



Standards and Specifications



**CITY OF GROVER BEACH
COMMUNITY DEVELOPMENT
DEPARTMENT**

City of Grover Beach

Standards and Specifications

Adopted by the City Council
June 5, 2006



Robert Perrault
City Manager

Attest:



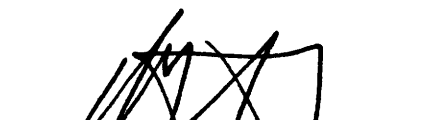
Donna L. McMahon
City Clerk

Approved:



Director of Public Works/
Designee

29 JUNE 07
Date



R. James Garing, PCB 26993
City Engineer

29 June 07
Date

TABLE OF CONTENTS

SECTION NUMBER	PAGE NO.
SECTION 1 - General Requirements	1 - 3
SECTION 2 - Preparation of Plans	4 - 8
SECTION 3 - Inspection	9 - 10
SECTION 4 - Roads and Streets	11 - 15
STANDARD DRAWINGS	
A.1 Curbs	16
A.2 Elements of Flexible Paving	17
A.3 Concrete Cross gutter	18
B.1 Sidewalks	19
B.1A Detached Sidewalks	20
B.2 Driveway Location	21
B.3 Cutting Concrete	22
B.4 Standard Upward Driveway	23
B.5 Standard Downward Driveway	24
B.6 Driveway Ramp	25
B.7 Driveways: Asphalt Concrete	26
B.8 Commercial or Industrial Off Street Parking	27
B.9 Location of Utilities in New Subdivisions	28
B.10 Location of Utilities in New Subdivisions (Continued)	29
B.11 Temporary Wood Beam Barricade	30
B.12 Metal Beam Barricade	31
B.13 Standard Street Monument	32
B.14 Standard Cantilever Retaining Walls (a - d)	33 - 36
B.15 Standard Street Sign	37

B.16	Street Sign Name Details	38
B.17	Mailbox Locations	39
B.18	Dumpster Enclosure Details (a - f)	40 - 45
B.19a	Corner Curb Ramp ADA	46
B.19b	Corner Curb Ramp ADA w/ 12' Curb Return	47
B.19c	Corner Curb Ramp ADA (Future) w/ 12' Curb Return	48
B.20	Mid-Block Curb Ramp ADA	49

SECTION 5 - Drainage 50 - 70

STANDARD DRAWINGS

D.1	Rainfall Intensity Duration Curve	71
D.2	Table of Coefficient Runoff Chart	72
D.3	Nomograph	73
D.4a	Standard Drop Inlet	74
D.4b	Drop Inlet <u>Insert</u> Details	75
D.5	Double Drop Inlet	76
D.6	Drop Inlet Details	77
D.7	Grate Details	78
D.8	Grate Details	79
D.9	Sidewalk Drain	80
D.10	Offstreet Drop Inlet and Junction Box	81
D.11	Infiltration Basin Options...Vacant Lot New Construction (Impervious)	82
D.12	Infiltration Basin Options...Vacant Lot New Construction (Pervious)	83
D.13	Infiltration Basin Options...Redevelopment (No Credit for Existing Drainage)	84
D.14	Infiltration Basin Options...Maximum Build-out Examples	85
D.15	Backfill Requirements for Storm Drain	86
D.16	Typical Storm Drain Manhole 60"	87
D.17	Typical Storm Drain Manhole 72"	88

SECTION 6 - Sewerage**89 – 107****STANDARD DRAWINGS**

S.1	Sewer Manhole Cover	108
S.2	Typical Drop Manhole	109
S.3	Typical Eccentric Cone Precast Concrete Manhole	110
S.4	Sewer Cleanout	111
S.5a	Sewer Lateral Installation	112
S.5b	Relocate Sewer Over Storm Drain	113
S.5c	Relocate Sewer Under Storm Drain	114
S.6	Sewer Lateral Notes	115
S.7	Sewer To Water Relationship	116
S.8	Sewer Backwater Prevention Valve	117

SECTION 7 - Water Supply**118 – 140****STANDARD DRAWINGS**

W.1a	Fire Hydrant Installation	141
W.1b	Fire Hydrant Installation Special Tie-in	142
W.2	Valve Anchor and Box	143
W.3	Thrust Block Requirements	144
W.4	Water Service Connection	145
W.5	1" Air & Vacuum Relief Assembly	146
W.6	1" Air & Vacuum Relief Assembly Details	147
W.7	Blow-Off Assembly	148
W.8	Backfill Requirements for Water or Sewer Lines	149
W.9	Water Main Realignment Over Storm Drain	150
W.10	Water Main Realignment Under Storm Drain	151

SECTION 1

GENERAL REQUIREMENTS

1.01 PURPOSE:

The purpose of these Standards and Specifications is to provide minimum standards for the design, methods of construction, kinds and uses of materials, and the preparation of plans for construction, repair or alteration of streets, roadways, concrete structures, drainage, sewerage, and water supply facilities within the City of Grover Beach, where any portion of such improvement is to be offered to the City of Grover Beach for operation and/or maintenance. Any items which are not included in these Standards and Specifications shall be constructed in accordance with the State Specifications as defined below or, if not covered in the State Specifications, as approved by the City of Grover Beach, Community Development Director.

1.02 DEFINITIONS:

In these Specifications or the State Specifications the intent and meaning of the terms that are used shall be as defined in Section I of the State Specifications except as follows:

1. Consultant - Shall mean any person or persons, firm, partnership or corporation legally authorized to practice civil engineering in the State of California who prepares or submits improvement plans and specifications on behalf of a Developer to the City of Grover Beach for approval.

2. Contractor - Shall mean any person or persons, firm, partnership, corporation or combination thereof who has/have entered into a contract with any person, corporation, company, special district, or the City of Grover Beach as party or parties of the second part, or legal representatives, for the construction of any improvement within the City of Grover Beach.

3. Community Development Director or Director - Shall mean the Community Development Director of the City of Grover Beach.

4. **Department** - Shall mean the City of Grover Beach Community Development Department.
5. **Engineer** - Shall mean the City Engineer of the City of Grover Beach acting either directly or through an authorized representative.
6. **Developer** - Shall mean the owner or owner's representative.
7. **Laboratory** - Shall mean any testing agency or testing firm, which has been licensed by the State of California to act in such capacity, and meeting the requirements of the Engineer.
8. **State** - When State specifications are applicable, the word "State" as used in the State Specifications, shall mean the City of Grover Beach.
9. **City** - Shall mean the City of Grover Beach.
10. **State Specifications** - Shall mean the latest edition of Standard Specifications and Standard Plans of the State of California, Business and Transportation Agency, Department of Transportation.

1.03 CONTROL OF MATERIALS:

The Director may make such tests of any of the materials used in any work done under these specifications as considered necessary. Samples of materials for testing shall be furnished to the Director without charge. In lieu of, or in addition to, tests by the Director, properly executed certificates of compliance with these specifications from the manufacturer or fabricator of any materials used in any work done hereunder may be required. Cost of all testing shall be paid for by person, firm or corporation making the improvement.

If pipe manufactured outside of the United States is to be furnished, all the tests required under these specifications shall be conducted within the continental limits of the United States by an established, reputable firm operating in the testing of materials field. The testing firm shall submit a certificate that all the requirements of these specifications have been met.

Requests for substitution of methods or materials differing from those set forth herein will be considered by the Director provided the requester makes any such requests in writing and furnishes complete descriptive information thereon to the Director (including any additional information the Director may request) as early in this process as possible, but, in any event, or not later than the day on which the final improvement plans are submitted for final review by the Director. The Director will consider requests for emergency substitutions involving materials which suddenly become unavailable, provided requests for such emergency substitutions, including all data to show substitutions comply with specifications, are received at least fifteen calendar days before date of use.

SECTION 2
PREPARATION OF PLANS

2.01 GENERAL:

All improvement plans shall be prepared and signed by a registered Civil Engineer. Complete plans and specifications for all proposed streets, drainage facilities, sewerage, water distribution systems, industrial and commercial development and residential subdivisions, including any necessary dedications and easements, shall be submitted to the Director for approval and must receive the required approval prior to the beginning of construction of any such improvements. This shall apply where it is the intent that any portion of such improvements will be turned over to the City. Where improvements are required as a condition of City approval of any development, including those where City acceptance of the public ways in said development is not intended, nor imminent, improvement plans acceptable to the Director shall be submitted to assure the City that proper construction standards will be used together with Performance Bonds and Labor and Materials Bonds as necessary to guarantee compliance. Plans not conforming to the normal standards of quality and neatness may be rejected.

Three sets of plans, specifications and special provisions, together with two copies of all computations, cost estimates, bid forms, test data, cross sections, and such other items as may be requested by the Director, shall be submitted to the Director for approval. One copy of the plans showing desired revisions will be returned to the consultant. At such time as the consultant has made the necessary revisions, the original drawings shall be submitted for approval. No construction will be authorized or plan approved until such time as the Director or a designated representative signifies approval by signature on the original drawings of the title sheet. There shall be no alterations made to an approved set of plans unless such alterations are submitted to the Director for approval. Excepted from approval are any features of the plans that are contrary to, in conflict with or do not conform to any Federal or State law, City

Ordinance or Resolution, or generally accepted engineering practice, in keeping with the standards of the profession, even though such errors, omissions or conflicts may have been overlooked in the review of the plans.

Where the improvement plans submitted cover only a portion of the ultimate development, the plans submitted must be accompanied by the approved overall tentative plan, or a study plan if there is no approved overall tentative plan, showing topographic features of the ultimate development at an adequate scale to clearly show the proposed improvements.

A print of the subdivision map shall be included with each set of subdivision improvement plans submitted.

2.02 DESIGN ALTERNATIVES:

The Director may approve design alternatives where the proposed alternate provides the same level of service, approximately the same estimated maintenance costs, and is not adverse to public health, safety and welfare. This provision is intended to provide for some flexibility in designing streets with bike ways, pedestrian paths and bridle paths; when an area specific plan has been approved showing an alternate to the standard drawings or where appropriate in order to provide compatibility with adjacent areas.

2.03 STANDARD SHEETS AND SCALES:

A. Residential Subdivisions and Commercial or Industrial Streets - These plans shall be prepared on mylar or an approved equal, 24" x 36", Standard Plan - Profile Sheet. Desirable Scales: Horizontal of 1" = 20' with vertical of 1" = 2' or 1' = 4'; or horizontal of 1' = 50' with vertical of 1" = 5'. However, scale may be varied in rough terrain.

B. Storm Drainage - Plans for minor drainage facilities may be shown on street plans, if appropriate. Plans for major drainage facilities shall conform to the sheet size and scale as shown for street plans, and shall include hydraulic grade line.

Attention is directed to 2.01 of these Specifications, which requires the submittal of computations with improvement plans at the time such plans are submitted for approval. Off street improvements shall be drawn on sheets and to a scale approved by the Director.

C. Sanitary Sewerage - Plans for sanitary sewer improvements shall be prepared on standard sheets as defined in paragraph A, and may be submitted on the same plans as the streets. Off street improvements shall be drawn on sheets and to a scale approved by the Director.

D. Water - Plans for water system layout and improvements shall be submitted on the same plans as the streets. Off street improvements shall be drawn on sheets and to a scale approved by the Director.

E. Utilities - Plans for electric, telephone, cable T.V. and gas system improvements shall be submitted on the same plans as the streets. Each respective utility shall signify approval of the proposed layout of its facility by signing the plans.

F. Grading - If any grading is proposed, a grading plan shall be submitted with the other required improvement plans. Cut and fill quantities shall be computed and shown on the plan. Existing and final contours shall also be shown.

2.04 PLAN DETAILS:

The following details are to be shown on plans submitted for approval:

A. Title Sheet - On improvement plans exceeding two sheets in the set, a title sheet shall be prepared showing the entire work complete with the following: a key map showing boundaries of the work, special districts, and City limits; street names; section and/or grant lines and corners; and the location of the work within the City. The title sheet shall also include an index of the sheets; the consultants name, and professional registration number and signature; the date of the drawing; and the blocks for the necessary approvals of the Director, Engineer and effected utilities.

B. Title Blocks - Each sheet of the set of drawings shall have an approved title