DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	901	1012

REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14
PLANS APPROVAL DATE

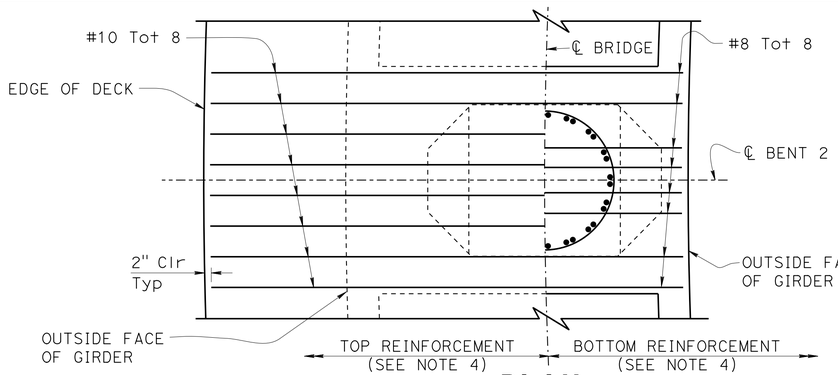
REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL No. C68491 Exp. 09/30/15 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

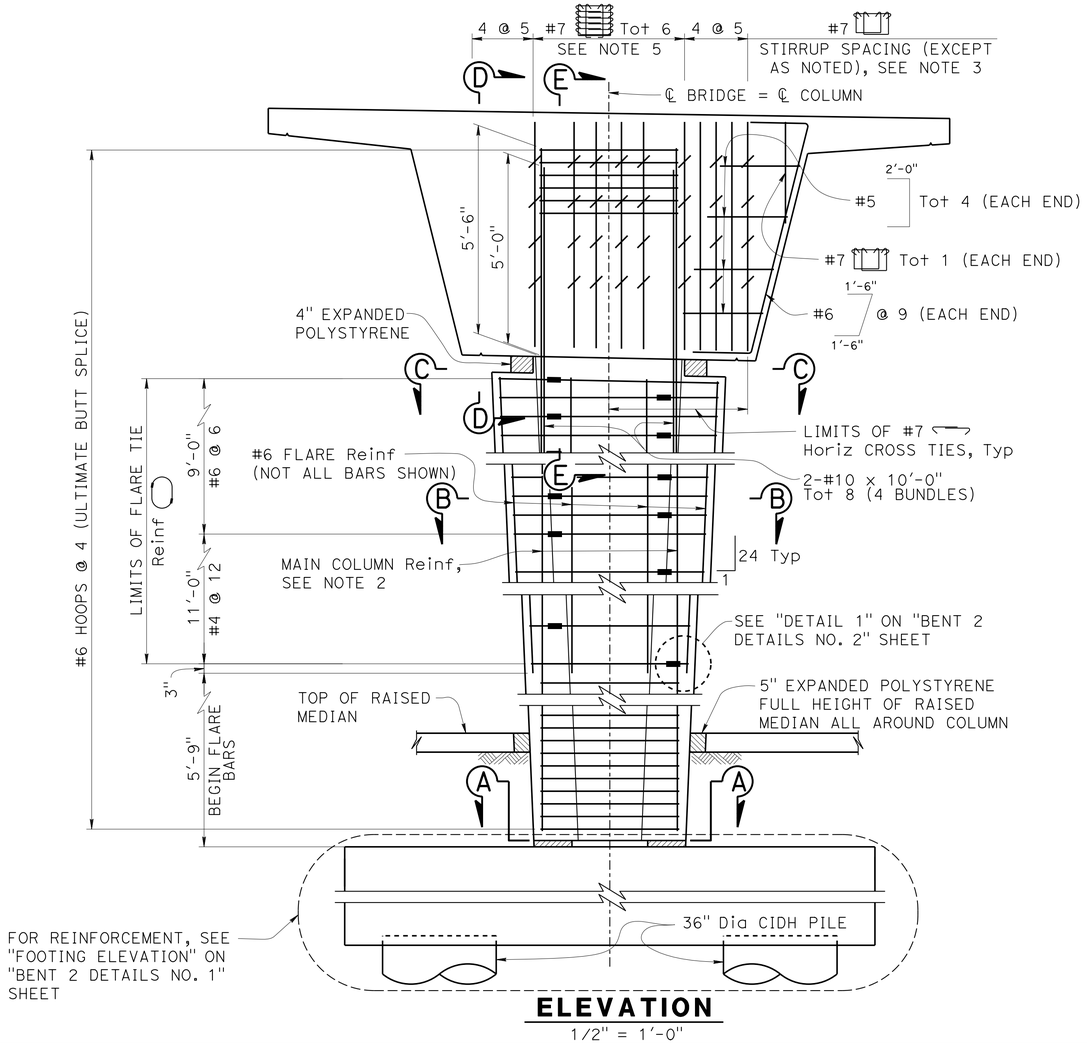
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

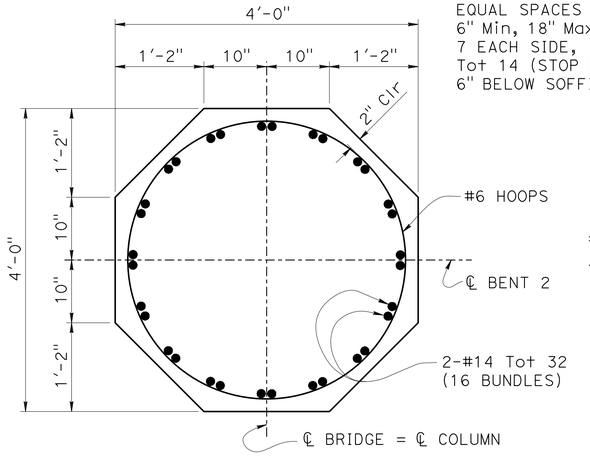
NOTES:
1. For SECTIONS "D-D" and "E-E", see "BENT 2 DETAILS NO. 1" sheet
2. No splices allowed in main column reinforcement
3. Place stirrup reinforcement normal to and space along ℄ Bent 2
4. No splices allowed in main bent cap reinforcement
5. See "BOTTOM CAP REINFORCEMENT LAYOUT" on "BENT 2 DETAILS NO. 2" sheet



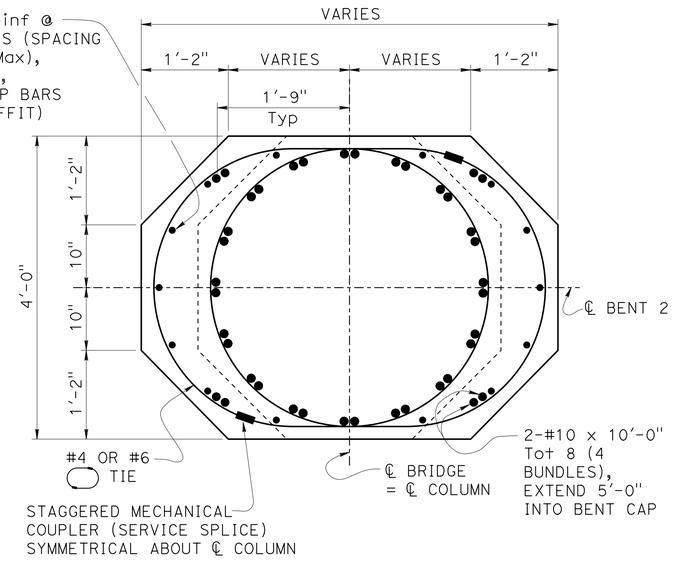
PLAN
1/2" = 1'-0"



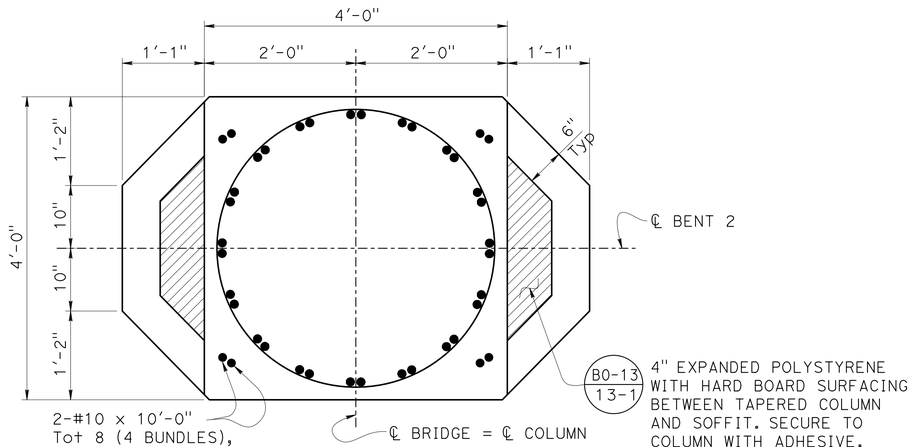
ELEVATION
1/2" = 1'-0"



SECTION A-A
1" = 1'-0"



SECTION B-B
1" = 1'-0"



SECTION C-C
1" = 1'-0"

DESIGN OVERSIGHT — Norbert Gee
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
BENT 2 LAYOUT

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

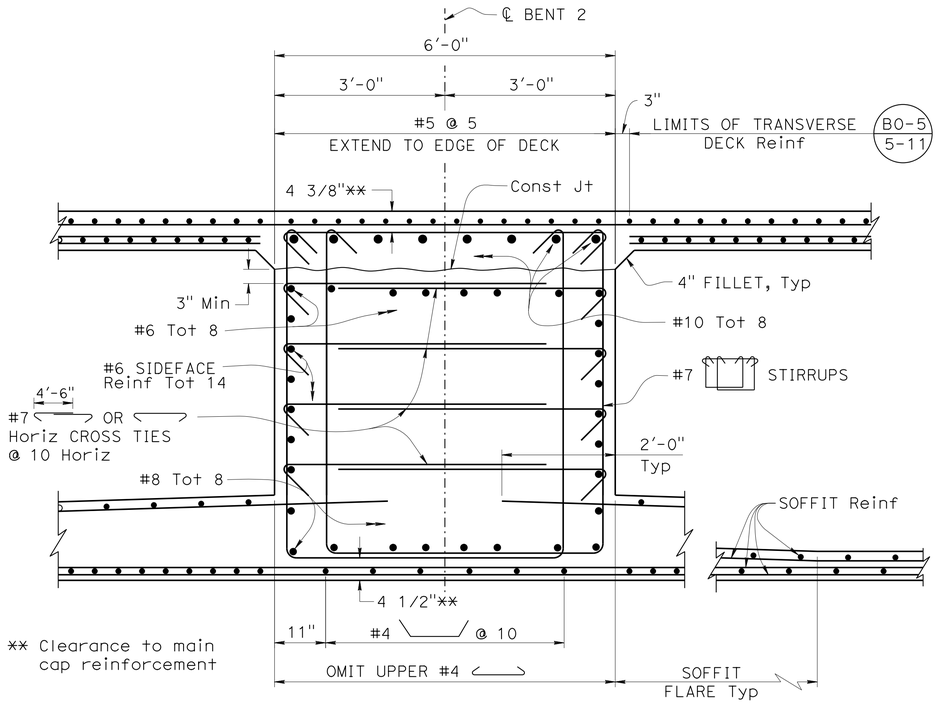
UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	17	34

FILE => 57-1231-h-b01_lo01.dgn

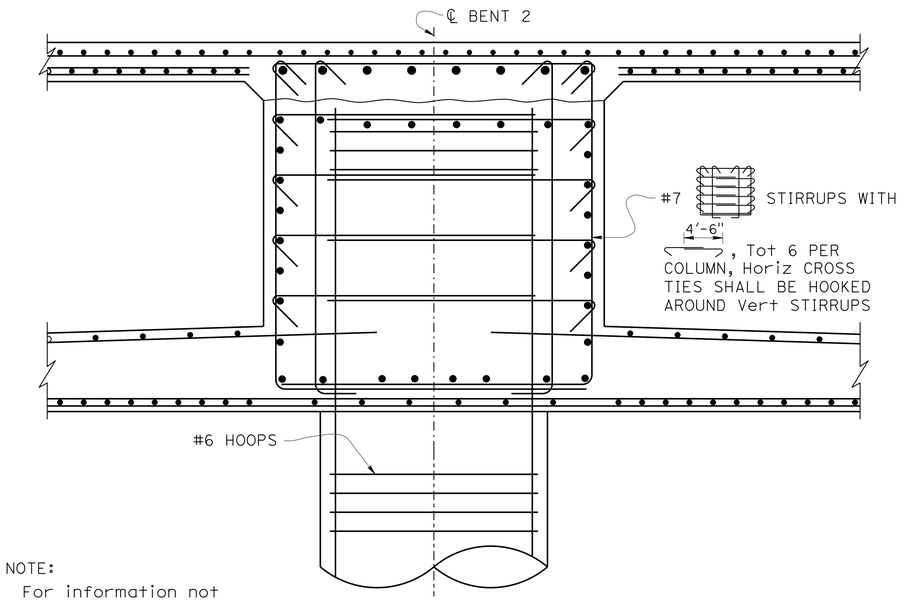
USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43



** Clearance to main cap reinforcement

SECTION D-D

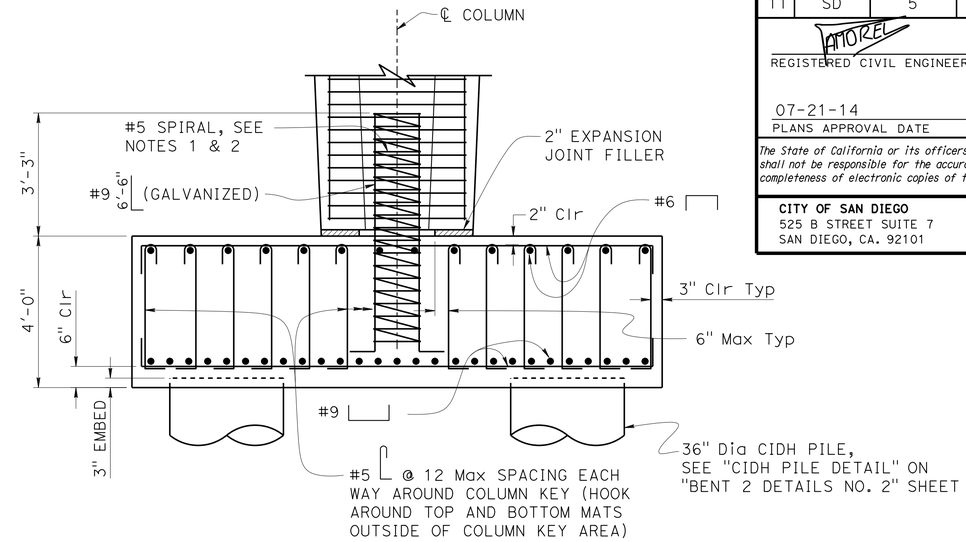
3/4" = 1'-0"



NOTE:
For information not shown, see "SECTION D-D"

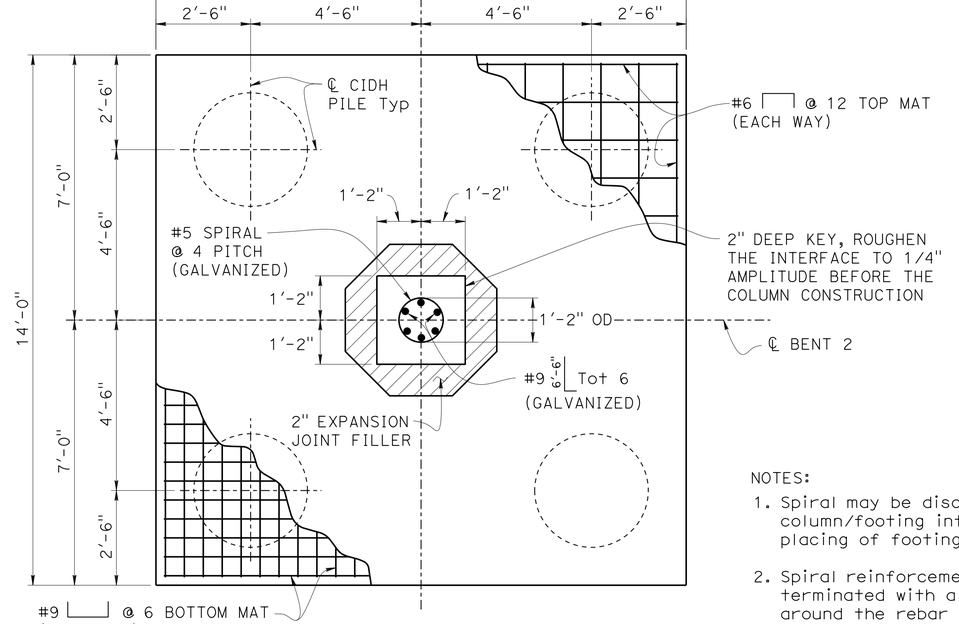
SECTION E-E

3/4" = 1'-0"



FOOTING ELEVATION

1/2" = 1'-0"



FOOTING PLAN

1/2" = 1'-0"

NOTES:

1. Spiral may be discontinuous at the column/footing interface to allow the placing of footing reinforcement
2. Spiral reinforcement at ends shall be terminated with a full horizontal turn around the rebar cage and a 1'-2" tail hooked around a longitudinal bar and passing through the core of the rebar cage

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	902	1012

REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL No. C68491 Exp. 09/30/15 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

DESIGN OVERSIGHT Norbert Gee
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
BENT 2 DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

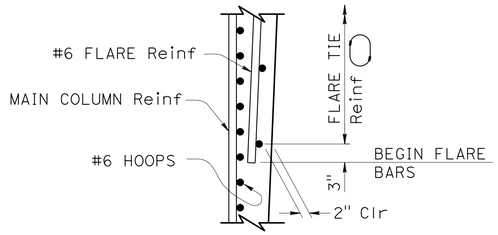
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 6-28-12 | 1-24-13 | 2-22-13 | 2-3-14

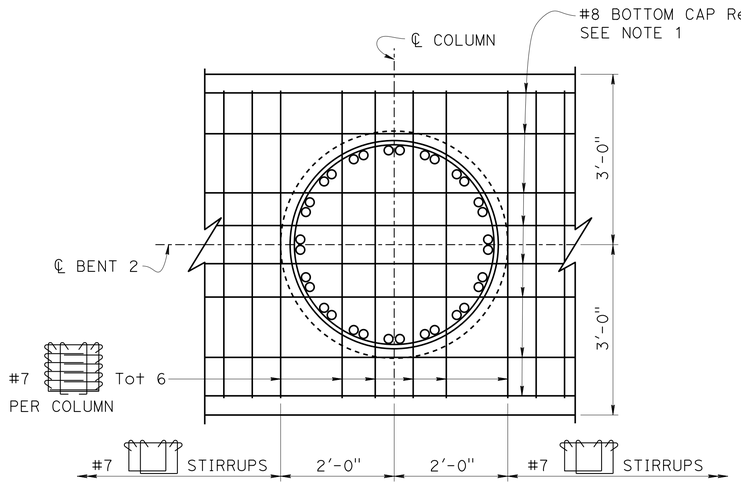
SHEET 18 OF 34

FILE => 57-1231-h-b01dt01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43



DETAIL 1
1" = 1'-0"



BOTTOM CAP REINFORCEMENT LAYOUT
3/4" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	903	1012

REGISTERED CIVIL ENGINEER — 3-6-14 DATE

PAUL MOREL No. C68491 Exp. 09/30/15 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

07-21-14
PLANS APPROVAL DATE

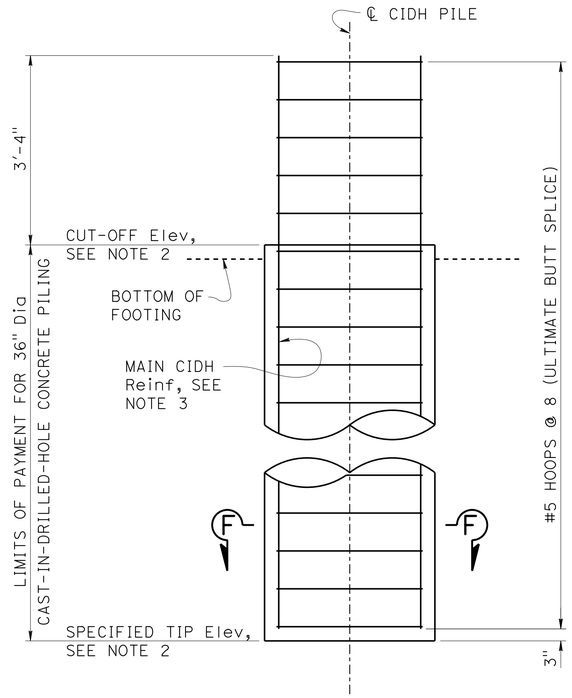
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

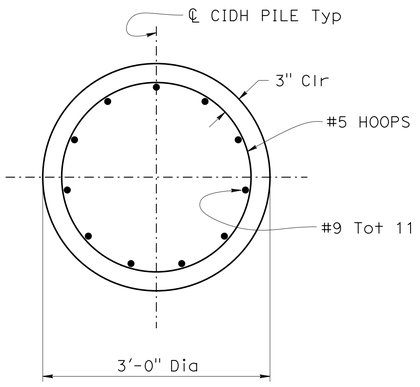
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

NOTES:

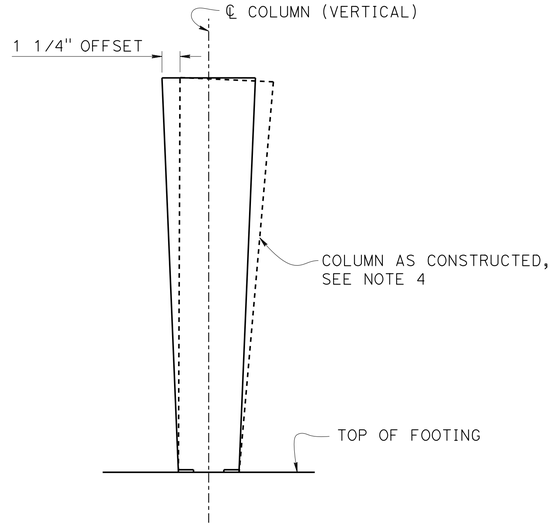
1. Prior to column concrete placement, the Contractor shall arrange, rotate and space column reinforcing cage to ensure subsequent main bent cap reinforcement as shown
2. For cut-off and specified tip elevations, see "FOUNDATION PLAN" sheet
3. No splices allowed in main CIDH reinforcement
4. The Contractor shall provide temporary bracing of the column during construction. Temporary bracing shall remain in place until deck concrete is poured. Remove bracing prior to superstructure falsework release. The bracing shall be designed to resist a lateral load of 7 kips applied horizontally in any direction at column mid-height.



CIDH PILE DETAIL
3/4" = 1'-0"



SECTION F-F
1" = 1'-0"



BENT 2 CONSTRUCTION OFFSET (LOOKING UPSTATION TOWARDS ABUTMENT 3)
No Scale

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
BENT 2 DETAILS NO. 2

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

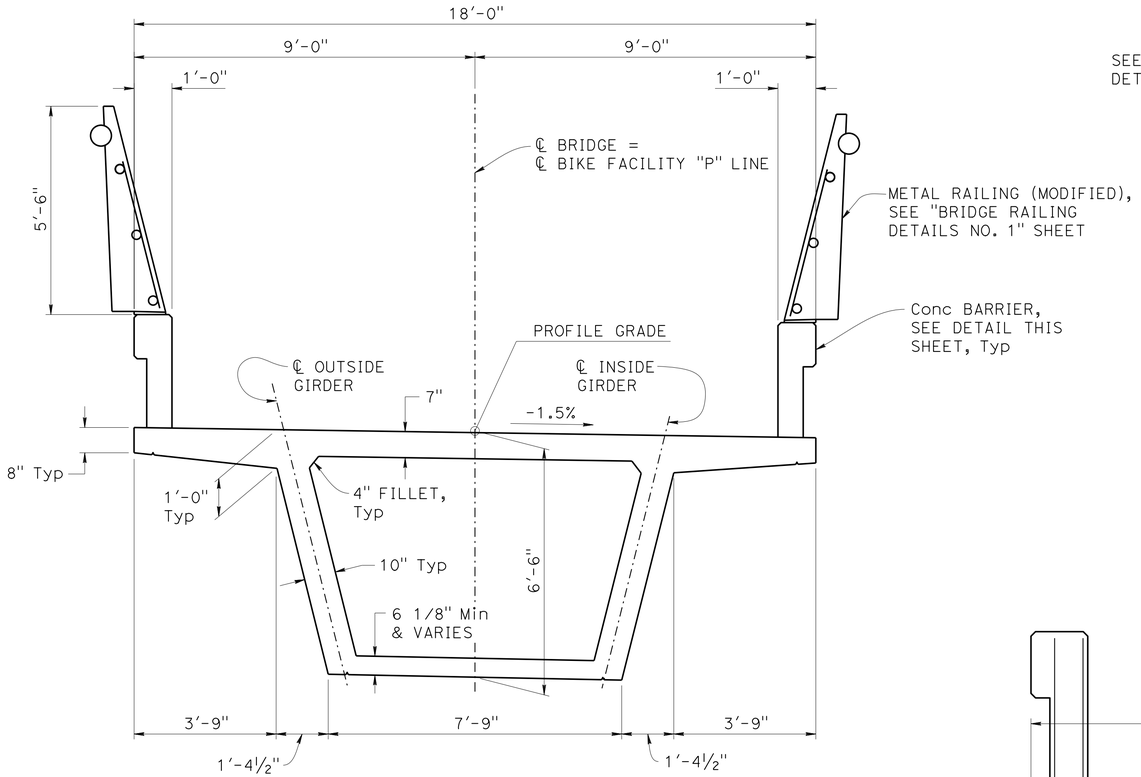
UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	19	34

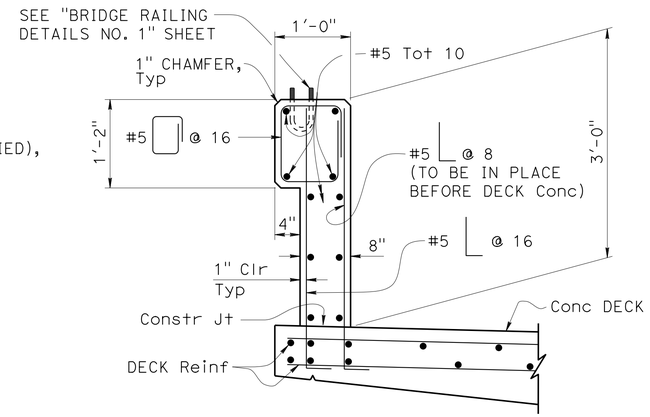
FILE => 57-1231-h-b01dt02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43



TYPICAL SECTION

1/2" = 1'-0"



CONCRETE BARRIER DETAIL

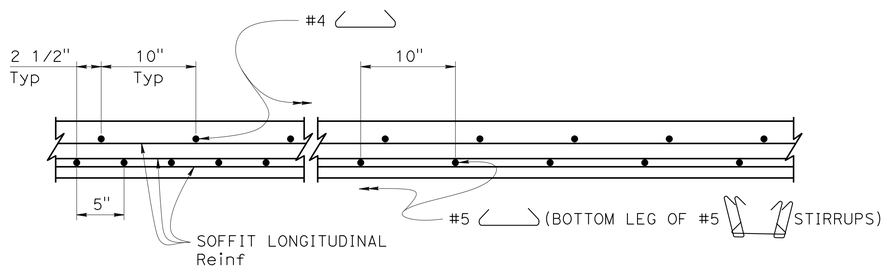
1" = 1'-0"

LEGEND:

o Denotes additional longitudinal reinforcement

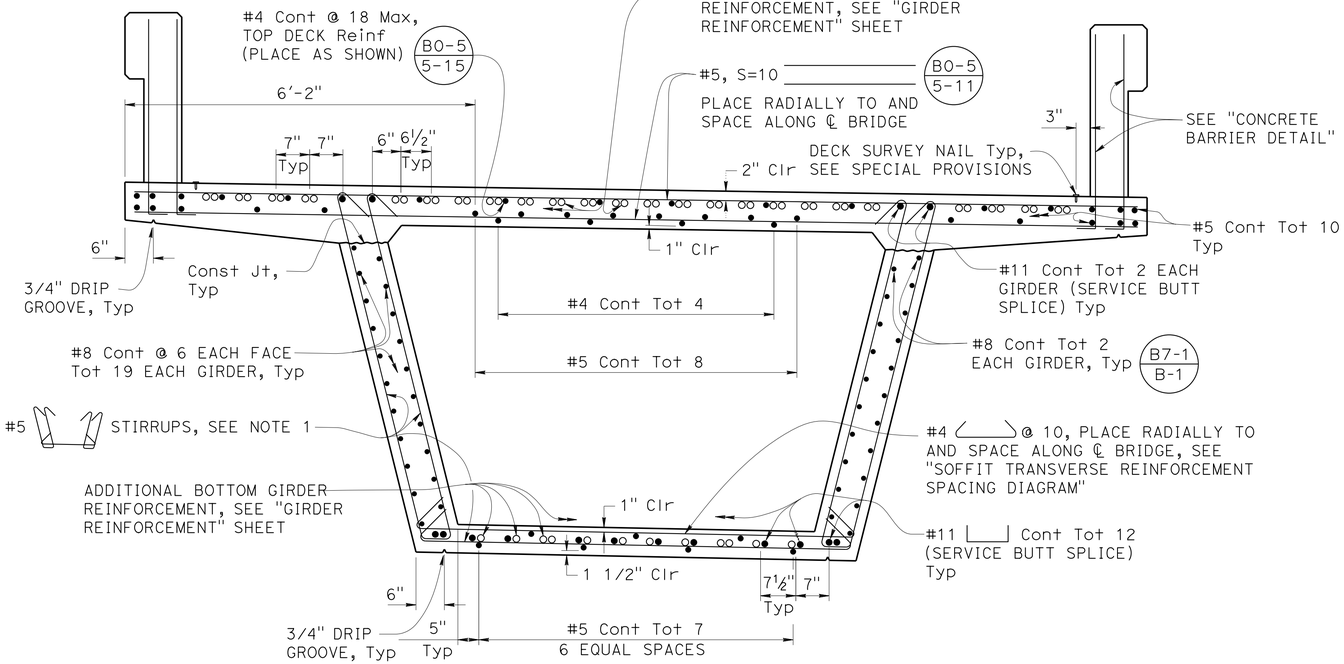
NOTES:

1. #5 Stirrups shall be placed radially to ℄ Bridge, and tied to upper #5 deck transverse reinf
2. Concrete barrier shall be placed after superstructure falsework is released



SOFFIT TRANSVERSE REINFORCEMENT SPACING DIAGRAM

No Scale



TYPICAL SECTION REINFORCEMENT

B7-1 B0-5

3/4" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	904	1012

PAUL MOREL — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL — No. C68491 — Exp. 09/30/15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON — PROJECT ENGINEER

BRIDGE NO. 57-1231 — POST MILES 29.46

GENESEE AVENUE POC
TYPICAL SECTION

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	20	34

FILE => 57-1231-k-ts01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	905	1012

PAUL MOREL — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL — No. C68491 — Exp. 09/30/15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

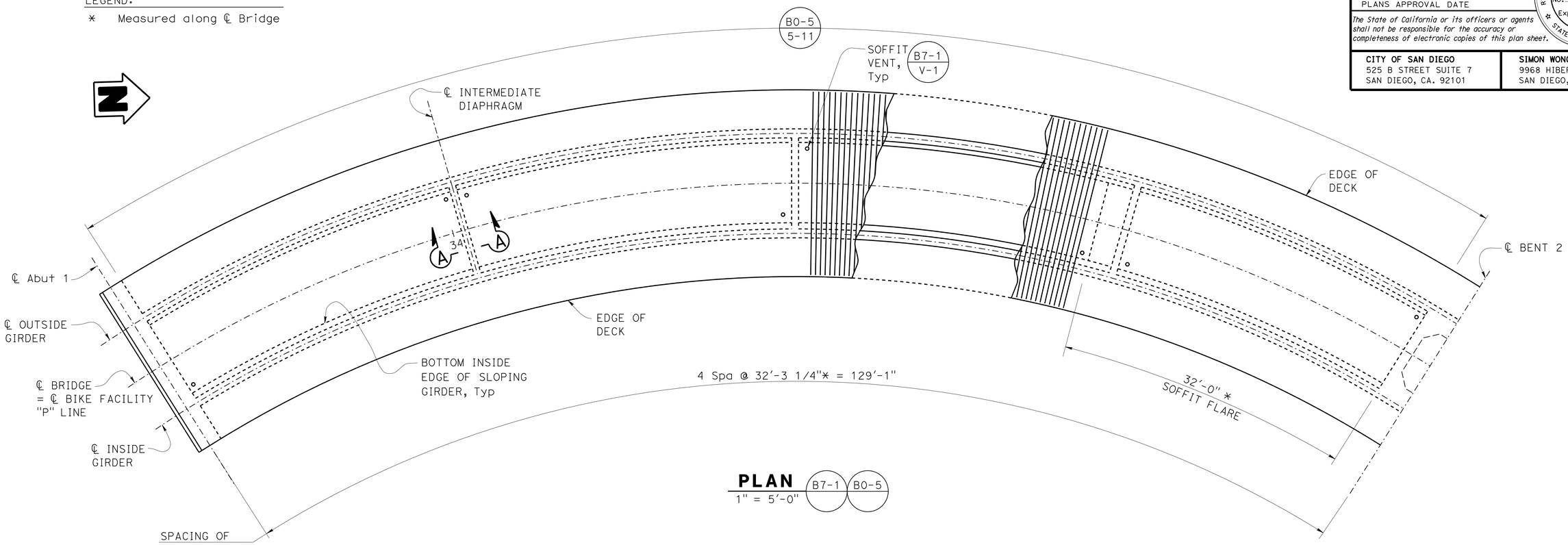
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

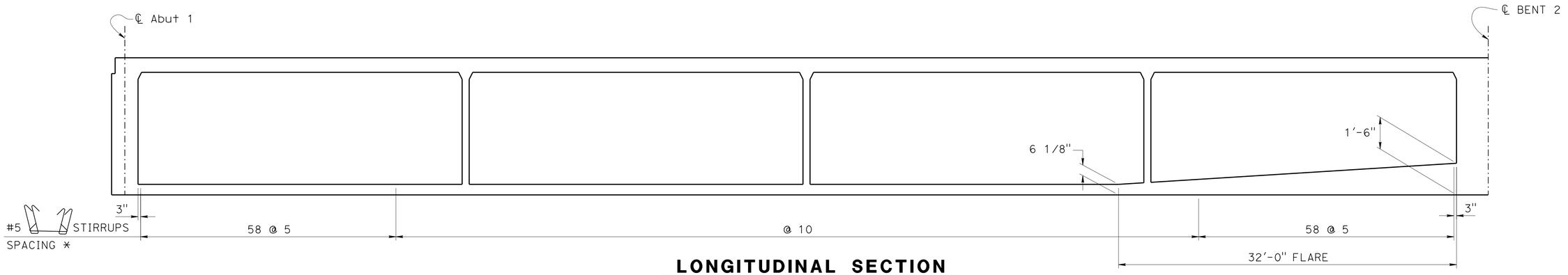
NOTE: For "SECTION A-A", see "GIRDER DETAILS" sheet

LEGEND:

* Measured along ℄ Bridge



PLAN (B7-1 / B0-5)
1" = 5'-0"



LONGITUDINAL SECTION

No Scale

DESIGN OVERSIGHT Norbert Gee 3-10-14 SIGN OFF DATE		DESIGN	BY P. Morel	CHECKED C. Cushing	**PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION**
		DETAILS	BY G. Espanto	CHECKED C. Cushing	
		QUANTITIES	BY P. Morel	CHECKED K. Gazaway	

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
GIRDER LAYOUT NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	21	34

FILE => 57-1231-1-g_lo01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	906	1012

PAUL MOREL — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL — No. C68491 — Exp. 09/30/15 — CIVIL — STATE OF CALIFORNIA

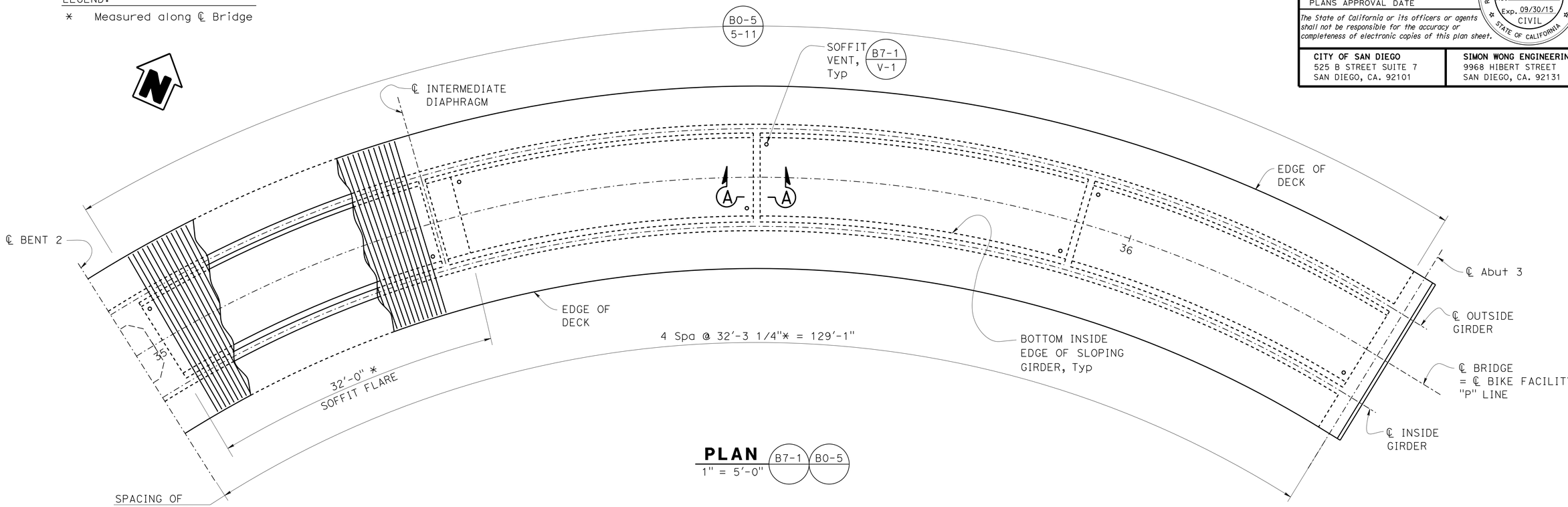
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

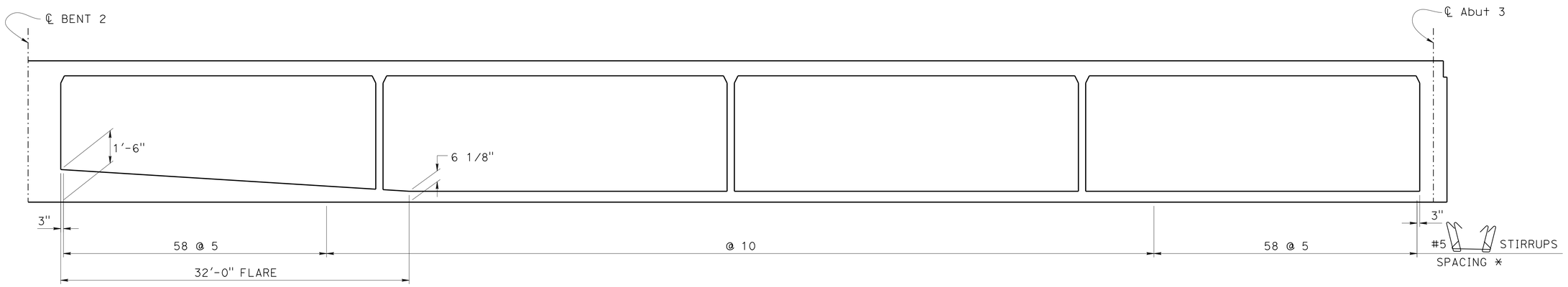
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

NOTE: For "SECTION A-A", see "GIRDER DETAILS" sheet

LEGEND:
* Measured along ℄ Bridge



PLAN (B7-1 / B0-5)
1" = 5'-0"



LONGITUDINAL SECTION
No Scale

Norbert Gee — DESIGN OVERSIGHT
3-10-14 — SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
GIRDER LAYOUT NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021
CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
6-25-12	1-31-13	2-22-13	2-3-14	22	34

FILE => 57-1231-1-g_lo02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	907	1012

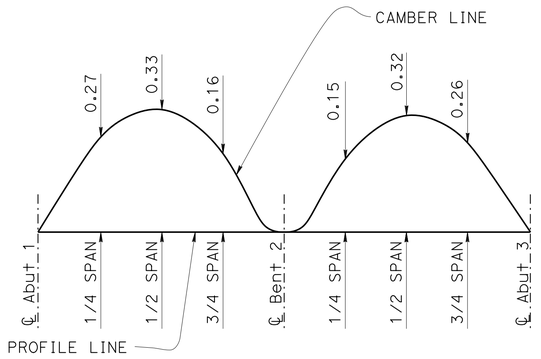
PAUL MOREL
REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14
PLANS APPROVAL DATE

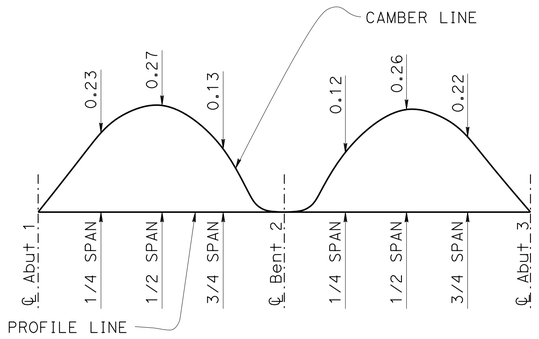
REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL No. C68491 Exp. 09/30/15 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO	SIMON WONG ENGINEERING
525 B STREET SUITE 7	9968 HIBERT STREET
SAN DIEGO, CA. 92101	SAN DIEGO, CA. 92131



OUTSIDE GIRDER



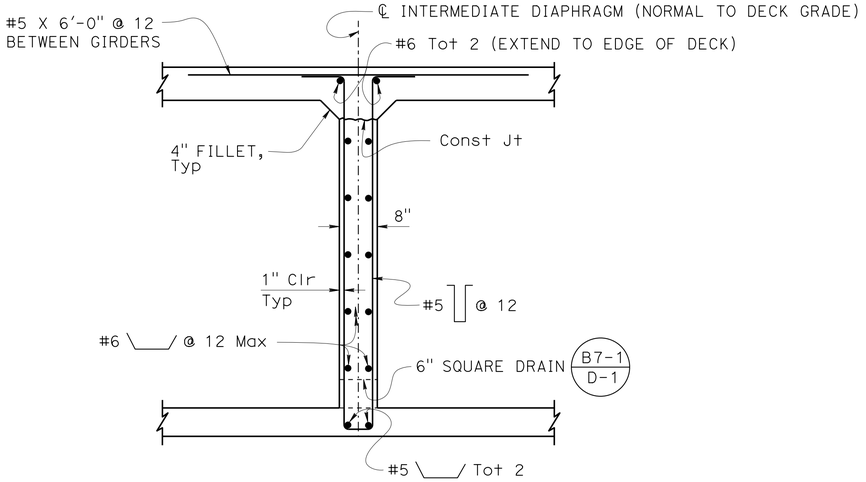
INSIDE GIRDER

CAMBER DIAGRAM

No Scale

NOTES:

1. Camber values are in feet
2. Camber does not include allowance for falsework settlement



SECTION A-A

3/4" = 1'-0"

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
GIRDER DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
~~6-28-12~~	~~1-31-13~~	~~2-22-13~~	2-3-14	23	34

FILE => 57-1231-1-gdt01.dgn

DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43
USERNAME => s127400

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	908	1012

PAUL MOREL — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

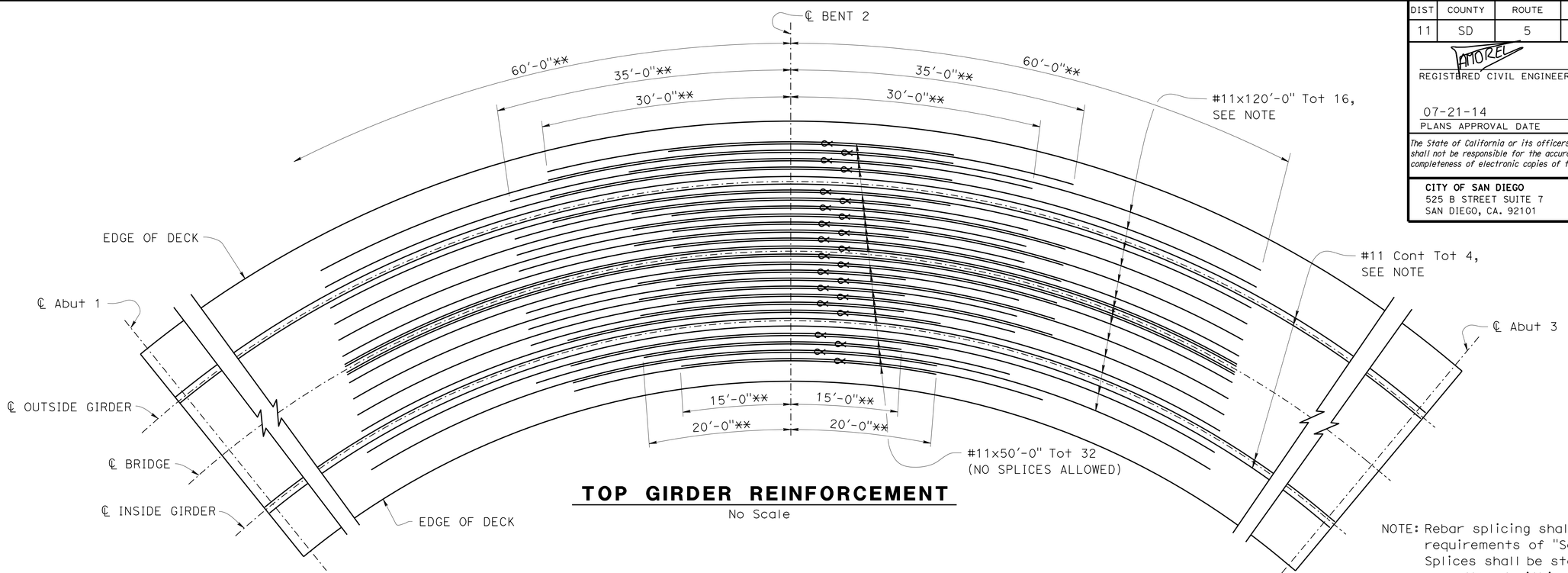
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL — No. C68491 — Exp. 09/30/15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



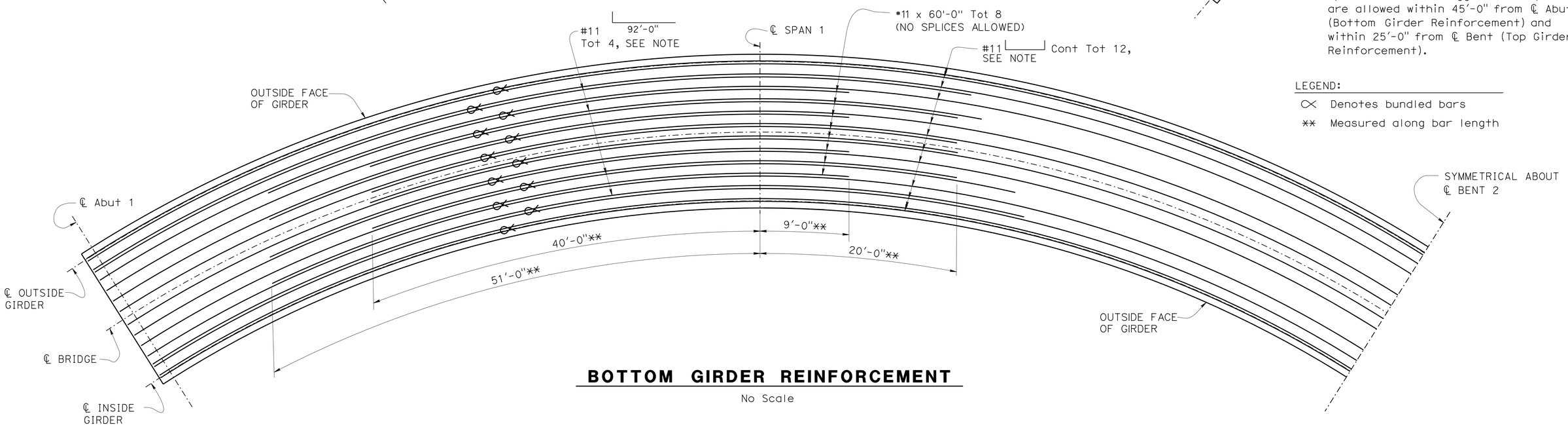
TOP GIRDER REINFORCEMENT

No Scale

NOTE: Rebar splicing shall conform to the requirements of "Service Butt Splice". Splices shall be staggered. No splices are allowed within 45'-0" from ℄ Abut (Bottom Girder Reinforcement) and within 25'-0" from ℄ Bent (Top Girder Reinforcement).

LEGEND:

- ⋉ Denotes bundled bars
- ** Measured along bar length



BOTTOM GIRDER REINFORCEMENT

No Scale

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
GIRDER REINFORCEMENT

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

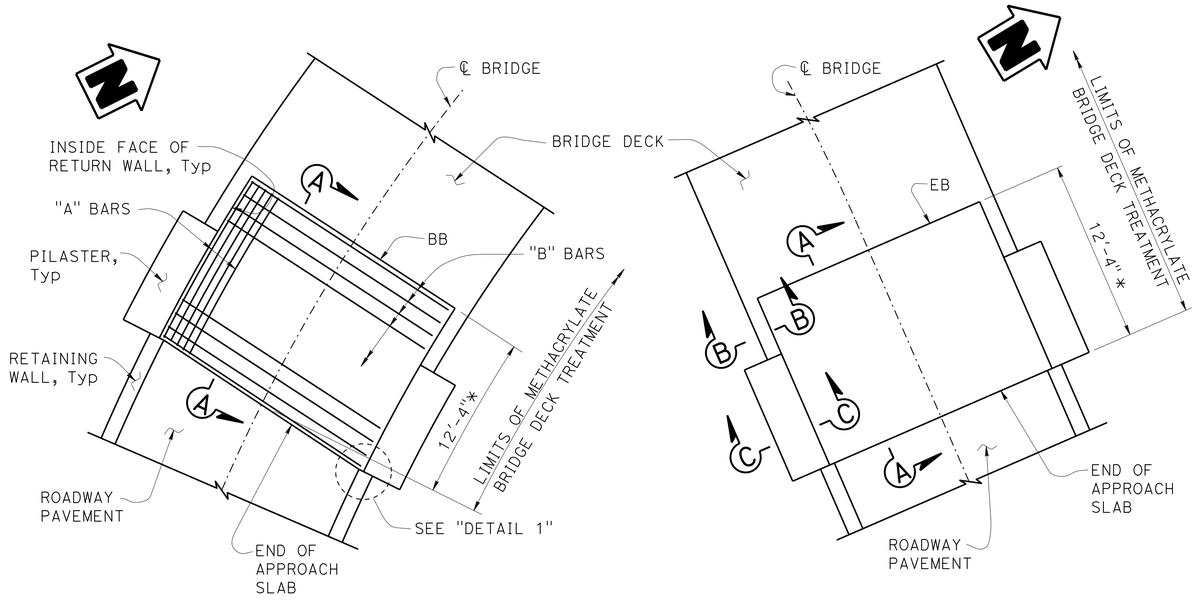
UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

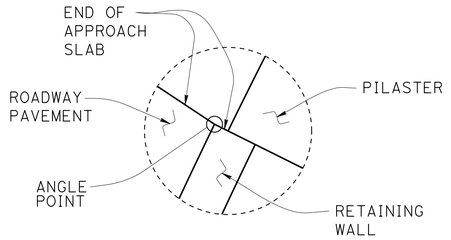
REVISION DATES				SHEET	OF
6-29-12	1-31-13	2-28-13	2-3-14	24	34

FILE => 57-1231-o-gir_rf01.dgn

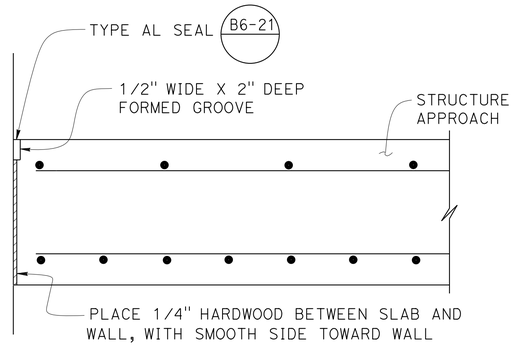
USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43



PLAN
1" = 5'-0"



DETAIL 1
No Scale



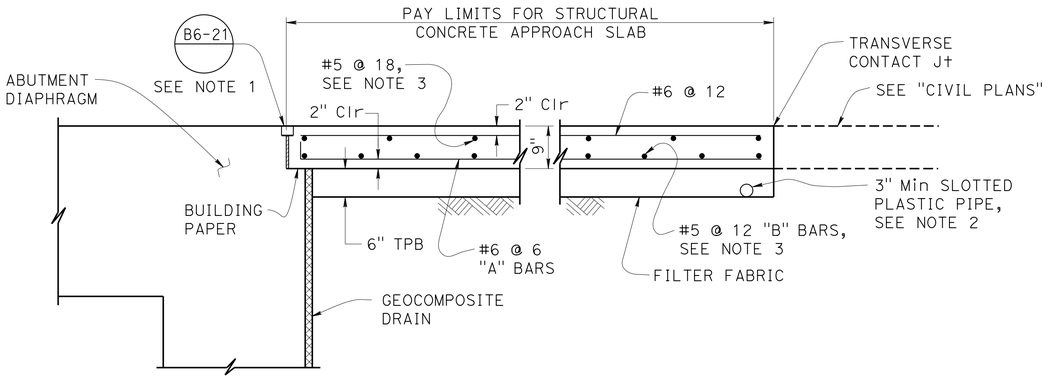
DETAIL 2
No Scale

LEGEND:

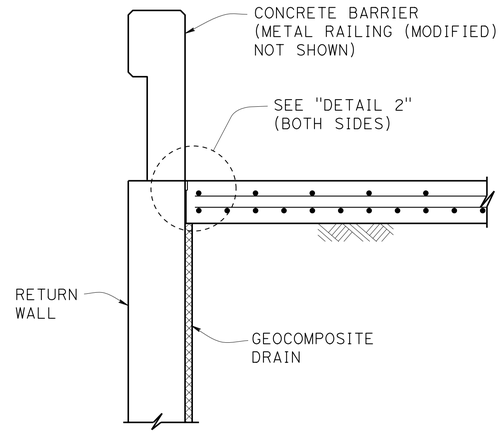
* Measured along ℄ Bridge

NOTES:

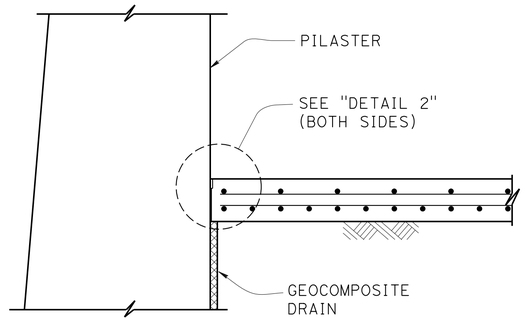
1. For details not shown, see "ABUTMENT 1 LAYOUT" sheet. Adjust bar reinforcement to clear the joint sawcut
2. For drainage details, see "STRUCTURE APPROACH DRAINAGE DETAILS" sheet
3. Place parallel to paving notch and space along ℄ Bridge



SECTION A-A
3/4" = 1'-0"



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



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

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	909	1012

PAUL MOREL — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL No. C68491 Exp. 09/30/15 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
STRUCTURE APPROACH DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021
CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 6-25-12 | 1-31-13 | 2-22-13 | 2-3-14

SHEET 25 OF 34

FILE => 57-1231-s-sadd01.dgn

DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43
USERNAME => s127400

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	910	1012

REGISTERED CIVIL ENGINEER — 3-6-14 DATE

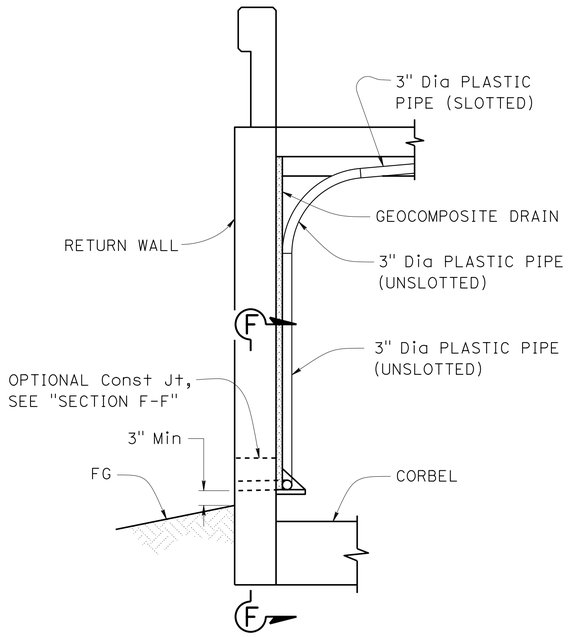
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL No. C68491 Exp. 09/30/15 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

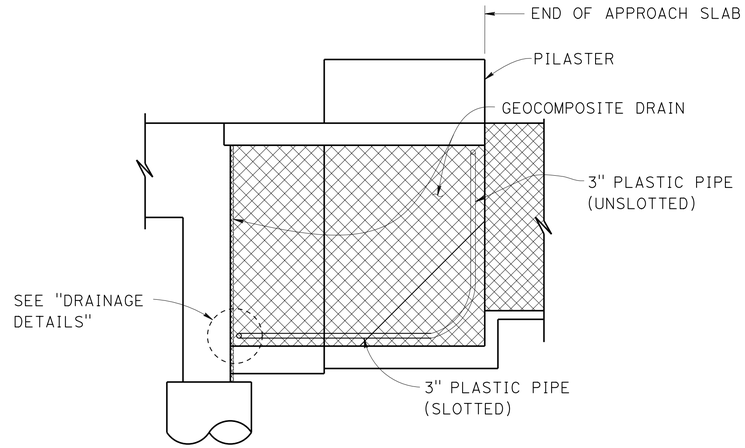
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: Bends and junctions in 3" Dia plastic pipe are 30" radius min

SECTION D-D

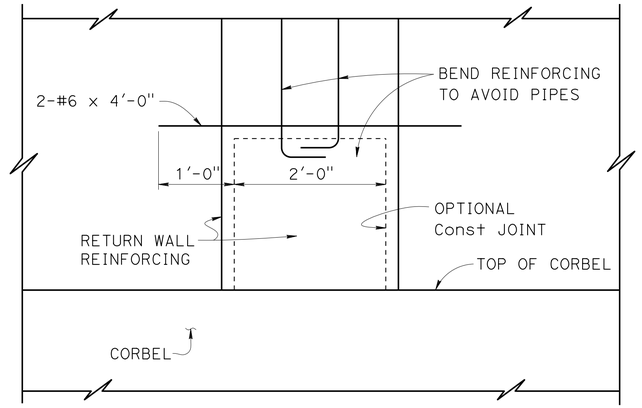
No Scale



RETURN WALL AND PILASTER DRAINAGE DETAILS

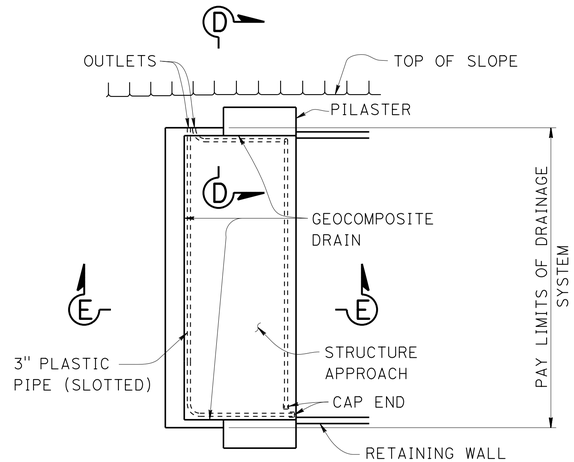
SECTION E-E

1/4" = 1'-0"



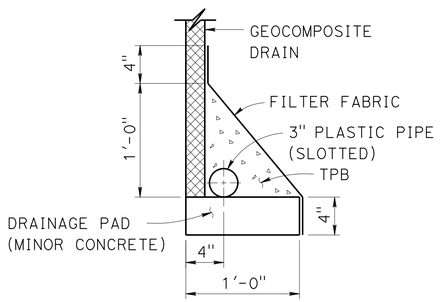
SECTION F-F

1" = 1'-0"

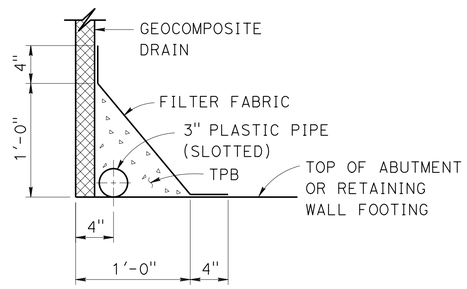


TYPICAL PLAN

No Scale



WITHOUT FOOTING



WITH FOOTING

DRAINAGE DETAILS

1 1/2" = 1'-0"

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC

STRUCTURE APPROACH DRAINAGE DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	26	34

FILE => 57-1231-s-sadd02.dgn

DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43
USERNAME => s127400

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	911	1012

REGISTERED CIVIL ENGINEER — DATE 3-6-14

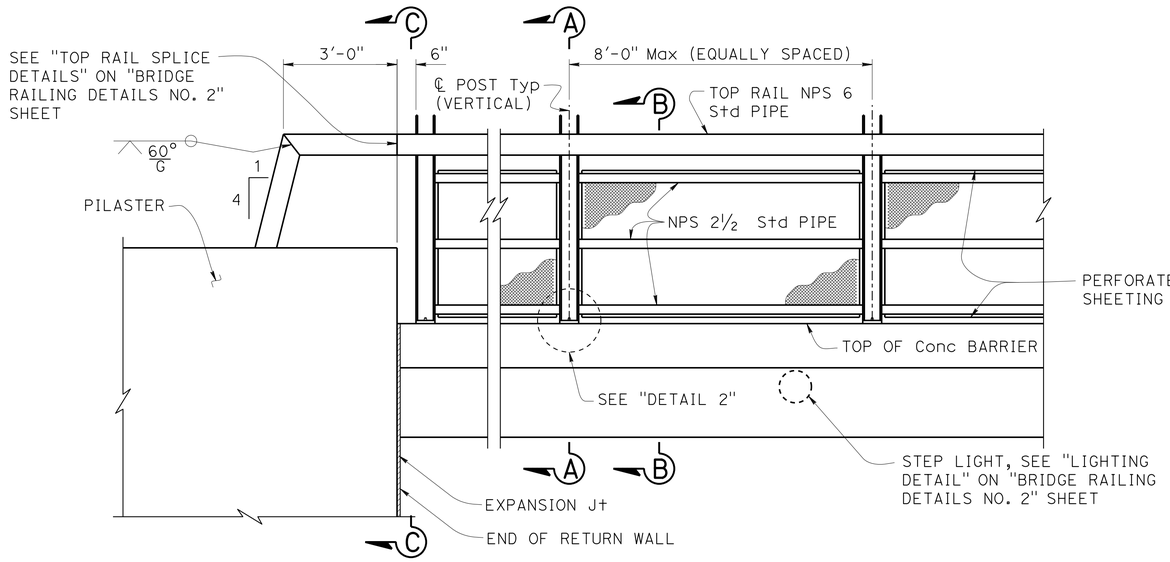
PAUL MOREL No. C68491 Exp. 09/30/15 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

07-21-14
PLANS APPROVAL DATE

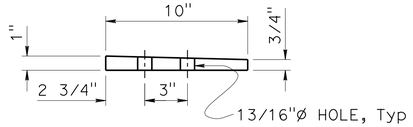
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

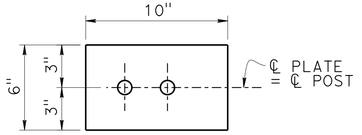
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



DEVELOPED ELEVATION
1/2" = 1'-0"

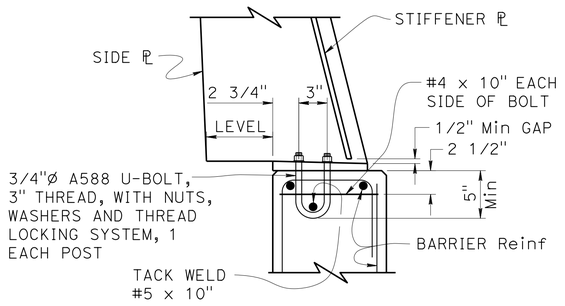


SECTION

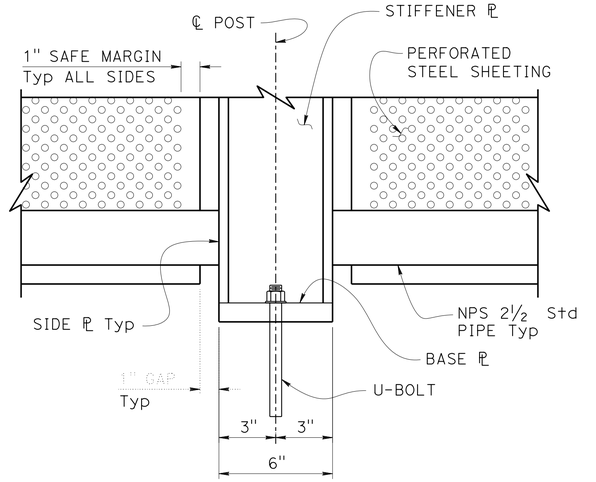


PLAN

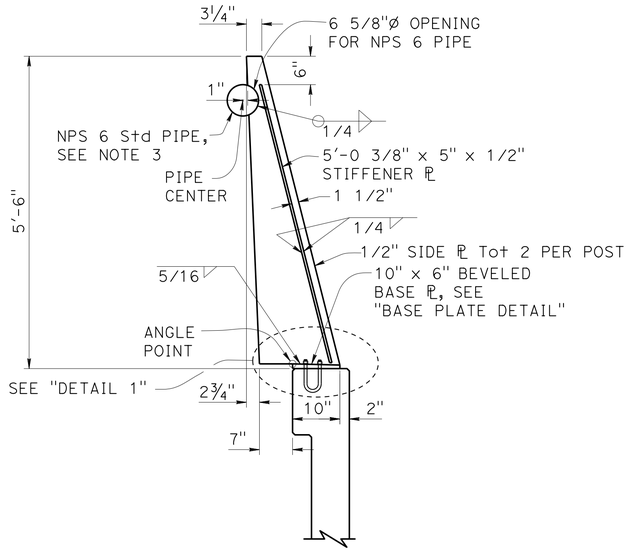
BASE PLATE DETAIL
No Scale



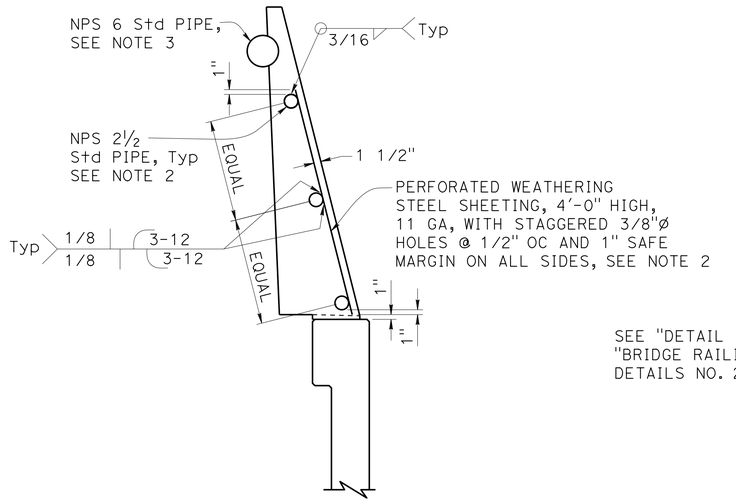
DETAIL 1
1 1/2" = 1'-0"



DETAIL 2
3" = 1'-0"

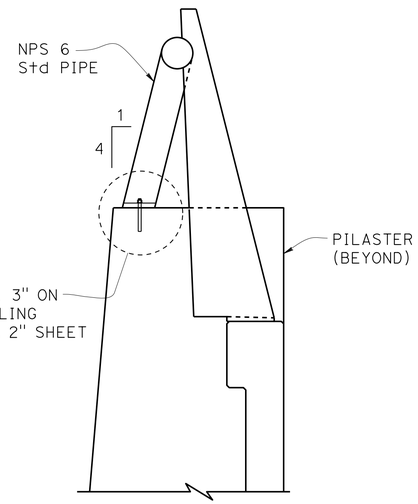


SECTION A-A
3/4" = 1'-0"



NOTE: For information not shown, see "SECTION A-A"

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



NOTE: For information not shown, see "SECTION A-A"

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

NOTES:

1. All rail to be weathering steel
2. NPS 2½ std pipes and perforated steel sheeting between posts shall be straight
3. Top rail pipe shall be shop bent or fabricated to match the railing radius
4. Welding material for weathering steel shall have a welding consumable matching the base material

DESIGN OVERSIGHT — Norbert Gee
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON
PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
BRIDGE RAILING DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-29-12	1-31-13	2-22-13	2-3-14	27	34

FILE => 57-1231-t-brdt01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	912	1012

PAUL MOREL — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

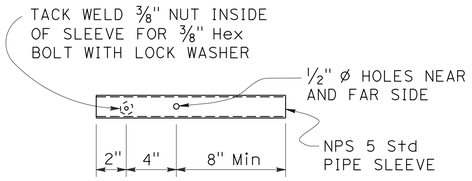
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — PAUL MOREL — No. C68491 — Exp. 09/30/15 — CIVIL — STATE OF CALIFORNIA

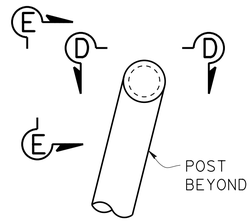
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

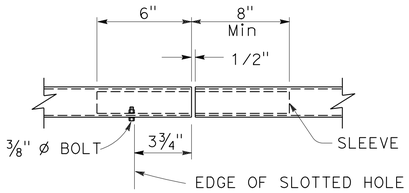
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



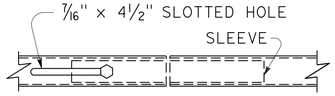
SLEEVE



SECTION

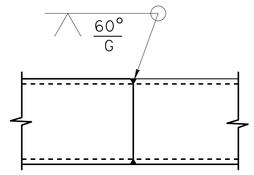


VIEW D-D

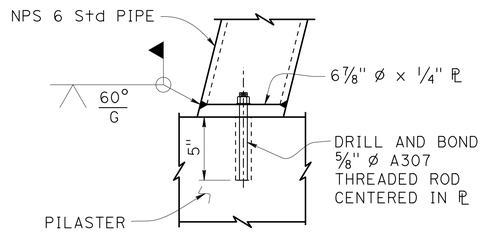


VIEW E-E

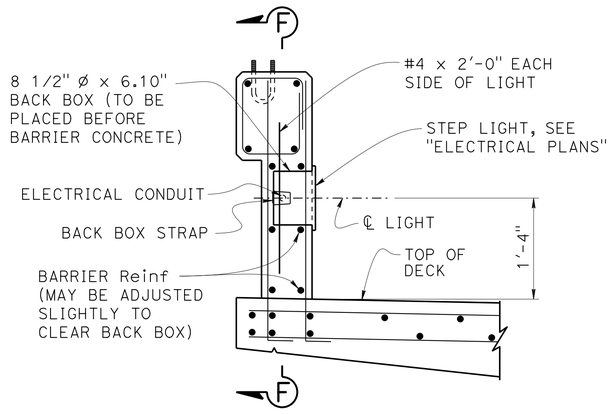
TOP RAIL SPLICE DETAILS
No Scale



TOP RAIL WELDED SPLICE
No Scale

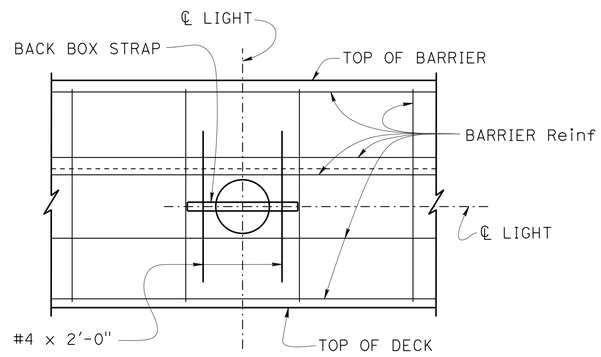


DETAIL 3
No Scale



LIGHTING DETAIL
1" = 1'-0"

NOTE: For locations of Step Light, see "LIGHTING LOCATION" table this sheet



SECTION F-F
1" = 1'-0"

LIGHTING LOCATION		
Lighting Type	Station	Offset
Step Light	33+28.47	8.00' Lt
Skot Light	33+58.90	8.00' Rt
Skot Light	33+60.27	8.00' Lt
Step Light	33+93.78	8.00' Lt
Step Light	34+23.55	8.00' Lt
Step Light	34+53.31	8.00' Lt
Step Light	34+83.07	8.00' Lt
Step Light	35+12.84	8.00' Lt
Step Light	35+42.60	8.00' Lt
Step Light	35+72.36	8.00' Lt
Step Light	36+02.12	8.00' Lt
Skot Light	36+36.31	8.00' Lt
Skot Light	36+36.31	8.00' Rt
Step Light	36+70.31	8.00' Lt
Step Light	37+00.31	8.00' Lt
Step Light	37+30.31	8.00' Lt
Step Light	37+61.40	8.00' Lt

Norbert Gee — DESIGN OVERSIGHT
3-10-14 — SIGN OFF DATE

	BY	CHECKED
DESIGN	P. Morel	C. Cushing
DETAILS	G. Espanto	C. Cushing
QUANTITIES	P. Morel	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

CRAIG SHANNON — PROJECT ENGINEER

BRIDGE NO. 57-1231
POST MILES 29.46

GENESEE AVENUE POC
BRIDGE RAILING DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021
CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 6-28-12 | 1-31-13 | 2-22-13 | 2-3-14

SHEET 28 OF 34

FILE => 57-1231-t-brdt02.dgn

USERNAME => s127400
DATE PLOTTED => 23-JUL-2014
TIME PLOTTED => 13:43

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	913	1012

REGISTERED CIVIL ENGINEER — 5-7-12 DATE

Fernando De Haro No. C65281 Exp. 9-30-15 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

07-21-14
PLANS APPROVAL DATE

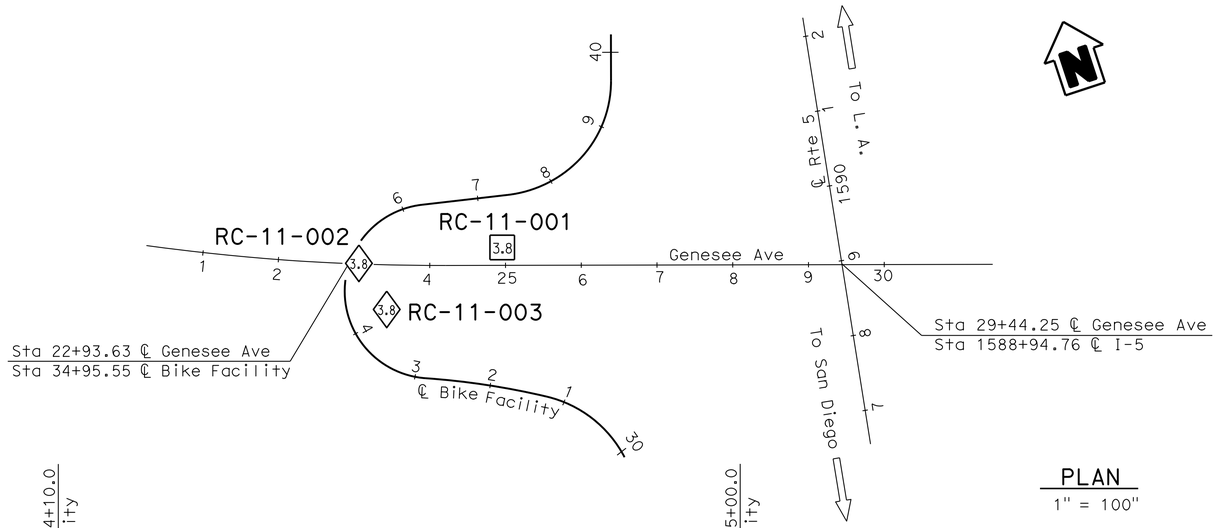
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

BENCH MARK

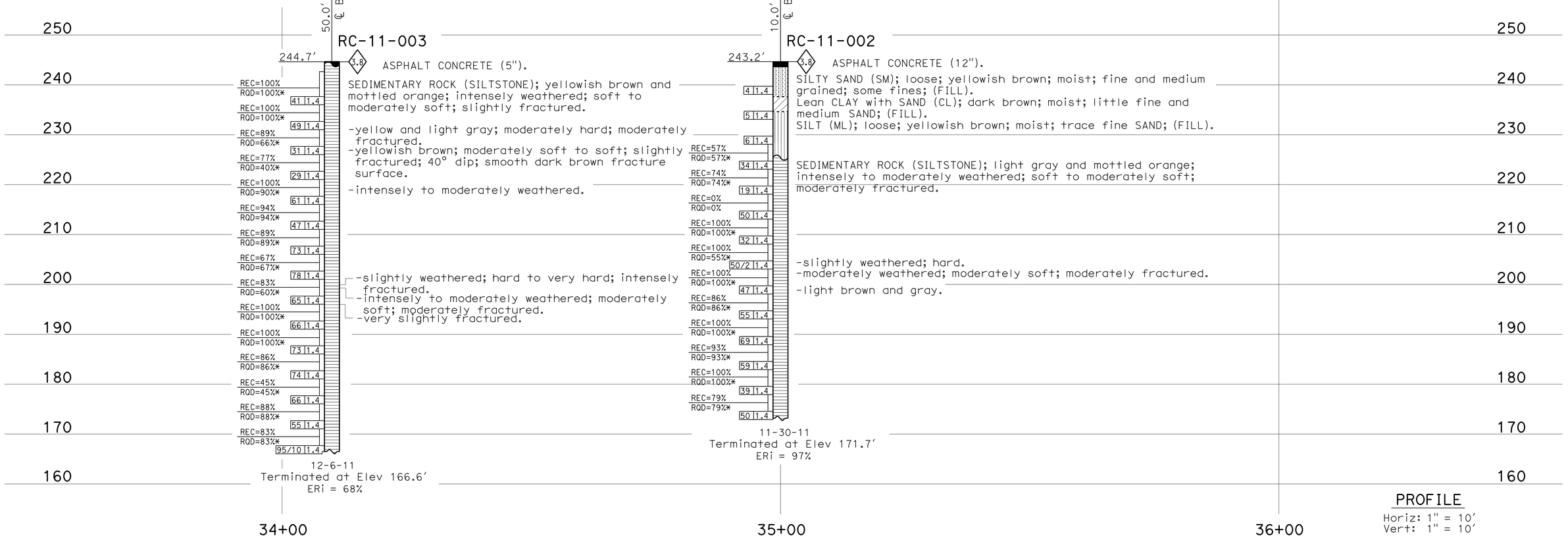
BM 5 29.43
2¼" CADT Brass Disk
connected into bridge
sidewalk.
N 580,330.679
E 1,908,538.676
Elev = 270.07′ (NAVD88)

BM 5 48436
PK & Washer Stamped
Located on median west of Hwy 5
N 580,354.532
E 1,908,411.722
Elev = 256.93′ (NAVD88)



PLAN
1" = 100"

Note: No groundwater encountered in Boring RC-11-002 and RC-11-003.



PROFILE
Horiz: 1" = 10′
Vert: 1" = 10′

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	GENESEE AVENUE POC
FUNCTIONAL SUPERVISOR	DRAWN BY: W. Tang 03/12	FIELD INVESTIGATION BY:	DESIGN BRANCH X	57-1231	LOG OF TEST BORINGS 1 OF 6
NAME: M. DeSalvatore	CHECKED BY: H. Valencia	F. De Haro		POST MILE 29.46	

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
03-30-12	04-06-12	04-04-12	05-04-12	29	34

FILE => 57-1231-z-ltb01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	914	1012

REGISTERED CIVIL ENGINEER — 5-7-12 DATE

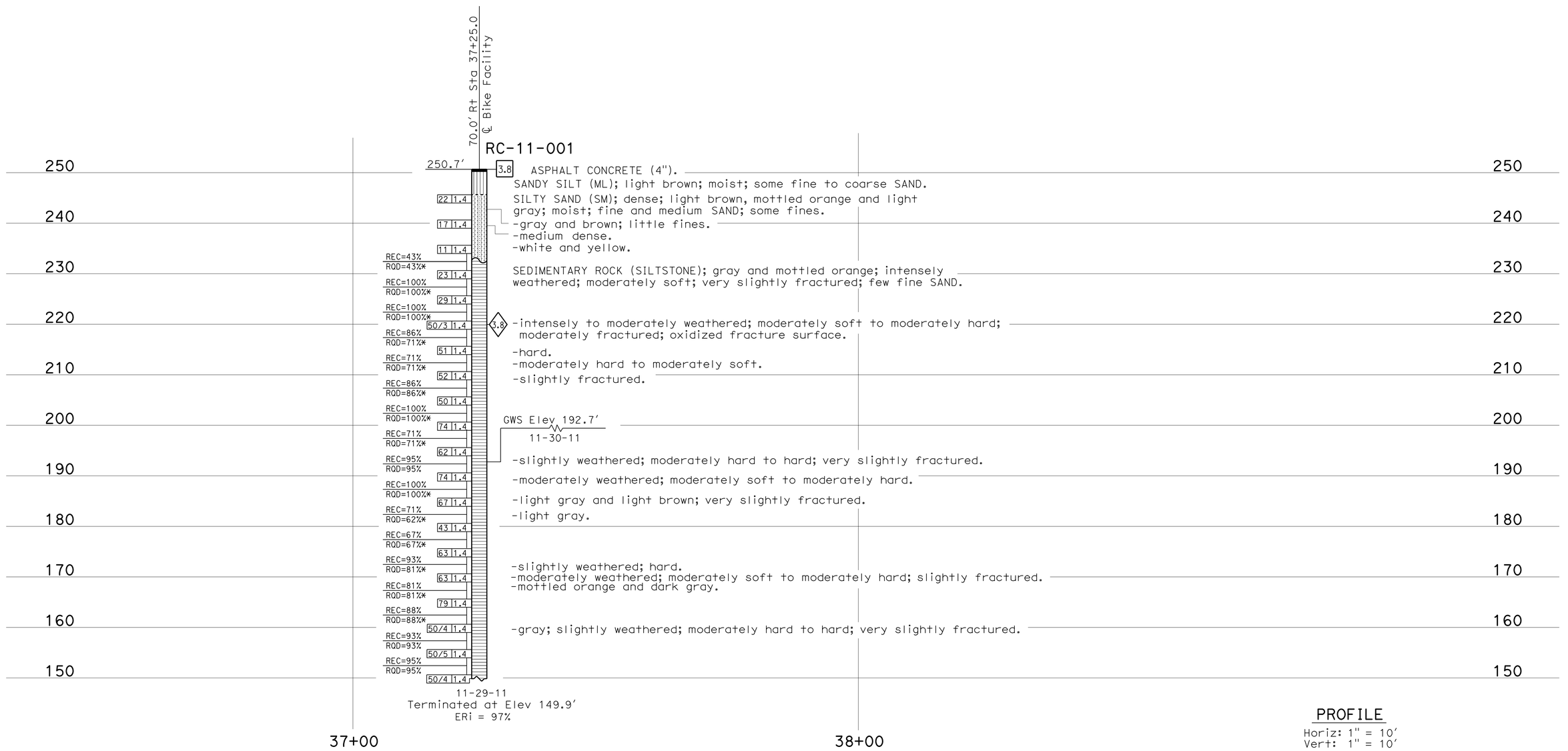
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Fernando De Haro — No. C65281 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 6"



PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	GENESEE AVENUE POC
FUNCTIONAL SUPERVISOR	DRAWN BY: W. Tang 03/12		DESIGN BRANCH X	57-1231	LOG OF TEST BORINGS 2 OF 6
NAME: M. DeSalvatore	CHECKED BY: H. Valencia	FIELD INVESTIGATION BY: F. De Haro		POST MILE 29.46	

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
03-30-12	04-06-12	04-04-12	05-04-12	30	34

FILE => 57-1231-z-ltb02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	915	1012

REGISTERED CIVIL ENGINEER — 5-7-12 DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Fernando De Haro — No. C65281 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

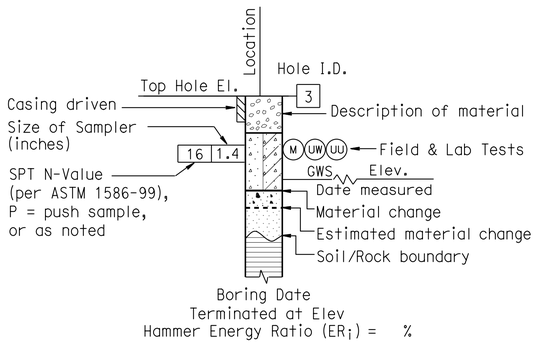
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring (hollow or solid stem bucket)
Size	R RW RC P	Rotary drilled boring (conventional) Rotary drilled with self-casing wire-line Rotary core with continuously-sampled, self-casing wire-line Rotary percussion boring (air)
Size	R RC	Rotary drilled diamond core Rotary drilled rock core
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778)
⬚	O	Other (note on LOTB)

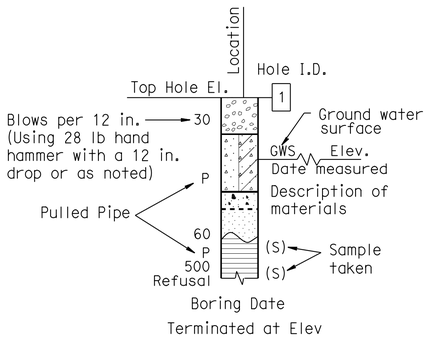
Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS

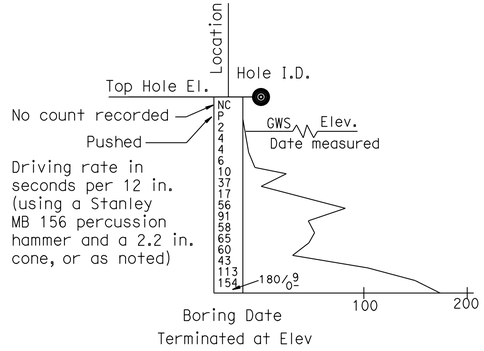
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



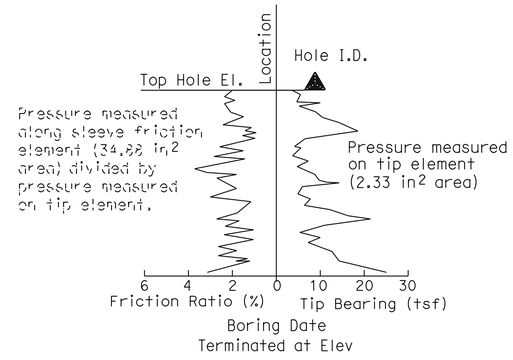
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) BORING

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	GENESEE AVENUE POC
	PREPARED BY: W. Tang 03/12		DESIGN BRANCH X	57-1231	LOG OF TEST BORINGS 3 OF 6
				POST MILE 29.46	

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
04-04-12	06-01-12	06-25-12		31	34

FILE => 57-1231-z-1tb03.dgn

USERNAME => s12400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly-graded GRAVEL Poorly-graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly-graded GRAVEL with SILT Poorly-graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly-graded GRAVEL with CLAY (or SILTY CLAY) Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly-graded SAND Poorly-graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly-graded SAND with SILT Poorly-graded SAND with SILT and GRAVEL		
SP-SC	Poorly-graded SAND with CLAY (or SILTY CLAY) Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	916	1012

REGISTERED CIVIL ENGINEER — 5-7-12 DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Fernando De Haro — No. C65281 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 - 12
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay		Less than 1/300

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES
PREPARED BY: W. Tang 03/12

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 57-1231
POST MILE 29.46

GENESEE AVENUE POC
LOG OF TEST BORINGS 4 OF 6

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
04-04-12	06-01-12	06-25-12		32	34

FILE => 57-1231-z-ltb04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	917	1012

REGISTERED CIVIL ENGINEER — 5-7-12 DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Fernando De Haro — No. C65281 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

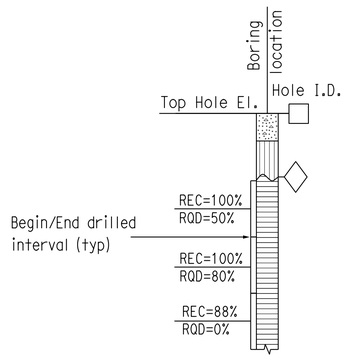
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)

$$REC = \frac{\sum \text{Length of the recovered core pieces (in.)}}{\text{Total length of core run (in.)}} \times 100\%$$

$$RQD = \frac{\sum \text{Length of intact core pieces} \geq 4 \text{ in.}}{\text{Total length of core run (in.)}} \times 100\%$$

RQD* Indicates soundness criteria not met.



BEDDING SPACING

Description	Thickness / Spacing
Massive	Greater than 10 ft
Very Thickly Bedded	3 ft - 10 ft
Thickly Bedded	1 ft - 3 ft
Moderately Bedded	4 in. - 1 ft
Thinly Bedded	1 in. - 4 in.
Very Thinly Bedded	1/4 in. - 1 in.
Laminated	Less than 1/4 in.

LEGEND OF ROCK MATERIALS

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

ROCK HARDNESS

Description	Criteria
Extremely Hard	Cannot be scratched with a pocketknife or sharp pick. Can only be chipped with repeated heavy hammer blows.
Very Hard	Cannot be scratched with a pocketknife or sharp pick. Breaks with repeated heavy hammer blows.
Hard	Can be scratched with a pocketknife or sharp pick with difficulty (heavy pressure). Breaks with heavy hammer blows.
Moderately Hard	Can be scratched with pocketknife or sharp pick with light or moderate pressure. Breaks with moderate hammer blows.
Moderately Soft	Can be grooved 1/16 in. deep with a pocketknife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.
Soft	Can be grooved or gouged easily by a pocketknife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very Soft	Can be readily indented, grooved or gouged with fingernail, or carved with a pocketknife. Breaks with light manual pressure.

FRACTURE DENSITY

Description	Observed Fracture Density
Unfractured	No fractures.
Very Slightly Fractured	Core lengths greater than 3 ft.
Slightly Fractured	Core lengths mostly from 1 to 3 ft.
Moderately Fractured	Core lengths mostly from 4 in. to 1 ft.
Intensely Fractured	Core lengths mostly from 1 to 4 in.
Very Intensely Fractured	Mostly chips and fragments.

WEATHERING DESCRIPTORS FOR INTACT ROCK

Description	Diagnostic Features					General Characteristics
	Chemical Weathering-Discoloration and/or Oxidation		Mechanical Weathering-Grain Boundary Conditions (Disaggregation) Primarily for Granitics and Some Coarse-Grained Sediments	Texture and Leaching		
	Body of Rock	Fracture Surfaces		Texture	Leaching	
Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change	No leaching	Hammer rings when crystalline rocks are struck.
Slightly Weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discoloration or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved	Minor leaching of some soluble minerals.	Hammer rings when crystalline rocks are struck. Body of rock not weakened.
Moderately Weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened.
Intensely Weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened.
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes."

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES

PREPARED BY: W. Tang 03/12

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 57-1231
POST MILE 29.46

GENESEE AVENUE POC
LOG OF TEST BORINGS 5 OF 6

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
04-04-12	06-04-12	06-25-12		33	34

FILE => 57-1231-z-ltb05.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:43

FED. ROAD DIV. NO.	STATE	PROJ. No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	CAL.				

DIST.	COUNTY	ROUTE	POST MILE	SHEET NO.	TOTAL SHEETS
XI	SD	5	28.6/31.5	118	197

BRIDGE ENGINEER — CIVIL ENGINEER—LICENSE 9365

DATE APPROVED July 20, 1964

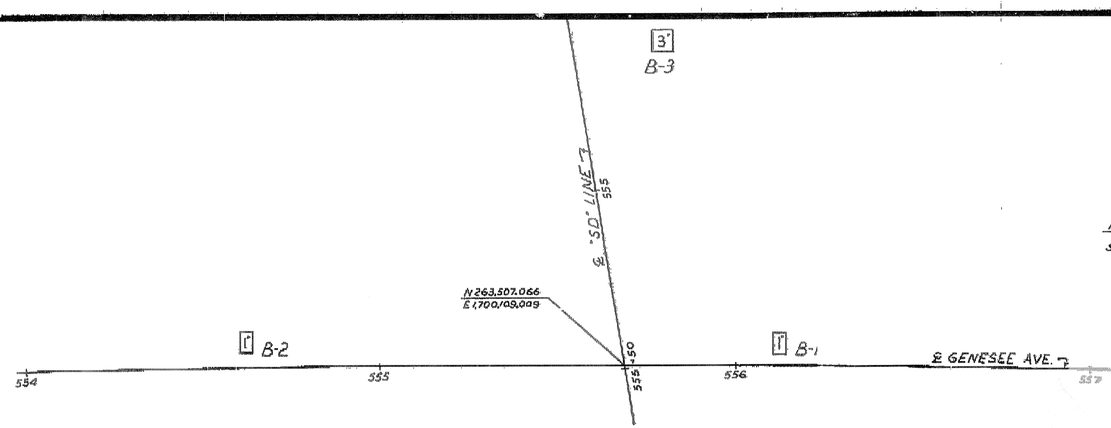
BRIDGE DEPARTMENT

BENCH MARK

TBM #1 - ℄ Stake, sta. 554+86
"SD" top of stake; set by Dist.
XI Survey Dept. ELEV. 284.73

TBM #2 - Top of stake, sta
555+00 "SD" Line. ELEV 278.66

PLAN
Scale 1"=20'



DIVISION OF ENGINEERING SERVICES - MATERIALS AND GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
11	SD	5	R29.1/R30.5	918	1012

REGISTERED CIVIL ENGINEER — 3/28/12 DATE

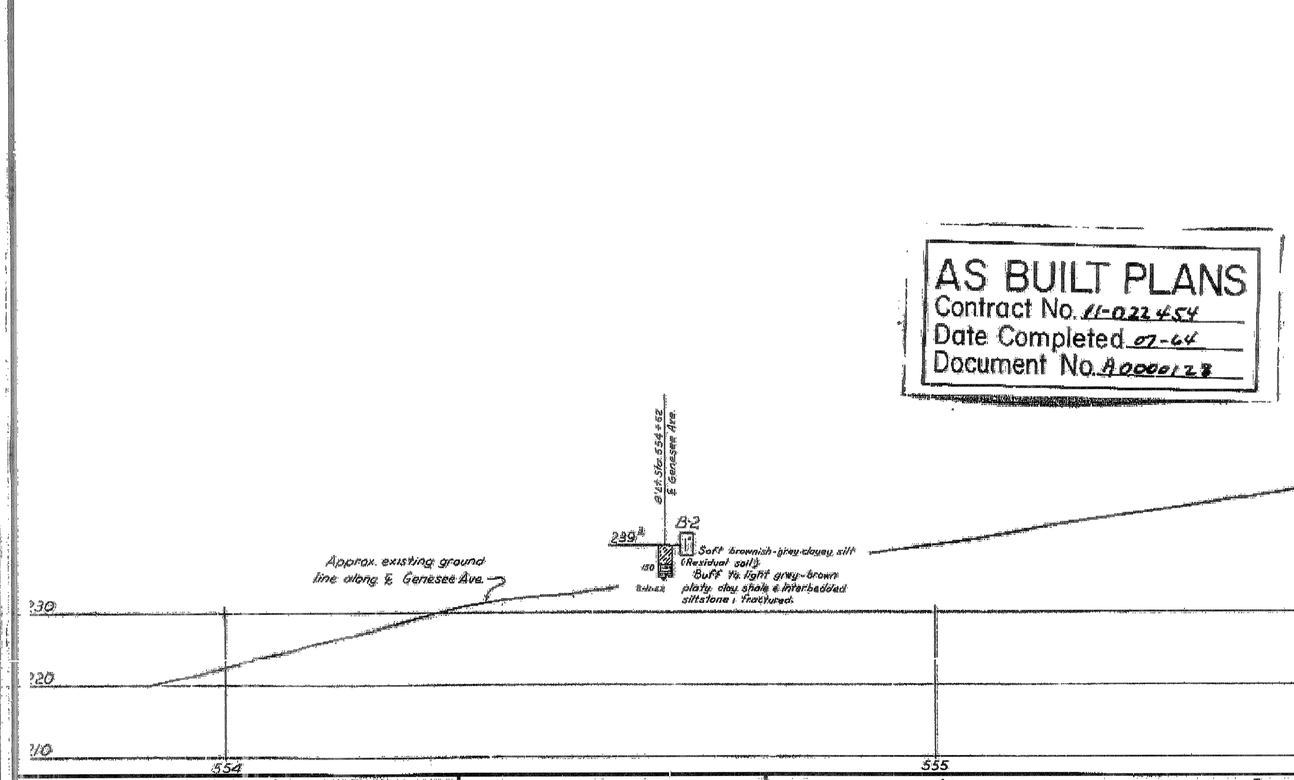
REGISTERED PROFESSIONAL ENGINEER — Fernando De Haro — No. C65281 — Exp. 9-30-15 — CIVIL — STATE OF CALIFORNIA

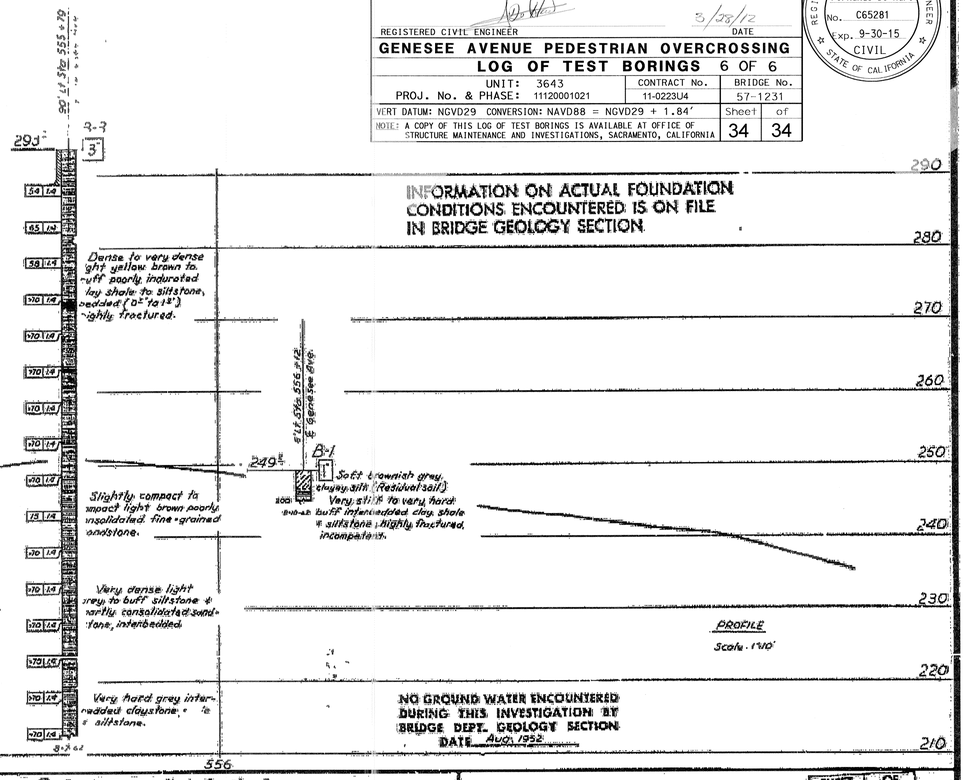
GENESEE AVENUE PEDESTRIAN OVERCROSSING

LOG OF TEST BORINGS 6 OF 6

UNIT: 3643	CONTRACT No.	BRIDGE No.
PROJ. No. & PHASE: 11120001021	11-0223U4	57-1231
VERT DATUM: NGVD29 CONVERSION: NAVD88 = NGVD29 + 1.84'	Sheet	of
NOTE: A COPY OF THIS LOG OF TEST BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA	34	34

AS BUILT PLANS
Contract No. 11-022454
Date Completed 07-64
Document No. A0000128





INFORMATION ON ACTUAL FOUNDATION CONDITIONS ENCOUNTERED IS ON FILE IN BRIDGE GEOLOGY SECTION

NO GROUND WATER ENCOUNTERED DURING THIS INVESTIGATION BY BRIDGE DEPT. GEOLOGY SECTION DATE Aug. 1952

CLASSIFICATION OF MATERIAL BASED ON STANDARD GRADE SIZE LIMITS

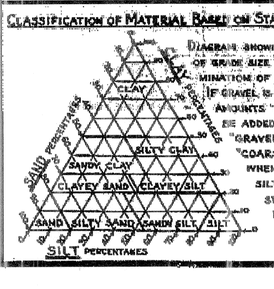


DIAGRAM SHOWING THE BASIS FOR ESTIMATES OF GRADE SIZE DISTRIBUTION USED IN DETERMINATION OF CLASS NAMES.

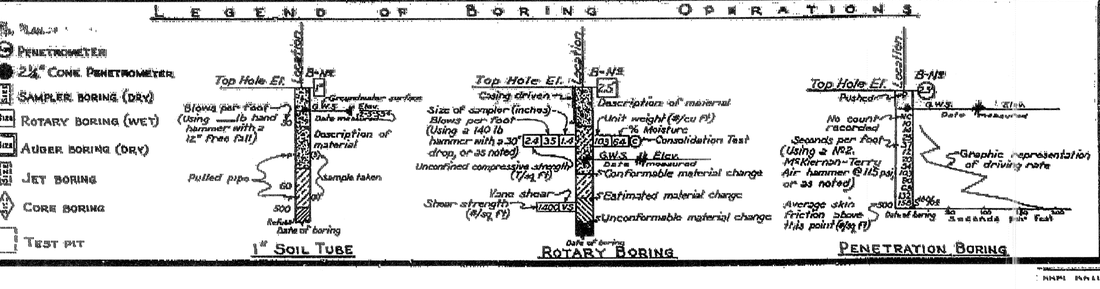
IF GRAVEL IS PRESENT IN APPRECIABLE AMOUNTS THE TERM "GRAVELLY" MAY BE ADDED TO THE CLASS NAME, VIZ. "GRAVELLY SAND." THE TERMS "COARSE", "MEDIUM" AND "FINE" WHEN USED TO DESCRIBE SAND, SILT AND GRAVEL, REFER TO STANDARD GRADE SIZE LIMITS.

LEGEND OF EARTH MATERIALS

- GRAVEL
- SAND
- SILT
- CLAY
- SANDY CLAY OR CLAYEY SAND
- SANDY SILT OR SILTY SAND
- SILTY CLAY OR CLAYEY SILT
- PEAT AND/OR ORGANIC MATTER
- FILL MATERIAL
- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

LEGEND OF BORING OPERATIONS

- PENETROMETER
- 2½" CONE PENETROMETER
- SAMPLER BORING (DRY)
- ROTARY BORING (WET)
- AUGER BORING (DRY)
- JET BORING
- CORE BORING
- TEST PIT



NOTE

SHEET 8 OF 9

Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

GENESEE AVENUE OVERCROSSING

LOG OF TEST BORINGS

SCALE As Noted	BRIDGE 57-527	FILE	DRAWING 57527-9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	919	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

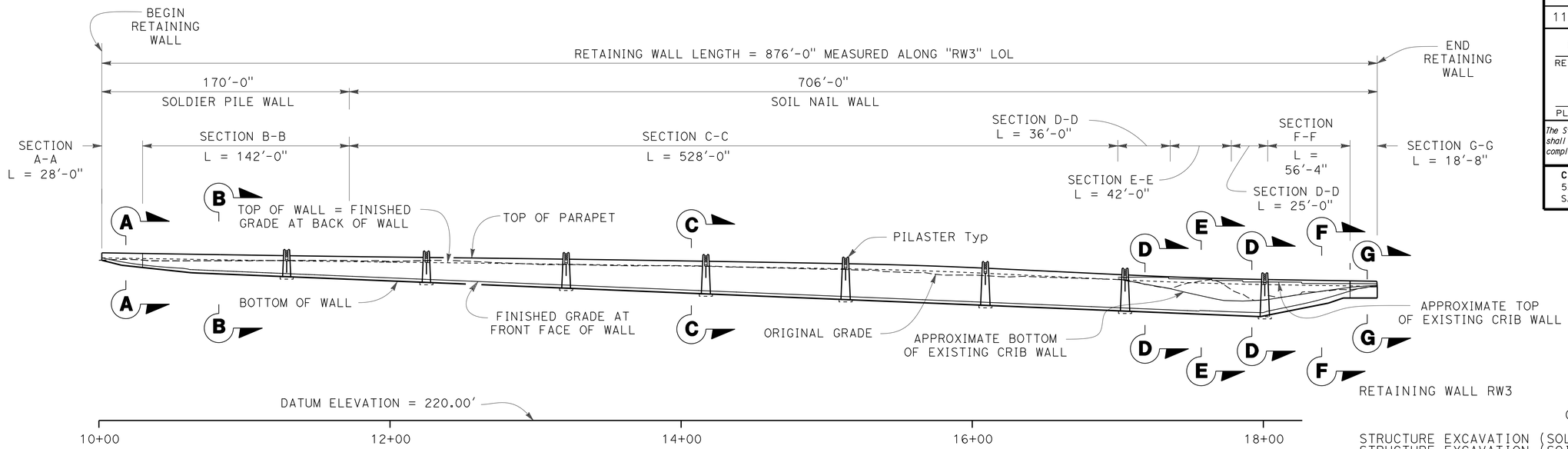
07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

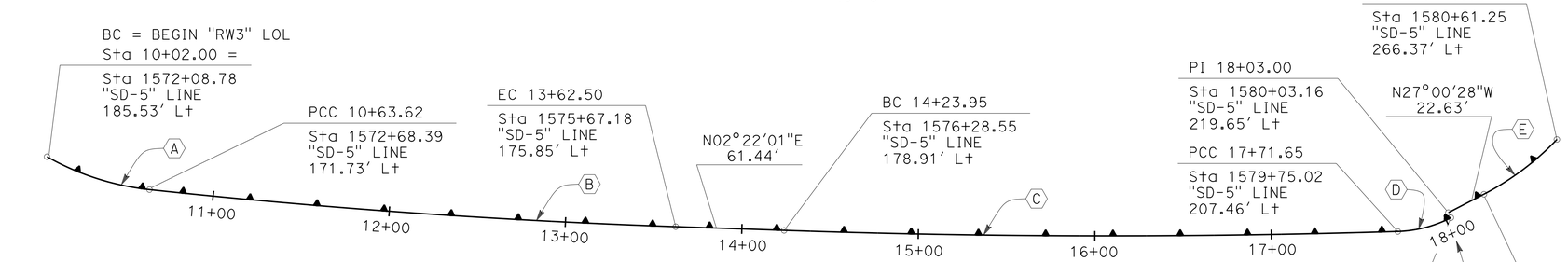
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

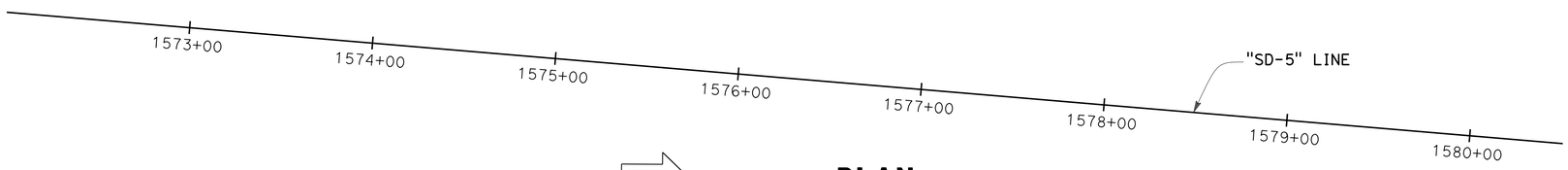


DEVELOPED ELEVATION

1" = 40'-0"



CURVE DATA (A)	CURVE DATA (B)	CURVE DATA (C)	CURVE DATA (D)	CURVE DATA (E)
R = 150.00'	R = 4158.24'	R = 5350.00'	R = 70.00'	R = 159.00'
Δ = 23°32'14"	Δ = 04°07'06"	Δ = 03°43'25"	Δ = 25°39'18"	Δ = 18°52'16"
L = 61.62'	L = 298.88'	L = 347.70'	L = 31.34'	L = 52.37'



PLAN

1" = 40'-0"

RETAINING WALL RW3 BRIDGE NO 57E0117

QUANTITIES

STRUCTURE EXCAVATION (SOLDIER PILE WALL)	137	CY
STRUCTURE EXCAVATION (SOIL NAIL WALL)	1,110	CY
STRUCTURE BACKFILL (SOIL NAIL WALL)	70	CY
STRUCTURE BACKFILL (SOLDIER PILE WALL)	13	CY
CONCRETE BACKFILL (SOLDIER PILE WALL)	54	CY
LEAN CONCRETE BACKFILL	33	CY
SOIL NAIL	20,757	LF
STEEL SOLDIER PILE (HP 12 X 84)	707	LF
24" DRILLED HOLE	721	LF
STRUCTURAL CONCRETE, RETAINING WALL	755	CY
ARCHITECTURAL TREATMENT (RANDOM FLUTE)	11,600	SQFT
ARCHITECTURAL TREATMENT (PARAPET TEXTURE)	1,980	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	105,000	LB
STRUCTURAL SHOTCRETE	160	CY
TIMBER LAGGING	5.2	MFBM
WEATHERING STEEL PLATE	534	EA
PIPE HANDRAILING (TYPE 2)	834	LF

NOTES:

1. For "GENERAL NOTES", "INDEX TO PLANS", and "STANDARD PLANS", see "INDEX TO PLANS" sheet
2. For soldier pile layout, size, and information; soil nail layout, size, embedment length, top of wall and bottom of wall stations and elevations, and pilaster locations, see "STRUCTURE ELEVATION NO. 1" through "STRUCTURE ELEVATION NO. 4" sheets
3. For Sections "A-A", "B-B", "C-C", "D-D", "E-E", "F-F", and "G-G", see "GENERAL PLAN (2 OF 2)" sheet
4. For Architectural Treatment not shown, see "ARCHITECTURAL DETAILS NO. 1" through "ARCHITECTURAL DETAILS NO. 4" sheets
5. Pipe handrailing not shown
6. For location of cribwall, see "FOUNDATION PLAN (2 OF 2)" sheet

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco
LAYOUT	J. Ramirez	L. Muco
SPECIFICATIONS	C. Shannon	PLANS AND SPECS COMPARED C. Shannon

LIVE LOADING:

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
GENERAL PLAN (1 OF 2)

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 6-28-12 | 1-31-13 | 2-22-13 | 2-3-14

SHEET 1 OF 33

FILE => 57E0117-a-gp01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	920	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

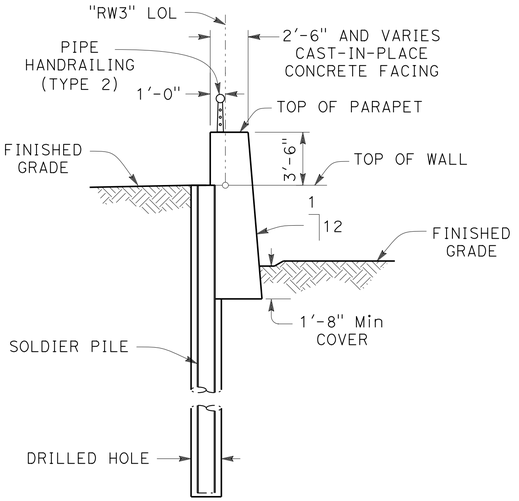
07-21-14 PLANS APPROVAL DATE

Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

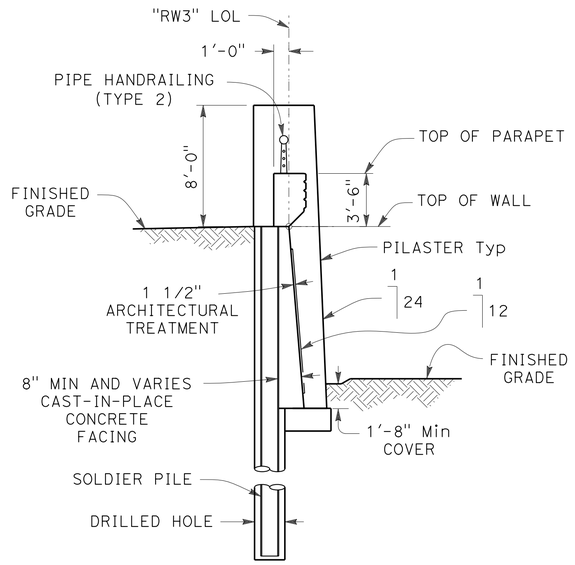
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



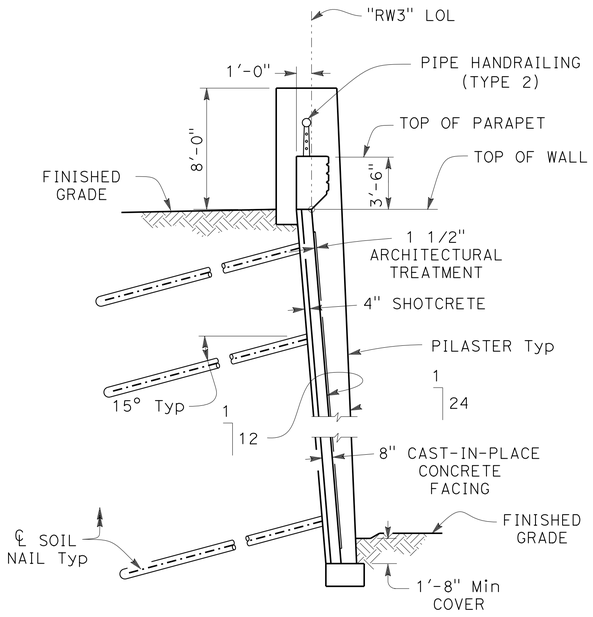
SECTION A-A

1" = 5'-0"



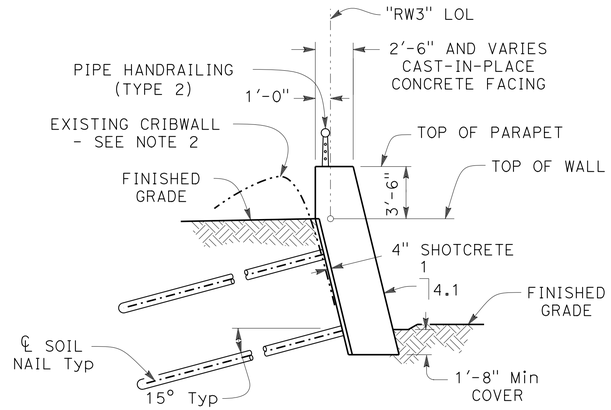
SECTION B-B

1" = 5'-0"



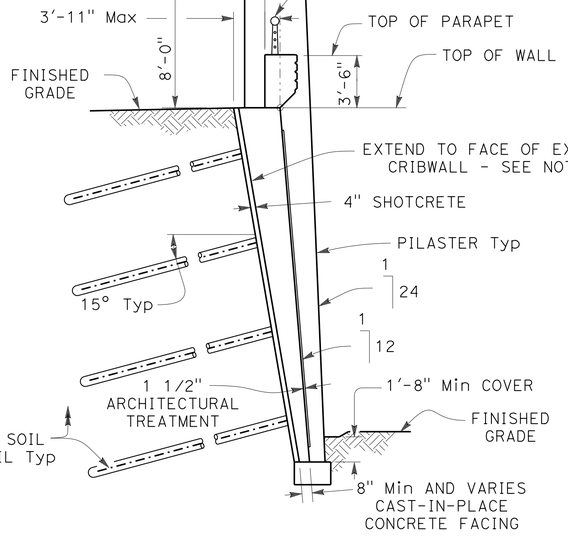
SECTION C-C

1" = 5'-0"



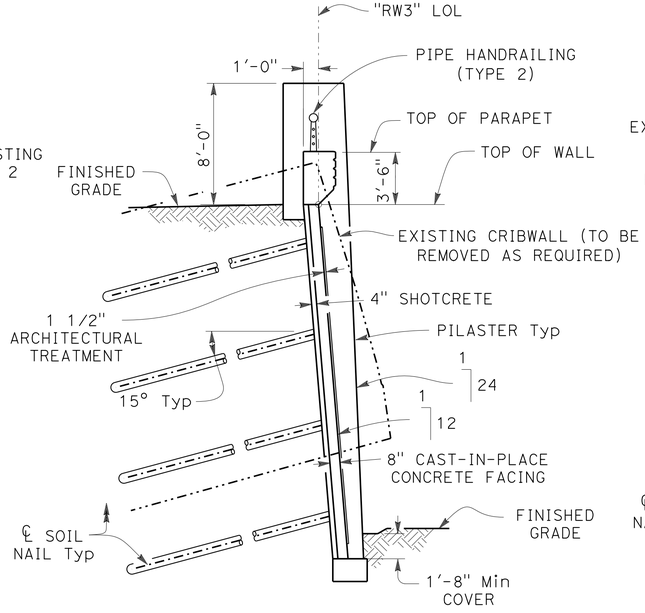
SECTION G-G

1" = 5'-0"



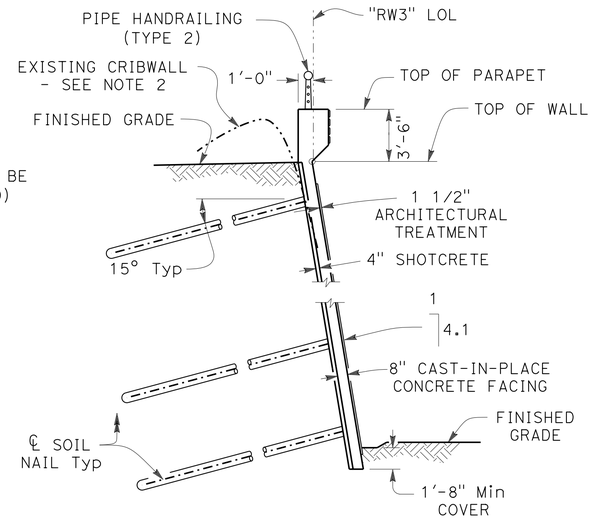
SECTION D-D

1" = 5'-0"



SECTION E-E

1" = 5'-0"



SECTION F-F

1" = 5'-0"

NOTES:

1. For information not shown, see "STRUCTURE ELEVATION NO. 1" through "STRUCTURE ELEVATION NO. 4" sheets, and "WALL DETAILS NO. 1" through "WALL DETAILS NO. 7" sheets
2. Contractor shall remove interfering portions of existing cribwall. Existing concrete and rebar should be expected. Cribwall limits are approximate. Exact extents of existing cribwall to be verified by the Contractor prior to ordering or fabricating any material.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco
LAYOUT	J. Ramirez	L. Muco
SPECIFICATIONS	C. Shannon	PLANS AND SPECS COMPARED C. Shannon

LIVE LOADING:

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
GENERAL PLAN (2 OF 2)

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-29-12	1-31-13	2-22-13	2-3-14	2	33

FILE => 57E0117-a-gp02.dgn

USERNAME => s5127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

INDEX TO PLANS

GENERAL NOTES (SOLDIER PILE WALL)

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION WITH 2008 INTERIM REVISIONS, AND THE CALIFORNIA AMENDMENTS, PREFACE DATED NOVEMBER 2011

LIVE LOAD:		240 psf
LATERAL EARTH PRESSURES:	ACTIVE EARTH PRESSURE, Pa =	35(H+D) psf
	PASSIVE EARTH PRESSURE, Pp =	410(D) psf
SEISMIC: PRESSURES:	SEISMIC EQUIVALENT LATERAL PRESSURE, Peq = (INVERTED TRIANGLE)	20(H) psf
STRUCTURAL CONCRETE:	f'c =	3.6 ksi
	fy =	60 ksi
	n =	8
STRUCTURAL STEEL:	SOLDIER PILES:	ASTM A572, Fy = 50 ksi Min
	HEADED STUDS:	ASTM A449, Type 1, Fu = 120 ksi
STRUCTURAL TIMBER:	TREATED DOUGLAS FIR, GRADE No. 1 OR BETTER (TIMBER TO BE FULL SAWN)	

GENERAL NOTES (SOIL NAIL WALL)

DESIGN: ALLOWABLE STRESS DESIGN

BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO WITH INTERIMS AND REVISIONS BY CALTRANS)

GEOTECHNICAL ENGINEERING CIRCULAR NO. 7: SOIL NAIL WALLS, REPORT NO. FHWA0-IF-03-017, MARCH 2003

SOIL PARAMETERS: Sta 11+74.00 RW3 LOL to Sta 17+00.00 RW3 LOL

SOIL UNIT WEIGHT, g_s =	121 pcf
SOIL FRICTION ANGLE, F =	33°
SOIL COHESION, C =	350 psf
DESIGN PULLOUT RESISTANCE, Q_d =	5.4 kips/ft
ALLOWABLE BEARING PRESSURE, q_{all} =	4.4 ksf

Sta 17+00.00 RW3 LOL to Sta 18+78.00 RW3 LOL

SOIL UNIT WEIGHT, g_s =	115 pcf
SOIL FRICTION ANGLE, F =	33°
SOIL COHESION, C =	0 psf
DESIGN PULLOUT RESISTANCE, Q_d =	5.4 kips/ft
ALLOWABLE BEARING PRESSURE, q_{all} =	4.4 ksf

SEISMIC LOADING:	PEAK GROUND ACCELERATION =	0.45 g
	K_h =	0.15
SURCHARGE:	LIVE LOAD =	240 psf
REINFORCED CONCRETE / SHOTCRETE:	fy =	60 ksi
	f'c =	3.60 ksi
	n =	8
GROUT STRENGTH:		3.0 ksi
STRUCTURAL STEEL:	BEARING PLATES:	ASTM A36, fy = 36 ksi
	HEADED STUDS:	ASTM A449 Type 1, Fu = 120 ksi
	PIPES:	ASTM A847
	PLATES AND BARS:	ASTM A588
SOIL NAILS:	ASTM A615 or A706, Grade 60 (Epoxy coated)	

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	921	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

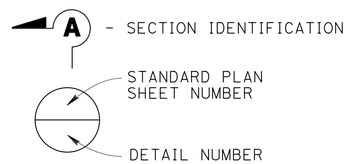
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO 525 B STREET SUITE 7 SAN DIEGO, CA. 92101	**SIMON WONG ENGINEERING** 9968 HIBERT STREET SAN DIEGO, CA. 92131

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
B0-3	BRIDGE DETAILS

PLAN SYMBOLS



Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO.	57E0117
POST MILES	29.2

RETAINING WALL NO. RW3
INDEX TO PLANS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	3	33

FILE => 57E0117-b-itp01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	922	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

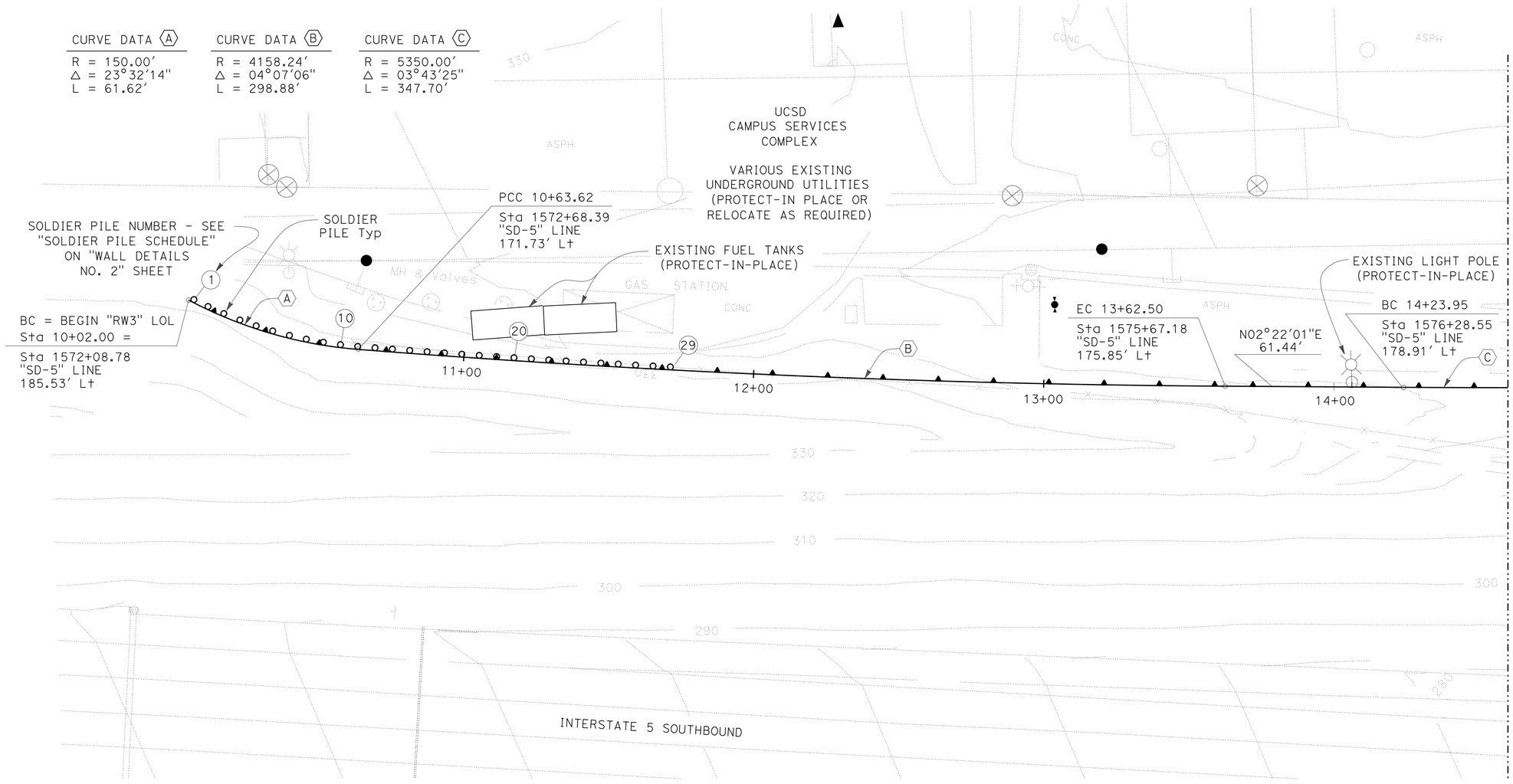
REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

CURVE DATA (A)	CURVE DATA (B)	CURVE DATA (C)
R = 150.00′	R = 4158.24′	R = 5350.00′
Δ = 23°32′14"	Δ = 04°07′06"	Δ = 03°43′25"
L = 61.62′	L = 298.88′	L = 347.70′



PLAN

1" = 20′-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

BENCHMARK

CONTROL SURVEY:

BM #1 5-29.11
2 1/4" CADT BRASS DISK
LABELED "5-29.11 1992"
N 1,901,973.73
E 6,261,254.25
Elev = 340.89′

BM #2 5-29.46
2 1/4" CADT BRASS DISK
LABELED "5-29.46 1993"
N 1,903,968.24
E 6,261,597.31
Elev = 270.07′

Mark M. Podlaski 6-5-12
GEOTECHNICAL PROFESSIONAL APPROVAL DATE

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

SCALE: X	VERT.DATUM NAVD 88	HORZ.DATUM CCS 83 (1991.35)	DESIGN	BY J. Ramirez	CHECKED L. Muco
PHOTOGRAMMETRY AS OF: X	ALIGNMENT TIES X		DETAILS	BY T. Brittain	CHECKED L. Muco
SURVEYED BY X	DRAFTED BY X		QUANTITIES	BY J. Ramirez	CHECKED L. Muco
FIELD CHECKED BY X	CHECKED BY X				

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
FOUNDATION PLAN (1 OF 2)

FOUNDATION PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	4	33

FILE => 57E0117-c-fp01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	923	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

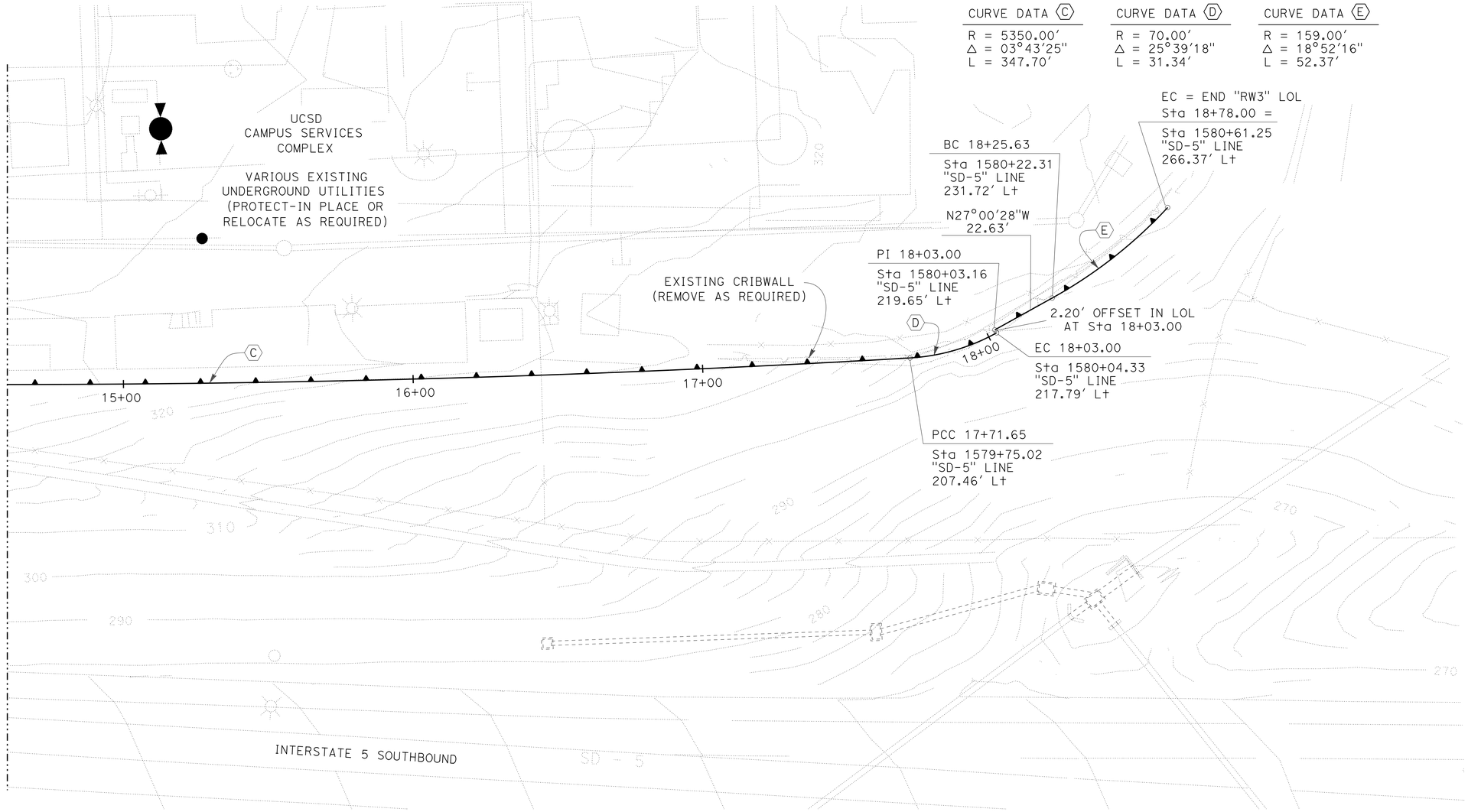
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

CURVE DATA (C)
R = 5350.00′
Δ = 03°43′25"
L = 347.70′

CURVE DATA (D)
R = 70.00′
Δ = 25°39′18"
L = 31.34′

CURVE DATA (E)
R = 159.00′
Δ = 18°52′16"
L = 52.37′



PLAN
1" = 20′-0"

BENCHMARK

CONTROL SURVEY:

BM #1 5-29.11
2 1/4" CADT BRASS DISK
LABELED "5-29.11 1992"
N 1,901,973.73
E 6,261,254.25
Elev = 340.89′

BM #2 5-29.46
2 1/4" CADT BRASS DISK
LABELED "5-29.46 1993"
N 1,903,968.24
E 6,261,597.31
Elev = 270.07′

NOTE:
THE CONTRACTOR SHALL VERIFY ALL
CONTROLLING FIELD DIMENSIONS
BEFORE ORDERING OR FABRICATING
ANY MATERIAL

Mark M. Fodness 6-5-12
GEOTECHNICAL PROFESSIONAL APPROVAL DATE

Norbert Gee 3-10-14
DESIGN OVERSIGHT SIGN OFF DATE

SCALE: X	VERT.DATUM NAVD 88	HORZ.DATUM CCS 83 (1991.35)	DESIGN	BY J. Ramirez	CHECKED L. Muco
PHOTOGRAMMETRY AS OF: X		ALIGNMENT TIES X	DETAILS	BY T. Brittain	CHECKED L. Muco
SURVEYED BY X		DRAFTED BY X	QUANTITIES	BY J. Ramirez	CHECKED L. Muco
FIELD CHECKED BY X		CHECKED BY X			

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
FOUNDATION PLAN (2 OF 2)

FOUNDATION PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 6-25-12 | 1-31-13 | 2-22-13 | 2-3-14

SHEET 5 OF 33

FILE => 57E0117-c-fp02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	924	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

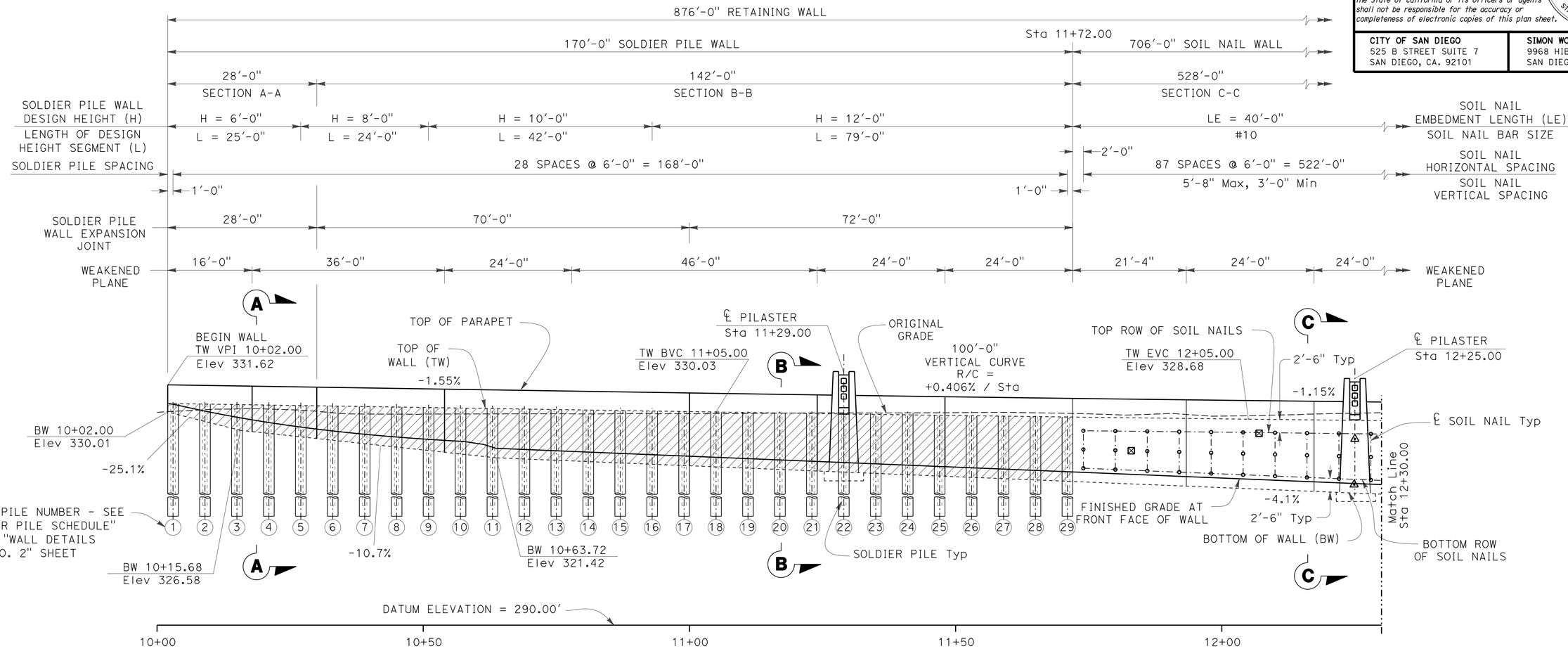
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

- ◦ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly
- △ - Indicates location of Strut Nail Assembly
- ▨ - Indicates Timber Lagging (4" x 12" Douglass Fir Larch No. 1 or better)

DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW3" LOL
2. For Sections "A-A" and "B-B", see "WALL DETAILS NO. 1" sheet. For Section "C-C", see "WALL DETAILS NO. 3" sheet.
3. For retaining wall weakened plane and expansion joint details, see "WALL DETAILS NO. 5" sheet
4. For strut nail details, see "WALL DETAILS NO. 7" sheet
5. Pipe handrailing not shown

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
STRUCTURE ELEVATION NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-1-14	6	33

FILE => 57E0117-e-se01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	925	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

876'-0" RETAINING WALL

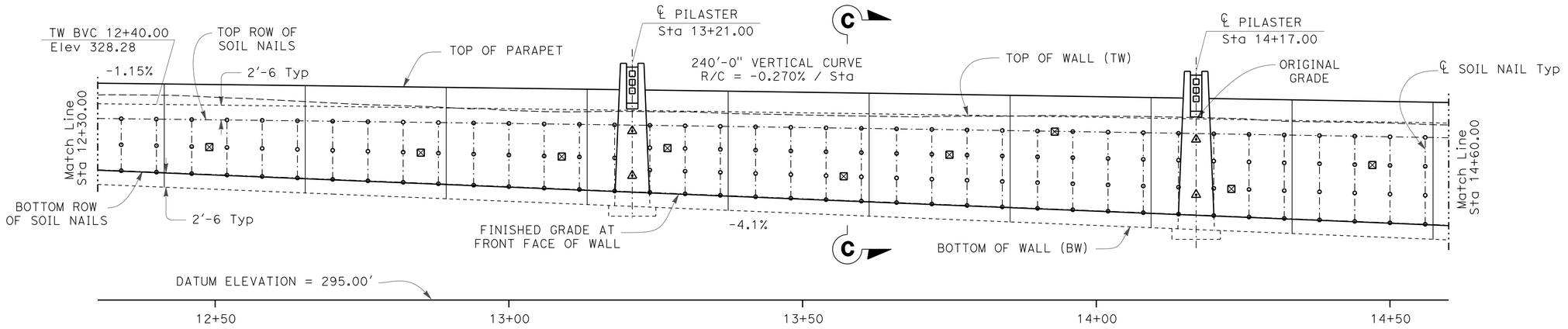
706'-0" SOIL NAIL WALL

528'-0"
SECTION C-C

SOIL NAIL EMBEDMENT LENGTH (LE) / SOIL NAIL BAR SIZE
LE = 40'-0"
#10

SOIL NAIL HORIZONTAL SPACING / SOIL NAIL VERTICAL SPACING
87 SPACES @ 6'-0" = 522'-0"
5'-8" Max, 3'-0" Min

WEAKENED PLANE
24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0"



DEVELOPED ELEVATION

1" = 10'-0"

LEGEND:

- ∘ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly
- ◬ - Indicates location of Strut Nail Assembly

NOTES:

1. All dimensions measured along "RW3" LOL
2. For Section "C-C", see "WALL DETAILS NO. 3" sheet
3. For retaining wall weakened plane and expansion joint details, see "WALL DETAILS NO. 5" sheet
4. For strut nail details, see "WALL DETAILS NO. 7" sheet
5. Pipe handrailing not shown

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
STRUCTURE ELEVATION NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 6-29-12 | 1-31-13 | 2-22-13 | 2-3-14

SHEET 7 OF 33

FILE => 57E0117-e-se02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	926	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

876'-0" RETAINING WALL

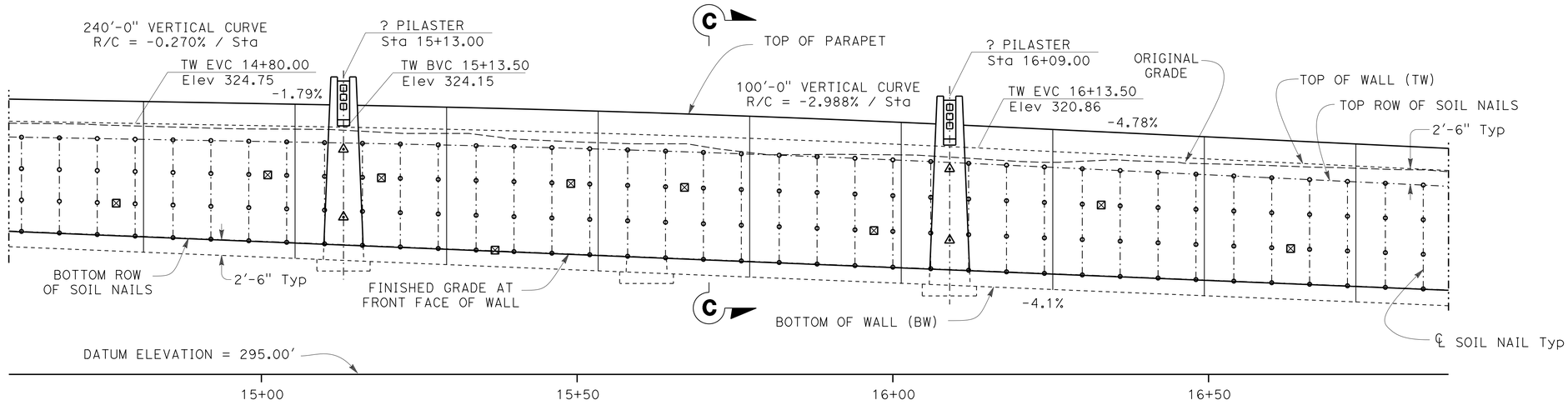
706'-0" SOIL NAIL WALL

528'-0"
SECTION C-C

SOIL NAIL EMBEDMENT LENGTH (LE)
SOIL NAIL BAR SIZE
LE = 40'-0"
#10

SOIL NAIL HORIZONTAL SPACING
SOIL NAIL VERTICAL SPACING
87 SPACES @ 6'-0" = 522'-0"
5'-8" Max, 3'-0" Min

WEAKENED PLANE
24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0" | 24'-0"



LEGEND:

- ∘ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly
- △ - Indicates location of Strut Nail Assembly

DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW3" LOL
2. For Section "C-C", see "WALL DETAILS NO. 3" sheet
3. For retaining wall weakened plane detail, see "WALL DETAILS NO. 5" sheet
4. For strut nail details, see "WALL DETAILS NO. 7" sheet
5. Pipe handrailing not shown

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
STRUCTURE ELEVATION NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-25-12	1-31-13	2-22-13	2-3-14	8	33

FILE => 57E0117-e-se03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	927	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

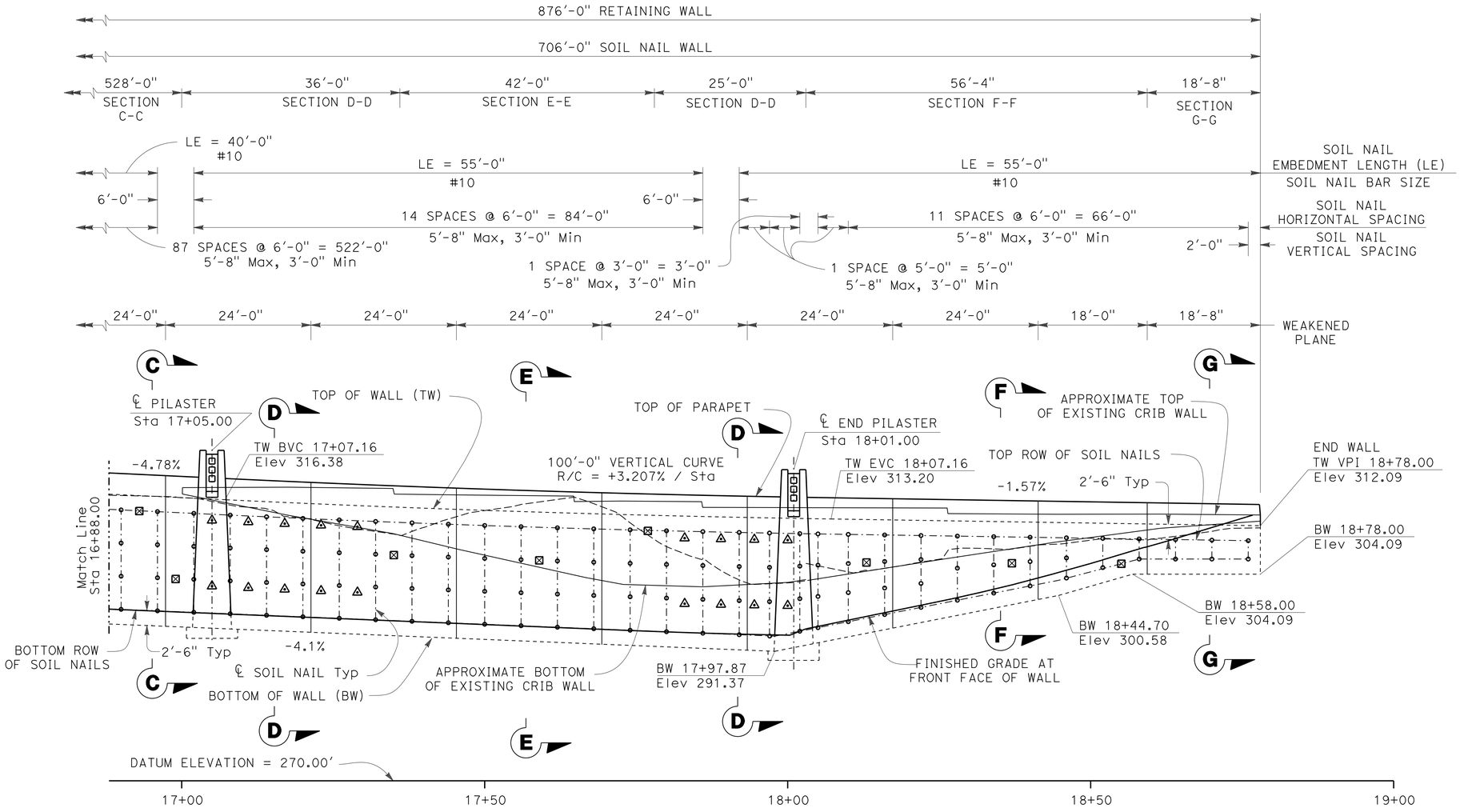
07-21-14 PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



DEVELOPED ELEVATION

1" = 10'-0"

LEGEND:

- ◦ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly
- △ - Indicates location of Strut Nail Assembly

NOTES:

1. All dimensions measured along "RW3" LOL
2. For Sections "C-C", "D-D", "E-E", "F-F", and "G-G", see "WALL DETAILS NO. 3" through "WALL DETAILS NO. 5" sheets
3. For retaining wall weakened plane and expansion joint details, see "WALL DETAILS NO. 5" sheet
4. For strut nail details, see "WALL DETAILS NO. 7" sheet
5. Pipe handrailing not shown

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
STRUCTURE ELEVATION NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	9	33

FILE => 57E0117-e-se04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	928	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

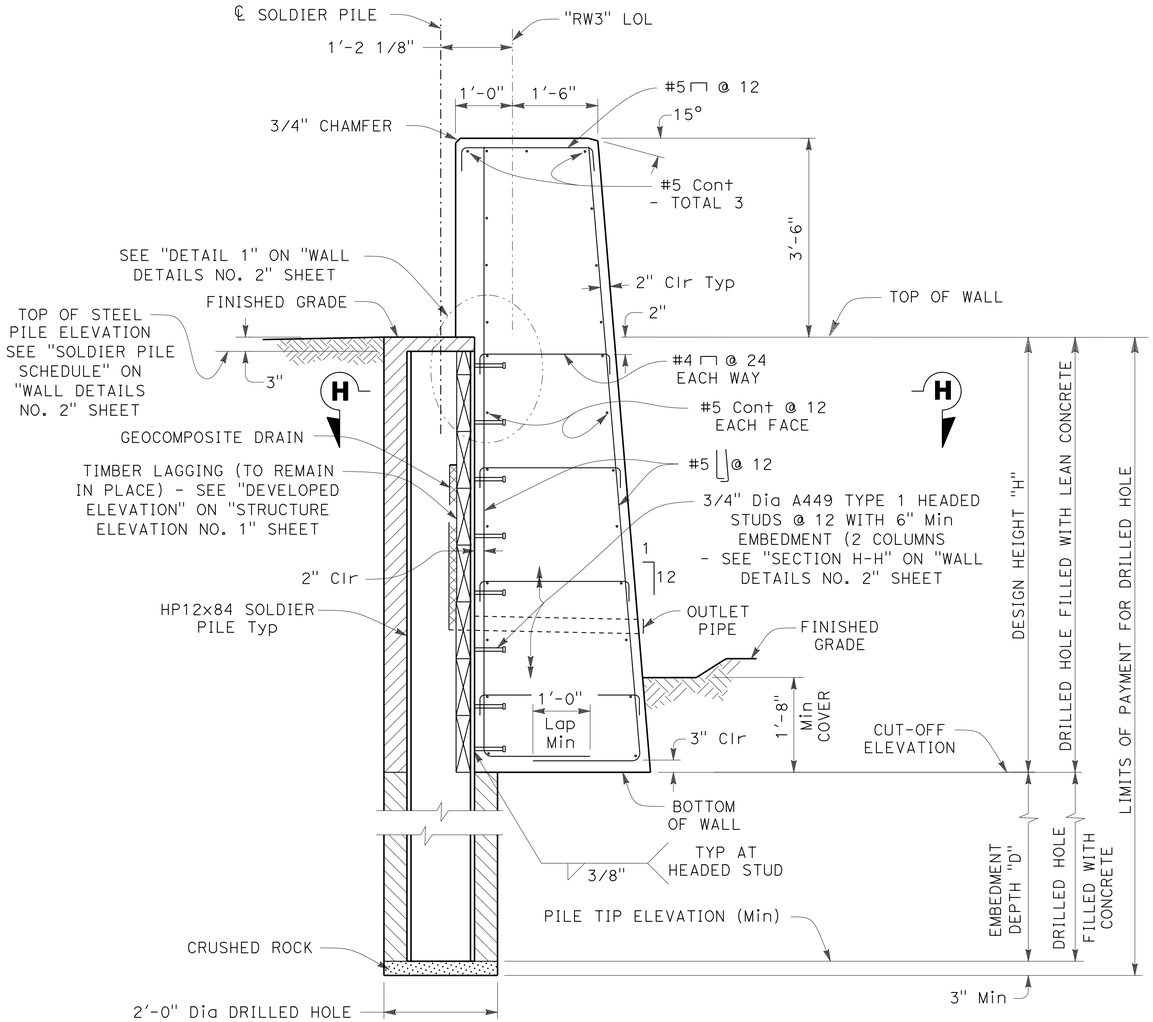
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

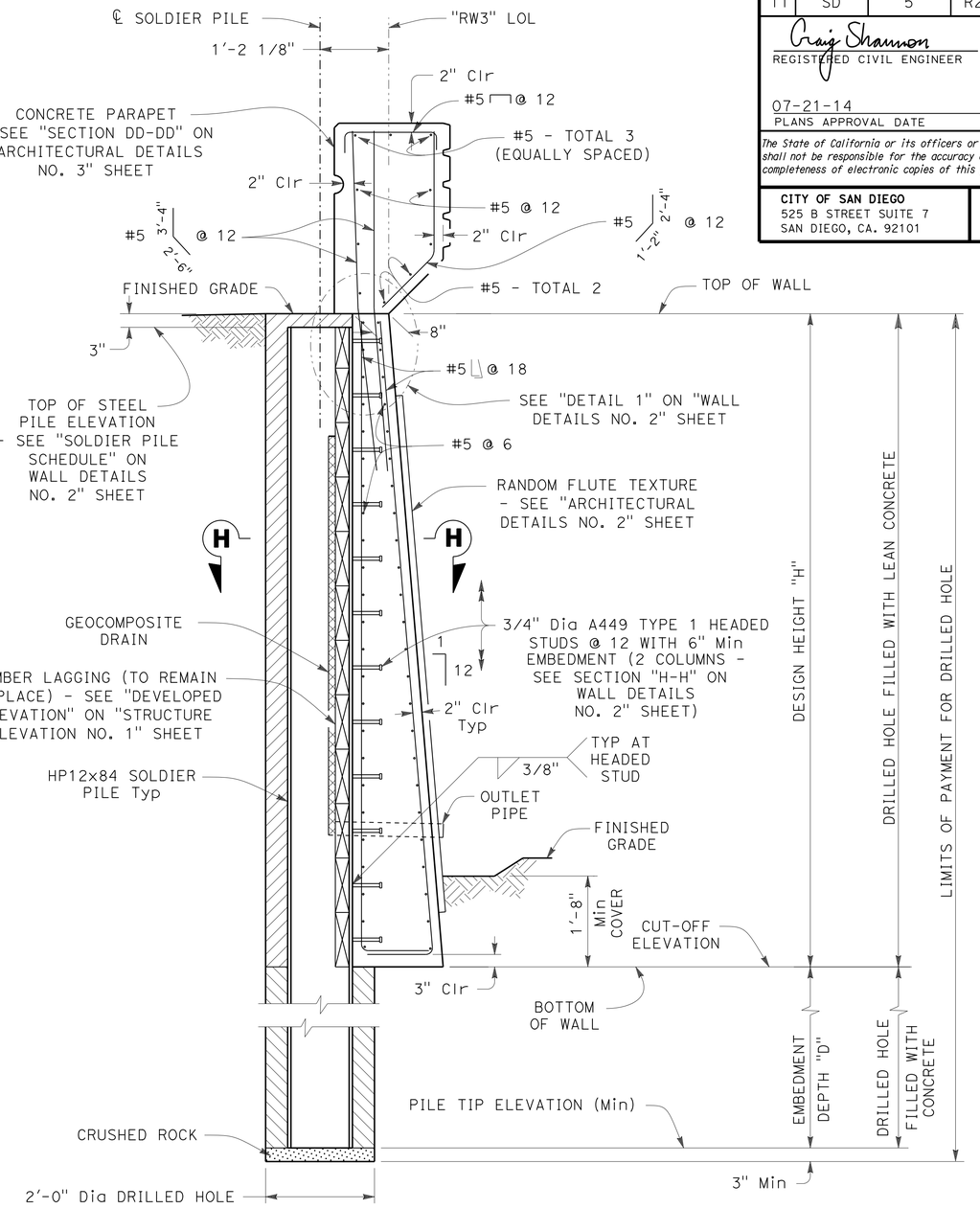
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



SECTION A-A
STA 10+02.00 TO 10+30.00

3/4" = 1'-0"



SECTION B-B
STA 10+30.00 TO 11+72.00

3/4" = 1'-0"

NOTE: For Section "H-H", embedment depth "D", and design height "H", see "WALL DETAILS NO. 2" sheet

DESIGN OVERSIGHT Norbert Gee	DESIGN	BY J. Ramirez	CHECKED L. Muco	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	Craig Shannon PROJECT ENGINEER
3-10-14 SIGN OFF DATE	DETAILS	BY T. Brittain	CHECKED L. Muco		BRIDGE NO. 57E0117
	QUANTITIES	BY J. Ramirez	CHECKED L. Muco		POST MILES 29.2

RETAINING WALL NO. RW3
WALL DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 6-28-12 | 1-31-13 | 2-22-13 | 2-3-14

SHEET 10 OF 33

FILE => 57E0117-g-wd01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	929	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

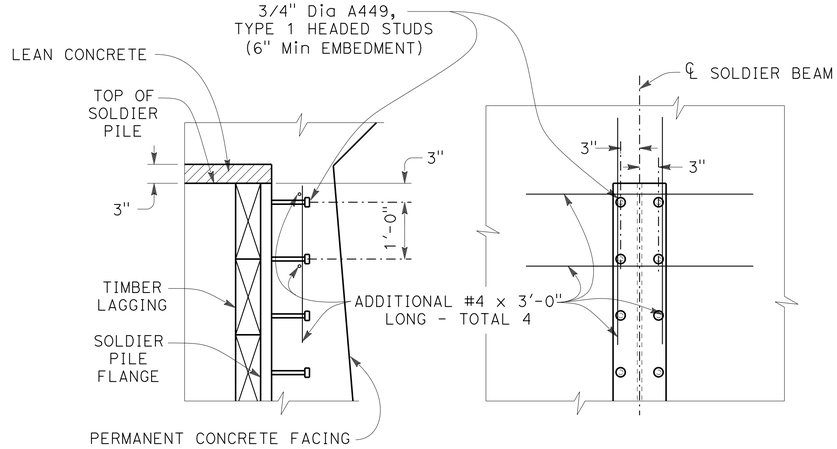
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

SOLDIER PILE SCHEDULE

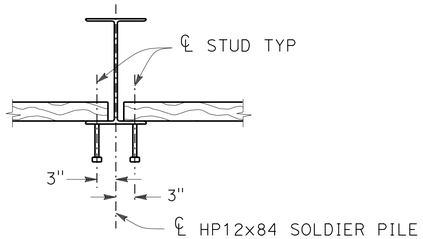
PILE NUMBER	STATION AT CENTERLINE OF PILE	TOP OF STEEL PILE ELEVATION (FEET)	CUT-OFF ELEVATION (FEET)	DESIGN HEIGHT "H" (FEET)	EMBEDMENT DEPTH "D" (FEET)	MINIMUM PILE TIP ELEVATION (FEET)	SOLDIER PILE SECTION
1	10+03.00	331.26	329.76	6.00	11.00	318.76	HP12x84
2	10+09.00	331.27	328.26			317.26	HP12x84
3	10+15.00	331.17	326.75			315.75	HP12x84
4	10+21.00	331.08	326.01			315.01	HP12x84
5	10+27.00	330.99	325.36			314.36	HP12x84
6	10+33.00	330.89	324.72	8.00	13.00	311.72	HP12x84
7	10+39.00	330.80	324.08			311.08	HP12x84
8	10+45.00	330.71	323.43			310.43	HP12x84
9	10+51.00	330.61	322.79			309.79	HP12x84
10	10+57.00	330.52	322.14	10.00	16.00	306.14	HP12x84
11	10+63.00	330.43	321.50			305.50	HP12x84
12	10+69.00	330.33	321.20			305.20	HP12x84
13	10+75.00	330.24	320.96			304.96	HP12x84
14	10+81.00	330.15	320.71			304.71	HP12x84
15	10+87.00	330.06	320.47			304.47	HP12x84
16	10+93.00	329.96	320.22			304.22	HP12x84
17	10+99.00	329.87	319.97	12.00	18.00	301.97	HP12x84
18	11+05.00	329.78	319.73			301.73	HP12x84
19	11+11.00	329.68	319.48			301.48	HP12x84
20	11+17.00	329.59	319.24			301.24	HP12x84
21	11+23.00	329.50	318.99			300.99	HP12x84
22	11+29.00	329.41	318.74			300.74	HP12x84
23	11+35.00	329.33	318.50			300.50	HP12x84
24	11+41.00	329.24	318.25			300.25	HP12x84
25	11+47.00	329.16	318.01			300.01	HP12x84
26	11+53.00	329.08	317.76			299.76	HP12x84
27	11+59.00	329.00	317.51			299.51	HP12x84
28	11+65.00	328.92	317.27			299.27	HP12x84
29	11+71.00	328.84	317.02			299.02	HP12x84



NOTE: Typical reinforcement not shown for clarity. See "WALL DETAILS NO. 1" sheet for information not shown. Section "B-B" shown, Section "A-A" similar.

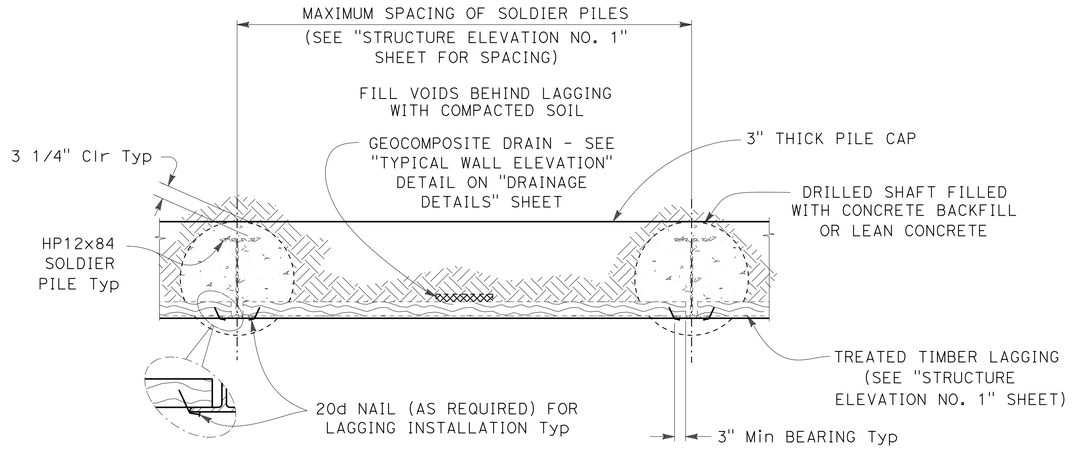
DETAIL 1

Not to Scale



SECTION H-H

Not to Scale



TYPICAL SOLDIER PILE PLAN SECTION

Not to Scale

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
WALL DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-25-12	1-31-13	2-22-13	2-3-14	11	33

FILE => 57E0117-g-wd02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	930	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

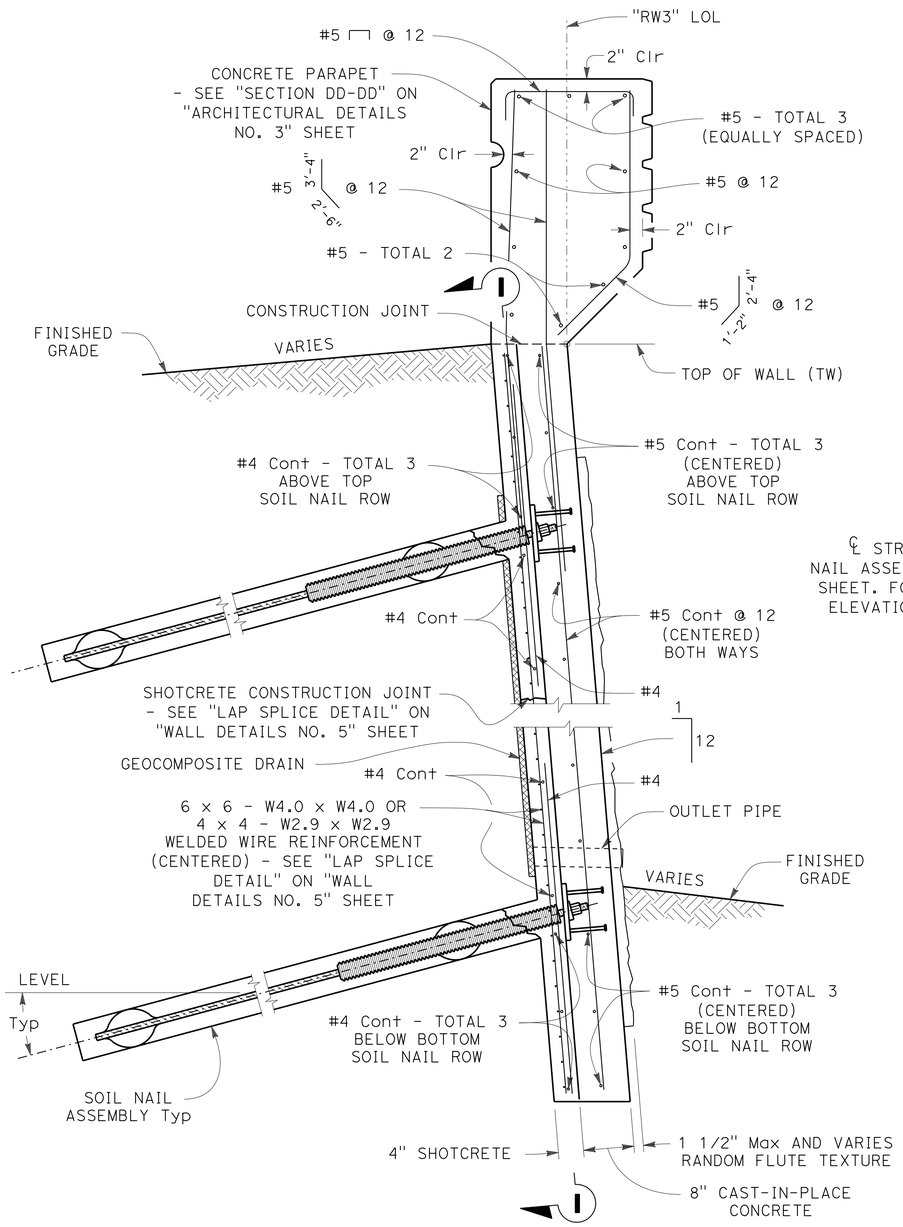
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

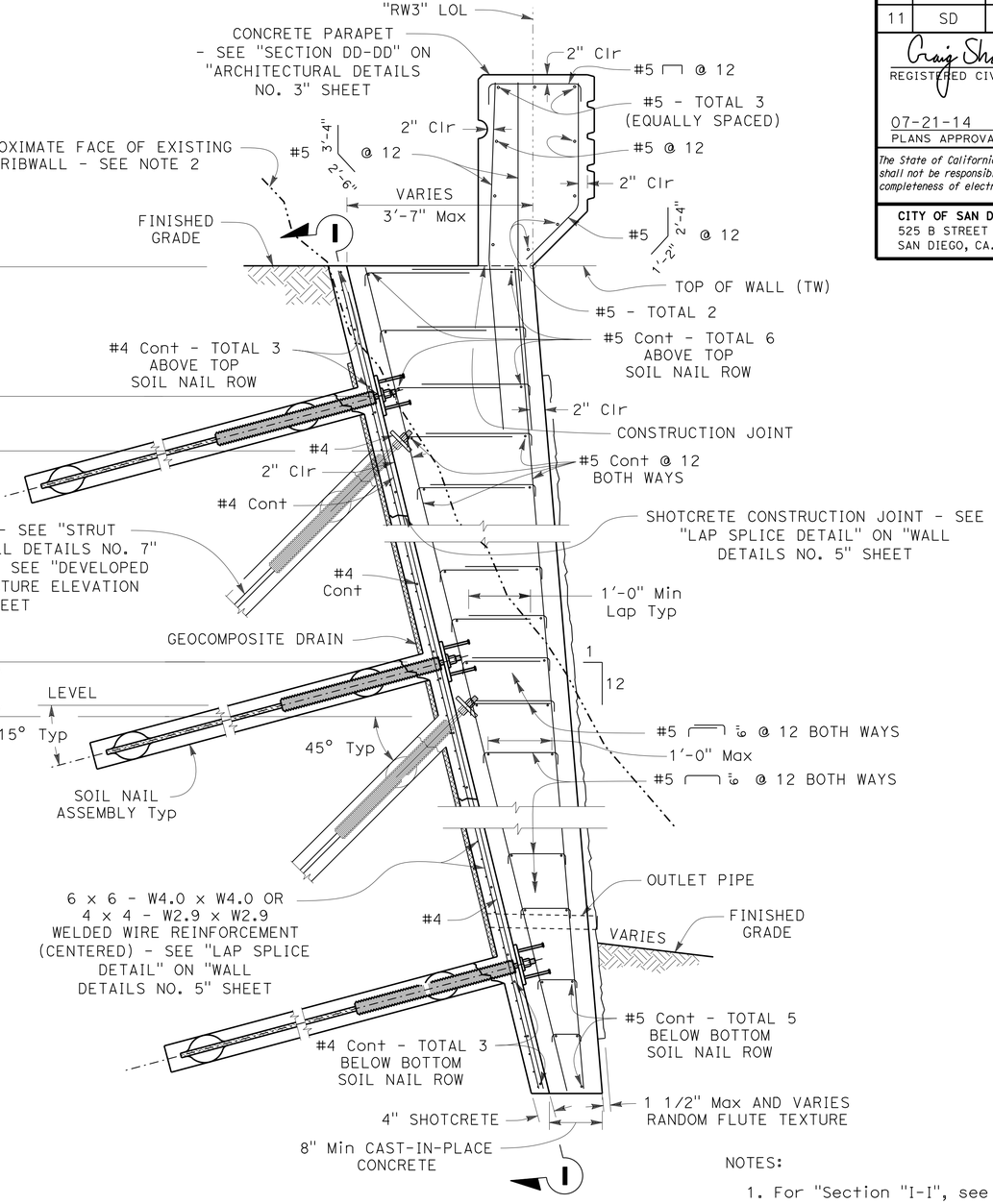
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



SECTION C-C
STA 11+72.00 TO 17+00.00

1" = 1'-0"



SECTION D-D
STA 17+00.00 TO 17+36.00
AND STA 17+78.00 TO 18+03.00

3/4" = 1'-0"

NOTES:

1. For "Section "I-I", see "WALL DETAILS NO. 5" sheet
2. Contractor shall remove interfering portions of existing cribwall. Existing concrete and rebar should be expected. Cribwall limits are approximate. Exact extents of existing cribwall to be verified by Contractor prior to ordering or fabricating any material.
3. For "SOIL NAIL ASSEMBLY" detail, see "WALL DETAILS NO. 6" sheet

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
WALL DETAILS NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-25-12	1-24-13	2-22-13	2-3-14	12	33

FILE => 57E0117-g-wd03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	931	1012

Craig Shannon — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

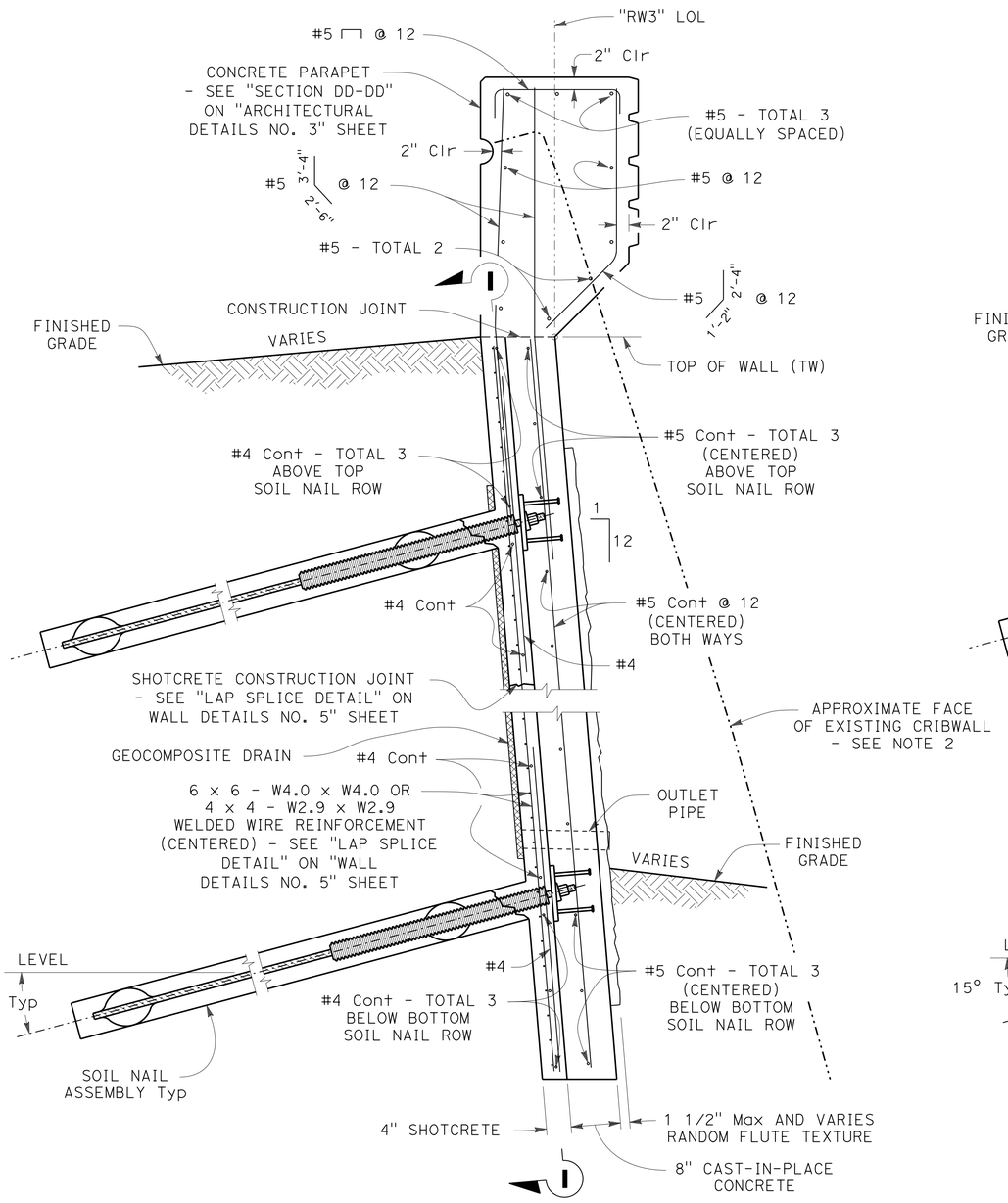
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

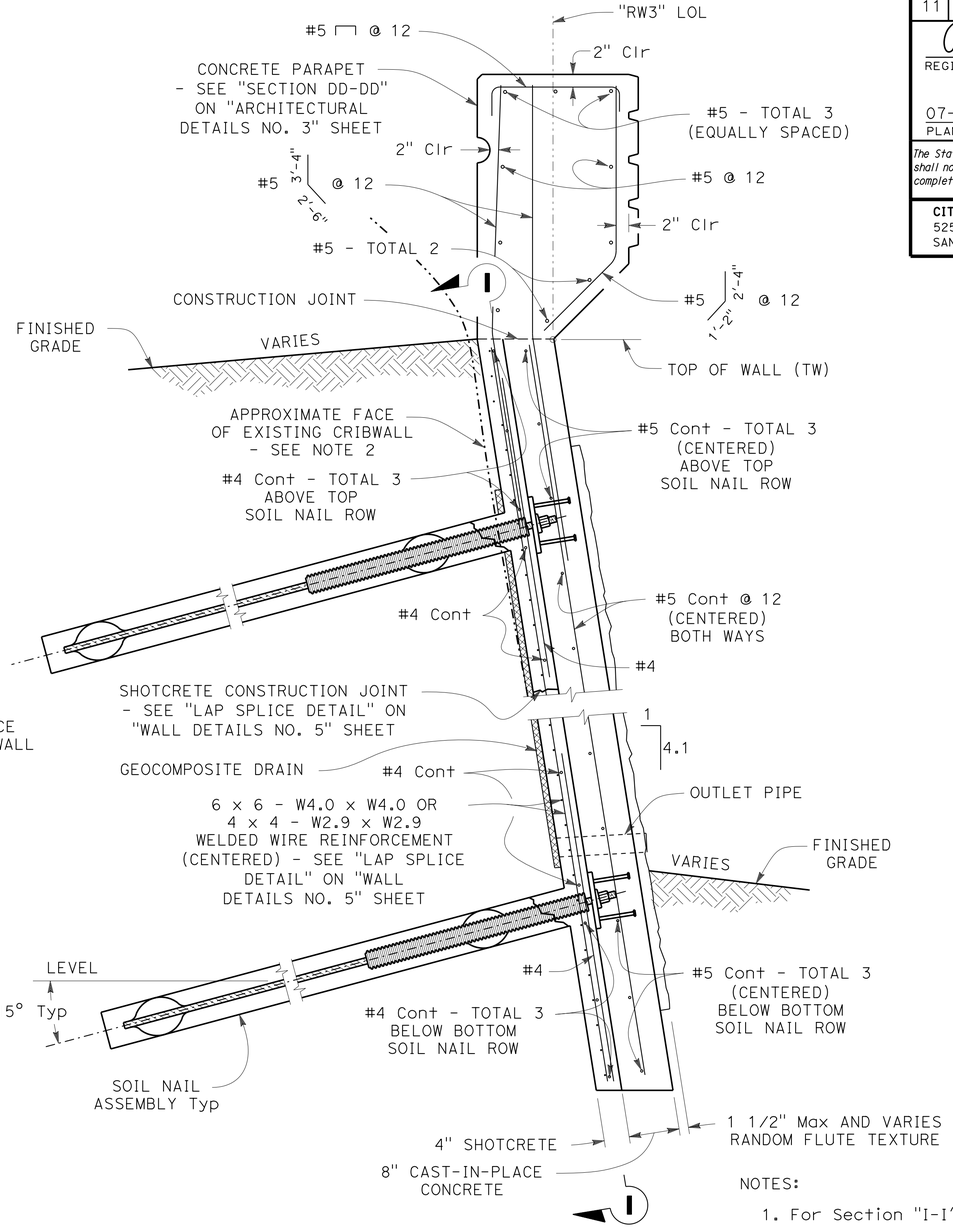
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



SECTION E-E
STA 17+36.00 TO 17+78.00

1" = 1'-0"



SECTION F-F
STA 18+03.00 TO 18+59.33

1" = 1'-0"

NOTES:

1. For Section "I-I'", see "WALL DETAILS NO. 5" sheet
2. Contractor shall remove interfering portions of existing cribwall. Existing concrete and rebar should be expected. Cribwall limits are approximate. Exact extents of existing cribwall to be verified by Contractor prior to ordering or fabricating any material.
3. For "SOIL NAIL ASSEMBLY", see "WALL DETAILS NO. 6" sheet

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
WALL DETAILS NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

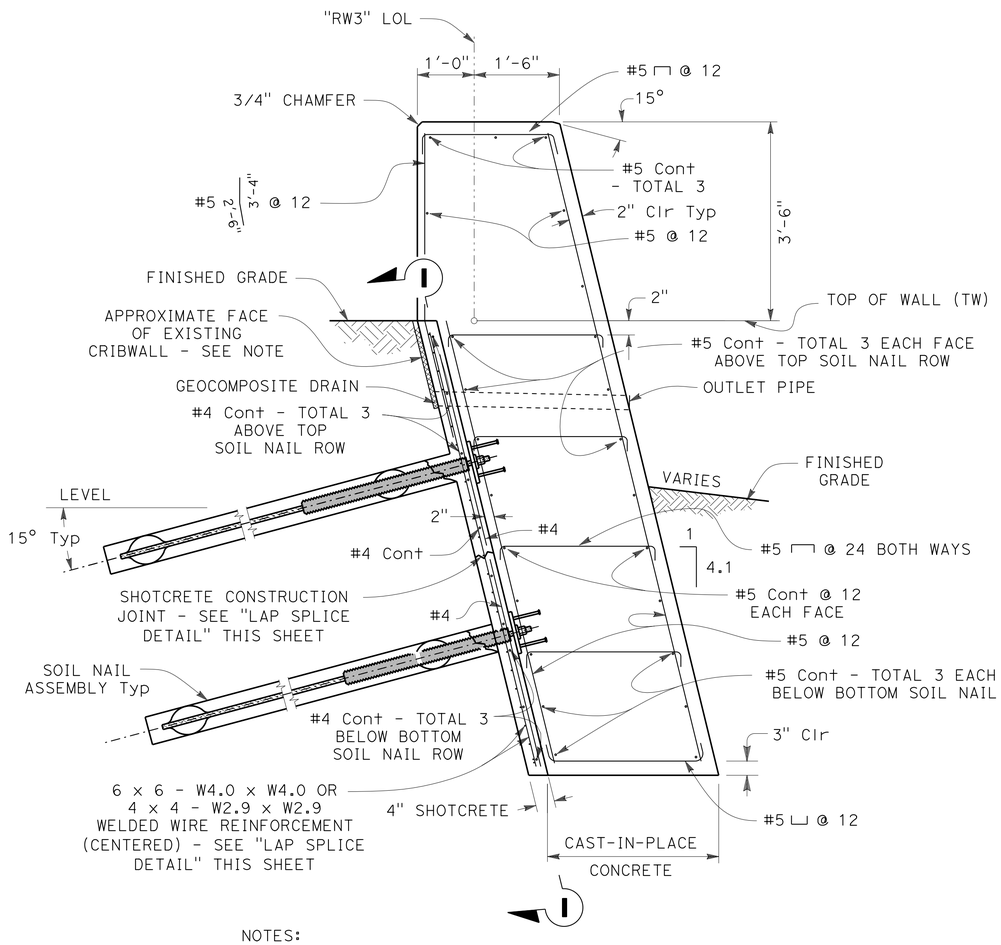
UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-26-12	1-31-13	2-22-13	2-3-14	13	33

FILE => 57E0117-g-wd04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

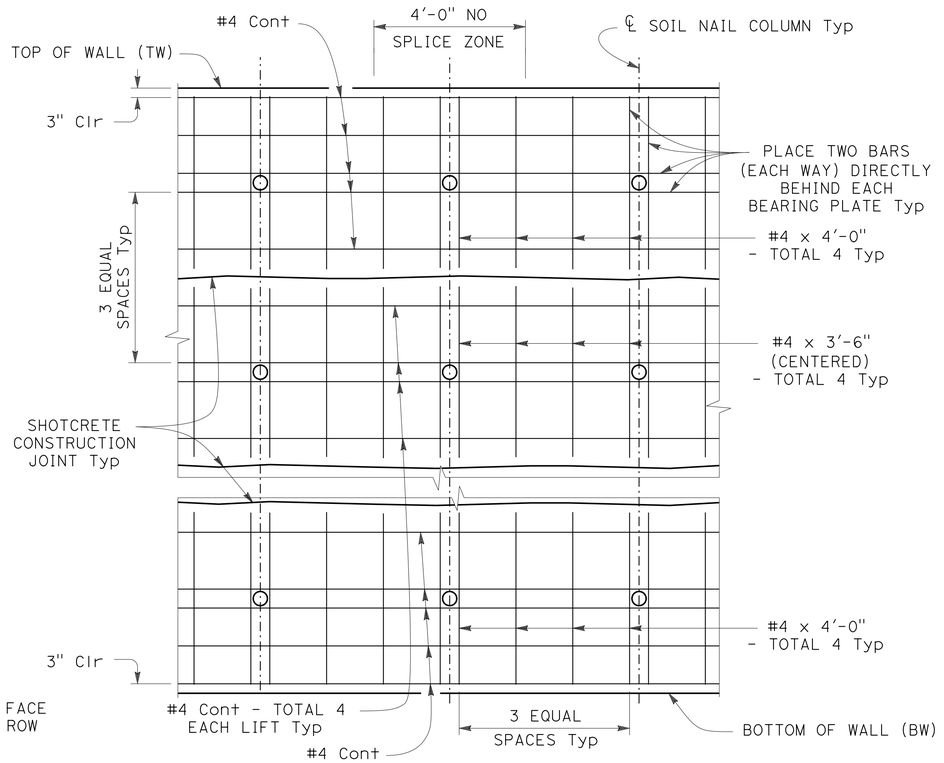


NOTES:

1. Contractor shall remove interfering portions of existing cribwall. Existing concrete and rebar should be expected. Cribwall limits are approximate. Exact extents of existing cribwall to be verified by Contractor prior to ordering or fabricating any material.
2. For "SOIL NAIL ASSEMBLY" detail, see "WALL DETAILS NO. 6" sheet

SECTION G-G
STA 18+59.33 TO 18+78.00

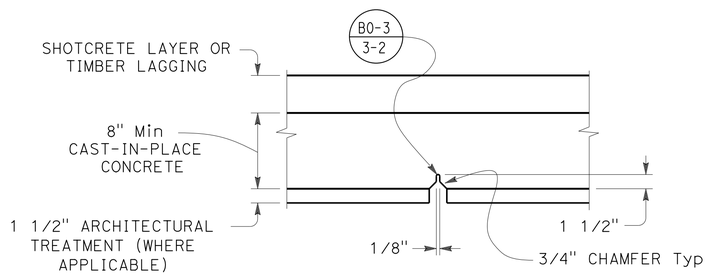
3/4" = 1'-0"



NOTE: Welded Wire Reinforcement not shown for clarity.
Three rows of nails shown, others similar.

SECTION I-I

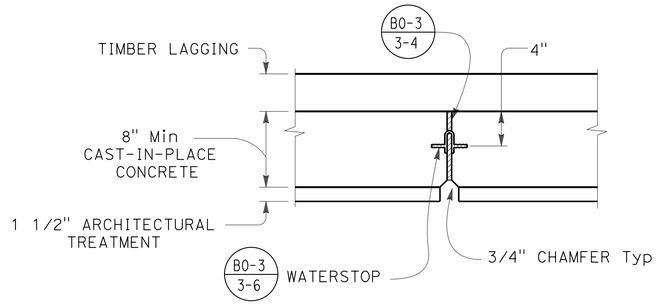
No Scale



NOTE: Reinforcement not shown for clarity

WEAKENED PLANE DETAIL

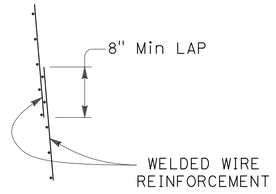
1 1/2" = 1'-0"



NOTE: Reinforcement not shown for clarity

EXPANSION JOINT DETAIL

1 1/2" = 1'-0"



LAP SPLICE DETAIL

No Scale

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	932	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14 PLANS APPROVAL DATE

Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO	SIMON WONG ENGINEERING
525 B STREET SUITE 7	9968 HIBERT STREET
SAN DIEGO, CA. 92101	SAN DIEGO, CA. 92131

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

		BY	CHECKED
DESIGN		J. Ramirez	L. Muco
DETAILS		T. Brittain	L. Muco
QUANTITIES		J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0117 — POST MILES 29.2

RETAINING WALL NO. RW3
WALL DETAILS NO. 5

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771 — PROJECT NUMBER & PHASE: 11120001021 — CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES: 6-25-12 | 1-31-13 | 2-22-13 | 2-3-14

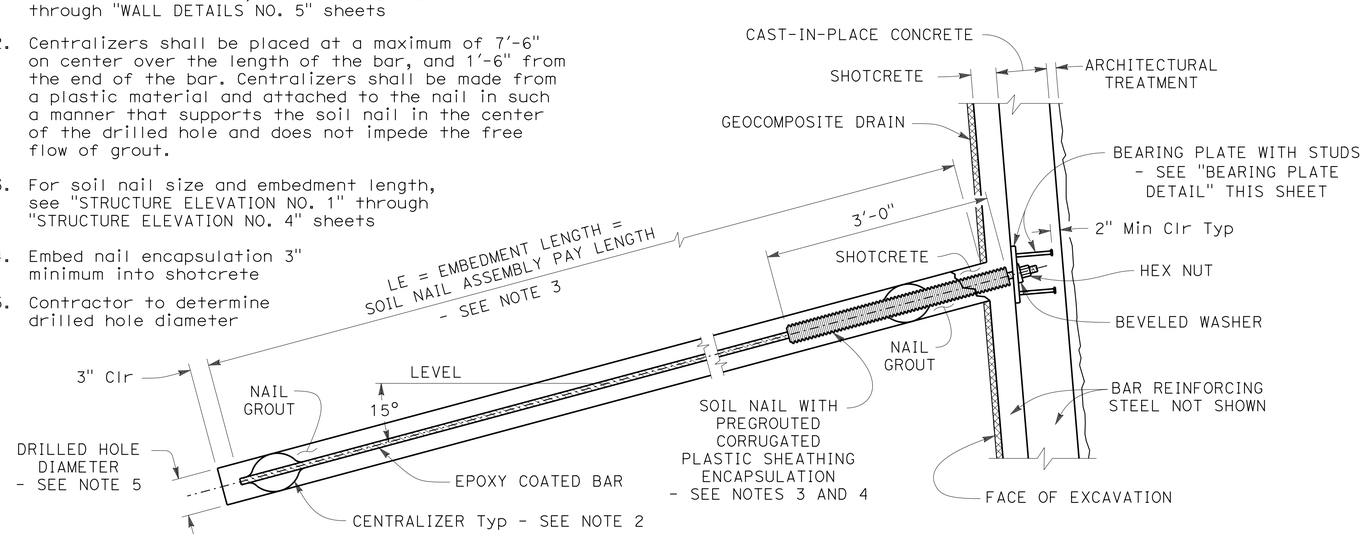
SHEET 14 OF 33

FILE => 57E0117-g-wd05.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

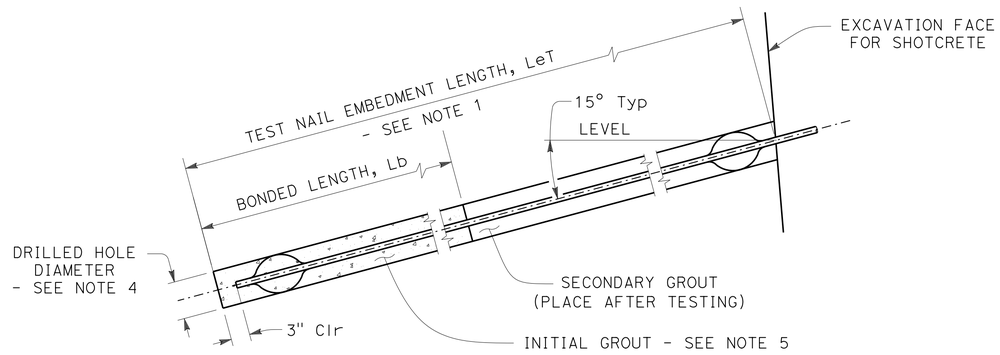
NOTES:

1. For details not shown, see "WALL DETAILS NO. 3" through "WALL DETAILS NO. 5" sheets
2. Centralizers shall be placed at a maximum of 7'-6" on center over the length of the bar, and 1'-6" from the end of the bar. Centralizers shall be made from a plastic material and attached to the nail in such a manner that supports the soil nail in the center of the drilled hole and does not impede the free flow of grout.
3. For soil nail size and embedment length, see "STRUCTURE ELEVATION NO. 1" through "STRUCTURE ELEVATION NO. 4" sheets
4. Embed nail encapsulation 3" minimum into shotcrete
5. Contractor to determine drilled hole diameter



SOIL NAIL ASSEMBLY

1" = 1'-0"

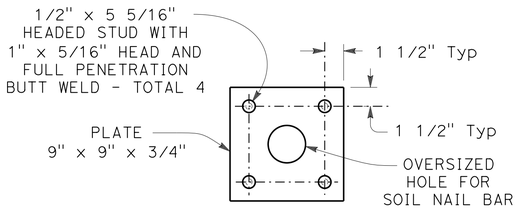


NOTES:

1. The test nail embedment length LeT, shall be equal to 2/3 of the embedment length, Le, of adjacent production soil nail assemblies, but not less than 12'-0"
2. The total length of the test nail assembly equals the embedment length plus the length required for jacking equipment
3. For location of proof test nail , see "STRUCTURE ELEVATION NO. 1" through "STRUCTURE ELEVATION NO. 4" sheets. Additional proof test nails will be installed and tested per special provisions.
4. Contractor to determine drilled hole diameter
5. Finished grout surface to be normal to the bar

PROOF TEST NAIL DETAIL

1" = 1'-0"



BEARING PLATE DETAIL

2" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	933	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

DESIGN	BY J. Ramirez	CHECKED L. Muco	
DETAILS	BY T. Brittain	CHECKED L. Muco	
QUANTITIES	BY J. Ramirez	CHECKED L. Muco	

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
WALL DETAILS NO. 6

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-29-12	1-31-13	2-22-13	2-3-14	15	33

FILE => 57E0117-g-wd06.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	934	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

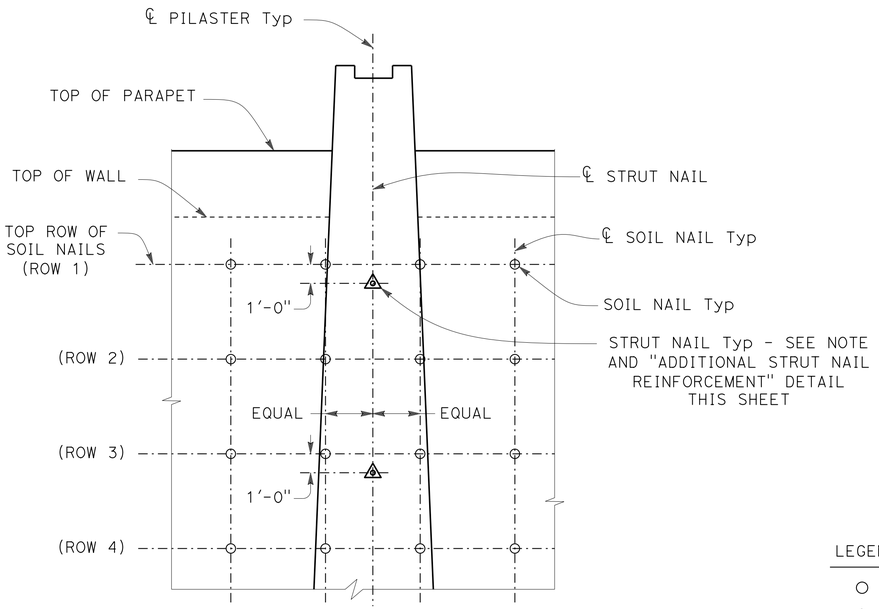
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: For Strut Nail layout, see "STRUCTURE ELEVATION NO. 1" through "STRUCTURE ELEVATION NO. 4" sheets

TYPICAL PILASTER ELEVATION

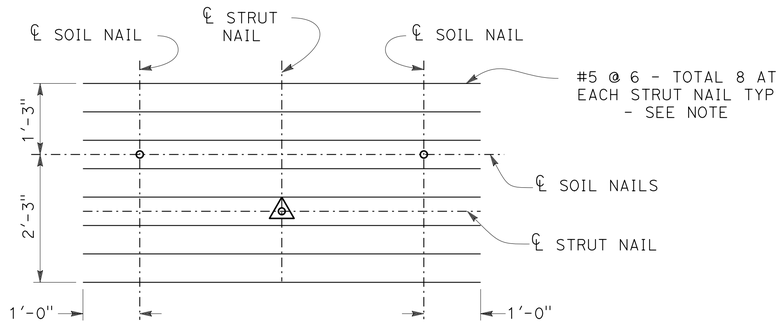
No Scale

LEGEND:

○ - Indicates location of Soil Nail Assembly

△ - Indicates location of Strut Nail Assembly

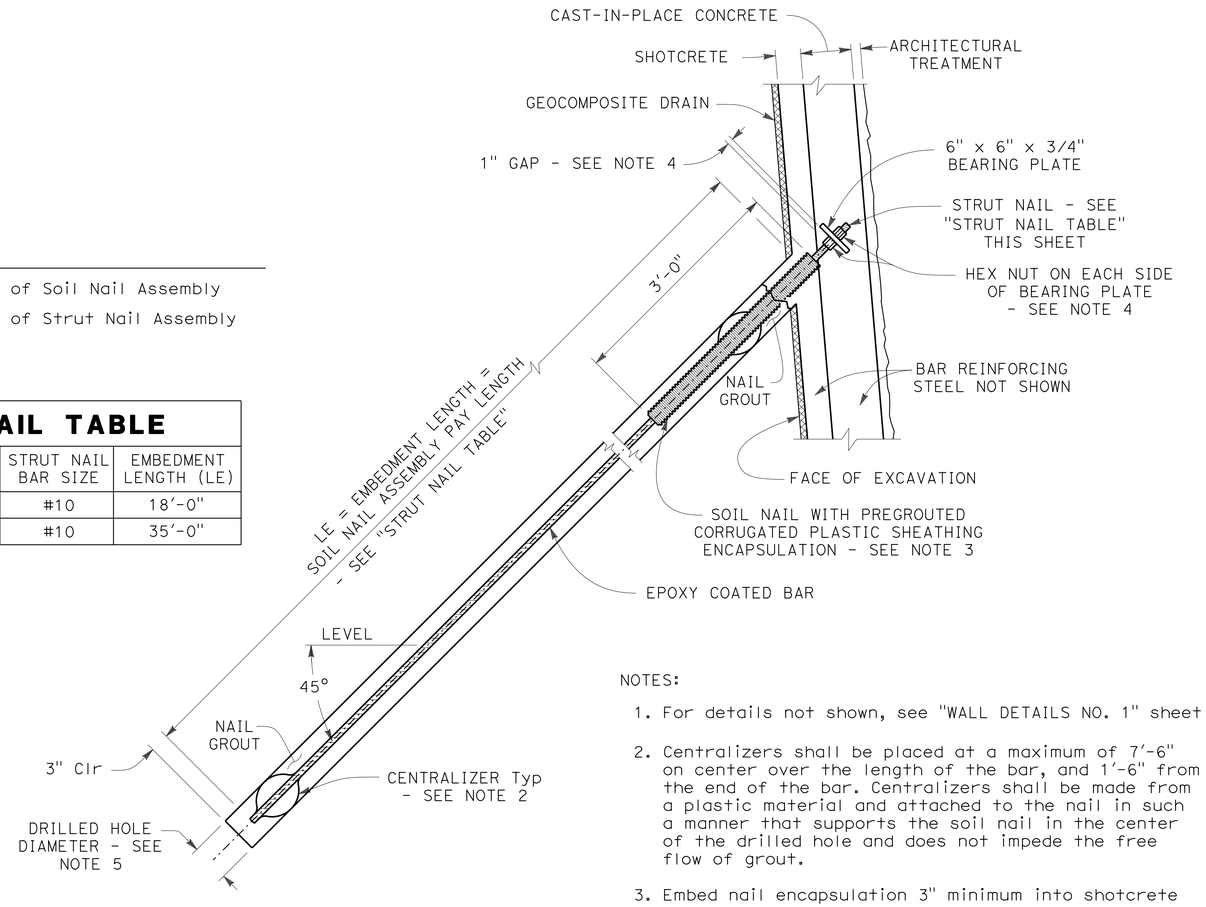
STRUT NAIL TABLE			
BEGIN STATION	END STATION	STRUT NAIL BAR SIZE	EMBEDMENT LENGTH (LE)
11+72.00	17+00.00	#10	18'-0"
17+00.00	18+78.00	#10	35'-0"



NOTE: Additonal reinforcement in cast-in-place wall facing at strut nails. For more information, see Sections "O-O" and "P-P" on "PILASTER DETAILS NO. 3" sheet, and Sections "W-W" and "X-X" on "PILASTER DETAILS NO. 5" sheet.

ADDITIONAL STRUT NAIL REINFORCEMENT

No Scale



NOTES:

1. For details not shown, see "WALL DETAILS NO. 1" sheet
2. Centralizers shall be placed at a maximum of 7'-6" on center over the length of the bar, and 1'-6" from the end of the bar. Centralizers shall be made from a plastic material and attached to the nail in such a manner that supports the soil nail in the center of the drilled hole and does not impede the free flow of grout.
3. Embed nail encapsulation 3" minimum into shotcrete
4. Install bearing plate and nuts after completion of full height shotcrete facing. Leave 1" gap between edge of bearing plate and shotcrete facing. Hex nuts shall be snug tight against bearing plate.
5. Contractor to determine drilled hole diameter

STRUT NAIL ASSEMBLY

1" = 1'-0"

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
WALL DETAILS NO. 7

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11020001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	16	33

FILE => 57E0117-g-wd07.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	935	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

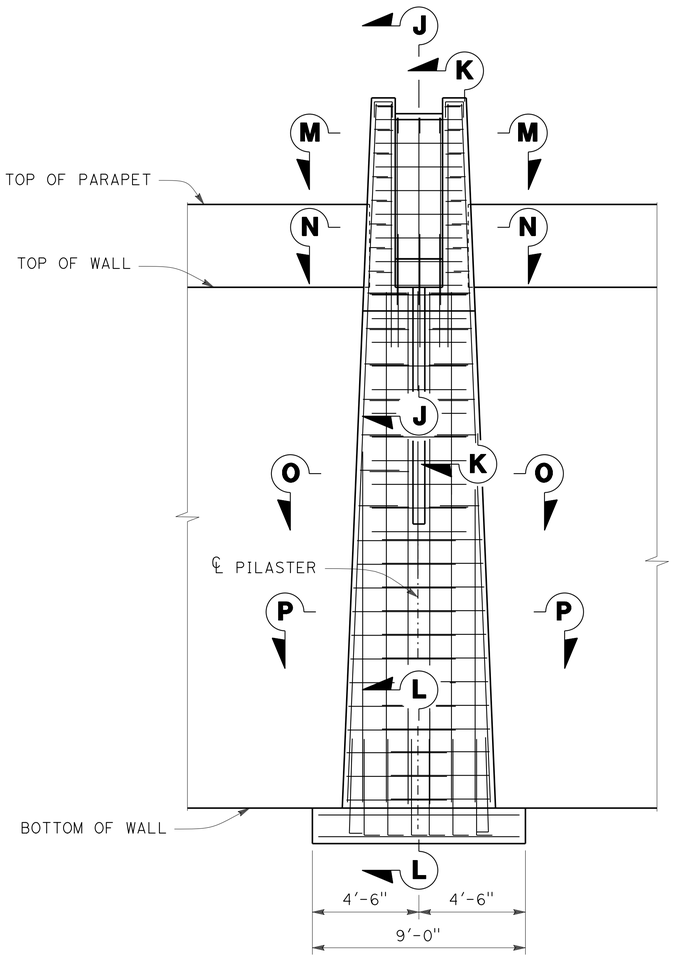
07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

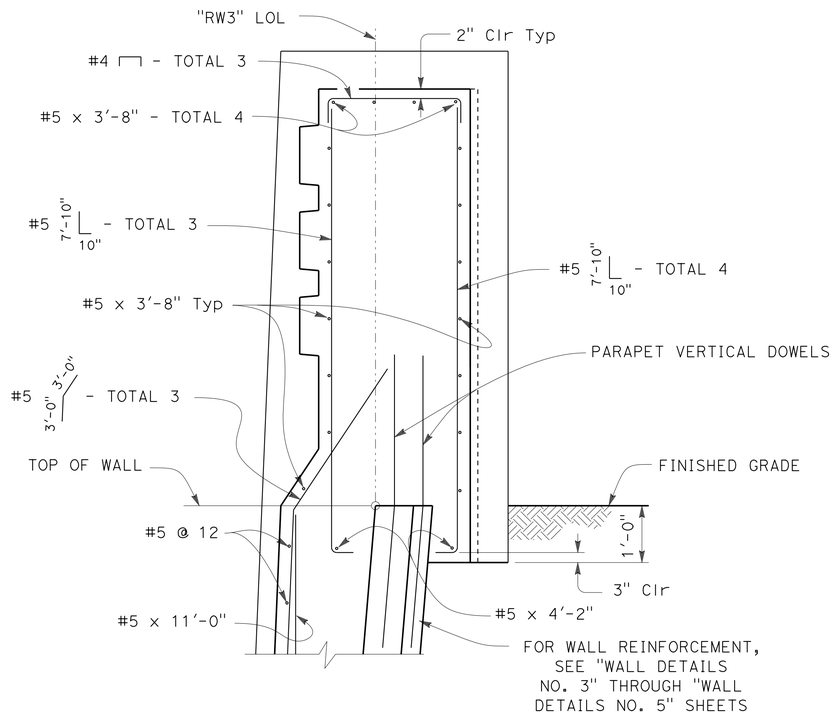
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: Pilaster at Sta 16+09 shown, other pilasters similar, unless otherwise noted

TYPICAL PILASTER ELEVATION

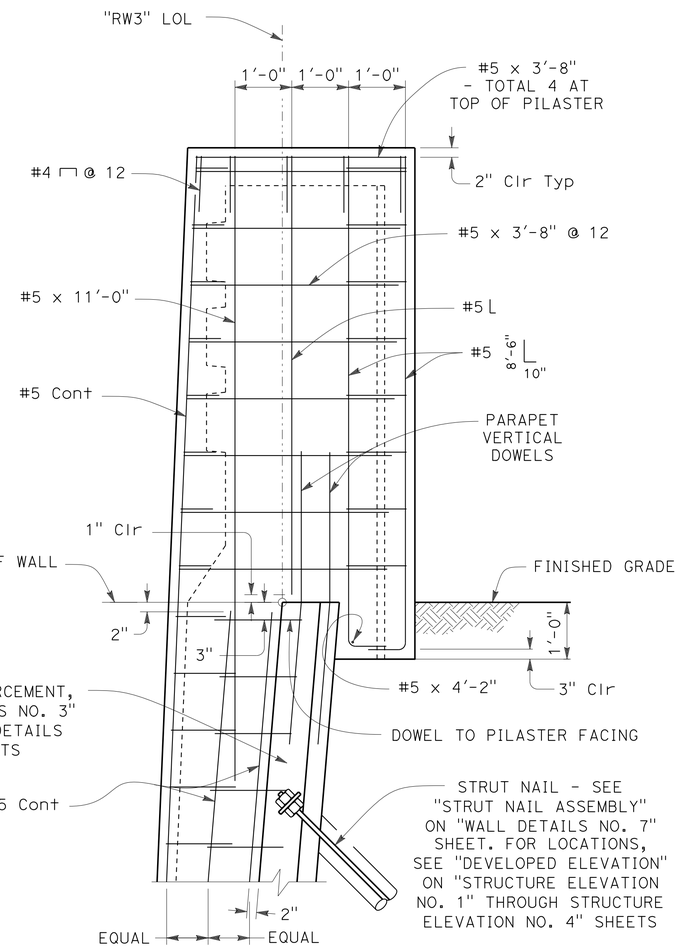
No Scale



NOTE: Pilaster at soil nail wall shown, pilaster at soldier pile wall similar

SECTION J-J

3/4" = 1'-0"



NOTE: Pilaster at soil nail wall shown, pilaster at soldier pile wall similar

SECTION K-K

3/4" = 1'-0"

NOTES:

1. For Sections "L-L", "M-M", AND "N-N", see "PILASTER DETAILS NO. 2" sheet
1. For Sections "O-O", and "P-P", see "PILASTER DETAILS NO. 3" sheet
2. For Pilaster dimensions, see "ARCHITECTURAL DETAILS NO. 1" sheet

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
PILASTER DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	17	33

FILE => 57E0117-j-pd01.dgn

USERNAME => s\127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	936	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

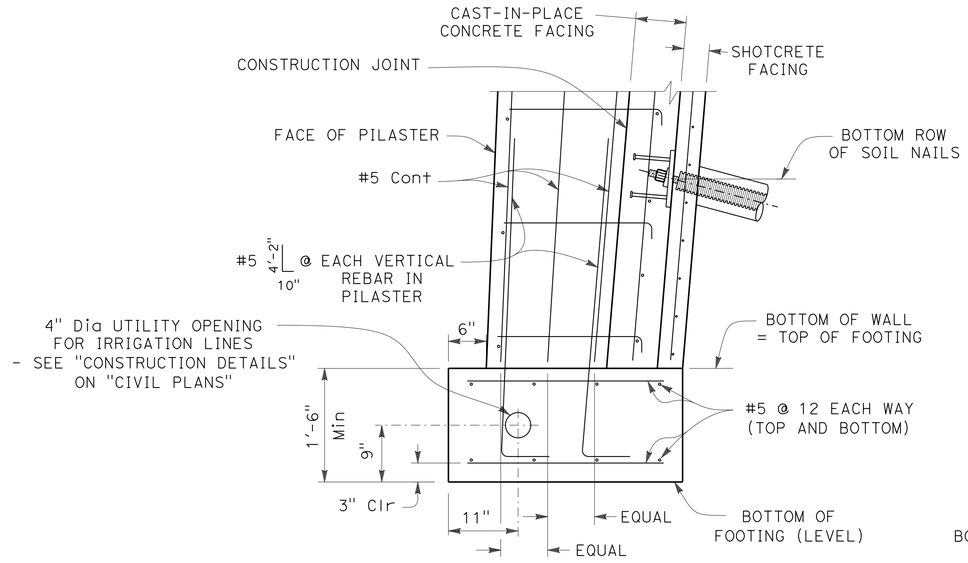
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

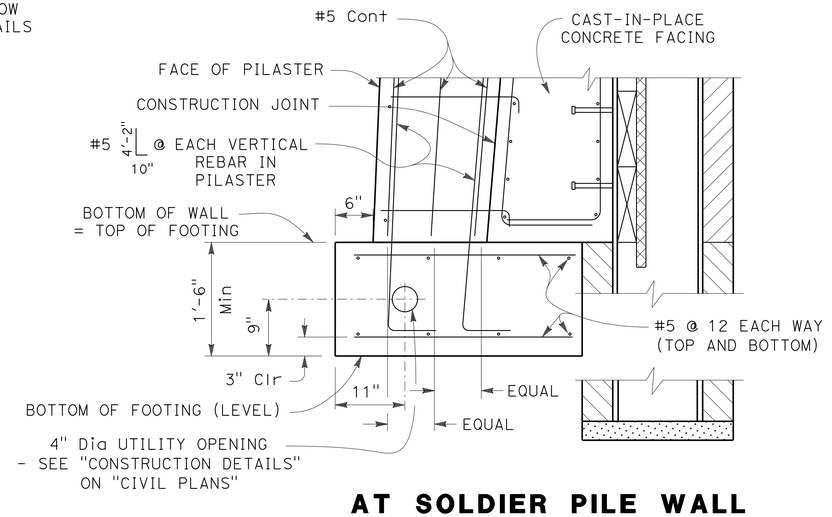
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: Excavate for footing after shotcrete facing has been installed

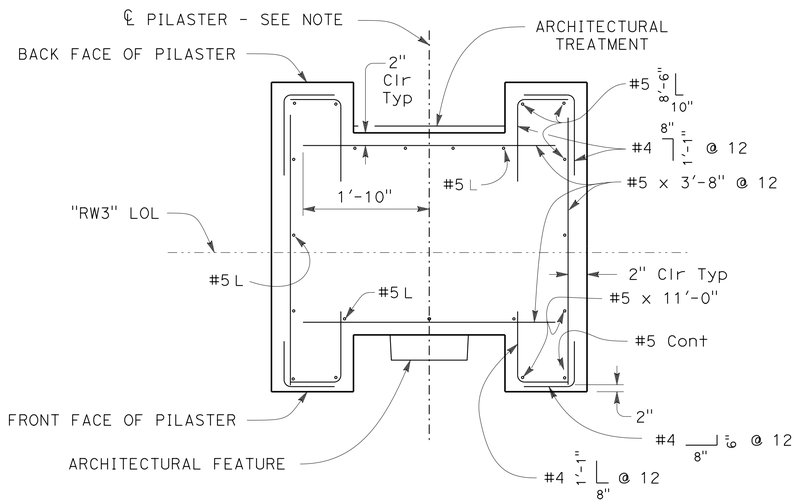
AT SOIL NAIL WALL



AT SOLDIER PILE WALL

SECTION L-L

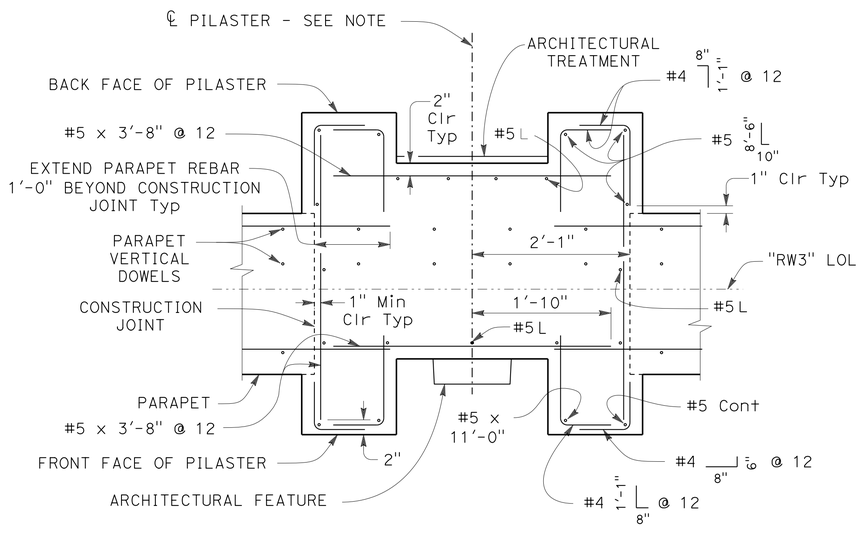
1" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION M-M

1" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION N-N

1" = 1'-0"

NOTE: For Pilaster dimensions, see "ARCHITECTURAL DETAILS NO. 1" sheet

Norbert Gee
DESIGN OVERSIGHT
5-7-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
PILASTER DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

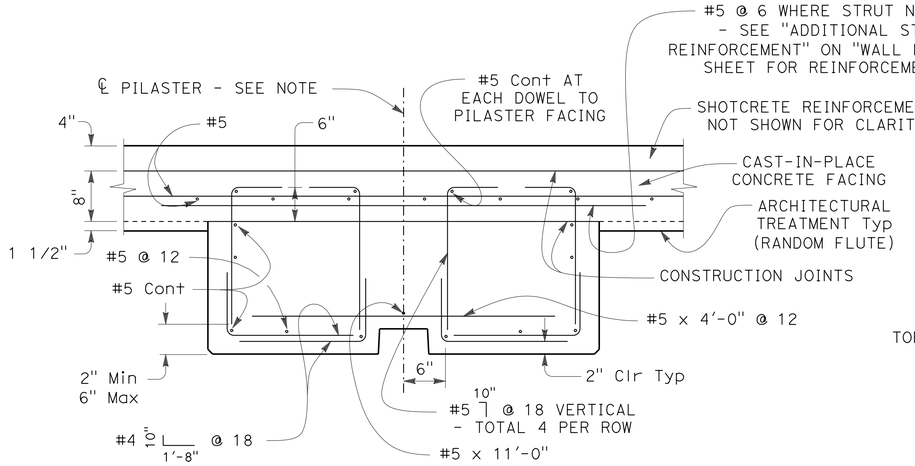
UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	18	33

FILE => 57E0117-j-pd02.dgn

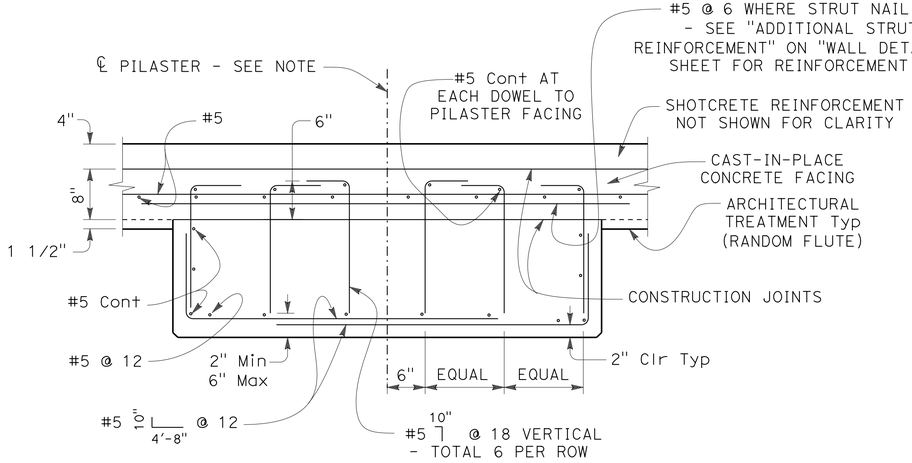
USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION O-O

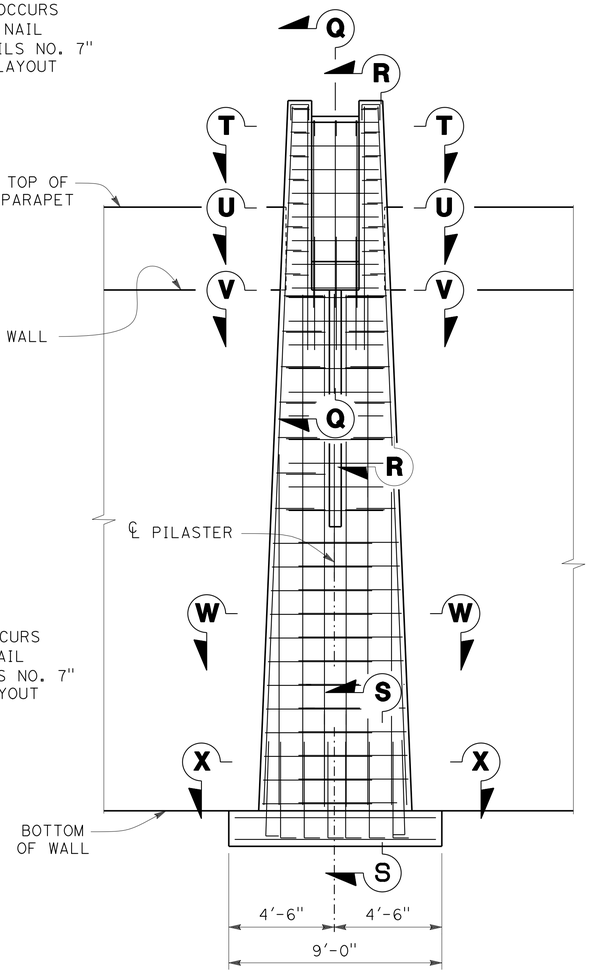
1" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION P-P

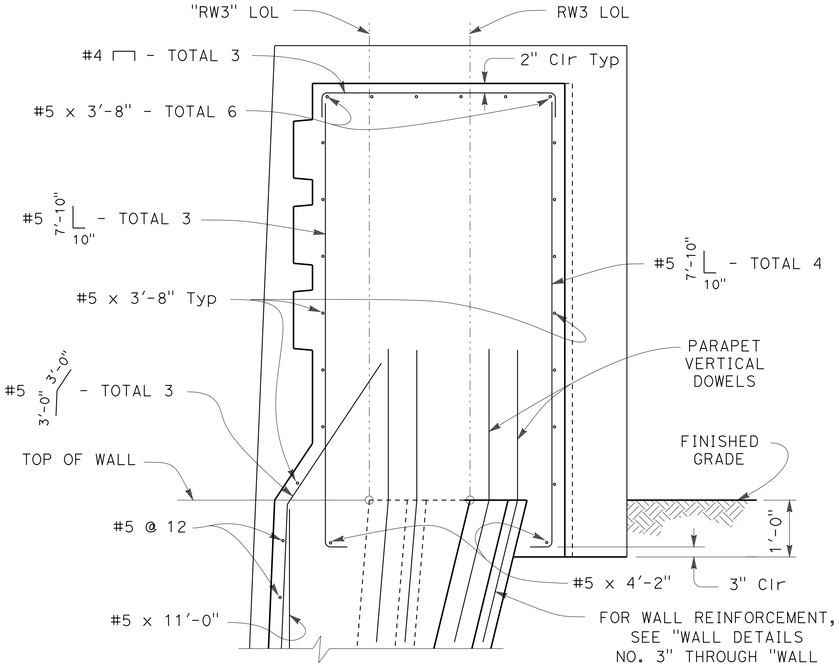
1" = 1'-0"



NOTE: For pilaster at Sta 18+01 only

END PILASTER ELEVATION

No Scale



SECTION Q-Q

3/4" = 1'-0"

NOTES:

1. For Sections "R-R", "S-S", "T-T", AND "U-U", see "PILASTER DETAILS NO. 4" sheet
1. For Sections "V-V", "W-W", AND "X-X", see "PILASTER DETAILS NO. 5" sheet
2. For Pilaster dimensions, see "ARCHITECTURAL DETAILS NO. 2" sheet

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	937	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
PILASTER DETAILS NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			
6-28-12	1-31-13	2-22-13	2-3-14

SHEET 19 OF 33

FILE => 57E0117-j-pd03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	938	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

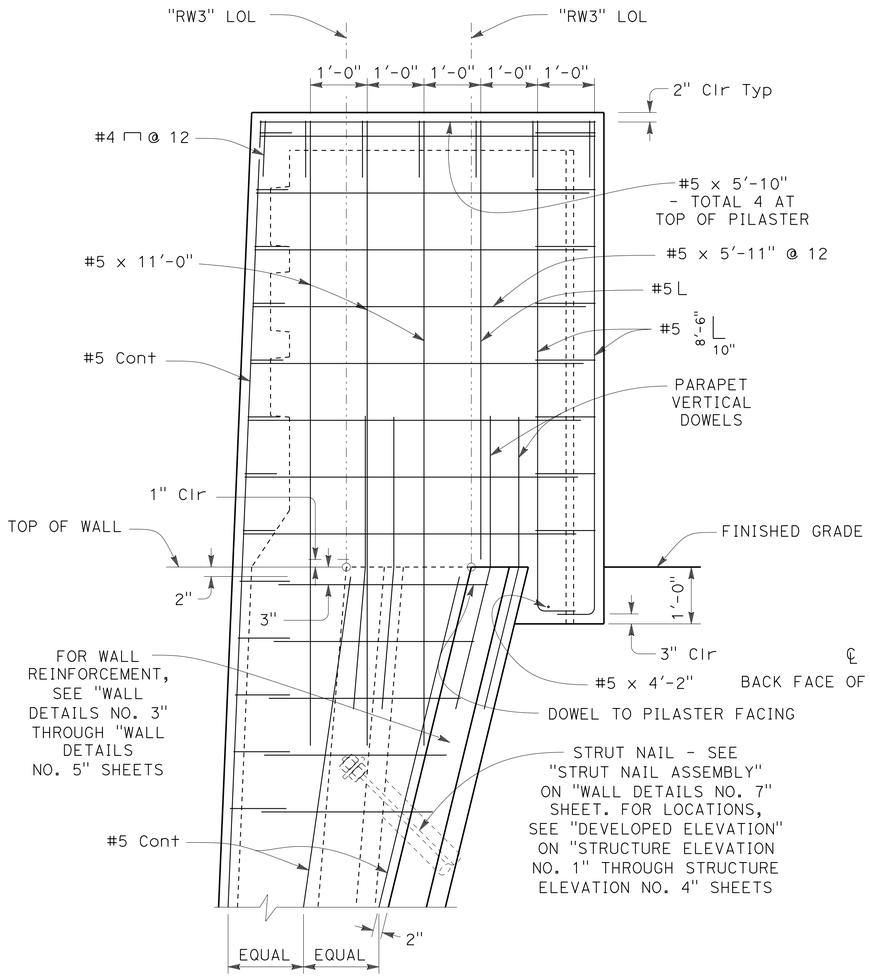
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

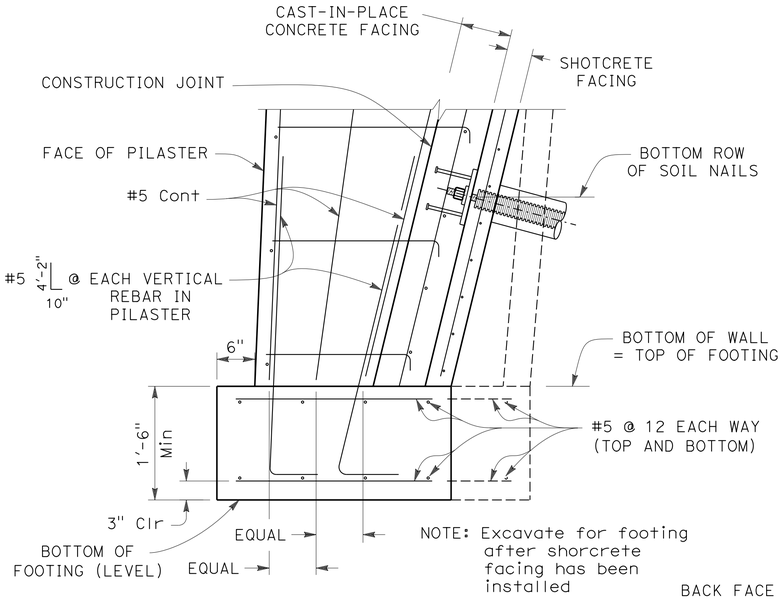
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



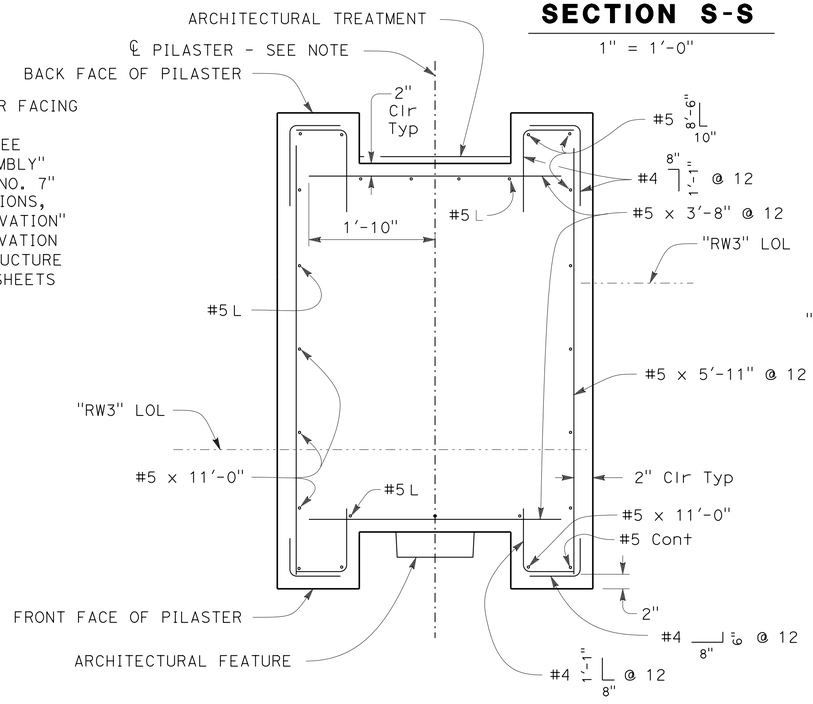
SECTION R-R

3/4" = 1'-0"



SECTION S-S

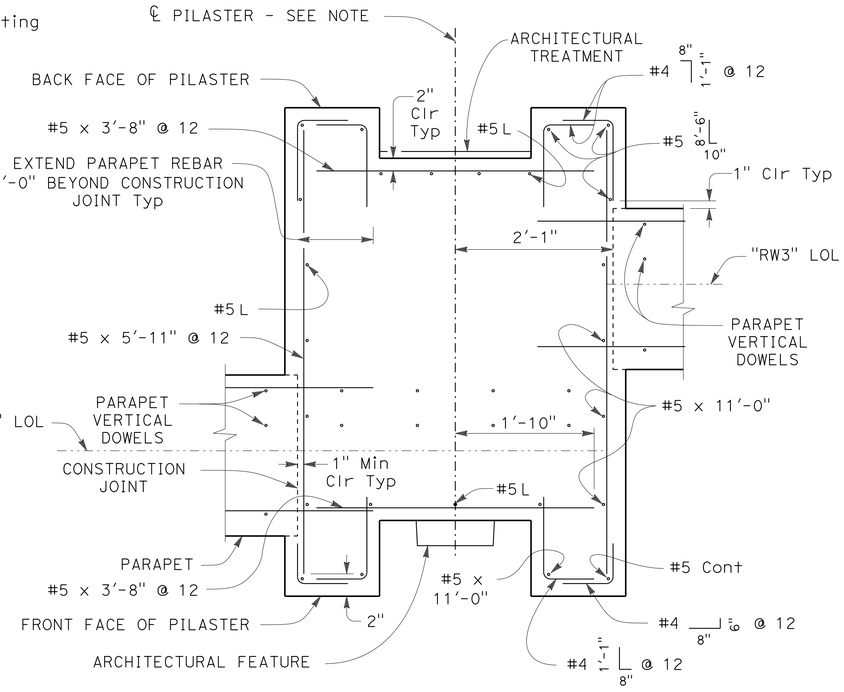
1" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION T-T

1" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION U-U

1" = 1'-0"

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
PILASTER DETAILS NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-26-12	1-31-13	2-22-13	2-3-14	20	33

FILE => 57E0117-j-pd04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	939	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

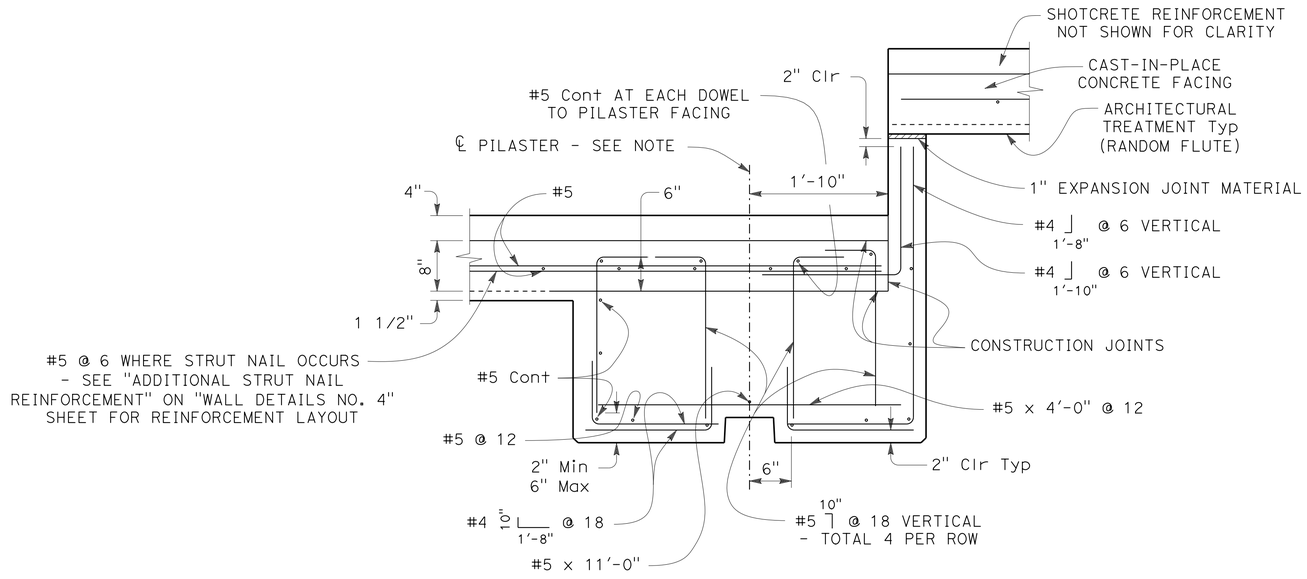
07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

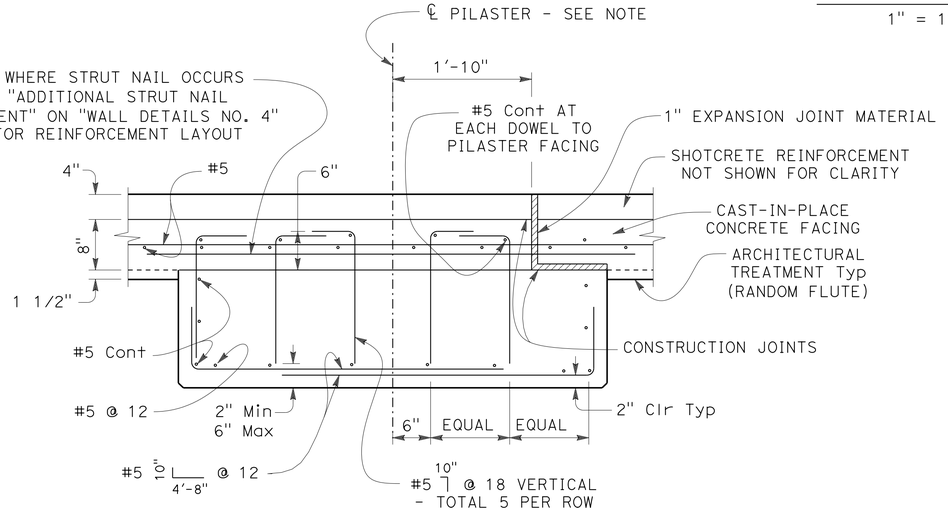
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: Reinforcement is symmetrical about centerline pilaster, unless otherwise noted

SECTION V-V

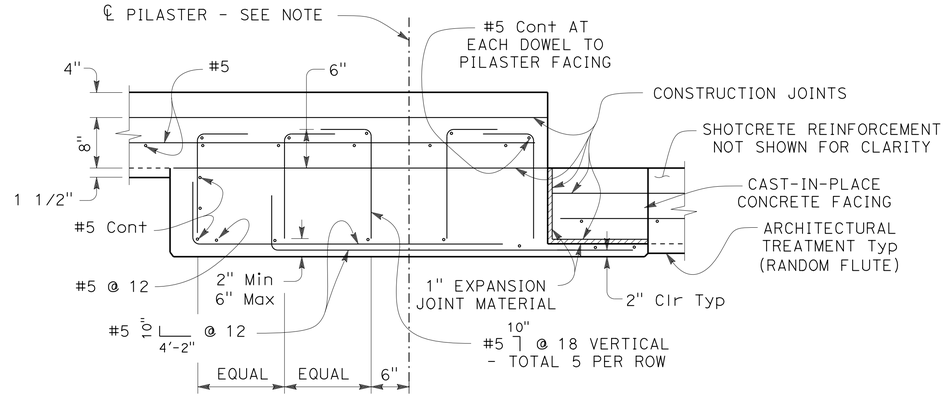
1" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster, unless otherwise noted

SECTION W-W

1" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster, unless otherwise noted

SECTION X-X

1" = 1'-0"

Norbert Gee DESIGN OVERSIGHT		DESIGN	BY J. Ramirez	CHECKED L. Muco	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
3-10-14 SIGN OFF DATE		DETAILS	BY T. Brittain	CHECKED L. Muco	
		QUANTITIES	BY J. Ramirez	CHECKED L. Muco	

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
PILASTER DETAILS NO. 5

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	21	33

FILE => 57E0117-j-pd05.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	940	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

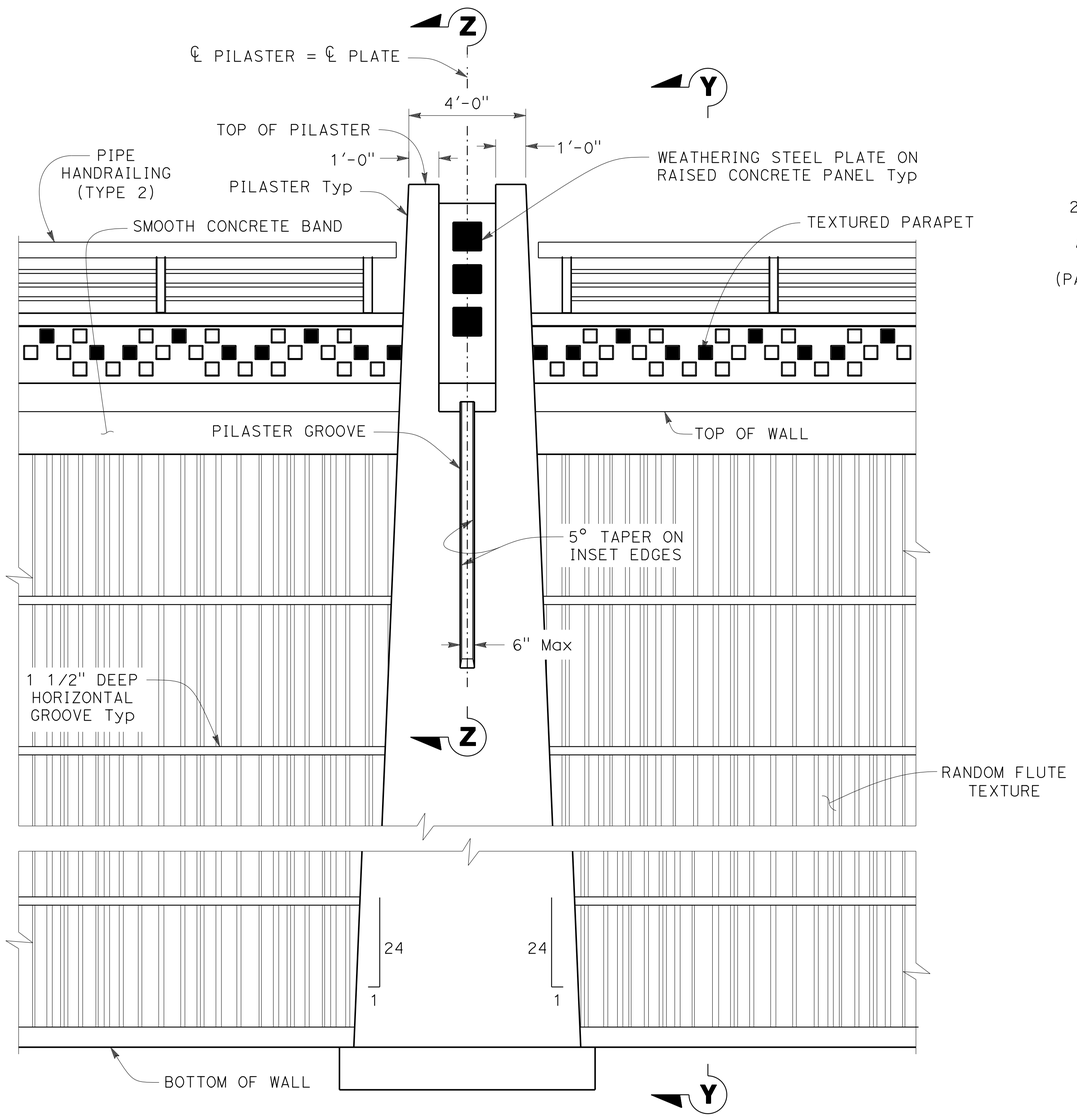
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

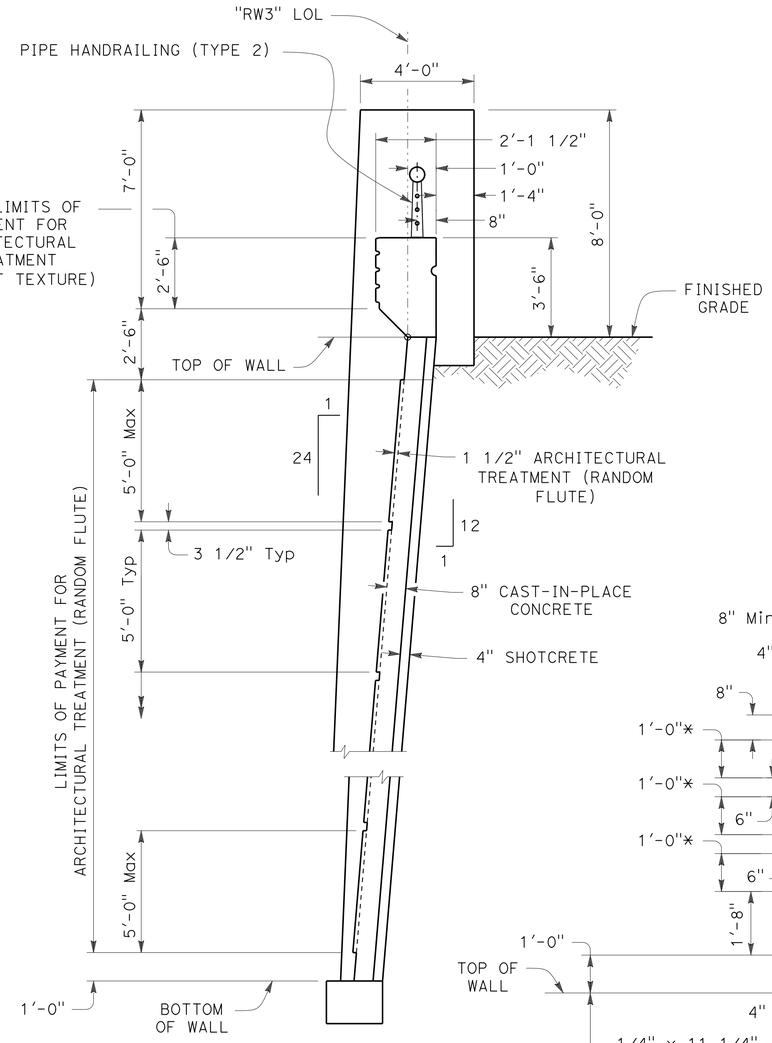
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



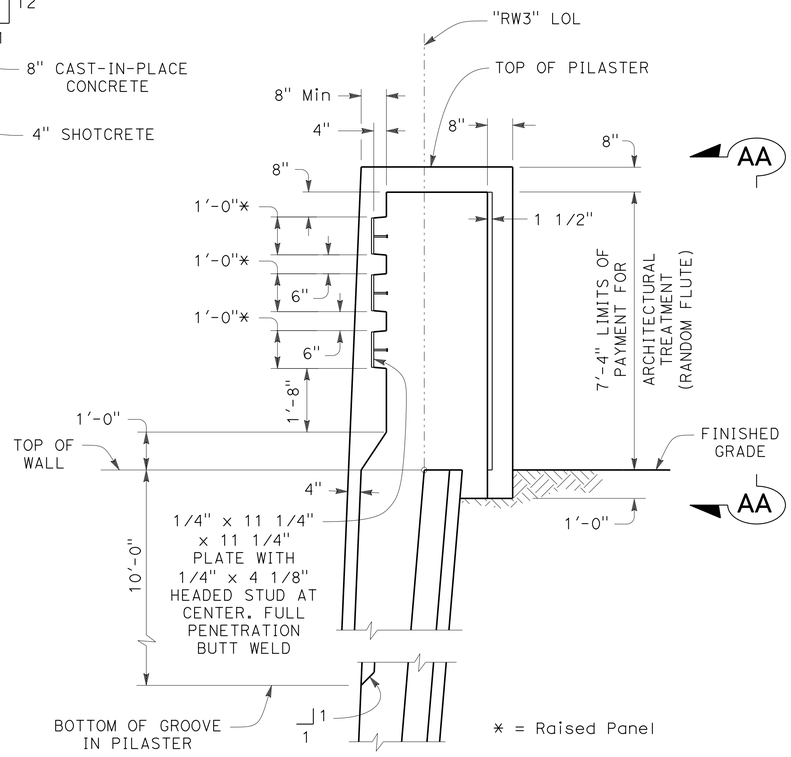
ARCHITECTURAL DETAILS - PARTIAL DEVELOPED ELEVATION FOR TYPICAL PILASTER

No Scale



SECTION Y-Y

No Scale



SECTION Z-Z

No Scale

NOTES:

1. For View "AA-AA", see "ARCHITECTURAL DETAILS NO. 3" sheet
2. For reinforcement and details not shown, see "PILASTER DETAILS NO. 1", "PILASTER DETAILS NO. 2", and "PILASTER DETAILS NO. 3" sheets

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
ARCHITECTURAL DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	22	33

FILE => 57E0117-1-ad01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	941	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

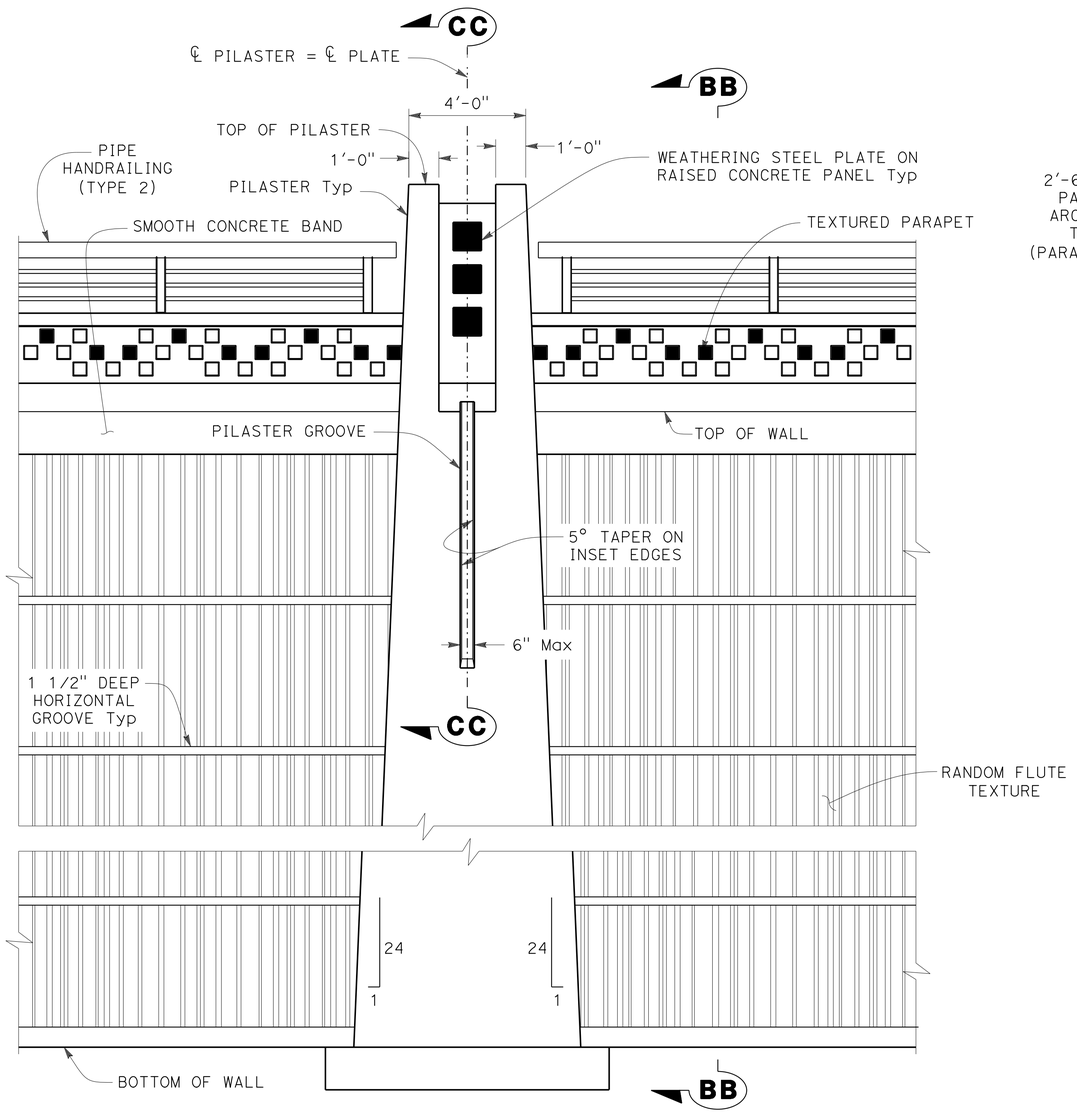
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

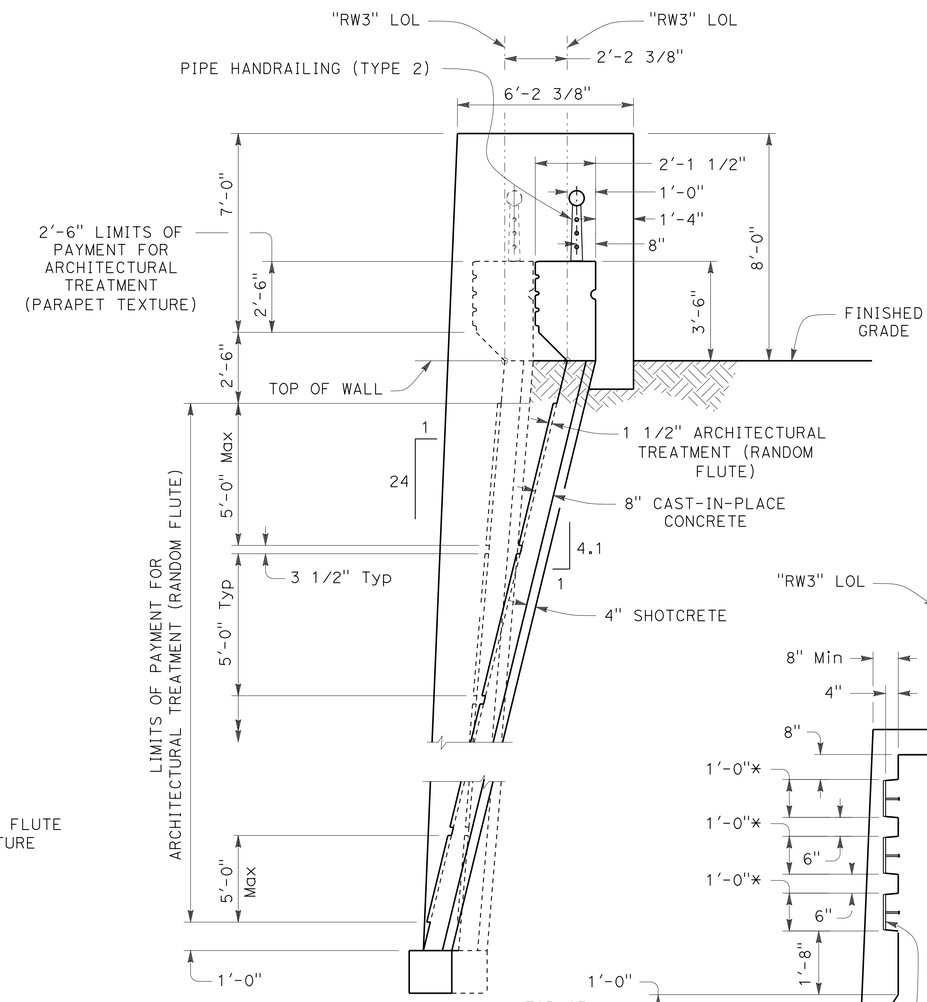
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



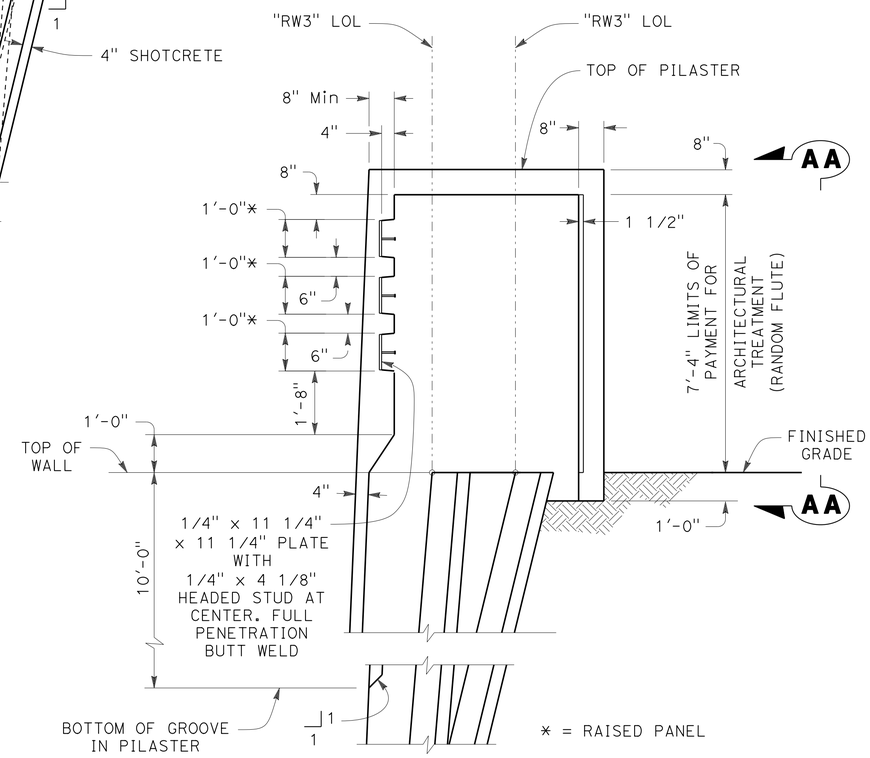
ARCHITECTURAL DETAILS - PARTIAL DEVELOPED ELEVATION FOR END PILASTER AT Sta 18+01

No Scale



SECTION BB-BB

No Scale



SECTION CC-CC

No Scale

NOTES:

1. For View "AA-AA", see "ARCHITECTURAL DETAILS NO. 3" sheet
2. For reinforcement and details not shown, see "PILASTER DETAILS NO. 3", "PILASTER DETAILS NO. 4", and "PILASTER DETAILS NO. 5" sheets

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
ARCHITECTURAL DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

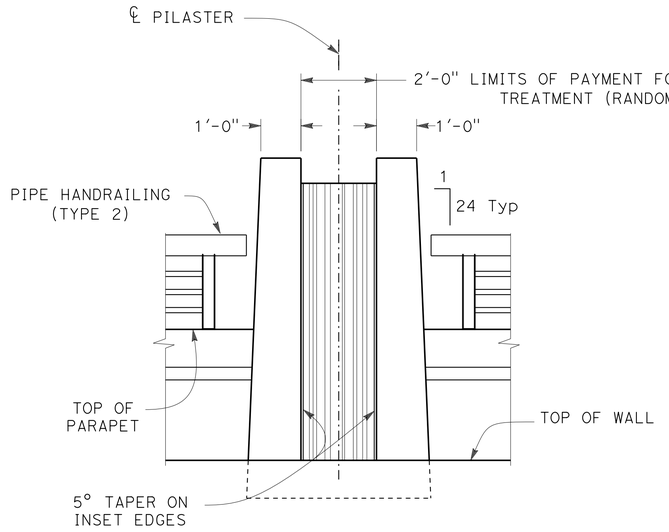
UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	23	33

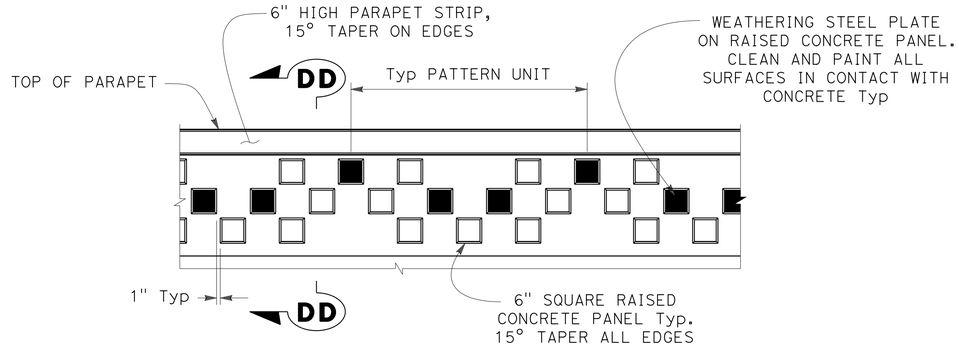
FILE => 57E0117-1-ad02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44



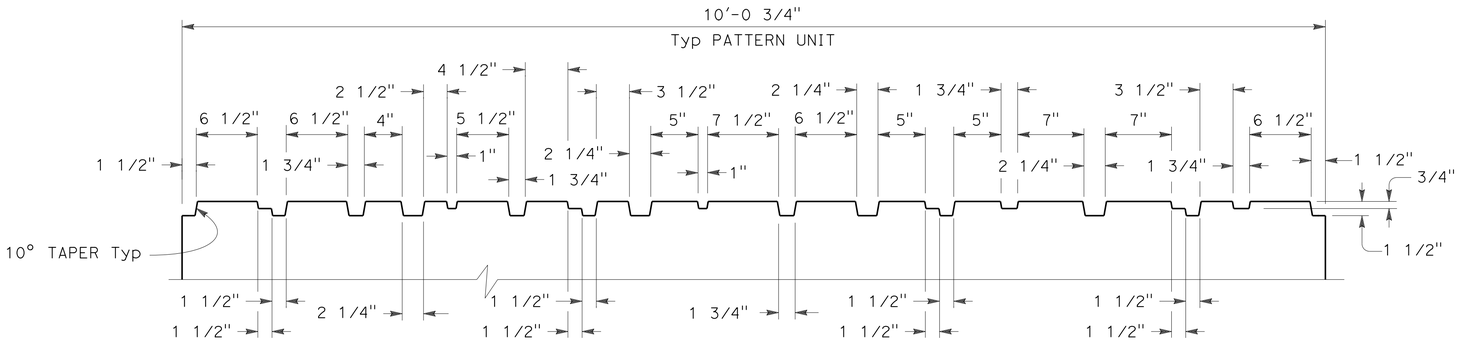
VIEW AA-AA

1/2" = 1'-0"



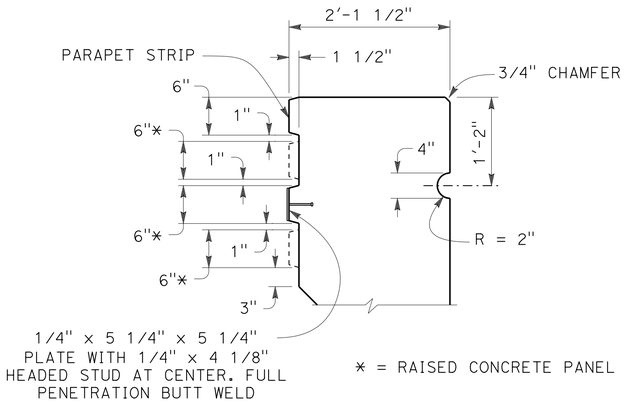
PARAPET TEXTURE DETAIL

No Scale



RANDOM FLUTE TEXTURE DETAIL

No Scale



SECTION DD-DD

1" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	942	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
ARCHITECTURAL DETAILS NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	7-22-13	2-3-14	24	33

FILE => 57E0117-1-ad03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	943	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

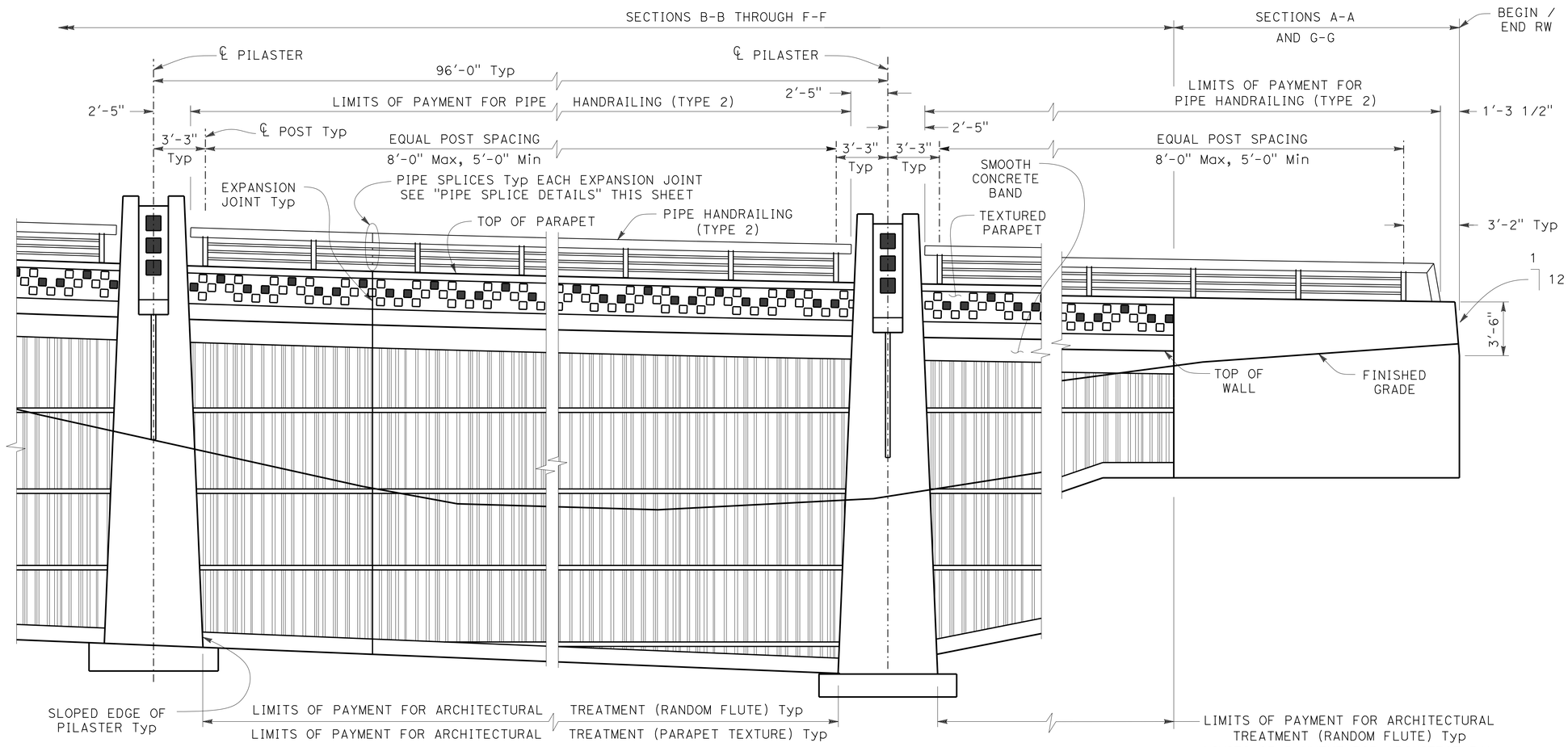
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

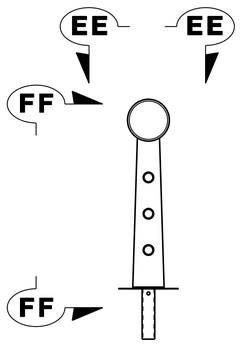


NOTES:

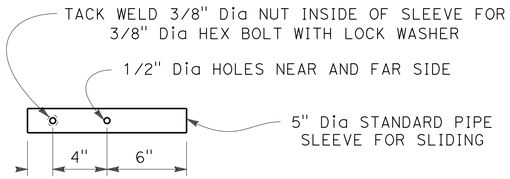
1. All exposed concrete surfaces to be finished with variable sandblast texture.
2. For additional handrailing and architectural details, see "RAILING DETAILS", and "ARCHITECTURAL DETAILS NO. 1" and "ARCHITECTURAL DETAILS NO. 2" sheets

PARTIAL DEVELOPED ELEVATION

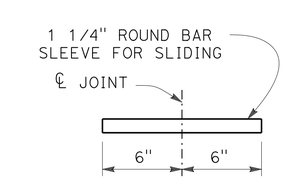
No Scale



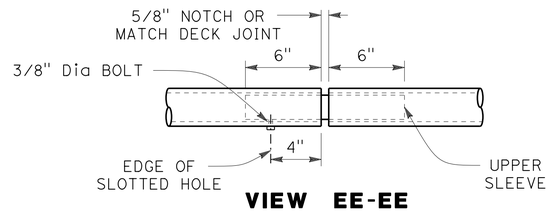
SECTION



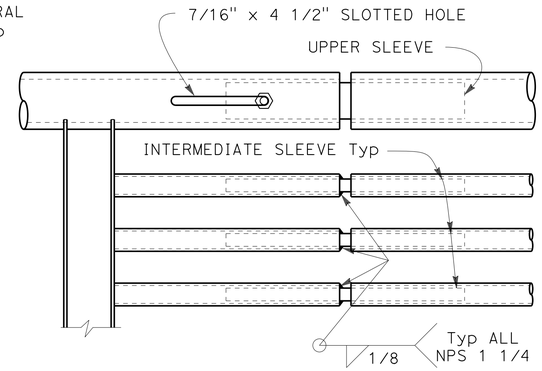
UPPER SLEEVE



INTERMEDIATE SLEEVE



VIEW EE-EE



VIEW FF-FF

PIPE SPLICE DETAILS

No Scale

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
ARCHITECTURAL DETAILS NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	25	33

FILE => 57E0117-1-ad04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	944	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

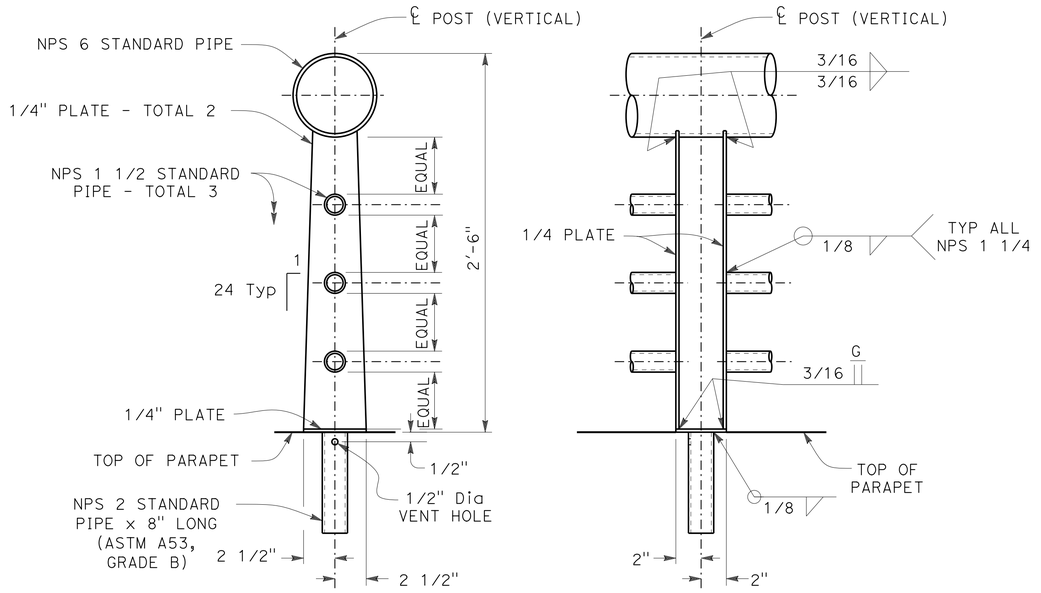
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

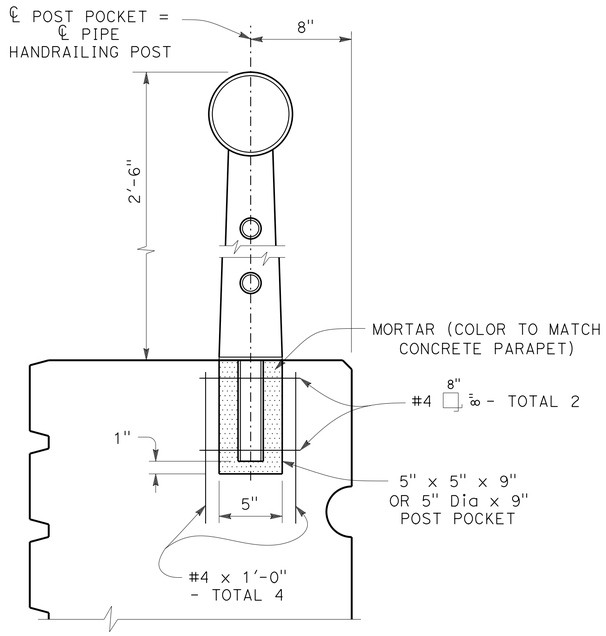
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



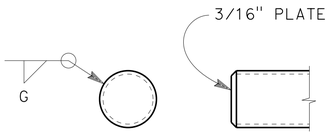
RAIL CONNECTION DETAILS

2" = 1'-0"



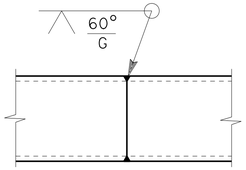
POST ANCHORAGE DETAILS

2" = 1'-0"



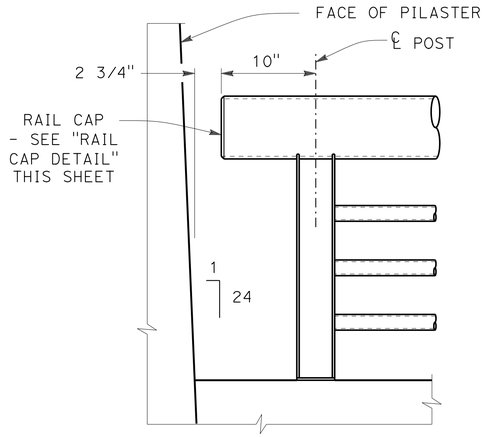
RAIL CAP DETAIL

No Scale



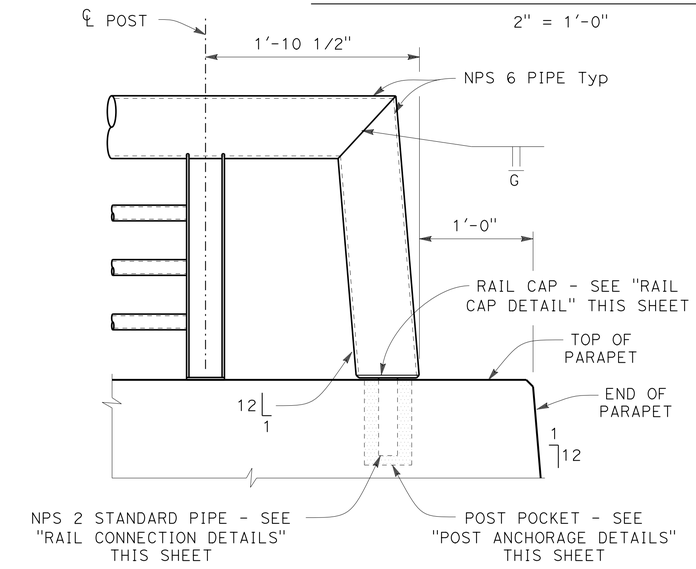
PIPE WELDED SPLICE

No Scale



DETAIL AT PILASTER

1 1/2" = 1'-0"



NOTE: Detail at end wall shown. Detail at begin wall similar.

DETAIL AT END WALL

1 1/2" = 1'-0"

NOTES:

1. All handrailing to be weathering steel unless otherwise noted
2. Posts shall be vertical
3. Rail pipe shall be shop bent or fabricated to fit horizontal and vertical curves when radius is less than 1000 feet
4. Pipe splices shall be located in tubes spanning wall joints. See "PIPE SPLICE DETAILS" on "ARCHITECTURAL DETAILS NO. 4" sheet.
5. Top rail pipe shall be continuous over not less than 2 posts except a short spacing is permitted near wall expansion joints
6. Welding material for weathering steel shall have a welding consumable matching the base material
7. For post spacing, see "PARTIAL DEVELOPED ELEVATION" on "ARCHITECTURAL DETAILS NO. 4" sheet

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0117 — POST MILES 29.2

RETAINING WALL NO. RW3
RAILING DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	26	33

FILE => 57E0117-n-rd01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	945	1012

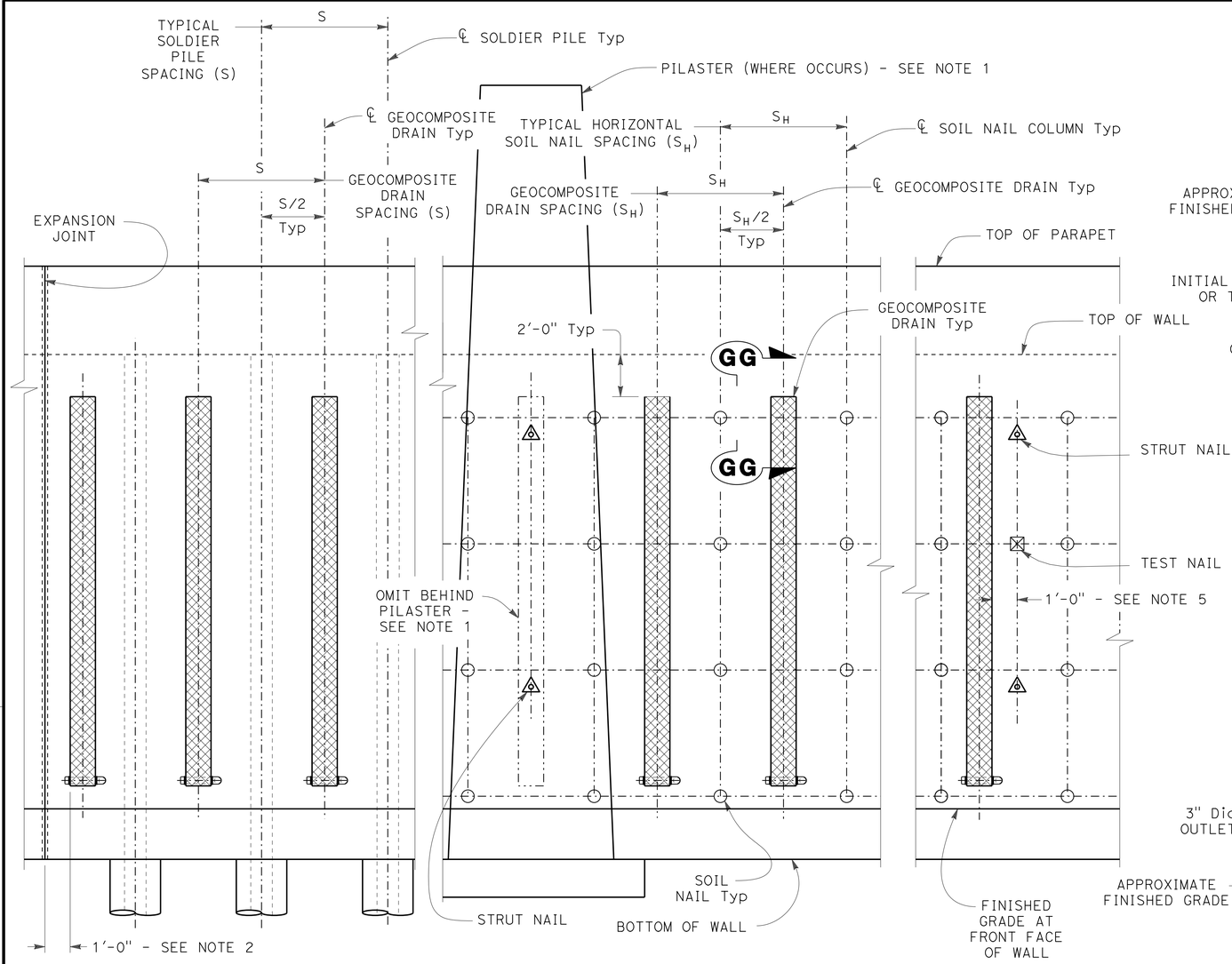
Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14 PLANS APPROVAL DATE

Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO	SIMON WONG ENGINEERING
525 B STREET SUITE 7	9968 HIBERT STREET
SAN DIEGO, CA. 92101	SAN DIEGO, CA. 92131

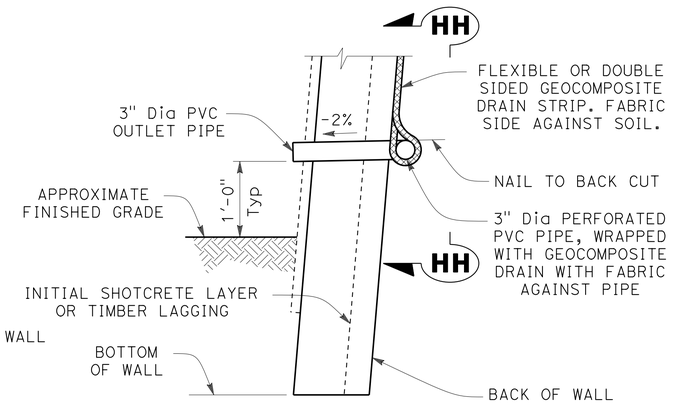


TYPICAL WALL ELEVATION

No Scale

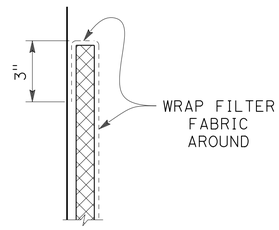
NOTES:

1. Omit Geocomposite Drains behind pilasters and at transition between Soldier Pile Wall and Soil Nail Wall
2. Shift Geocomposite Drain location to provide 1'-0" clear to wall expansion joints
3. Geocomposite Drain strip per Section 88 Geosynthetics of the Standard Specifications
4. Geocomposite Drain strip shall be sized to insure continuity between lifts. Special consideration should be taken where existing cribwall is encountered behind Soil Nail Wall.
5. Shift Geocomposite Drain location to provide 1'-0" clear to test nails or strut nails



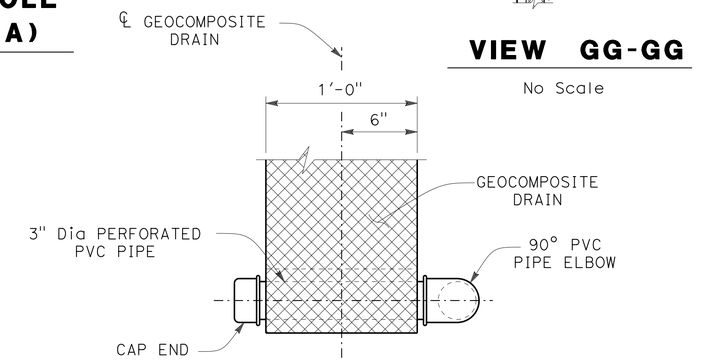
WALL DRAIN DETAIL AT WEEPHOLE (OPTION A)

No Scale



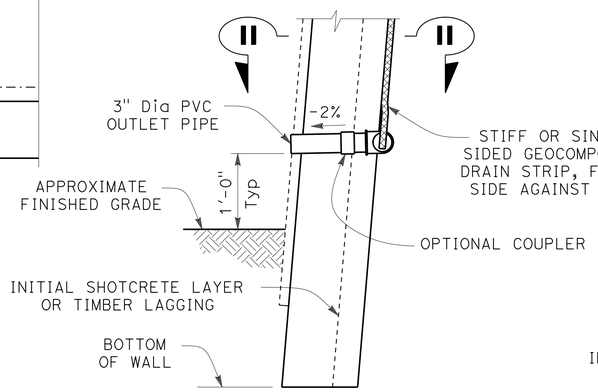
VIEW GG-GG

No Scale



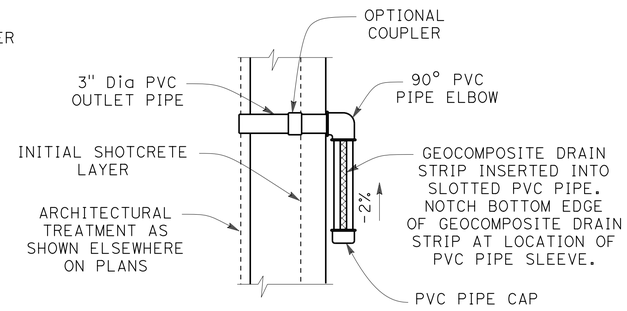
VIEW HH-HH

No Scale



WALL DRAIN DETAIL AT WEEPHOLE (OPTION B)

No Scale



SECTION II-II

No Scale

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0117 — POST MILES 29.2

RETAINING WALL NO. RW3
DRAINAGE DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771 — PROJECT NUMBER & PHASE: 11120001021 — CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	27	33

FILE => 57E0117-p-dd01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	946	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

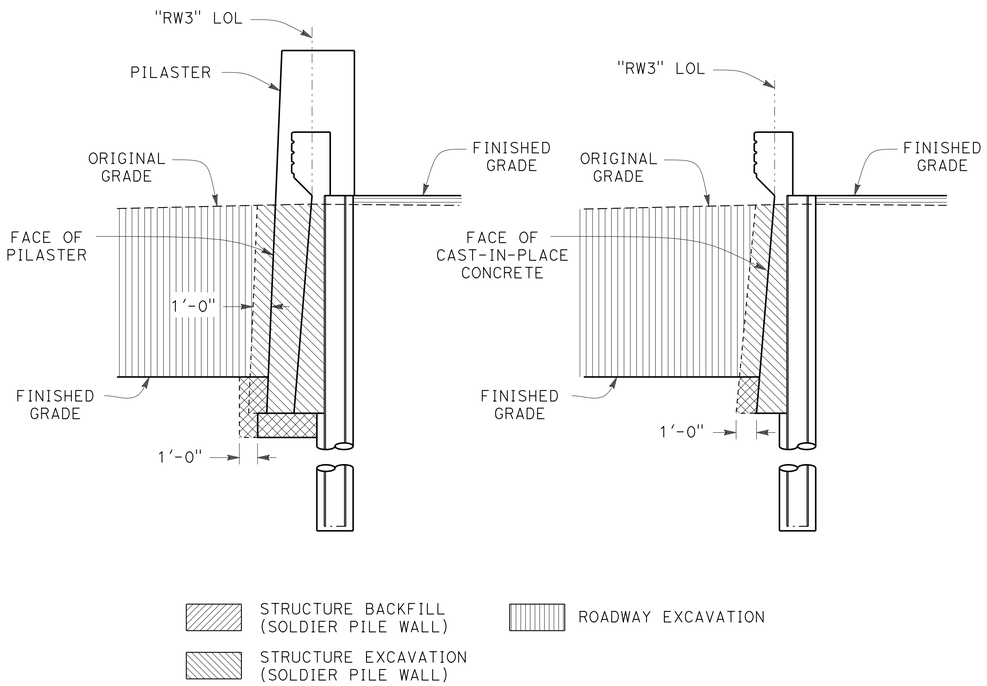
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

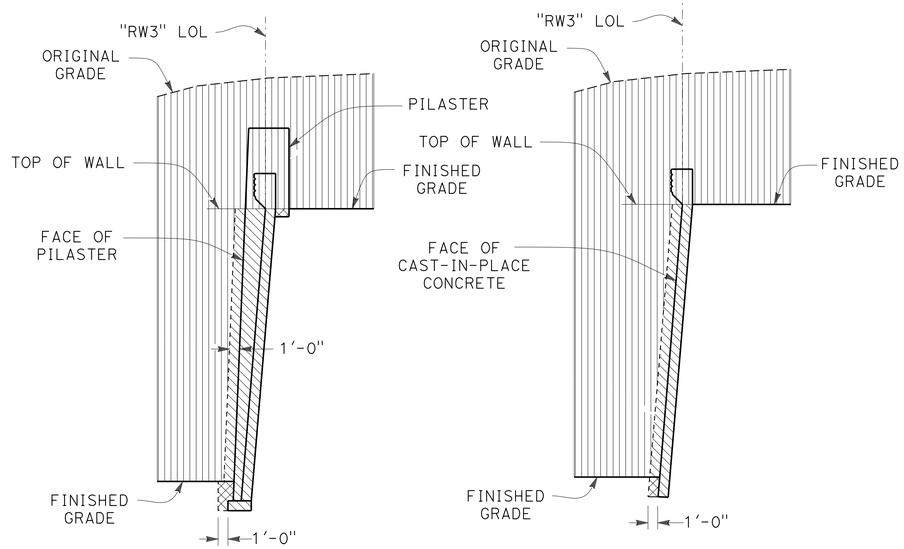


STRUCTURE BACKFILL (SOLDIER PILE WALL)
STRUCTURE EXCAVATION (SOLDIER PILE WALL)
ROADWAY EXCAVATION

PILASTER SECTION TYPICAL SECTION

LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL (SOLDIER PILE WALL)

No Scale

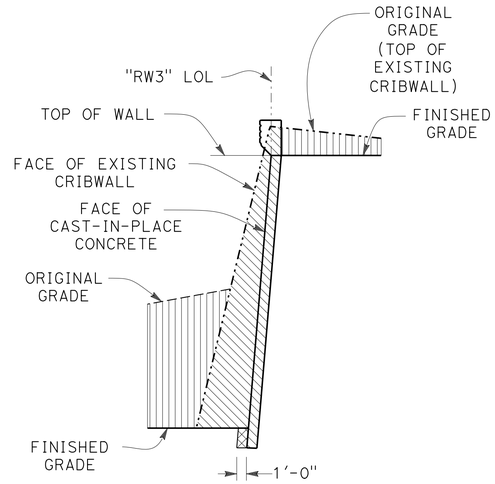


STRUCTURE BACKFILL (SOIL NAIL WALL)
STRUCTURE EXCAVATION (SOIL NAIL WALL)
ROADWAY EXCAVATION

PILASTER SECTION TYPICAL SECTION

LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL (SOIL NAIL WALL)

No Scale



STRUCTURE BACKFILL (SOIL NAIL WALL)
STRUCTURE EXCAVATION (SOIL NAIL WALL)
ROADWAY EXCAVATION

LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL (SOIL NAIL WALL AT EXISTING CRIB WALL)

No Scale

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	J. Ramirez	L. Muco
DETAILS	T. Brittain	L. Muco
QUANTITIES	J. Ramirez	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0117
POST MILES 29.2

RETAINING WALL NO. RW3
MISCELLANEOUS DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-28-12	1-31-13	2-22-13	2-3-14	28	33

FILE => 57E0117-s-md01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	947	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

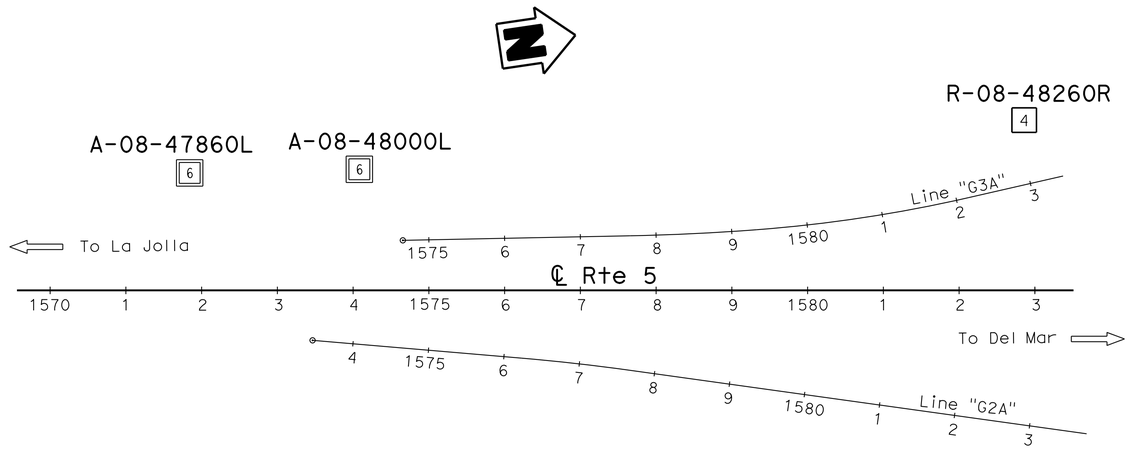
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

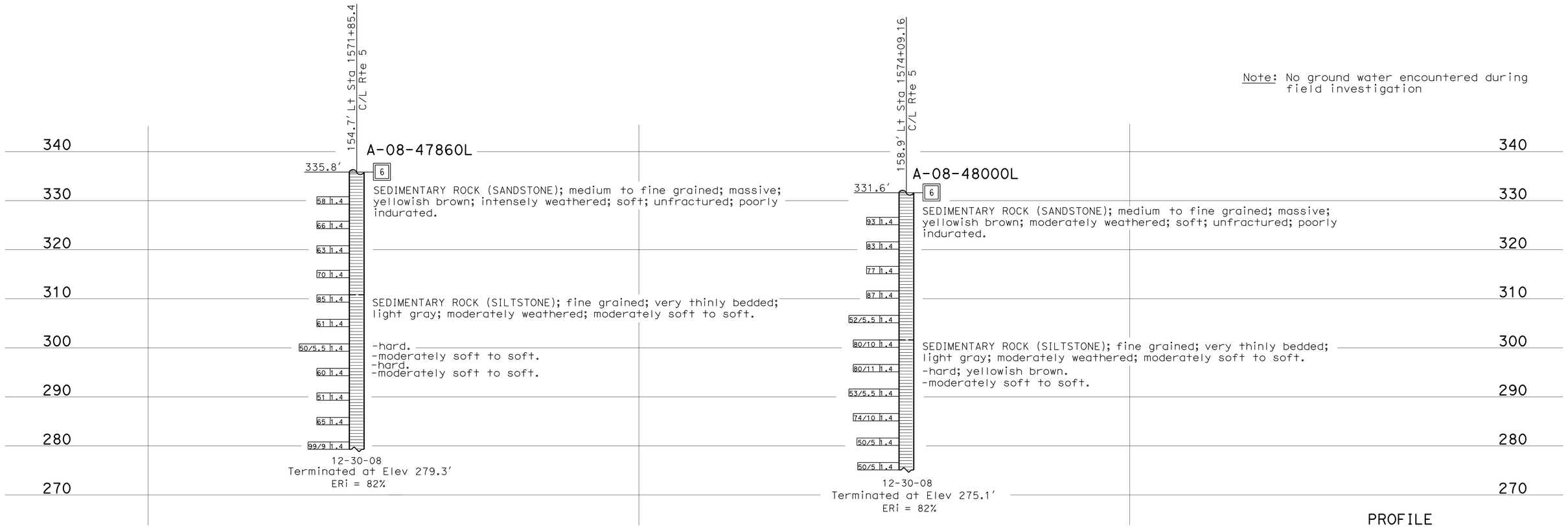
This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

BENCH MARK

5-28.41
Elev 287.78
Located at the intersection of I-5 and LA Jolla Village Dr, set in sidewalk near southeast corner of LA Jolla Village Dr Bridge over I-5.
NAVD 88



PLAN
1" = 100'



PROFILE
Horiz: 1" = 20'
Vert: 1" = 10'

Note: No ground water encountered during field investigation

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW3
FUNCTIONAL SUPERVISOR	DRAWN BY: W. Tang 02/12	FIELD INVESTIGATION BY:	DESIGN BRANCH X	57E0117	LOG OF TEST BORINGS 1 OF 5
NAME: B. Hinman	CHECKED BY: Z. Yazdani	M. Fordham		POST MILE 29.2	

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				29	33

FILE => 57E0117-z-1tb01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	948	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

FOR PLAN VIEW, SEE
"LOG OF TEST BORINGS 1 OF 5"

PROFILE
Horiz: 1" = 20'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW3
FUNCTIONAL SUPERVISOR	DRAWN BY: W. Tang 02/12	FIELD INVESTIGATION BY:	DESIGN BRANCH X	57E0117	LOG OF TEST BORINGS 2 OF 5
NAME: B. Hinman	CHECKED BY: Z. Yazdani	M. Fordham		POST MILE 29.2	

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				30	33

FILE => 57E0117-z-1tb02.dgn

USERNAME => s124400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	949	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

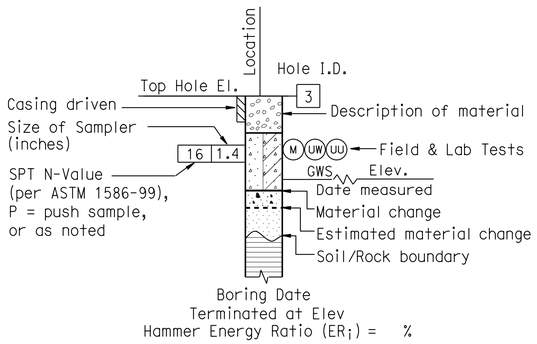
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring (hollow or solid stem bucket)
Size	R RW RC P	Rotary drilled boring (conventional) Rotary drilled with self-casing wire-line Rotary core with continuously-sampled, self-casing wire-line Rotary percussion boring (air)
Size	R RC	Rotary drilled diamond core Rotary drilled rock core
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778)
⬚	O	Other (note on LOTB)

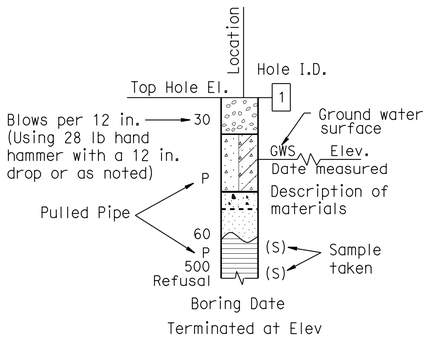
Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS

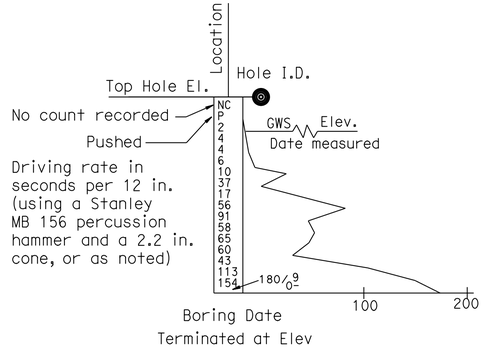
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



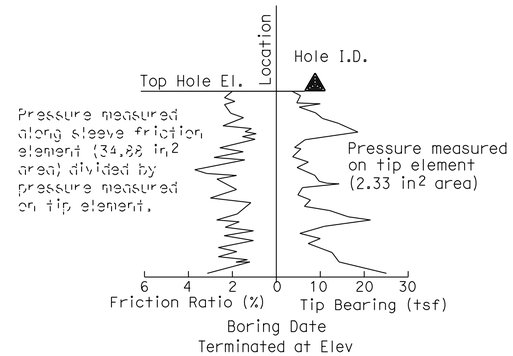
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) BORING

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW3
	PREPARED BY: W. Tang 02/12		DESIGN BRANCH X	57E0117	LOG OF TEST BORINGS 3 OF 5
				POST MILE 29.2	

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				31	33

FILE => 57E0117-z-1tb03.dgn

USERNAME => s12400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly-graded GRAVEL Poorly-graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly-graded GRAVEL with SILT Poorly-graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly-graded GRAVEL with CLAY (or SILTY CLAY) Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly-graded SAND Poorly-graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly-graded SAND with SILT Poorly-graded SAND with SILT and GRAVEL		
SP-SC	Poorly-graded SAND with CLAY (or SILTY CLAY) Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	950	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 - 12
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay		Less than 1/300

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES
PREPARED BY: W. Tang 02/12

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 57E0117
POST MILE 29.2

RETAINING WALL NO. RW3
LOG OF TEST BORINGS 4 OF 5

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021
CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				32	33

FILE => 57E0117-z-ltb04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	951	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

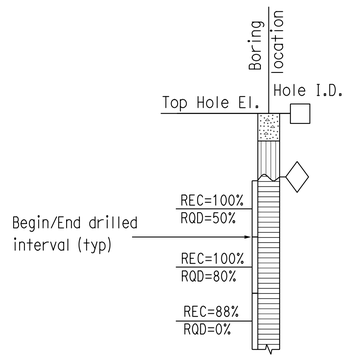
REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)

$$REC = \frac{\sum \text{Length of the recovered core pieces (in.)}}{\text{Total length of core run (in.)}} \times 100\%$$

$$RQD = \frac{\sum \text{Length of intact core pieces} \geq 4 \text{ in.}}{\text{Total length of core run (in.)}} \times 100\%$$

RQD* Indicates soundness criteria not met.



BEDDING SPACING

Description	Thickness / Spacing
Massive	Greater than 10 ft
Very Thickly Bedded	3 ft - 10 ft
Thickly Bedded	1 ft - 3 ft
Moderately Bedded	4 in. - 1 ft
Thinly Bedded	1 in. - 4 in.
Very Thinly Bedded	1/4 in. - 1 in.
Laminated	Less than 1/4 in.

LEGEND OF ROCK MATERIALS

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

ROCK HARDNESS

Description	Criteria
Extremely Hard	Cannot be scratched with a pocketknife or sharp pick. Can only be chipped with repeated heavy hammer blows.
Very Hard	Cannot be scratched with a pocketknife or sharp pick. Breaks with repeated heavy hammer blows.
Hard	Can be scratched with a pocketknife or sharp pick with difficulty (heavy pressure). Breaks with heavy hammer blows.
Moderately Hard	Can be scratched with pocketknife or sharp pick with light or moderate pressure. Breaks with moderate hammer blows.
Moderately Soft	Can be grooved 1/16 in. deep with a pocketknife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.
Soft	Can be grooved or gouged easily by a pocketknife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very Soft	Can be readily indented, grooved or gouged with fingernail, or carved with a pocketknife. Breaks with light manual pressure.

FRACTURE DENSITY

Description	Observed Fracture Density
Unfractured	No fractures.
Very Slightly Fractured	Core lengths greater than 3 ft.
Slightly Fractured	Core lengths mostly from 1 to 3 ft.
Moderately Fractured	Core lengths mostly from 4 in. to 1 ft.
Intensely Fractured	Core lengths mostly from 1 to 4 in.
Very Intensely Fractured	Mostly chips and fragments.

WEATHERING DESCRIPTORS FOR INTACT ROCK

Description	Diagnostic Features					General Characteristics
	Chemical Weathering-Discoloration and/or Oxidation		Mechanical Weathering-Grain Boundary Conditions (Disaggregation) Primarily for Granitics and Some Coarse-Grained Sediments	Texture and Leaching		
	Body of Rock	Fracture Surfaces		Texture	Leaching	
Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change	No leaching	Hammer rings when crystalline rocks are struck.
Slightly Weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discoloration or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved	Minor leaching of some soluble minerals.	Hammer rings when crystalline rocks are struck. Body of rock not weakened.
Moderately Weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened.
Intensely Weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened.
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes."

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES
PREPARED BY: W. Tang 02/12

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 57E0117
POST MILE 29.2

RETAINING WALL NO. RW3
LOG OF TEST BORINGS 5 OF 5

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				33	33

FILE => 57E0117-z-ltb05.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	952	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

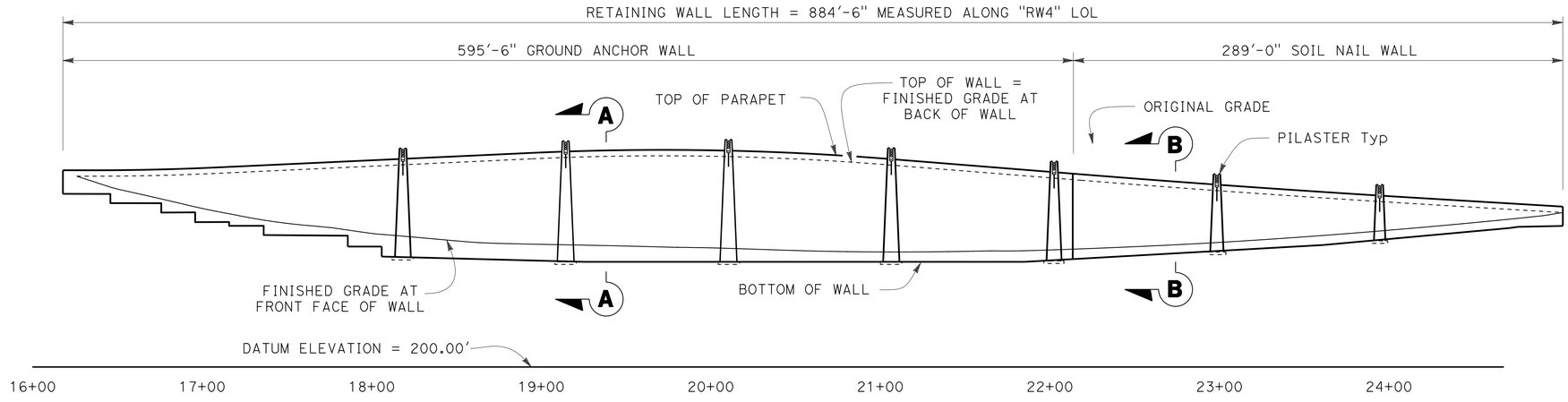
07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

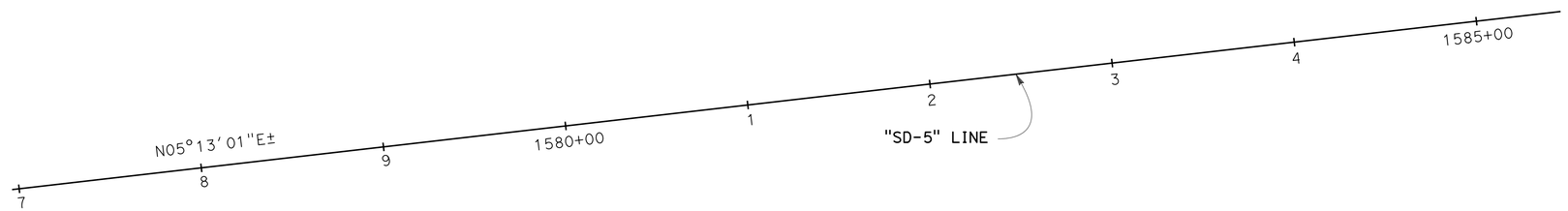
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



MIRRORED DEVELOPED ELEVATION

1" = 40'-0"



NOTES:

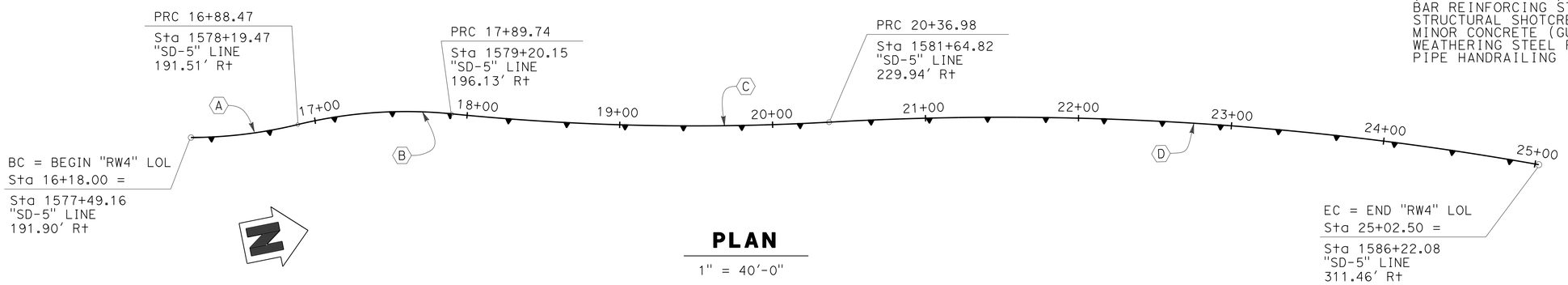
1. For "GENERAL NOTES", see "GENERAL PLAN (2 OF 2)" sheet.
2. For ground anchor layout and unbonded length; soil nail layout, size, embedment length, and pilaster locations, see "STRUCTURE ELEVATION NO. 1" through "STRUCTURE ELEVATION NO. 4" sheets
3. For Sections "A-A" and "B-B", see "GENERAL PLAN (2 OF 2)" sheet
4. For Architectural Treatment not shown, see "ARCHITECTURAL DETAILS NO. 1" through "ARCHITECTURAL DETAILS NO. 4" sheets
5. Pipe handrailing not shown

RETAINING WALL RW4 BRIDGE NO 57E0118

QUANTITIES

STRUCTURE EXCAVATION (SOIL NAIL WALL)	680	CY
STRUCTURE EXCAVATION (GROUND ANCHOR WALL)	3,600	CY
STRUCTURE BACKFILL (GROUND ANCHOR WALL)	170	CY
STRUCTURE BACKFILL (SOIL NAIL WALL)	59	CY
GROUND ANCHOR (SUBHORIZONTAL)	528	EA
SOIL NAIL	10,965	LF
STRUCTURAL CONCRETE, RETAINING WALL	1,375	CY
ARCHITECTURAL TREATMENT (RANDOM FLUTE)	31,100	SQFT
ARCHITECTURAL TREATMENT (PARAPET TEXTURE)	2,135	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	530,000	LB
STRUCTURAL SHOTCRETE	1,525	CY
MINOR CONCRETE (GUTTER) (CY)	30	CY
WEATHERING STEEL PLATE	570	EA
PIPE HANDRAILING (TYPE 2)	846	LF

CURVE DATA (A)	CURVE DATA (B)	CURVE DATA (C)	CURVE DATA (D)
R = 300.00'	R = 300.00'	R = 1600.00'	R = 2000.00'
Δ = 13°27'32"	Δ = 19°20'27"	Δ = 08°51'14"	Δ = 13°20'10"
L = 70.47'	L = 101.27'	L = 247.24'	L = 465.52'



PLAN

1" = 40'-0"

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

DESIGN	BY M.A. Nekuda	CHECKED N. Vu	LOAD FACTOR RESISTANCE DESIGN	LIVE LOADING:		
DETAILS	BY T. Brittain	CHECKED N. Vu	LAYOUT	BY M.A. Nekuda	CHECKED N. Vu	
QUANTITIES	BY M.A. Nekuda	CHECKED K. Gazaway	SPECIFICATIONS	BY C. Shannon	PLANS AND SPECS COMPARED C. Shannon	

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO.	POST MILES
57E0118	29.2

RETAINING WALL NO. RW4
GENERAL PLAN (1 OF 2)

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

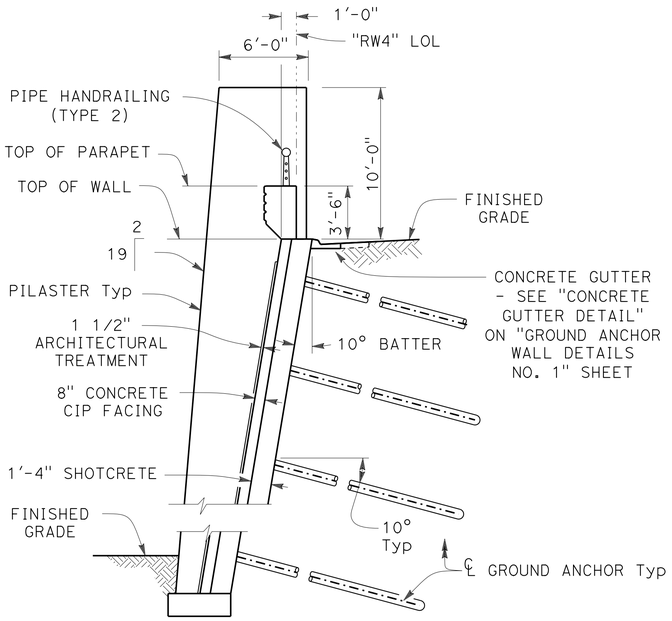
UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-16-13	2-22-13	12-23-13	2-3-14	1	29

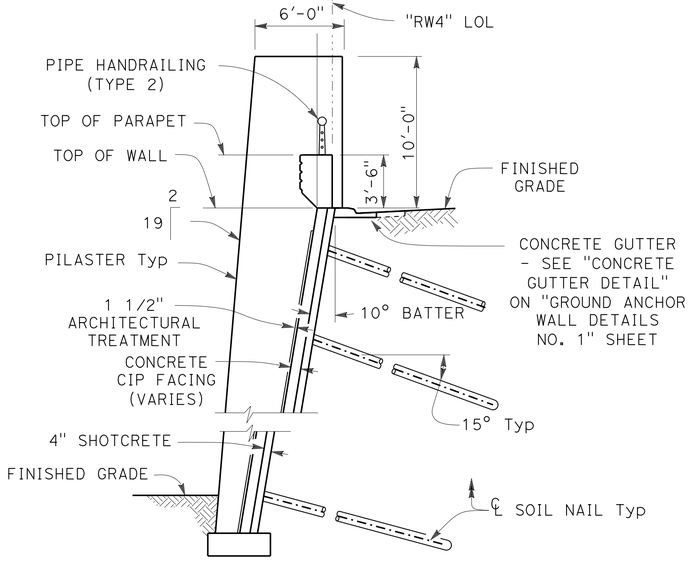
FILE => 57E0118-a-gp01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44



SECTION A-A
TYPICAL GROUND ANCHOR WALL SECTION

No Scale



SECTION B-B
TYPICAL SOIL NAIL WALL SECTION

No Scale

GENERAL NOTES (GROUND ANCHOR WALLS)

DESIGN: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (4TH EDITION, WITH 2008 INTERIM REVISIONS, AND THE CALTRANS AMENDMENTS, PREFACE DATED NOVEMBER 2011)

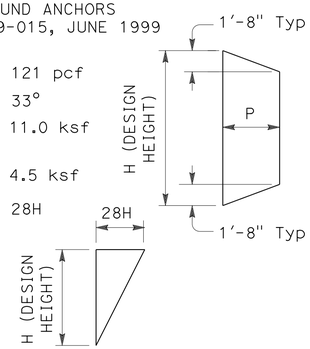
GEOTECHNICAL ENGINEERING CIRCULAR NO. 4 GROUND ANCHORS AND ANCHORED SYSTEMS, REPORT NO. FHWA-IF-99-015, JUNE 1999

SOIL PARAMETERS:

SOIL UNIT WEIGHT, g_s =	121 pcf
SOIL FRICTION ANGLE, F :	33°
ALLOWABLE BEARING PRESSURE, q_{all} =	11.0 ksf
ALLOWABLE LATERAL BEARING PRESSURE (TOP ANCHOR) =	4.5 ksf

SEISMIC LOADING: INVERTED TRIANGLE

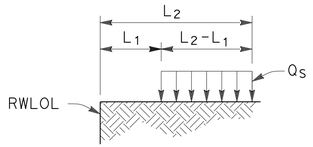
SOIL LOADING:



APPARENT EARTH PRESSURE (AEP)

	BEGINNING STATION	END STATION	P (psf)
SOIL PRESSURE (EH_{AEP})	16+18	16+60	2761
	16+60	18+00	3353
	18+00	19+00	3708
	19+00	21+00	3929
	21+00	21+50	3726
	21+50	22+13.50	3576

SURCHARGE LOADING:



	BEGINNING STATION	END STATION	L1 (ft)	L2 (ft)	Qs (psf)
LIVE LOAD (LS)	16+18	16+60	20	100	240
	16+60	18+00	20	100	240
	18+00	19+00	20	100	240
	19+00	21+00	25	150	240
	21+00	21+50	25	150	240
	21+50	22+13.50	20	100	240
BUILDING LOAD (ES)	16+18	16+60	100	500	1000
	16+60	18+00	100	500	1000
	18+00	19+00	101	500	1000
	19+00	21+00	150	300	1000
	21+00	21+50	0	0	0
	21+50	22+13.50	101	500	1000

REINFORCED CONCRETE / SHOTCRETE: fy = 60 ksi; f'c = 3.60 ksi

GROUT STRENGTH: 3.0 ksi

STRUCTURAL STEEL: BEARING PLATES: ASTM A572, fy = 50 ksi; PIPES: ASTM A847; PLATES AND BARS: ASTM A588

PRESTRESSING STEEL: STRAND TENDONS: 0.6" Dia 7-WIRE STRAND, ASTM A416, fpu = 270 ksi

FTL = FACTORED TEST LOAD - SEE "GROUND ANCHOR TENSION FORCES" TABLE ON "WALL DETAILS NO. 1" SHEET

FDL = FACTORED DESIGN LOAD - SEE "GROUND ANCHOR TENSION FORCES" TABLE ON "WALL DETAILS NO. 1" SHEET

GENERAL NOTES (SOIL NAIL WALLS)

DESIGN: ALLOWABLE STRESS DESIGN

BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO WITH INTERIMS AND REVISIONS BY CALTRANS)

GEOTECHNICAL ENGINEERING CIRCULAR NO.7, SOIL NAIL WALLS, REPORT NO. FHWAO-IF-03-017

SOIL PARAMETERS:

SOIL UNIT WEIGHT, g_s =	121 pcf
SOIL FRICTION ANGLE, F :	
FROM Sta 22+13.50 TO Sta 23+02.00 =	33°
FROM Sta 23+02.00 TO Sta 25+02.50 =	28°
SOIL COHESION, c =	350 psf
DESIGN PULLOUT RESISTANCE, Qd =	5.4 kips/ft
ALLOWABLE BEARING PRESSURE =	11.0 ksf

SEISMIC LOADING: PGA = 0.45 g; K_h = 0.15

SURCHARGE: UTILITY YARD AND PADS: 1000 psf Sta 22+13.50 RW-4 TO Sta 22+63.50 RW-4

LIVE LOAD: 240 psf Sta 23+02.00 RW-4 TO Sta 25+02.50 RW-4

REINFORCED CONCRETE / SHOTCRETE: Fy = 60 ksi; F'c = 3.60 ksi; n = 8

GROUT STRENGTH: 3.0 ksi

STRUCTURAL STEEL: BEARING PLATES: ASTM A36, fy = 36 ksi; HEADED STUDS: ASTM A449, Type 1, Fu = 120 ksi; PIPES: ASTM A847; PLATES AND BARS: ASTM A588

SOIL NAILS: ASTM DESIGNATION: A615 OR A706, GRADE 60, EPOXY COATED

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	953	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

CITY OF SAN DIEGO	SIMON WONG ENGINEERING
525 B STREET SUITE 7	9968 HIBERT STREET
SAN DIEGO, CA. 92101	SAN DIEGO, CA. 92131

DESIGN OVERSIGHT Norbert Gee	DESIGN	BY M.A. Nekuda	CHECKED N. Vu	LOAD FACTOR RESISTANCE DESIGN	LIVE LOADING:
3-10-14 SIGN OFF DATE	DETAILS	BY T. Brittain	CHECKED N. Vu	LAYOUT: BY M.A. Nekuda	CHECKED N. Vu
	QUANTITIES	BY M.A. Nekuda	CHECKED K. Gazaway	SPECIFICATIONS: BY C. Shannon	PLANS AND SPECS COMPARED C. Shannon

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon, PROJECT ENGINEER

BRIDGE NO. 57E0118; POST MILES 29.2

RETAINING WALL NO. RW4
GENERAL PLAN (2 OF 2)

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-15-13 | 2-22-13 | 12-23-13 | 2-3-14

SHEET 2 OF 29

FILE => 57E0118-a-gp02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

INDEX TO PLANS

STANDARD PLANS DATED 2010

	A10A	ABBREVIATIONS (SHEET 1 OF 2)
RSP	A10B	ABBREVIATIONS (SHEET 2 OF 2)
	A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
	A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
	A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
	B0-3	BRIDGE DETAILS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	954	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14 PLANS APPROVAL DATE

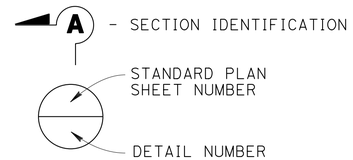
REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

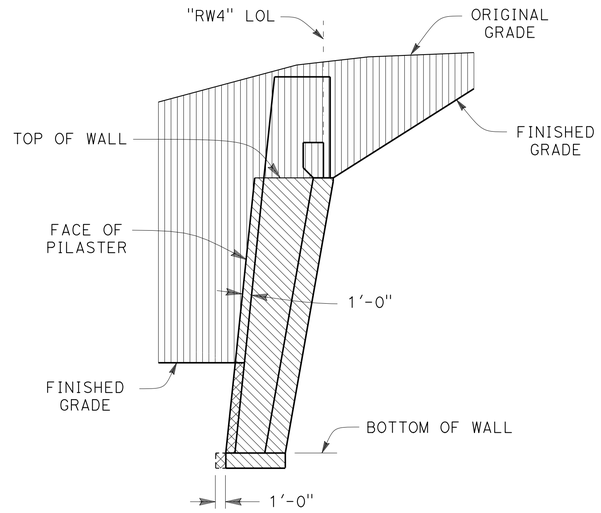
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

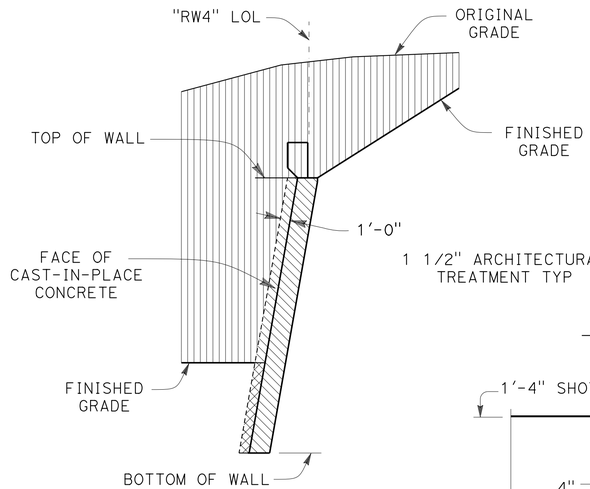
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

PLAN SYMBOLS





PILASTER SECTION



TYPICAL SECTION

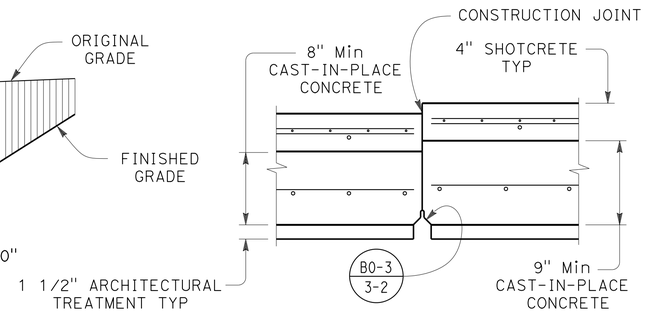
STRUCTURE BACKFILL (GROUND ANCHOR WALL) OR STRUCTURE BACKFILL (SOIL NAIL WALL)

ROADWAY EXCAVATION

STRUCTURE EXCAVATION (GROUND ANCHOR WALL) OR STRUCTURE EXCAVATION (SOIL NAIL WALL)

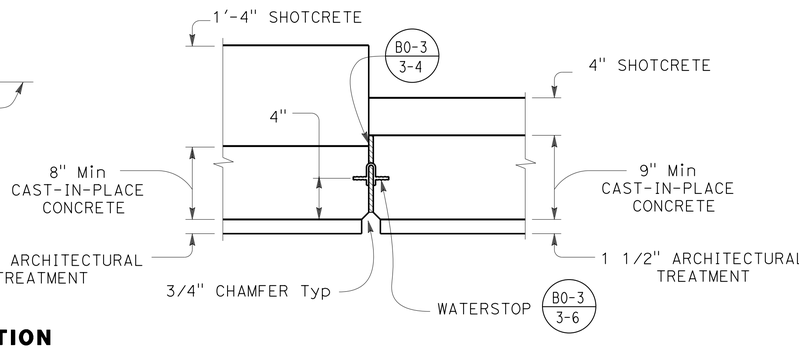
LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL

No Scale



CONSTRUCTION JOINT DETAIL

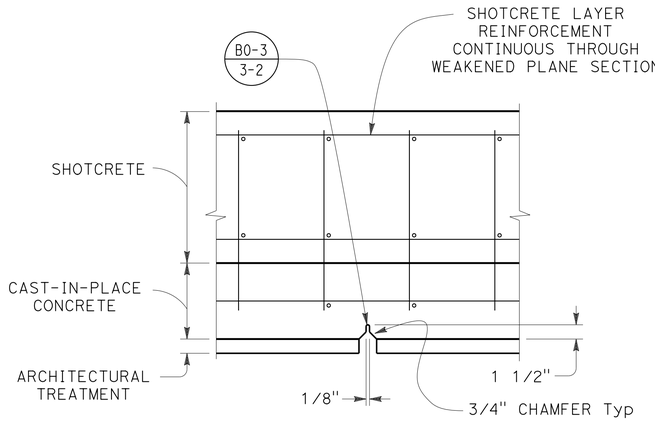
1 1/2" = 1'-0"



NOTE: Reinforcement not shown for clarity

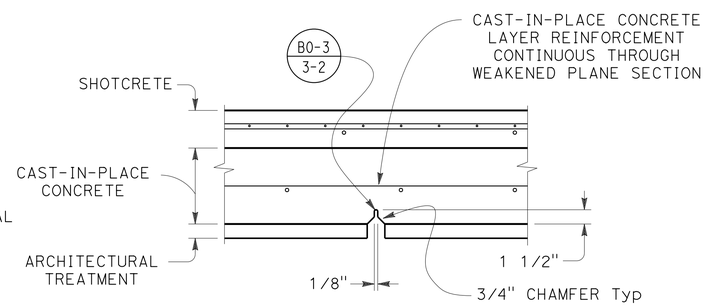
EXPANSION JOINT DETAIL

1 1/2" = 1'-0"



WEAKENED PLANE DETAIL AT GROUND ANCHOR WALL

1 1/2" = 1'-0"



WEAKENED PLANE DETAIL AT SOIL NAIL WALL

1 1/2" = 1'-0"

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE	DESIGN	BY M.A. Nekuda	CHECKED N. Vu	LOAD FACTOR RESISTANCE DESIGN	LIVE LOADING:		
	DETAILS	BY T. Brittain	CHECKED N. Vu	LAYOUT	BY M.A. Nekuda	CHECKED N. Vu	
	QUANTITIES	BY M.A. Nekuda	CHECKED K. Gazaway	SPECIFICATIONS	BY C. Shannon	PLANS AND SPECS COMPARED C. Shannon	

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0118 — POST MILES 29.2

RETAINING WALL NO. RW4
INDEX TO PLANS

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771 PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-16-13 | 2-22-13 | 12-23-13 | 2-3-14

SHEET 3 OF 29

FILE => 57E0118-b-itp01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	955	1012

Craig Shannon — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

INTERSTATE 5 SOUTHBOUND

INTERSTATE 5 NORTHBOUND

1578+00 1579+00 1580+00 1581+00

"SD-5" LINE

CURVE DATA (A)
R = 300.00′
Δ = 13°27′32"
L = 70.47′

CURVE DATA (B)
R = 300.00′
Δ = 19°20′27"
L = 101.27′

CURVE DATA (C)
R = 1600.00′
Δ = 08°51′14"
L = 247.24′

CURVE DATA (D)
R = 2000.00′
Δ = 13°20′10"
L = 465.52′

NEW 18" Dia HDPE STORM DRAINS

PRC 16+88.47
Sta 1578+19.47
"SD-5" LINE
191.51′ R†

PRC 17+89.74
Sta 1579+20.15
"SD-5" LINE
196.13′ R†

NEW 18" Dia HDPE STORM DRAIN AND STRUCTURES

17+00 18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00

BC = BEGIN "RW4" LOL
Sta 16+18.00 =
Sta 1577+49.16
"SD-5" LINE
191.90′ R†

PRC 20+36.98
Sta 1581+64.82
"SD-5" LINE
229.94′ R†

NEW DRAINAGE STRUCTURES - TO BE CONSTRUCTED CONCURRENTLY WITH RETAINING WALL (PROTECT-IN-PLACE) - SEE "DRAINAGE PLANS"

EXISTING PARKING STRUCTURE FOOTINGS AND GEOPIERS (PROTECT-IN-PLACE)

UTILITY PADS

SCRIPPS BUILDING

EC = END "RW4" LOL
Sta 25+02.50 =
Sta 1586+22.08
"SD-5" LINE
311.46′ R†

SCRIPPS MEDICAL PARKING FACILITIES

VARIOUS EXISTING UNDERGROUND UTILITIES (PROTECT-IN PLACE OR RELOCATE AS REQUIRED)

PLAN

1" = 30′-0"

BENCHMARK

CONTROL SURVEY:

BM #1 5-29.11
2 1/4" CADT BRASS DISK
LABELED "5-29.11 1992"
N 1,901,973.73
E 6,261,254.25
Elev = 340.89′

BM #2 5-29.46
2 1/4" CADT BRASS DISK
LABELED "5-29.46 1993"
N 1,903,968.24
E 6,261,597.31
Elev = 270.07′

Mark M. Toolson — 6-5-12
GEOTECHNICAL PROFESSIONAL — APPROVAL DATE

Norbert Gee
DESIGN OVERSIGHT — 3-10-14
SIGN OFF DATE

SCALE: X	VERT.DATUM NAVD 88	HORZ.DATUM CCS 83 (1991.35)	
PHOTOGRAMMETRY AS OF: X	ALIGNMENT TIES X		
SURVEYED BY X	DRAFTED BY X		
FIELD CHECKED BY X	CHECKED BY X		

DESIGN	BY M.A. Nekuda	CHECKED N. Vu
DETAILS	BY T. Brittain	CHECKED N. Vu
QUANTITIES	BY M.A. Nekuda	CHECKED K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO.	POST MILES
57E0118	29.2

RETAINING WALL NO. RW4
FOUNDATION PLAN

FOUNDATION PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-16-13	2-22-13	12-23-13	2-3-14	4	29

FILE => 57E0118-c-fp01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	956	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

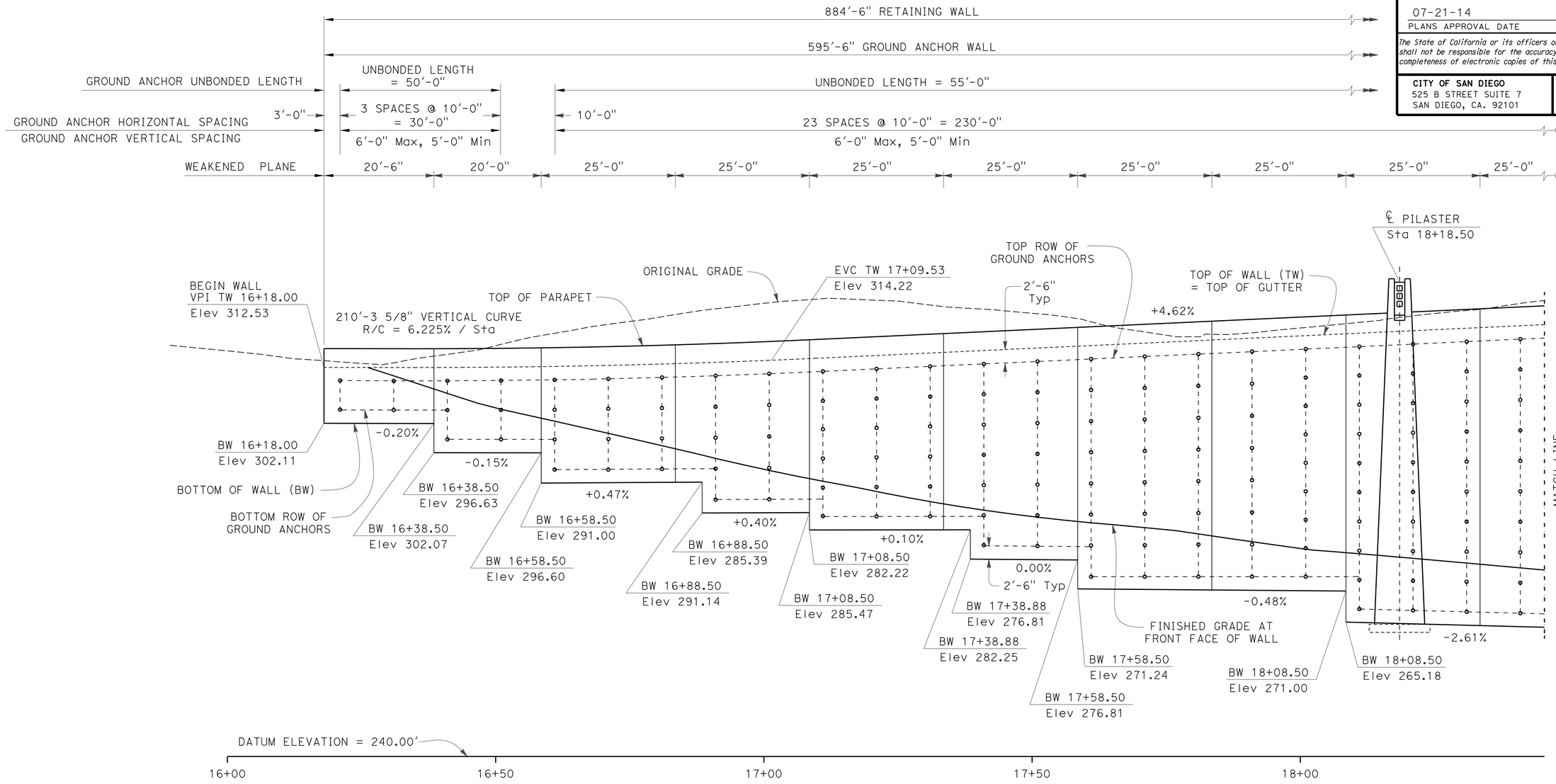
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

- ∘ - Indicates location of Ground Anchor

MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW4" LOL
2. For "WEAKENED PLANE DETAIL AT GROUND ANCHOR WALL", see "INDEX TO PLANS" sheet
3. Pipe handrailing not shown

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

DESIGN	BY M.A. Nekuda	CHECKED N. Vu
DETAILS	BY T. Brittain	CHECKED N. Vu
QUANTITIES	BY M.A. Nekuda	CHECKED K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
STRUCTURE ELEVATION NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-16-13	2-22-13	12-23-13	2-3-14	5	29

FILE => 57E0118-e-se01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	957	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

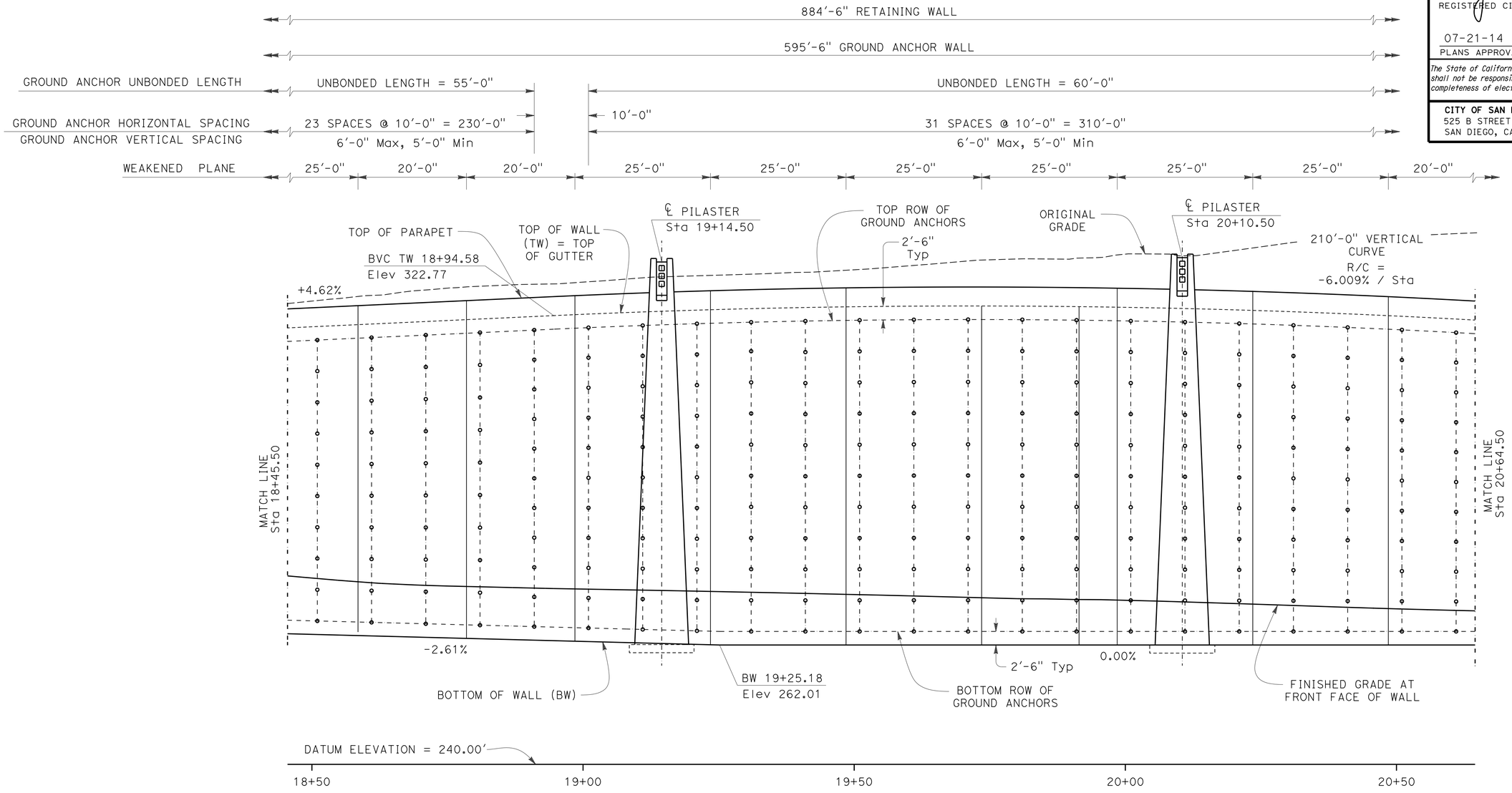
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

- ∘ - Indicates location of Ground Anchor

MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW4" LOL
2. For "WEAKENED PLANE DETAIL AT GROUND ANCHOR WALL", see "INDEX TO PLANS" sheet
3. Pipe handrailing not shown

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
STRUCTURE ELEVATION NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			
1-15-13	2-22-13	12-23-13	2-3-14

SHEET 6 OF 29

FILE => 57E0118-e-se02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	958	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

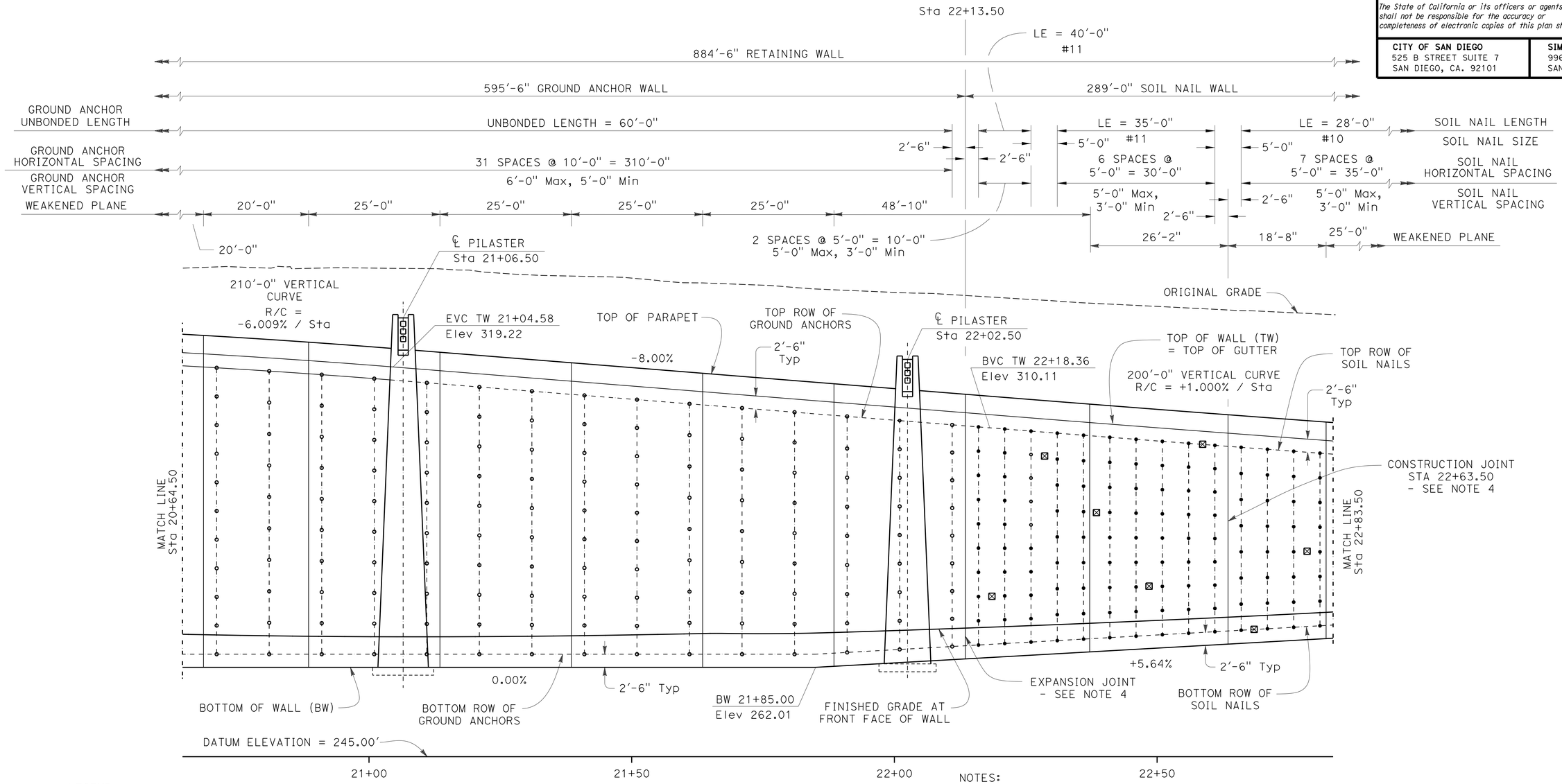
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

LEGEND:

- ∘ - Indicates location of Ground Anchor
- • - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly

NOTES:

1. All dimensions measured along "RW4" LOL
2. For "WEAKENED PLANE DETAIL AT GROUND ANCHOR WALL" and "WEAKENED PLANE DETAIL AT SOIL NAIL WALL", see "INDEX TO PLANS" sheet
3. Pipe handrailing not shown
4. For "EXPANSION JOINT DETAIL" and "CONSTRUCTION JOINT DETAIL", see "INDEX TO PLANS" sheet

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
STRUCTURE ELEVATION NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-18-13	2-22-13	12-23-13	2-3-14	7	29

FILE => 57E0118-e-se03.dgn

USERNAME => s124400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	959	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

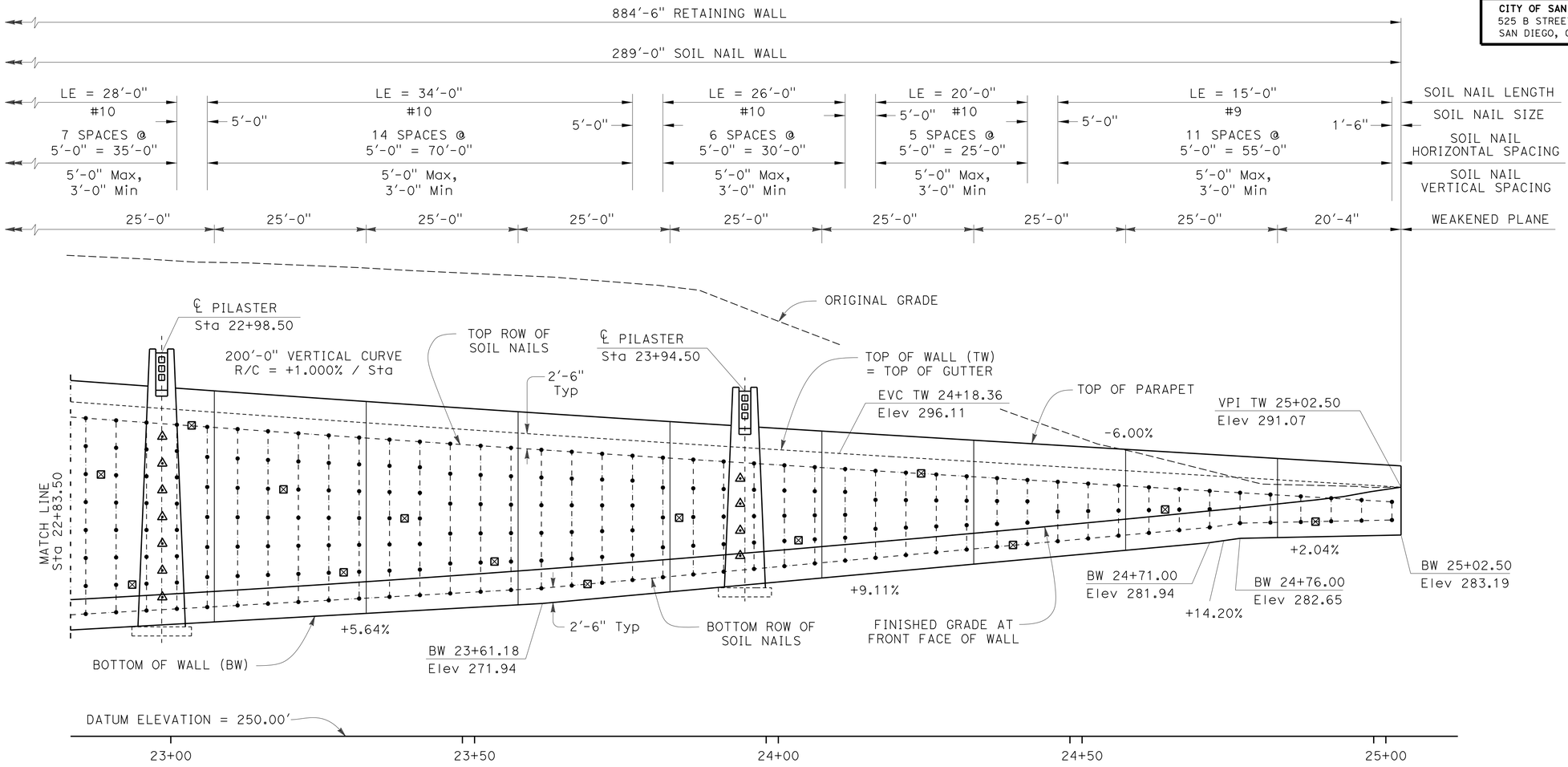
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

- • - Indicates location of Soil Nail Assembly
- ◬ - Indicates location of Strut Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly

MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW4" LOL
2. For "WEAKENED PLANE DETAIL AT SOIL NAIL WALL", see "INDEX TO PLANS" sheet
3. Pipe handrailing not shown

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
STRUCTURE ELEVATION NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-15-13	2-22-13	12-23-13	2-3-14	8	29

FILE => 57E0118-e-se04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	960	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

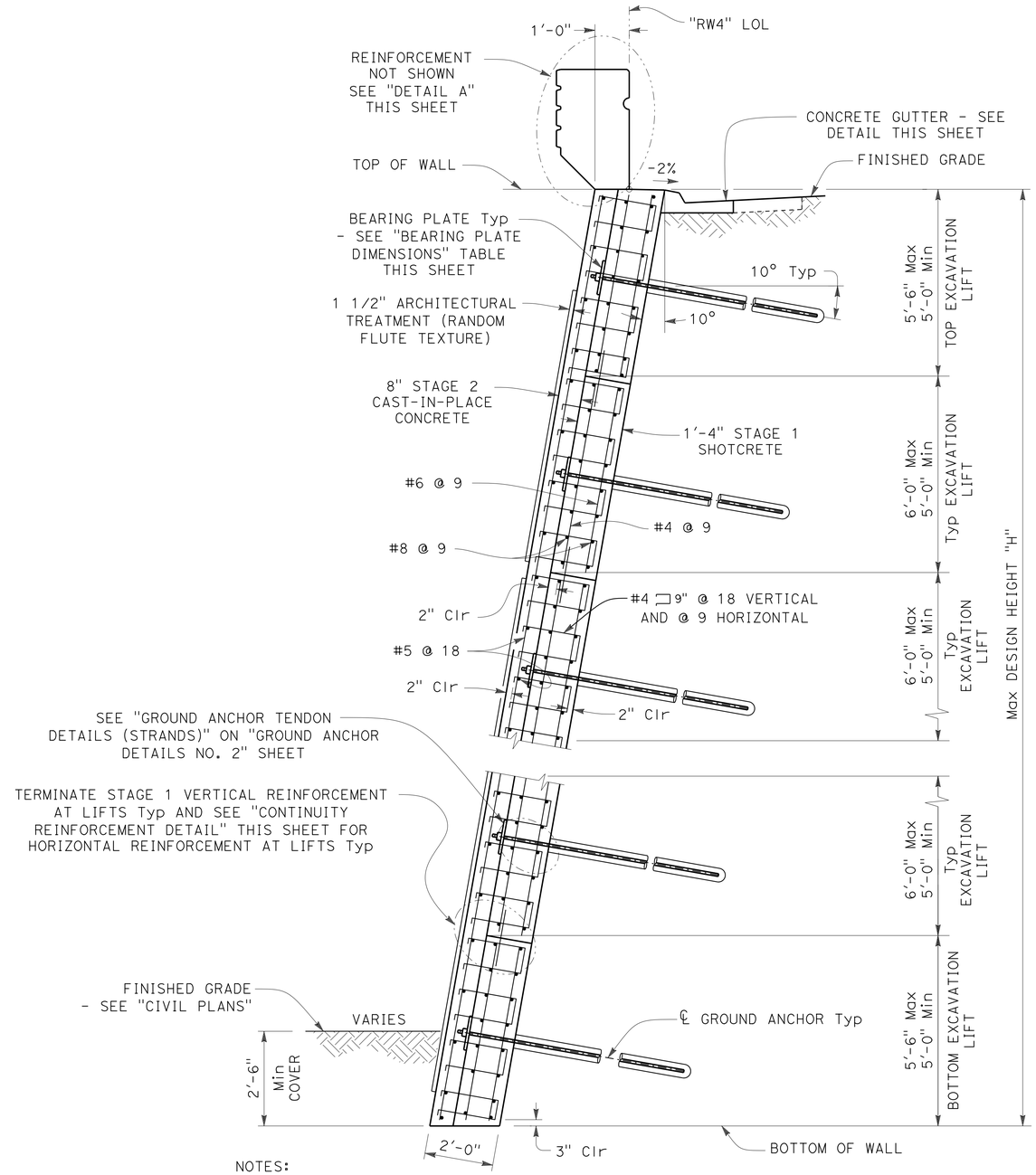
07-21-14 PLANS APPROVAL DATE

Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

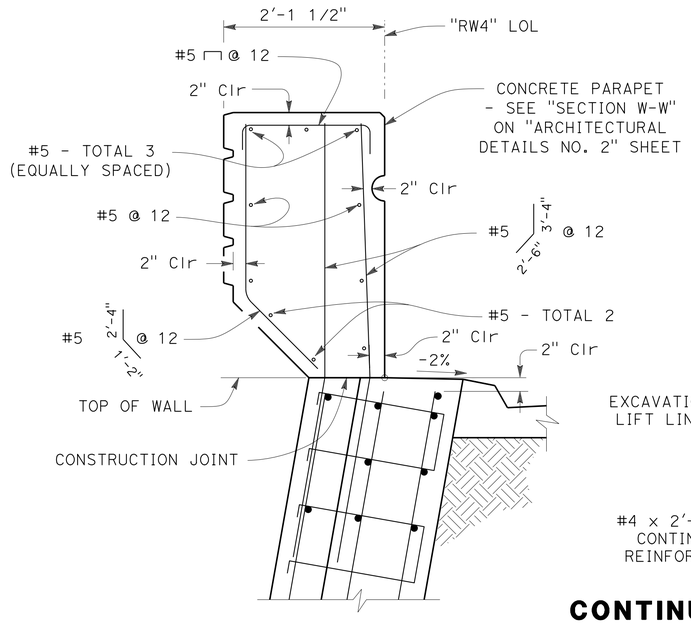


NOTES:

1. Ground anchors shall be centered in each Typ Excavation Lift
2. Pipe handrailing not shown

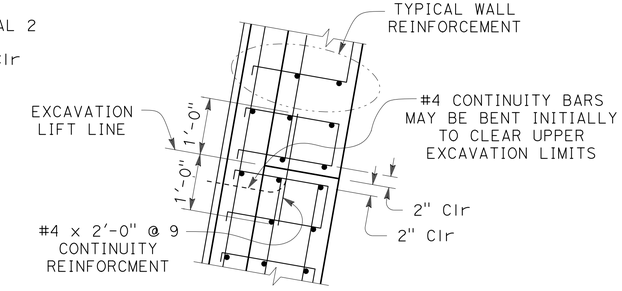
GROUND ANCHOR WALL TYPICAL SECTION

1/2" = 1'-0"



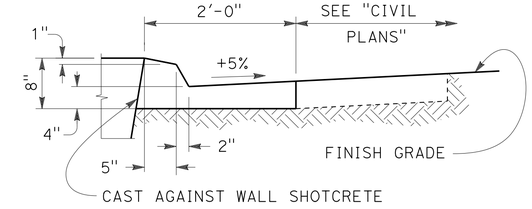
DETAIL A

1" = 1'-0"



CONTINUITY REINFORCEMENT DETAIL

3/4" = 1'-0"



CONCRETE GUTTER DETAIL

1" = 1'-0"

BEARING PLATE DIMENSIONS

NUMBER OF STRANDS	PLATE DIMENSIONS
3, 4, OR 5	1'-0" x 1'-0" x 1 1/4"
6 OR 7	1'-4" x 1'-4" x 1 3/4"
8 OR 9	1'-8" x 1'-8" x 1 7/8"

GROUND ANCHOR TENSION FORCES

BEGINNING STATION	END STATION	TOP ANCHOR				REMAINING ANCHORS			
		NUMBER OF STRANDS	FDL (K)	FTL (K)	LOCK-OFF (K)	NUMBER OF STRANDS	FDL (K)	FTL (K)	LOCK-OFF (K)
16+18.00	16+60.00	5	205	205	115	7	275	275	160
16+60.00	18+00.00	6	240	240	135	8	325	325	180
18+00.00	19+00.00	7	275	275	155	9	360	360	200
19+00.00	21+00.00	7	285	285	160	9	360	360	215
21+00.00	21+50.00	7	275	275	155	8	325	325	180
21+50.00	22+13.50	6	260	260	145	8	345	345	190

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
GROUND ANCHOR WALL DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4
FILE => 57E0118-g-gawd01.dgn

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-16-13	2-22-13	12-23-13	2-3-14	9	29

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

GENERAL NOTES

DESIGN:

AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments

PRESTRESSING STEEL:

Bars - ASTM Designation: A722 Type II (150 ksi)

Strand Tendons-ASTM Designation: A416 (270 Ksi Low Relaxation steel)

FTL = Factored Test Load per anchor (Kips)

fpu = Minimum tensile strength of prestressing steel

As = Minimum cross sectional area of prestressing steel in ground anchor (square inch)

$$As(Min) = \frac{1.0\ FTL}{0.75\ fpu} \quad \text{(Strands)}$$

$$As(Min) = \frac{1.0\ FTL}{0.80\ fpu} \quad \text{(Bars)}$$

NOTES:

(A) Level of initial grouting for drilled hole 6" in diameter or smaller

(B) Level of secondary grouting

(C) Level of initial grouting inside corrugated sheathing

(D) Bonded length shall be determined by the contractor

(E) For unbonded length, see PROJECT PLANS

(F) For inclination, see PROJECT PLANS

(G) Face of Wall Excavation

NOTES:

1. Anchorage enclosure shall only be used when anchor head assembly is not enclosed in concrete
2. Anchorage enclosure shall have provisions to allow injecting grout at low end and venting at high end. Galvanize after fabrication.
3. Silicone sealant to cover full width of flange
4. Steel tube (Min thickness = 1/4") welded to bearing plate. Galvanize assembly after fabrication
5. Steel tube welded to bearing plate. Inside diameter of steel tube (Min thickness = 1/4") to be 1" greater than outside diameter of smooth sheathing.
6. Galvanize assembly after fabrication
7. For other wall details, see PROJECT PLANS

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	961	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

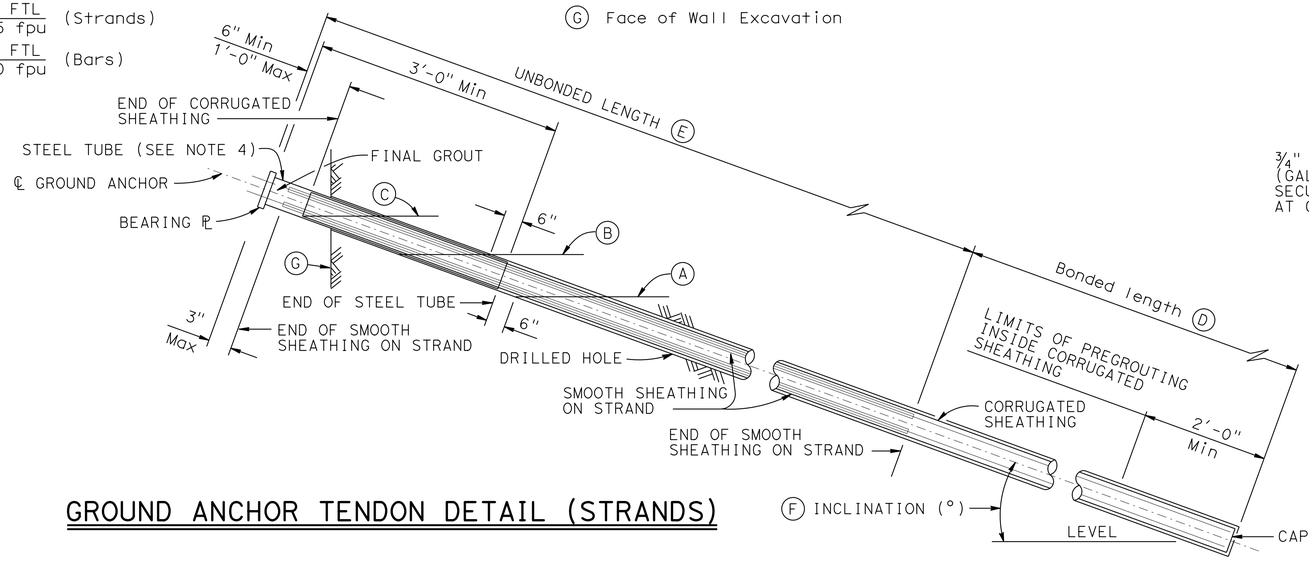
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 9-30-14 CIVIL — STATE OF CALIFORNIA

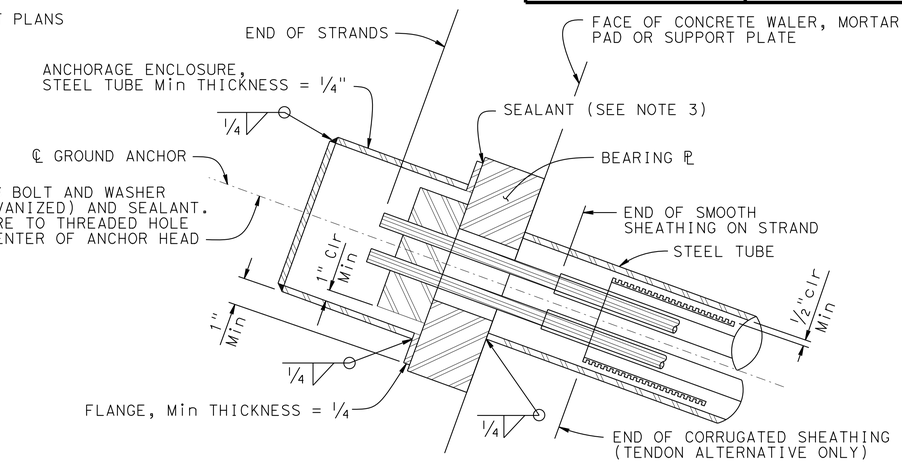
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

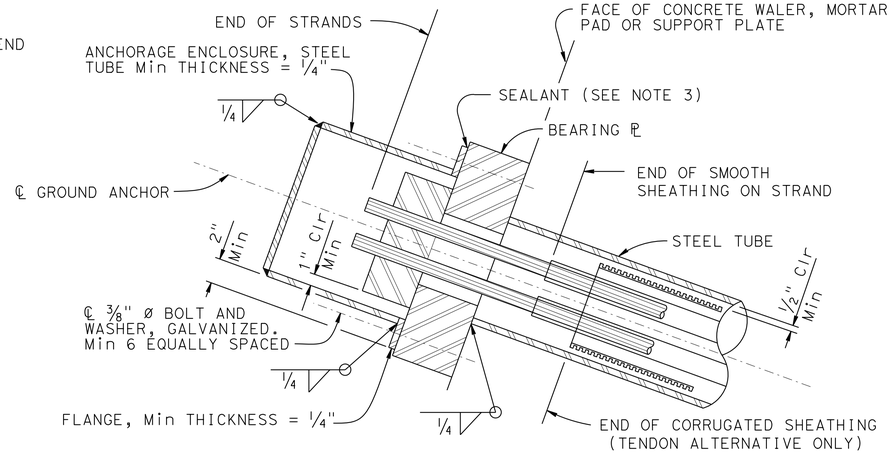
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



GROUND ANCHOR TENDON DETAIL (STRANDS)



ALTERNATIVE X



ALTERNATIVE Y

ANCHORAGE ENCLOSURE DETAILS

NO SCALE

SPECIAL DETAILS

1 DELETED DETAIL

REVISED STANDARD DRAWING

FILE NO. xs12-040

APPROVAL DATE January 2012

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 57E0118
POST MILE 29.2

RETAINING WALL NO. RW4

GROUND ANCHOR WALL DETAILS NO. 2

DS OSD 2147A (ENGLISH STANDARD DRAWING "XS" BORDER REV. (02-02-11)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021
CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-16-13	2-22-13	12-23-13	2-3-14	10	29

FILE => 57E0118-g-gawd02.dgn

USERNAME => s\127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	962	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

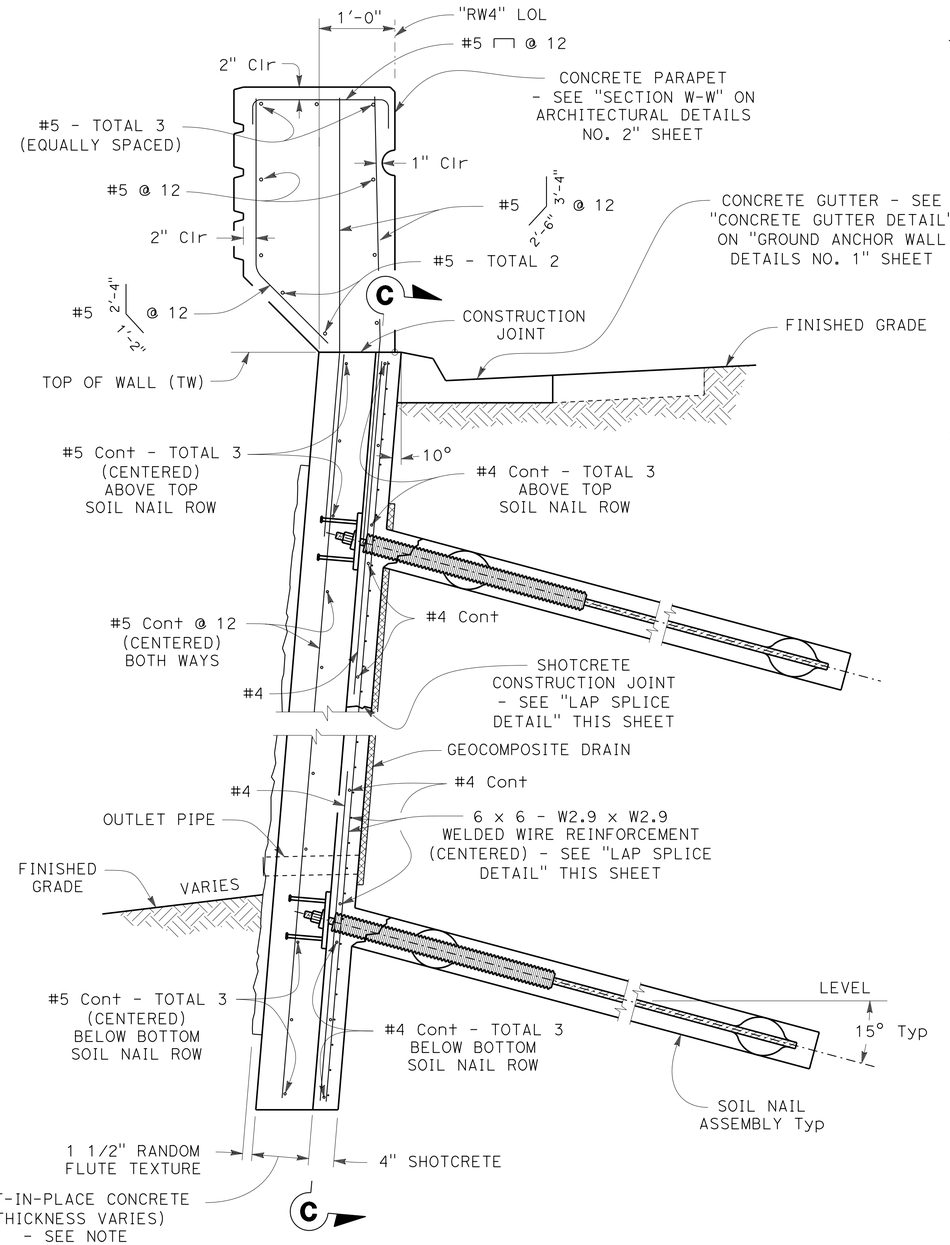
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



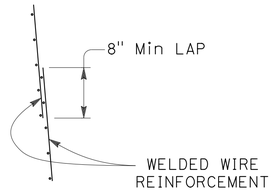
SOIL NAIL WALL TYPICAL SECTION

1" = 1'-0"

NOTE: Welded Wire Reinforcement not shown for clarity.
Three rows of nails shown, others similar.

SECTION C-C

No Scale



LAP SPLICE DETAIL

No Scale

NOTE: Provide 9" Cast-In-Place concrete facing from Sta 22+13.50 to Sta 22+63.50.
Provide 8" Cast-In-Place concrete facing from Sta 22+63.50 to Sta 25+02.50.

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
SOIL NAIL WALL DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-15-13 | 2-22-13 | 12-23-13 | 2-3-14

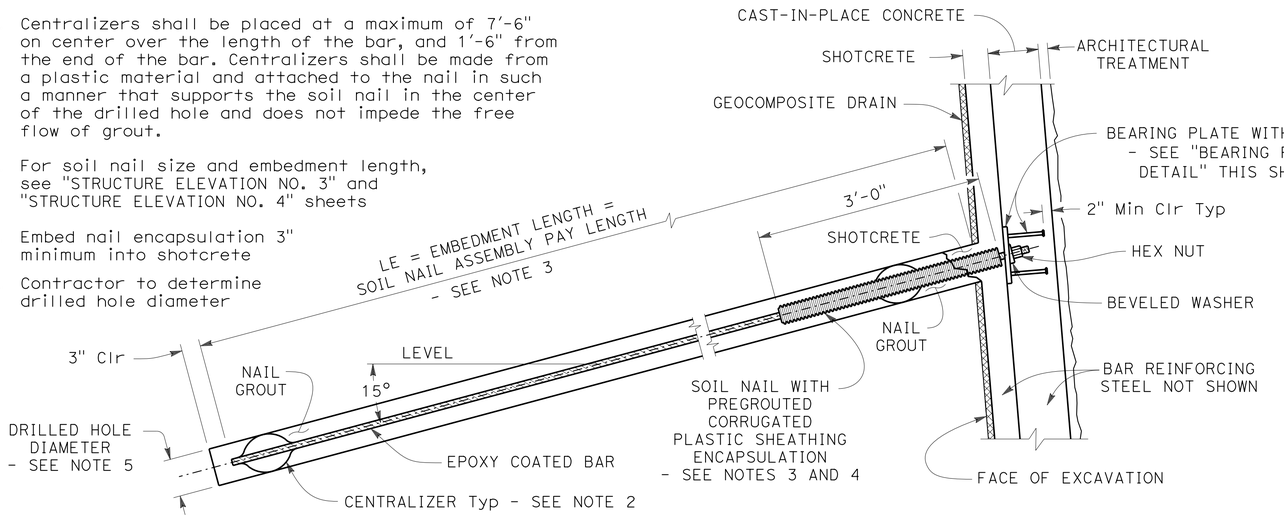
SHEET 11 OF 29

FILE => 57E0118-g-snwd01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:44

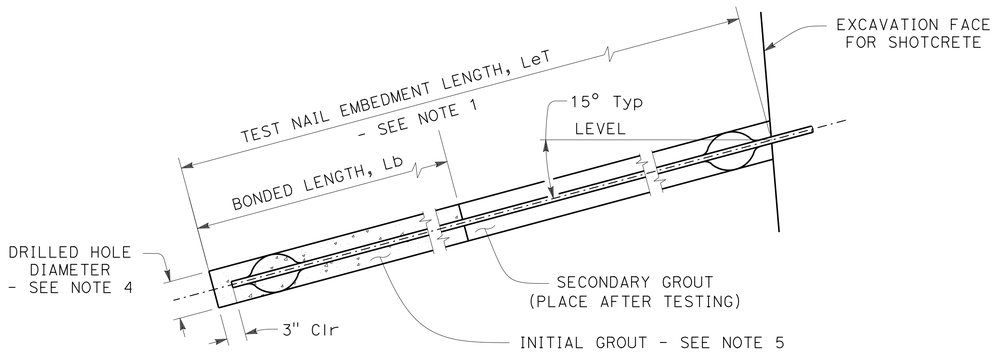
NOTES:

1. For details not shown, see "SOIL NAIL WALL DETAILS NO. 1" sheet
2. Centralizers shall be placed at a maximum of 7'-6" on center over the length of the bar, and 1'-6" from the end of the bar. Centralizers shall be made from a plastic material and attached to the nail in such a manner that supports the soil nail in the center of the drilled hole and does not impede the free flow of grout.
3. For soil nail size and embedment length, see "STRUCTURE ELEVATION NO. 3" and "STRUCTURE ELEVATION NO. 4" sheets
4. Embed nail encapsulation 3" minimum into shotcrete
5. Contractor to determine drilled hole diameter



SOIL NAIL ASSEMBLY

1" = 1'-0"

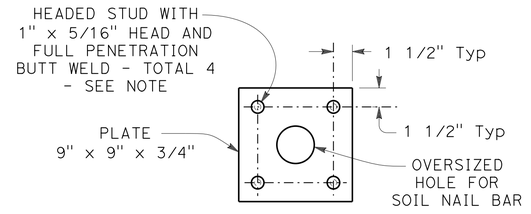


NOTES:

1. The test nail embedment length LeT, shall be equal to 2/3 of the embedment length, Le, of adjacent production soil nail assemblies, but not less than 12'-0"
2. The total length of the test nail assembly equals the embedment length plus the length required for jacking equipment
3. For location of proof test nail , see "STRUCTURE ELEVATION NO. 3" and "STRUCTURE ELEVATION NO. 4" sheets. Additional proof test nails will be installed and tested per special provisions.
4. Contractor to determine drilled hole diameter
5. Finished grout surface to be normal to the bar

PROOF TEST NAIL DETAIL

1" = 1'-0"



NOTE: From Sta 22+13.50 RW-4 to Sta 22+63.50 RW-4, use 1/2" x 6 1/8" headed studs.
From Sta 22+63.50 RW-4 to Sta 25+02.50 RW-4, use 1/2" x 5 5/16" headed studs.

BEARING PLATE DETAIL

2" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	963	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO	SIMON WONG ENGINEERING
525 B STREET SUITE 7	9968 HIBERT STREET
SAN DIEGO, CA. 92101	SAN DIEGO, CA. 92131

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
SOIL NAIL WALL DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-15-13	2-22-13	12-23-13	2-3-14	12	29

FILE => 57E0118-g-snwd02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	964	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

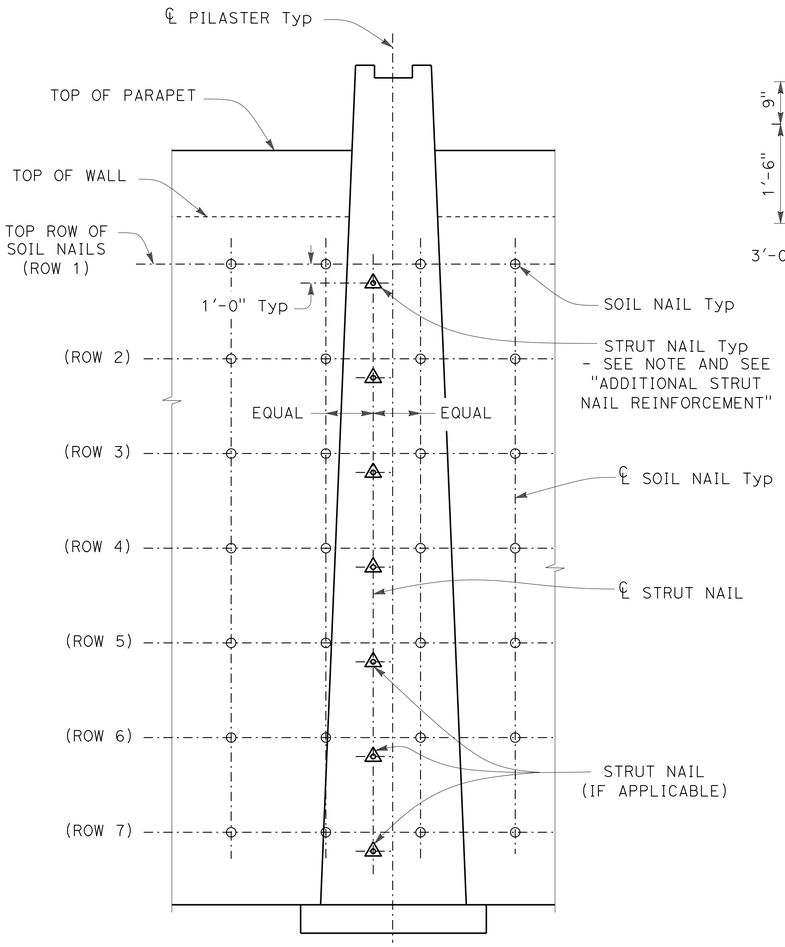
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

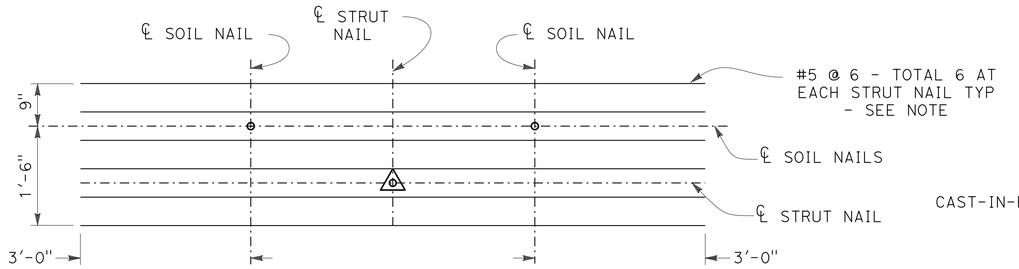
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: For Strut Nail layout, see "STRUCTURE ELEVATION NO. 4" sheet

TYPICAL PILASTER ELEVATION

No Scale



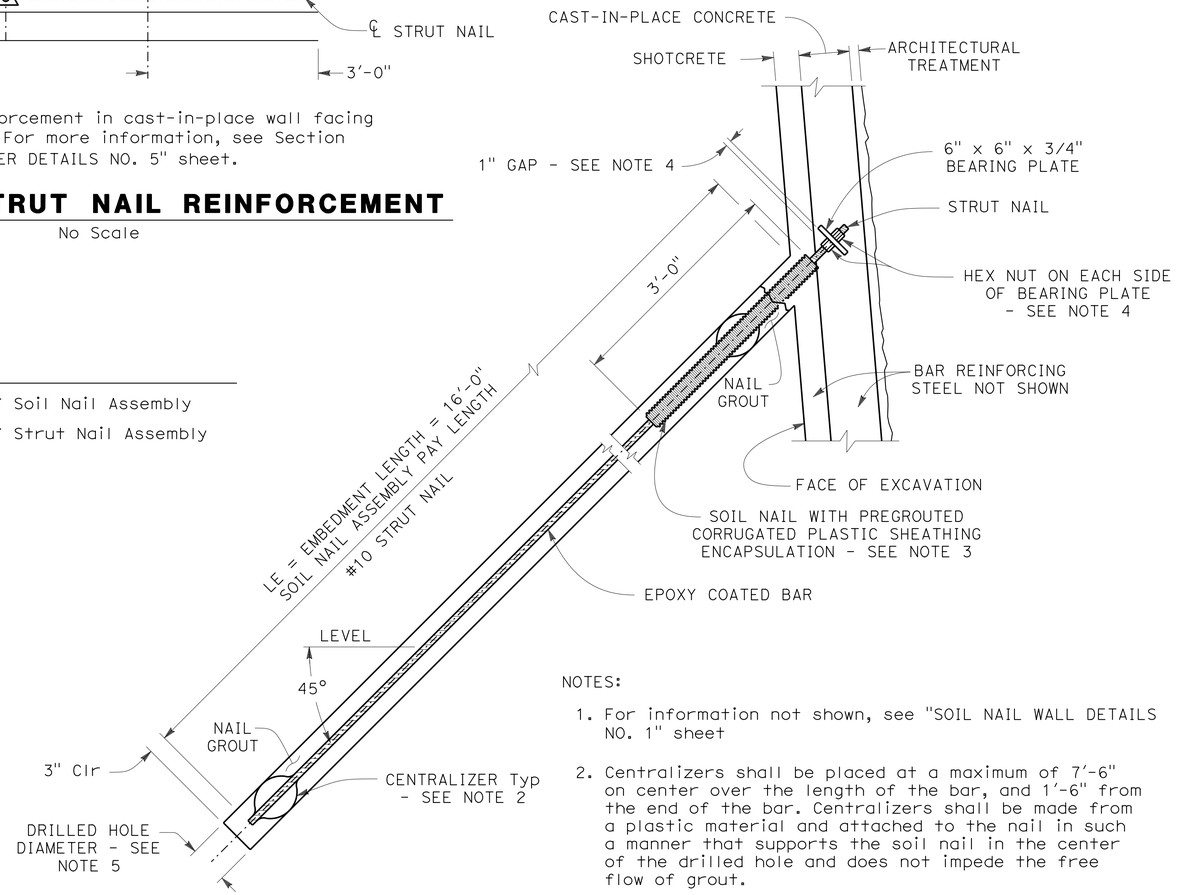
NOTE: Additional reinforcement in cast-in-place wall facing at strut nails. For more information, see Section "O-O" on "PILASTER DETAILS NO. 5" sheet.

ADDITIONAL STRUT NAIL REINFORCEMENT

No Scale

LEGEND:

- O - Indicates location of Soil Nail Assembly
- ⚠ - Indicates location of Strut Nail Assembly



NOTES:

1. For information not shown, see "SOIL NAIL WALL DETAILS NO. 1" sheet
2. Centralizers shall be placed at a maximum of 7'-6" on center over the length of the bar, and 1'-6" from the end of the bar. Centralizers shall be made from a plastic material and attached to the nail in such a manner that supports the soil nail in the center of the drilled hole and does not impede the free flow of grout.
3. Embed nail encapsulation 3" minimum into shotcrete
4. Install bearing plate and nuts after completion of full height shotcrete facing. Leave 1" gap between edge of bearing plate and shotcrete facing. Hex nuts shall be snug tight against bearing plate.
5. Contractor to determine drilled hole diameter

STRUT NAIL ASSEMBLY

1" = 1'-0"

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0118 — POST MILES 29.2

RETAINING WALL NO. RW4
SOIL NAIL WALL DETAILS NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-18-13	2-22-13	12-23-13	2-3-14	13	29

FILE => 57E0118-g-snwd03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	965	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

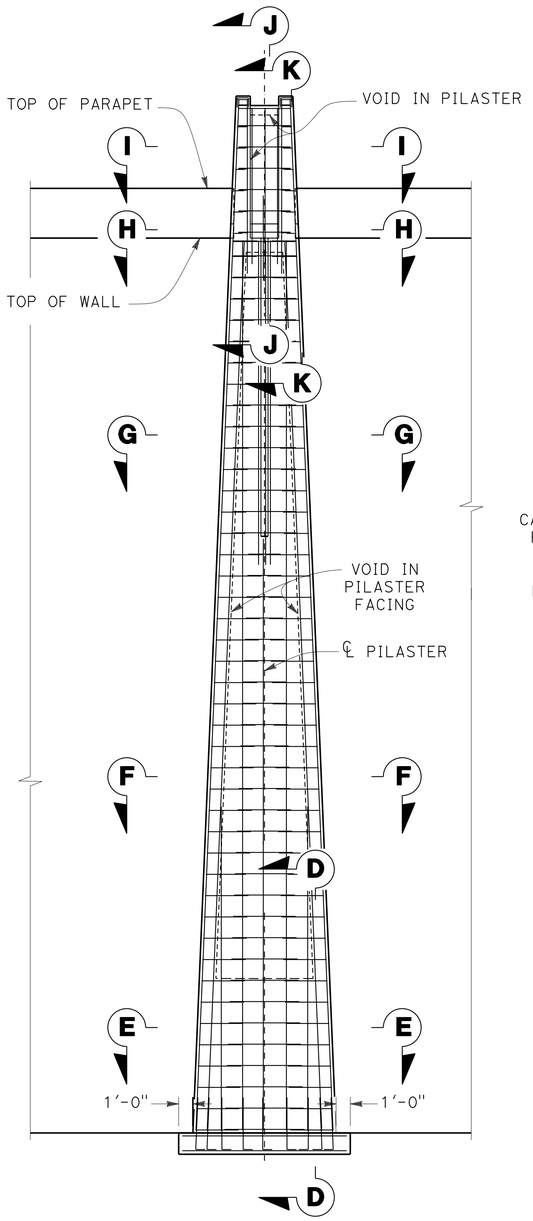
07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

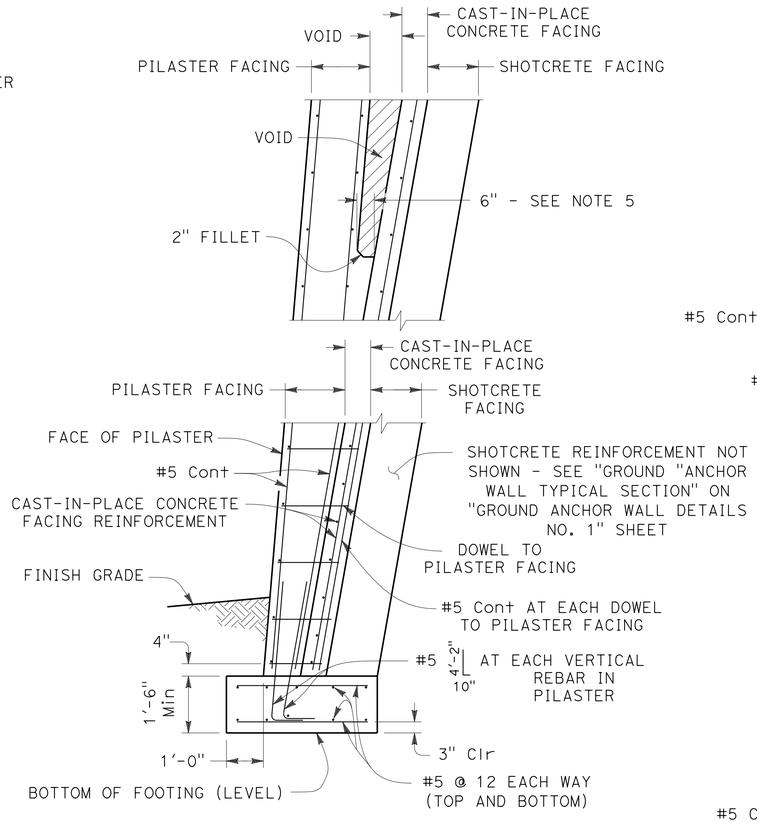
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



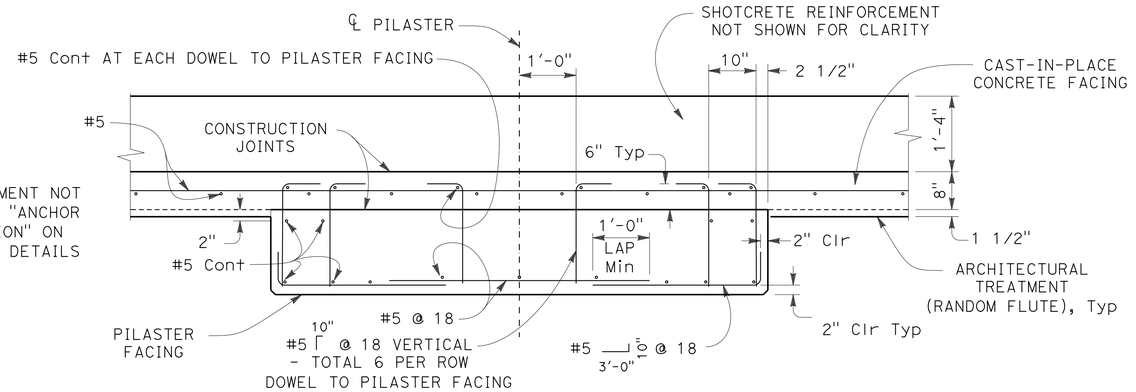
TYPICAL GROUND ANCHOR WALL PILASTER ELEVATION STA 16+18.00 TO STA 22+13.50

3/16" = 1'-0"



SECTION D-D

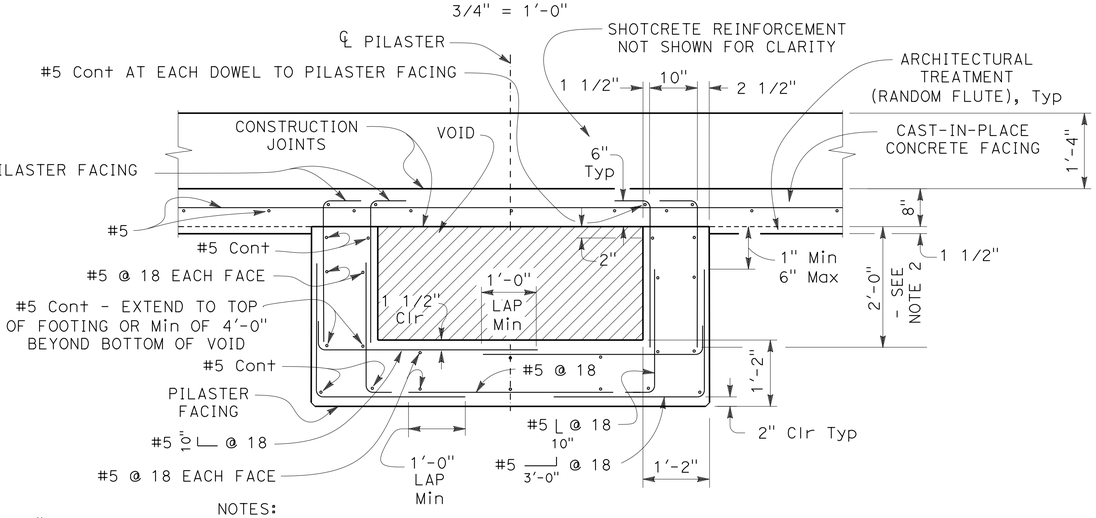
1/2" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION E-E

3/4" = 1'-0"



NOTES:

1. For Sections "G-G", "H-H", and "I-I', see "PILASTER DETAILS NO. 2" sheet
2. For Sections "J-J" and "K-K", see "PILASTER DETAILS NO. 3" sheet
3. For pilaster dimensions, see "ARCHITECTURAL DETAILS NO. 1" sheet
4. Maximum weight of material used to form or fill void shall not exceed 10 pcf
5. For the pilaster at Sta 22+02.50, the void extends to the top of the footing

NOTES:

1. Reinforcement is symmetrical about centerline pilaster
2. Where Pilaster facing thickness is less than 2'-2", provide dowel with shorter length so that 2" Clr is maintained

SECTION F-F

3/4" = 1'-0"

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
PILASTER DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
1-18-13	2-22-13	12-23-13	2-3-14	14	29

FILE => 57E0118-j-pd01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	966	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

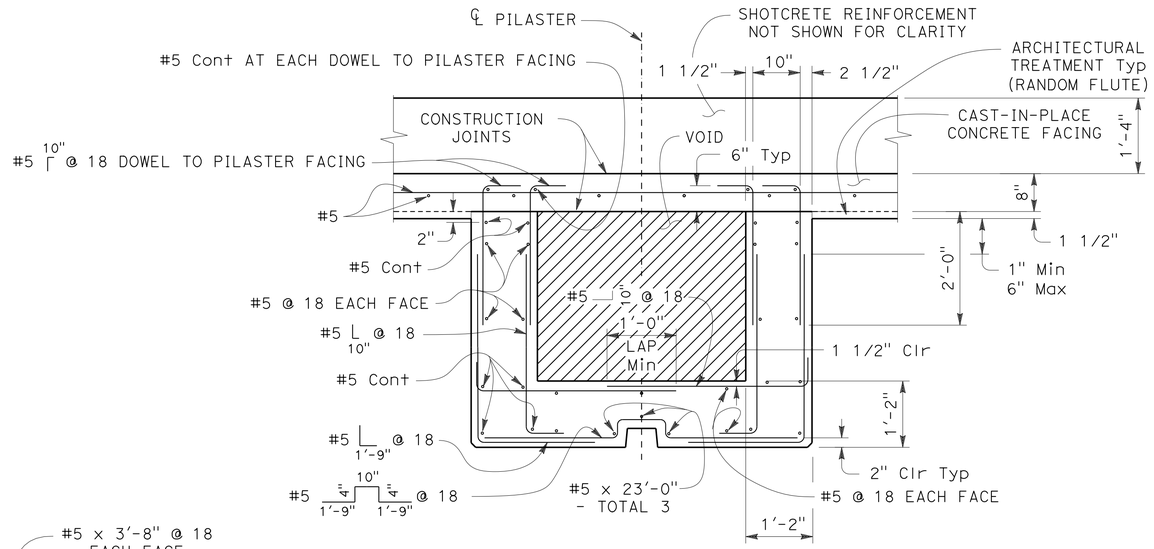
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

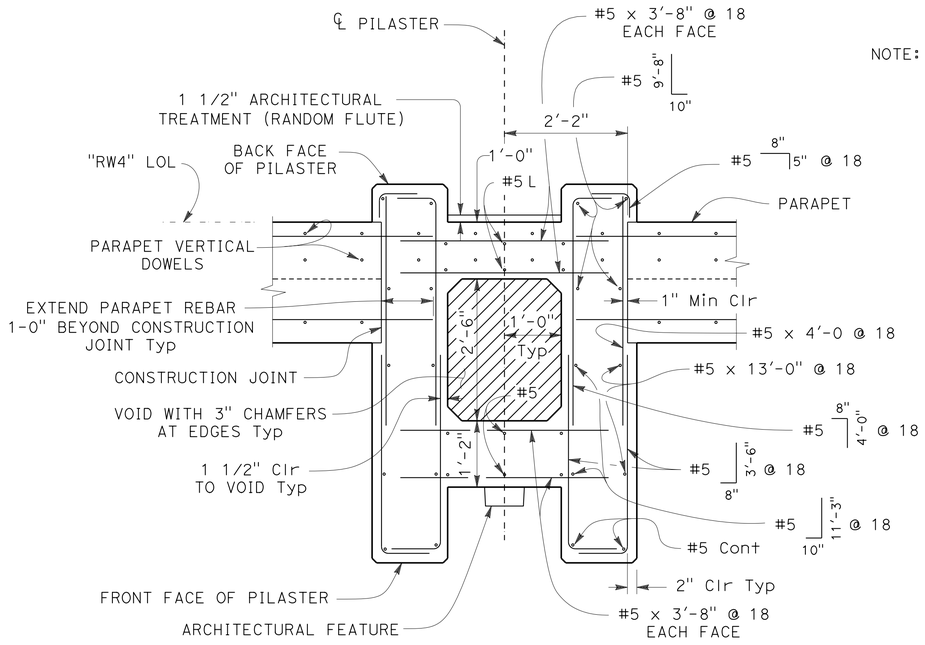
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: Reinforcement is symmetrical about centerline pilaster.

SECTION G-G

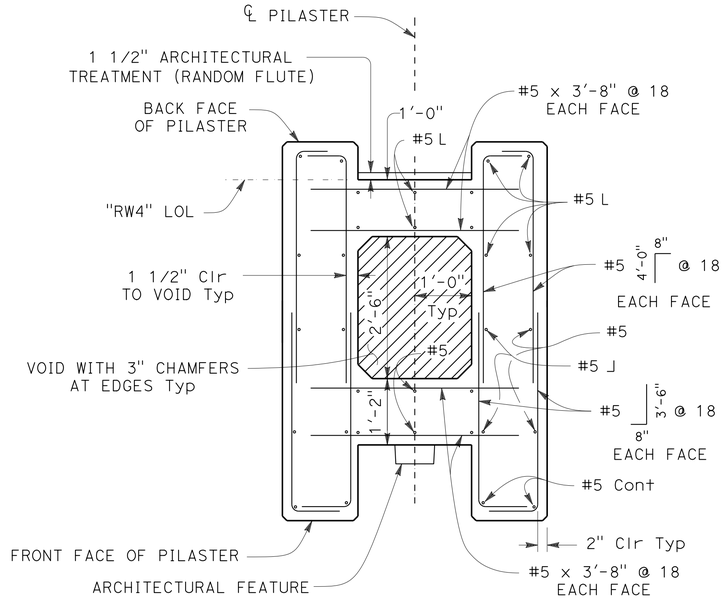
3/4" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION H-H

3/4" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION I-I

3/4" = 1'-0"

NOTE: Maximum weight of material used to form or fill void shall not exceed 10 pcf

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
PILASTER DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-15-13 | 2-22-13 | 12-25-13 | 2-3-14

SHEET 15 OF 29

FILE => 57E0118-j-pd02.dgn

USERNAME => s12400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	967	1012

Craig Shannon — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

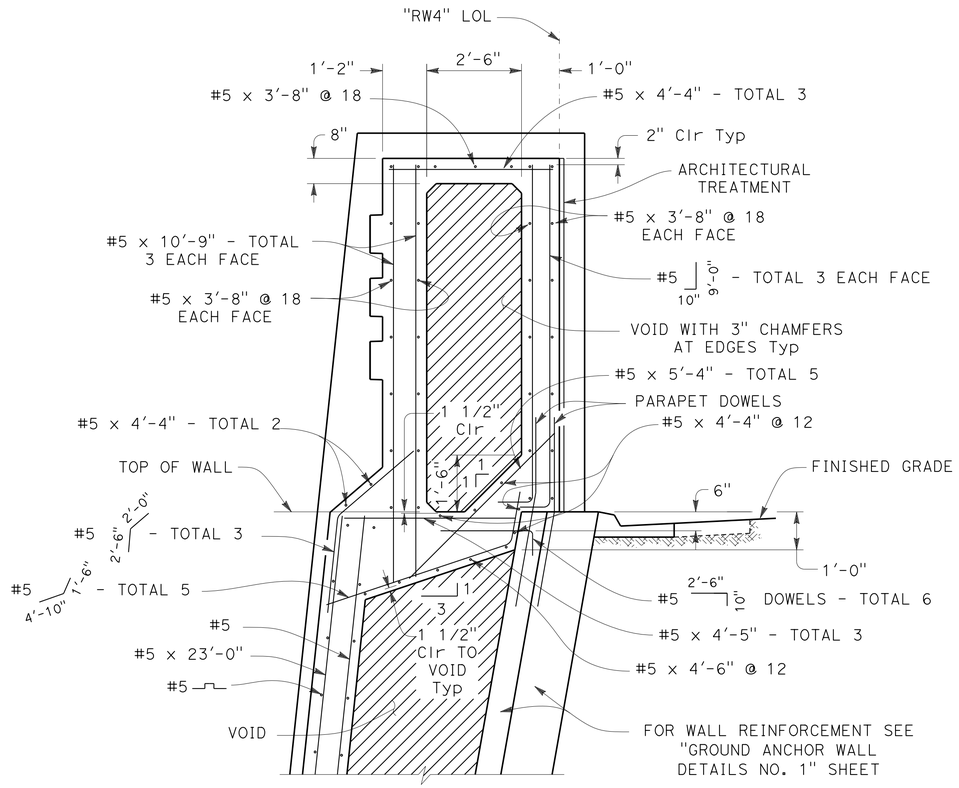
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

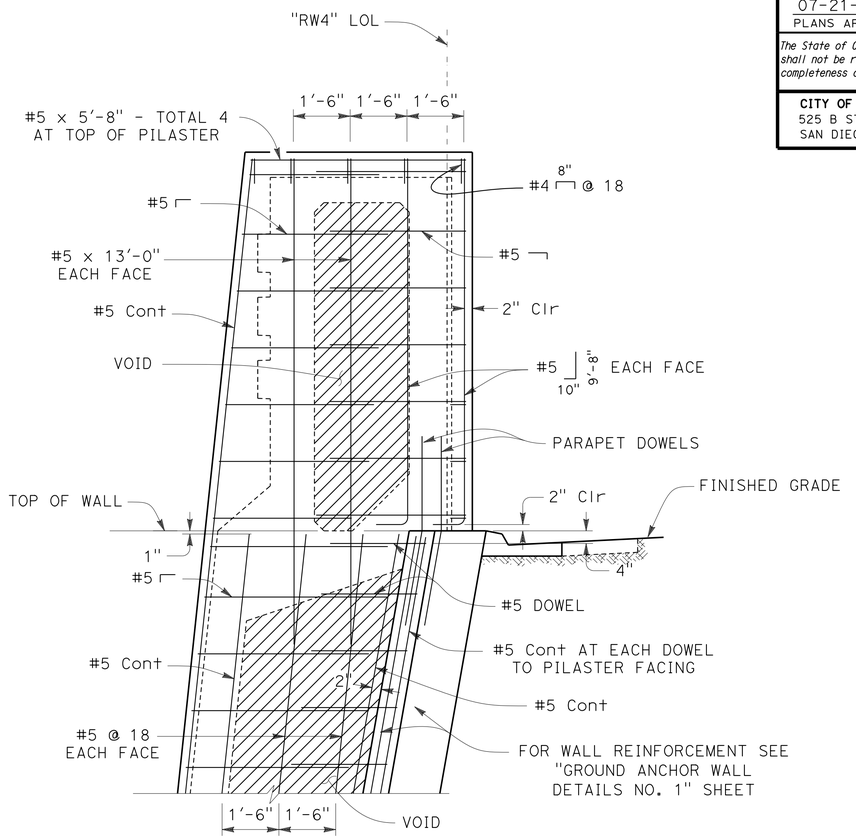
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



SECTION J-J

1/2" = 1'-0"



SECTION K-K

1/2" = 1'-0"

NOTE: Maximum weight of material used to form or fill void shall not exceed 10 pcf

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
PILASTER DETAILS NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 111200001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-16-13 | 2-22-13 | 12-25-13 | 2-3-14

SHEET 16 OF 29

FILE => 57E0118-j-pd03.dgn

USERNAME => s12400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	968	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

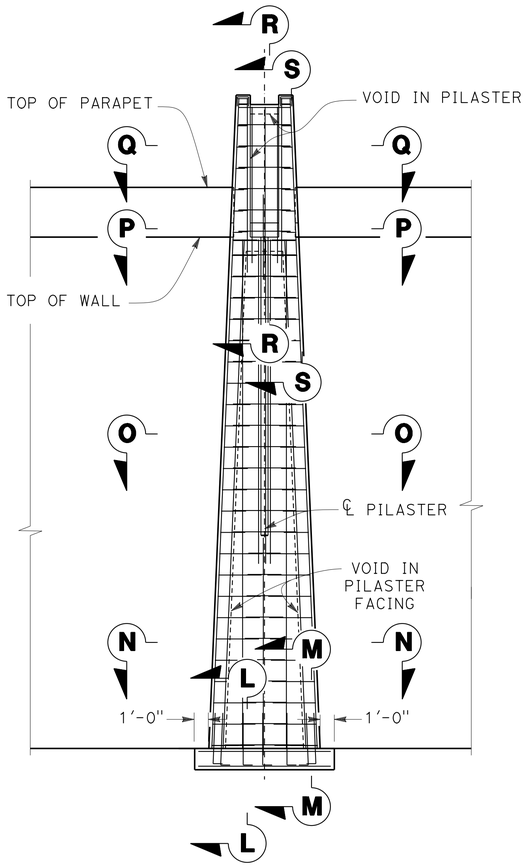
07-21-14 PLANS APPROVAL DATE

Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

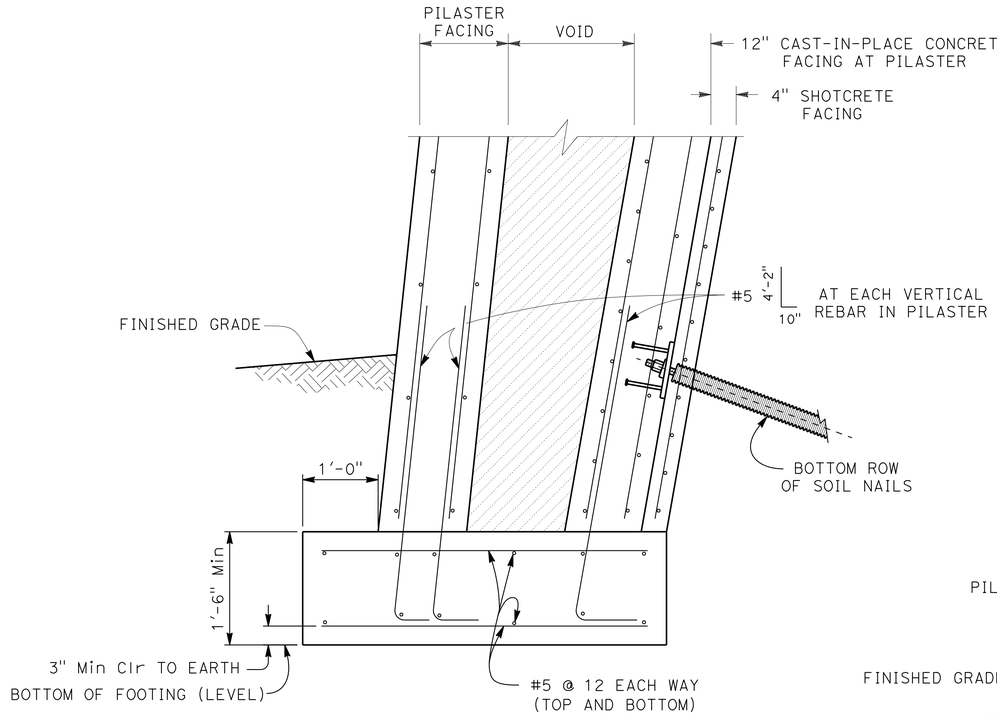
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



TYPICAL SOIL NAIL WALL PILASTER ELEVATION STA 22+13.50 TO STA 25+02.50

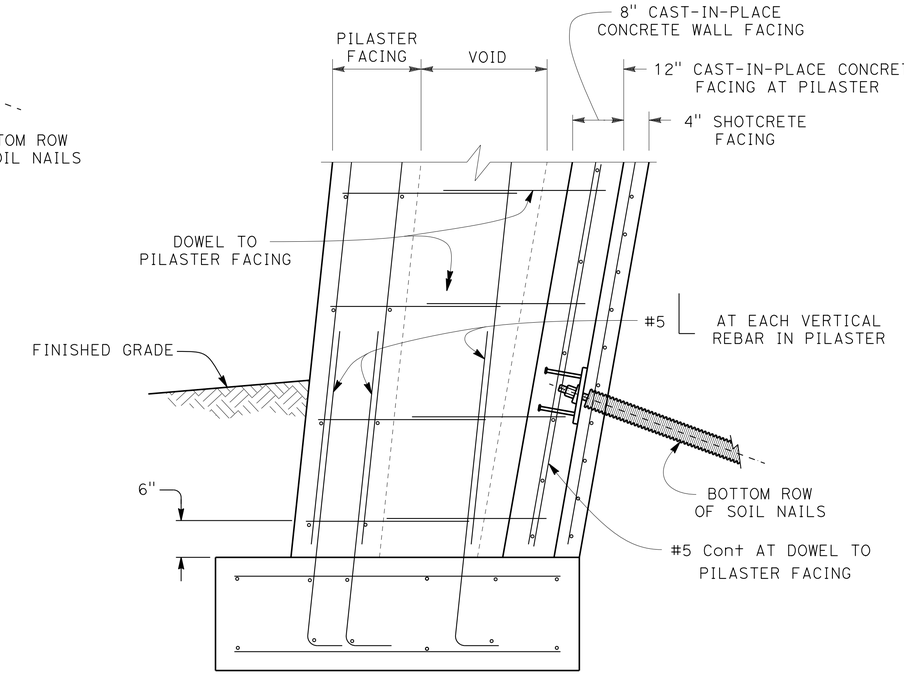
3/16" = 1'-0"



NOTE: Excavate for footing after shotcrete has been placed

SECTION L-L

1" = 1'-0"



NOTE: Excavate for footing after shotcrete has been placed

SECTION M-M

1" = 1'-0"

NOTES:

1. For Sections "O-O", "P-P", and "Q-Q', see "PILASTER DETAILS NO. 5" sheet
2. For Sections "R-R" and "S-S", see "PILASTER DETAILS NO. 6" sheet
3. For pilaster dimensions, see "ARCHITECTURAL DETAILS NO. 1" sheet
4. Maximum weight of material used to form or fill void shall not exceed 10 pcf

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0118 — POST MILES 29.2

RETAINING WALL NO. RW4
PILASTER DETAILS NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-15-13 | 2-28-13 | 12-23-13 | 2-3-14

SHEET 17 OF 29

FILE => 57E0118-j-pd04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	969	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

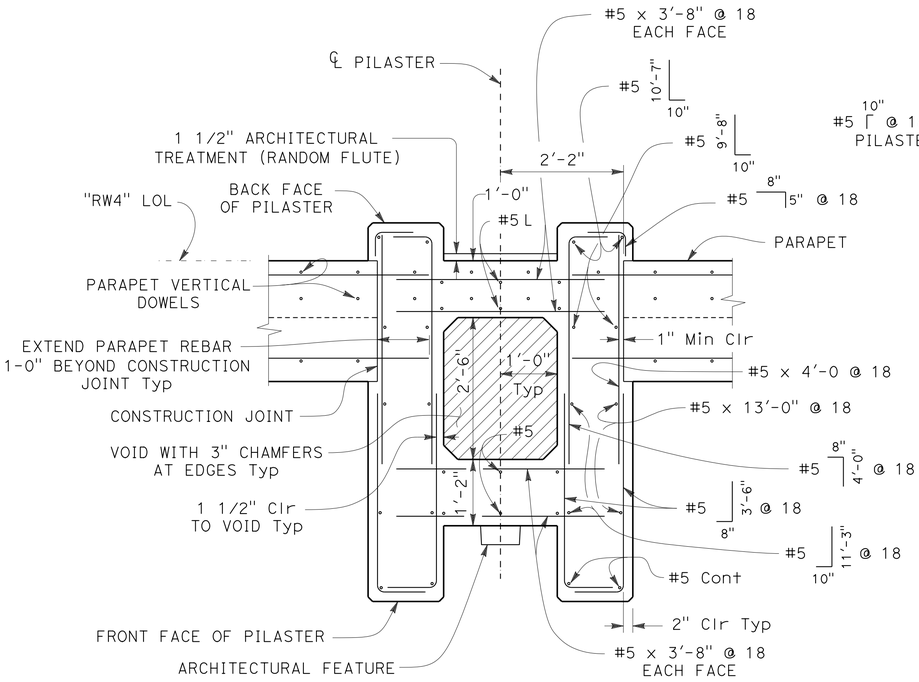
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

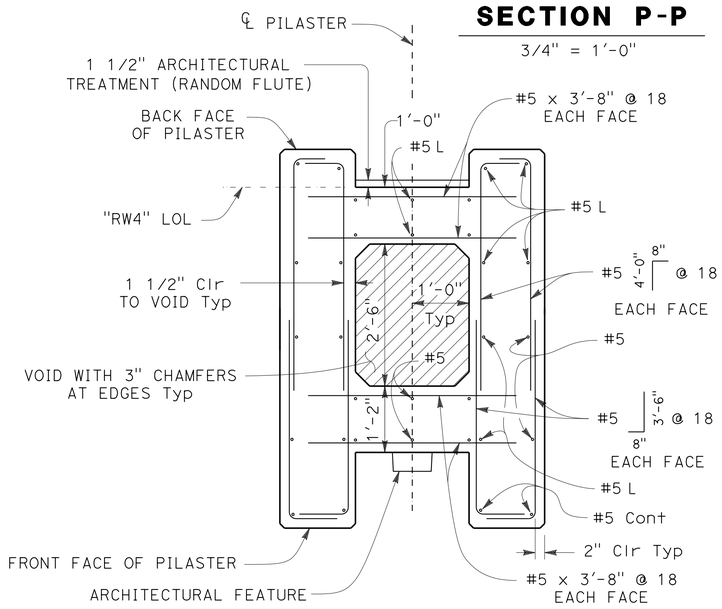
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION P-P

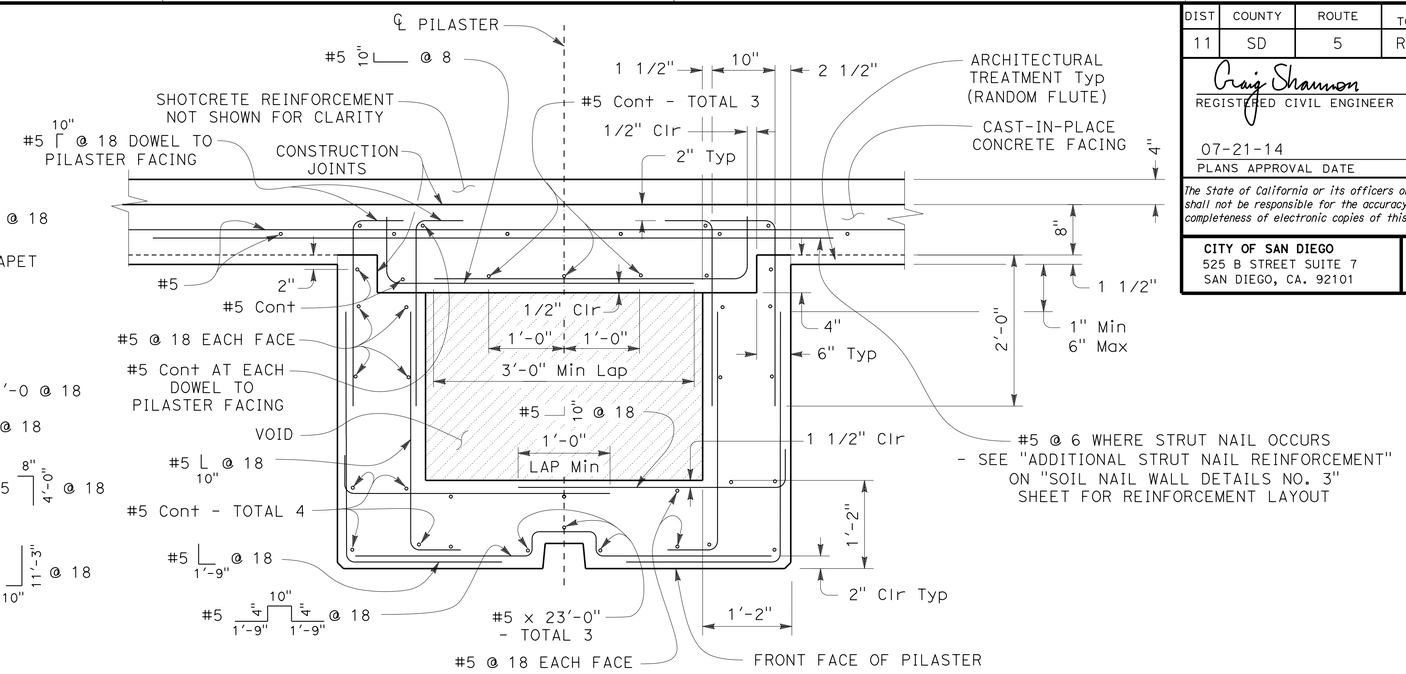
3/4" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION Q-Q

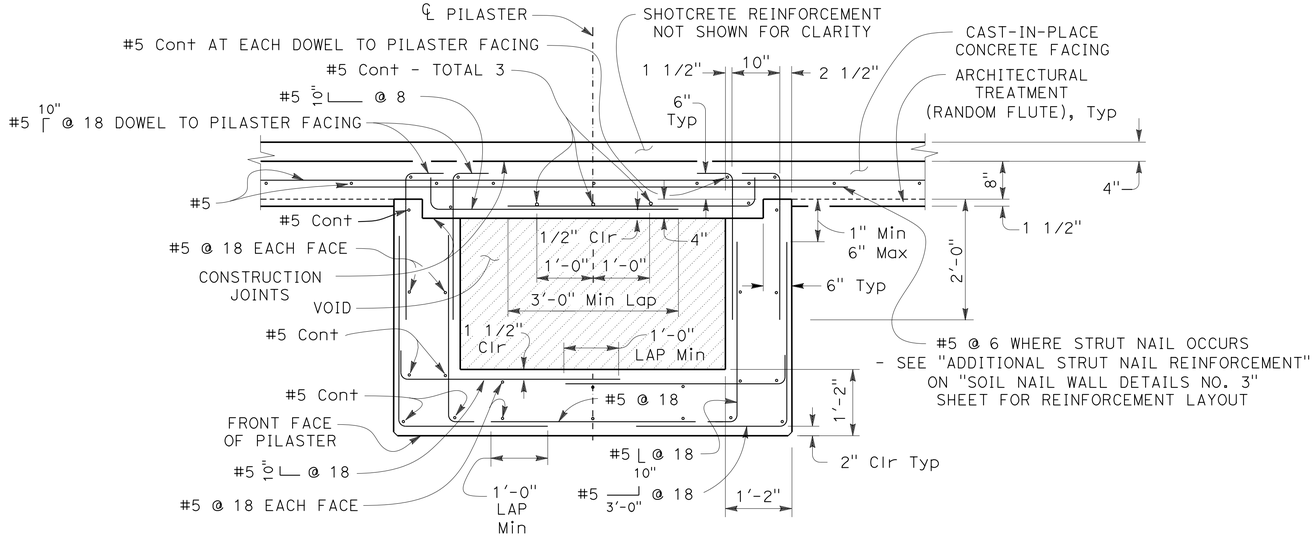
3/4" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster.

SECTION O-O

1" = 1'-0"



NOTE: Reinforcement is symmetrical about centerline pilaster

SECTION N-N

3/4" = 1'-0"

NOTE: Maximum weight of material used to form or fill void shall not exceed 10 pcf

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
PILASTER DETAILS NO. 5

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 1-18-13 | 2-22-13 | 12-23-13 | 2-3-14

SHEET 18 OF 29

FILE => 57E0118-j-pd05.dgn

USERNAME => s5127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	970	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

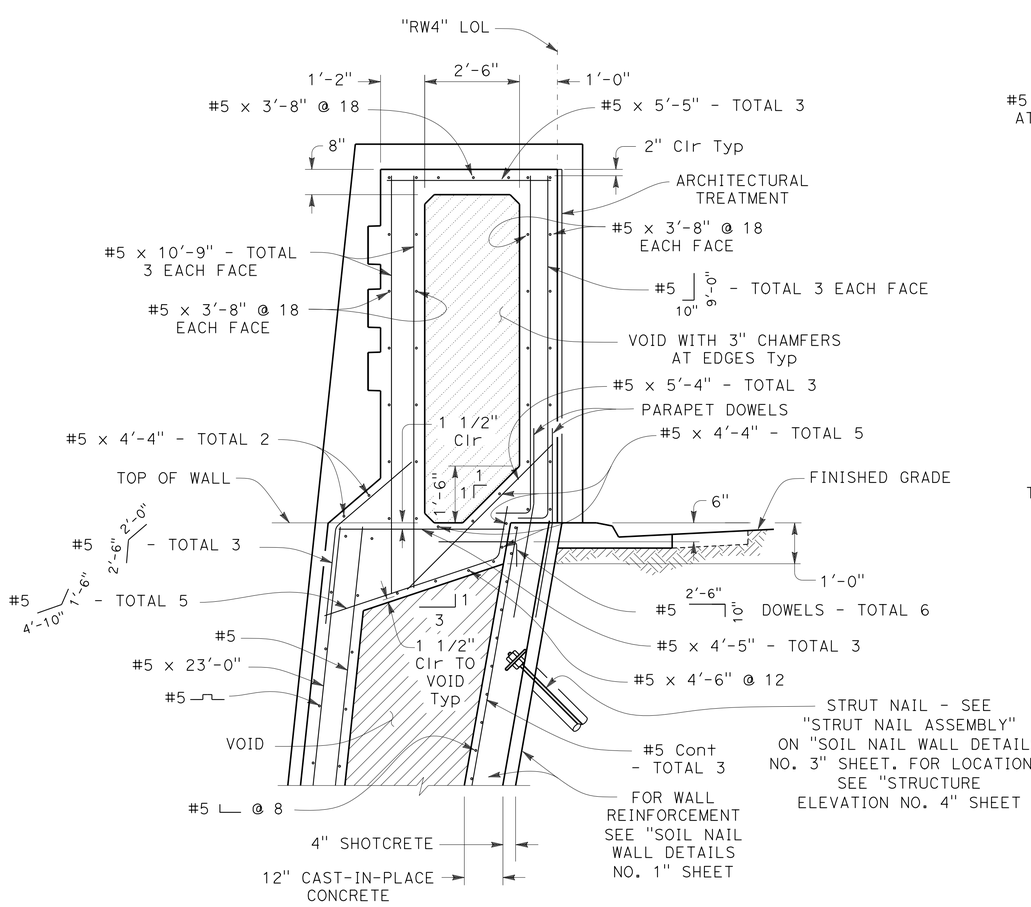
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

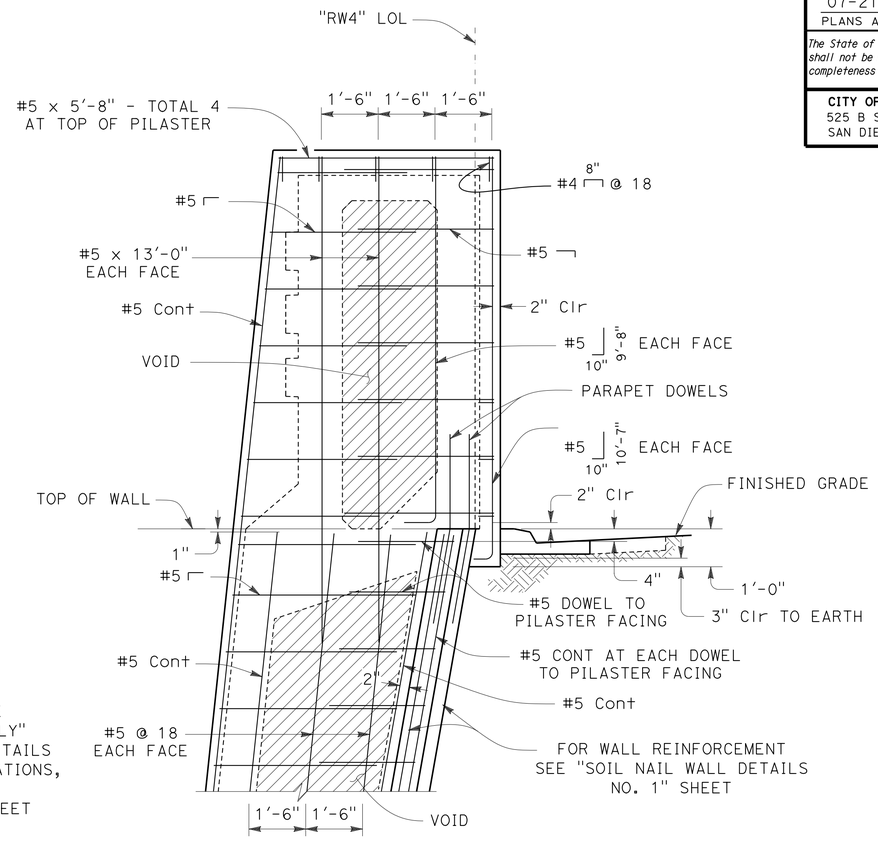
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



SECTION R-R

1/2" = 1'-0"



SECTION S-S

1/2" = 1'-0"

NOTE: Maximum weight of material used to form or fill void shall not exceed 10 pcf

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
PILASTER DETAILS NO. 6

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 111200001021 CONTRACT NO.: 11-0223U4

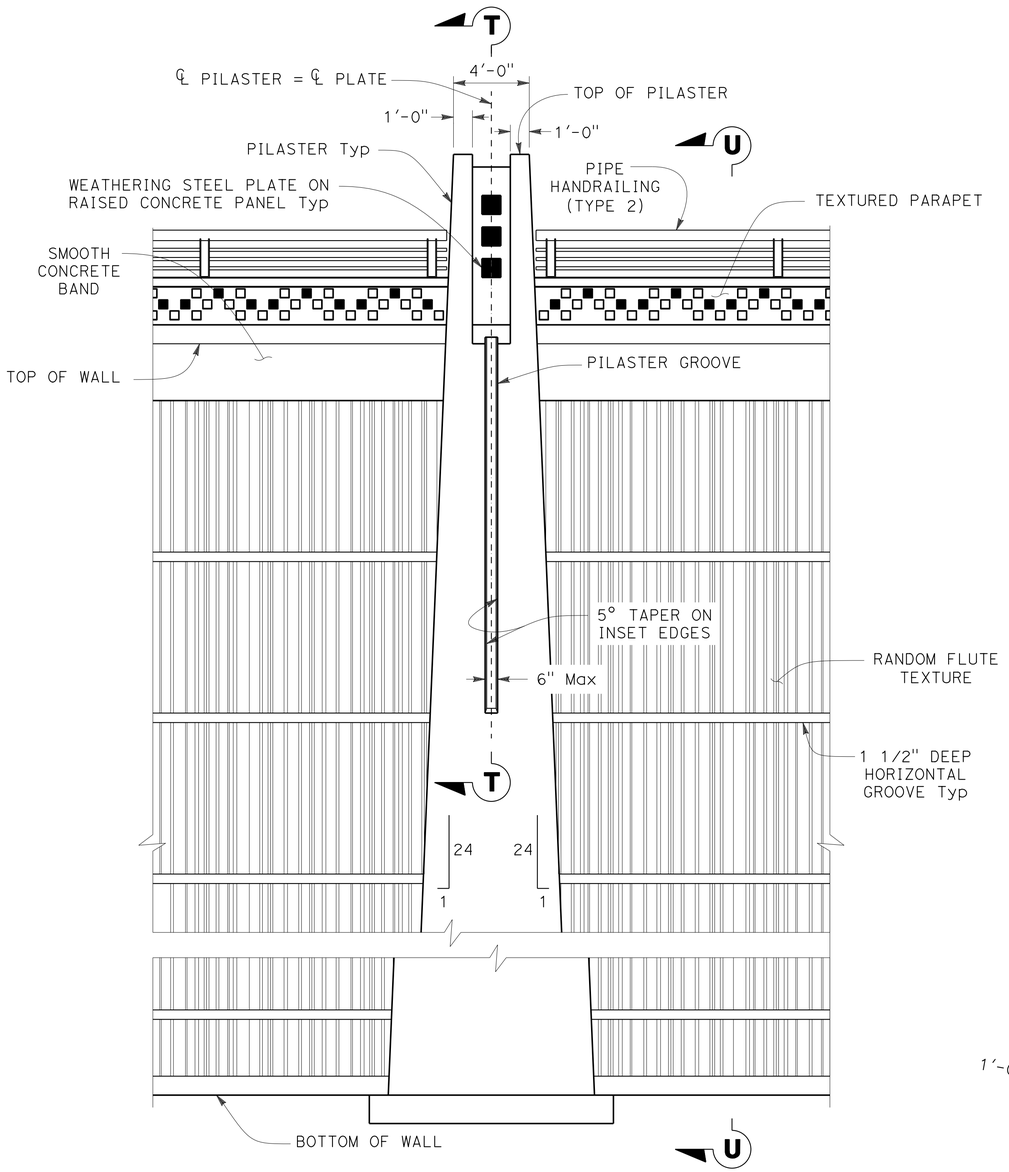
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 1-15-13 | 2-22-13 | 12-23-13 | 2-3-14

SHEET 19 OF 29

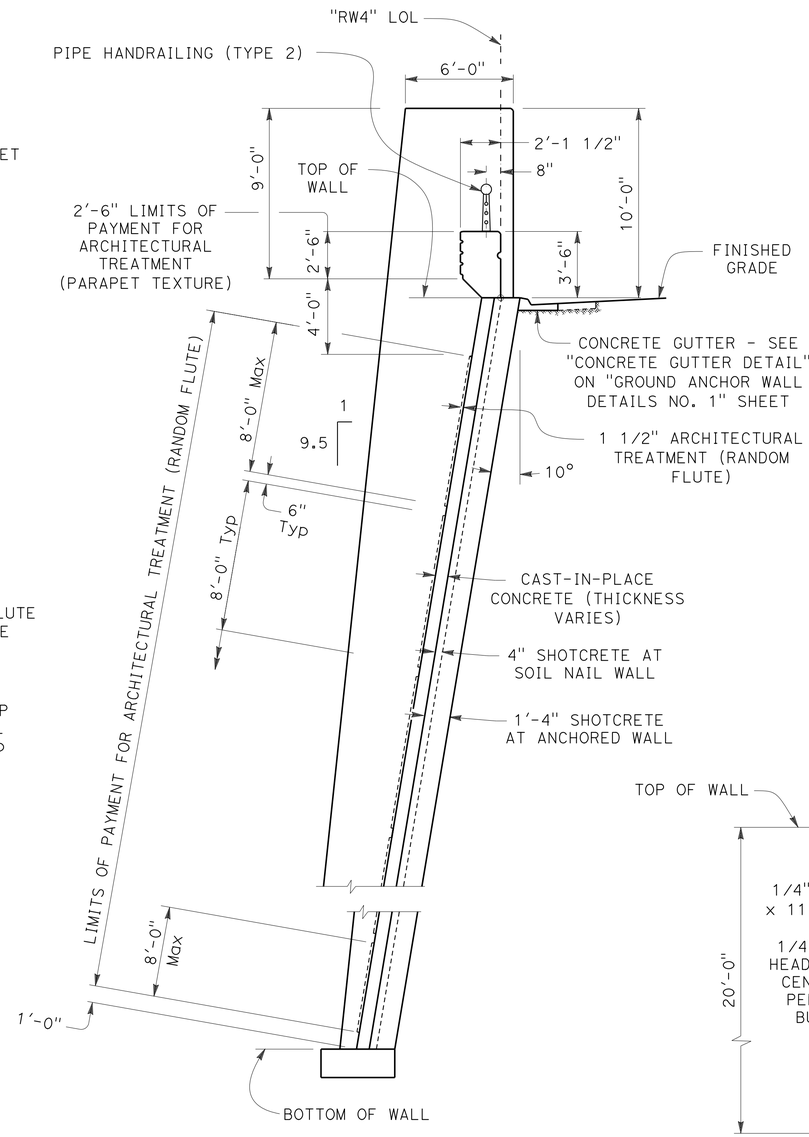
FILE => 57E0118-j-pd06.dgn

USERNAME => s12400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45



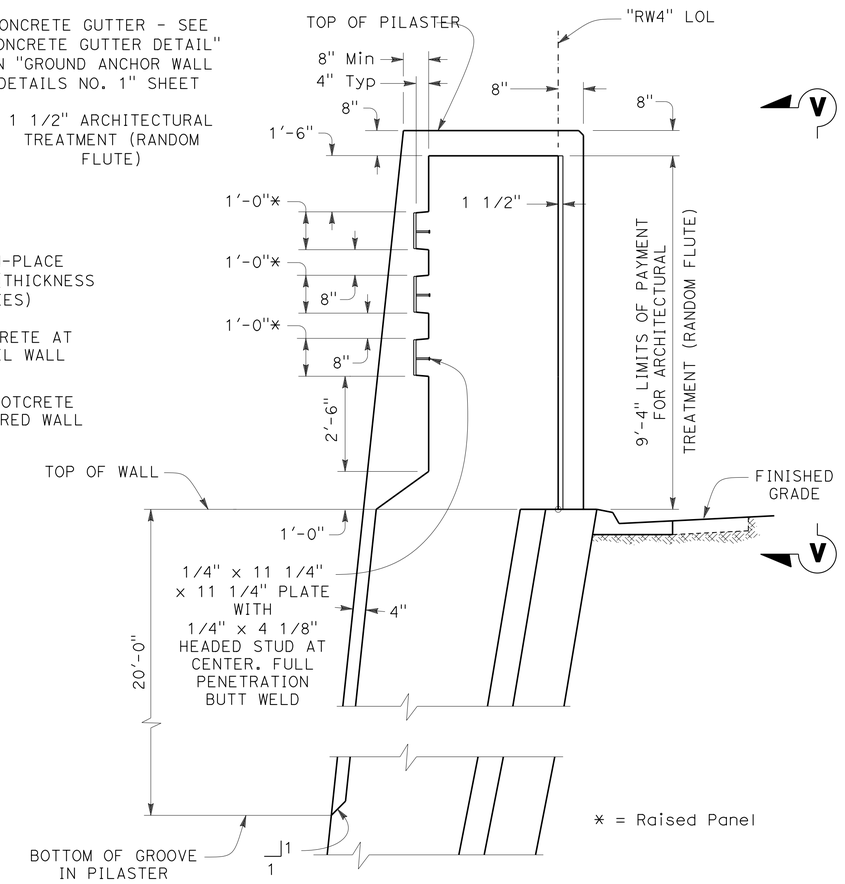
ARCHITECTURAL DETAILS - PARTIAL MIRRORED DEVELOPED ELEVATION

No Scale



SECTION U-U

No Scale



SECTION T-T

No Scale

NOTES:

1. For View "V-V", see "ARCHITECTURAL DETAILS NO. 2" sheet
2. For pilaster reinforcement and details not shown, see "PILASTER DETAILS NO. 1" through "PILASTER DETAILS NO. 6" sheets

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	971	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO	SIMON WONG ENGINEERING
525 B STREET SUITE 7	9968 HIBERT STREET
SAN DIEGO, CA. 92101	SAN DIEGO, CA. 92131

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
ARCHITECTURAL DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-16-13	2-22-13	12-23-13	2-3-14	20	29

FILE => 57E0118-1-ad01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	972	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

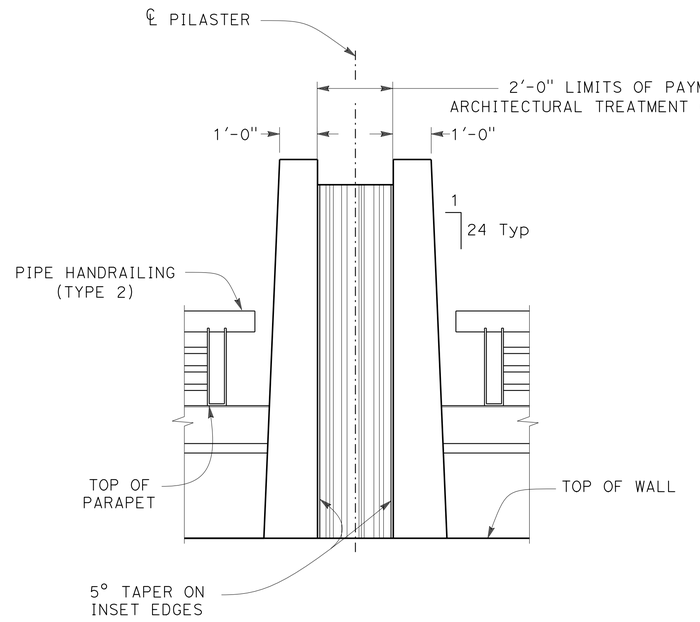
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

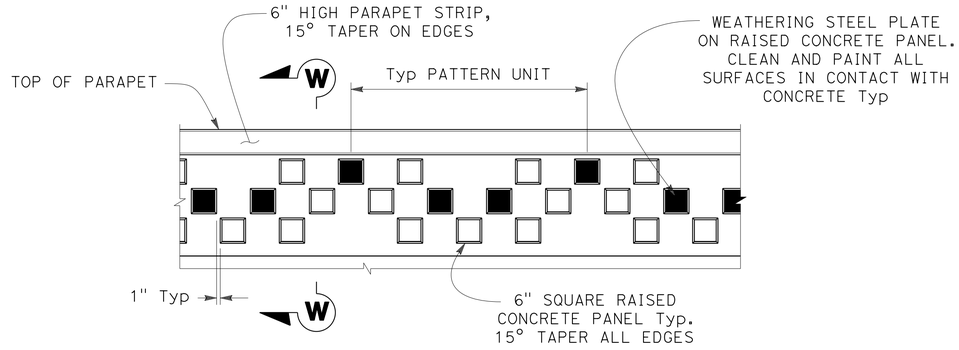
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



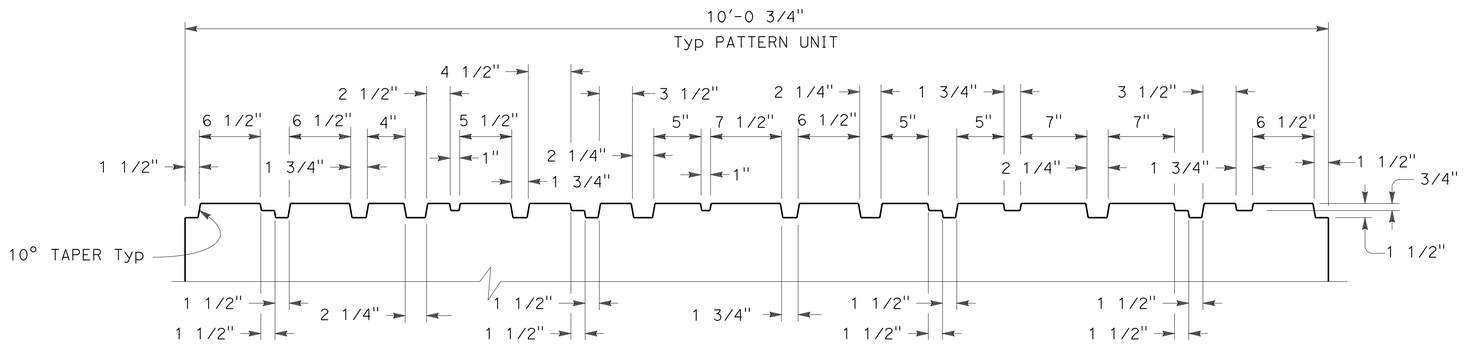
VIEW V-V

1/2" = 1'-0"



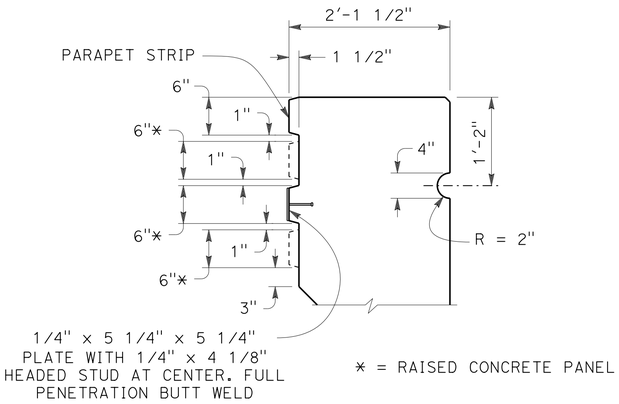
PARAPET TEXTURE DETAIL

No Scale



RANDOM FLUTE TEXTURE DETAIL

No Scale



SECTION W-W

1" = 1'-0"

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
ARCHITECTURAL DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-15-13	2-22-13	12-23-13	2-3-14	21	29

FILE => 57E0118-1-ad02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	973	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

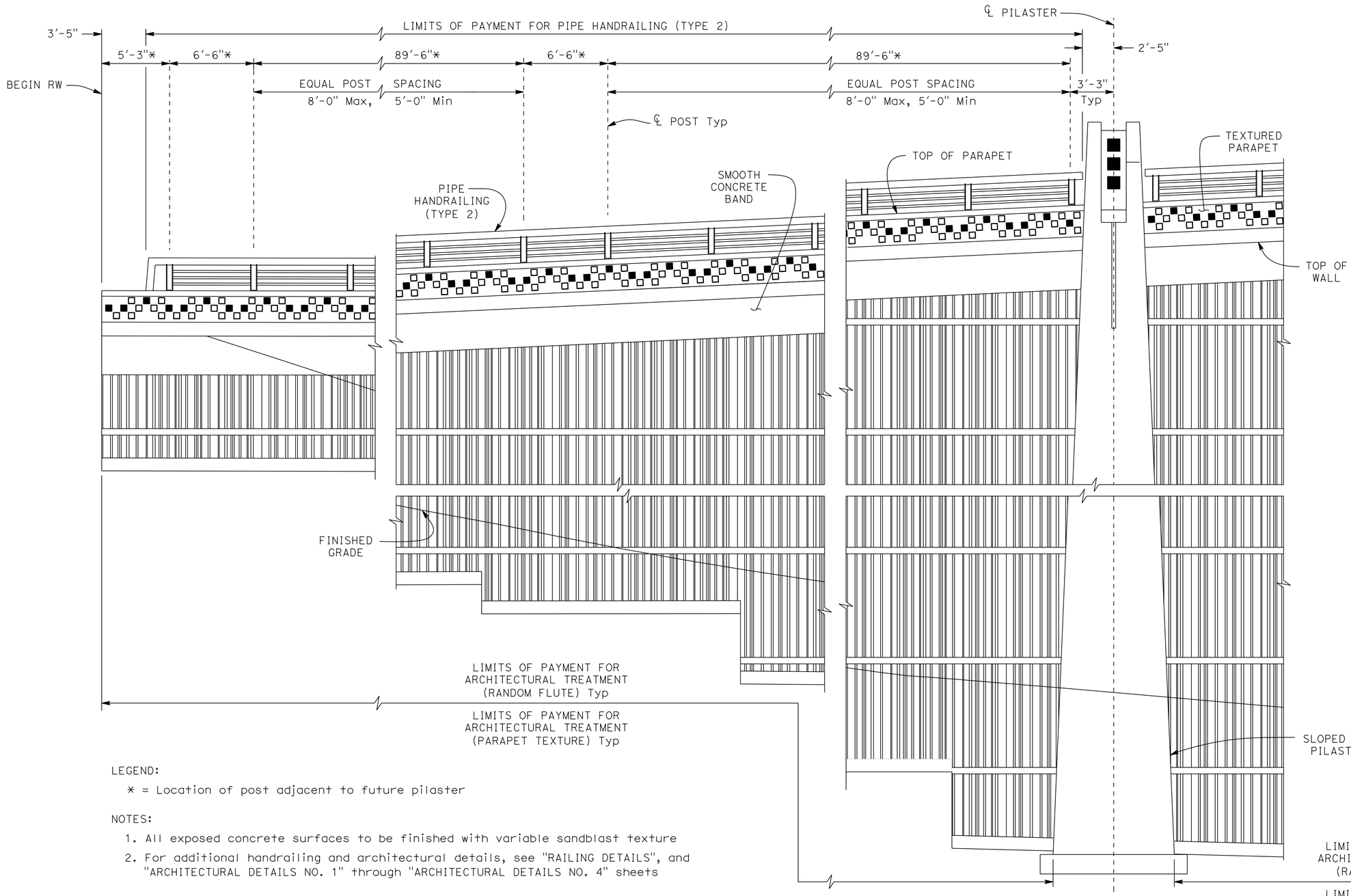
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

* = Location of post adjacent to future pilaster

NOTES:

1. All exposed concrete surfaces to be finished with variable sandblast texture
2. For additional handrailing and architectural details, see "RAILING DETAILS", and "ARCHITECTURAL DETAILS NO. 1" through "ARCHITECTURAL DETAILS NO. 4" sheets

PARTIAL MIRRORED DEVELOPED ELEVATION

No Scale

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
ARCHITECTURAL DETAILS NO. 3

DESIGN DETAIL SHEET (ENGLISH) ((REV. 7/16/12))

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-15-13	2-28-13	12-23-13	2-3-14	22	29

FILE => 57E0118-1-ad03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	974	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

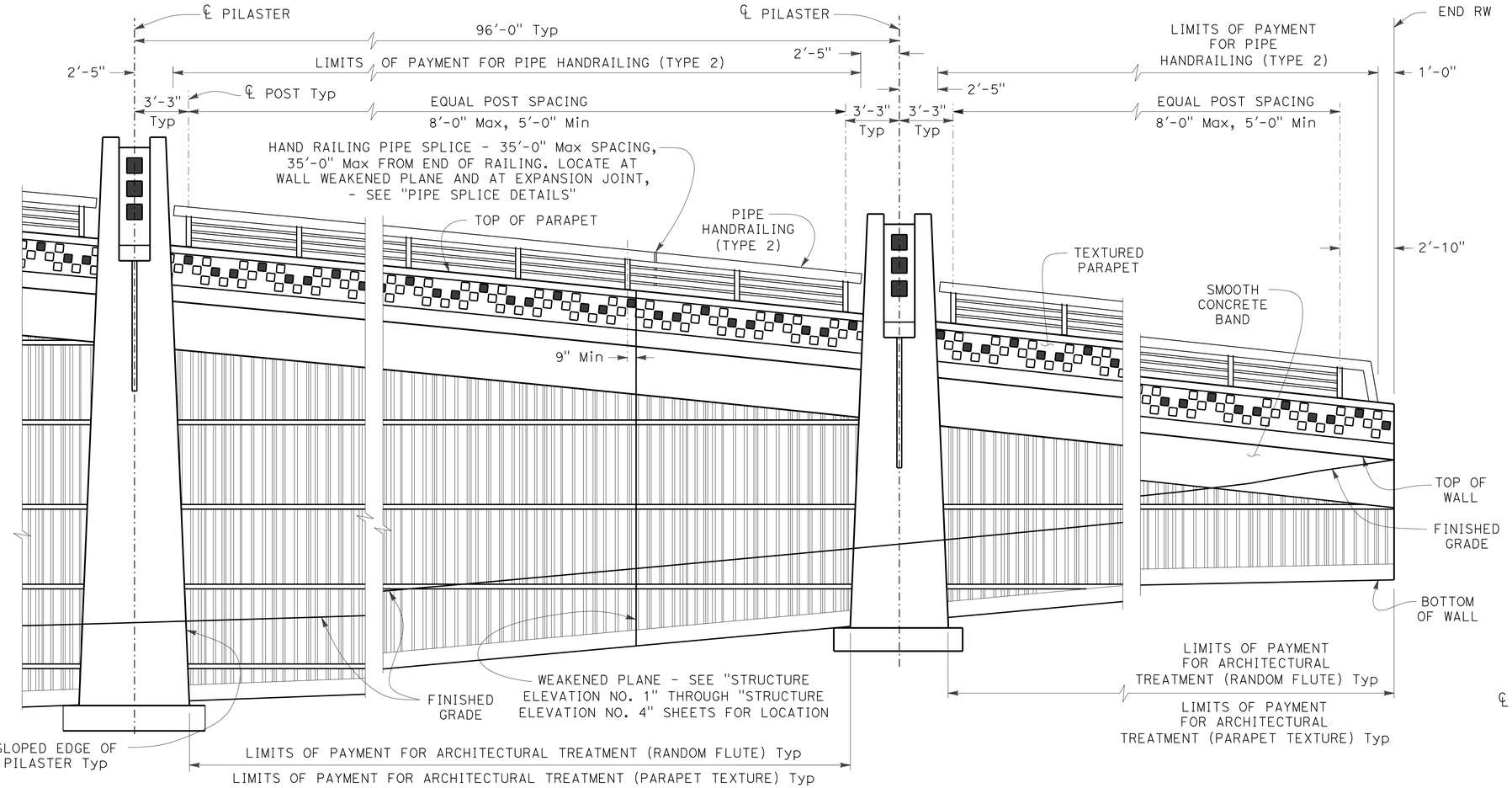
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

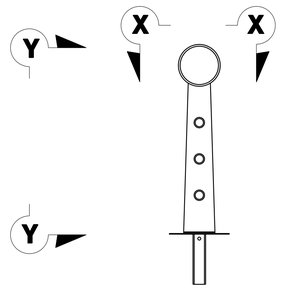


NOTES:

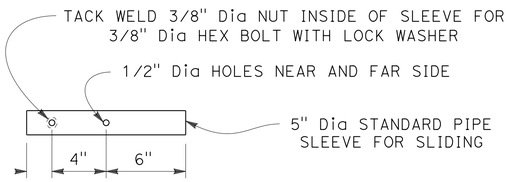
1. All exposed concrete surfaces to be finished with variable sandblast texture
2. For additional handrailing and architectural details, see "RAILING DETAILS", and "ARCHITECTURAL DETAILS NO. 1" through "ARCHITECTURAL DETAILS NO. 4" sheets

PARTIAL MIRRORED DEVELOPED ELEVATION

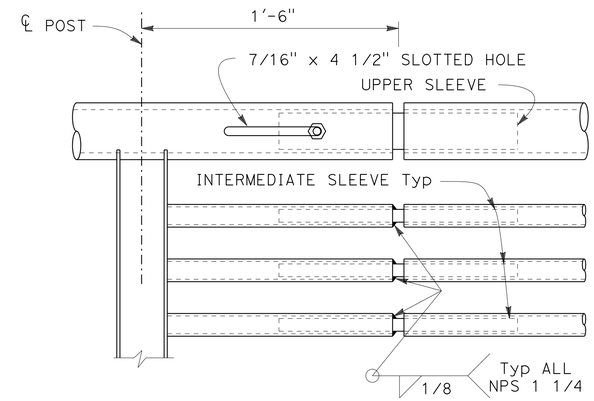
No Scale



SECTION

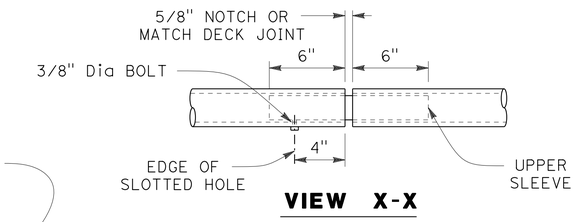


UPPER SLEEVE

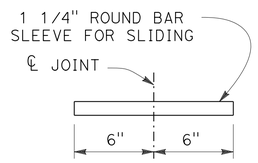


NOTE: Locate centerline of post
9" Min from parapet weakened plane

VIEW Y-Y



VIEW X-X



INTERMEDIATE SLEEVE

PIPE SPLICE DETAILS

No Scale

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
ARCHITECTURAL DETAILS NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-18-13	2-22-13	12-23-13	2-3-14	23	29

FILE => 57E0118-1-ad04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	975	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

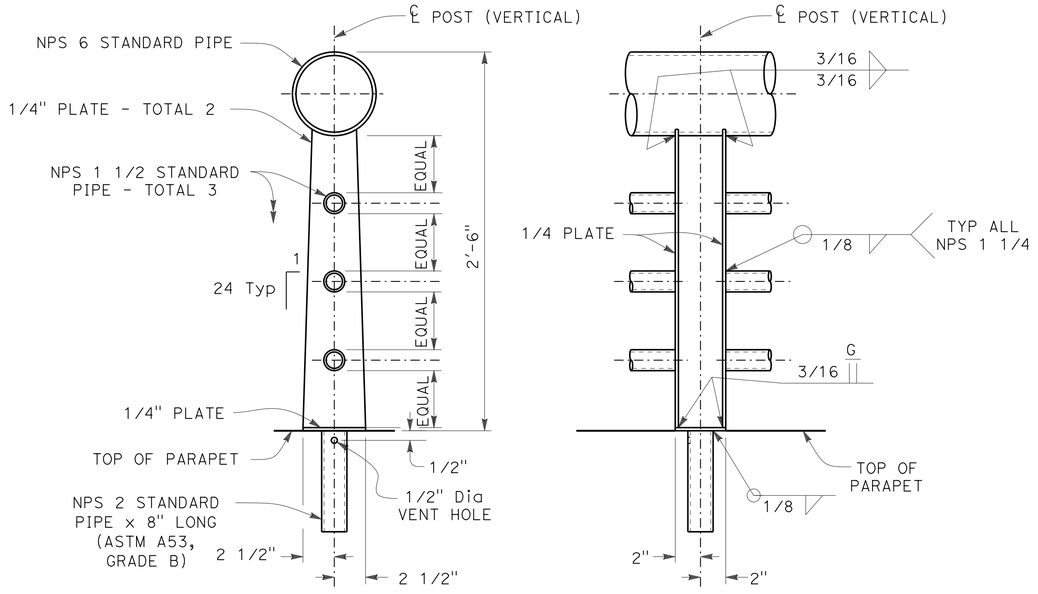
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

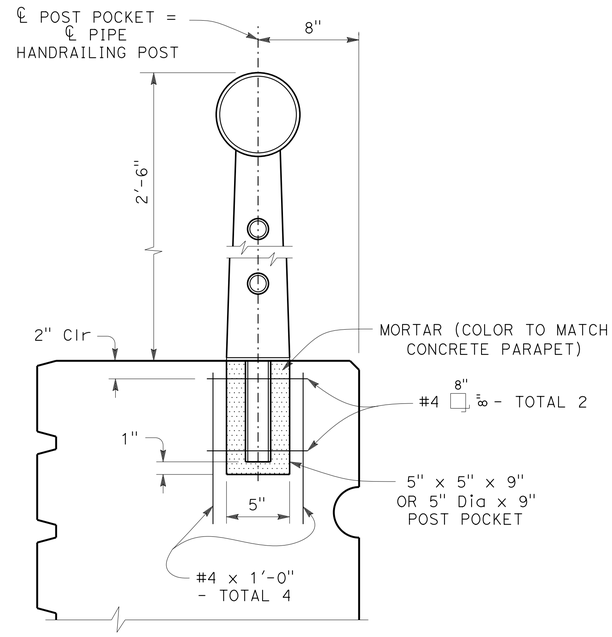
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



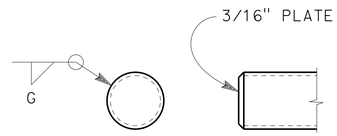
RAIL CONNECTION DETAILS

2" = 1'-0"



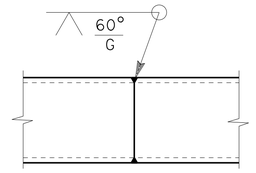
POST ANCHORAGE DETAILS

2" = 1'-0"



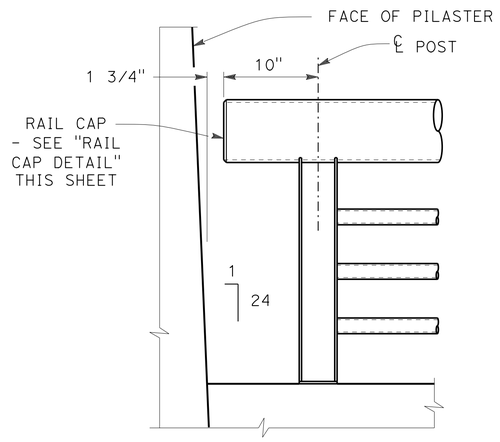
RAIL CAP DETAIL

No Scale



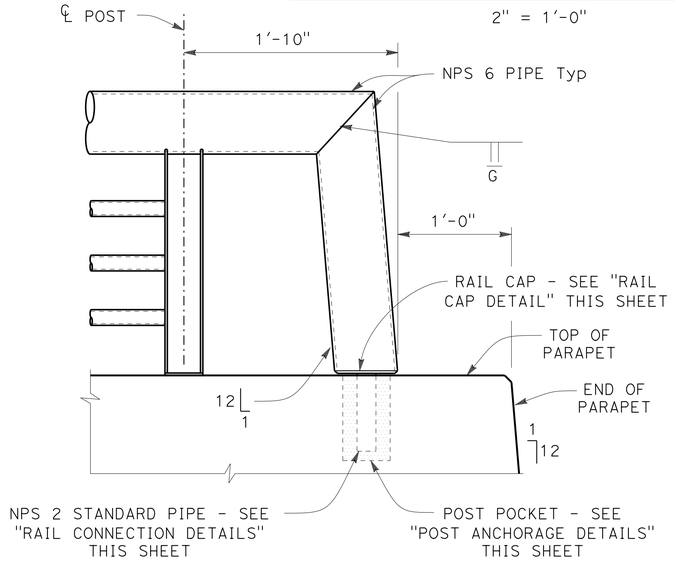
PIPE WELDED SPLICE

No Scale



DETAIL AT PILASTER

1 1/2" = 1'-0"



NOTE: Detail at end wall shown. Detail at begin wall similar.

DETAIL AT END WALL

1 1/2" = 1'-0"

NOTES:

1. All handrailing to be weathering steel unless otherwise noted
2. Posts shall be vertical
3. Rail pipe shall be shop bent or fabricated to fit horizontal and vertical curves when radius is less than 1000 feet
4. Top rail pipe shall be continuous over not less than 2 posts
5. Welding material for weathering steel shall have a welding consumable matching the base material
6. For post spacing, see "PARTIAL DEVELOPED ELEVATION" on "ARCHITECTURAL DETAILS NO. 3" and "ARCHITECTURAL DETAILS NO. 4" sheets

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0118
POST MILES 29.2

RETAINING WALL NO. RW4
RAILING DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-18-13	2-22-13	12-23-13	2-3-14	24	29

FILE => 57E0118-n-rd01.dgn

USERNAME => s127400 DATE PLOTTED => 23 JUL 2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	976	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

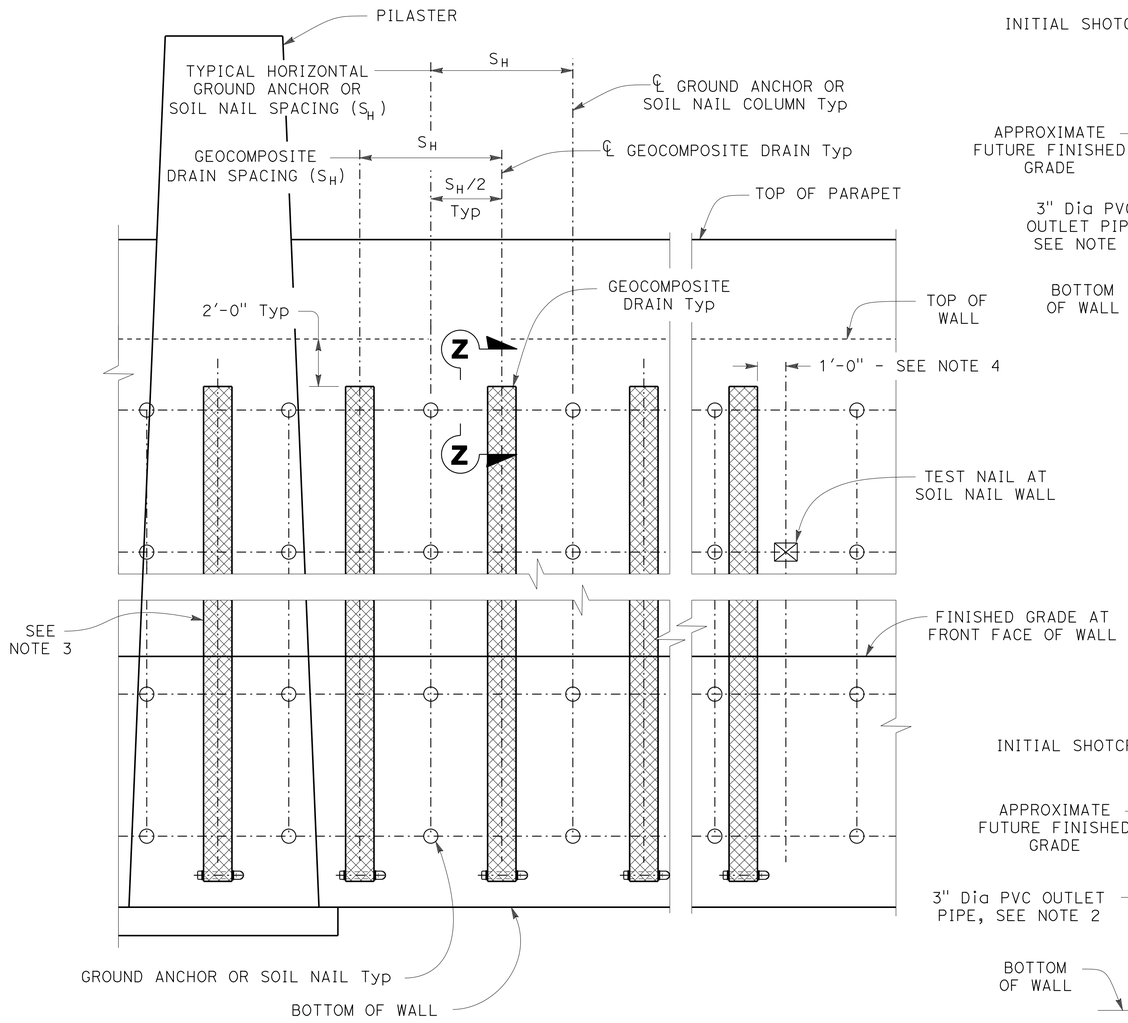
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

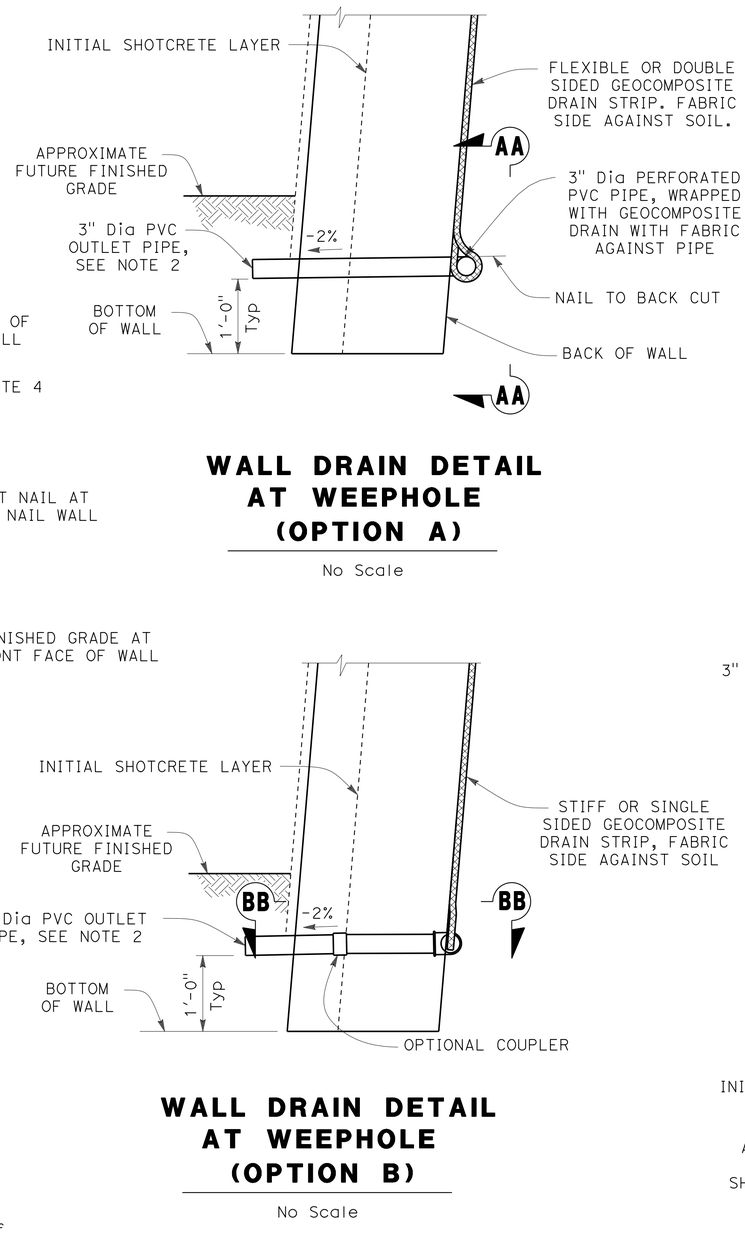
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



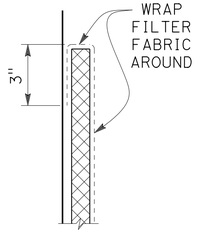
TYPICAL WALL ELEVATION

No Scale



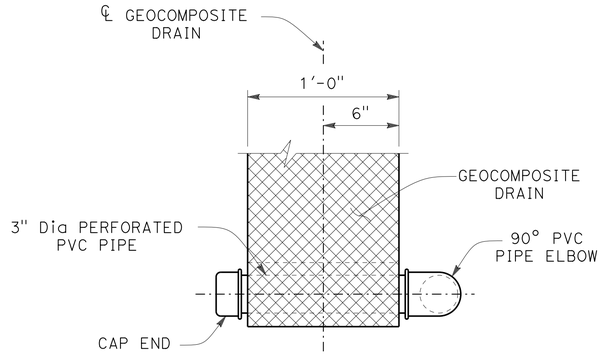
WALL DRAIN DETAIL AT WEEPHOLE (OPTION A)

No Scale



VIEW Z-Z

No Scale

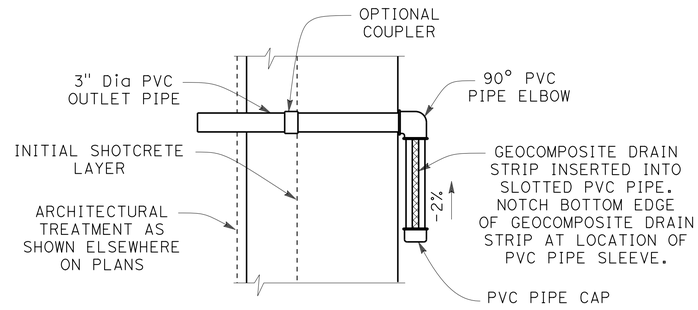


VIEW AA-AA

No Scale

WALL DRAIN DETAIL AT WEEPHOLE (OPTION B)

No Scale



SECTION BB-BB

No Scale

NOTES:

1. Geocomposite Drain strip per Section 88 Geosynthetics of the Standard Specifications
2. Extend PVC outlet pipe 6" beyond face of architectural treatment. See "DRAINAGE PLANS" for trunk drain connection details.
3. Omit geocomposite drains at the construction joint (Sta 22+63.50) and behind pilasters at soil nail wall only
4. Shift geocomposite drain location to provide 1'-0" Clr to test nails

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	N. Vu
DETAILS	T. Brittain	N. Vu
QUANTITIES	M.A. Nekuda	K. Gazaway

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO.	POST MILES
57E0118	29.2

RETAINING WALL NO. RW4
DRAINAGE DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-15-13	2-22-13	12-23-13	2-3-14	25	29

FILE => 57E0118-p-dd01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	977	1012

REGISTERED CIVIL ENGINEER — 3-12-12 DATE

07-21-14
PLANS APPROVAL DATE

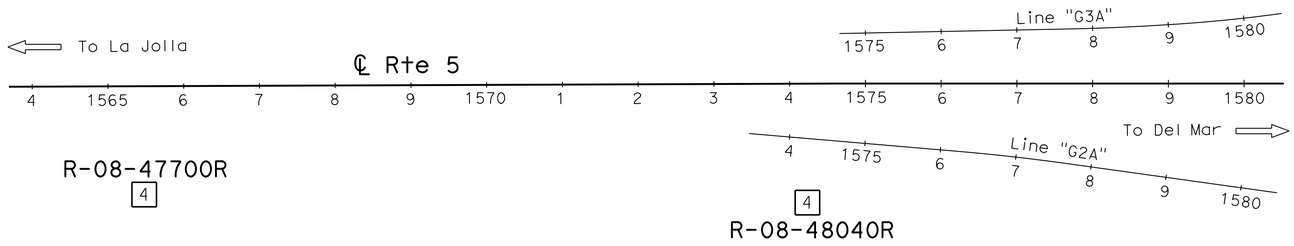
Michael M. Fordham, No. C61341, Exp. 6-30-15, CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

BENCH MARK

5-28.41
Elev 287.78
Located at the intersection of I-5 and La Jolla Village Dr, set in sidewalk near southeast corner of La Jolla Village Dr Bridge over I-5.
NAVD 88



PLAN
1" = 100'

Note: No ground water encountered during field investigation

PROFILE
Horiz: 1" = 40'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW4
FUNCTIONAL SUPERVISOR	DRAWN BY: W. Tang 02/12		DESIGN BRANCH X	57E0118	LOG OF TEST BORINGS 1 OF 4
NAME: B. Hinman	CHECKED BY: Z. Yazdani	FIELD INVESTIGATION BY: M. Fordham		POST MILE 29.2	

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				26	29

FILE => 57E0118-z-ltb01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	978	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

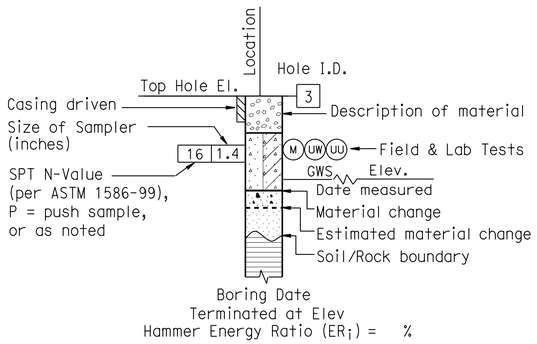
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring (hollow or solid stem bucket)
Size	R	Rotary drilled boring (conventional)
	RW	Rotary drilled with self-casing wire-line
	RC	Rotary core with continuously-sampled, self-casing wire-line
	P	Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
	RC	Rotary drilled rock core
Size	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778)
⬚	O	Other (note on LOTB)

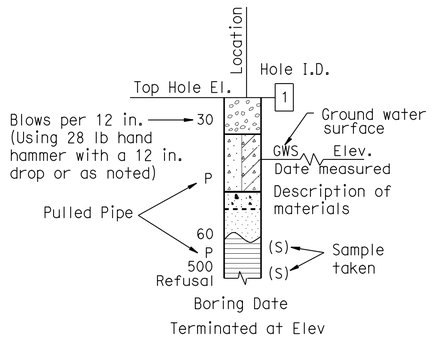
Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS

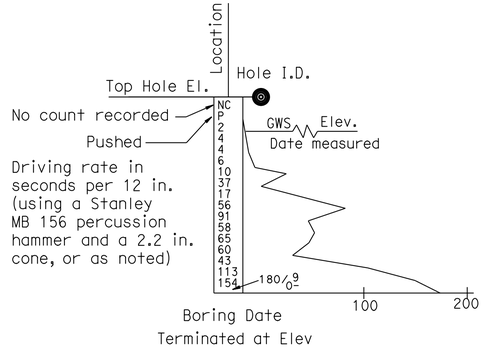
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



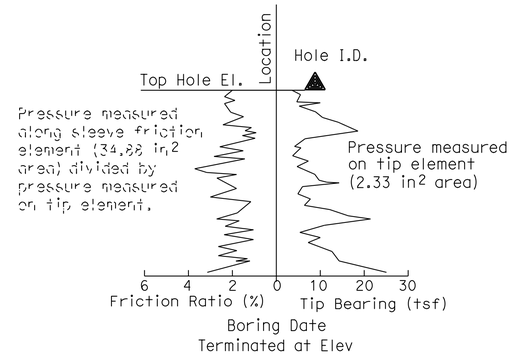
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) BORING

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW4
	PREPARED BY: W. Tang 02/12		DESIGN BRANCH X	57E0118	LOG OF TEST BORINGS 2 OF 4
				POST MILE 29.2	

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				27	29

FILE => 57E0118-z-1tb02.dgn

USERNAME => s12400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly-graded GRAVEL Poorly-graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly-graded GRAVEL with SILT Poorly-graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly-graded GRAVEL with CLAY (or SILTY CLAY) Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly-graded SAND Poorly-graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly-graded SAND with SILT Poorly-graded SAND with SILT and GRAVEL		
SP-SC	Poorly-graded SAND with CLAY (or SILTY CLAY) Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	979	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 - 12
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay		Less than 1/300

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW4
	PREPARED BY: W. Tang 02/12		DESIGN BRANCH X	57E0118	LOG OF TEST BORINGS 3 OF 4
				POST MILE 29.2	

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				28	29

FILE => 57E0118-z-ltb03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	980	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

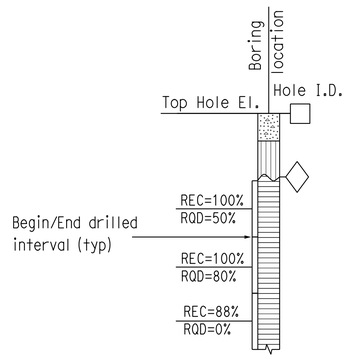
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)

$$REC = \frac{\sum \text{Length of the recovered core pieces (in.)}}{\text{Total length of core run (in.)}} \times 100\%$$

$$RQD = \frac{\sum \text{Length of intact core pieces} \geq 4 \text{ in.}}{\text{Total length of core run (in.)}} \times 100\%$$

RQD* Indicates soundness criteria not met.



BEDDING SPACING

Description	Thickness / Spacing
Massive	Greater than 10 ft
Very Thickly Bedded	3 ft - 10 ft
Thickly Bedded	1 ft - 3 ft
Moderately Bedded	4 in. - 1 ft
Thinly Bedded	1 in. - 4 in.
Very Thinly Bedded	1/4 in. - 1 in.
Laminated	Less than 1/4 in.

LEGEND OF ROCK MATERIALS

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

ROCK HARDNESS

Description	Criteria
Extremely Hard	Cannot be scratched with a pocketknife or sharp pick. Can only be chipped with repeated heavy hammer blows.
Very Hard	Cannot be scratched with a pocketknife or sharp pick. Breaks with repeated heavy hammer blows.
Hard	Can be scratched with a pocketknife or sharp pick with difficulty (heavy pressure). Breaks with heavy hammer blows.
Moderately Hard	Can be scratched with pocketknife or sharp pick with light or moderate pressure. Breaks with moderate hammer blows.
Moderately Soft	Can be grooved 1/16 in. deep with a pocketknife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.
Soft	Can be grooved or gouged easily by a pocketknife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very Soft	Can be readily indented, grooved or gouged with fingernail, or carved with a pocketknife. Breaks with light manual pressure.

FRACTURE DENSITY

Description	Observed Fracture Density
Unfractured	No fractures.
Very Slightly Fractured	Core lengths greater than 3 ft.
Slightly Fractured	Core lengths mostly from 1 to 3 ft.
Moderately Fractured	Core lengths mostly from 4 in. to 1 ft.
Intensely Fractured	Core lengths mostly from 1 to 4 in.
Very Intensely Fractured	Mostly chips and fragments.

WEATHERING DESCRIPTORS FOR INTACT ROCK

Description	Diagnostic Features					General Characteristics
	Chemical Weathering-Discoloration and/or Oxidation		Mechanical Weathering-Grain Boundary Conditions (Disaggregation) Primarily for Granitics and Some Coarse-Grained Sediments	Texture and Leaching		
	Body of Rock	Fracture Surfaces		Texture	Leaching	
Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change	No leaching	Hammer rings when crystalline rocks are struck.
Slightly Weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discoloration or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved	Minor leaching of some soluble minerals.	Hammer rings when crystalline rocks are struck. Body of rock not weakened.
Moderately Weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened.
Intensely Weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened.
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes."

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES
PREPARED BY: W. Tang 02/12

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 57E0118
POST MILE 29.2

RETAINING WALL NO. RW4
LOG OF TEST BORINGS 4 OF 4

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES | SHEET 29 | OF 29

FILE => 57E0118-z-ltb04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	981	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

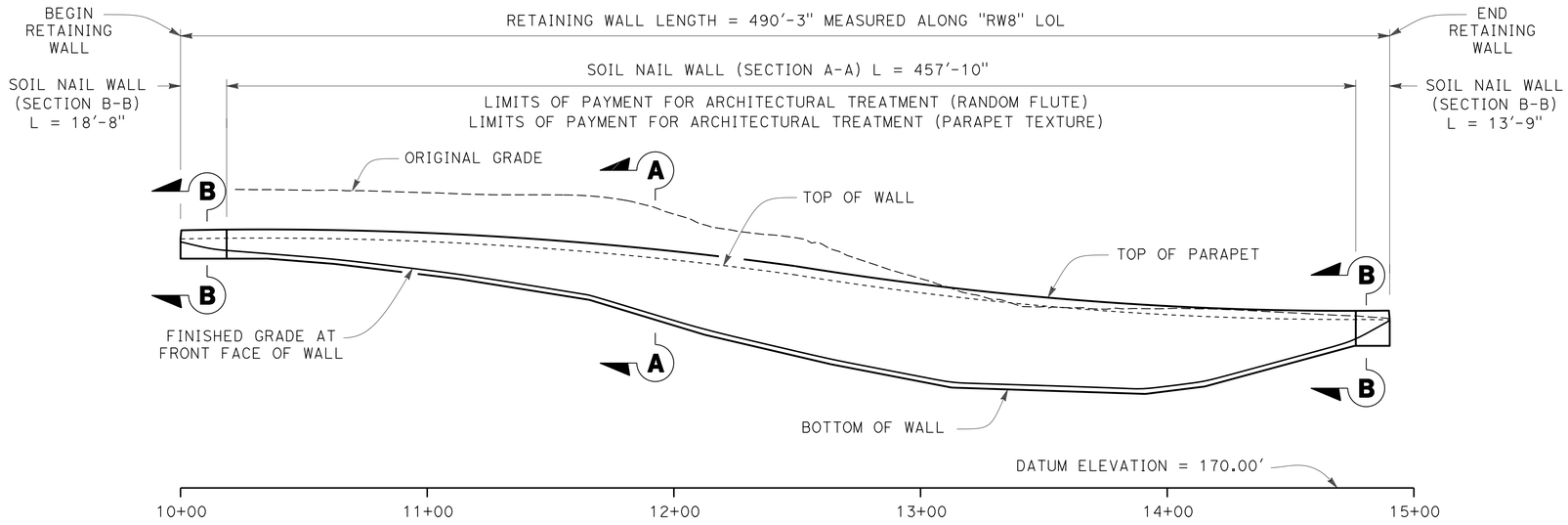
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

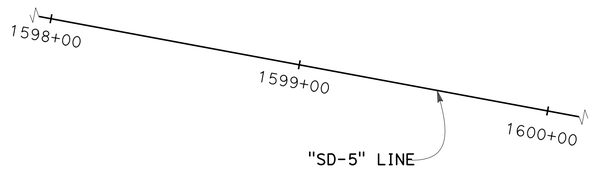
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



MIRRORED DEVELOPED ELEVATION

1" = 30'-0"

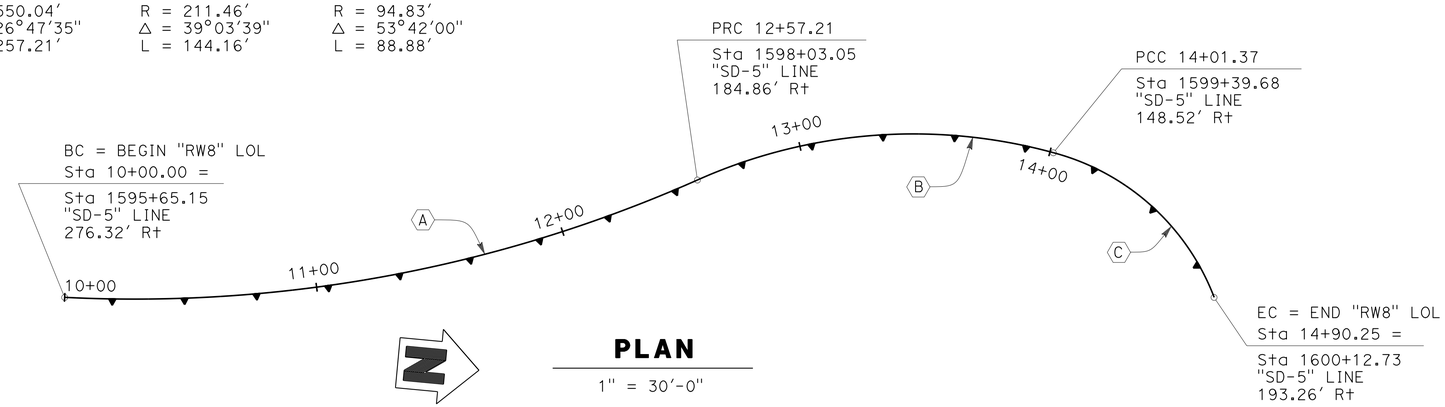


RETAINING WALL RW8 BRIDGE NO 57E0119

QUANTITIES

STRUCTURE EXCAVATION (SOIL NAIL WALL)	850	CY
STRUCTURE BACKFILL (SOIL NAIL WALL)	42	CY
SOIL NAIL	24,209	LF
STRUCTURAL CONCRETE, RETAINING WALL	425	CY
ARCHITECTURAL TREATMENT (RANDOM FLUTE)	10,000	SQFT
ARCHITECTURAL TREATMENT (PARAPET TEXTURE)	1,150	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	60,000	LB
STRUCTURAL SHOTCRETE	140	CY
MINOR CONCRETE (GUTTER) (CY)	17	CY
WEATHERING STEEL PLATE	295	EA

CURVE DATA (A)	CURVE DATA (B)	CURVE DATA (C)
R = 550.04'	R = 211.46'	R = 94.83'
Δ = 26°47'35"	Δ = 39°03'39"	Δ = 53°42'00"
L = 257.21'	L = 144.16'	L = 88.88'



PLAN

1" = 30'-0"

NOTES:

1. For "GENERAL NOTES", "INDEX TO PLANS", and "STANDARD PLANS", see "GENERAL PLAN (2 OF 2)" sheet
2. For soil nail layout, size, embedment length, top of wall and bottom of wall stations and elevations, see "STRUCTURE ELEVATION NO. 1" and "STRUCTURE ELEVATION NO. 2" sheets
3. For Sections "A-A" and "B-B", see "GENERAL PLAN (2 OF 2)" sheet
4. For Architectural Treatment not shown, see "ARCHITECTURAL DETAILS NO. 1" and "ARCHITECTURAL DETAILS NO. 2" sheets

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

DESIGN	BY L. Muco	CHECKED J. Ramirez	ALLOWABLE STRESS DESIGN	LIVE LOADING:		
DETAILS	BY T. Brittain	CHECKED J. Ramirez	LAYOUT	BY L. Muco	CHECKED J. Ramirez	
QUANTITIES	BY L. Muco	CHECKED M.A. Nekuda	SPECIFICATIONS	BY C. Shannon	PLANS AND SPECS COMPARED C. Shannon	

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0119
POST MILES 29.5

RETAINING WALL NO. RW8
GENERAL PLAN (1 OF 2)

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

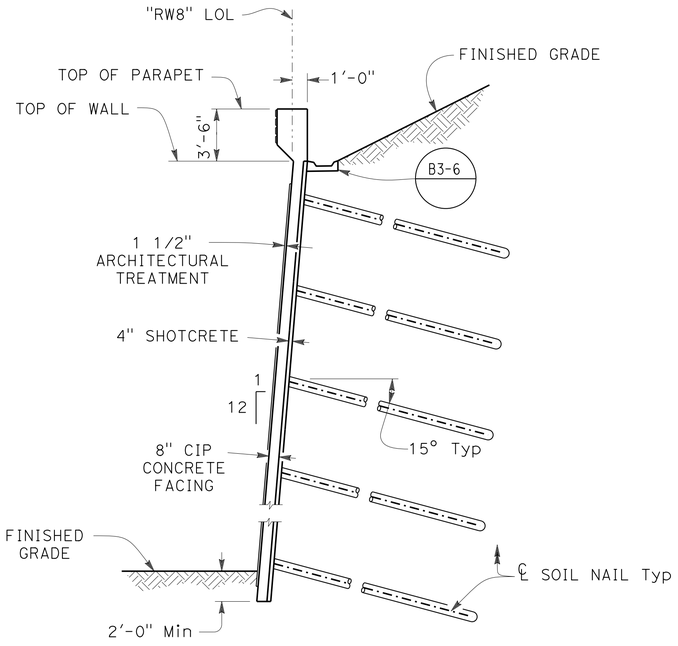
UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-1-12	6-29-12	7-22-13	2-3-14	1	16

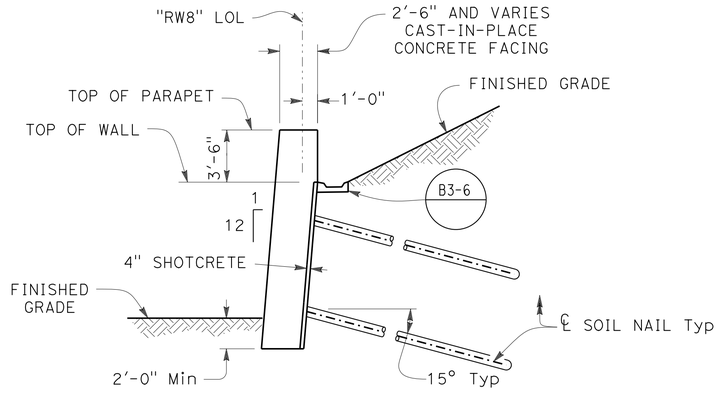
FILE => 57E0119-a-gp01.dgn

USERNAME => s\127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45



SECTION A-A

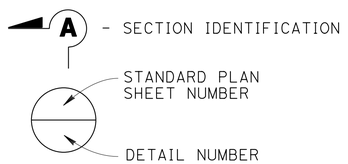
1" = 5'-0"



SECTION B-B

1" = 5'-0"

PLAN SYMBOLS



INDEX TO PLANS

SHEET NUMBER	DESCRIPTION
1	GENERAL PLAN (1 OF 2)
2	GENERAL PLAN (2 OF 2)
3	FOUNDATION PLAN
4	STRUCTURE ELEVATION NO. 1
5	STRUCTURE ELEVATION NO. 2
6	WALL DETAILS NO. 1
7	WALL DETAILS NO. 2
8	WALL DETAILS NO. 3
9	WALL DETAILS NO. 4
10	ARCHITECTURAL DETAILS NO. 1
11	ARCHITECTURAL DETAILS NO. 2
12	DRAINAGE DETAILS
13	LOG OF TEST BORINGS 1 OF 4
14	LOG OF TEST BORINGS 2 OF 4
15	LOG OF TEST BORINGS 3 OF 4
16	LOG OF TEST BORINGS 4 OF 4

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	982	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

GENERAL NOTES

DESIGN: ALLOWABLE STRESS DESIGN
BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO WITH INTERIMS AND REVISIONS BY CALTRANS)
GEOTECHNICAL ENGINEERING CIRCULAR NO. 7: SOIL NAIL WALLS, REPORT NO. FHWAO-IF-03-017, MARCH 2003

SOIL PARAMETERS:	SOIL UNIT WEIGHT, g_s =	121 pcf
	SOIL FRICTION ANGLE, F =	33°
	SOIL COHESION, C =	350 psf
	DESIGN PULLOUT RESISTANCE, Q_d =	5.4 kips/ft
SEISMIC LOADING:	PEAK GROUND ACCELERATION =	0.45 g
	K_h =	0.15
SURCHARGE:	LIVE LOAD =	240 psf
	BUILDING SURCHARGE =	1000 psf
	(from Sta 10+00.00 RW8 LOL to Sta 13+40.00 RW8 LOL)	
REINFORCED CONCRETE / SHOTCRETE:	fy =	60 ksi
	f'c =	3.60 ksi
	n =	8
GROUT STRENGTH:		3.0 ksi
STRUCTURAL STEEL:	BEARING PLATES:	ASTM A36, fy = 36 ksi
	HEADED STUDS:	ASTM A449 Type 1, Fu = 120 ksi
	PLATES:	ASTM A588
SOIL NAILS:	ASTM A615 or A706, Grade 60 (Epoxy coated)	

STANDARD PLANS DATED 2010

A10A	ABBREVIATIONS (SHEET 1 OF 2)
A10B	ABBREVIATIONS (SHEET 2 OF 2)
A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
B0-3	BRIDGE DETAILS
B3-6	RETAINING WALL DETAILS NO. 2

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	L. Muco	J. Ramirez
DETAILS	T. Brittain	J. Ramirez
QUANTITIES	L. Muco	M.A. Nekuda

ALLOWABLE STRESS DESIGN — LIVE LOADING:

	BY	CHECKED
LAYOUT	L. Muco	J. Ramirez
SPECIFICATIONS	C. Shannon	PLANS AND SPECS COMPARED C. Shannon

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0119
POST MILES 29.5

RETAINING WALL NO. RW8
GENERAL PLAN (2 OF 2)

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-1-12	6-28-12	2-22-13	2-3-14	2	16

FILE => 57E0119-a-gp02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	983	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14 PLANS APPROVAL DATE

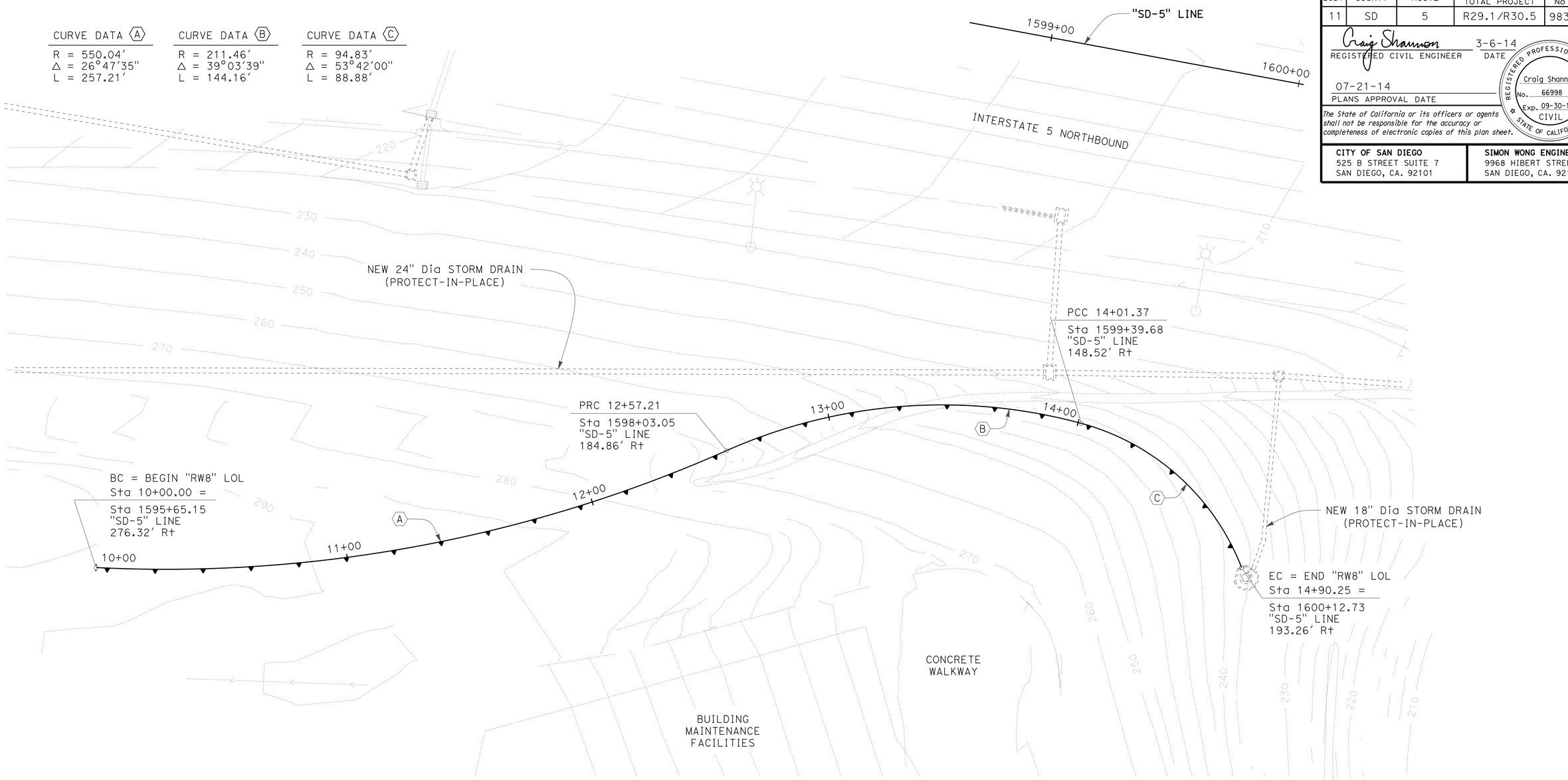
REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

CURVE DATA (A)	CURVE DATA (B)	CURVE DATA (C)
R = 550.04′	R = 211.46′	R = 94.83′
Δ = 26°47′35"	Δ = 39°03′39"	Δ = 53°42′00"
L = 257.21′	L = 144.16′	L = 88.88′



PLAN

1" = 20′-0"

BENCHMARK

CONTROL SURVEY:

BM #1 5-29.46	BM #2 5-29.85
2 1/4" CADT BRASS DISK	2 1/4" CADT BRASS DISK
LABELED "5-29.46 1993"	LABELED "5-29.85 1993"
N 1,903,968.24	N 1,906,025.08
E 6,261,597.31	E 6,261,710.00
Elev = 270.07′	Elev = 183.12′

Mark M. Fordham — GEOTECHNICAL PROFESSIONAL — 6-5-12 APPROVAL DATE

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

SCALE: X	VERT.DATUM NAVD 88	HORZ.DATUM CCS 83 (1991.35)	DESIGN	BY L. Muco	CHECKED J. Ramirez
PHOTOGRAMMETRY AS OF: X		ALIGNMENT TIES X	DETAILS	BY T. Brittain	CHECKED J. Ramirez
SURVEYED	BY X	DRAFTED BY X	QUANTITIES	BY L. Muco	CHECKED M.A. Nekuda
FIELD CHECKED	BY X	CHECKED BY X			

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0119
POST MILES 29.5

RETAINING WALL NO. RW8
FOUNDATION PLAN

FOUNDATION PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-1-12	6-25-12	2-22-13	2-1-14	3	16

FILE => 57E0119-c-fp01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	984	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

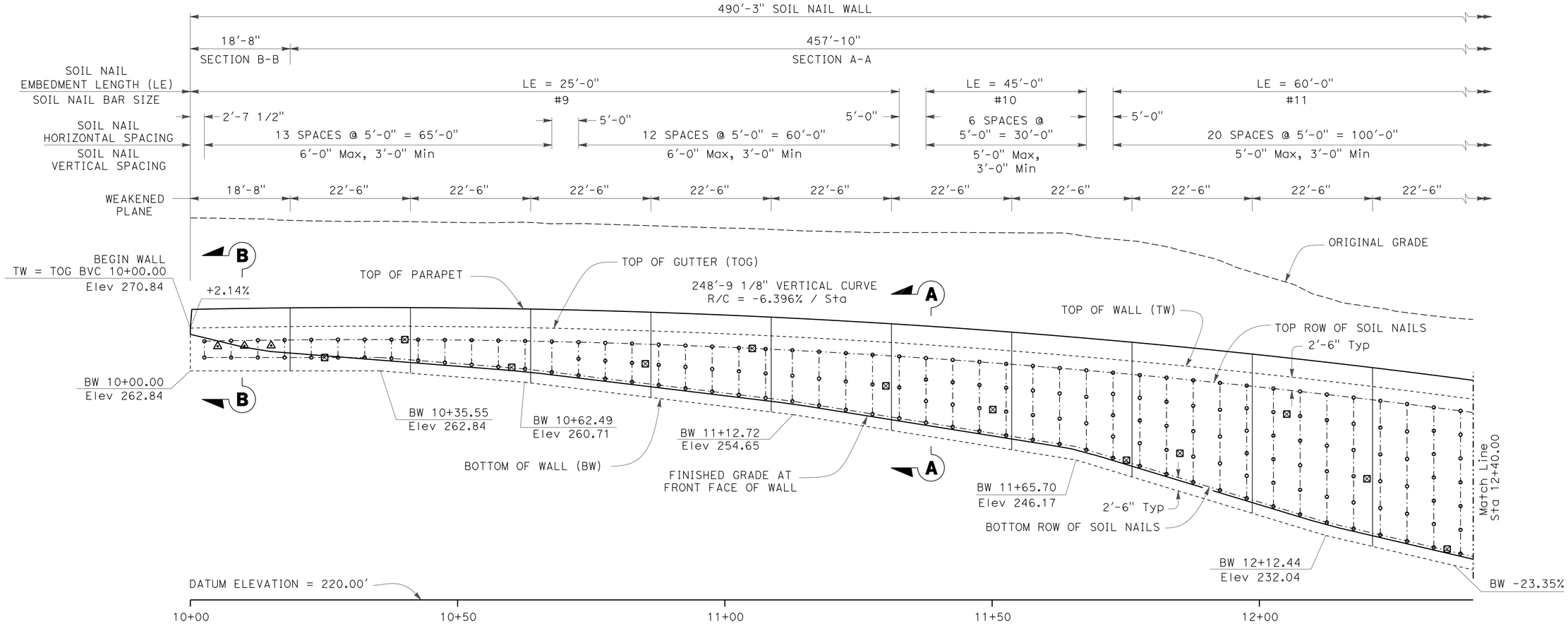
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

- ∘ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly
- ◬ - Indicates location of Strut Nail Assembly

MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW8" LOL
2. For Sections "A-A" and "B-B", see "WALL DETAILS NO. 1" sheet
3. For soil nail retaining wall weakened plane detail, see "WALL DETAILS NO. 2" sheet
4. For strut nail details, see "WALL DETAILS NO. 4" sheet

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	L. Muco	J. Ramirez
DETAILS	T. Brittain	J. Ramirez
QUANTITIES	L. Muco	M.A. Nekuda

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0119 — POST MILES 29.5

RETAINING WALL NO. RW8
STRUCTURE ELEVATION NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-1-12	6-26-12	2-22-13	2-3-14	4	16

FILE => 57E0119-e-se01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	985	1012

Craig Shannon
REGISTERED CIVIL ENGINEER

3-6-14
DATE

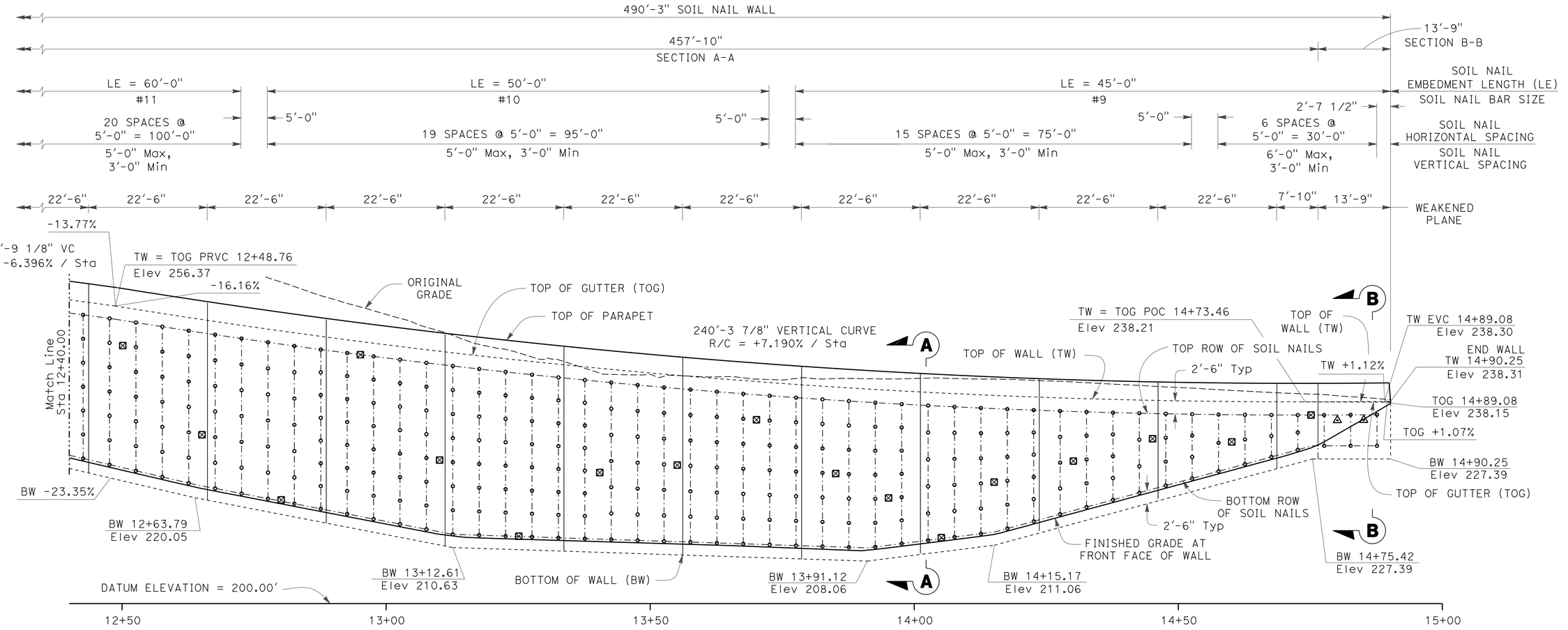
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

- ∘ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly
- ◬ - Indicates location of Strut Nail Assembly

MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW8" LOL
2. For Sections "A-A" and "B-B", see "WALL DETAILS NO. 1" sheet
3. For soil nail retaining wall weakened plane detail, see "WALL DETAILS NO. 2" sheet
4. For strut nail details, see "WALL DETAILS NO. 4" sheet

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	L. Muco	J. Ramirez
DETAILS	T. Brittain	J. Ramirez
QUANTITIES	L. Muco	M.A. Nekuda

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0119
POST MILES 29.5

RETAINING WALL NO. RW8
STRUCTURE ELEVATION NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-1-12	6-25-12	7-20-12	2-3-14	5	16

FILE => 57E0119-e-se02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	986	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

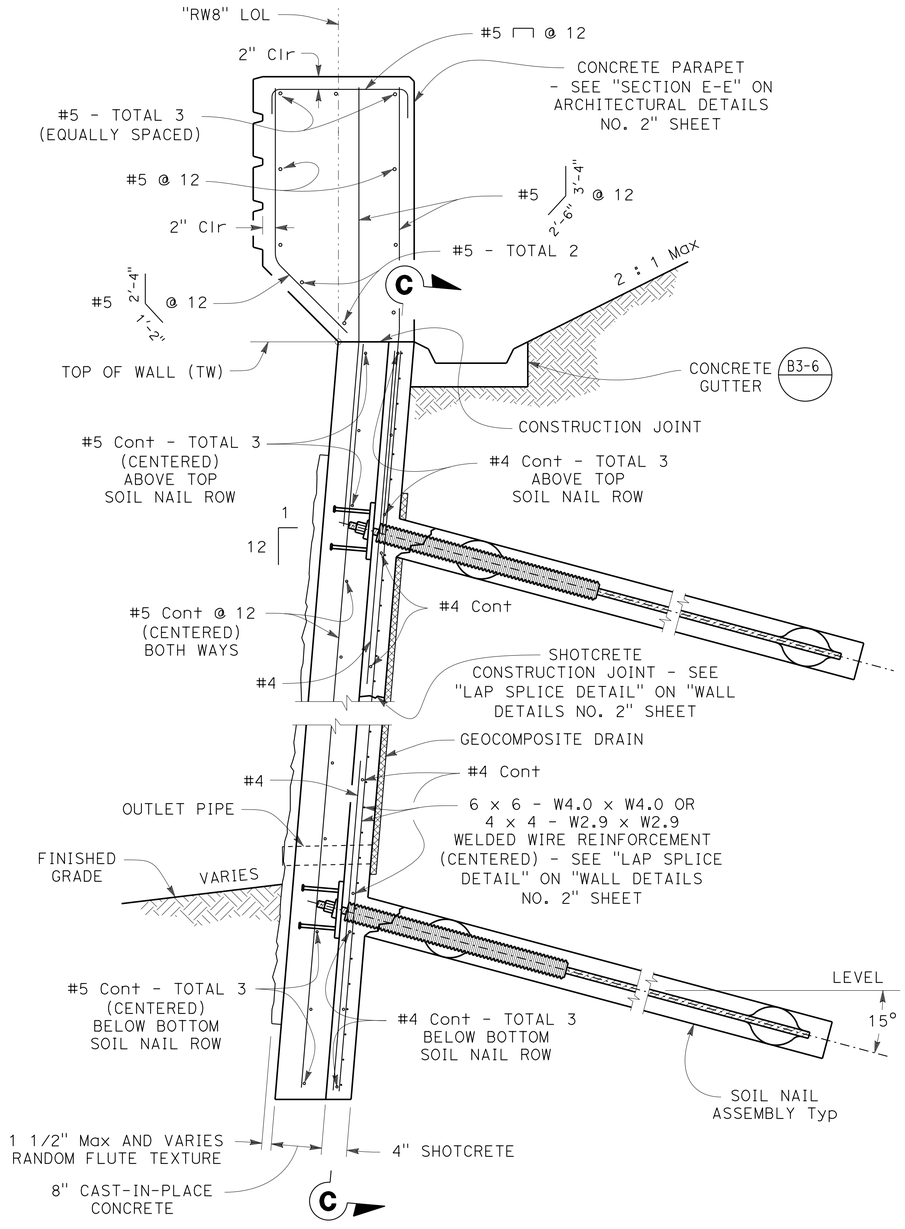
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

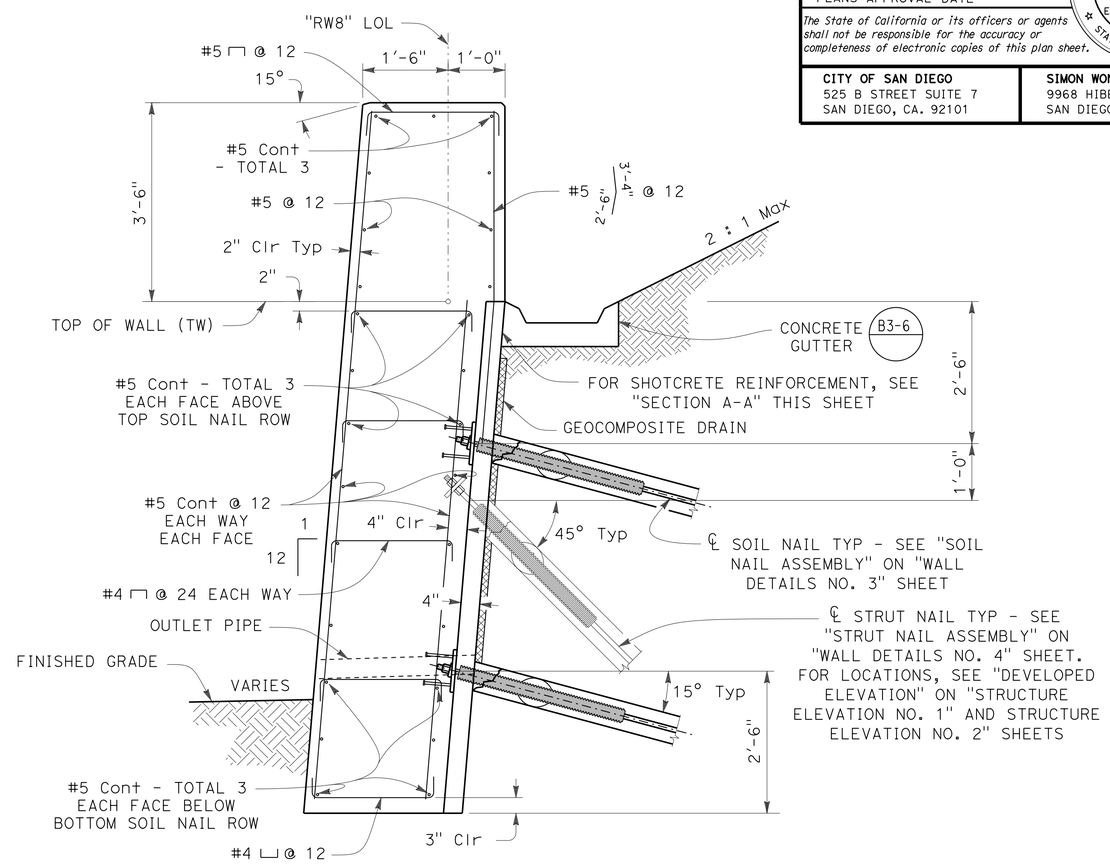
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



SECTION A-A
Sta 10+18.67 TO Sta 14+76.50

1" = 1'-0"



SECTION B-B
Sta 10+00.00 TO Sta 10+18.67 AND Sta 14+76.50 TO Sta 14+90.25

3/4" = 1'-0"

NOTES:

1. For Section "C-C", see "WALL DETAILS NO. 2" sheet

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	L. Muco	J. Ramirez
DETAILS	T. Brittain	J. Ramirez
QUANTITIES	L. Muco	M.A. Nekuda

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0119
POST MILES 29.5

RETAINING WALL NO. RW8
WALL DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

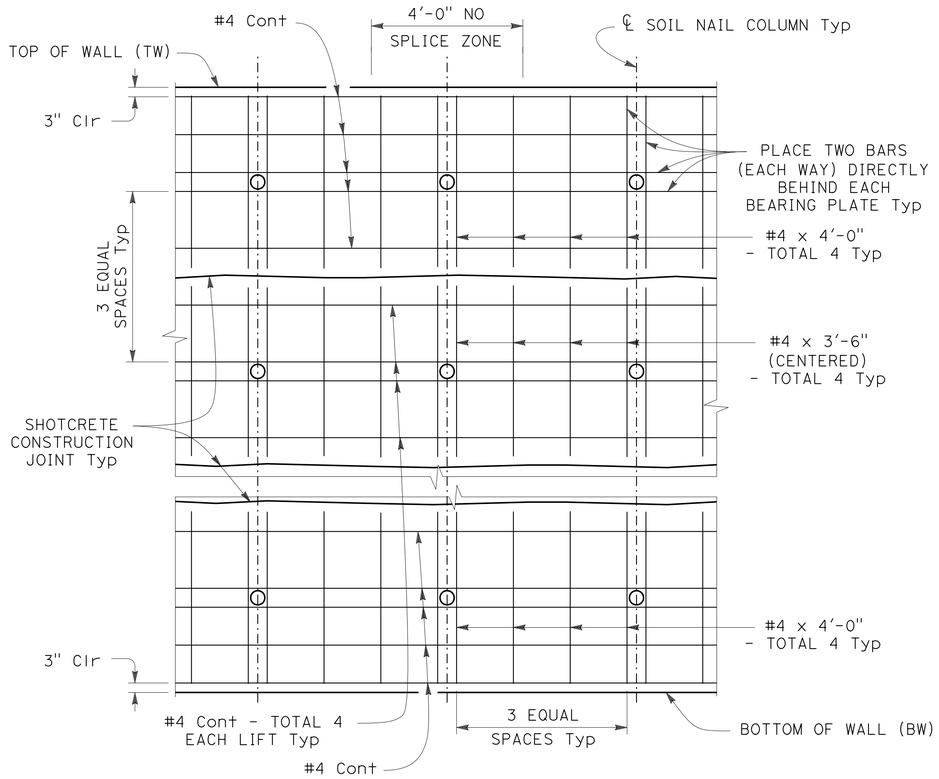
UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-1-12	6-28-12	2-22-13	2-3-14	6	16

FILE => 57E0119-g-wd01.dgn

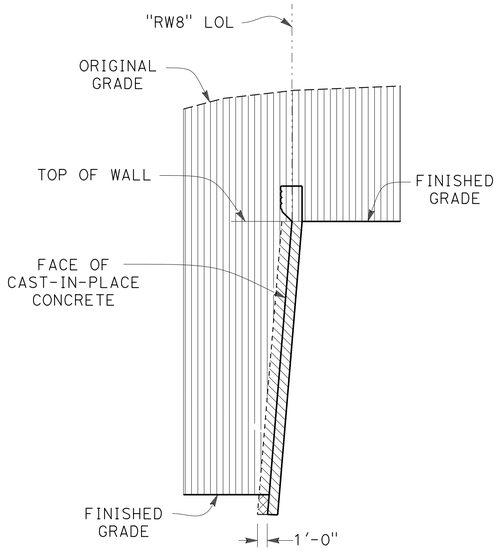
USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45



NOTE: Welded Wire Reinforcement not shown for clarity

SECTION C-C

No Scale



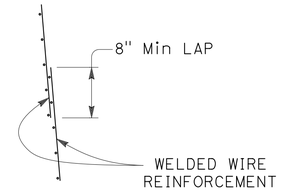
STRUCTURE BACKFILL (SOIL NAIL WALL)

STRUCTURE EXCAVATION (SOIL NAIL WALL)

ROADWAY EXCAVATION

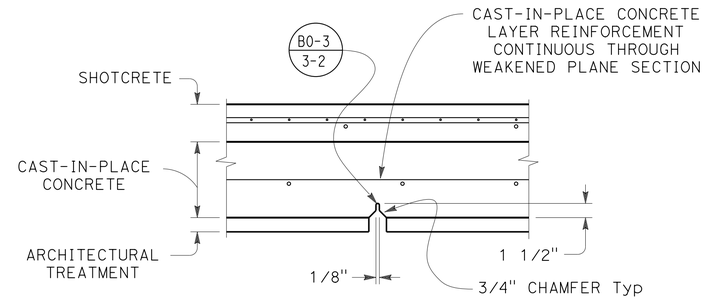
LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL

No Scale



LAP SPLICE DETAIL

No Scale



WEAKENED PLANE DETAIL

1 1/2" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	987	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	L. Muco	J. Ramirez
DETAILS	T. Brittain	J. Ramirez
QUANTITIES	L. Muco	M.A. Nekuda

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0119
POST MILES 29.5

RETAINING WALL NO. RW8
WALL DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

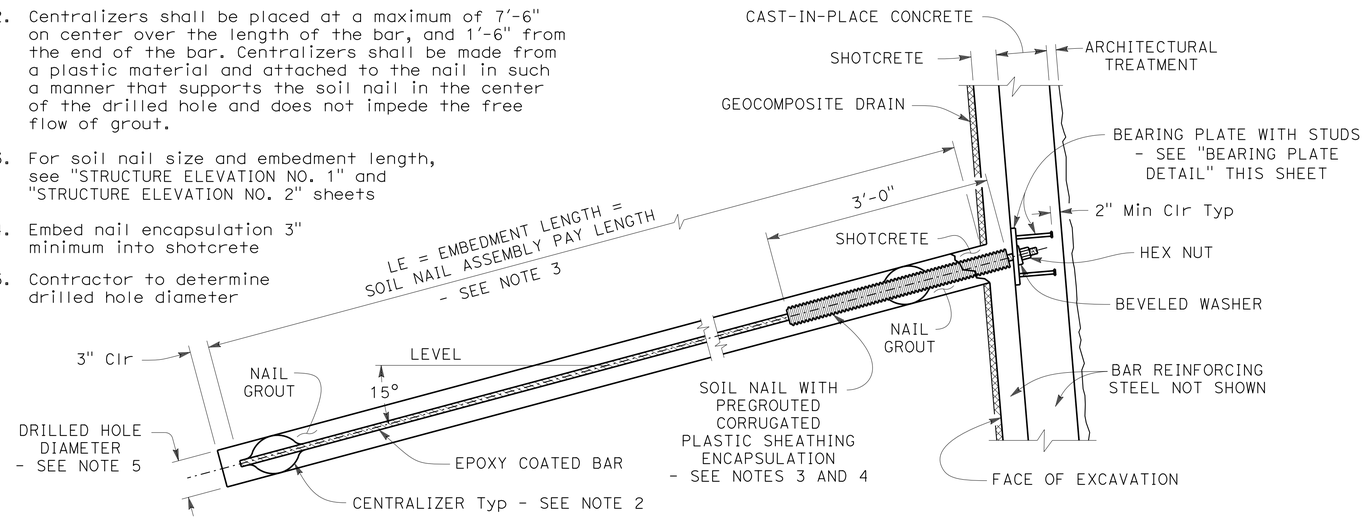
REVISION DATES				SHEET	OF
6-1-12	6-28-12	2-22-13	2-3-14	7	16

FILE => 57E0119-g-wd02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

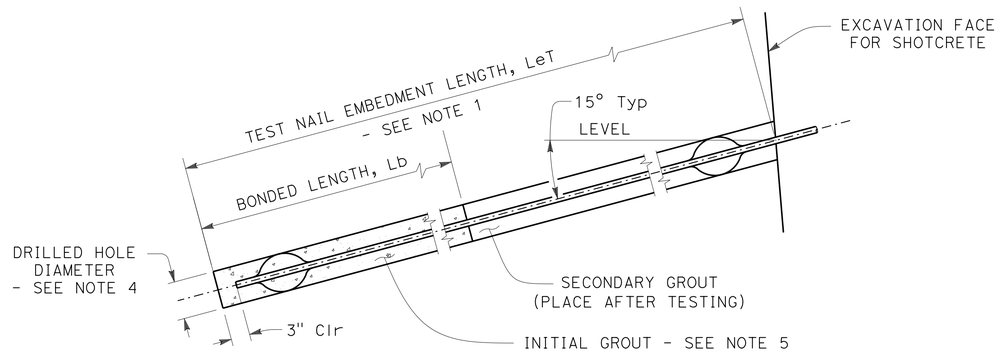
NOTES:

1. For details not shown, see "WALL DETAILS NO. 1" sheet
2. Centralizers shall be placed at a maximum of 7'-6" on center over the length of the bar, and 1'-6" from the end of the bar. Centralizers shall be made from a plastic material and attached to the nail in such a manner that supports the soil nail in the center of the drilled hole and does not impede the free flow of grout.
3. For soil nail size and embedment length, see "STRUCTURE ELEVATION NO. 1" and "STRUCTURE ELEVATION NO. 2" sheets
4. Embed nail encapsulation 3" minimum into shotcrete
5. Contractor to determine drilled hole diameter



SOIL NAIL ASSEMBLY

1" = 1'-0"

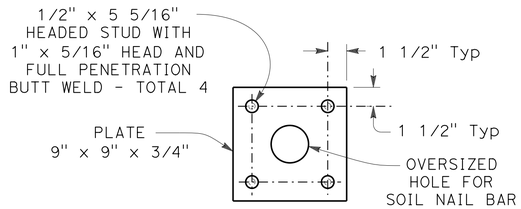


NOTES:

1. The test nail embedment length LeT, shall be equal to 2/3 of the embedment length, Le, of adjacent production soil nail assemblies, but not less than 12'-0"
2. The total length of the test nail assembly equals the embedment length plus the length required for jacking equipment
3. For location of proof test nail , see "STRUCTURE ELEVATION NO. 1" and "STRUCTURE ELEVATION NO. 2" sheets. Additional proof test nails will be installed and tested per special provisions.
4. Contractor to determine drilled hole diameter
5. Finished grout surface to be normal to the bar

PROOF TEST NAIL DETAIL

1" = 1'-0"



BEARING PLATE DETAIL

2" = 1'-0"

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	988	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	L. Muco	J. Ramirez
DETAILS	T. Brittain	J. Ramirez
QUANTITIES	L. Muco	M.A. Nekuda

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0119 — POST MILES 29.5

RETAINING WALL NO. RW8
WALL DETAILS NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES 6-1-12 6-28-12 2-22-13 2-3-14

SHEET 8 OF 16

FILE => 57E0119-g-wd03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	989	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

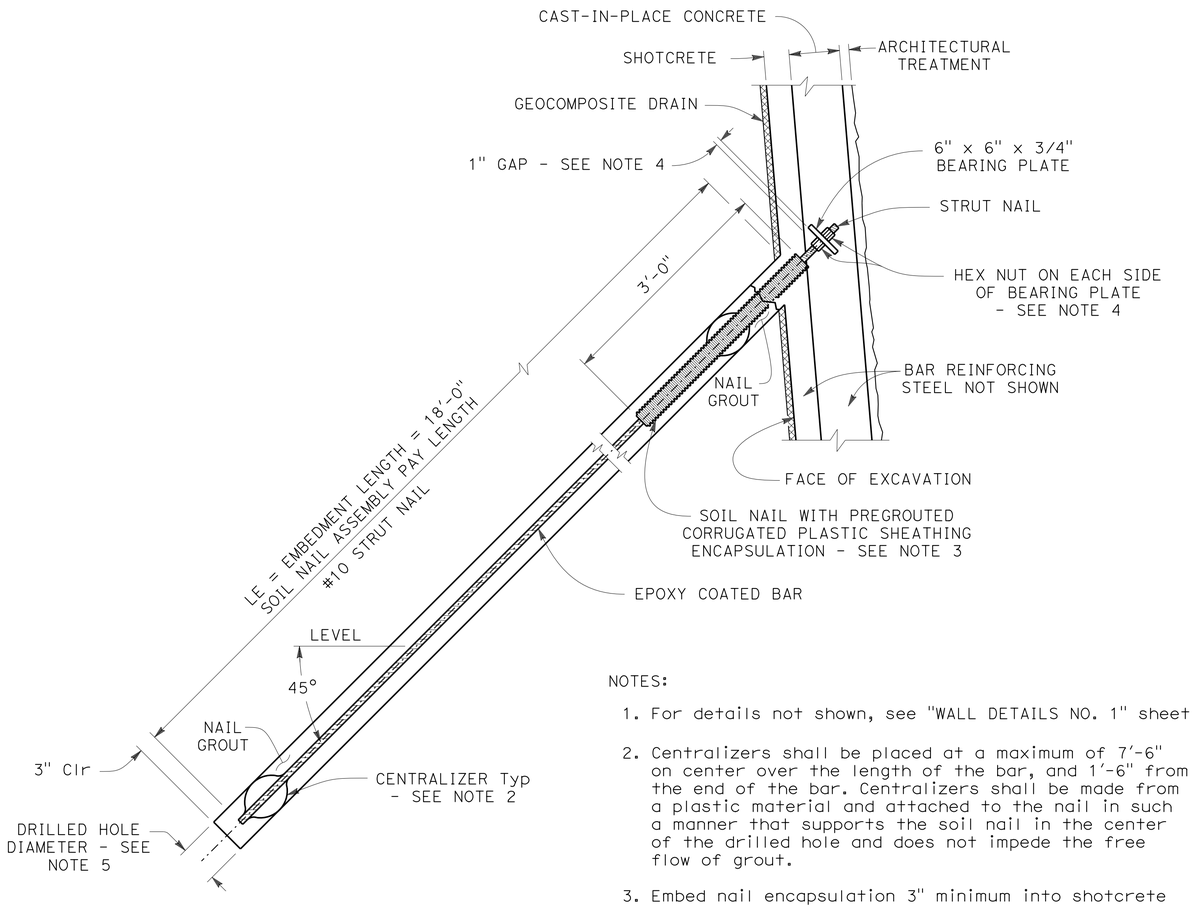
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

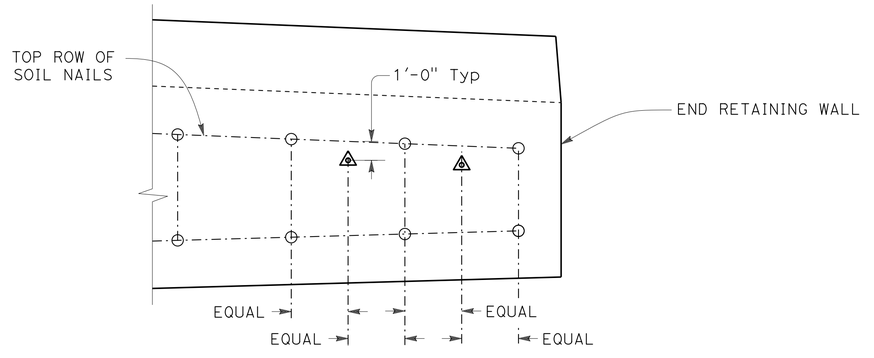


NOTES:

1. For details not shown, see "WALL DETAILS NO. 1" sheet
2. Centralizers shall be placed at a maximum of 7'-6" on center over the length of the bar, and 1'-6" from the end of the bar. Centralizers shall be made from a plastic material and attached to the nail in such a manner that supports the soil nail in the center of the drilled hole and does not impede the free flow of grout.
3. Embed nail encapsulation 3" minimum into shotcrete
4. Install bearing plate and nuts after completion of full height shotcrete facing. Leave 1" gap between edge of bearing plate and shotcrete facing. Hex nuts shall be snug tight against bearing plate.
5. Contractor to determine drilled hole diameter

STRUT NAIL ASSEMBLY

1" = 1'-0"



NOTE: End retaining wall elevation shown.
Begin retaining wall elevation similar

END WALL ELEVATION

No Scale

LEGEND:

- ○ - Indicates location of Soil Nail Assembly
- ◬ - Indicates location of Strut Nail Assembly

Norbert Gee DESIGN OVERSIGHT 3-10-14 SIGN OFF DATE		DESIGN	BY L. Muco	CHECKED J. Ramirez	PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
		DETAILS	BY T. Brittain	CHECKED J. Ramirez	
		QUANTITIES	BY L. Muco	CHECKED M.A. Nekuda	

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0119
POST MILES 29.5

RETAINING WALL NO. RW8
WALL DETAILS NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 6-1-12 | 6-28-12 | 7-22-13 | 2-3-14

SHEET 9 OF 16

FILE => 57E0119-g-wd04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	990	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

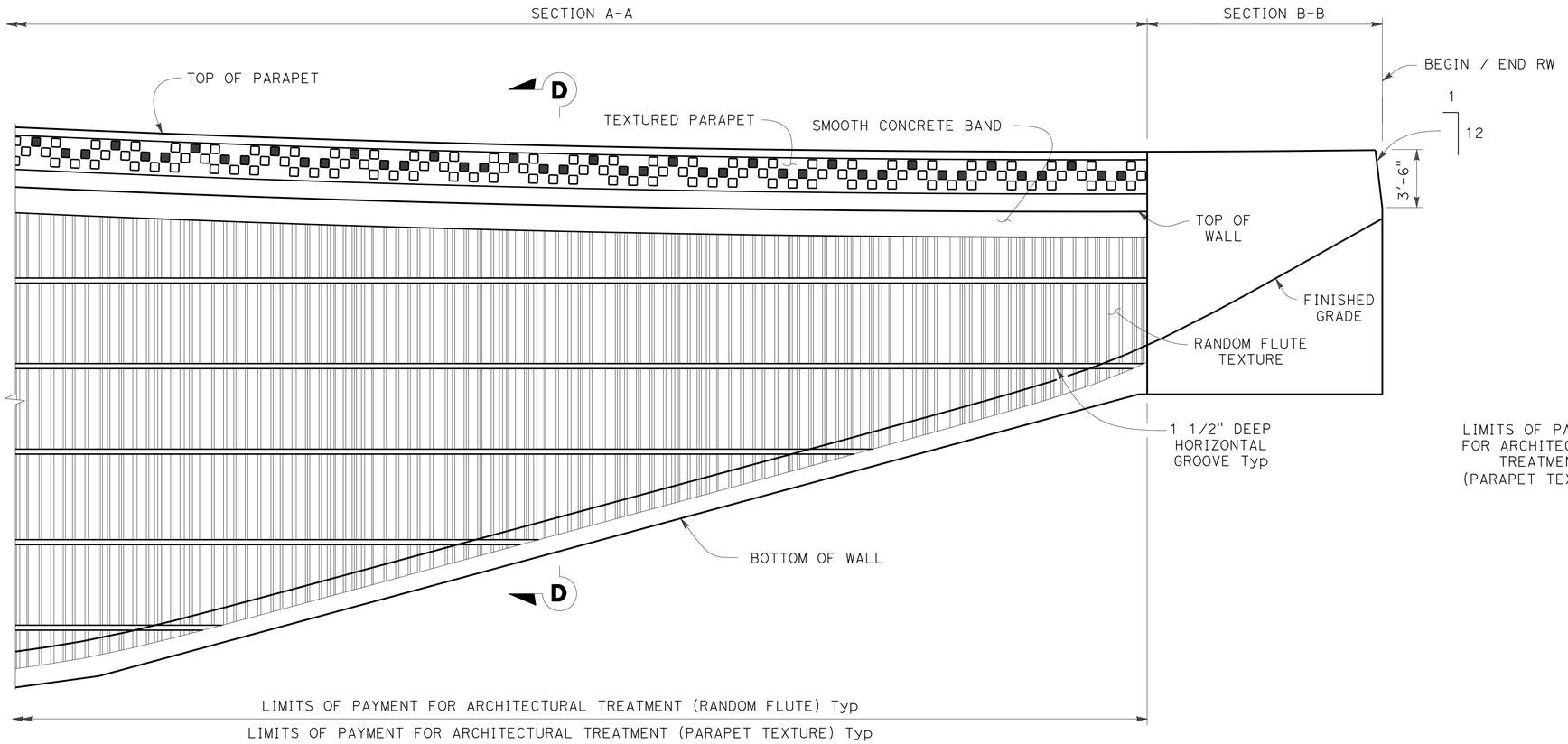
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

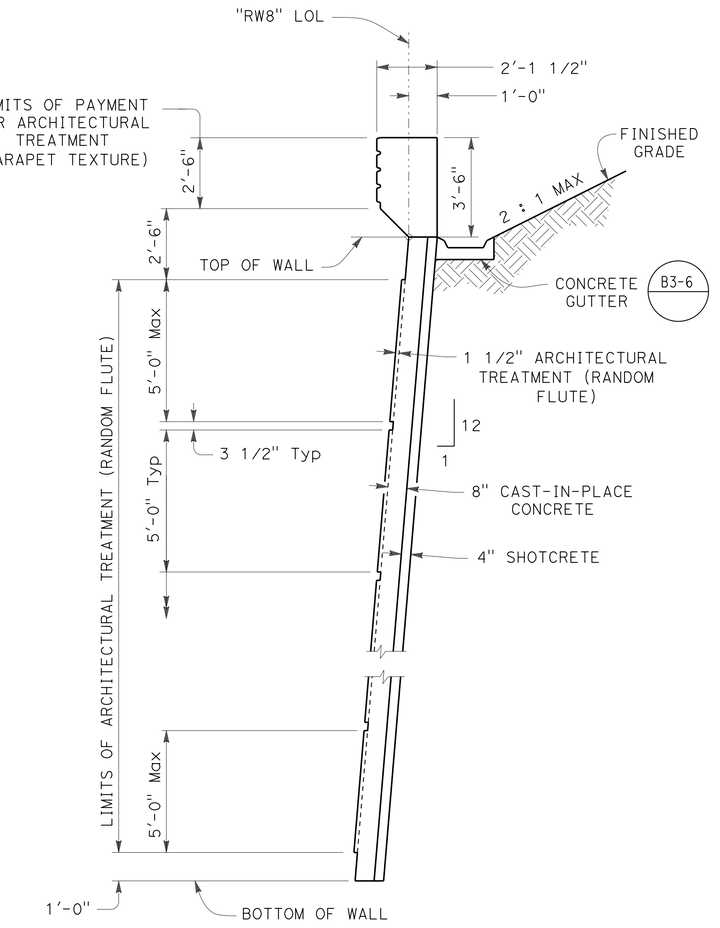


NOTES:

1. All exposed concrete surfaces to be finished with variable sandblast texture
2. For additional architectural details, see "ARCHITECTURAL DETAILS NO. 2" sheet

PARTIAL MIRRORED DEVELOPED ELEVATION

No Scale



SECTION D-D

No Scale

Norbert Gee — DESIGN OVERSIGHT — 5-7-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	L. Muco	J. Ramirez
DETAILS	T. Brittain	J. Ramirez
QUANTITIES	L. Muco	M.A. Nekuda

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0119 — POST MILES 29.5

RETAINING WALL NO. RW8
ARCHITECTURAL DETAILS NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-1-12	6-28-12	2-22-13	2-3-14	10	16

FILE => 57E0119-1-ad01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	991	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

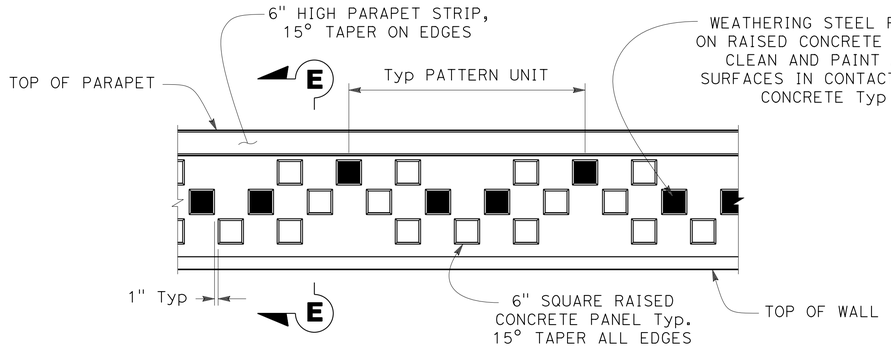
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

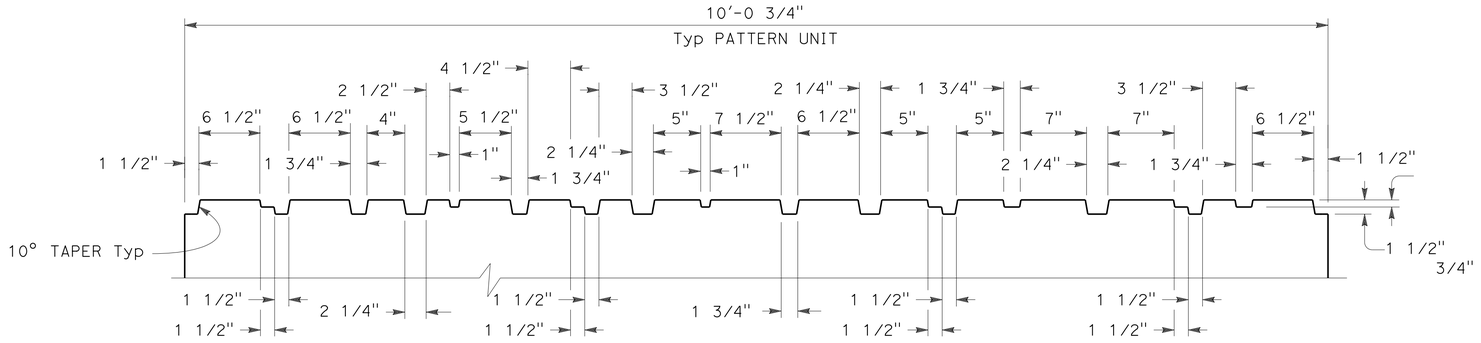
CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



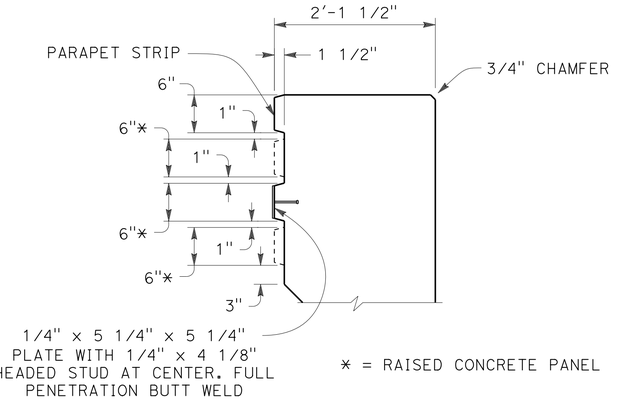
PARAPET TEXTURE DETAIL

No Scale



RANDOM FLUTE TEXTURE DETAIL

No Scale



SECTION E-E

1" = 1'-0"

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	L. Muco	J. Ramirez
DETAILS	T. Brittain	J. Ramirez
QUANTITIES	L. Muco	M.A. Nekuda

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0119
POST MILES 29.5

RETAINING WALL NO. RW8
ARCHITECTURAL DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-1-12	6-28-12	2-22-13	2-3-14	11	16

FILE => 57E0119-I-ad02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	992	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

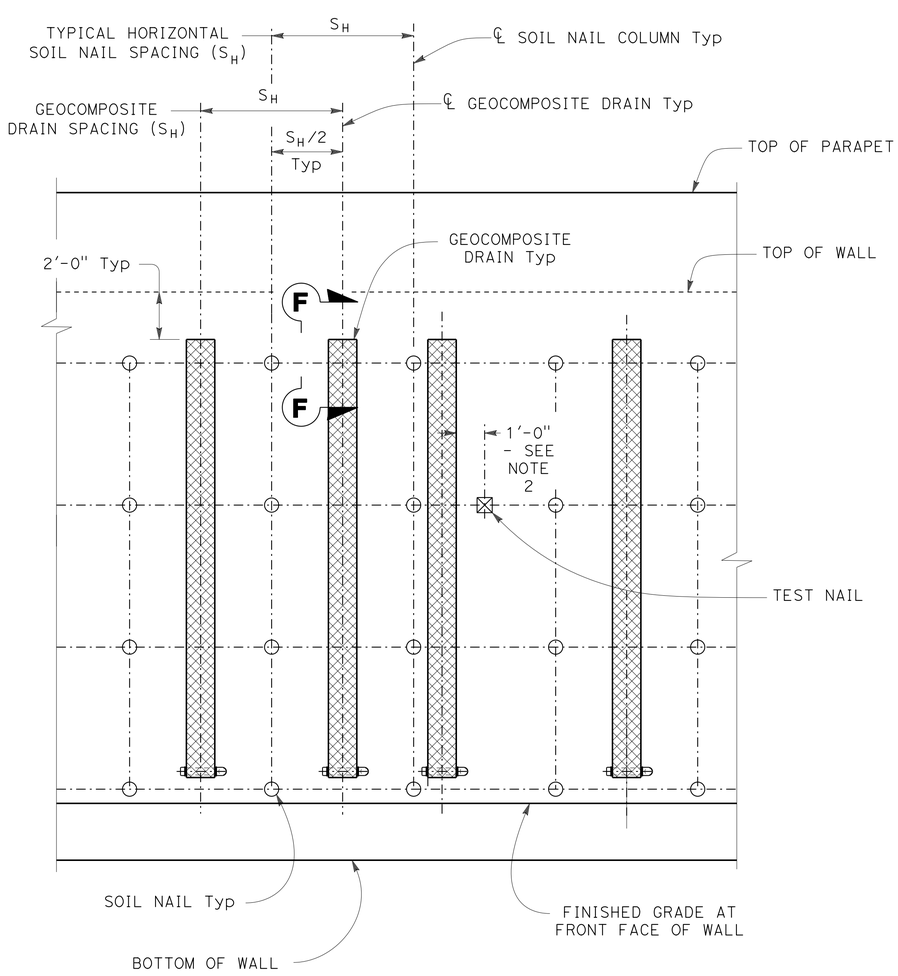
07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

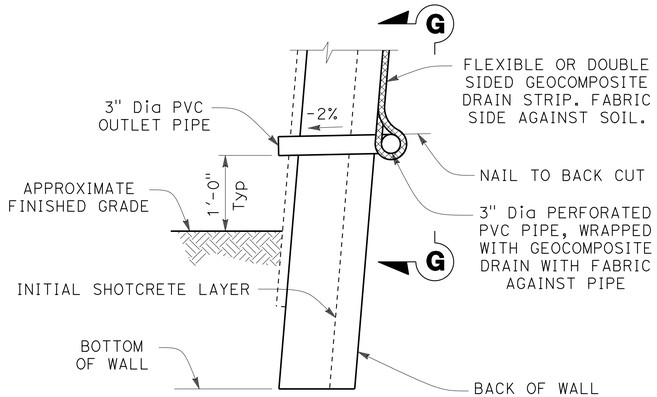


TYPICAL WALL ELEVATION

No Scale

NOTES:

1. Geocomposite Drain strip per Section 88 Geosynthetics of the Standard Specifications
2. Shift Geocomposite Drain location to provide 1'-0" clear to test nails or strut nails

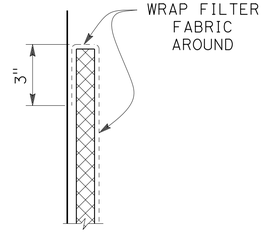


WALL DRAIN DETAIL AT WEEPHOLE (OPTION A)

No Scale

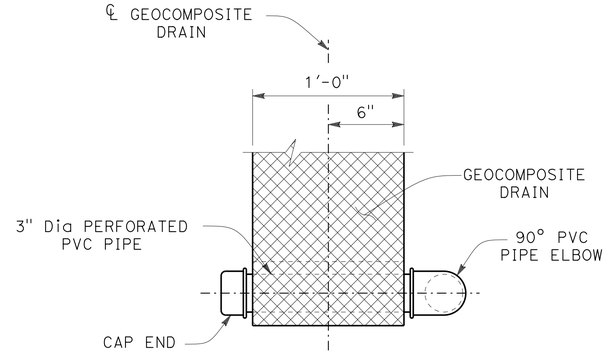
WALL DRAIN DETAIL AT WEEPHOLE (OPTION B)

No Scale



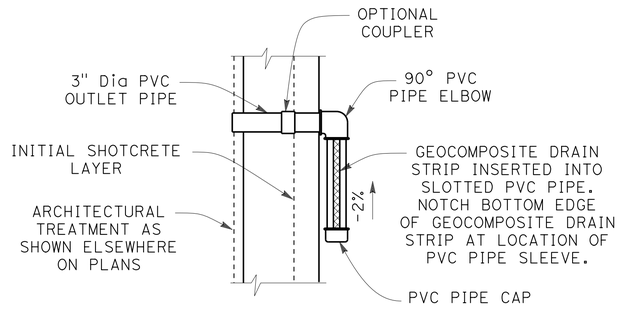
VIEW F-F

No Scale



VIEW G-G

No Scale



SECTION H-H

No Scale

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	L. Muco	J. Ramirez
DETAILS	T. Brittain	J. Ramirez
QUANTITIES	L. Muco	M.A. Nekuda

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0119
POST MILES 29.5

RETAINING WALL NO. RW8
DRAINAGE DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-1-12	6-28-12	2-22-13	2-3-14	12	16

FILE => 57E0119-p-dd01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	993	1012

Michael M. Fordham — 3-12-12
REGISTERED CIVIL ENGINEER — DATE

07-21-14
PLANS APPROVAL DATE

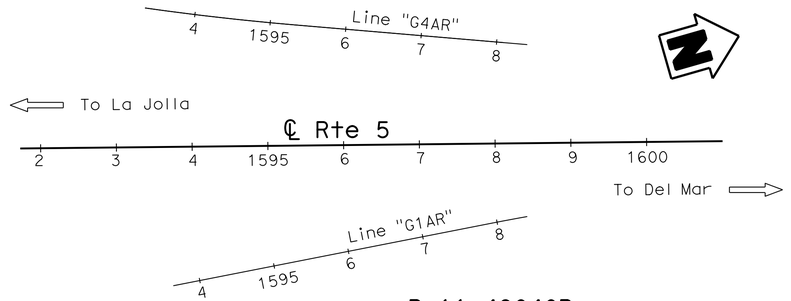
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

BENCH MARK

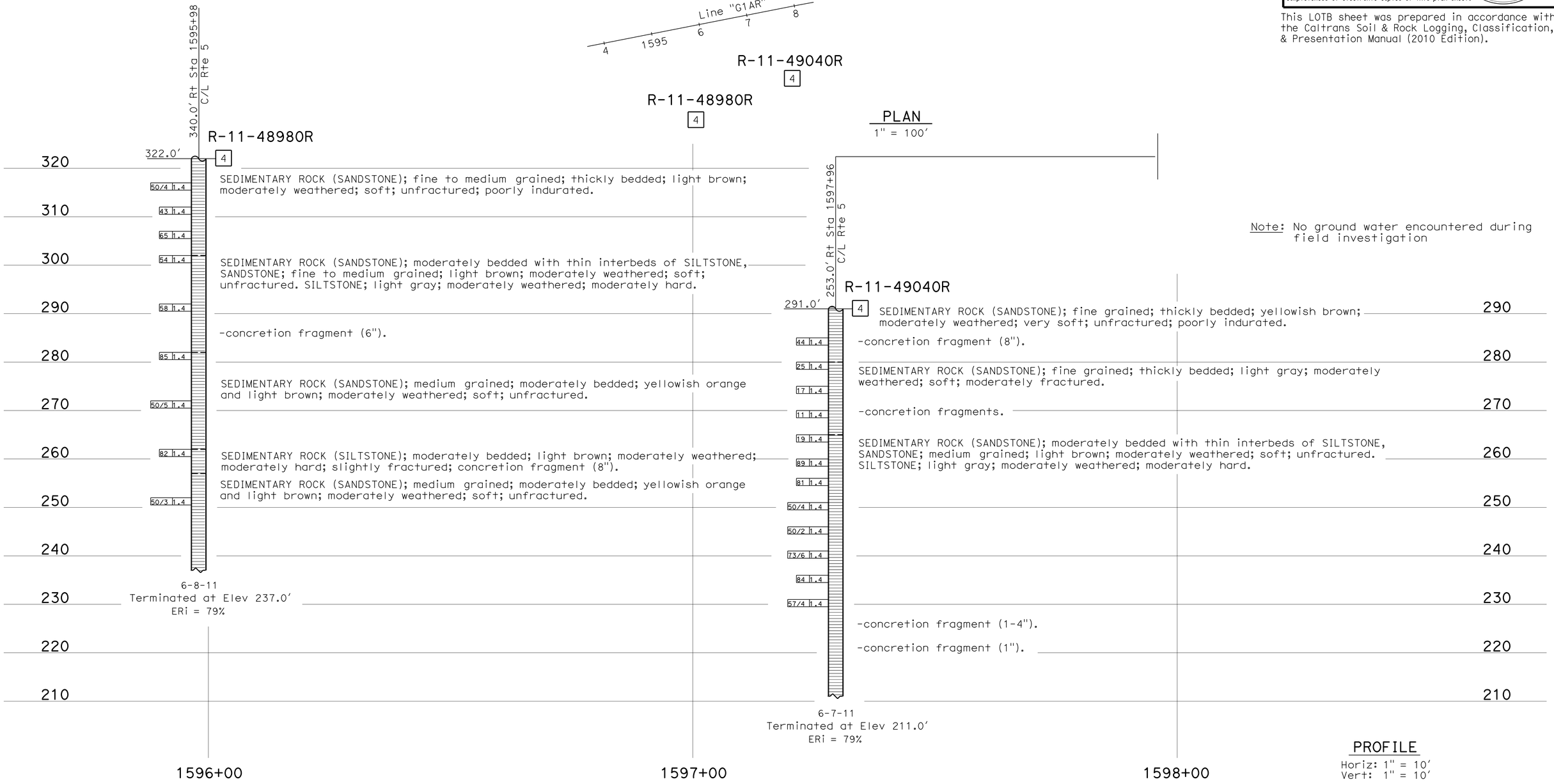
5-28.41
Elev 287.78
Located at the intersection of I-5 and La Jolla Village Dr, set in sidewalk near southeast corner of La Jolla Village Dr Bridge over I-5.
NAVD 88



R-11-49040R
4

R-11-48980R
4

PLAN
1" = 100'



Note: No ground water encountered during field investigation

PROFILE
Horiz: 1" = 10'
Vert: 1" = 10'

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW8
FUNCTIONAL SUPERVISOR	DRAWN BY: W. Tang 02/12	FIELD INVESTIGATION BY:	DESIGN BRANCH X	57E0119	LOG OF TEST BORINGS 1 OF 4
NAME: B. Hinman	CHECKED BY: Z. Yazdani	M. Fordham		POST MILE 29.5	

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				13	16

FILE => 57E0119-z-1tb01.dgn

USERNAME => s124400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	994	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

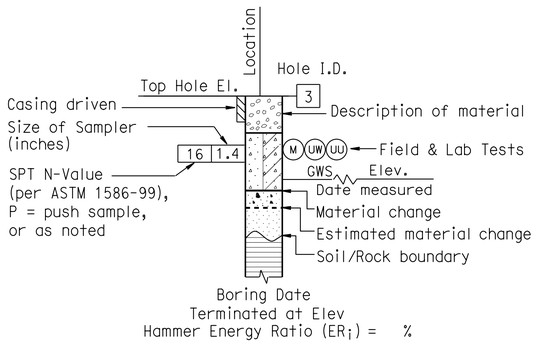
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring (hollow or solid stem bucket)
Size	R	Rotary drilled boring (conventional)
	RW	Rotary drilled with self-casing wire-line
	RC	Rotary core with continuously-sampled, self-casing wire-line
	P	Rotary percussion boring (air)
Size	R	Rotary drilled diamond core
	RC	Rotary drilled rock core
Size	HD	Hand driven (1-inch soil tube)
	HA	Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778)
⬚	O	Other (note on LOTB)

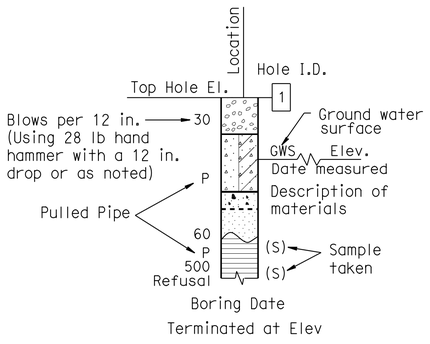
Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS

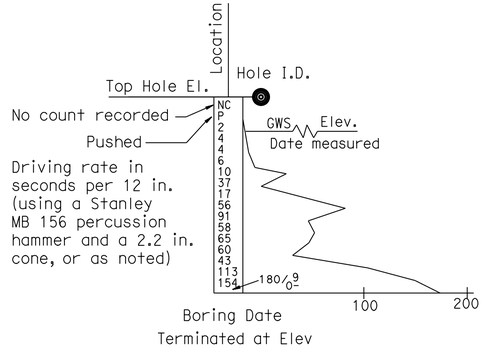
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



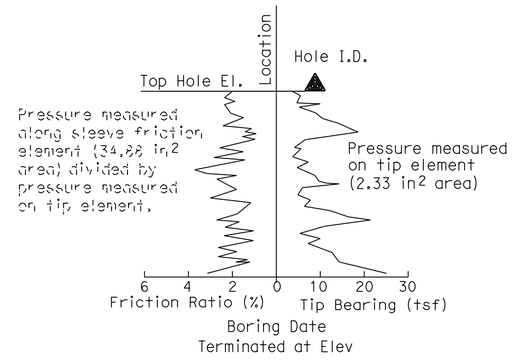
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) BORING

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW8
	PREPARED BY: W. Tang 02/12		DESIGN BRANCH X	57E0119	LOG OF TEST BORINGS 2 OF 4
				POST MILE 29.5	

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				14	16

FILE => 57E0119-z-1tb02.dgn

USERNAME => s12400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly-graded GRAVEL Poorly-graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly-graded GRAVEL with SILT Poorly-graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly-graded GRAVEL with CLAY (or SILTY CLAY) Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly-graded SAND Poorly-graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly-graded SAND with SILT Poorly-graded SAND with SILT and GRAVEL		
SP-SC	Poorly-graded SAND with CLAY (or SILTY CLAY) Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	995	1012

Michael M. Fordham 3-12-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 - 12
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay		Less than 1/300

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES
PREPARED BY: W. Tang 02/12

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 57E0119
POST MILE 29.5

RETAINING WALL NO. RW8
LOG OF TEST BORINGS 3 OF 4

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				15	16

FILE => 57E0119-z-ltb03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	996	1012

Michael M. Fordham — 3-12-12
REGISTERED CIVIL ENGINEER — DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

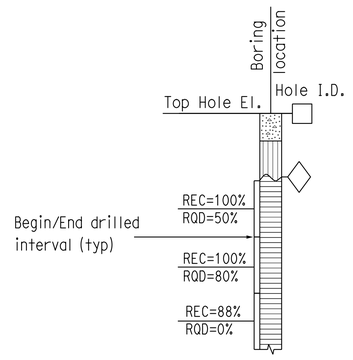
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)

$$REC = \frac{\sum \text{Length of the recovered core pieces (in.)}}{\text{Total length of core run (in.)}} \times 100\%$$

$$RQD = \frac{\sum \text{Length of intact core pieces} \geq 4 \text{ in.}}{\text{Total length of core run (in.)}} \times 100\%$$

RQD* Indicates soundness criteria not met.



BEDDING SPACING

Description	Thickness / Spacing
Massive	Greater than 10 ft
Very Thickly Bedded	3 ft - 10 ft
Thickly Bedded	1 ft - 3 ft
Moderately Bedded	4 in. - 1 ft
Thinly Bedded	1 in. - 4 in.
Very Thinly Bedded	1/4 in. - 1 in.
Laminated	Less than 1/4 in.

LEGEND OF ROCK MATERIALS

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

ROCK HARDNESS

Description	Criteria
Extremely Hard	Cannot be scratched with a pocketknife or sharp pick. Can only be chipped with repeated heavy hammer blows.
Very Hard	Cannot be scratched with a pocketknife or sharp pick. Breaks with repeated heavy hammer blows.
Hard	Can be scratched with a pocketknife or sharp pick with difficulty (heavy pressure). Breaks with heavy hammer blows.
Moderately Hard	Can be scratched with pocketknife or sharp pick with light or moderate pressure. Breaks with moderate hammer blows.
Moderately Soft	Can be grooved 1/16 in. deep with a pocketknife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.
Soft	Can be grooved or gouged easily by a pocketknife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very Soft	Can be readily indented, grooved or gouged with fingernail, or carved with a pocketknife. Breaks with light manual pressure.

FRACTURE DENSITY

Description	Observed Fracture Density
Unfractured	No fractures.
Very Slightly Fractured	Core lengths greater than 3 ft.
Slightly Fractured	Core lengths mostly from 1 to 3 ft.
Moderately Fractured	Core lengths mostly from 4 in. to 1 ft.
Intensely Fractured	Core lengths mostly from 1 to 4 in.
Very Intensely Fractured	Mostly chips and fragments.

WEATHERING DESCRIPTORS FOR INTACT ROCK

Description	Diagnostic Features					General Characteristics
	Chemical Weathering-Discoloration and/or Oxidation		Mechanical Weathering-Grain Boundary Conditions (Disaggregation) Primarily for Granitics and Some Coarse-Grained Sediments	Texture and Leaching		
	Body of Rock	Fracture Surfaces		Texture	Leaching	
Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change	No leaching	Hammer rings when crystalline rocks are struck.
Slightly Weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discoloration or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved	Minor leaching of some soluble minerals.	Hammer rings when crystalline rocks are struck. Body of rock not weakened.
Moderately Weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened.
Intensely Weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened.
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes."

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES
PREPARED BY: W. Tang 02/12

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 57E0119
POST MILE 29.5

RETAINING WALL NO. RW8
LOG OF TEST BORINGS 4 OF 4

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

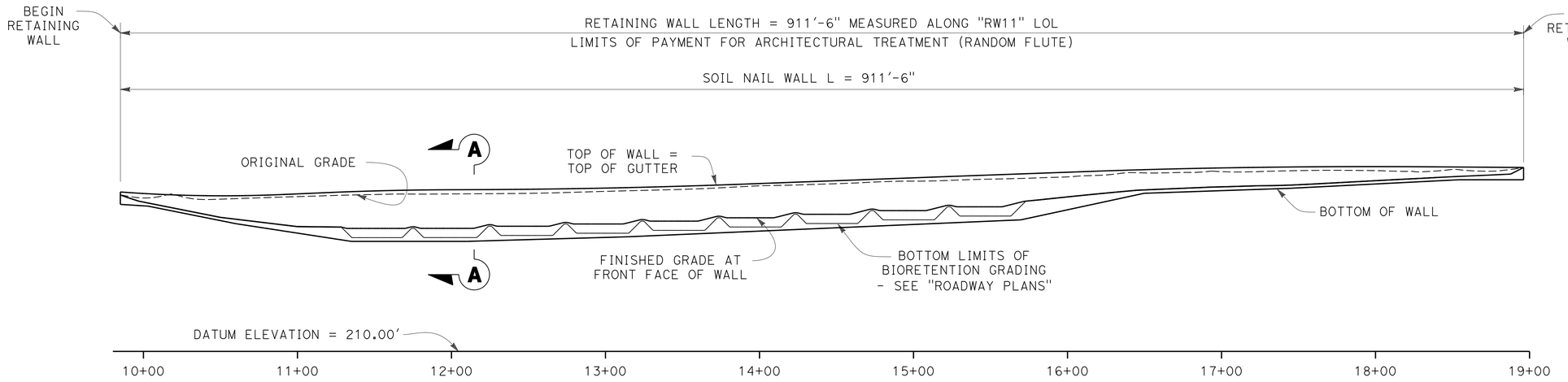
UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				16	16

FILE => 57E0119-z-ltb04.dgn

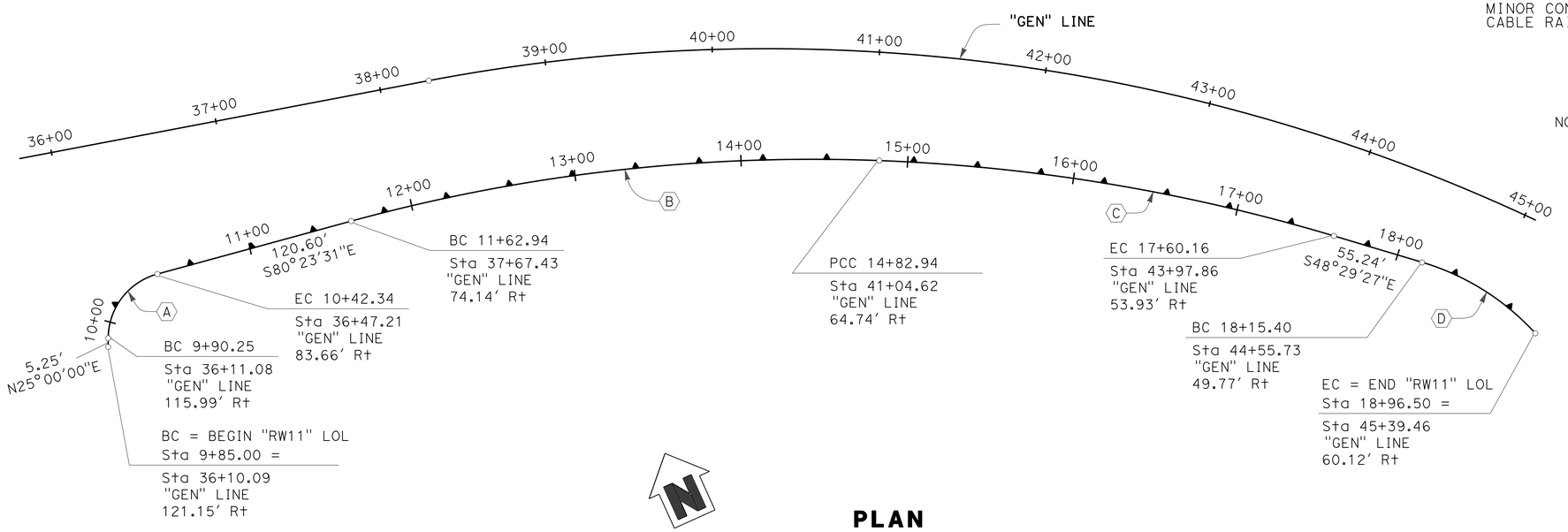
USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45



MIRRORED DEVELOPED ELEVATION

1" = 40'-0"

CURVE DATA (A)	CURVE DATA (B)	CURVE DATA (C)	CURVE DATA (D)
R = 40.00'	R = 1,050.00'	R = 1,100.00'	R = 150.00'
Δ = 74°36'29"	Δ = 17°27'42"	Δ = 14°26'22"	Δ = 30°58'41"
L = 52.09'	L = 320.00'	L = 277.22'	L = 81.10'



PLAN

1" = 40'-0"

RETAINING WALL RW11 — BRIDGE NO 57E0120

QUANTITIES

STRUCTURE EXCAVATION (SOIL NAIL WALL)	1,440	CY
STRUCTURE BACKFILL (SOIL NAIL WALL)	130	CY
SOIL NAIL	35,100	LF
STRUCTURAL CONCRETE, RETAINING WALL	545	CY
ARCHITECTURAL TREATMENT (RANDOM FLUTE)	13,425	SQFT
BAR REINFORCING STEEL (RETAINING WALL)	86,000	LB
STRUCTURAL SHOTCRETE	265	CY
MINOR CONCRETE (GUTTER) (CY)	31	CY
CABLE RAILING	912	LF

NOTES:

1. For "GENERAL NOTES", "INDEX TO PLANS", and "STANDARD PLANS", see "GENERAL PLAN (2 OF 2)" sheet
2. For soil nail layout, size, embedment length, top of wall and bottom of wall stations and elevations, see "STRUCTURE ELEVATION NO. 1" through "STRUCTURE ELEVATION NO. 4" sheets
3. For Section "A-A", see "GENERAL PLAN (2 OF 2)" sheet
4. For Architectural Treatment not shown, see "ARCHITECTURAL DETAILS" sheet
5. Cable railing not shown

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	997	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

Norbert Gee — DESIGN OVERSIGHT — 5-7-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

ALLOWABLE STRESS DESIGN — LIVE LOADING:

	BY	CHECKED
LAYOUT	M.A. Nekuda	L. Muco
SPECIFICATIONS	C. Shannon	PLANS AND SPECS COMPARED C. Shannon

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0120 — POST MILES 29.4

RETAINING WALL NO. RW11
GENERAL PLAN (1 OF 2)

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771 PROJECT NUMBER & PHASE: 111200001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-15-13 | 2-22-13 | 2-3-14

SHEET 1 OF 16

FILE => 57E0120-a-gp01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	998	1012

Craig Shannon — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

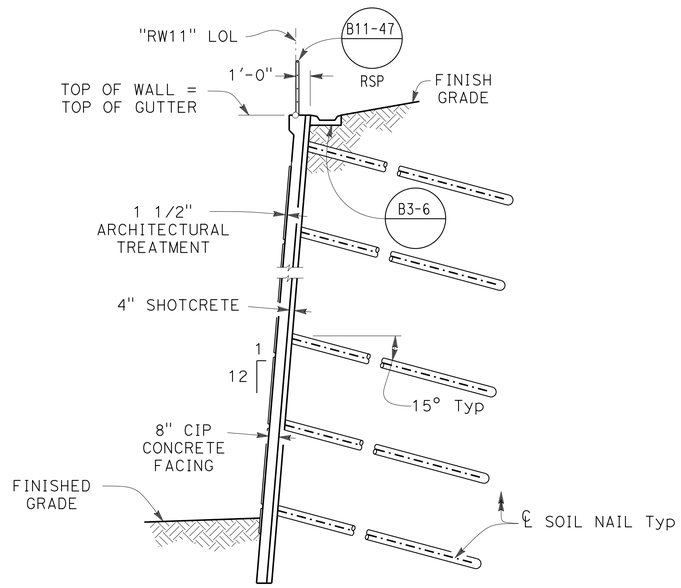
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

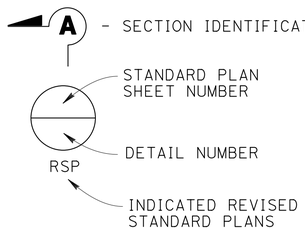
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



SECTION A-A

1" = 5'-0"

PLAN SYMBOLS



INDEX TO PLANS

GENERAL NOTES

DESIGN: ALLOWABLE STRESS DESIGN
BRIDGE DESIGN SPECIFICATIONS (1996 AASHTO WITH INTERIMS AND REVISIONS BY CALTRANS)
GEOTECHNICAL ENGINEERING CIRCULAR NO. 7: SOIL NAIL WALLS, REPORT NO. FHWAO-IF-03-017, MARCH 2003

SOIL PARAMETERS:	SOIL UNIT WEIGHT, γ_s =	121 pcf
	SOIL FRICTION ANGLE, Φ =	33°
	SOIL COHESION, C =	350 psf
	DESIGN PULLOUT RESISTANCE, Q_d =	5.4 kips/ft
SEISMIC LOADING:	PEAK GROUND ACCELERATION =	0.45 g
	K_h =	0.15
SURCHARGE:	LIVE LOAD =	240 psf
	BUILDING SURCHARGE =	1,000 psf
	(from Sta 13+90 RW11 LOL to Sta 18+96.50 RW11 LOL)	
REINFORCED CONCRETE / SHOTCRETE:	fy =	60 ksi
	f'c =	3.60 ksi
	n =	8
GROUT STRENGTH:		3.0 ksi
STRUCTURAL STEEL:	BEARING PLATES:	ASTM A36, fy = 36 ksi
	HEADED STUDS:	ASTM A449 TYPE 1, Fu = 120 ksi
SOIL NAILS:	ASTM A615 or A706, Grade 60 (Epoxy coated)	

STANDARD PLANS DATED 2010

	A10A	ABBREVIATIONS (SHEET 1 OF 2)
	A10B	ABBREVIATIONS (SHEET 2 OF 2)
	A10C	LINES AND SYMBOLS (SHEET 1 OF 3)
	A10D	LINES AND SYMBOLS (SHEET 2 OF 3)
	A10E	LINES AND SYMBOLS (SHEET 3 OF 3)
	B0-3	BRIDGE DETAILS
	B3-6	RETAINING WALL DETAILS NO. 2
RSP	B11-47	CABLE RAILING

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

DESIGN	BY M.A. Nekuda	CHECKED L. Muco	ALLOWABLE STRESS DESIGN	LIVE LOADING:		
DETAILS	BY T. Brittain	CHECKED M.A. Nekuda	LAYOUT	BY M.A. Nekuda	CHECKED L. Muco	
QUANTITIES	BY M.A. Nekuda	CHECKED L. Muco	SPECIFICATIONS	BY C. Shannon	PLANS AND SPECS COMPARED C. Shannon	

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

RETAINING WALL NO. RW11
GENERAL PLAN (2 OF 2)

DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-15-13	2-22-13	2-3-14		2	16

FILE => 57E0120-a-gp02.dgn

USERNAME => s\27400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	999	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon No. 66998 Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

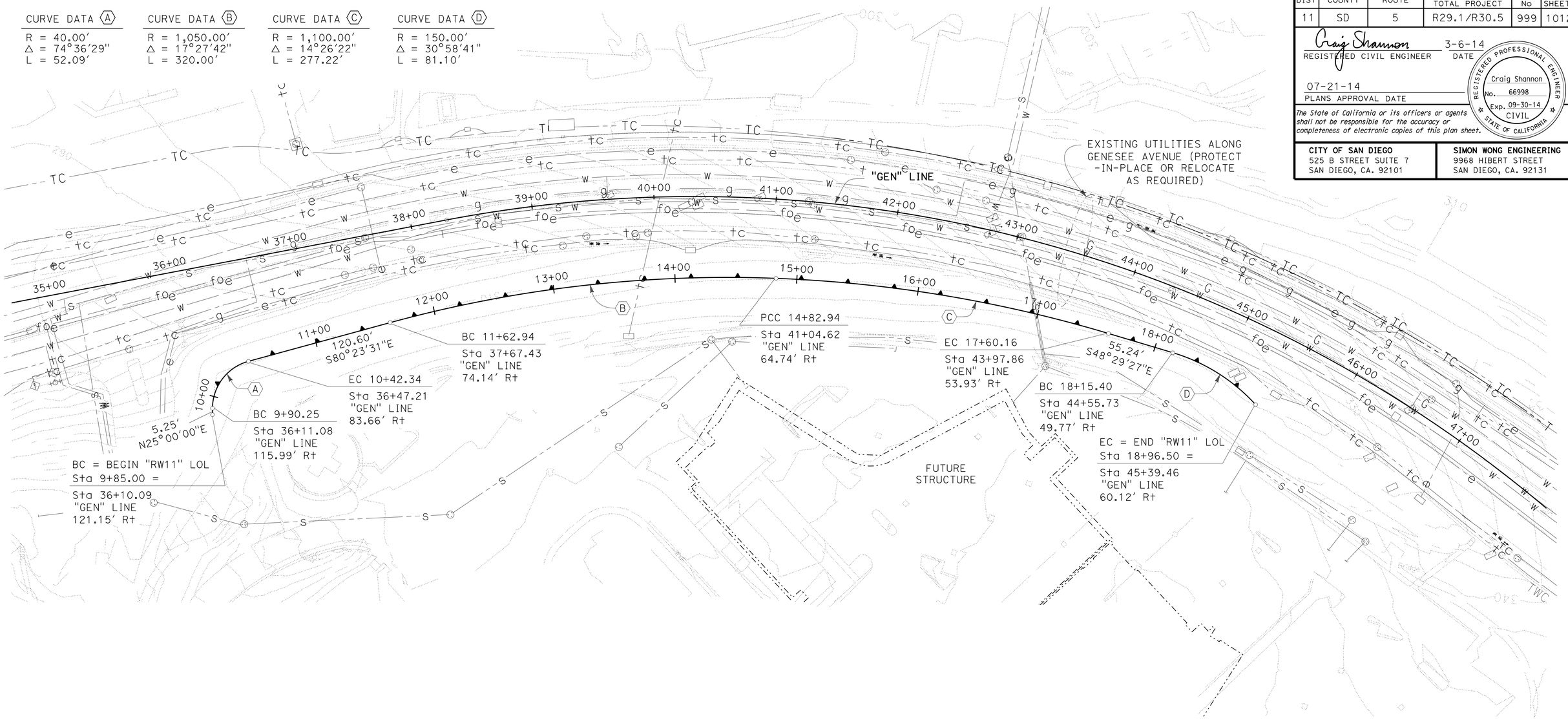
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

CURVE DATA (A)
R = 40.00′
Δ = 74°36′29"
L = 52.09′

CURVE DATA (B)
R = 1,050.00′
Δ = 17°27′42"
L = 320.00′

CURVE DATA (C)
R = 1,100.00′
Δ = 14°26′22"
L = 277.22′

CURVE DATA (D)
R = 150.00′
Δ = 30°58′41"
L = 81.10′



BENCHMARK

CONTROL SURVEY:

BM #1 5-29.46
2 1/4" CADT BRASS DISK
LABELED "5-29.46 1993"
N 1,903,968.24
E 6,261,597.31
Elev = 270.07′

BM #2 5-29.47
PK NAIL AND WASHER
N 1,904,781.66
E 6,259,851.10
Elev = 261.55′

N

PLAN

1" = 40′-0"

Mark M. Hollman 6-5-12
GEOTECHNICAL PROFESSIONAL APPROVAL DATE

Norbert Gee
DESIGN OVERSIGHT
5-7-14
SIGN OFF DATE

SCALE: X	VERT.DATUM NAVD 88	HORZ.DATUM CCS 83 (1991.35)	DESIGN	BY M.A. Nekuda	CHECKED L. Muco
PHOTOGRAMMETRY AS OF: X		ALIGNMENT TIES X	DETAILS	BY T. Brittain	CHECKED M.A. Nekuda
SURVEYED	BY X	DRAFTED BY X	QUANTITIES	BY M.A. Nekuda	CHECKED L. Muco
FIELD CHECKED	BY X	CHECKED BY X			

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

RETAINING WALL NO. RW11
FOUNDATION PLAN

FOUNDATION PLAN SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-16-13 | 2-22-13 | 2-3-14

SHEET 3 OF 16

FILE => 57E0120-c-fp01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1000	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

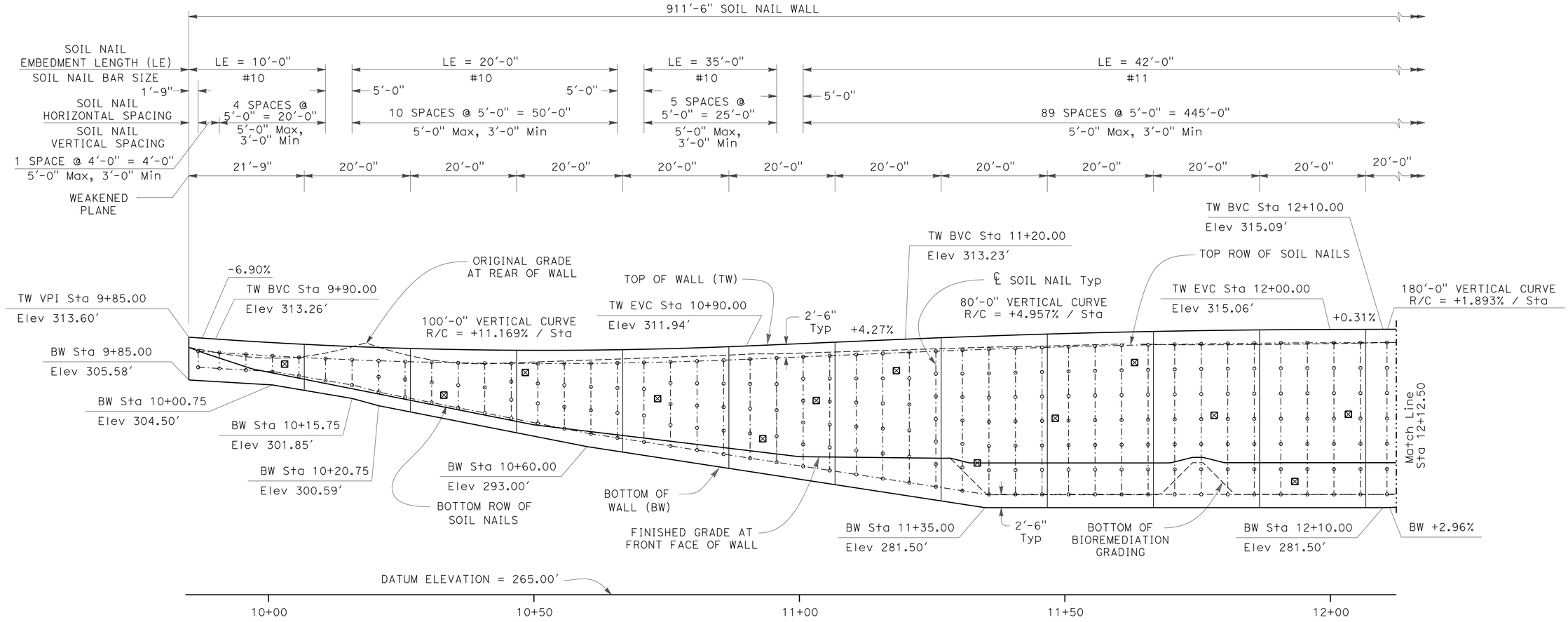
07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

- ∘ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly

MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW11" LOL
2. For soil nail retaining wall weakened plane detail, see "WALL DETAILS NO. 1" sheet
3. Cable railing not shown

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

RETAINING WALL NO. RW11
STRUCTURE ELEVATION NO. 1

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
1-18-13	2-22-13	2-3-14		4	16

FILE => 57E0120-e-se01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1001	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

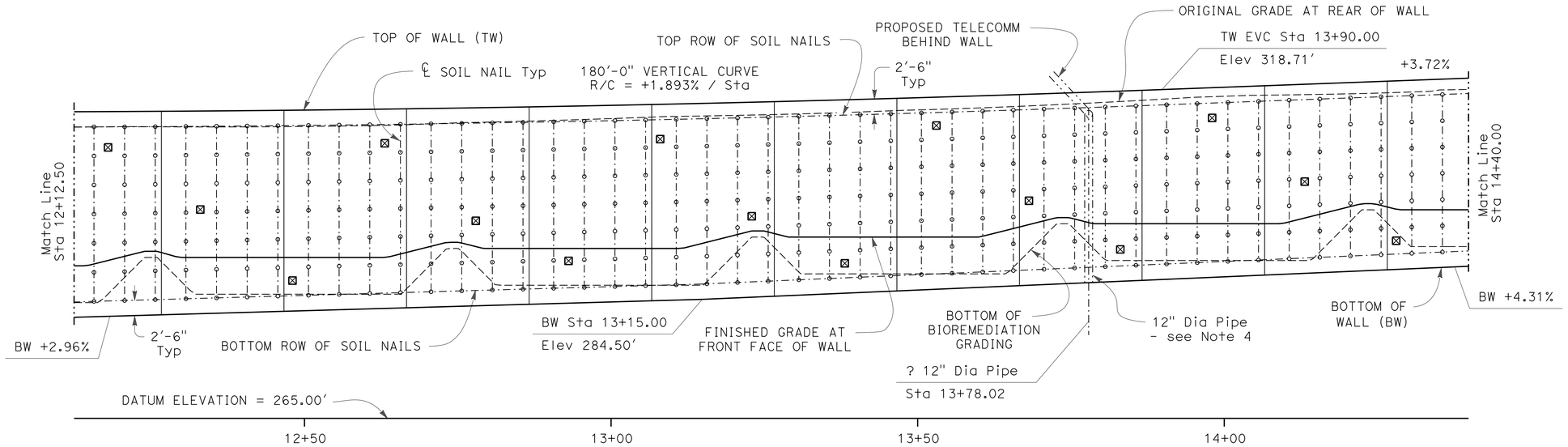
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

911'-6" SOIL NAIL WALL

SOIL NAIL EMBEDMENT LENGTH (LE) / SOIL NAIL BAR SIZE: LE = 42'-0" / #11

SOIL NAIL HORIZONTAL SPACING / SOIL NAIL VERTICAL SPACING: 89 SPACES @ 5'-0" = 445'-0" / 5'-0" Max, 3'-0" Min

WEAKENED PLANE: 20'-0" | 20'-0" | 20'-0" | 20'-0" | 20'-0" | 20'-0" | 20'-0" | 20'-0" | 20'-0" | 20'-0" | 20'-0" | 20'-0"



LEGEND:

- ∘ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly

MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW11" LOL
2. For soil nail retaining wall weakened plane detail, see "WALL DETAILS NO. 1" sheet
3. Cable railing not shown
4. 12" Dia pipe to be constructed concurrently with retaining wall, see "UTILITY PLANS" for details

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

RETAINING WALL NO. RW11
STRUCTURE ELEVATION NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-18-13 | 2-22-13 | 2-3-14

SHEET 5 OF 16

FILE => 57E0120-e-se02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1002	1012

Craig Shannon — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

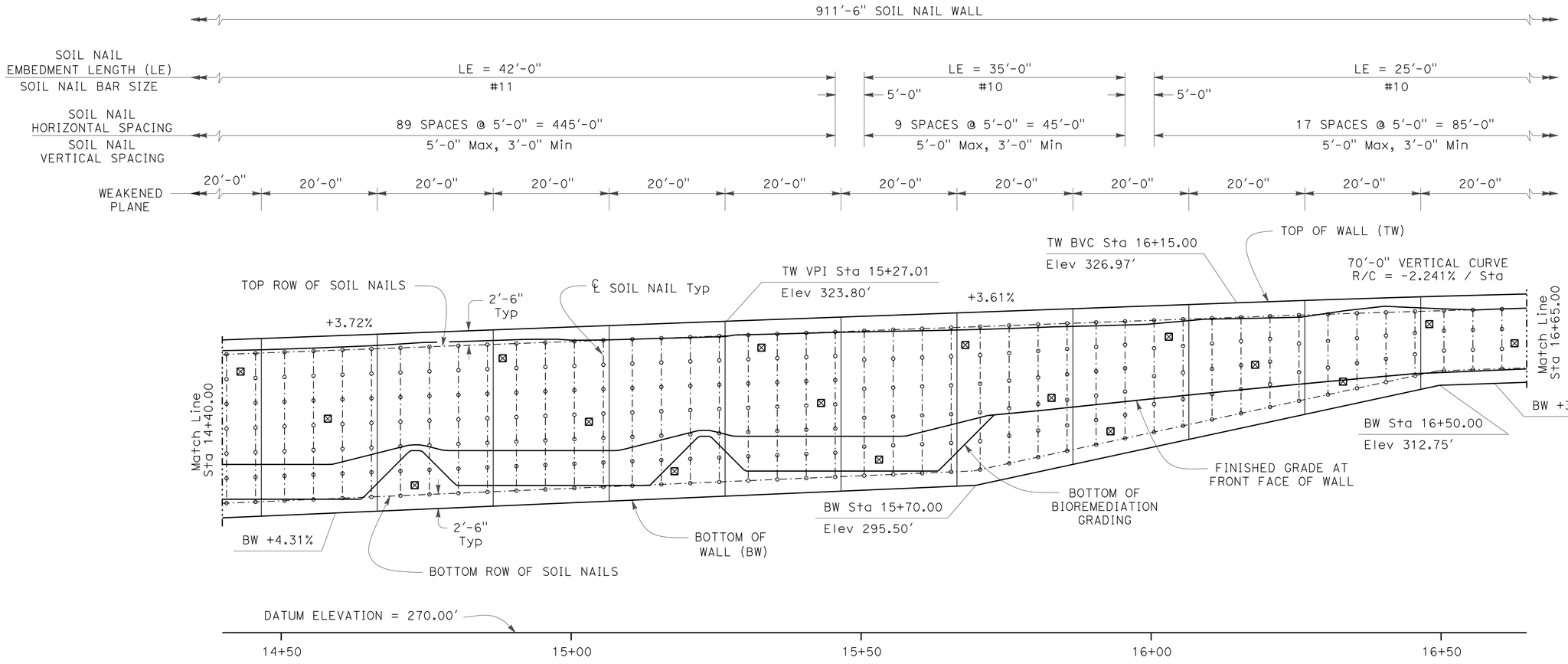
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

- ∘ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly

MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW11" LOL
2. For soil nail retaining wall weakened plane detail, see "WALL DETAILS NO. 1" sheet
3. Cable railing not shown

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

RETAINING WALL NO. RW11
STRUCTURE ELEVATION NO. 3

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021
CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-18-13	2-22-13	2-3-14		6	16

FILE => 57E0120-e-se03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1003	1012

Craig Shannon — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

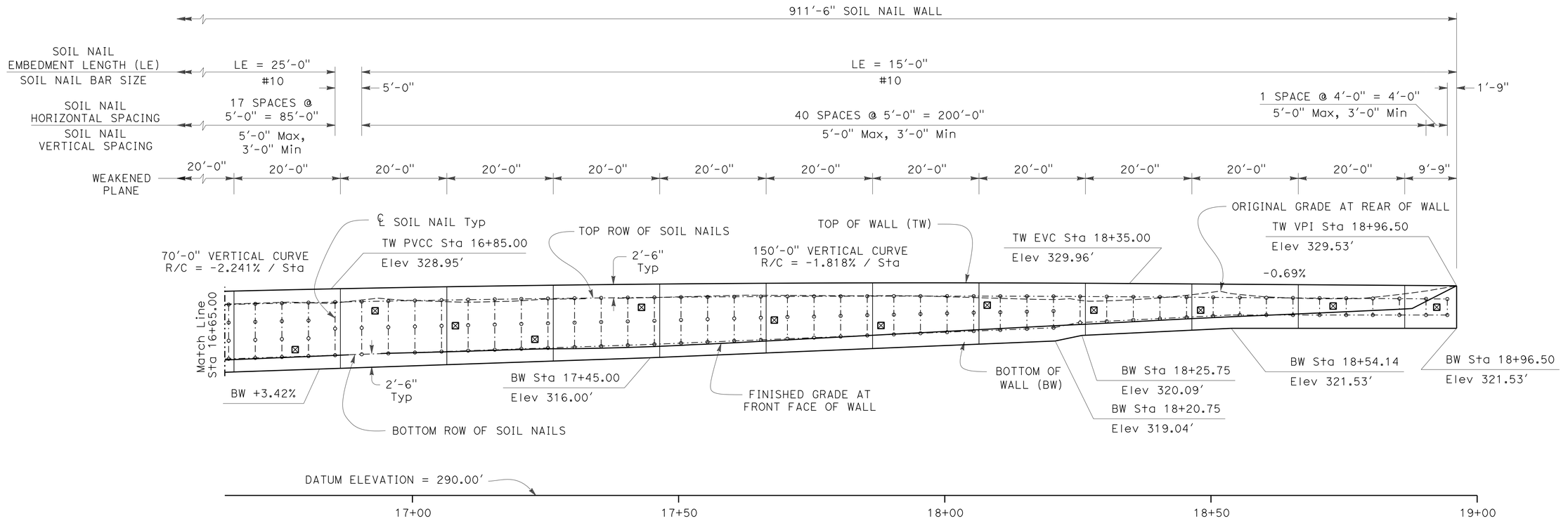
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



LEGEND:

- ∘ - Indicates location of Soil Nail Assembly
- ⊠ - Indicates location of proof test Soil Nail Assembly

MIRRORED DEVELOPED ELEVATION

1" = 10'-0"

NOTES:

1. All dimensions measured along "RW11" LOL
2. For soil nail retaining wall weakened plane detail, see "WALL DETAILS NO. 1" sheet
3. Cable railing not shown

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

RETAINING WALL NO. RW11
STRUCTURE ELEVATION NO. 4

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021
CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-16-13 | 2-22-13 | 2-3-14

SHEET 7 OF 16

FILE => 57E0120-e-se04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1004	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

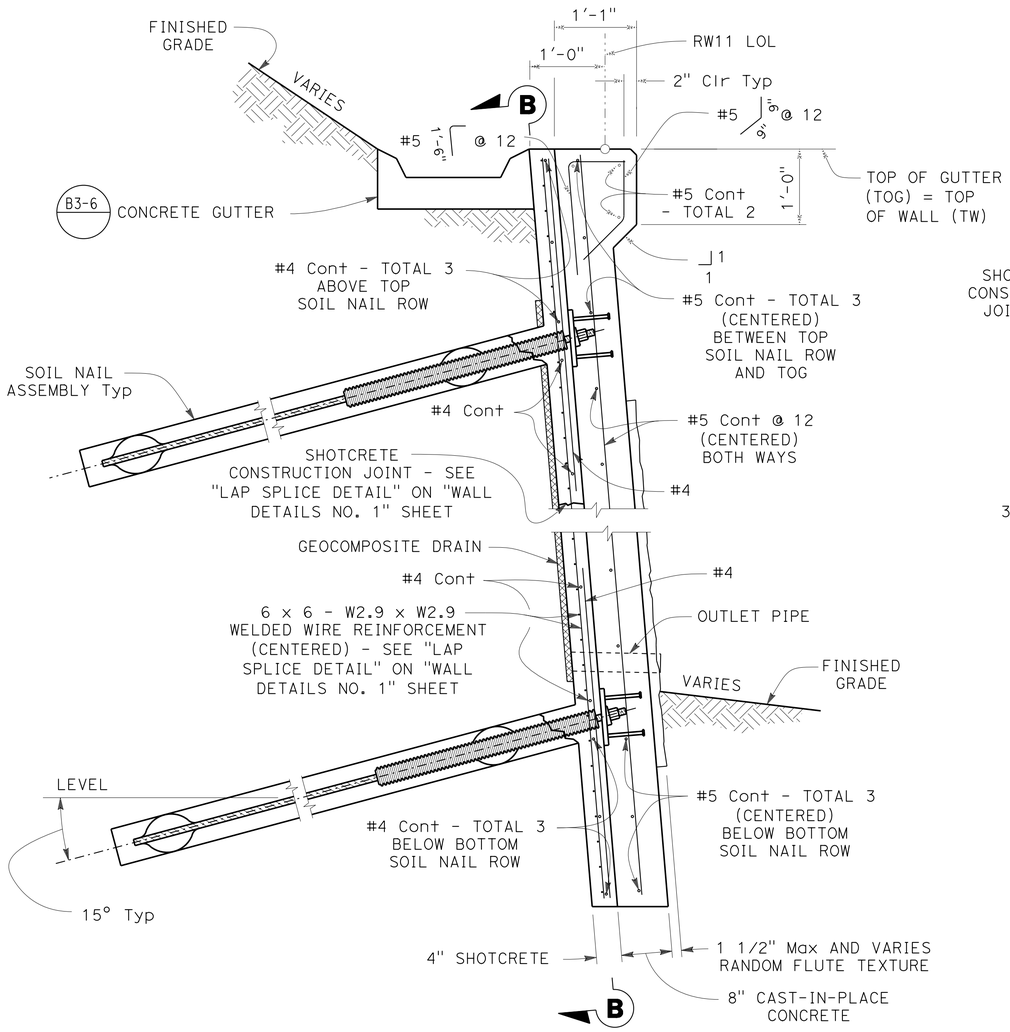
07-21-14 PLANS APPROVAL DATE

Registered Professional Engineer — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — State of California

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

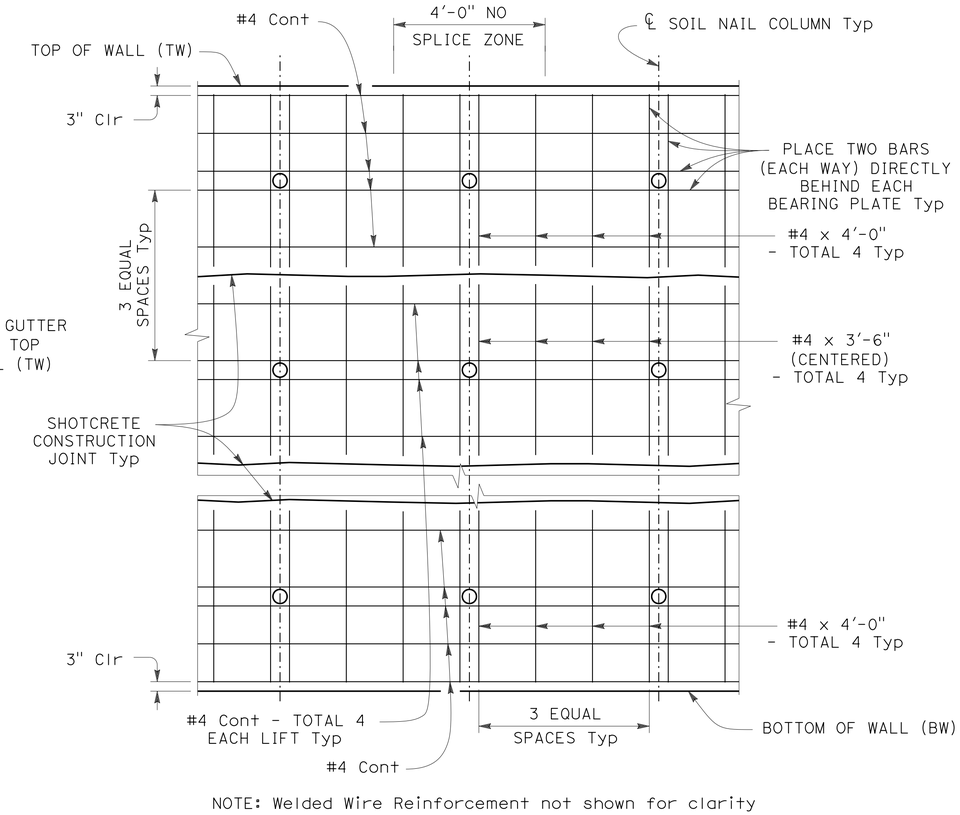
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: Cable railing not shown for clarity

WALL TYPICAL SECTION

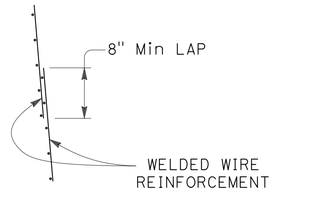
1" = 1'-0"



NOTE: Welded Wire Reinforcement not shown for clarity

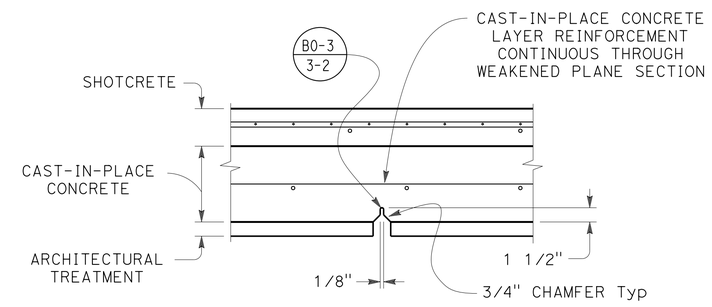
SECTION B-B

No Scale



LAP SPLICE DETAIL

No Scale



WEAKENED PLANE DETAIL

1 1/2" = 1'-0"

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

RETAINING WALL NO. RW11
WALL DETAILS NO. 1

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-18-13	2-22-13	2-3-14		8	16

FILE => 57E0120-g-wd01.dgn

USERNAME => S127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1005	1012

Craig Shannon — 3-6-14
REGISTERED CIVIL ENGINEER — DATE

07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

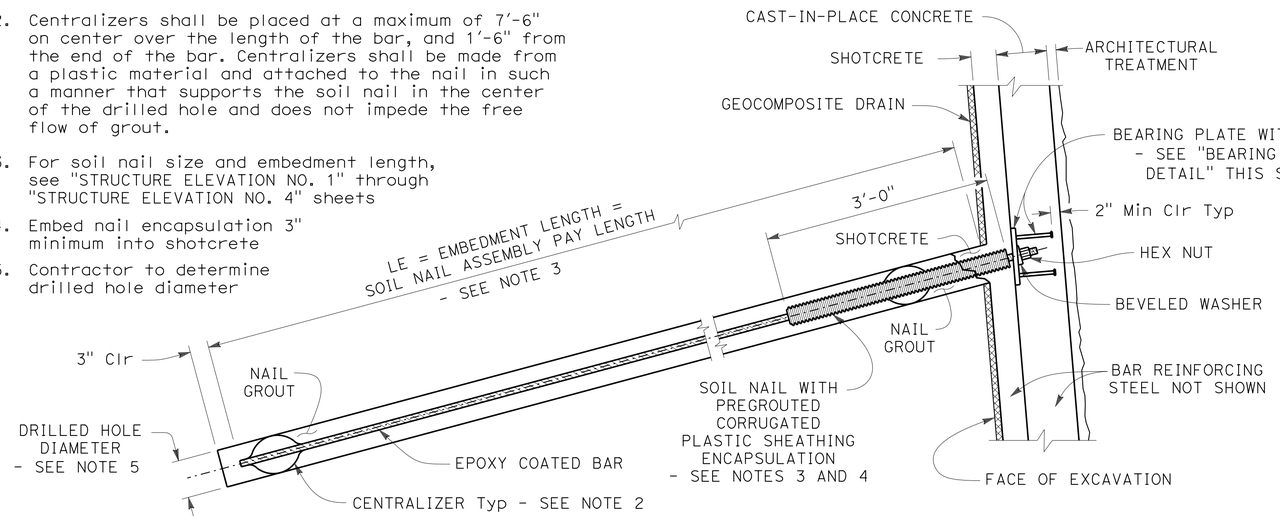
REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

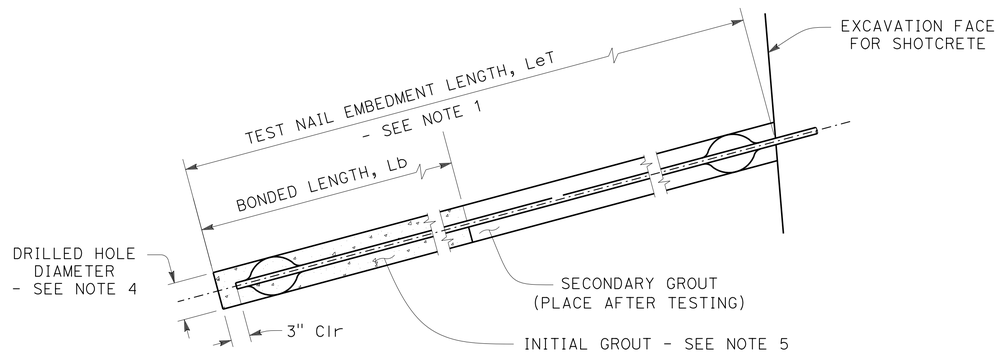
NOTES:

1. For details not shown, see "WALL DETAILS NO. 1" sheet
2. Centralizers shall be placed at a maximum of 7'-6" on center over the length of the bar, and 1'-6" from the end of the bar. Centralizers shall be made from a plastic material and attached to the nail in such a manner that supports the soil nail in the center of the drilled hole and does not impede the free flow of grout.
3. For soil nail size and embedment length, see "STRUCTURE ELEVATION NO. 1" through "STRUCTURE ELEVATION NO. 4" sheets
4. Embed nail encapsulation 3" minimum into shotcrete
5. Contractor to determine drilled hole diameter



SOIL NAIL ASSEMBLY

1" = 1'-0"

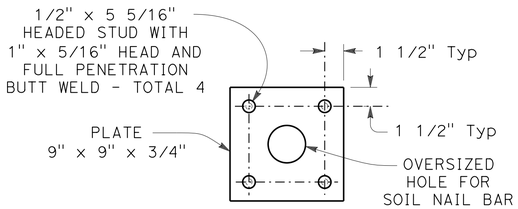


NOTES:

1. The test nail embedment length LeT, shall be equal to 2/3 of the embedment length, Le, of adjacent production soil nail assemblies, but not less than 12'-0"
2. The total length of the test nail assembly equals the embedment length plus the length required for jacking equipment
3. For location of proof test nail , see "STRUCTURE ELEVATION NO. 1" through "STRUCTURE ELEVATION NO. 4" sheets. Additional proof test nails will be installed and tested per special provisions.
4. Contractor to determine drilled hole diameter
5. Finished grout surface to be normal to the bar

PROOF TEST NAIL DETAIL

1" = 1'-0"



BEARING PLATE DETAIL

2" = 1'-0"

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

RETAINING WALL NO. RW11
WALL DETAILS NO. 2

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-18-13	2-22-13	2-3-14		9	16

FILE => 57E0120-g-wd02.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1006	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

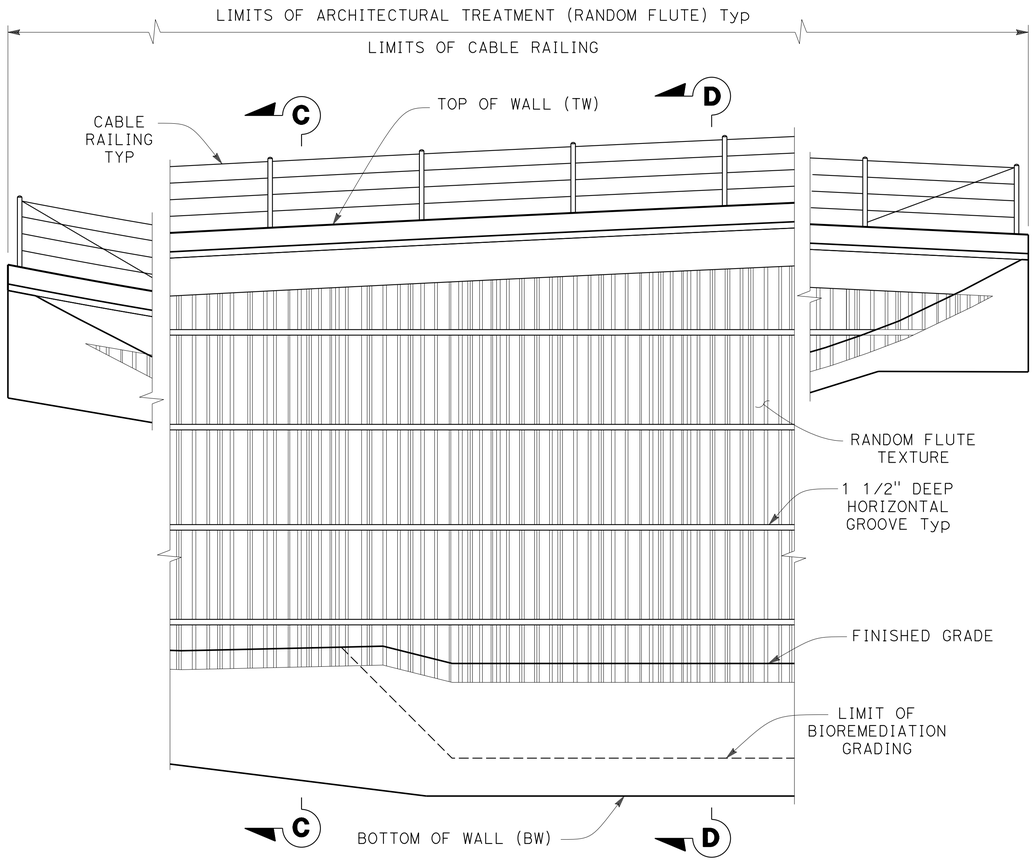
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

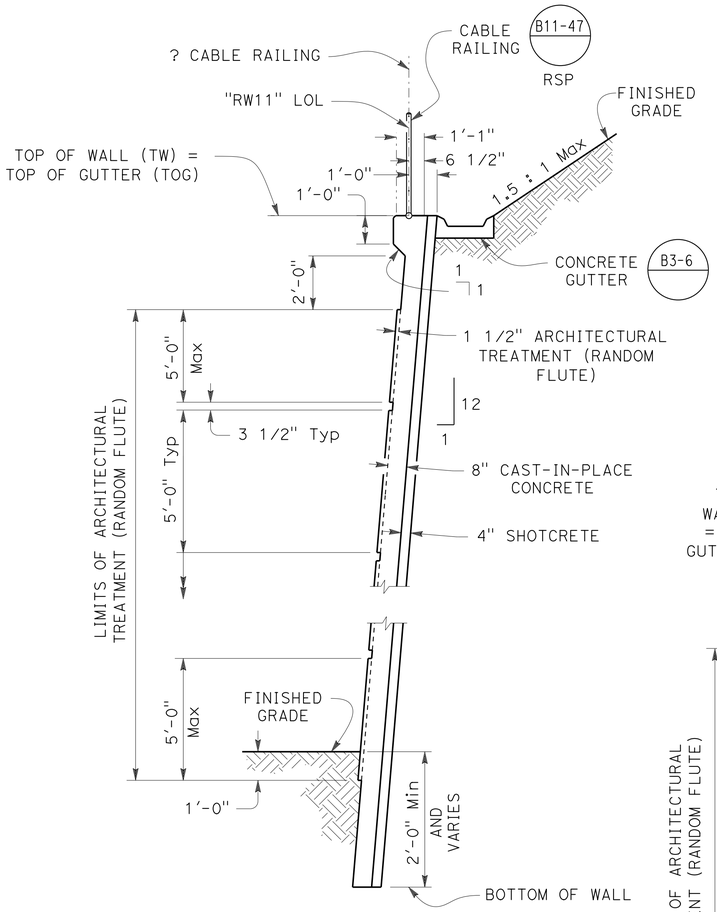
SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



NOTE: All exposed concrete surfaces to be finished with variable sandblast texture

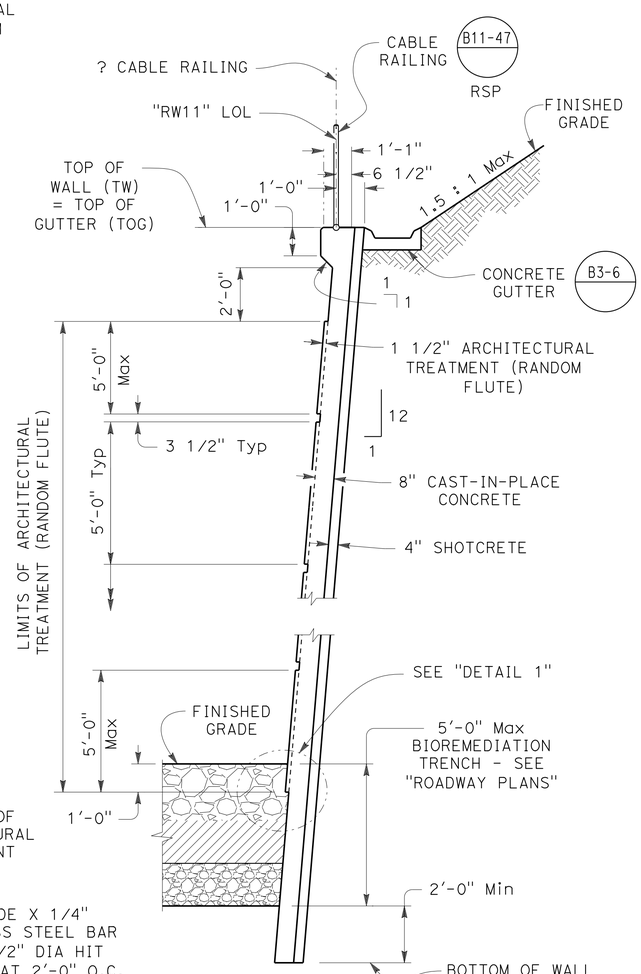
PARTIAL MIRRORED DEVELOPED ELEVATION

No Scale



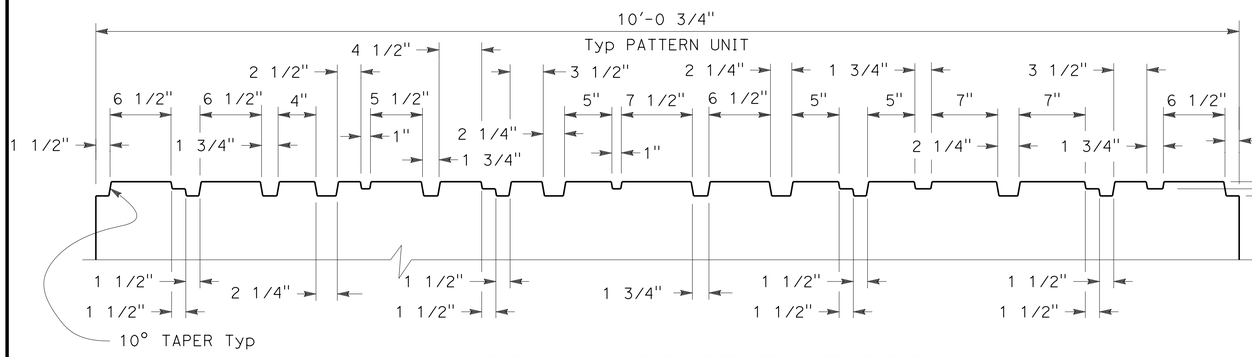
SECTION C-C

No Scale



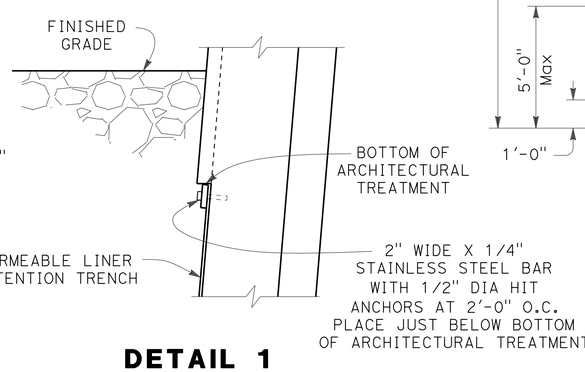
SECTION D-D

No Scale



RANDOM FLUTE TEXTURE DETAIL

No Scale



DETAIL 1

No Scale

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

RETAINING WALL NO. RW11
ARCHITECTURAL DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-16-13 | 2-22-13 | 2-3-14 |

SHEET 10 OF 16

FILE => 57E0120-1-ad01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1007	1012

Craig Shannon — REGISTERED CIVIL ENGINEER — 3-6-14 DATE

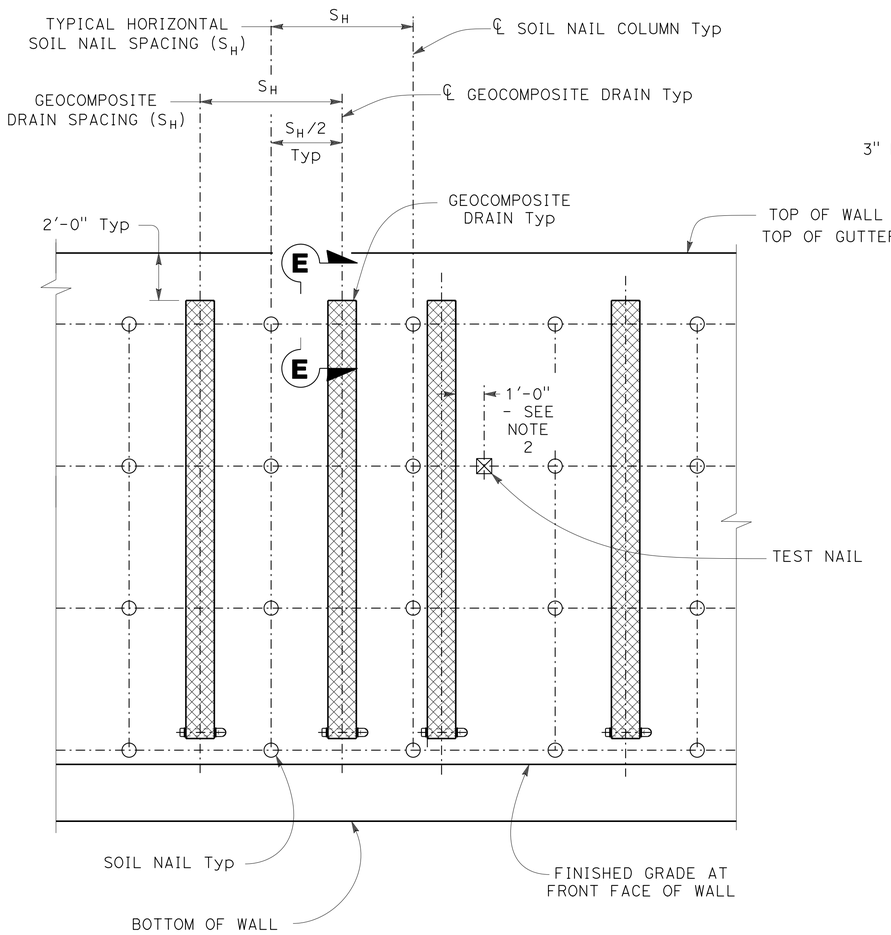
07-21-14 PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131

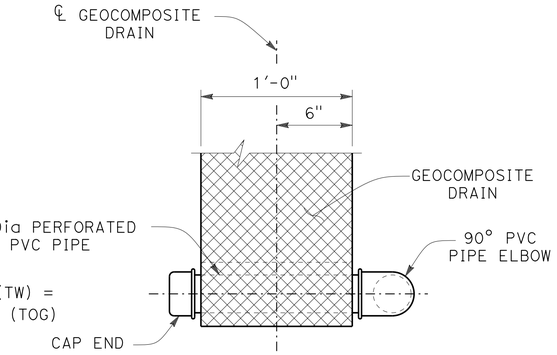


TYPICAL WALL ELEVATION

No Scale

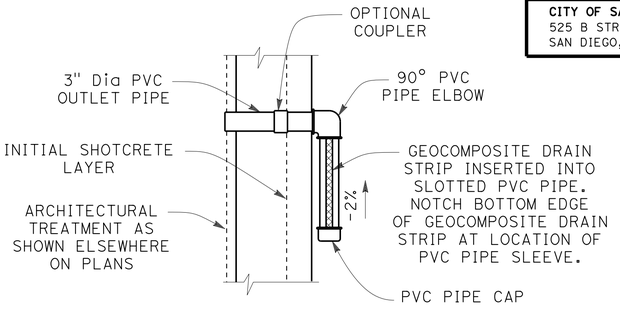
NOTES:

1. Geocomposite Drain strip per Section 88 Geosynthetics of the Standard Specifications
2. Shift Geocomposite Drain location to provide 1'-0" clear to test nails



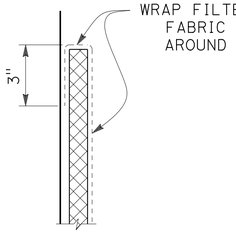
VIEW F-F

No Scale



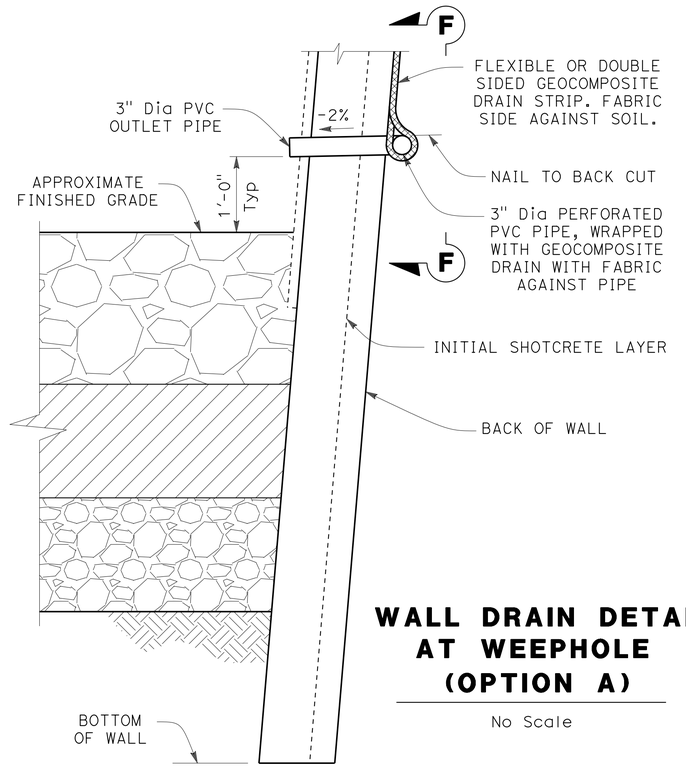
SECTION G-G

No Scale



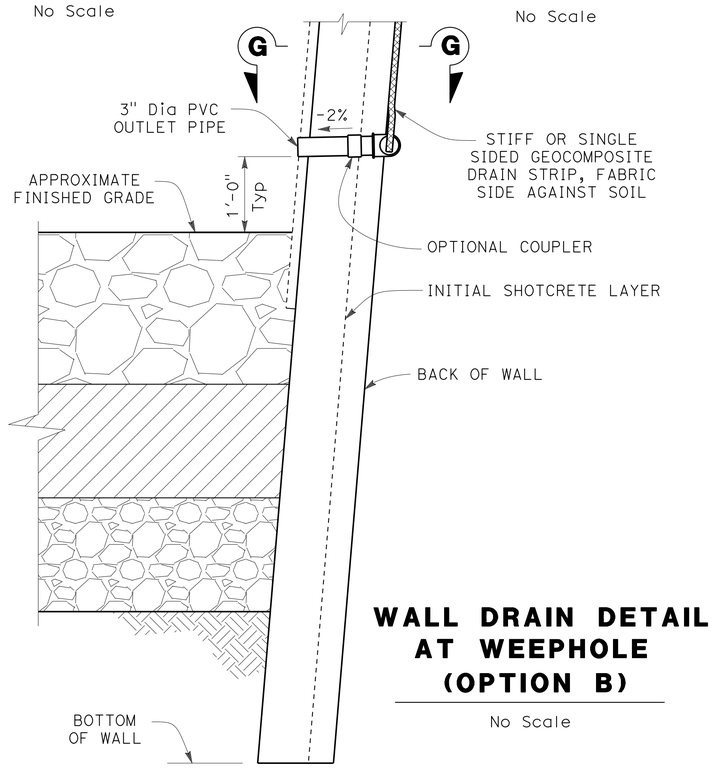
VIEW E-E

No Scale



WALL DRAIN DETAIL AT WEEPHOLE (OPTION A)

No Scale



WALL DRAIN DETAIL AT WEEPHOLE (OPTION B)

No Scale

Norbert Gee — DESIGN OVERSIGHT — 3-10-14 SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon — PROJECT ENGINEER

BRIDGE NO. 57E0120 — POST MILES 29.4

RETAINING WALL NO. RW11
DRAINAGE DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771 PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 1-16-13 | 2-22-13 | 2-3-14

SHEET 11 OF 16

FILE => 57E0120-p-dd01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1008	1012

Craig Shannon 3-6-14
REGISTERED CIVIL ENGINEER DATE

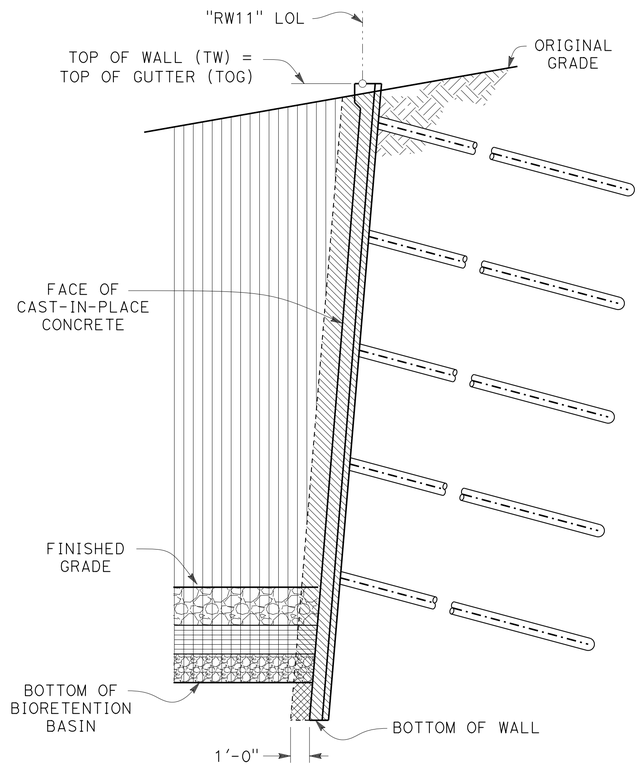
07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Craig Shannon — No. 66998 — Exp. 09-30-14 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

CITY OF SAN DIEGO
525 B STREET SUITE 7
SAN DIEGO, CA. 92101

SIMON WONG ENGINEERING
9968 HIBERT STREET
SAN DIEGO, CA. 92131



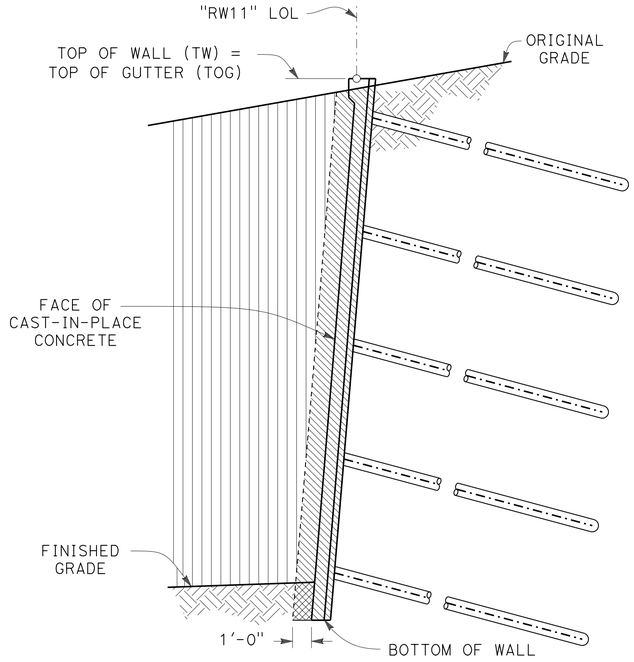
LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL SECTION WITH BIORETENTION BASIN

No Scale

STRUCTURE BACKFILL (SOIL NAIL WALL)

STRUCTURE EXCAVATION (SOIL NAIL WALL)

ROADWAY EXCAVATION



LIMITS OF PAYMENT FOR EXCAVATION AND BACKFILL SECTION WITHOUT BIORETENTION BASIN

No Scale

Norbert Gee
DESIGN OVERSIGHT
3-10-14
SIGN OFF DATE

	BY	CHECKED
DESIGN	M.A. Nekuda	L. Muco
DETAILS	T. Brittain	M.A. Nekuda
QUANTITIES	M.A. Nekuda	L. Muco

PREPARED FOR THE STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

Craig Shannon
PROJECT ENGINEER

BRIDGE NO. 57E0120
POST MILES 29.4

RETAINING WALL NO. RW11
MISCELLANEOUS DETAILS

DESIGN DETAIL SHEET (ENGLISH) (REV.7/16/10)

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 2771
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-18-13	2-22-13	2-3-14		12	16

FILE => 57E0120-s-md01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:45

DIST	COUNTY	ROUTE	POST MILES (KP) TOTAL PROJECT	SHEET No	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1009	1012

Michael M. Fordham — REGISTERED CIVIL ENGINEER — 3-30-12 DATE

07-21-14 PLANS APPROVAL DATE

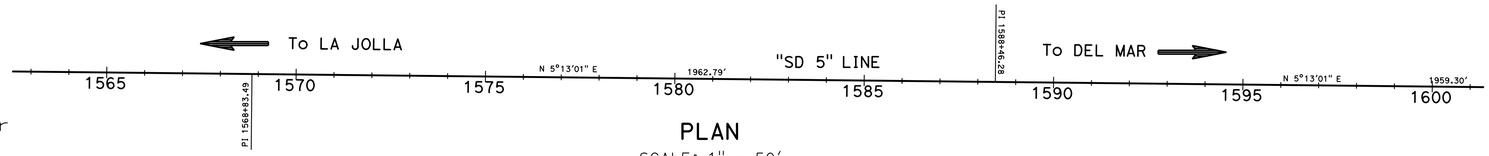
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, & Presentation Manual (2010 Edition).

BENCH MARK

5-28.41
Elev. 287.78
Located at teh intersection of I-5 and La Jolla Village Dr, set in siedwalk near southeast corner of La Jolla Village Dr Bridge over I-5
NAVD 88



PLAN
SCALE: 1" = 50'

1106.4' Rt Sta 1586+68.40 "SD5"

R-09-002 — 4"

303.7'

ASPHALT CONCRETE (6") over SILT with SAND (ML): estimated medium dense, pale yellow, variegated, dry, SILT with trace fine to medium angular GRAVEL. Sub-base.

SILT with SAND (ML): estimated medium dense, pale yellow, dry, mostly SILT with fine SAND. FILL.

At 2.0': SEDIMENTARY ROCK (Sandstone and Siltstone), laminated to very thinly bedded, light yellowish brown, olive gray, and reddish yellow, mottled, moderately weathered, very soft to soft, slightly fractured on bedding breaks. (SILTY SAND [SM] and SILT with SAND [ML], very dense, dry, mostly fine SAND with some SILT, trace CLAY, and mostly SILT with some fine SAND, medium plasticity).

>50 | 1.4 — REC=80% / RQD=N/A

At 10.2': SEDIMENTARY ROCK (Claystone), thickly bedded, dark gray to olive gray, intensely to moderately weathered, soft, very slightly fractured on bedding breaks. (Lean CLAY [CL], hard, dry, high plasticity).

>50 | 1.4 — REC=83% / RQD=N/A

At 11.7': SEDIMENTARY ROCK (Sandstone and Siltstone), laminated and thinly bedded, light gray and yellow, mottled, intensely to moderately weathered, soft to very soft, slightly fractured on bedding breaks. (SILT with SAND [ML], and SILTY SAND [SM], estimated very dense, dry, mostly SILT and fine SAND, little medium to coarse trace GRAVEL, weak ferrous cementation).

>50 | 1.4 — REC=94% / RQD=N/A

At 15.3': SEDIMENTARY ROCK (Siltstone), moderately bedded, olive gray, moderately weathered, moderately hard, unfractured.

At 16.0': SEDIMENTARY ROCK (Sandstone), moderately to thinly bedded, light gray, olive gray, and reddish yellow, intensely to moderately weathered, moderately soft to very soft, intensely to moderately fractured on bedding breaks. (SILTY SAND [SM], estimated very dense, dry, mostly SAND, some SILT, little coarse, trace CLAY, weakly cemented).

>50 | 1.4 — REC=83% / RQD=20%

At 18.5': SEDIMENTARY ROCK (Sandstone and Claystone), very thinly bedded, reddish yellow and olive gray, intensely to moderately weathered, very soft to soft. (SAND with CLAY [SC] and Lean CLAY with SAND [CL], estimated very dense, dry, mostly fine SAND and CLAY with some fine SAND, trace medium SAND).

At 20.2': SEDIMENTARY ROCK (Siltstone and Sandstone), moderately to very thinly bedded, olive gray, light gray and pale yellow, intensely to moderately weathered, very soft to moderately hard, intensely to moderately fractured on bedding plane breaks. (SILT with SAND [ML] and SILTY SAND [SM], very dense, dry, mostly SILT and fine SAND with some SILT, low plasticity, weakly cemented).

02/11/2009
Terminated at Elev 278.54'
ERi=94%

R-09-001 — 4"

R-09-002 — 4"

742.1' Rt Sta 1587+50.65 "SD5"

R-09-001 — 4"

288.64'

ASPHALT CONCRETE (6") over SILT with SAND (ML), estimated medium dense, pale yellow, dry, mostly SILT with little fine SAND, trace fine to coarse GRAVEL (FILL).

At 2.0': SEDIMENTARY ROCK (Siltstone), thinly bedded, yellow, olive gray, and reddish yellow, mottled, intensely to moderately weathered, soft to moderately soft, intensely to moderately fractured on bedding plane breaks. (SILT with SAND [ML], estimated very dense, dry, mostly SILT, little fine SAND)

>50 | 1.4 — REC=100% / RQD=N/A

At 7.9': SEDIMENTARY ROCK (Claystone), thickly bedded, light olive brown, mottled, intensely to moderately weathered, soft. (Lean CLAY [CL], hard, dry, mostly CLAY, little fine SAND, medium plasticity)

>50 | 1.4 — REC=78% / RQD=N/A

At 13.4': SEDIMENTARY ROCK (Siltstone), moderately bedded to laminated, dark gray, light gray, and light yellowish brown, intensely to moderately weathered, soft to moderately hard, (SILT with SAND [ML], very dense, dry, mostly SILT some fine SAND, trace COBBLE, medium plasticity).

>50 | 1.4 — REC=78% / RQD=17%

At 17.6': SEDIMENTARY ROCK (Sandstone and Siltstone). moderately and thinly bedded, pale yellow, intensely to moderately weathered, soft to very soft, intensely to moderately fractured on bedding plane breaks. (SILTY SAND [SM] and SILT with SAND [ML], estimated very dense, dry, mostly fine SAND with some SILT and mostly SILT with some fine SAND).

>50 | 1.4 — REC=92% / RQD=N/A

At 20.2': SEDIMENTARY ROCK (Claystone), moderately bedded, dark gray, light olive brown, moderately to intensely weathered, soft to moderately soft, moderately fractured on bedding plane breaks, (Lean CLAY [CL], hard, dry mostly CLAY, little fine SAND, high plasticity).

>50 | 1.4

At 22.2': SEDIMENTARY ROCK (Sandstone), moderately bedded, pale yellow, intensely weathered, soft. (SILTY SAND [SM], estimated very dense, mostly SAND, some SILT, weak ferrous cementation).

At 23.3': SEDIMENTARY ROCK (Siltstone and Claystone), very thinly to thinly bedded, olive, very pale brown and reddish yellow, intensely to moderately weathered, soft. (SILT with SAND [ML] and CLAY with SAND [CL], estimated very dense, dry, mostly SILT with some fine SAND and mostly CLAY with some fine SAND)

02/11/2009
Terminated at Elev 262.55'
ERi=94%

300 / 290 / 280 / 270 / 260

Note: No ground water encountered during field investigation

PROFILE

Horiz: 1" = 50'
Vert: 1" = 20'

ENGINEERING SERVICES	GEOTECHNICAL SERVICES	STATE OF CALIFORNIA	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO. 57E0120	RETAINING WALL NO. RW11
FUNCTIONAL SUPERVISOR	DRAWN BY: K. Le	DEPARTMENT OF TRANSPORTATION	DESIGN BRANCH	POST MILES (KP) 29.4	LOG OF TEST BORINGS 1 of 4
NAME: B. Hinman	CHECKED BY: Z. Yazdani	FIELD INVESTIGATION BY: M. Fordham	CU 3569 EA 11120001021		

OGS CIVIL LOG OF TEST BORINGS SHEET

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 06-01-12

SHEET 13 OF 16

FILE => 57E0120-z-ltb01.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:46

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1010	1012

Michael M. Fordham 3-30-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

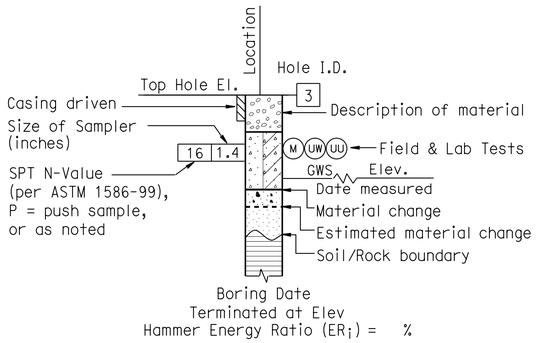
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring (hollow or solid stem bucket)
Size	R RW RC P	Rotary drilled boring (conventional) Rotary drilled with self-casing wire-line Rotary core with continuously-sampled, self-casing wire-line Rotary percussion boring (air)
Size	R RC	Rotary drilled diamond core Rotary drilled rock core
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778)
⬚	O	Other (note on LOTB)

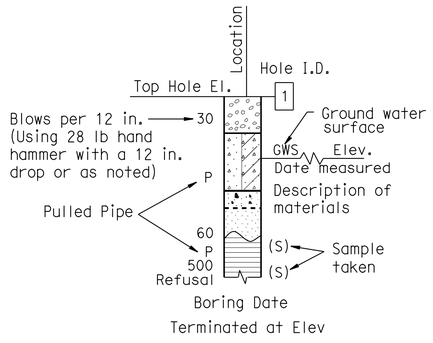
Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS

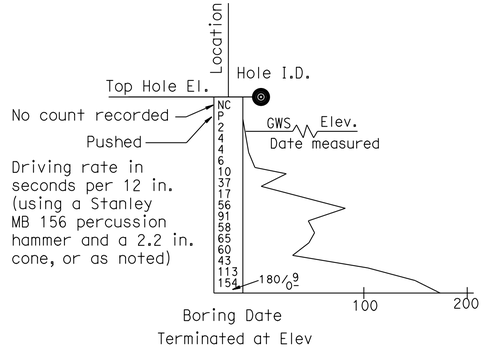
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



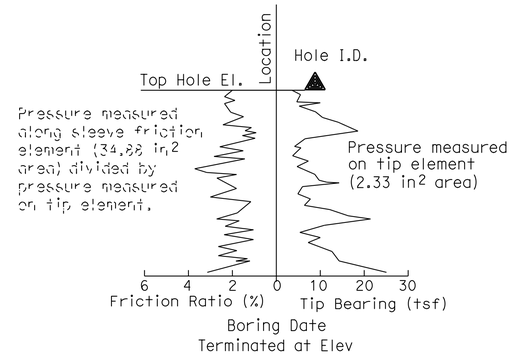
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) BORING

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW11
	PREPARED BY: W. Tang 02/12		DESIGN BRANCH X	57E0120	LOG OF TEST BORINGS 2 OF 4
				POST MILE 29.4	

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				14	16

FILE => 57E0120-z-1tb02.dgn

USERNAME => s12400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:46

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly-graded GRAVEL Poorly-graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly-graded GRAVEL with SILT Poorly-graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly-graded GRAVEL with CLAY (or SILTY CLAY) Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly-graded SAND Poorly-graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly-graded SAND with SILT Poorly-graded SAND with SILT and GRAVEL		
SP-SC	Poorly-graded SAND with CLAY (or SILTY CLAY) Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1011	1012

Michael M. Fordham 3-30-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 - 12
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay		Less than 1/300

ENGINEERING SERVICES	MATERIALS AND GEOTECHNICAL SERVICES	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES STRUCTURE DESIGN	BRIDGE NO.	RETAINING WALL NO. RW11
	PREPARED BY: W. Tang 02/12		DESIGN BRANCH X	57E0120	LOG OF TEST BORINGS 3 OF 4
				POST MILE 29.4	

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
				15	16

FILE => 57E0120-z-ltb03.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:46

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
11	SD	5	R29.1/R30.5	1012	1012

Michael M. Fordham 3-30-12
REGISTERED CIVIL ENGINEER DATE

07-21-14
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — Michael M. Fordham — No. C61341 — Exp. 6-30-15 — CIVIL — STATE OF CALIFORNIA

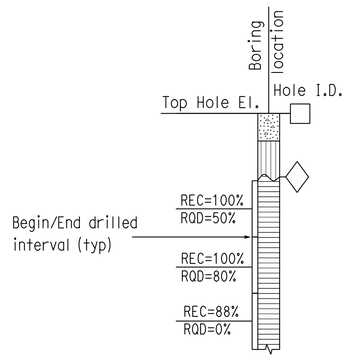
The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.

PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)

$$REC = \frac{\sum \text{Length of the recovered core pieces (in.)}}{\text{Total length of core run (in.)}} \times 100\%$$

$$RQD = \frac{\sum \text{Length of intact core pieces} \geq 4 \text{ in.}}{\text{Total length of core run (in.)}} \times 100\%$$

RQD* Indicates soundness criteria not met.



BEDDING SPACING

Description	Thickness / Spacing
Massive	Greater than 10 ft
Very Thickly Bedded	3 ft - 10 ft
Thickly Bedded	1 ft - 3 ft
Moderately Bedded	4 in. - 1 ft
Thinly Bedded	1 in. - 4 in.
Very Thinly Bedded	1/4 in. - 1 in.
Laminated	Less than 1/4 in.

LEGEND OF ROCK MATERIALS

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

ROCK HARDNESS

Description	Criteria
Extremely Hard	Cannot be scratched with a pocketknife or sharp pick. Can only be chipped with repeated heavy hammer blows.
Very Hard	Cannot be scratched with a pocketknife or sharp pick. Breaks with repeated heavy hammer blows.
Hard	Can be scratched with a pocketknife or sharp pick with difficulty (heavy pressure). Breaks with heavy hammer blows.
Moderately Hard	Can be scratched with pocketknife or sharp pick with light or moderate pressure. Breaks with moderate hammer blows.
Moderately Soft	Can be grooved 1/16 in. deep with a pocketknife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.
Soft	Can be grooved or gouged easily by a pocketknife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very Soft	Can be readily indented, grooved or gouged with fingernail, or carved with a pocketknife. Breaks with light manual pressure.

FRACTURE DENSITY

Description	Observed Fracture Density
Unfractured	No fractures.
Very Slightly Fractured	Core lengths greater than 3 ft.
Slightly Fractured	Core lengths mostly from 1 to 3 ft.
Moderately Fractured	Core lengths mostly from 4 in. to 1 ft.
Intensely Fractured	Core lengths mostly from 1 to 4 in.
Very Intensely Fractured	Mostly chips and fragments.

WEATHERING DESCRIPTORS FOR INTACT ROCK

Description	Diagnostic Features					General Characteristics
	Chemical Weathering-Discoloration and/or Oxidation		Mechanical Weathering-Grain Boundary Conditions (Disaggregation) Primarily for Granitics and Some Coarse-Grained Sediments	Texture and Leaching		
	Body of Rock	Fracture Surfaces		Texture	Leaching	
Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change	No leaching	Hammer rings when crystalline rocks are struck.
Slightly Weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discoloration or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved	Minor leaching of some soluble minerals.	Hammer rings when crystalline rocks are struck. Body of rock not weakened.
Moderately Weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened.
Intensely Weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened.
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes."

ENGINEERING SERVICES

MATERIALS AND GEOTECHNICAL SERVICES
PREPARED BY: W. Tang 02/12

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH X

BRIDGE NO. 57E0120
POST MILE 29.4

RETAINING WALL NO. RW11
LOG OF TEST BORINGS 4 OF 4

GS LOTB SOIL LEGEND

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3643
PROJECT NUMBER & PHASE: 11120001021 CONTRACT NO.: 11-0223U4

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-12				16	16

FILE => 57E0120-z-ltb04.dgn

USERNAME => s127400 DATE PLOTTED => 23-JUL-2014 TIME PLOTTED => 13:46