	Magnet Facility
	100,000	-	101,999	Magnet Facility
	115,000	-	116,999	Magnet Facility
	220,000	-	219,999	Magnet Facility
Ln, Mn, En, ES	34,000	-	35,999	Accelerator Operations Controls
	218,000	-	219,999	Accelerator Operations Controls
Ln, Mn, En, ES	40,000	-	41,999	30-in. Bubble Chamber
Ln, Mn, En, ES	214,000	-	214,999	Bubble Chamber Cryogenics
Ln, Mn, En, ES	42,000	-	44,999	Proton Laboratory
	73,000	-	79,999	Proton Laboratory
Ln, Mn, En, ES	45,000	-	47,999	Research Services and Physics
	215,000	-	215,999	Research Services and Physics
Ln, Mn, En, ES	259,000	-	259,999	“Detectors R Us”

Ln, Mn, En, ES	50,000	-	51,999	Physics
	113,000	-	114,999	Physics
	161,000	-	161,999	Physics
	209,000	-	209,999	Physics
Ln, Mn, En, ES	240,000	-	240,999	Physics Dept. – Mechanical Support
Ln, Mn, En, ES	48,000	-	49,999	Internal Target Laboratory
Ln, Mn, En, ES	29,000	-	31,999	Neutrino Laboratory
	80,000	-	82,999	Neutrino Laboratory
	102,000	-	102,999	Neutrino Laboratory
	108,000	-	109,999	Neutrino Laboratory
	162,000	-	166,999	Neutrino Laboratory
Ln, Mn, En, ES	110,000	-	110,999	Colliding Beam Area (CBA)
	134,000	-	135,999	Colliding Beam Detectors
	207,000	-	207,999	Colliding Beam Detectors
Ln, Mn, En, ES	255,000	-	255,999	D0 Project
	228,000	-	238,999	D0 Central Calorimeter (BNL Design)
Ln, Mn, En, ES	199,000	-	199,999	Collider Detector Facility
	204,000	-	204,999	Collider Detector Facility
	262,000	-	262,999	Collider Detector Facility
	206,000	-	206,999	CDF PIG Group
Ln, Mn, En, ES	55,000	-	59,999	Research Services
	104,000	-	105,999	Research Services
	156,000	-	156,999	Research Services
	183,000	-	184,999	Research Services Cryogenics
	193,000	-	194,999	Research Services Cryogenics
Ln, Mn, En, ES	64,000	-	67,999	Plant Engineering
Ln, Mn, En, ES	68,000	-	68,999	pbar Storage Ring
	87,000	-	88,999	pbar Storage Ring
	146,000	-	147,999	Precooling Ring and pbar Transport
Ln, Mn, En, ES	129,000	-	133,999	Satellite Refrigerator Support
Ln, Mn, En, ES	72,000	-	72,999	Muon Mark II Dipole Magnets
Ln, Mn, En, ES	89,000	-	89,999	Superconducting Transmission Lines
Ln, Mn, En, ES	90,000	-	90,999	Computing Department
Ln, Mn, En, ES	205,000	-	205,999	Advanced Computer Program
Ln, Mn, En, ES	93,000	-	93,999	Beam Diagnostics
Ln, Mn, En, ES	145,000	-	145,999	Tevatron Cryogenics Systems Group
	167,000	-	168,999	Tevatron Cryogenics Systems Group
Ln, Mn, En, ES	176,000	-	176,999	Tevatron Magnets
Ln, Mn, En, ES	185,000	-	186,999	Tevatron I Magnets

Ln, Mn, En, ES	169,000	-	170,999	Antiproton Source (Tevatron I)
	208,000	-	208,999	Antiproton Source (Tevatron I)
	216,000	-	216,999	Antiproton Source (Tevatron I)
	254,000	-	254,999	Antiproton Source (Mech. Support)
Ln, Mn, En, ES	187,000	-	189,999	Tevatron I Collider Detector
	261,000	-	261,999	Tevatron I Collider Detector
Ln, Mn, En, ES	198,000	-	198,999	Tevatron I Tooling
Ln, Mn, En, ES	210,000	-	210,999	Tevatron I
Ln, Mn, En, ES	172,000	-	173,999	Experimental Areas Electrical Support
Ln, Mn, En, ES	177,000	-	179,999	Experimental Areas Construction and Planning Coordination Group
Ln, Mn, En, ES	201,000	-	203,999	Experimental Areas Department
Ln, Mn, En, ES	211,000	-	211,999	Experimental Areas Cryogenics
Ln, Mn, En, ES	250,000	-	253,999	Central Helium Liquefier
Ln, Mn, En, ES	190,000	-	191,999	Tev II Switchyard to Exp. Areas
Ln, Mn, En, ES	192,000	-	192,999	20 TeV Cold Iron Magnets
Ln, Mn, En, ES	200,000	-	200,999	3T SSC Magnets
Ln, Mn, En, ES	212,000	-	212,999	SSC Cryostat
	239,000	-	239,999	SSC Cryostat (Tech. Suppt. Eng.)
Ln, Mn, En, ES	217,000	-	217,999	SSC Dipoles
Ln, Mn, En, ES	222,000	-	224,999	Accelerator Dept.-Exp. Suppt. Group

Old DUSAF serial numbers were as follows:

- PC - Physical-Plant Civil Drawing
- PA - Physical-Plant Architectural Drawing
- PM - Physical-Plant Mechanical Drawing
- PE - Physical-Plant Electrical Drawing
- PS - Physical-Plant Structural Drawing

DUSAF did not file drawings by size, so no size delegation is included. The revision system was the same as Fermilab's.

## Category Number

The purpose of the category number is to permit ready identification of the subject matter of documents and their automatic retrieval.

The category number consists of four digits followed by a decimal point and six more possible digits. In the accelerator category, the first two digits refer to a given accelerator, the third to major systems of that accelerator, the fourth to subsystems and the remainder to assemblies and components. The last six digits are to be left for future expansion at the discretion of interested sections. We now discuss the first four digits.

## First Two Digits

00	Director's Office
01	General Accelerator and Site
02	Linear Accelerator
03	Booster Accelerator
04	Main Accelerator
05	Beam Extraction
06	External Proton Beam
07	Internal Beam Area
08	Over-all Controls and Instrumentation
09	Over-all Assembly, Installation and Tune-up
10	Physical Plant and Facilities (DUSAF)
11	Shielding and Radiation Effects
12	Target Systems
13	Safety
14	Operations
15	Storage Rings
16	Energy Doubler Magnets
17	Energy Doubler
18	Switchyard Cryogenic Equipment and Superconducting Devices
19	Beam Diagnostics
20	High-Energy Physics Studies
21	Research-Equipment Concepts
22	Experimental Areas
23	Computers and Data Analysis
24	Experimental Program
25	Electronic and Other Detectors
26	Bubble Chambers
27	Experimental Area – Cryogenic Equipment and Superconducting Devices
28	Meson Laboratory Construction
29	Neutrino Laboratory
30	Experiments

40	Reserved for Experimental Program Needs
50	Architectural Engineering and Site Planning
55	Technical Services
60	Proton Laboratory
70	Experiments – Physics Results
80	pbar Storage Ring
81	Recycler Ring AD (Gerry Jackson 9/20/95)
90	Nucleon Therapy Medical Facility
91	Satellite Refrigerator Support
92	Experimental Areas Department
93	Solenoidal Detector Collaboration
94	TESLA
95	Main Injector Project (Fritz Lange)
96	Electron Cooling (Gerry Jackson 9/20/95)
97	PET Project (Glenn Waverly 11/1/95)
98	NuMI Project (Rick Divelbiss 4/26/00)
99	VLHC Project (Very Large Hadron Collider) (Rick Divelbiss 10/17/00)

The use of the third digit is made as uniform as possible throughout, so that someone interested in, for example, vacuum systems, can find material on the vacuum systems of all the accelerators and external beams by having the computer look for 4 in the third digit. Thus, the third digit is only significant for accelerators and is not significant for non-accelerator documents. The third digit means the following for each accelerator:

0	General Studies and Criteria (including criteria for DUSAF)
1	Injection, Transport and Inflection System
2	Magnet System
3	Accelerating System
4	Vacuum System
5	Beam Extraction and Transport
6	Interior Utilities
7	Handling Systems and Systems peculiar to a particular accelerator
8	Controls
9	Assembly, Installation and Tune-up



## 00 Management

0000.000	-	0039.000	-	Reserved for Director's Office
		0002.000	-	Laboratory Staff Personnel
		0030.000	-	Davis-Bacon
		0031.000	-	Human Rights-Equal Opportunity
		0032.000	-	Organization-Personnel
		0032.010	-	Employee Training
		0032.020	-	Library
		0033.000	-	Public Information
		0034.000	-	URA-AEC Contract and Correspondence
		0035.000	-	Consultant's Contract and Correspondence
		0036.000	-	Scheduling and Planning
		0037.000	-	CPFF Contracts
		0038.000	-	Patents
		0039.000	-	Document-Index System and Document-Index Historical Data
0040.000	-	0049.000	-	Budgets, Schedules and Manpower
		0040.010	-	Budget Instructions
		0040.020	-	Cost Comparisons
		0040.030	-	Obligations
		0040.040	-	Schedules
		0040.050	-	Schedule 189
		0040.060	-	Work-Package Requests and Work-Package Authorization a) by Accounting Cost Code and b) by Charge Code
		0041.000	-	Accounting System
0050.000	-	0059.000	-	Cost Estimates
0060.000	-	0069.000	-	Equipment
		0061.000	-	Transportation
		0062.000	-	Computer Equipment
		0062.010	-	PMS/360
		0063.000	-	Microfilm Equipment
		0064.000	-	Shop and Warehouse Equipment
0070.000	-	0079.000	-	General Manpower Studies and Projections
		0071.000	-	Space Requirements
0080.000	-	0089.000	-	Temporary Buildings
0090.000	-	0099.000	-	Advisory Committees and Users Groups, Reports to URA and AEC
		0090.010	-	NAL Monthly Report of Activities/Fermilab Report
		0092.000	-	Summer Study Program Correspondence

## 01 General Accelerator and Site

0100.000	-	0109.000	-	General Concepts, Goals and Descriptions
		0101.000	-	Historical-Early Accelerators
		0102.000	-	New Accelerators
		0102.001	-	SSC Magnets
		0103.000	-	Linear Colliders
		0104.000	-	New Accelerator Techniques
		0106.000	-	Storage-Ring Study
0110.000	-	0119.000	-	Layouts, Arrangements and Master Plan (Including Future Expansions)
		0110.010	-	Layouts, Arrangements and Master Plan Layouts
		0110.020	-	NAL Oak Brook Layouts
		0111.000	-	Accelerator Nomenclature
0120.000	-	0129.000	-	Criteria and Standards
		0121.000	-	Electrical Engineering Standards
0121.100	-	0121.699	-	Electrical and Electronic Components, Hardware
0121.100	-	0121.119	-	Amplifiers, Audio, Operational, etc.
0121.120	-	0121.129	-	Antennas and Accessories
0121.130	-	0121.139	-	Audio Equipment and Accessories
0121.140	-	0121.149	-	Cabinets, Chassis, Containers, Racks, etc.
0121.150	-	0121.159	-	Capacitors (All Types)
0121.160	-	0121.169	-	Chemicals; Acids, Adhesives, Cleaners, Coatings, Compounds, Lubricants, etc.
0121.170	-	0121.179	-	Circuit Assemblies, Circuit Boards, Breadboards and Breadboarding Kits
0121.180	-	0121.189	-	Coils (Inductors, Chokes) Assemblies, Forms
0121.190	-	0121.199	-	Communications Equipment (Broadcast, Television, Facsimile)
0121.200	-	0121.209	-	Computing, Data Handling Equip. and Accessories
0121.210	-	0121.219	-	Connectors, Electrical (Clips, Jacks, Plugs, Receptacles, Terminals, Terminal Boards)
0121.220	-	0121.229	-	Controls, Control Components and Systems, Counters
0121.230	-	0121.239	-	Crystals, Tuning Forks and Accessories
		0121.235	-	Delay Lines (All Types)
0121.240	-	0121.249	-	Dials, Knobs and Panel Components
0121.250	-	0121.259	-	Fabricated Mech. Parts (Bearings, Cores, Gears, Magnets, etc.)
		0121.255	-	Environmental Test Equipment
0121.260	-	0121.269	-	Fans, Blowers and Cooling Equip.
0121.270	-	0121.279	-	Filters
0121.280	-	0121.289	-	Hardware, Non-Current Carrying (Bolts, Fasteners, Nut Screws, Washers, etc. – Metal and Non-Metallic)
0121.290	-	0121.299	-	Instruments, Measuring and Test
0121.300	-	0121.309	-	Instruments, Graphic Recording
0121.310	-	0121.319	-	Insulators, Insulating Mat'l and Parts

	0121.313	-	Integrated Circuits and Hybrid Microcircuits, IC Sockets
	0121.315	-	Manufacturing, Subcontracts, Custom Fabrication
0121.320	-	0121.329	- Materials, Raw (Metals, Plastic, Glass, Rubber, Cloth, etc.
0121.330	-	0121.339	- Medical Electronic Equipment
0121.340	-	0121.349	- Microwave, Radar Equip., Components and Accessories
0121.350	-	0121.359	- Motors, Rotating Components and Accessories
0121.360	-	0121.369	- Nuclear and Radiation Equipment
0121.370	-	0121.379	- Photoelectric Equip. and Components
0121.380	-	0121.389	- Optical Equipment and Accessories
0121.390	-	0121.399	- Pilot and Signal Lamps, Lights, Accessories
0121.400	-	0121.409	- Power Supplies, Converters, Inverters, Batteries, etc.
0121.410	-	0121.419	- Production Machinery and Automation Equipment
0121.420	-	0121.429	- Eng. Aids, Books, Drafting Equip., Slide Rules, Blueprinters, Whiteprinters, Microfilm Equipment
0121.430	-	0121.439	- Recording Equip. (Non-Audio Types)
0121.440	-	0121.449	- Left Blank for Future Expansion
0121.450	-	0121.459	- Relays
0121.460	-	0121.469	- Research, Development, Eng. Services
0121.470	-	0121.479	- Resistors, Fixed
	0121.475	-	Resistors, Variable (Potentiometers and Rheostats)
0121.480	-	0121.489	- Semiconductors, Semiconductor Devices, Rectifiers (Non-Tube Types) transistor Sockets
0121.490	-	0121.499	- Servomechanisms and Components
0121.500	-	0121.509	- Studio Equipment
0121.510	-	0121.519	- Switches; Circuit Breakers, Fuses, Protective Devices
0121.520	-	0121.529	- Telemetry Equipment
0121.530	-	0121.539	- Thermal Devices, Thermistors, Thermocouples, Thermopiles, Thermostats, etc.
0121.540	-	0121.549	- Tools (Hand and Power); Supplies
0121.550	-	0121.559	- Transducers and Associated Equipment
0121.560	-	0121.569	- Transformers
0121.570	-	0121.579	- Tubes, Tube Parts, Shields, Inserts, Sockets
0121.580	-	0121.589	- Ultrasonic, Sonic, Subsonic Equipment
	0121.585	-	Vacuum Equipment and Accessories
0121.590	-	0121.599	- Vibrators, Choppers, etc.
0121.600	-	0121.609	- Wire, Cable, Harnesses, Accessories
0121.610	-	0121.699	- Left for Future Expansion
0121.700	-	0121.899	- Electrical Engineering Practices
0121.900	-	0121.999	- Electrical Engineering Design Data
	0122.000	-	Mechanical Engineering Standards
0122.100	-	0122.599	- Fittings and Hardware
0122.600	-	0122.699	- Processes
0122.700	-	0122.799	- Practices

0122.800	-	0122.899	-	Materials
0122.900	-	0122.999	-	Design Data
0123.000	-	0129.000	-	Left for Future Expansion
0130.000	-	0139.000	-	Parameters
0140.000	-	0149.000	-	Site Development
		0141.000	-	Village of Weston
		0142.000	-	Historical Data
		0143.000	-	Daniel Dorr and Associates
		0144.000	-	Construction of New Facilities at NAL
		0145.000	-	NAL Village
		0146.000	-	NAL Site
		0151.000	-	Site Maintenance
0160.000	-	0169.000	-	Site Materials; Handling Systems
0170.000	-	0199.000	-	Accelerator Design

## 02 Linear Accelerator

0200.000	-	0209.000	-	Linac General Studies, Design Variants, Criteria, Orbit Theory, Structure and Nomenclature
0210.000	-	0219.000	-	Preaccelerator, Beam Transport to Linac, Prebunch
0220.000	-	0229.000	-	Linac Quadrupole Focusing and Intertank Magnets
0230.000	-	0239.000	-	Linac RF System
0240.000	-	0249.000	-	Linac Vacuum System
0250.000	-	0259.000	-	Beam Transport to Booster Interface, Debuncher, Beam Dumps
0260.000	-	0269.000	-	Linac Interior Util. & Mech. Systems
0270.000	-	0279.000	-	Linac Tanks, Drift Tubes, Tank Supports and Handling Systems
0280.000	-	0289.000	-	Linac Local Controls
0290.000	-	0299.000	-	Linac Assembly, Installation & Tune-up

## 03 Booster

0300.000	-	0309.000	-	Booster General Studies, Criteria, Design Variants, Orbit Theory, Structure and Nomenclature
		0300.000	-	Preliminary Layouts and Concepts
		0301.000	-	General Machine Layouts and Studies
		0302.000	-	Orbit Theory
		0303.000	-	Structure and Nomenclature
		0304.000	-	Long Straight Sections
		0310.000	-	Parameters, Preliminary Layouts & Concepts
		0311.000	-	200 MeV Analyzing Components
		0312.000	-	200 MeV Beam Dumps; RF Capture Analysis
		0313.000	-	200 MeV Transport Components
		0314.000	-	Injection Long Straight Section
		0315.000	-	200 MeV Vacuum System
		0316.000	-	Control, Power and Water Schematics

	0317.000	-	Support, Aligning, Shielding, Safety and Related Equipment
	0318.000	-	Testing, Tooling and Special Equipment
	0319.000	-	Left for Future Expansion
0320.000	-	0329.000	- Booster Magnet System
	0320.000	-	Preliminary Layouts and Concepts
	0321.000	-	Magnets
	0322.000	-	Coils
	0323.000	-	Power Supply
	0324.000	-	Test Equipment
	0325.000	-	Support Systems
	0326.000	-	Correction Coils
	0327.000	-	Jigs and Fixtures
0330.000	-	0339.000	- Booster RF System
	0330.000	-	Preliminary Layouts and Concepts
	0331.000	-	Low Level RF
	0331.010	-	Suppression of Instabilities
	0332.000	-	Medium Level RF
	0333.000	-	Power Amplifier
	0334.000	-	Accelerating Cavity
	0334.010	-	Cavity Electrical Properties
	0334.020	-	Mechanical Fabrication
	0334.030	-	Cavity Support
	0334.040	-	Ceramic Insulators
	0334.050	-	Ferrite Tuners
	0334.060	-	Vacuum
	0335.000	-	Power Supplies
	0335.010	-	Anode Power Supply
	0335.020	-	Anode Modulator
	0335.030	-	Bias Current Power Supply
	0335.040	-	A.C. Power Supplies
	0335.050	-	D.C. Power Supplies
	0335.060	-	High Current Monitors
	0336.000	-	Low Conductivity Water
	0337.000	-	RF System Local Controls
	0337.010	-	Gallery RF Control Center
	0337.020	-	Control Computer
	0337.030	-	Module Interface Unit
	0337.040	-	Programming
	0337.050	-	Module Control Rack
	0337.060	-	Curve Generator
	0338.000	-	Reserved for Future Use
	0339.000	-	Syst. Assembly, Installation & Tune-up
	0339.010	-	RF Test Station
0340.000	-	0349.000	- Booster Vacuum System
	0340.000	-	Preliminary Layouts and Concepts
	0341.000	-	Vacuum System; Straight Sections, Piping
	0342.000	-	Chambers, Valves, Baffles, Bellows
	0343.000	-	Pump and Valve Controls
	0344.000	-	Vacuum Roughing System

0350.000	-	0359.000	-	Beam Synchronization, Extraction and Transport to Main Ring Interface
	0350.000	-		Preliminary Layouts and Concepts
	0351.000	-		Booster Extraction – Septum Magnet
	0352.000	-		Booster Extraction – Orbit Bump Magnet
	0352.010	-		Booster Extraction – Orbit Bump Magnet - Double Dog Leg
	0353.000	-		Booster Extraction – Fast Kicker Magnet
	0355.000	-		Booster Beam Transport – Bending Magnets
	0356.000	-		Booster Beam Transport – Quadrupoles
	0357.000	-		Booster Beam Transport – Steering Magnet
	0358.000	-		Booster Beam Transport – Beam Dump
0360.000	-	0369.000	-	Booster Interior Utilities and Mech. Syst.
	0360.000	-		Preliminary Layouts and Concepts
	0361.000	-		Cooling Systems; Air Conditioning
	0362.00	-		Power Distribution
0370.000	-	0379.000	-	Booster Materials; Handling Systems
	0370.000	-		Preliminary Layouts and Concepts
	0371.000	-		Booster Proto Building
0380.000	-	0389.000	-	Booster Local Controls
	0380.000	-		Preliminary Layouts and Concepts
	0381.000	-		Beam Detection and Analyzing Equipment
	0382.000	-		Instrumentation and Control
	0383.000	-		Access Control System
	0384.000	-		Kicker Power Supply
0390.000	-	0399.000	-	Booster Assembly, Installation and Tune-up
	0390.000	-		Preliminary Layouts and Concepts
	0391.000	-		Coordinates for Alignment
	0392.000	-		Tools and Tooling; Assembly and Maintenance

#### 04 Main Accelerator

0400.000	-	0409.000	-	Main Ring General Studies, Criteria, Design Variants, Orbit Theory, Structure and Nomenclature
	0400.000	-		Preliminary Layouts and Concepts
	0401.000	-		Main Accelerator Layouts and Studies
	0402.000	-		Orbit Theory
	0403.000	-		Survey and Survey Equipment
	0404.000	-		Main Ring Components (Parameters)
	0405.000	-		Main Ring Damping System
	0406.000	-		Tevatron Collider Operations
0410.000	-	0419.000	-	Beam Transport from Booster, Main Accelerator Inflection
	0410.000	-		Preliminary Layouts and Concepts
	0411.000	-		Main Accelerator Inflection -- Septum
	0412.000	-		Main Accelerator Inflection -- Orbit Bump
	0413.000	-		Main Accelerator Inflection – Fast Kicker
	0416.000	-		Betatron Bump Magnets
0420.000	-	0429.000	-	Main Ring Magnet System
	0420.000	-		Preliminary Layouts and Concepts

0420.010	-	Coil Shim Study
0420.020	-	Tunnel Models "Slide"
0420.030	-	West Chicago Facility – Plant Services
0420.040	-	Industrial Building #1 – Plant Layout, etc.
0420.050	-	Magnet data
0420.090	-	Specification
0421.000	-	Magnet Tooling and Fixtures
0421.010	-	Magnet Core Stacking Fixture
0421.020	-	Magnet Core Roll Over and Handling Fixture
0421.030	-	Jigs and Fixtures, Headers, Epoxy Curing
0421.040	-	Cover Molds and Components
0421.050	-	B2 Coil and Magnet Potting Fixture
0421.090	-	Specification
0422.000	-	Magnetic Measuring and Models
0422.020	-	Magnetic Measuring (Probes, etc.)
0422.030	-	Jigs and Fixtures
0422.040	-	Experimental Magnets
0422.090	-	Specification
0423.000	-	Bending Magnets
0423.010	-	Coils
0423.020	-	Magnet Measuring (Mech. and Electrical)
0423.030	-	Fixtures - Coil Winding
0423.040	-	Fixtures - Coil Potting
0423.050	-	Fixtures - Coil Handling
0423.060	-	Fixtures - Lamination Stacking
0423.070	-	Fixtures - Magnet Handling
0423.080	-	Fixtures - Magnet Assembly Table
0423.090	-	Specification
0423.100	-	Fixtures - Magnet Welding
0423.110	-	B1 Magnet and Components
0423.120	-	B2 Magnet and Components
0423.130	-	Design Report, Drawings and Graphs
0423.140	-	
0423.150	-	
0424.000	-	Quadrupole Magnets
0424.010	-	Coils
0424.020	-	Magnetic Measuring
0424.030	-	Fixtures - Coil Winding
0424.040	-	Fixtures - Coil Potting
0424.050	-	Fixtures - Coil Handling
0424.060	-	Fixtures - Lamination Stacking
0424.070	-	Fixtures - Magnet Handling
0424.080	-	Fixtures - Magnet Assembly Table
0424.090	-	Specification
0424.100	-	Fixtures - Magnet Welding
0424.111	-	7 ft. Quadrupole Magnet and Components
0424.120	-	4 ft. Quadrupole Magnet and Components
0424.130	-	
0424.140	-	Long Straight Section Quadrupole Magnets 4 ft.+ 4 ft. & 4 ft.+ 7 ft.
0425.000	-	Magnet Water and Electrical Connections

0425.010	-	Transfer Gallery - Magnet Water & Electrical Connections
0425.020	-	RF Tunnel - Mag. Water & Electrical Connections
0425.090	-	Specification
0426.000	-	Magnet Support
0426.010	-	Alignment Fixtures
0426.090	-	Specification
0427.000	-	Correcting Magnets
0427.010	-	Coils
0427.020	-	Magnetic Measuring
0427.030	-	Fixtures - Coil Winding
0427.040	-	Fixtures - Coil Potting
0427.060	-	Fixtures - Lamination Stacking
0427.070	-	Fixtures - Magnet Handling
0427.080	-	Fixtures - Magnet Assembly Table
0427.090	-	Specification
0427.100	-	
0427.110	-	Auxiliary Magnet System - Prototypes
0427.120	-	Horizontal Dipole
0427.130	-	Vertical Dipole
0427.140	-	Horizontal - Vertical Dipole (Combined)
0427.150	-	Trim Quadrupole
0427.160	-	Sextupole
0427.170	-	Electronics
0428.000	-	Energy Doubler - Preliminary Layouts & Concepts
0428.010	-	Energy Doubler Coils
0428.020	-	Energy Doubler Magnetic Measuring
0428.030	-	Energy Doubler Fixtures - Coil Winding
0428.040	-	Energy Doubler Fixtures - Coil Potting
0428.050	-	Energy Doubler Fixtures - Coil Handling
0428.060	-	Energy Doubler Fixtures - Lamination Stacking
0428.070	-	Energy Doubler Fixtures - Magnet Handling
0428.080	-	Energy Doubler Refrigerator Prototype
0428.090	-	Specifications
0428.100	-	Fixtures - Magnet Welding
0428.111	-	Pancake Coil Assemblies & Components (Including Cryostat)
0428.120	-	Shell Coil Assemblies & Components (Including Cryostat)
0428.130	-	Magnet Assembly Tables
0429.000	-	Power Supplies & Ser. Bldg. Components
0429.010	-	Service Bldg. Magnet Power Supplies
0429.020	-	Service Bldg. Cabinets (Power Supply & Filter Cabinets)
0429.030	-	Service Building Logic Diagrams
0429.040	-	Service Bldg. Util. House Syst. - Power Interconnection
0429.050	-	Service Building Heat Exchanger Support Structure
0429.060	-	Service Building A/C Power Distribution
0429.070	-	Service Building Correction Magnet Power Supply
0429.080	-	Service Building 3 Bay Control Cabinet



	0429.090	-	Service Building Specification
	0429.100	-	Service Building Water Deionizing System
	0429.110	-	Service Building Data Transmittal Syst. ('-Hore)
	0429.120	-	Capacitor Tree
	0429.130	-	Service Building Interconnections
0430.000	-	0439.000	- Main Accelerator RF System
	0430.000	-	Preliminary Layouts and Concepts
	0430.100	-	RF Systems for pbar p
	0431.000	-	Low Level RF
	0431.010	-	Suppression of Instabilities
	0432.000	-	Medium Level RF
	0433.000	-	Power Amplifier
	0434.000	-	Accelerating Cavity
	0434.010	-	Cavity Electrical Properties
	0434.020	-	Mechanical Fabrication
	0434.030	-	Cavity Support
	0434.040	-	Ceramic Insulators
	0434.050	-	Ferrite Tuners
	0434.060	-	Vacuum
	0435.000	-	Power Supplies
	0435.010	-	Anode Power Supply
	0435.020	-	Anode Modulator
	0435.030	-	Bias Current Power Supply
	0435.040	-	A.C. Power Supplies
	0435.050	-	D.C. Power Supplies
	0435.060	-	High Current Monitors
	0436.000	-	Low Conductivity Water
	0437.000	-	RF System Local Controls
	0437.010	-	RF Building Control Center
	0437.020	-	Control Computer
	0437.030	-	Module Interface Unit
	0437.040	-	Programming
	0437.050	-	Module Control Rack
	0437.060	-	Curve Generator
	0438.000	-	Reserved for Future Use
	0439.000	-	System Assembly, Installation and Tune-up
	0439.010	-	RF Test Station
	0439.020	-	Standard Station
	0439.030	-	Coalescing Station
0440.000	-	0449.000	- Main Accelerator Vacuum System
	0440.000	-	Preliminary Layouts and Concepts
	0441.000	-	Tooling and Fixtures
	0441.010	-	Gauges - Vacuum Chambers
	0441.020	-	Vacuum Tube Alignment Fixtures
	0441.030	-	Engineering Layouts
	0441.040	-	Vacuum Syst. Control Syst. (Roughing & Isolation Valves and Diffusion Pumps)
	0441.050	-	
	0442.000	-	Vacuum System Vacuum Chambers
	0442.090	-	Vacuum System Specifications
0450.000	-	0459.000	- Misc. Systems & Exp. Equipment

	0450.000	-	Radiation Safety Program
	0451.000	-	Abort System
	0452.000	-	Beam Scraper
	0453.000	-	Beam Sensors
	0454.000	-	Experimental Equipment
	0455.000	-	Current Torroid
0460.000	-	0469.000	- Main Accelerator Interior Util. & Mech. Systems
	0460.000	-	Preliminary Layouts and Concepts
	0461.000	-	Enclosure Piping
	0462.000	-	Cable Trays
	0463.000	-	Heat Exchanger and Components
0470.000	-	0479.000	- Main Accelerator Mat'l Handling System
	0470.000	-	Preliminary Layouts and Concepts
	0471.000	-	Tooling and Fixtures
	0472.000	-	Auxiliary Vehicles & Transport Carts
	0473.000	-	Magnet Handling Vehicle Mark II
0480.000	-	0489.000	- Main Accelerator Local Controls
	0480.000	-	Preliminary Layouts and Concepts
	0481.000	-	Television Monitoring System
	0482.000	-	Control Room Cabling
	0483.000	-	Magnet Fine Control System
	0484.000	-	Access Control System (Safety)
0490.000	-	0499.000	- Main Accelerator Assembly, Installation and Tune-up
	0490.000	-	Preliminary Layouts and Concepts
	0491.000	-	Tooling and Fixtures
	0491.010	-	Magnet Laser Alignment Systems
	0492.000	-	Wire Alignment Schematics

## 05 Beam Transfer

0500.00	-	0509.000	- General Studies, Criteria, Design Variants and Nomenclature
	0500.000	-	Preliminary Layouts and Concepts
	0501.000	-	Beam Transport Models
	0502.000	-	Building Arrangements
0510.000	-	0519.000	- Slow and Fast Extraction Systems
	0510.000	-	Preliminary Layouts and Concepts
	0511.000	-	p pbar Extraction/Injection
0520.000	-	0529.000	- Beam-Extraction Magnet Systems
	0520.000	-	Preliminary Layouts and Concepts
	0521.000	-	Extraction Sextupoles
	0522.000	-	Orbit Bump Magnets
	0523.000	-	Fast Kicker
	0524.000	-	Electrostatic Septum (S1)
	0525.000	-	Lambertson Magnet
	0526.000	-	"C" and "H" Magnets
	0526.010	-	S3 Septum
	0527.000	-	Pulsed Magnets

	0528.000	-	Quadrupoles
	0529.000	-	Steering Magnets
0530.000	-	0539.000	- Not Applicable
0540.000	-	0549.000	- Beam Extraction Vacuum System
	0540.000	-	Preliminary Layouts and Concepts
0550.000	-	0559.000	- Beam Transport, Switching Magnets
	0550.000	-	Preliminary Layouts and Concepts
0560.000	-	0569.000	- Extraction Utilities and Mech. Systems
	0560.000	-	Preliminary Layouts and Concepts
	0561.000	-	Magnet Supports
	0562.000	-	Alignment System
	0563.000	-	Cooling System
	0564.000	-	
	0565.000	-	Electrical Power System
	0566.000	-	Control System
	0567.000	-	Security System
0570.000	-	0579.000	- Extraction Handling Systems
	0570.000	-	Preliminary Layouts and Concepts
0580.000	-	0589.000	- Beam Extraction Local Control System
	0580.000	-	Preliminary Layouts and Concepts
	0581.000	-	Switchyard
	0582.000	-	8 GeV Line
0590.000	-	0599.000	- Beam Extraction Assembly, Installation and Tune-up
	0590.000	-	Preliminary Layouts and Concepts

## 06 External Proton Beam

0600.000	-	0609.000	- General Studies, Criteria, Design Variants and Nomenclature
	0600.000	-	Preliminary Layouts and Concepts
	0601.000	-	Operational Schematics
0610.000	-	0619.000	- Primary Beam Transport
	0610.000	-	Preliminary Layouts and Concepts
0620.000	-	0629.000	- Primary Beam Magnets
	0620.000	-	Preliminary Layouts and Concepts
	0621.000	-	Primary Beam Bending Magnets
	0622.000	-	Primary Beam Steering Magnets
	0623.000	-	Primary Beam Dump
	0624.000	-	Primary Beam Quadrupoles
	0625.000	-	Primary Beam Instrumentation
0630.000	-	0639.000	- Not Applicable
0640.000	-	0649.000	- Primary Beam Vacuum Systems
	0640.000	-	Preliminary Layouts and Concepts
	0641.000	-	Vacuum Components
0650.000	-	0659.000	- Secondary Beam Transport and Separation Systems
	0650.000	-	Preliminary Layouts and Concepts
0660.000	-	0669.000	- External Beam Area Util. & Mech. Systems
	0660.000	-	Preliminary Layouts and Concepts

	0661.000	-		Magnet Supports
	0662.000	-		Alignment Systems
	0663.000	-		Cooling Systems
	0664.000	-		Electrical Power Systems
	0665.000	-		Service Bldg. P-1 & Related Equipment
0670.000	-	0679.000	-	External Beam Area Local Controls
	0680.000	-		Preliminary Layouts and Concepts
0690.000	-	0699.000	-	External Beam Area Assembly, Installation and Tune-up
	0690.000	-		Preliminary Layouts and Concepts

## 07 Internal-Target Area

0700.000	-	0709.000	-	General Studies, Criteria, Design Variants and Nomenclature
0710.000	-	0719.000	-	Targeting Systems
0720.000	-	0729.000	-	Target Materials
0730.000	-	0739.000	-	Not Applicable
0740.000	-	0749.000	-	Target Vacuum Systems
0750.000	-	0759.000	-	Secondary Beam Transport & Separation Systems
0760.000	-	0769.000	-	Internal-Target Area Util. & Mech. Systems
0770.000	-	0779.000	-	Internal-Target Area Mat'l Handling Syst.
0780.000	-	0789.000	-	Internal-Target Area Local Controls
0790.000	-	0799.000	-	Internal-Target Area Assembly, Installation and Tune-up

## 08 Accelerator Controls

0800.000	-	Central Computer Facilities
0801.000	-	MAC Room Facilities
0802.000	-	Linear Accelerator
0803.000	-	Booster Accelerator
0804.000	-	Main Accelerator
0805.000	-	Abort System
0806.000	-	Beam Transfer
0807.000	-	Fire and Utility Monitor System
0808.000	-	Experimental Beam Lines
0809.000	-	PDC Boxes and Sigma Links
0810.000	-	Tevatron Accelerator
0811.000	-	Cable and Wiring
0812.000	-	CAMAC Equipment
0813.000	-	Control Console
0814.000	-	Clock System
0815.000	-	Television System
0816.000	-	Multibus Equipment
0817.000	-	Colliding Beams
0818.000	-	Miscellaneous
0819.000	-	Test Equipment

	0820.000	-	pbar Source
	0821.000	-	Energy Management
	0822.000	-	Microprocessor Equipment
	0823.000	-	VME Bus Equipment
	0824.000	-	Left for Future Expansion
0880.000	-	0889.000	- Experimental Area Overall Controls and Instrumentation
	0880.000	-	Beam Line Controls (Hardware)
	0880.100	-	Beam Line Computers
	0880.200	-	Beam Line Micro-Computer Bus Equipment
	0880.300	-	Beam Line Controls Cabling
	0881.000	-	Beam Line Controls (Software)
	0882.000	-	Fastbus
	0883.000	-	Trigger Processor

09 Over All Assembly, Installation and Tune-up

10 Conventional Facilities

1000.000	-	1009.000	- Plant Management
		1001.000	- DUSAF Contract and Correspondence
1010.000	-	1019.000	- General Accelerator and Site, Including Util. Systems, Roads and Parking, Materials Handling Systems
		1010.000	- Master Plan and Site Information
		1010.050	- Soil Investigation
		1011.000	- Roads and Parking
		1011.050	- Site Grading, Rough Rds. and Drainage (240-3-2)
		1012.000	- Water Supply
		1013.000	- Gas Distribution
		1014.000	- Sewage
		1015.000	- Hot Water and Chilled Water Distribution
		1016.000	- Power and Lighting
		1016.050	- Advance Procurement (Job No. 240-11-1)
		1017.000	- Communications
		1018.000	- Materials Handling
		1019.000	- Site Finish Work
1020.000	-	1029.000	- Linear Accelerator Bldgs. & Structures
		1025.050	- Linac (Job No. 240-4-1)
1030.000	-	1039.000	- Booster Bldgs. and Structures
		1030.050	- Booster (Job No. 240-5-1)
1040.000	-	1049.000	- Main Accelerator Bldgs. & Structures
		1040.000	- Long Straight Section "A" (Job No. 240-6-1)
		1041.000	- Utility Buildings
1050,000	-	1059.000	- Beams Extraction & Switching Buildings and Structures
		1050.000	- Extraction Enclosures
		1051.000	- Switching Stations
1060.000	-	1069.000	- External Proton Beam Bldgs. & Structures
		1060.000	- Target Station A

	1061.000	-	Target Station B
	1062.000	-	Target Station C
1070.000	-	1079.000	- Internal Beam Area Bldgs. & Structures
	1070.000	-	Internal Target Building
1080.000	-	1089.000	- Shops and Warehouses
	1080.000	-	Warehouses
	1080.050	-	Warehouse (Job No. 240-10-1)
	1081.000	-	Service Maintenance Building
	1082.000	-	Fire-Security Building
	1083.000	-	Heavy Shops
	1084.000	-	Heavy Laboratory
	1085.000	-	Utility Buildings
1090.000	-	1099.000	- Overall Conventional Facilities Construction, Installation and Acceptance
	1090.000	-	Standard Equipment
	1091.000	-	Acceptance Tests
	1092.000	-	Custody and Maintenance
	1093.000	-	Turnover Documents

#### 11 Shielding and Radiation Effects

1100.000	-	1159.000	- Radiation Physics
	1100.000	-	Shielding, General; Shielding Materials
	1100.050	-	Shielding, Design, Hadron
	1100.100	-	Shielding, Linac Hadron Attenuation
	1100.200	-	Shielding, Booster & M.R. Accelerator & EPB Hadron Attenuation
	1100.210	-	Charged Hadron Transport
	1100.300	-	Shielding, Exp. Areas Hadron Attenuation
	1100.400	-	Shielding, Exp. Areas Muon Attenuation
	1100.500	-	Shielding, Beam Dump Design
	1100.510	-	Shielding, Beam Dump Design Geology & Hydrology
	1100.600	-	Shielding, Ground & Sky-Shine
	1100.700	-	Shielding, Labyrinth & Duck Neutron Attenuation
	1101.000	-	Radioactivation, General
	1101.100	-	Radioactivation, Linac
	1101.200	-	Radioactivation, Booster, Main Accelerator, EPB & Experimental Areas
	1101.300	-	Radioactivation, Soil Leaching, Ion Exchange
	1101.400	-	Radioactivation, Accelerator Components
	1102.000	-	Particle Energy Spectra Measurements, General
	1102.100	-	Spectrum Unfolding
	1103.000	-	Dosimetry (Techniques & Calculations), General
	1103.110	-	Flux to Dose Conversion Factors
	1103.120	-	Neutron Spectra and Dose Calculations
	1104.000	-	Environmental Survey & Monitoring, General
	1104.100	-	Waterflow Underground, Radioactivity in Water
	1104.200	-	Soil Activation
	1104.300	-	Dose Rates in Non-Radiation Areas

	1104.400	-	Decommissioning and Decontamination
1105.000	-	1110.000	- Instrumentation for Beam Loss & Exposure Control, Radiation Survey, Monitoring & Dosimetry
	1105.000	-	Instrumentation, Beam Loss, General
	1105.110	-	Instrumentation, Beam Loss, Linac
	1105.120	-	Instrumentation, Beam Loss, Booster, Main Ring, EPB, T.S.
	1105.130	-	Instrumentation, Beam Loss, Exp. Areas
	1105.210	-	Radiation Actuated Interlocks, Linac
	1105.220	-	Radiation Actuated Interlocks, Booster, Main Ring, EPB, T.S.
	1105.230	-	Radiation Actuated Interlocks, Experimental Areas
	1106.000	-	Dosimeters and Doserate Meters, Electronic
	1106.100	-	Neutron Detectors
	1106.110	-	Neutron Detectors, Gamma Insensitive
	1106.200	-	Radiation Monitoring, Computer Control
	1107.000	-	Dosimeters and Doserate Meters, Chemical, Photographic, Solid State, etc.
1108.000	-	1110.000	- Reserved for Future Expansion
	1111.000	-	Radiation Interaction with Matter, General
	1111.110	-	Energy Loss, Charged Particles by Collision (DE/DX), Range
	1111.120	-	Energy Loss, Charged Particles by Radiation (DE/DX), Range
	1111.130	-	Energy Loss, All Particles Non-Elastic Processes
	1111.140	-	Total Energy Loss, Hadrons
	1111.150	-	Total Energy Loss, Leptons
	1111.200	-	Particle Yields, Calculations & Exp. Results
	1112.000	-	Radiation Effects, General
	1112.100	-	Radiation Effects, Organic Mat'ls (Elastomers, Epoxies, Insulators)
1113.000	-	1159.000	- Reserved for Future Expansion
1160.000	-	1199.000	- Radiation Safety
	1161.000	-	Radioactive Materials, General
	1161.100	-	Radioactive Sources
	1162.000	-	Radiation Safety Manuals
	1162.110	-	Operational Procedures, General
	1162.111	-	Operational Procedures, Linac
	1162.112	-	Operational Procedures, Booster
	1162.113	-	Operational Procedures, Main Accelerator
	1162.114	-	Operational Procedures, E.P.B., T.S.
	1162.115	-	Operational Procedures, Exp. Areas
1163.000	-	1179.000	- Reserved for Future Expansion
	1180.000	-	Personnel Exposures, General
	1180.100	-	Personnel Exposures Policy, NAL
	1180.101	-	Personnel Exposures Policy, Other Laboratories
	1180.102	-	Personnel Exposures at Other Laboratories
	1181.000	-	Personnel Exposures at NAL
	1182.000	-	Radiobiology
	1183.000	-	Cancer Therapy

1184.000	-	1199.000	-	Reserved for Future Expansion
12 Target Systems				
1200.000	-	1209.000	-	General Studies, Criteria, Design Variants and Nomenclature
		1200.000	-	Preliminary Layouts and Concepts
1210.000	-	1219.000	-	Target Area #1
		1210.000	-	Preliminary Layouts and Concepts
1211.000	-	1219.000	-	Meson Target Area
		1210.000	-	Target Train
		1211.000	-	Target Area Master Plan
		1212.000	-	Target Area Magnets and Supports
		1213.000	-	Swing Mechanism
		1214.000	-	Bedplate Equipment
		1215.000	-	Low System
1220.000	-	1229.000	-	Neutrino Target Area
		1220.000	-	Target Train
		1221.000	-	Target Area Master Plan
		1222.000	-	Target Area Magnets and Supports
		1223.000	-	Swing Mechanism
		1224.000	-	Bedplate Equipment
		1225.000	-	Low System
		1225.100	-	Closed Loop Water Systems
		1226.000	-	Vacuum Systems
1230.000	-	1239.000	-	Target Area No. 3
		1230.000	-	Preliminary Layouts and Concepts
		1231.000	-	Target
		1232.000	-	Target Area Magnets
		1233.000	-	Swing Mechanism
1240.000	-	1249.000	-	Target Transport System
		1240.000	-	Preliminary Layouts and Concepts
1250.000	-	1259.000	-	Target Lab
		1250.000	-	Preliminary Layouts and Concepts
		1251.000	-	Building
		1252.000	-	Target Handling Servo Mechanism
		1253.000	-	Mechanical Systems
1260.000	-	1269.000	-	Internal Target Area
1270.000	-	1279.000	-	Colliding Beams
1280.000	-	1299.000	-	Left for Future Expansion

## 13 Safety

1300.000	-	1309.000	-	Preliminary Layouts and Concepts
		1310.000	-	General Safety Equipment
		1381.000	-	Firealarm Systems

## 14 Operations



## 15 Storage Rings

1500.000	-	Storage Rings General Concepts
1501.000	-	Proton-Proton Storage Rings General Concepts
1502.000	-	Electronic Proton Storage Rings General Concepts
1503.000	-	Electron Cooling

## 16 Energy Doubler Magnets

1600.000	-	Energy Doubler General Concepts
1610.000	-	Energy Doubler Conductor (Wire)
1620.000	-	Energy Doubler Magnets
1630.000	-	Energy Doubler Magnet, Fabrication & Tooling
1640.000	-	Energy Doubler Safety
1650.000	-	Energy Doubler Refrigeration
1660.000	-	Energy Doubler Interior Utilities
1670.000	-	Energy Doubler Testing
1680.000	-	Energy Doubler Controls (Instrumentation)
1690.000	-	Energy Doubler Assembly, Installation and Tune-up (Schedules)

## 17 Energy Doubler

1700.000	-	1709.000	-	Left for Future Expansion
1710.000	-	1719.000	-	Injection, Transport and Inflection System
1720.000	-	1729.000	-	Magnet System (See 16 Energy Doubler)
1730.000	-	1739.000	-	Energy Doubler RF Syst. (All serial #s and the register for this series will be issued and kept by the Accelerator Support Group)
1730.000	-			Preliminary Layouts and Concepts
1731.000	-			Low Level RF
1731.000	-			Suppression of Instabilities
1732.000	-			Medium Level RF
1733.000	-			Power Amplifier
1733.010	-			9-3/16 Diameter Transmission Line
1733.020	-			Anode Resonator
1733.030	-			Anode Blocker
1733.040	-			Anode Tuner
1733.050	-			Input Section
1733.060	-			Mode Damping
1733.070	-			Adjustable Stand
1733.080	-			Cooling
1733.090	-			Screen & Grid Power Supply
1733.100	-			Driver
1734.000	-			Accelerating Cavity
1734.010	-			Cavity Electrical Properties
1734.020	-			Mechanical Fabrication
1734.030	-			Cavity Support

	1734.040	-		Ceramic Insulators
	1734.050	-		Cavity Tuning System
	1734.060	-		Vacuum
	1734.070	-		Cooling
	1735.000	-		Power Supplies
	1735.010	-		Anode Power Supply
	1735.020	-		Anode Modulator
	1735.030	-		Bias Current Power Supply
	1735.040	-		AC Power Supplies
	1735.050	-		DC Power Supplies
	1735.060	-		High Current Monitors
	1736.000	-		Low Conductivity Water
	1737.000	-		RF System Local Controls
	1737.010	-		RF Bldg. Control Center
	1737.020	-		Control Computer
	1737.030	-		Module Interface Unit
	1737.040	-		Programming
	1737.050	-		Module Control Rack
	1737.060	-		Curve Generator
	1737.070	-		Instrumentation Clock and Timing
	1738.000	-		System Cooling
	1739.000	-		Syst. Assembly, Installation & Tune-up
	1739.010	-		RF Test Station
	1739.020	-		Power Distribution
1740.000	-	1749.000	-	Vacuum System
1750.000	-	1759.000	-	Beam Extraction and Transport
	1751.000	-		Beam Abort System
	1753.000	-		Beam Sensors
1760.000	-	1769.000	-	Superconducting Magnet Power Supply and Quench Protection
	1765.050	-		Dipole Correction Element Power Supply
	1765.051	-		High Order Correction Element Waveform Generator
	1765.052	-		High Order Correction Element Power Supply
	1765.053	-		High Order Correction Element Transistor Regulator
1770.000	-	1779.000	-	Handling Syst. & Systems peculiar to a particular accelerator
1780.000	-	1789.000	-	Left for Future Expansion
1790.000	-	1799.000	-	Left for Future Expansion

## 18 Switchyard Cryogenic Equipment & Superconducting Devices

### 19 Beam Diagnostics

1900.000	-		Transverse Emittance Detection
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## 20 High Energy Physics Studies

2000.000	-	High Energy Physics, General Studies
2010.000	-	Particle Physics Theoretical Studies, Two-Body Interactions
2011.000	-	Particle Physics Theoretical Studies, Three-Body Interactions
2012.000	-	Particle Physics Theoretical Studies, Greater than Three-Body Interactions
2013.000	-	Particle Physics Theoretical Studies
2020.000	-	General Studies of Possible Experiments
2021.000	-	Possible Experiments, Hadron Induced Interactions
2022.000	-	Possible Experiments, Neutrino Interactions
2023.000	-	Possible Experiments, Muon Interactions
2024.000	-	Possible Experiments, Electromagnetic Interactions
2025.000	-	Possible Experiments, Weak Decays
2026.000	-	Possible Experiments, New Particle Searches
2040.000	-	Orbit Theory and Concepts
2041.000	-	Computer Programs for Beam Calculations
2042.000	-	Beam Theory and Concepts
2043.000	-	General RF Cavity Studies
2044.000	-	General Magnet Studies
2045.000	-	General Vacuum Studies
2050.000	-	Physics Experiments that have been performed
2060.000	-	Particle Yields and Spectra
2065.000	-	Particle Production Experiments
2070.000	-	Polarized Targets and Polarization Techniques
2080.000	-	General Magnet Measurement Systems
2085.000	-	Hyperon Physics

## 21 Research Equipment Concepts

2100.000	-	General Studies on Research Equipment
2100.001	-	Video Data Acquisition
2110.000	-	Track Position Measurement
2120.000	-	Spectrometers, General Studies
2121.000	-	Multiparticle Spectrometers
2122.000	-	Hybrid Spectrometer
2123.000	-	Single Arm Spectrometer
2124.000	-	Neutron Spectrometers
2125.000	-	Calorimetry
2126.000	-	CDF Detector

## 22 Experimental Areas

2200.000	-	Experimental Areas, General Studies, Criteria, Design Variants & Nomenclature
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2200.200	-	Area 2 General Studies, Criteria Design Variants & Nomenclature
2200.400	-	Area 4 General Studies, Criteria Design Variants & Nomenclature
2211.000	-	Beam Layouts & Bldgs. in Exp. Area No. 1
2212.200	-	Beam Layouts & Bldgs. in Exp. Area No. 2
2213.000	-	Beam Layouts & Bldgs. in Exp. Area No. 3
2214.000	-	Main Ring Experimental Areas
2214.010	-	C0 Area
2220.000	-	Beam Forming Equipment, General
2220.100	-	Dipole Magnets, General
2220.200	-	H-Frame Dipole Magnets
2220.300	-	Picture Frame Dipole Magnets
2220.400	-	C-Frame Dipole Magnets
2220.500	-	Septum & Offset Picture Frame Dipole Magnets
2220.600	-	Superconducting Cosine Distribution Dipole Magnets
2220.700	-	Primary Beam Target Station Systems
2221.000	-	Quadrupole Magnets, General
2221.100	-	Symmetrical Frame Quadrupoles
2221.200	-	Narrow Frame (Figure of Eight) Quadrupoles
2222.000	-	Multipole Magnets, General
2222.100	-	Sextupole Magnets
2222.200	-	Octupole Magnets
2223.000	-	Beam Separators, General
2223.100	-	Electrostatic (DC) Separators
2223.200	-	Radio Frequency Separators
2224.000	-	Neutrino Focusing Devices
2230.000	-	Power Supplies, General
2231.000	-	DC Power Supplies, General
2231.100	-	DC Power Supplies, Beam Transport Magnets
2231.600	-	DC Power Supplies, Electrostatic Separators
2232.000	-	Pulsed Power Supplies, General
2232.100	-	Pulsed Power Supplies, Beam Transport Magnets
2232.200	-	Pulsed Power supplies, Switching Magnets
2240.000	-	Vacuum Systems
2240.200	-	Vacuum Systems Exp. Area 2
2250.000	-	Proton Beams
2251.000	-	Neutrino Beams
2251.100	-	Wide Band Beams, General Studies
2251.110	-	Wide Band Horn Beams, General Studies
2251.111	-	Low Energy Wide Band Horn Beams
2251.112	-	Intermediate Energy, Wide Band Horn Beams
2251.113	-	High Energy Wide Band Horn Beams
2251.120	-	Wide Band Quadrupole Beams, General Studies
2251.121	-	Low Energy Wide Band Quadrupole Beams
2251.122	-	Intermediate Energy Wide Band Quadrupole Beams
2251.123	-	High Energy Wide Band Quadrupole Beams
2251.200	-	Monochromatic Beams, General Studies
2251.210	-	Monochromatic Horn Beams, General Studies
2251.211	-	Low Energy Monochromatic Horn Beams

2251.212	-	Intermediate Energy Monochromatic Horn Beams
2251.213	-	High Energy Monochromatic Horn Beams
2251.220	-	Monochromatic Quadrupole Beams, General Studies
2251.221	-	Low Energy Monochromatic Quadrupole Beams
2251.222	-	Intermediate Energy Monochromatic Quadrupole Beams
2251.223	-	High Energy Monochromatic Quadrupole Beams
2252.000	-	Muon Beams
2253.000	-	Electron-Photon Beams
2254.000	-	Unseparated Hadron Beams
2255.000	-	Separated Beams
2256.000	-	Neutral Beams
2257.000	-	Hyperon Beams
2260.000	-	Utilities and Systems, General
2261.000	-	Primary Electrical Power Systems
2262.000	-	Secondary Electrical Power Distribution
2264.000	-	Water Cooling Systems
2268.000	-	Cranes and Rigging Equipment
2269.000	-	Alignment and Survey Systems
2270.000	-	General Shielding
2271.000	-	Muon Shielding
2280.000	-	General Controls, Communications and Instrumentation
2280.100	-	Magnetic Field Mapping Devices
2280.200	-	General Purpose Fast Electronics
2280.300	-	Current Digitizers and Integrators
2281.000	-	Beam Monitoring Equipment
2281.100	-	Beam Monitoring Equipment, Ion Chambers
2281.110	-	Beam Monitoring Equipment, Ion Chambers, Jigs, Fixtures, Mockups, etc.
2281.200	-	Beam Monitoring Equipment, SWICS
2281.210	-	Beam Monitoring Equipment, SWICS, Jigs, Fixtures, Mockups, etc.
2281.220	-	Beam Monitoring Equipment, SWICS, Electronics
2281.230	-	Beam Monitoring Equipment, SWICS, Mechanical
2290.000	-	Experimental Area Operations and Safety

### 23 Computers and Data Analysis

2300.000	-	Computers and Data Analysis
2310.000	-	Hardware Specifications, General
2311.000	-	On-Line Computer Specifications
2320.000	-	Software Specifications, General
2330.000	-	Experimental On-Line Computer Systems
2340.000	-	Computer Communications Systems
2350.000	-	FAF Measuring Equipment, Automatic Measuring Facility
2360.000	-	Film Analysis Facility, Computer Programs
2370.000	-	FAF Scanning Equipment, General

2370.010	-	Vanguard Scanner, Electronics
2370.011	-	Vanguard Scanner, Mechanics
2370.020	-	SP5000 Scanner, Electronics
2370.021	-	SP5000 Scanner, Mechanics
2370.030	-	Bubble Chamber Scanners, Electronics
2370.300	-	MOM (Manually Operated Measuring Machine)
2370.031	-	Bubble Chamber Scanners, Mechanics
2380.000	-	Advanced Computer Architectures
2390.000	-	Central Computing Facility
2391.000	-	Energy Conservation Design

#### 24 Experimental Program

2400.000	-	Experimental Program
2410.000	-	Meson Laboratory, General
2411.000	-	Meson Laboratory, Experimental Planning
2420.000	-	Neutron Laboratory, General
2421.000	-	Neutron Laboratory, Experimental Planning
2430.000	-	Proton Laboratory, General
2431.000	-	Proton Laboratory, Experimental Planning

#### 25 Electronic and Other Detectors

2500.000	-	Particle Detectors, General Studies
2510.000	-	Detector Components and Accessories
2511.000	-	Phototubes
2512.000	-	Image Intensifiers
2513.000	-	Imaging (TV Pickup) Tubes
2514.000	-	Electron Multipliers
2515.000	-	Solid-State Particle Detectors or Devices
2516.000	-	Photodiodes, Phototransistors
2517.000	-	Scintillators
2517.100	-	Scintillator Vacuum Chambers
2520.000	-	Electronic Particle Counters
2521.000	-	Gas Counters
2522.000	-	Liquid Counters
2523.000	-	Solid-State Counters
2524.000	-	Scintillation Counters
2526.000	-	Cerenkov Counters
2527.000	-	Transition Radiation Detectors
2528.000	-	Synchrotron Radiation Detectors
2529.000	-	Electronic Particle Counters, Total Absorption Counters
2530.000	-	Electronic Circuits & Logic for Particle Detectors
2550.000	-	Spark Chambers with Visual or Sonic Readout
2551.000	-	Narrow-Gap Visual Chambers
2552.000	-	Wide-Gap Chambers
2553.000	-	Streamer Chambers
2556.000	-	Sonic Chambers

2557.000	-	Proportional Wire Chambers
2558.000	-	Winding Equipment for Detection Chambers
2559.000	-	SWIC Chambers
2560.000	-	Wire Array and Other Digitized Spark Chambers
2561.000	-	SWIC Electronics
2562.000	-	Drift Chambers
2563.000	-	Colliding Beam Detectors
2563.800	-	Colliding Detector Facility VTPC
2590.000	-	Non-Electronic Particle Detectors (Excluding Bubble Chambers)
2591.000	-	Cloud Chambers
2592.000	-	Emulsions
2593.000	-	Plastic, other Radiation-Damage Track Detectors

#### 26 Bubble Chambers

2600.000	-	Bubble Chamber, General Studies and Criteria
2600.100	-	Bubble Chamber, General Weak Interactions
2600.200	-	Bubble Chamber, General, Strong Interactions
2600.300	-	Bubble Chamber, General Data Analysis
2600.400	-	Bubble Chambers, General Chamber Performance
2600.500	-	Bubble Chamber, General Chamber Studies
2600.600	-	Bubble Chamber, General Neutral Particle Detection
2600.700	-	Bubble Chamber, General Track Sensitive Targets or Double Chambers
2600.800	-	Bubble Chamber, General Background
2600.900	-	Bubble Chamber, General Auxiliary Detectors
2601.000	-	Bubble Chamber, General Chamber & Expansion System Studies & Criteria
2602.000	-	Bubble Chamber, General Magnet Syst. Studies & Criteria
2603.000	-	Bubble Chamber, General Optic Syst. Studies and Criteria
2603.001	-	Holograph
2604.000	-	Bubble Chamber, General Handling Syst. & Systems Peculiar to Bubble Chambers
2605.000	-	Bubble Chamber, General Refrigeration Syst. Studies and Criteria
2606.000	-	Bubble Chamber, General Interior Util. Studies and Criteria
2607.000	-	Bubble Chamber, General Vacuum Syst. Studies and Criteria
2608.000	-	Bubble Chamber, General Controls Studies & Criteria

#### 25-Foot Chamber

2610.000	-	25ft. BC, General Studies & Criteria
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2610.100	-	25' BC, Weak Interactions
2610.200	-	25' BC, Strong Interactions
2610.300	-	25' BC, Data Analysis
2610.400	-	25' BC, Chamber Performance
2610.500	-	25' BC, Specific Chamber Studies
2610.600	-	25' BC, Neutral Particle Detection
2610.700	-	25' BC, Track Sensitive Targets or Double Chambers
2610.800	-	25' BC, Background
2610.900	-	25' BC, Auxiliary Detectors
2611.000	-	25' BC, Chamber & Expansion Syst. Studies & Criteria
2612.000	-	25' BC, Magnet Syst. Studies & Criteria
2613.000	-	25' BC, Optic Syst. Studies & Criteria
2614.000	-	25' BC, Handling Syst. & Systems peculiar to BC
2615.000	-	25' BC, Refrigeration Syst. Studies & Criteria
2616.000	-	25' BC, Interior Util. Studies & Criteria
2617.000	-	25' BC, Vacuum Syst. Studies & Criteria
2618.000	-	25' BC, Controls Studies & Criteria

#### 30 Cubic Meter Chamber

2620.000	-	30 Cubic Meter Bubble Chamber, General Studies and Criteria
2620.100	-	30 Cu. M BC, Weak Interactions
2620.200	-	30 Cu. M BC, Strong Interactions
2620.300	-	30 Cu. M BC, Data Analysis
2620.400	-	30 Cu. M BC, Chamber Performance
2620.500	-	30 Cu. M BC, Specific Chamber Studies
2620.600	-	30 Cu. M BC, Neutral Particle Detection
2620.700	-	30 Cu. M BC, Handling Syst. & Systems Peculiar to Bubble Chamber
2620.800	-	30 Cu. M BC, Background
2620.900	-	30 Cu. M BC, Auxiliary Detectors
2621.000	-	30 Cu. M BC, Chamber & Expansion Syst Studies & Criteria
2622.000	-	30 Cu. M BC, Magnet system Studies & Criteria
2623.000	-	30 Cu. M BC, Optics Syst. Studies & Criteria
2624.000	-	30 Cu. M BC, Handling Syst. & Syst. Peculiar to Bubble Chamber
2625.000	-	30 Cu. M BC, Refrigeration Syst. Studies & Criteria
2626.000	-	30 Cu. M BC, Interior Util. Studies & Criteria
2627.000	-	30 Cu. M BC, Vacuum Syst. Studies & Criteria
2628.000	-	30 Cu. M BC, Controls Studies & Criteria
2629.000	-	30 Cu. M BC, Assembly, Installation & Tune-up



## ANL 12-Foot Chamber

2630.000	-	ANL 12' Bubble Chamber, General Studies & Criteria
2630.100	-	ANL 12' BC, Weak Interactions
2630.200	-	ANL 12' BC, Strong Interactions
2630.300	-	ANL 12' BC, Data Analysis
2630.400	-	ANL 12' BC, Chamber Performance
2630.500	-	ANL 12' BC, Specific Chamber Studies
2630.600	-	ANL 12' BC, Neutral Particle Detection
2630.700	-	ANL 12' BC, Track-Sensitive Targets or Double Chambers
2630.800	-	ANL 12' BC, Auxiliary Detectors
2631.000	-	ANL 12' BC, Chamber & Expansion Syst. Studies & Criteria
2632.000	-	ANL 12' BC, Magnet Syst. Studies & Criteria
2633.000	-	ANL 12' BC, Optics Syst. Studies & Criteria
2634.000	-	ANL 12' BC, Handling Syst. & Systs. peculiar to the Bubble Chamber
2635.000	-	ANL 12' BC, Refrigeration Syst. Studies & Criteria
2636.000	-	ANL 12' BC, Interior Util. Syst. Studies & Criteria
2637.000	-	ANL 12' BC, Vacuum Syst. Studies & Criteria
2638.000	-	ANL 12' BC, Controls Studies & Criteria

## Chamber with High Magnetic Field, Rapid Cycling for Use With or Without Hybrid Spectrometers

2640.000	-	Hi-Mag Field Chamber, General Studies & Criteria
2640.100	-	Hi-Mag Field Chamber, Weak Interactions
2640.200	-	Hi-Mag Field Chamber, Strong Interactions
2640.300	-	Hi-Mag Field Chamber, Data Analysis
2640.400	-	Hi-Mag Field Chamber, Chamber Performance
2640.500	-	Hi-Mag Field Chamber, Specific Chamber Studies
2640.600	-	Hi-Mag Field Chamber, Neutral Particle Detection
2640.700	-	Hi-Mag Field Chamber, Track-Sensitive Targets or Double Chambers
2640.800	-	Hi-Mag Field Chamber, Auxiliary Detectors

## Heavy Liquid Chamber

2650.000	-	Heavy Liquid Chamber, General Studies & Criteria
2650.100	-	Heavy Liquid Chamber, Weak Interactions
2650.200	-	Heavy Liquid Chamber, Strong Interactions
2650.300	-	Heavy Liquid Chamber, Data Analysis
2650.400	-	Heavy Liquid Chamber, Chamber Performance
2650.500	-	Heavy Liquid Chamber, Specific Chamber Studies
2650.600	-	Heavy Liquid Chamber, Neutral Particle Detection
2650.700	-	Heavy Liquid Chamber, Track-Sensitive Targets or Double Chambers

2650.800 - Heavy Liquid Chamber, Auxiliary Detectors

#### All Other Specific Chambers

2660.000 - Other Specific Chambers, General Studies & Criteria  
 2660.100 - Other Specific Chambers, Weak Interactions  
 2660.200 - Other Specific Chambers, Strong Interactions  
 2660.300 - Other Specific Chambers, Data Analysis  
 2660.400 - Other Specific Chambers, Chamber Performance  
 2660.500 - Other Specific Chambers, Specific Chamber Studies  
 2660.600 - Other Specific Chambers, Neutral Particle Detection  
 2660.700 - Other Specific Chambers, Track Sensitive Targets or Double Chambers  
 2660.800 - Other Specific Chambers, Auxiliary Detectors  
 2661.000 - Other Specific Chambers, Chamber & Expansion Syst. Studies & Criteria  
 2662.000 - Other Specific Chambers, Magnet Syst. Studies & Criteria  
 2663.000 - Other Specific Chambers, Optics Syst. Studies & Criteria  
 2664.000 - Other Specific Chambers, Handling Syst. & Syst. peculiar to the Bubble Chamber  
 2665.000 - Other Specific Chambers, Refrigeration Syst. Studies & Criteria  
 2666.000 - Other Specific Chambers, Interior Util. Syst. & Criteria  
 2667.000 - Other Specific Chambers, Vacuum Syst. Studies & Criteria  
 2668.000 - Other Specific Chambers, Control Studies & Criteria

Studies

#### BNL 7' Bubble Chamber

2670.000 - BNL 7' Bubble Chamber, General Studies & Criteria  
 2670.100 - BNL 7' Bubble Chamber, Weak Interactions  
 2670.200 - BNL 7' Bubble Chamber, Strong Interactions  
 2670.300 - BNL 7' Bubble Chamber, Data Analysis  
 2670.400 - BNL 7' Bubble Chamber, Chamber Performance  
 2670.500 - BNL 7' Bubble Chamber, Specific Chamber Studies  
 2670.600 - BNL 7' Bubble Chamber, Neutral Particle Detection  
 2670.700 - BNL 7' Bubble Chamber, Track Sensitive Targets or Double Chamber

2670.800	-	BNL 7' Bubble Chamber, Auxiliary Detectors
2671.000	-	BNL 7' Bubble Chamber, Chamber & Expansion Syst. Studies and Criteria
2672.000	-	BNL 7' Bubble Chamber, Magnet Syst. Studies & Criteria
2673.000	-	BNL 7' Bubble Chamber, Optics Syst. Studies & Criteria
2674.000	-	BNL 7' Bubble Chamber, Handling Syst. & Systs. peculiar to the Bubble Chamber
2675.000	-	BNL 7' Bubble Chamber, Refrigeration Syst. Studies & Criteria
2676.000	-	BNL 7' Bubble Chamber, Interior Util. Syst. Studies & Criteria
2677.000	-	BNL 7' Bubble Chamber, Vacuum Syst. Studies & Criteria
2678.000	-	BNL 7' Bubble Chamber, Controls Studies & Criteria

## CERN BEBC 7.3m Chamber

2680.000	-	CERN (BEBC 7.3m Chamber), General Studies & Criteria
2680.100	-	CERN (BEBC 7.3m Chamber), Weak Interactions
2680.200	-	CERN (BEBC 7.3m Chamber), Strong Interactions
2680.300	-	CERN (BEBC 7.3m Chamber), Data Analysis
2680.400	-	CERN (BEBC 7.3m Chamber), Chamber Performance
2680.500	-	CERN (BEBC 7.3m Chamber), Specific Chamber Studies
2680.600	-	CERN (BEBC 7.3m Chamber), Neutral Particle Detection
2680.700	-	CERN (BEBC 7.3m Chamber), Track-Sensitive Targets or Double Chambers
2680.800	-	CERN (BEBC 7.3m Chamber), Auxiliary Detectors
2681.000	-	CERN (BEBC 7.3m Chamber), Chamber & Expansion Syst. Studies & Criteria
2682.000	-	CERN (BEBC 7.3m Chamber), Magnet Syst. Studies & Criteria
2683.000	-	CERN (BEBC 7.3m Chamber), Optics Syst. Studies & Criteria
2684.000	-	CERN (BEBC 7.3m Chamber), Handling Syst. & Systs. peculiar to the Bubble Chamber
2685.000	-	CERN (BEBC 7.3m Chamber), Refrigeration Syst. Studies & Criteria
2686.000	-	CERN (BEBC 7.3m Chamber), Interior Util. Syst. Studies & Criteria
2687.000	-	CERN (BEBC 7.3m Chamber), Vacuum Syst. Studies & Criteria
2688.000	-	CERN (BEBC 7.3m Chamber), Controls Studies & Criteria

2690.000 - 2699.999 - 30-Inch Bubble Chamber

27 Experimental Area, Cryogenic Equipment & Superconducting (SC) Devices

2701.000	-	General Studies of Cryogenic Systems
2702.000	-	4.2 degree K Refrigerator/Liquefier No. 1 - 20 Liters/Hour
2714.000	-	20 degree K Cryodyne Refrigerator
2714.010	-	Cryodyne No. 1
2714.020	-	Cryodyne No. 2
2714.030	-	Cryodyne No. 3
2714.040	-	Cryodyne No. 4
2721.000	-	77 degree K Refrigerator/Liquefiers
2726.000	-	20 degree K Refrigerator Cryostat
2726.001	-	Assembly #1
2726.002	-	Assembly #2
2726.003	-	Assembly #3
2726.004	-	Assembly #4
2727.000	-	20 degree K LH Flask & Flask Cryostat
2727.001	-	U. of Michigan, Jones, Longo, Cork, Exp. 4A
2727.002	-	U. of Michigan, Meyer, Exp. 7
2730.000	-	LHE Transfer Lines
2731.000	-	LH2 Transfer Lines
2732.000	-	LN2 Transfer Lines
2733.000	-	Other Transfer Lines
2740.000	-	LHE Reservoirs
2741.000	-	LH2 reservoirs
2742.000	-	LN2 Reservoirs
2743.000	-	Other Reservoirs
2750.000	-	General Studies of SC Devices
2751.000	-	Dipole Magnets (Prototype)
2751.100	-	MK I Prototype Dipole Magnet, Superferric
2751.200	-	MK II Prototype Dipole Magnet, Superferric
2751.300	-	10' Prototype Dipole Magnet, MK III, Superferric
2751.400	-	10' AIRCO Temescal Dipole
2751.500	-	SCBM 109 Spectrometer
2753.000	-	Production Dipole Magnets
2753.100	-	MFC IV Superferric Dipole Magnet
2761.000	-	Prototype Quadrupole Magnets
2761.100	-	10', 5kG/in. Superferric Quadrupole Prototype Magnet
2761.200	-	2' Prototype Quadrupole Magnets, 10 kG/in.
2763.000	-	Production Quadrupole Magnets
2771.000	-	Other Magnets
2771.100	-	80 kG SC Solenoid Magnet E76
2781.000	-	Jigs, Fixtures, Winding Apparati, Mockups
2782.000	-	RF Devices
2788.000	-	Cryogenic Controls
2788.100	-	Cryogenic Controls Software
2789.000	-	SC Magnet Quench Protection

2791.000 - Other Devices

28 Meson Laboratory

2800.000	-	2804.000	-	Gen. Studies, Criteria, Designs, Theory, Structure and Nomenclature
	2800.000		-	
	2801.000		-	Meson Lab Beam Line Layout & Installation
	2802.000		-	Meson Lab Bldg., Enclosure Modifications & Construction
	2803.000		-	
	2804.000		-	
2805.000	-	2819.000	-	Magnet Systems
	2805.000		-	
	2806.000		-	
	2807.000		-	Monitoring, Protection, etc.
	2808.000		-	Muon Spoilers
	2809.000		-	Septum Magnets
	2810.000		-	Main Ring Bending & Quad. Magnets
	2811.000		-	Vernier Magnets
	2812.000		-	Sextupole Magnets
	2813.000		-	Dipole Magnet 3.5-1-60
	2814.000		-	Hyperon Magnet
	2815.000		-	
	2816.000		-	Magnet Power Supply
	2817.000		-	Measuring Equipment Devices
	2818.000		-	Supports and Bases
	2819.000		-	
2820.000	-	2824.000	-	Power Supply
	2820.000		-	Parameters and Specifications
	2821.000		-	Power Distribution
	2822.000		-	
	2823.000		-	
	2824.000		-	
2825.000	-	2829.000	-	Vacuum System
	2825.000		-	Parameters and Specifications
	2826.000		-	Flanges, End Connections, etc.
	2827.000		-	Controls
	2828.000		-	
	2829.000		-	
2830.000	-	2834.000	-	Utilities & Facilities
	2830.000		-	Parameters & Specifications
	2831.000		-	Low, Bus and Tray Systems
	2832.000		-	Heating, Air Conditioning, etc.
	2833.000		-	Facilities
	2834.000		-	Instrumentation
2835.000	-	2839.000	-	Local Controls
	2835.000		-	Modules
	2836.000		-	Cabling and Wiring
	2837.000		-	Area General Control System

	2838.000	-	Target Hall/Box Area
2840.000	-	2844.000	- Material Handling
	2840.000	-	Material Handling
	2841.000	-	
	2842.000	-	
	2843.000	-	
	2844.000	-	
2845.000	-	2845.999	- Surveying
2846.000	-	2846.999	- Collimators, Targets, Beam Dumps & Stops
2847.000	-	2847.999	- Beam Detection/Monitoring
2848.000	-	2849.000	- Left for Future Expansion
2850.000	-	2850.999	- Experiments
	2850.100	-	E82
	2850.110	-	E22
	2850.120	-	E248
	2850.130	-	E8
	2850.140	-	E236
	2850.150	-	E268
	2850.160	-	E118
	2850.170	-	E178
	2850.180	-	E61
	2850.190	-	E396
	2850.199	-	E456
	2850.200	-	E96
	2850.210	-	E440
	2850.220	-	E383
	2850.230	-	E533
	2850.240	-	E515
	2850.250	-	E557
	2850.260	-	E555
	2850.270	-	E613
	2850.280	-	E605
	2850.290	-	E617
	2850.299	-	E104
	2850.300	-	E104
	2850.400	-	E4
	2850.500	-	E108
	2850.600	-	E86
	2850.700	-	E110
	2850.800	-	E7
	2850.810	-	
	2850.820	-	
	2850.830	-	
	2850.840	-	
	2850.850	-	
	2850.860	-	
	2850.900	-	E69
	2850.999	-	E111
2851.000	-	2855.000	- Cryogenics
	2851.000	-	Cryogenic Studies, Criteria, Theory, etc.
	2852.000	-	Development

2853.000	-	Left Bend
2854.000	-	Meson Installation
2854.001	-	800 ft. Area
2855.000	-	Controls
2856.000	-	Tevatron II

### 29 Neutrino Laboratory

2900.000	-	2999.000	-	Neutrino Laboratory
2900.000	-	2909.000	-	Neutrino Laboratory Specifications
2900.000	-			Neutrino Laboratory Specifications
2910.000	-			Neutrino Laboratory Beam Dump Box
2911.000	-			Iron Neutron Shield Cart
2912.000	-			Buildings Mechanical
2913.000	-			Beam Dump Recombiner
2914.000	-			Construction Projects
2915.000	-			Target Service Building
2916.000	-			Target Lab 7
2920.000	-			Magnets
2922.000	-			Trim Septum
2923.000	-			6-3-12- Dipole
2924.000	-			2.28 cm Aperture "H" Magnet
2926.000	-			Cherenkov Counter
2930.000	-			Neutrino Laboratory Power Supplies
2930.100	-			Ignitor Drivers Horn Power Supply
2931.000	-			Radiation Safety System
2932.000	-			Beam Diagnostics
2940.000	-			Focusing Horn (Meson) Power Supplies
2941.000	-			Meson Focusing Horn
2942.000	-			Neutrino Narrow Band Focusing Horn
2950.000	-			Neutrino Laboratory, Survey
2960.000	-			Neutrino Beam Line
2961.000	-			400 GeV
2961.100	-			All Enclosures, No Line
2961.200	-			All Enclosures, Prompt Neutrino Line
2961.300	-			All Enclosures, Muon Beam Line
2962.000	-			N2 Target & Detector Manhole
2963.000	-			Beam Decay Pipe Manhole
2965.000	-			Neutrino Beam Line, Superconducting Magnets
2966.000	-			Muon Beam M9
2967.000	-			Muon Beam NM
2971.000	-			Triplet Train
2972.000	-			Dichromatic Trains
2980.000	-			Neutrino Lab Cyclotron
2981.000	-			Neutrino Lab, Muon Lab, Addition Cyclotron, Mag. Utilities
2982.000	-			Neutrino Lab Cyclotron Magnet Iron
2983.000	-			Neutrino Lab Cyclotron Magnet Coils
2985.000	-			Cyclotron Safety
2990.000	-			Experiments Muon Lab
2990.100	-			Exp. Multi-Muon Magnet #203/#391

2991.000	-	Experiments Lab E
2992.000	-	Experiments Wonder Building
2993.000	-	Experiments Lab C
2994.000	-	Experiments NMS

## 30 Experiments

3000.000	-	3999.000	-	Experiments
		3014.130	-	Experiment #14 Target Lab
		3021.040	-	Experiment #21-61
		3021.300	-	Proposal, Experiment #21
		3021.301	-	Correspondence, Experiment 21
		3021.302	-	Agreement, Experiment 21
		3021.310	-	Budget & Financial, Experiment 21
		3021.320	-	General Experimental Concepts, Exp. 21
		3021.330	-	General Experimental Equipment, Exp. 21
		3021.331	-	Magnets & Magnet Supports, Exp. 21
		3021.332	-	Power Supplies, Exp. 21
		3021.333	-	Collimators, Exp. 21
		3021.334	-	Vacuum Systems, Exp. 21
		3021.335	-	Cooling Systems, Exp. 21
		3021.336	-	Electrical Power Systems, Exp. 21
		3021.337	-	Beam Monitoring & Counters, Exp. 21
		3021.338	-	Detectors, Exp. 21
		3021.339	-	Targets, Exp. 21
		3063.100	-	Proposal, Exp. #63
		3063.101	-	Correspondence, Exp. 63
		3063.102	-	Agreement, Exp. 63
		3063.110	-	Budget & Financial, Exp. 63
		3063.120	-	General Exp. Concepts, Exp. 63
		3063.130	-	General Exp. Equipment, Exp. 63
		3063.131	-	Magnets & Magnet Supports, Exp. 63
		3063.132	-	Power Supplies, Exp. 63
		3063.133	-	Collimators, Exp. 63
		3063.134	-	Vacuum Systems, Exp. 63
		3063.135	-	Cooling Systems, Exp. 63
		3063.136	-	Electrical Power Syst, Exp. 63
		3063.137	-	Beam Monitoring & Concepts, Exp. 63
		3063.138	-	Detectors, Exp. 63
		3063.139	-	Targets, Exp. 63
		3063.140	-	Spectrometer, Exp. 63
		3070.100	-	Proposal
		3070.101	-	Correspondence
		3070.102	-	Agreement
		3070.110	-	Budget & Financial
		3070.120	-	General Experimental Concepts
		3070.130	-	Experimental Equipment
		3070.131	-	Magnet & Magnet Supports
		3070.132	-	Power Supplies
		3070.133	-	Collimators
		3070.134	-	Vacuum Systems



3070.135	-	Cooling Systems
3070.136	-	Electrical Power Systems
3070.137	-	Beam Monitoring & Counters
3070.138	-	Detectors
3070.139	-	Targets
3070.140	-	Spectrometers
3076.671	-	70kG Superconducting Solenoid, Exp. #76
3087.700	-	Proposal
3087.701	-	Correspondence
3087.702	-	Agreement
3087.710	-	Budget & Financial
3087.720	-	General Experimental Concepts
3087.730	-	Experimental Equipment
3087.731	-	Magnet & Magnet Supports
3087.732	-	Power Supplies
3087.733	-	Collimators
3087.734	-	Vacuum Systems
3087.735	-	Cooling Systems
3087.736	-	Electrical Power Systems
3087.737	-	Beam Monitoring & Counters
3087.738	-	Detectors
3087.739	-	Targets
3087.740	-	Spectrometers
3100.100	-	Proposal
3100.101	-	Correspondence
3100.102	-	Agreement
3100.110	-	Budget & Financial
3100.120	-	General Experimental Concepts
3100.130	-	Experimental Equipment
3100.131	-	Magnet & Magnet Supports
3100.132	-	Power Supplies
3100.133	-	Collimators
3100.134	-	Vacuum Systems
3100.135	-	Cooling Systems
3100.136	-	Electrical Power Systems
3100.137	-	Beam Monitoring & Counters
3100.138	-	Detectors
3100.139	-	Targets
3100.140	-	Spectrometers
3276.330	-	Experiment #276
3594.338	-	Experiment #594 Flash Chambers
3595.338	-	Experiment #595 Detectors
3687.000	-	E687 Electronics & VDAS
3705.000	-	E705 Cluster Finder

## 40 Experimental Areas

4000.000	-	4999.000	-	Experimental Areas
4001.000	-		-	Construction

## 50 Architectural Engineering &amp; Site Planning (T. Collins' Office)

## 55 Technical Services

5501.000 - Superconducting Ceramics

## 60 Proton Laboratory

6000.000	-	6009.000	-	General Criteria & Concepts
		6000.000	-	General Criteria & Concepts
		6001.000	-	Master Plan & Preliminary Concepts
		6002.000	-	Low System, Entire Proton Laboratory
		6003.000	-	Cable Tray Syst., Entire Proton Laboratory
		6004.000	-	Radiation Interlock Syst., Entire Proton Lab
		6005.000	-	
		6006.000	-	Vacuum Sysys. & Equip., Pre-Proton Lab
		6007.000	-	Shielding
		6008.000	-	Electrical Schematics, Details & Control Drawings
		6009.000	-	
6010.000	-	6019.000	-	Pre-Target Area
		6010.000	-	
		6011.000	-	Transport Bending Magnets, Mech. & Electrical Drawings
		6012.000	-	Quad. Magnets, Mech. & Electrical Drawings
		6013.000	-	Correction & Misc. Magnets, Mech. & Electrical Drawings
		6014.000	-	Supports, Alignment and Installation
		6015.000	-	Electrical Power Supplies & Installation
		6016.000	-	Vacuum Syst. & Equipment
		6017.000	-	
		6018.000	-	EPB Instrumentation
		6019.000	-	
6020.000	-	6029.000	-	Secondary Beams
		6020.000	-	Preliminary Concepts, Beam Layouts & Components
		6021.000	-	Transport Bending Magnets (Mech. & Electrical Drawings
		6022.000	-	Quad. Magnets, Mech. & Electrical Drawings
		6023.000	-	Correction & Misc. Magnets, Mech. & Electrical Drawings
		6024.000	-	Supports, Alignment & Installation
		6025.000	-	Electrical Power Supplies & Installation
		6026.000	-	Vacuum Syst. & Equipment
		6027.000	-	Special Equip., Collimators, Slits, Dumps, etc.
		6028.000	-	Beam Instrumentation
		6029.000	-	Beam Study Results
6030.000	-	6039.000	-	Primary Proton Beam Lines
		6030.000	-	Preliminary Concepts, Beam Layouts & Components

	6031.000	-	Transport Bending Magnets
	6032.000	-	Quadrupole Magnets
	6033.000	-	Correction & Misc. Magnets
	6034.000	-	Supports, Alignment & Installation
	6035.000	-	Beam Study Results
	6036.000	-	Beam Instrumentation
	6037.000	-	
	6038.000	-	Septum Magnets, 3-Way Lambertson
	6039.000	-	
6040.000	-	6049.000	- Proton Lab Target System
	6040.000	-	Preliminary Concepts
	6041.000	-	Beam Magnets, Inside Cannon
	6042.000	-	Collimators & Beam Stops, Inside Cannon
	6043.000	-	Supports, Alignment & Install., Jacks, Shielding, Around Cannon Alignment Fiducials
	6044.000	-	Target Equip., Cannon & Target Manipulating Mechanisms
	6045.000	-	Utility, Controls and Monitoring Systems
	6046.000	-	
	6047.000	-	Transport, Plug Sys'ts., Radiation Handling Sys'ts.
	6048.000	-	
	6049.000	-	
6050.000	-	6059.000	-
	6050.000	-	Mat'l Handling Syst. Other than Target Syst. Air Casters, Shielding Blocks, Pallets, Tables, Lift Trucks, Air Piping, etc.
	6051.000	-	
	6052.000	-	
	6054.000	-	
	6055.000	-	
	6056.000	-	
	6057.000	-	
	6058.000	-	
	6060.000	-	Pion Beam Master Plan, Preliminary Concepts, Layouts, Enclosures, Service Bldgs., Cranes, Above Ground Drawings
	6061.000	-	Pion Beam Supports, Transporters, Radiation Handling, Magnet Vehicles
	6062.000	-	Pion Beam Electrical, Instrumentation, Supplies, Penetrations all Drawings, Cable Trays, Controls, Monitoring System, Radiation Interlock
	6063.000	-	Pion Beam Exp. Areas, Shielding, Beam Study Results
	6064.000	-	Pion Beam Low System, Vacuum System
	6065.000	-	Pion Beam Cryo., Transfer Lines, Cold Boxes, Cryo. Equip., Magnet Conn., Cryo. Magnets
	6066.000	-	Pion Beam Target Area, Mech., 6 ft. Target & Collimator B2 Arr't Mech., 3 Aperture Collimator, Moveable Walls, etc.
	6067.000	-	Pion Beam Special Equip., Momentum Slit, Beam Stops, Dumps Collimators, Magnets (Other than Cryogenic)

## 70 Experiments

## 80 pbar Storage Rings

8000.000	-	General Studies & Criteria
8010.000	-	Injection, Transport & Inflection System
8020.000	-	Magnet System
8030.000	-	Accelerating System
8035.000	-	Cooling System
8040.000	-	Vacuum System
8050.000	-	Beam Extraction & Transport
8055.000	-	Antiproton Production & Collection
8060.000	-	Interior Utilities
8070.000	-	Handling System & Systems peculiar to a particular Accelerator
8080.000	-	Controls
8090.000	-	Assembly, Installation & Tune-up

## 90 Nucleon Medical Facility

9000.000	-	Preliminary Layouts, Studies & Concepts
9010.000	-	Dosimetry
9020.000	-	Magnet Systems
9030.000	-	Interlock Safety
9040.000	-	Vacuum System
9050.000	-	Beam Extraction & Transport
9060.000	-	Interior Utilities
9070.000	-	Handling Systems (Patient Positioning)
9080.000	-	Controls
9090.000	-	Assembly, Installation, Tune-up & Test

## 91 Satellite Refrigerator Support

9100.000	-	General System Assemblies, Conceptual
9110.000	-	Refrigerator Heat Exchanger, Cold Box & Valve Box
9120.000	-	Controls & Instrumentation
9130.000	-	Expansion Engines, Loads, Cryostats
9140.000	-	Compressors
9150.000	-	Oil Removal & Heat Removal
9160.000	-	Left for Future Expansion

## 92 Experimental Areas Department

9200.000	-	9202.999	-	Enclosures & Related Equipment
9203.000	-	9203.999	-	Any Area Not Encompassed by Exp. Areas Department
9204.000	-	9204.999	-	Magnets
	9204.000	-		Dipoles (B1 & B2's, 6-3-120's, EPB's Trims, etc.)
	9204.050	-		Labertsons
	9204.100	-		Quads (3-Q-120's, 4-Q-120's, etc.)
	9204.150	-		Toroids
	9204.200	-		Cyclotron
	9204.250	-		Special Magnets
9204.300	-	9204.950	-	Left for Future Expansion
9205.000	-	9205.999	-	Targets
	9205.000	-		Stationary
	9205.050	-		Movable
	9205.100	-		Cryogenic
9205.150	-	9205.950	-	Left for Future Expansion
9206.000	-	9206.999	-	Beam Dumps
	9206.000	-		Fixed Aperture, Stationary
	9206.050	-		Fixed Aperture, Mobile
	9206.100	-		Variable Aperture, Stationary
	9206.150	-		Variable Aperture, Mobile
	9206.200	-		Absorbers, Beam Stops
	9206.250	-	9206.950	Left for Future Expansion
9207.000	-	9207.999	-	Shielding
	9207.000	-		Stationary
	9207.050	-		Mobile
	9207.100	-	9207.950	Left for Future Expansion
9208.000	-	9208.999	-	Collimators
	9208.000	-		Fixed Aperture, Stationary
	9208.050	-		Fixed Aperture, Mobile
	9208.100	-		Variable Aperture, Stationary
	9208.150	-		Variable Aperture, Mobile
	9208.200	-	9208.950	Left for Future Expansion
9209.000	-	9209.999	-	Equipment Supports
	9209.000	-		Bedplates
	9209.050	-		Stationary Supports
	9209.100	-		Manual Adjustment Supports
	9209.150	-		Motorized Drive Supports
	9209.200	-		Overhead Suspended Supports
	9209.250	-	9209.950	Left for Future Expansion
9210.000	-	9210.999	-	Equipment Handling
	9210.000	-		Locomotive, Diesel
	9210.050	-		Locomotive, Electric
	9210.100	-		Transporter, Meson, Hydraulic
	9210.150	-		Transporter, Neutrino, Hydraulic
	9210.200	-		Transporter, Neutrino
	9210.250	-		Transporter, Shield Car
	9210.300	-		Lifting Devices
	9210.350	-	9210.950	Left for Future Expansion
9211.000	-	9211.999	-	Pressure Vessels
	9211.000	-		Roughing Pump Vacuum Systems

	9211.050	-	Turbo Pump Vacuum Systems
	9211.100	-	Ion Pump Vacuum Systems
	9211.150	-	Left for Future Expansion
	9211.200	-	Pressure Vessel Systems
	9211.250	-	Left for Future Expansion
	9211.300	-	Pumps
	9211.350	-	Flexible Connectors
	9211.400	-	Valves
	9211.450	-	Manifolding
	8211.500	-	Vacuum Lines
	9211.550	-	Flanges, O'Rings, Clamps, Seal Seats, Centering Rings, Windows & Blank-Offs
	9211.600	-	9211.950 - Left for Future Expansion
9212.000	-	9212.999	- Cooling Systems
	9212.000	-	LCW systems
	9212.050	-	Closed Loop Systems
	9212.100	-	Cryogenic Systems
	9212.150	-	9211.250 - Left for Future Expansion
	9212.300	-	Pumps
	9212.350	-	Flexible Connectors
	9212.400	-	Fittings
	9212.450	-	Valves
	9212.500	-	Controls
	9212.550	-	Manifolding
	9212.600	-	Heat Exchangers
	9212.650	-	9212.950 - Left for Future Expansion
9213.000	-	9213.999	- Detectors
	9213.000	-	SWICS
	9213.050	-	SEMS
	9213.100	-	Ion Chambers
	9213.150	-	Cherenkov Counters
	9213.200	-	Flash Chambers
	9213.250	-	RF Devices
	9213.300	-	Scintillators
	9213.350	-	Loss Monitors
	9213.400	-	30 Inch Bubble Chamber
	9213.450	-	15 Foot Bubble Chamber
	9213.500	-	9213.999 - Left for Future Expansion
9214.000	-	9214.999	- Gas Systems
9215.000	-	9215.999	- Surveying
	9215.000	-	Layout
	9215.050	-	Fixtures
	9215.100	-	9215.950 - Left for Future Expansion
9216.000	-	9219.999	- Left for Future Expansion
9220.000	-	9221.999	- Experiments

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