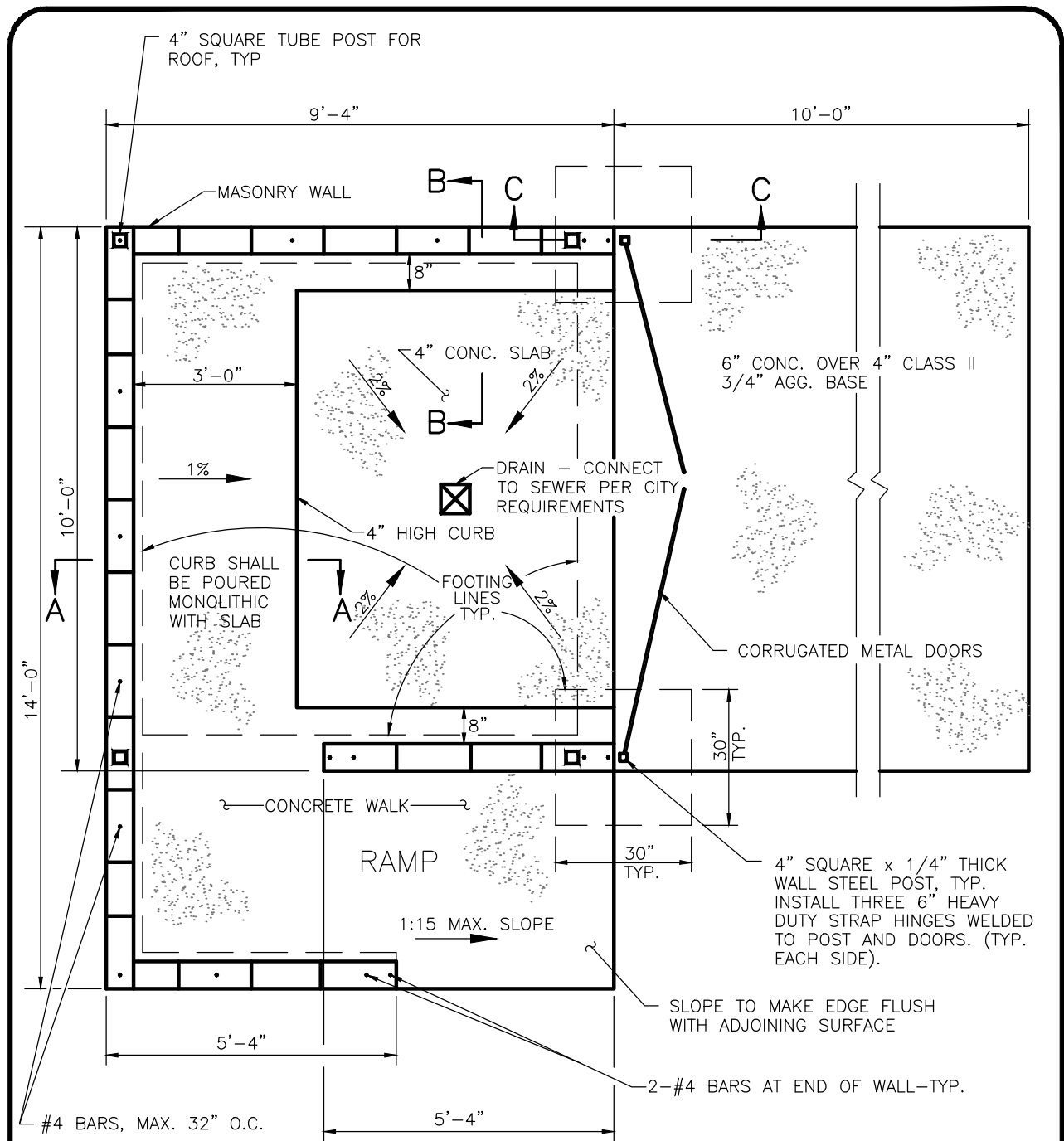




# CITY OF GARDEN GROVE PUBLIC WORKS STANDARD PLANS

## SERIES B-500 BUILDING

- B-502 REFUSE STORAGE ENCLOSURE
- B-504 BLOCK WALL RETAINING 2' OF SOIL
- B-505 MINIMUM REQUIREMENTS FOR 6" OR 8" BLOCK WALL
- B-506 ALTERNATIVE FOOTING FOR WALL STANDARD No. 505
- B-507 EQUIPMENT VIEW OBSCURING SCREEN DETAIL
- B-508 GARDEN WALL
- B-509 COMMERCIAL BMP DEVICES FOR BUILDING SITES LESS THAN 1.0 ACRE
- B-510 RESIDENTIAL WATER QUALITY SYSTEMS



**PLAN**  
N.T.S.

**NOTE:**

PLANNING DIVISION SHALL APPROVE  
STYLE AND COLOR OF BLOCK,  
ROOF, AND METAL DOORS PRIOR TO  
CONSTRUCTION.

\*PROVIDE SOLID ROOF OR AWNING TO PREVENT DIRECT PRECIPITATION FROM ENTERING ENCLOSURE.



City of  
Garden Grove  
California

**REFUSE STORAGE  
ENCLOSURE**

Approved  Date 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

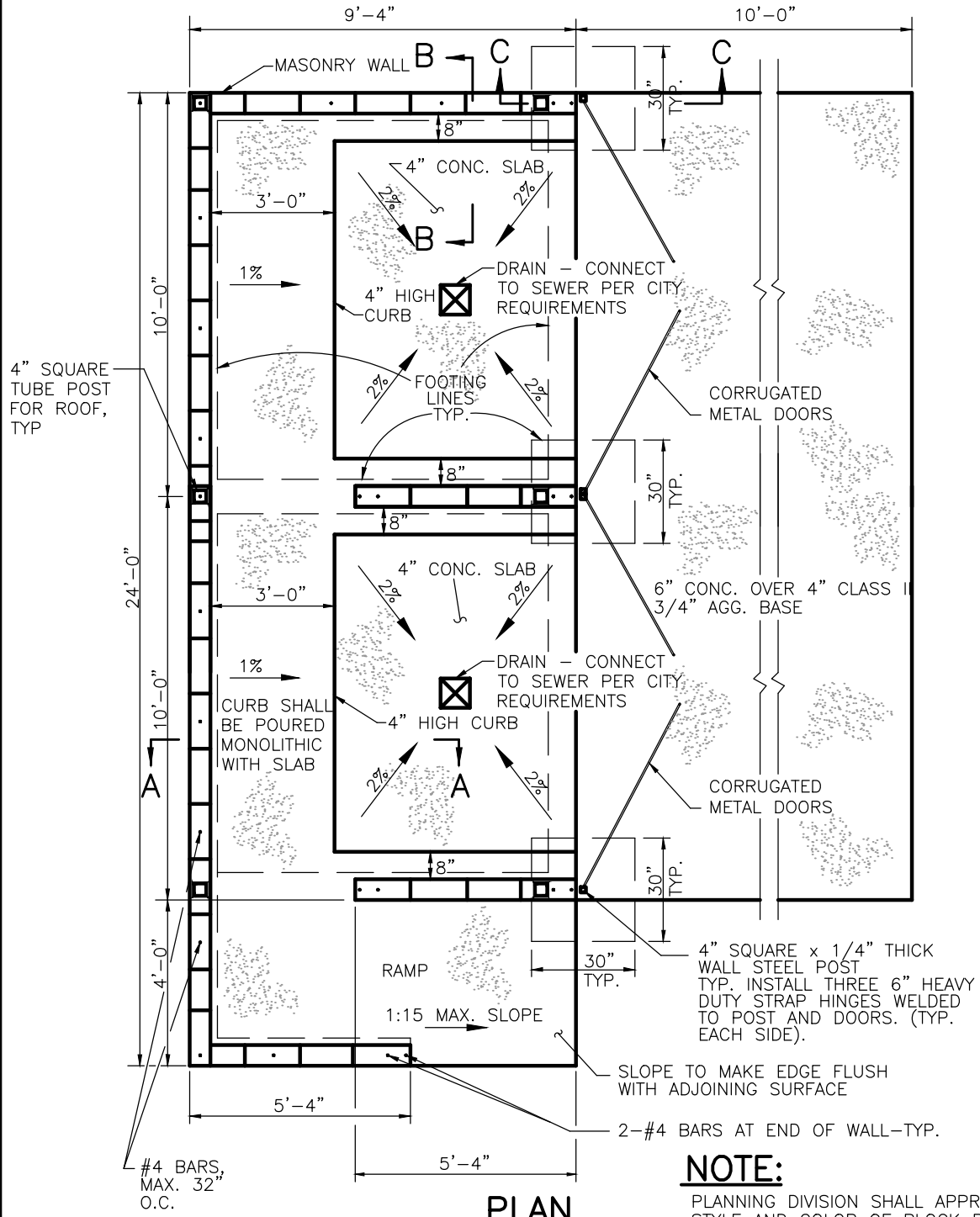
REVISIONS	BY	DATE

STD. PLAN NUMBER

**B-502**

SHEET 1 OF 4

# DOUBLE ENCLOSURE



## PLAN

N.T.S.

### NOTE:

PLANNING DIVISION SHALL APPROVE STYLE AND COLOR OF BLOCK PRIOR TO CONSTRUCTION.

\*PROVIDE SOLID ROOF OR AWNING TO PREVENT DIRECT PRECIPITATION FROM ENTERING ENCLOSURE.

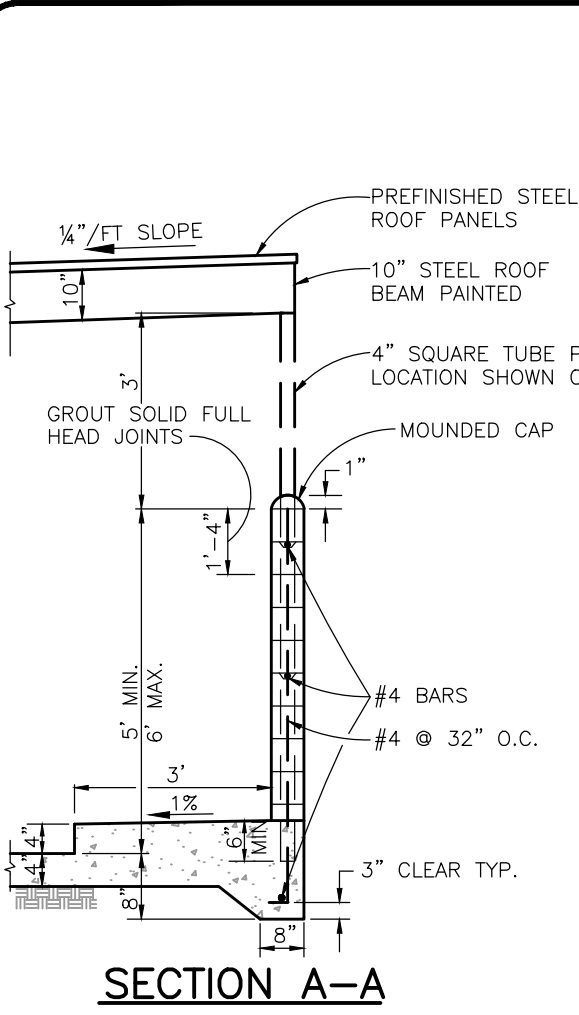


## REFUSE STORAGE ENCLOSURE

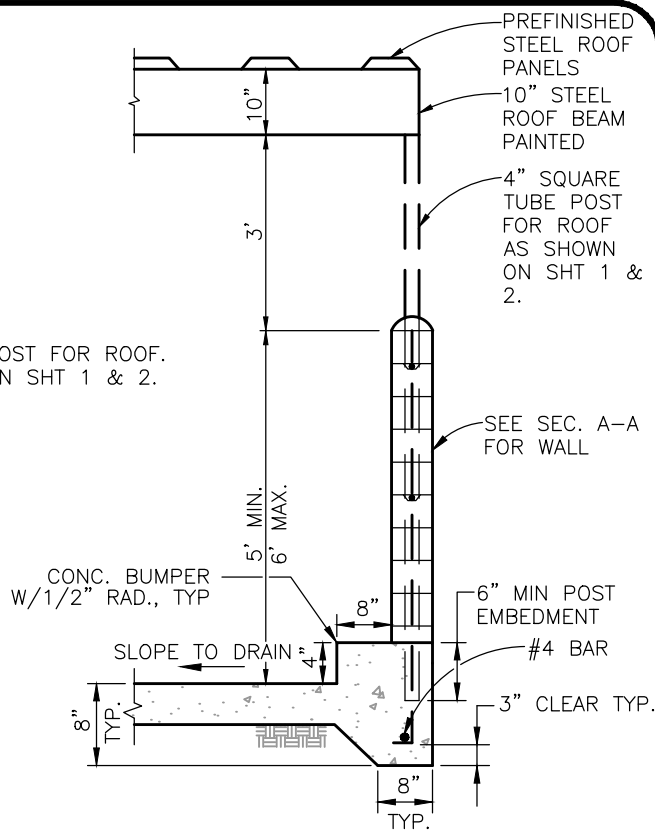
Approved:  Date: 12-8-15  
 City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

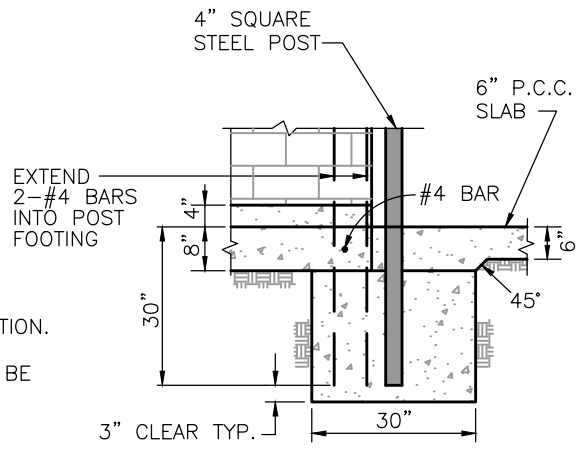
**STD. PLAN NUMBER**  
**B-502**  
 SHEET 2 OF 4



**SECTION A-A**



**SECTION B-B**



**SECTION C-C**

**NOTES:**

1. LOCATION SHALL BE APPROVED BY THE PUBLIC WORKS DEPARTMENT.
2. AREAS SHALL BE ACCESSIBLE FOR DELIVERY AND COLLECTION.
3. GATES SHALL BE CORRUGATED METAL DOORS, AND MUST BE APPROVED BY PUBLIC WORKS DEPARTMENT PRIOR TO INSTALLATION.
4. GATE LATCHES SHALL BE OF THE PLUNGER BAR TYPE OR EQUIVALENT AS APPROVED BY THE PUBLIC WORKS DEPARTMENT.
5. PLANNING SERVICES DIVISION SHALL APPROVE BLOCK, GATE AND ROOF COLOR & STYLE AND ANY OTHER MODIFICATIONS PRIOR TO CONSTRUCTION. CALL 714-741-5312.
6. SEE SPECIFICATIONS, NOTES, AND INSPECTION SCHEDULING ON SHEET 4 OF 4.



**REFUSE STORAGE ENCLOSURE**

Approved:  Date: 12-8-15  
 City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

STD. PLAN NUMBER  
**B-502**  
 SHEET 3 OF 4

## MATERIAL SPECIFICATIONS:

1. CONCRETE BLOCK: 8" MINIMUM IN SIZE, ASTM C90.
2. REINFORCING STEEL: ASTM 615, GRADE 40.
3. ACCEPTABLE SOIL TYPES:
  - a. MIN. ALLOWABLE BEARING: 1000 LBS./SQ. FT.
  - b. MIN. LATERAL BEARING: 100 LBS./SQ. FT./FT.
  - c. MAX. EXPANSION INDEX: 20
4. CONCRETE: 2500 LBS./SQ. IN. IN 28 DAYS.
5. MORTAR: 1:1/4:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND, BY VOLUME), MIXED TO PLASTIC CONSISTENCY.
6. GROUT: 1:1/10:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND BY VOLUME), MIX TO FLOW WITHOUT SEGREGATION. GROUT MAY CONTAIN 2 PARTS PEA GRAVEL (3/8" MAX. SIZE). MINIMUM COMPRESSIVE STRENGTH: 2500 LBS./SQ. IN.

## GENERAL NOTES:

1. THIS DESIGN IS FOR AVERAGE CONDITIONS AND MAY NOT BE SUITABLE FOR ALL CASES. IT IS RECOMMENDED THAT A LICENSED CIVIL OR STRUCTURAL ENGINEER BE CONSULTED.
2. FOOTINGS SHALL BE IN NATIVE SOIL OR CERTIFIED FILL.
3. BLOCKS SHALL BE STAGGERED (RUNNING BOND).
4. ALL CELLS CONTAINING REINFORCING STEEL SHALL BE GROUTED.
5. APPROVED GROUT STOPS ARE REQUIRED BELOW HORIZONTAL STEEL IN PARTIALLY GROUTED WALLS. BAGS, NEWSPAPERS, ETC. ARE NOT APPROVED GROUT STOPS.
6. INITIAL BED JOINT SHALL BE 1/4"MIN., 1"MAX. SUBSEQUENT BED JOINTS SHALL BE 1/4"MIN., 5/8"MAX.
7. VERTICAL CONTINUITY OF CELLS SHALL BE UNOBSTRUCTED. MORTAR PROJECTIONS SHALL NOT EXCEED 1/2" FOR 6" AND LARGER BLOCK. MORTAR DROPPINGS OR OTHER FOREIGN MATTER ARE NOT PERMITTED IN CELLS AND MUST BE REMOVED.
8. EXPANSION JOINTS REQUIRED AT 60'-0" MAX. INTERVALS.
9. REQUIRED BAR LAPS (IF ANY): 24" MIN
  - a. WIRE JOINT REINFORCEMENT IN THE MORTARED BED JOINT: 75 WIRE DIAMETERS OR IN ALTERNATE BED JOINTS OF RUNNING BOND, 54 DIAMETERS PLUS TWICE THE BED JOINT SPACING.
10. WHERE HORIZONTAL WIRE JOINT REINFORCEMENT IS REQUIRED OR UTILIZED, IT SHALL BE EQUIVALENT TO TWO 3/16" DIAMETER BARS CONNECTED AT 16" INTERVALS BY NO. 9 GAUGE WELDED WIRE.
11. 3"MIN. COVER REQUIRED FOR REINFORCEMENT IN CONCRETE WHICH IS CAST AGAINST EARTH.

## INSPECTION SCHEDULING:

1. FOUNDATION: AFTER TRENCHES ARE DUG, STEEL IS TIED IN PLACE, AND BEFORE ANY CONCRETE IS POURED.
2. PREGROUT: AFTER ALL BLOCKS (EXCEPT CAP) ARE IN PLACE, VERTICAL AND HORIZONTAL STEEL IS IN PLACE, GROUT STOPS (FOR PARTIALLY GROUTED MASONRY) ARE IN PLACE, AND PRIOR TO GROUTING.
3. FINAL: AFTER GROUT IS IN PLACE AND PRIOR TO PLACEMENT OF CAP.



City of  
Garden Grove  
California

## REFUSE STORAGE ENCLOSURE

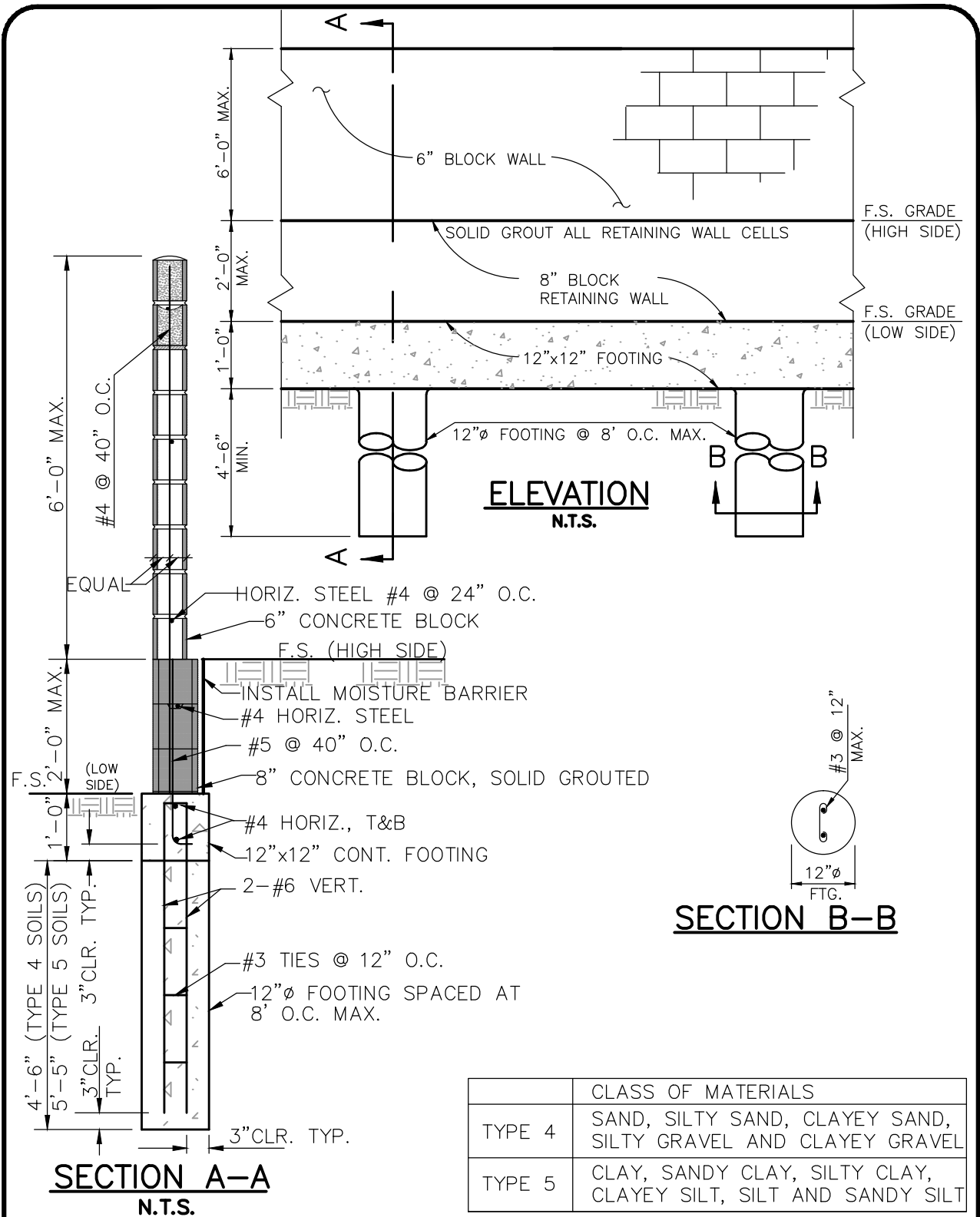
Approved:  Date: 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

STD. PLAN NUMBER

**B-502**

SHEET 4 OF 4



City of  
Garden Grove  
California

# BLOCK WALL RETAINING 2' OF SOIL

Approved

Date 12-8-15

REVISIONS

BY

DATE

STD. PLAN NUMBER

City Engineer

R.C.E. 52125 Exp.12-31-16

**B-504**

SHEET 1 OF 2

## MATERIAL SPECIFICATIONS:

1. CONCRETE BLOCK: ASTM C-90
2. REINFORCING STEEL: ASTM 615, GRADE 40
3. ACCEPTABLE SOIL TYPES:
  - a. MIN. ALLOWABLE BEARING: 1000 LBS./SQ. FT
  - b. MIN. LATERAL BEARING: 100 LBS./SQ. FT./FT
  - c. MAX. EXPANSION INDEX: 20
4. CONCRETE: 2500 LBS./SQ. IN. COMPRESSIVE STRENGTH IN 28 DAYS.
5. MORTAR: 1:1/4:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND, BY VOLUME). MIXED TO PLASTIC CONSISTENCY. MORTAR SHALL CONFORM TO ASTM C270 AND ARTICLES 2.1 AND 2.6A OF TMS 602/ACI 530.1/ASCE 6.
6. GROUT: 1:1/10:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND BY VOLUME), MIX TO FLOW WITHOUT SEGREGATION. GROUT MAY CONTAIN 2 PARTS PEA GRAVEL (3/8" MAX. SIZE). MINIMUM COMPRESSIVE STRENGTH: 2500 LBS./SQ. IN. GROUT SHALL COMPLY WITH ARTICLE 2.2 OF TMS 602/ACI 530.1/ASCE 6.

## GENERAL NOTES:

1. THIS DESIGN IS FOR MAXIMUM 2' GRADE DIFFERENCE CONDITIONS AND MAY NOT BE SUITABLE FOR ALL CASES. IT IS RECOMMENDED THAT A LICENSED CIVIL OR STRUCTURAL ENGINEER BE CONSULTED.
2. CONCRETE MASONRY UNITS SHALL BE LAID IN RUNNING BOND. (BLOCKS ARE STAGGERED).
3. ALL CELLS CONTAINING REINFORCING STEEL SHALL BE GROUTED.
4. APPROVED GROUT STOPS ARE REQUIRED BELOW HORIZONTAL STEEL IN PARTIALLY GROUTED WALLS. BAGS, NEWSPAPERS, ETC. ARE NOT APPROVED GROUT STOPS.
5. INITIAL BED JOINT SHALL BE 1/4"MIN., 1"MAX. SUBSEQUENT BED JOINTS SHALL BE 1/4"MIN., 5/8"MAX.
6. VERTICAL CONTINUITY OF CELLS SHALL BE UNOBSTRUCTED. MORTAR PROJECTIONS SHALL NOT EXCEED 1/2" FOR 6" AND LARGER BLOCK. MORTAR DROPPINGS OR OTHER FOREIGN MATTER ARE NOT PERMITTED IN CELLS AND MUST BE REMOVED.
7. VERTICAL EXPANSION JOINTS REQUIRED AT 60'-0" MAX. INTERVALS.
8. REQUIRED BAR LAPS: 24" MINIMUM
  - a. VERTICAL STEEL: 30 BAR DIAMETERS.
  - b. HORIZONTAL STEEL: 40 BAR DIAMETERS.
  - c. WIRE JOINT REINFORCEMENT IN THE MORTARED BED JOINT: 75 WIRE DIAMETERS OR IN ALTERNATE BED JOINTS OF RUNNING BOND, 54 DIAMETERS PLUS TWICE THE BED JOINT SPACING.
9. WHERE HORIZONTAL WIRE JOINT REINFORCEMENT IS REQUIRED OR UTILIZED, IT SHALL BE EQUIVALENT TO TWO 3/16" DIAMETER BARS CONNECTED AT 16" INTERVALS BY NO. 9 GAUGE WELDED WIRE.
10. 3"MIN. COVER REQUIRED FOR REINFORCEMENT IN CONCRETE WHICH IS CAST AGAINST EARTH.
11. NO BACKFILL SHALL BE PLACED AGAINST RETAINING WALL FOR A MINIMUM OF 7 DAYS.
12. METHOD OF COMPACTION WITHIN 4ft. OF RETAINING WALL TO BE APPROVED BY BUILDING INSPECTOR PRIOR TO START OF WORK.
13. FOR 6" SLUMPSTONE, PROVIDE CLEANOUTS AT THE BASE OF ALL CELLS CONTAINING VERTICAL REINFORCEMENT. FIRST COURSE MAY BE BURIED TO HIDE CLEANOUTS.

## INSPECTION PROCEDURES: INSPECTION REQUESTS SHALL BE MADE BEFORE 4:00 PM ON THE BUSINESS DAY PRIOR TO THE DESIRED INSPECTION DATE.

1. FOUNDATION: AFTER TRENCHES ARE DUG, STEEL IS TIED IN PLACE, AND BEFORE ANY CONCRETE IS POURED. PREGROUT: AFTER ALL BLOCKS (EXCEPT CAP) ARE IN PLACE, VERTICAL AND HORIZONTAL STEEL
2. IS IN PLACE, GROUT STOPS (FOR PARTIALLY GROUTED MASONRY) ARE IN PLACE, AND PRIOR TO GROUTING. INSPECTION OF RETAINING PORTION TO BE DONE SEPERATLY.
3. THE INSPECTION OF THE COMPACTED BACKFILL SHALL BE DONE SEPERATELY A MINIMUM OF SEVEN DAYS AFTER THE PREGROUT INSPECTION.
4. FINAL: AFTER GROUT IS IN PLACE AND PRIOR TO PLACEMENT OF CAP.



City of  
Garden Grove  
California

## BLOCK WALL RETAINING 2' OF SOIL

Approved  Date 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

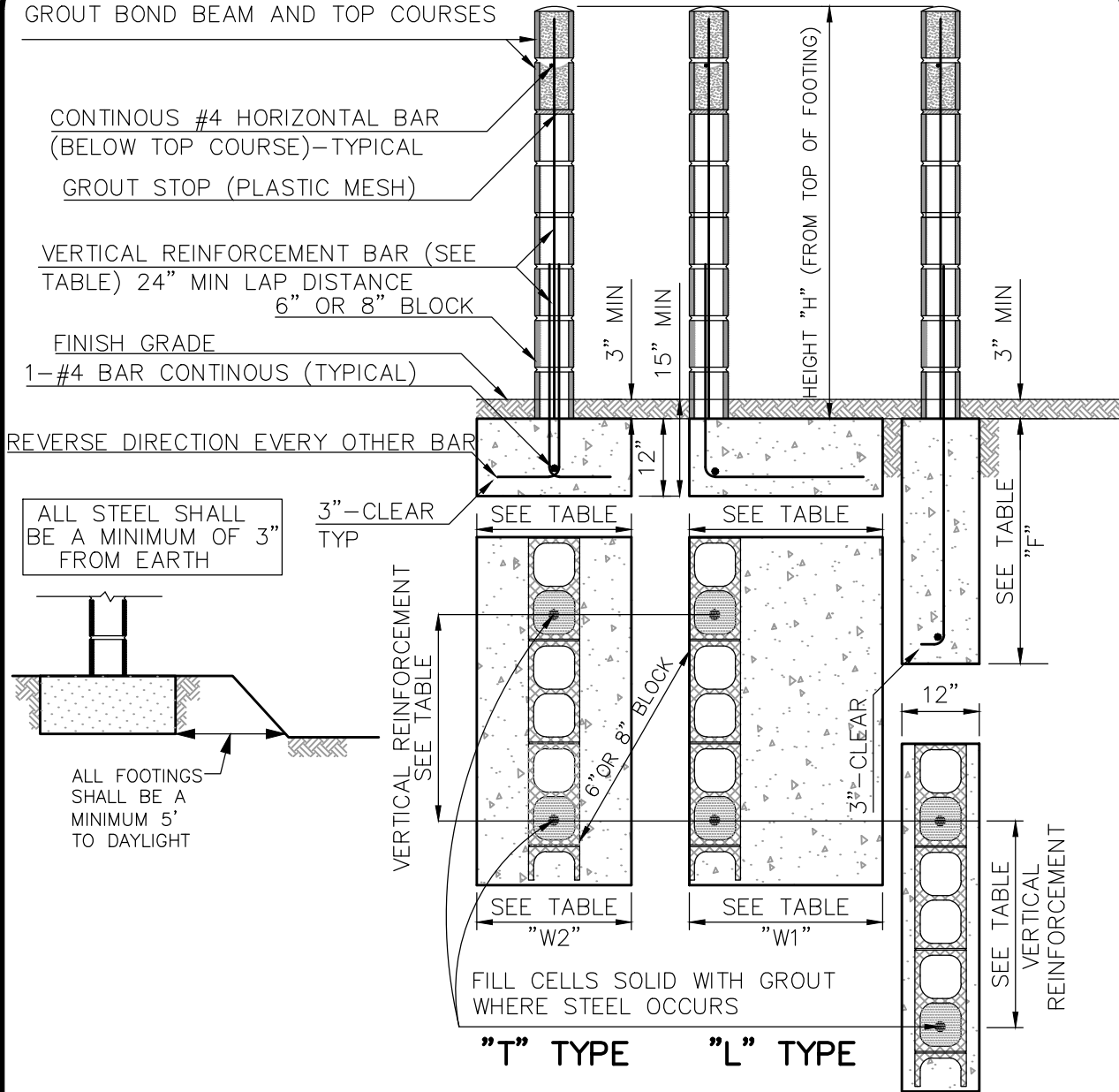
REVISIONS	BY	DATE

STD. PLAN NUMBER

**B-504**

SHEET 2 OF 2

USE BOND BEAM BLOCK BELOW TOP COURSE.  
GROUT BOND BEAM AND TOP COURSES



DIMENSION AND REINFORCEMENT TABLE

"H"	REINFORCEMENT BARS		"L" TYPE	"T" TYPE	"I" TYPE
	VERTICAL	HORIZONTAL	"W1"	"W2"	"F"
3'	#4 @ 48"	AS SHOWN ABOVE AND ON SHEET 3	16"	22"	26"
4'	#4 @ 32"		20"	22"	30"
5'	#4 @ 32"		24"	22"	34"
6'	#4 @ 32"		30"	24"	38"
7'	#5 @ 32"		36"	28"	42"
8'	#5 @ 32"		42"	30"	46"



City of  
Garden Grove  
California

## MINIMUM REQUIREMENTS FOR 6" OR 8" BLOCK WALL

Approved:  Date: 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

STD. PLAN NUMBER  
**B-505**  
SHEET 1 OF 3



## MATERIAL SPECIFICATIONS:

1. CONCRETE BLOCK: ASTM C-90
2. REINFORCING STEEL: ASTM 615, GRADE 40
3. ACCEPTABLE SOIL TYPES:
  - a. MIN. ALLOWABLE BEARING: 1000 LBS./SQ. FT
  - b. MIN. LATERAL BEARING: 100 LBS./SQ. FT./FT
  - c. MAX. EXPANSION INDEX: 20
4. CONCRETE: 2500 LBS./SQ. IN. COMPRESSIVE STRENGTH IN 28 DAYS.
5. MORTAR: 1:1/4:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND, BY VOLUME), MIXED TO PLASTIC CONSISTENCY. MORTAR SHALL CONFORM TO ASTM C270 AND ARTICLES 2.1 AND 2.6A OF TMS 602/ACI 530.1/ASCE 6.
6. GROUT: 1:1/10:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND BY VOLUME), MIX TO FLOW WITHOUT SEGREGATION. GROUT MAY CONTAIN 2 PARTS PEA GRAVEL (3/8" MAX. SIZE). MINIMUM COMPRESSIVE STRENGTH: 2500 LBS./SQ. IN. GROUT SHALL COMPLY WITH ARTICLE 2.2 OF TMS 602/ACI 530.1/ASCE 6.

## GENERAL NOTES:

1. THIS DESIGN IS FOR AVERAGE CONDITIONS AND MAY NOT BE SUITABLE FOR ALL CASES. IT IS RECOMMENDED THAT A LICENSED CIVIL OR STRUCTURAL ENGINEER BE CONSULTED.
2. CONCRETE MASONRY UNITS SHALL BE LAID IN RUNNING BOND. (BLOCKS ARE STAGGERED).
3. ALL VERTICAL CELLS CONTAINING REINFORCING STEEL SHALL BE GROUTED.
4. APPROVED GROUT STOPS ARE REQUIRED BELOW HORIZONTAL STEEL IN PARTIALLY GROUTED WALLS. BAGS, NEWSPAPERS, ETC. ARE NOT APPROVED GROUT STOPS.
5. INITIAL BED JOINT SHALL BE 1/4" MIN., 1" MAX. SUBSEQUENT BED JOINTS SHALL BE 1/4" MIN., 5/8" MAX.
6. VERTICAL CONTINUITY OF CELLS SHALL BE UNOBSTRUCTED. MORTAR PROJECTIONS SHALL NOT EXCEED 1/2" FOR 6" AND LARGER BLOCK. MORTAR DROPPINGS OR OTHER FOREIGN MATTER ARE NOT PERMITTED IN CELLS AND MUST BE REMOVED.
7. VERTICAL EXPANSION JOINTS REQUIRED AT 60'-0" MAX. INTERVALS.
8. REQUIRED BAR LAPS: 24" MINIMUM
  - a. VERTICAL STEEL: 30 BAR DIAMETERS.
  - b. HORIZONTAL STEEL: 40 BAR DIAMETERS.
  - c. WIRE JOINT REINFORCEMENT IN THE MORTARED BED JOINT: 75 WIRE DIAMETERS OR IN ALTERNATE BED JOINTS OF RUNNING BOND, 54 DIAMETERS PLUS TWICE THE BED JOINT SPACING.
9. WHERE HORIZONTAL WIRE JOINT REINFORCEMENT IS REQUIRED OR UTILIZED, IT SHALL BE EQUIVALENT TO TWO 3/16" DIAMETER BARS CONNECTED AT 16" INTERVALS BY NO. 9 GAUGE WELDED WIRE.
10. 3" MIN. COVER REQUIRED FOR REINFORCEMENT IN CONCRETE WHICH IS CAST AGAINST EARTH. NO BACKFILL TO BE PLACED AGAINST RETAINING WALL FOR A MINIMUM OF 7 DAYS.
11. METHOD OF COMPACTION WITHIN 4ft. OF RETAINING WALL TO BE APPROVED BY BUILDING INSPECTOR
12. PRIOR TO START OF WORK. FOR 6" SLUMPSTONE, PROVIDE CLEANOUTS AT THE BASE OF ALL CELLS CONTAINING VERTICAL REINFORCEMENT.
13. FIRST COURSE MAY BE BURIED TO HIDE CLEANOUTS.

## INSPECTION PROCEDURES: INSPECTION REQUESTS SHALL BE MADE BEFORE 4:00 PM ON THE BUSINESS DAY PRIOR TO THE DESIRED INSPECTION DATE.

1. FOUNDATION: AFTER TRENCHES ARE DUG, STEEL IS TIED IN PLACE, AND BEFORE ANY CONCRETE IS POURED.
2. PREGROUT: AFTER ALL BLOCKS (EXCEPT CAP) ARE IN PLACE, VERTICAL AND HORIZONTAL STEEL IS IN PLACE, GROUT STOPS (FOR PARTIALLY GROUTED MASONRY) ARE IN PLACE, AND PRIOR TO GROUTING. INSPECTION OF RETAINING PORTION TO BE DONE SEPARATELY.
3. FINAL: AFTER GROUT IS IN PLACE AND PRIOR TO PLACEMENT OF CAP.



City of  
Garden Grove  
California

## MINIMUM REQUIREMENTS FOR 6" OR 8" BLOCK WALL

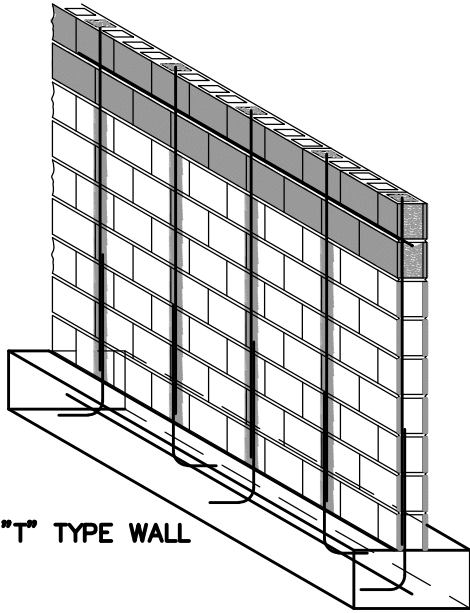
Approved  Date 12-8-15  
City Engineer R.C.E. 52125 Exp.12-31-16

REVISIONS	BY	DATE

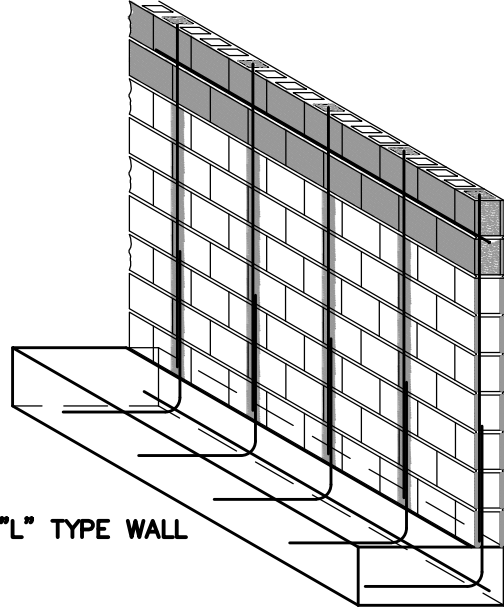
STD. PLAN NUMBER

**B-505**

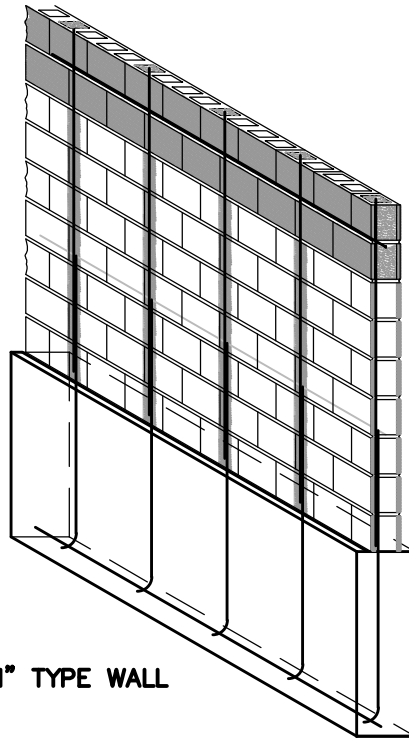
SHEET 2 OF 3



"T" TYPE WALL



"L" TYPE WALL



"I" TYPE WALL

NOTE:

THIS DETAIL IS PROVIDED AS A COURTESY TO ASSIST IN THE CONSTRUCTION OF A TYPICAL PRIVACY WALL ON PRIVATE PROPERTY AND MAY NOT BE SUITABLE FOR ALL CONDITIONS. PERMIT APPLICANTS WISHING TO USE THIS DETAIL SHOULD CONSULT WITH A PROPERLY LICENSED DESIGN PROFESSIONAL FOR SUITABILITY OF DESIGN PRIOR TO THE START OF CONSTRUCTION. SECTIONS OF WALLS MUST BE SHOWN ON PLANS. PLANNING DIVISION SHALL APPROVE STYLE AND COLOR OF BLOCK FOR ALL COMMERCIAL AND MULTI-FAMILY RESIDENTIAL DEVELOPMENTS PRIOR TO CONSTRUCTION.



City of  
Garden Grove  
California

## MINIMUM REQUIREMENTS FOR 6" OR 8" BLOCK WALL

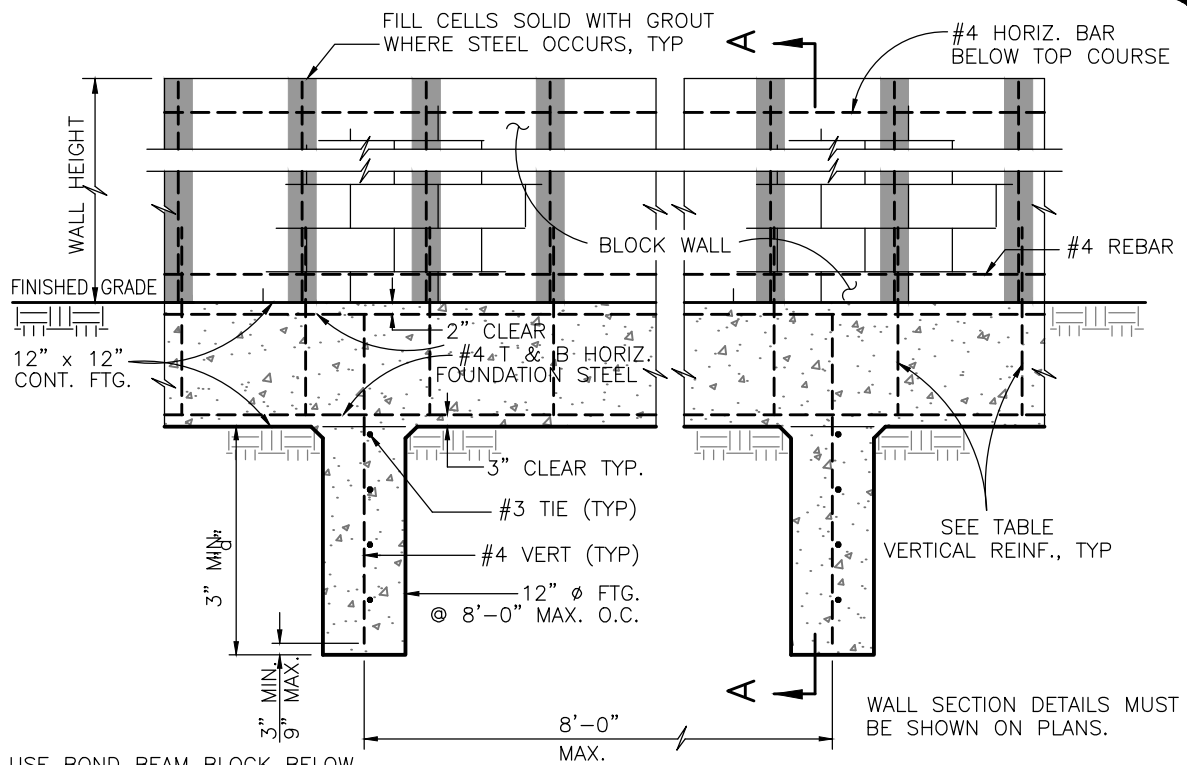
Approved:  Date: 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

STD. PLAN NUMBER

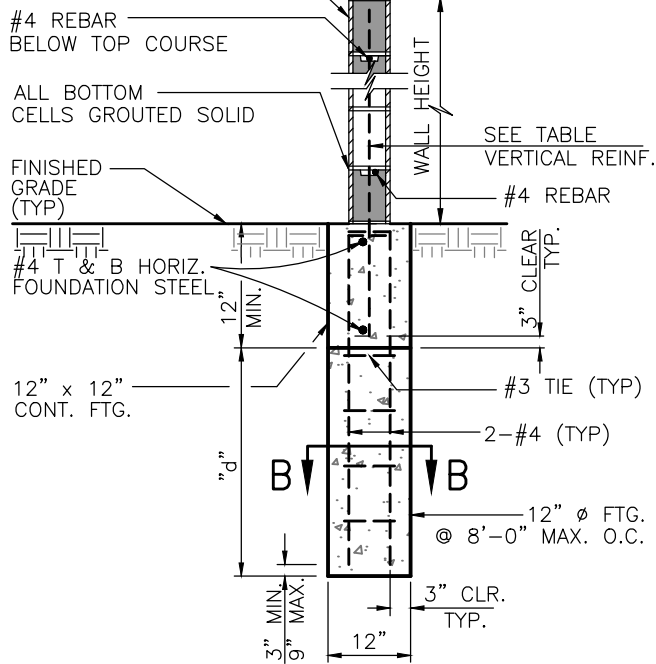
**B-505**

SHEET 3 OF 3



USE BOND BEAM BLOCK BELOW TOP COURSE. GROUT BOND BEAM AND TOP COURSES.

### SECTION - "E" TYPE

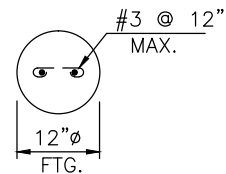


### SECTION A-A

VERTICAL REINFORCEMENT TABLE

MAX. WALL HT.	REBAR SIZE @ SPACING
6'-0"	#4 @ 32"
7'-0"	#5 @ 32"
8'-0"	#5 @ 32"

MAX. WALL HT.	"d" MIN.
6'-0"	3'-0"
7'-0"	3'-6"
8'-0"	4'-0"



### SECTION B-B



City of  
Garden Grove  
California

## ALTERNATIVE FOOTING FOR WALL STANDARD No. 505

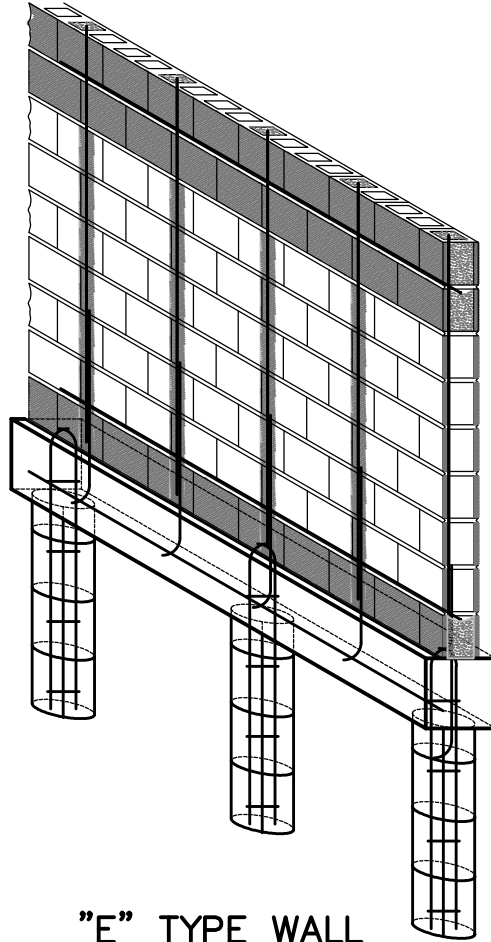
Approved:  Date 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

STD. PLAN NUMBER

**B-506**

SHEET 1 OF 2



"E" TYPE WALL

**NOTES:**


1) REFER TO STANDARD PLAN NUMBER B-505 FOR MATERIAL SPECIFICATIONS, GENERAL NOTES, AND INSPECTION PROCEDURES.

2) THIS DETAIL IS PROVIDED AS A COURTESY TO ASSIST IN THE CONSTRUCTION OF A TYPICAL PRIVACY WALL ON PRIVATE PROPERTY AND MAY NOT BE SUITABLE FOR ALL CONDITIONS. PERMIT APPLICANTS WISHING TO USE THIS DETAIL SHOULD CONSULT WITH A PROPERLY LICENSED DESIGN PROFESSIONAL FOR SUITABILITY OF DESIGN PRIOR TO THE START OF CONSTRUCTION. PLANNING DIVISION SHALL APPROVE STYLE AND COLOR OF BLOCK FOR ALL COMMERCIAL AND MULTI-FAMILY RESIDENTIAL DEVELOPMENTS PRIOR TO CONSTRUCTION.



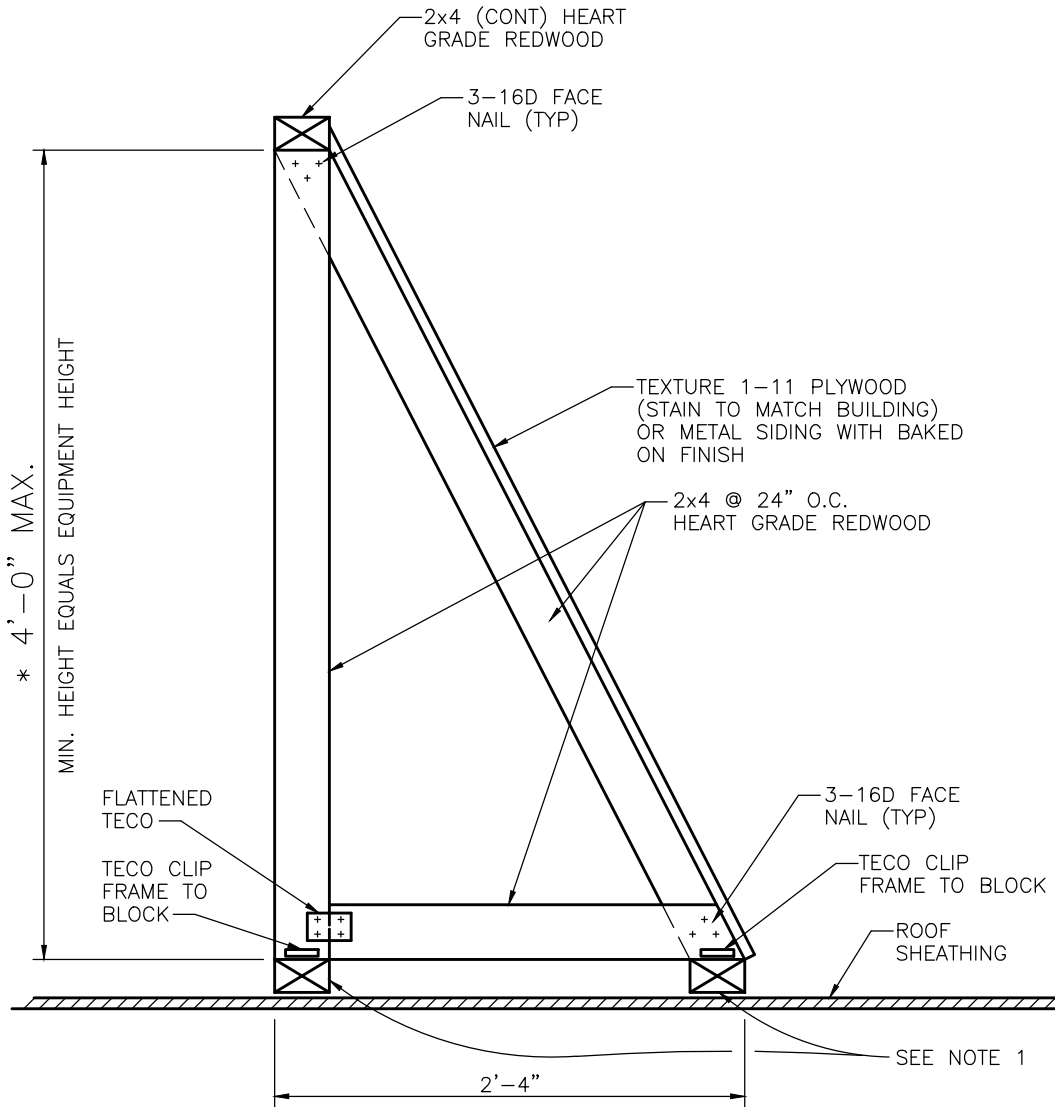
City of  
Garden Grove  
California

**ALTERNATIVE FOOTING FOR  
WALL STANDARD No. 505**

Approved  Date 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

STD. PLAN NUMBER  
**B-506**  
SHEET 2 OF 2



**SECTION**

**NOTES:**

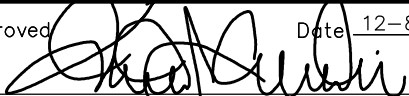
1. SET 2"x4"x24" LONG BLOCK IN MASTIC TYPICAL @ 48" O.C. ATTACH EACH BLOCK TO PURLINS OR SUBPURLINS WITH 2-3/8" DIA. x 5" LAG BOLTS. SEAL HEAD OF LAG BOLT WITH MASTIC. BLOCKS TO BE HEART GRADE REDWOOD.
2. ALL NAILS, SCREWS, BOLTS AND TECO CLIPS TO BE GALVANIZED METAL.
3. PROVIDE ACCESS GATE TO EQUIPMENT.

\* OVER 4'-0" HIGH REQUIRES DETAILED PLAN



City of  
Garden Grove  
California

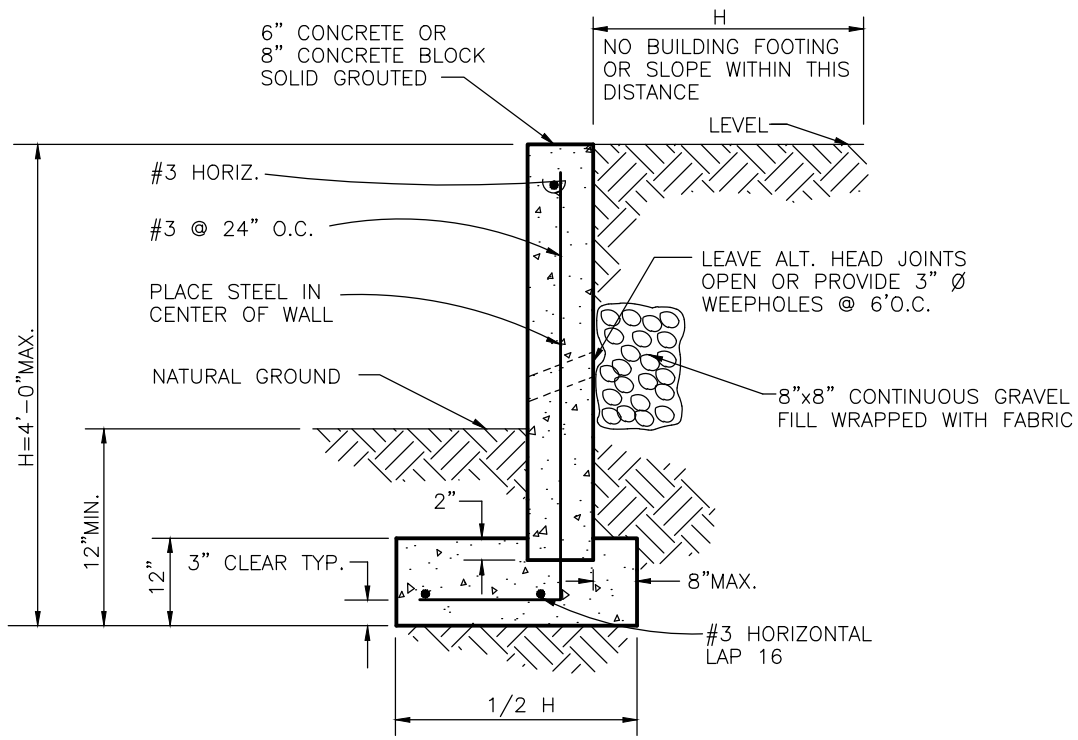
**EQUIPMENT VIEW  
OBSCURING SCREEN DETAIL**

Approved:  Date: 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

STD. PLAN NUMBER

**B-507**



**SECTION**

NO PERMIT IS REQUIRED



**GARDEN WALL**

Approved *[Signature]* Date 12-8-15  
 City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

STD. PLAN NUMBER  
**B-508**  
 SHEET 1 OF 2

**MATERIAL SPECIFICATIONS:**

1. CONCRETE BLOCK: ASTM C-90
2. REINFORCING STEEL: ASTM 615, GRADE 40
3. ACCEPTABLE SOIL TYPES:
  - a. MIN. ALLOWABLE BEARING: 1000 LBS./SQ. FT
  - b. MIN. LATERAL BEARING: 100 LBS./SQ. FT./FT
  - c. MAX. EXPANSION INDEX: 20
4. CONCRETE: 2500 LBS./SQ. IN. COMPRESSIVE STRENGTH IN 28 DAYS.
5. MORTAR: 1:1/4:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND, BY VOLUME), MIXED TO PLASTIC CONSISTENCY. MORTAR SHALL CONFORM TO ASTM C270 AND ARTICLES 2.1 AND 2.6A OF TMS 602/ACI 530.1/ASCE 6.
6. GROUT: 1:1/10:3 (PORTLAND CEMENT: HYDRATED LIME OR LIME PUTTY: SAND BY VOLUME), MIX TO FLOW WITHOUT SEGREGATION. GROUT MAY CONTAIN 2 PARTS PEA GRAVEL (3/8" MAX. SIZE). MINIMUM COMPRESSIVE STRENGTH: 2500 LBS./SQ. IN. GROUT SHALL COMPLY WITH ARTICLE 2.2 OF TMS 602/ACI 530.1/ASCE 6.

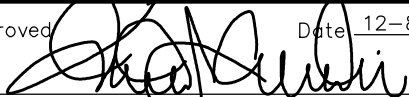
**GENERAL NOTES:**

1. THIS DESIGN IS FOR AVERAGE CONDITIONS AND MAY NOT BE SUITABLE FOR ALL CASES. IT IS RECOMMENDED THAT A LICENSED CIVIL OR STRUCTURAL ENGINEER BE CONSULTED.
2. FOOTINGS SHALL BE IN NATURAL SOIL OR CERTIFIED FILL.
3. BLOCKS TO BE STAGGERED (RUNNING BOND).
4. ALL CELLS SHALL BE GROUTED SOLID.
5. APPROVED GROUT STOPS, IF NECESSARY ARE REQUIRED BELOW HORIZONTAL STEEL IN PARTIALLY GROUTED WALLS. BAGS, NEWSPAPERS, ETC. ARE NOT APPROVED GROUT STOPS.
6. INITIAL BED JOINT SHALL BE 1/4"MIN., 1"MAX. SUBSEQUENT BED JOINTS SHALL BE 1/4"MIN., 5/8"MAX.
7. VERTICAL CONTINUITY OF CELLS SHALL BE UNOBSTRUCTED. MORTAR PROJECTIONS SHALL NOT EXCEED 1/2" FOR 6" AND LARGER BLOCK. MORTAR DROPPINGS OR OTHER FOREIGN MATTER ARE NOT PERMITTED IN CELLS AND MUST BE REMOVED.
8. EXPANSION JOINTS REQUIRED AT 60'-0" MAX. INTERVALS.
9. REQUIRED BAR LAPS (IF ANY): 24" MIN.
  - a. WIRE JOINT REINFORCEMENT IN THE MORTARED BED JOINT: 75 WIRE DIAMETERS OR IN ALTERNATE BED JOINTS OF RUNNING BOND, 54 DIAMETERS PLUS TWICE THE BED JOINT SPACING.
10. WHERE HORIZONTAL WIRE JOINT REINFORCEMENT IS REQUIRED OR UTILIZED, IT SHALL BE EQUIVALENT TO TWO 3/16" DIAMETER BARS CONNECTED AT 16" INTERVALS BY NO. 9 GAUGE WELDED WIRE.
11. 3"MIN. COVER REQUIRED FOR REINFORCEMENT IN CONCRETE WHICH IS CAST AGAINST EARTH.



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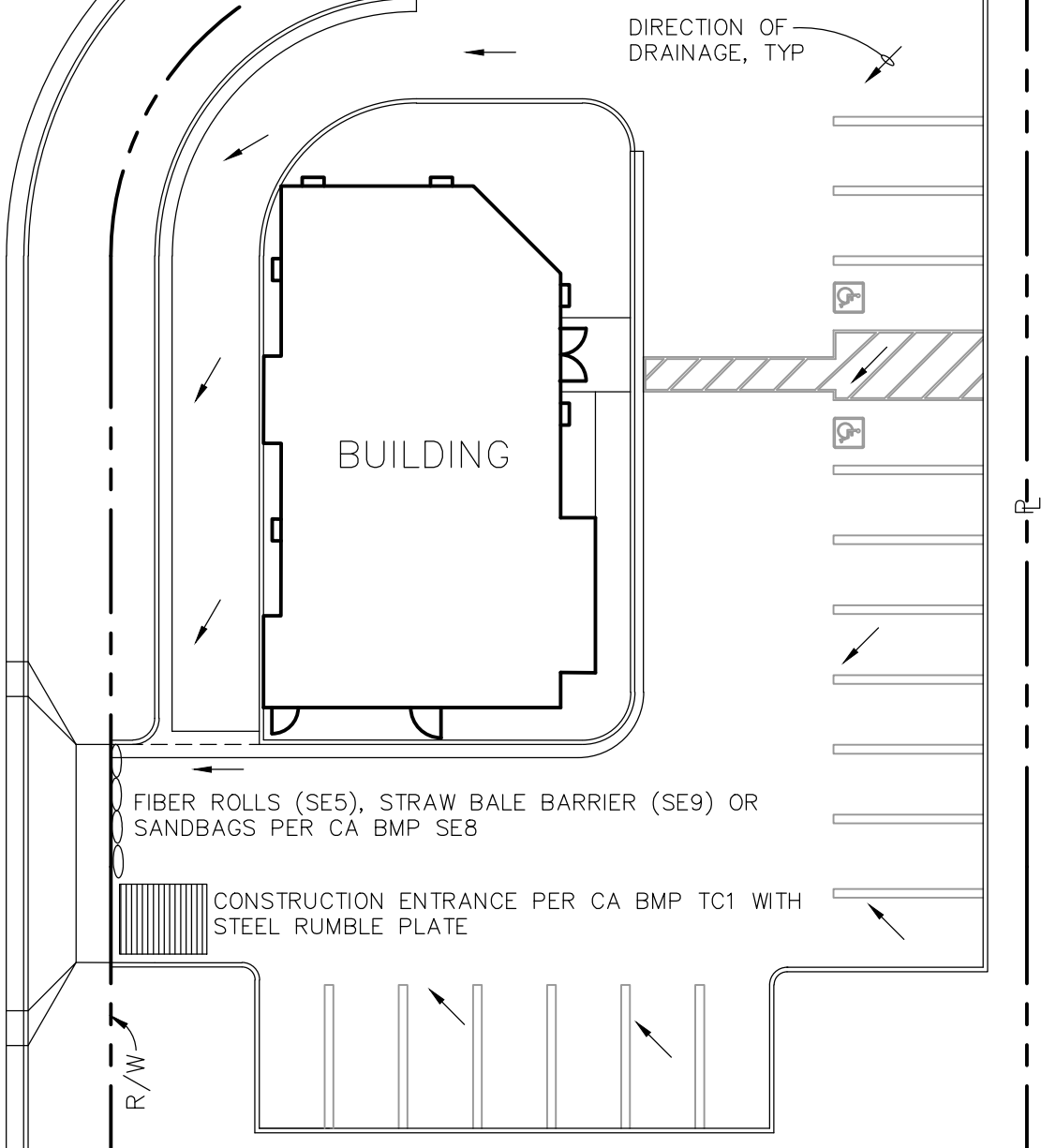
**GARDEN WALL**

Approved  Date 12-8-15  
City Engineer R.C.E. 52125 Exp.12-31-16

REVISIONS	BY	DATE


STD. PLAN NUMBER  
**B-508**  
SHEET 2 OF 2

NOTE: THESE SEDIMENT CONTROL MEASURES ARE MINIMUM REQUIREMENTS PRIOR TO CONSTRUCTION OF FINAL HARD SURFACES (PAVEMENT AND BUILDING SLAB). FOR PROJECTS ONE ACRE OR LARGER, THE CONTRACTOR SHALL PREPARE AND SUBMIT A SWPPP.



City of  
Garden Grove  
California

## COMMERCIAL BMP DEVICES FOR BUILDING SITES LESS THAN 1.0 ACRE

Approved:  Date: 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

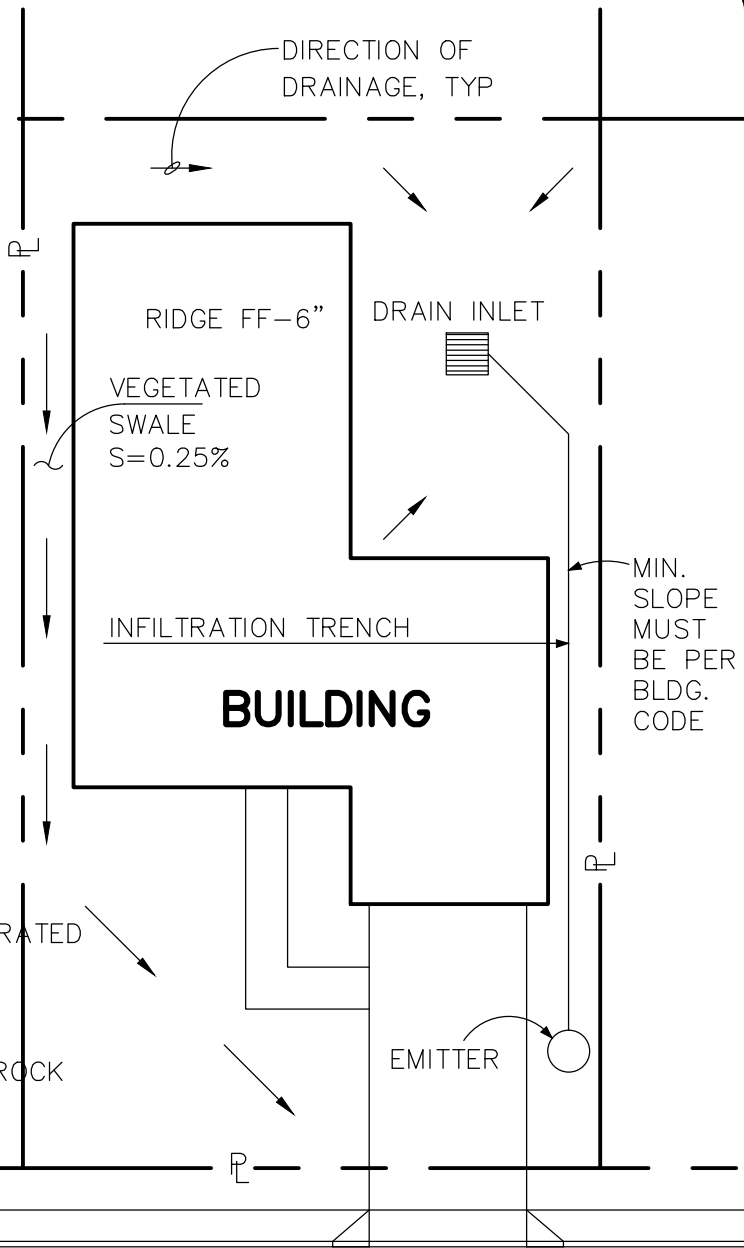
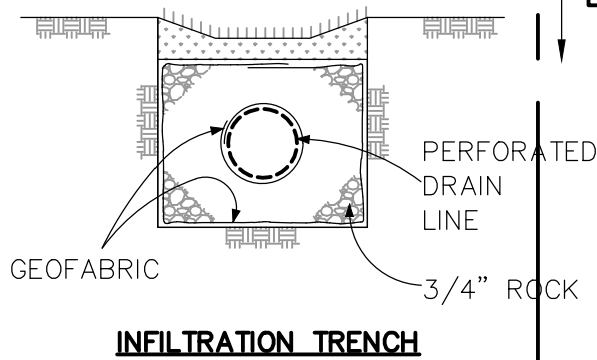
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**B-509**



**NOTE:**

AT A MINIMUM, AN EROSION CONTROL PLAN IS REQUIRED FOR ALL GRADING AND CONSTRUCTION.

ONSITE DRAINAGE SYSTEM MAY INCLUDE AN INFILTRATION TRENCH – A PERFORATED DRAIN LINE WRAPPED IN GEOFABRIC CENTERED IN 3/4" ROCK BACKFILL



A RESIDENTIAL DWELLING MAY USE ANY COMBINATION OF THE FOLLOWING OPTIONS:

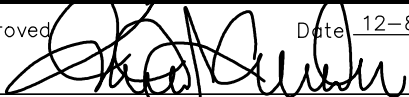
- INFILTRATION TRENCH PER CA BMP TC10
- VEGETATED SWALE PER CA BMP TC30

SEE CALIFORNIA STORMWATER BMP HANDBOOK ([WWW.CABMPHANDBOOKS.COM](http://WWW.CABMPHANDBOOKS.COM))



City of  
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California

**RESIDENTIAL WATER QUALITY SYSTEMS**

Approved:  Date: 12-8-15  
City Engineer R.C.E. 52125 Exp. 12-31-16

REVISIONS	BY	DATE

STD. PLAN NUMBER  
**B-510**