GENERAL STRUCTURAL NOTES:

1. REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60. ARC WELDING OF REINFORCING STEEL SHALL CONFORM TO AMERICAN WELDING SOCIETY STANDARDS FOR REINFORCING STEEL.

2. CONCRETE SHALL HAVE A MINIMUM STRENGTH OF 4000 psi AT 28 DAYS USING TYPE V CEMENT PER ASTM C-150. (DESIGN BASED ON f'c=4000 psi) SPECIAL INSPECTION SHALL BE REQUIRED ON ALL WALLS AND FOOTINGS UNLESS OTHERWISE NOTED.

3. MASONRY UNITS SHALL BE ASTM C-90, GRADE N-1 HOLLOW CONCRETE UNITS. MASONRY DESIGN STRESSES ARE AS FOLLOWS: f'm=1500 psi. FULL STRESSES FOR MASONRY HAVE BEEN USED. SPECIAL INSPECTION SHALL BE REQUIRED PER THE 1997 UBC, SECTION 1701, UNLESS OTHERWISE NOTED.

4. MORTAR SHALL BE ASTM C270, TYPE "M" or "S" WITH A MINIMUM STRENGTH OF 1900 psi AT 28 DAYS.

5. GROUT SHALL HAVE A MINIMUM STRENGTH OF 2000 psi AT 28 DAYS USING TYPE V CEMENT PER ASTM C-150.

6. FOOTINGS SHALL BE CAST AGAINST ADEQUATELY PLACED AND COMPACTED FILL FOR FULL DEPTH OF THE FOOTING OR FOOTING SHALL BE COMPLETELY BACKFILLED AND COMPACTED PER SPECIFICATIONS, AND THE RECOMMENDATIONS CONTAINED IN THE SOILS REPORT DESCRIBED IN NOTE 19, PRIOR TO PLACEMENT OF ANY BACKFILL BEHIND THE WALL.

7. UNLESS OTHERWISE NOTED, ALL CONSTRUCTION SHALL CONFORM TO THE UNIFORM BUILDING CODE, LATEST EDITION, AND PER STANDARD SPECIFICATIONS FOR CLARK COUNTY, NEVADA, BUILDING DEPARTMENT.

8. ALL WALLS ARE SUBJECT TO APPROVAL BY CLARK COUNTY, NEVADA, BUILDING DEPARTMENT.

9. SOLID GROUT ALL MASONRY UNITS THAT ARE BELOW THE HIGHEST FINISH GRADE OF THE WALL, OR AS SHOWN ON THE DRAWINGS

10. ALL CORNERS OR ANGLES SHALL BE TIED TOGETHER WITH REINFORCING STEEL AND GROUTED SOLID.

11. WHERE VERTICAL GROUT POURS ARE NOT CONTINUOUS FOR THE ENTIRE HEIGHT OF THE WALL, THE LIFTS SHALL BE TERMINATED 1 1/2" BELOW THE TOP OF THE TOP BLOCK TO FORM A KEY FOR FUTURE LIFTS.

12. CONSTRUCTION JOINTS IN RETAINING WALL SHALL BE LOCATED AT A MAXIMUM SPACING OF 30'-0".

13. JOINT REINFORCING AND BOND BEAMS SHALL NOT BE CONTINUOUS THROUGH WALL CONSTRUCTION JOINTS.

14. WALLS SHALL BE STEPPED IN INCREMENTS OF NOT MORE THAN 2'. UNLESS OTHERWISE SHOWN ON WALL PROFILE.

15. IF THE ACTUAL HEIGHT OF THE WALL IS NOT LISTED, THE CONTRACTOR SHALL USE THE STEEL AND DIMENSIONS FOR NEXT HIGHEST WALL SHOWN

16. WATERPROOFING: WATERPROOFING MEMBRANE SHALL BE APPLIED TO THE BACK OF THE RETAINING WALL. SHALL BE A 24-MIL DIMPLED HDPE MEMBRANE. THE CONTRACTOR SHALL PROVIDE DELTA-MS AS MANUFACTURED BY COSELLA-DORKEN. APPLICATION OF THE DELTA-MS SYSTEM SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS, DETAILS, AND MATERIALS.

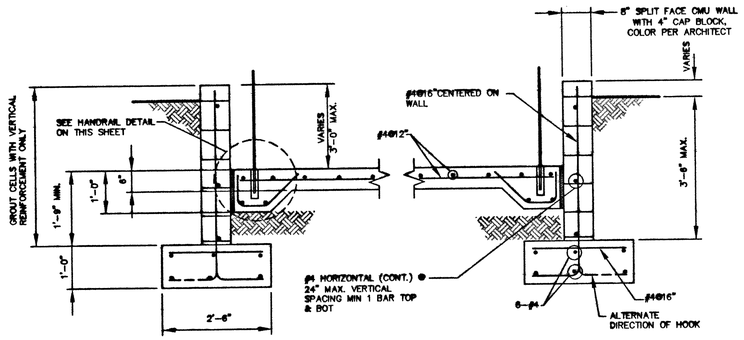
17. BACKFILL BEHIND WALLS SHALL BE COMPACTED TO 90% MAXIMUM. DRY DENSITY PER ASTM D1557, OR THE RECOMMENDATIONS CONTAINED IN THE SOILS REPORT, WHICHEVER IS MORE RESTRICTIVE.

18. PREPARATION OF FOUNDATION MATERIAL LOCATED BELOW THE BOTTOM OF WALL SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATION CONTAINED IN THE SOILS REPORT DESCRIBED IN NOTE 19 OF THESE PLANS.

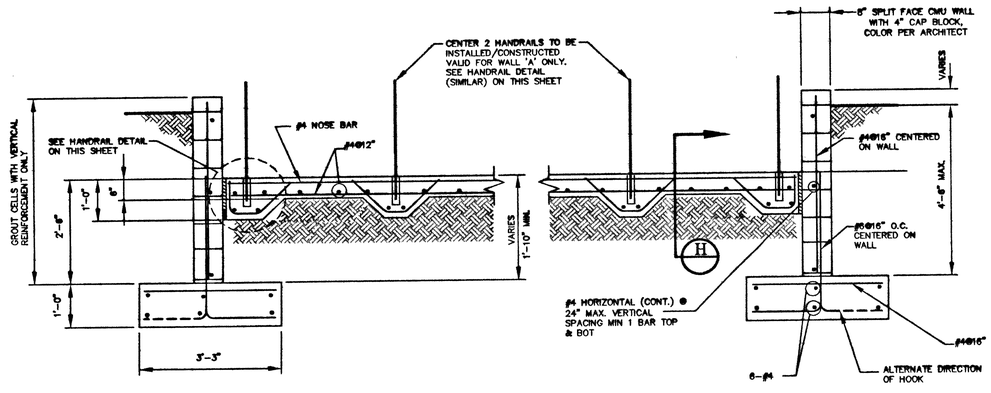
19. SOILS REPORT BY: "KLEINFELDER" DATED 02/28/01
   - (A) ALLOWABLE SOILS BEARING = 2500 PSF
   - (B) ACTIVE PRESSURE (USED FOR DESIGN) = 40 PCF (EQUIVALENT FLUID DENSITY)
   - (C) PASSIVE PRESSURE (USED FOR DESIGN) = 250 PCF (EQUIVALENT FLUID DENSITY)
   - (D) COEFFICIENT OF FRICTION = 0.30

20. HEAVY CONSTRUCTION EQUIPMENT SHALL BE MAINTAINED A DISTANCE OF AT LEAST 1/2 OF THE TOTAL DESIGN WALL HEIGHT AWAY FROM THE WALLS, OR 5'-0" WHICHEVER IS GREATER, WHILE THE BACKFILL IS PLACED AND COMPACTED. BACKFILL BEHIND THE WALL SHOULD BE PLACED AND COMPACTED IN ACCORDANCE WITH THE RECOMMENDATIONS OUTLINED IN THE SOILS REPORT DESCRIBED IN NOTE 19. HAND OPERATED COMPACTION EQUIPMENT SHOULD BE USED TO COMPACT BACKFILL SOILS WITHIN A 5 FOOT WIDE ZONE BEHIND WALLS UNLESS NOTED IN THE SOILS REPORT. THE CONTRACTOR SHALL EXERCISE CARE DURING BACKFIL OPERATIONS IN ORDER TO ASSURE THAT EXCESSIVE STRESSES ARE NOT INDUCED ON THE WALL DUE TO OVERCOMPACTION.

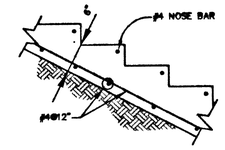
21. TRENCH EXCAVATION AND SHORING SHALL CONFORM TO OSHA REGULATIONS 29 CFR PART 1926, SUBPART C.



SECTION A-A

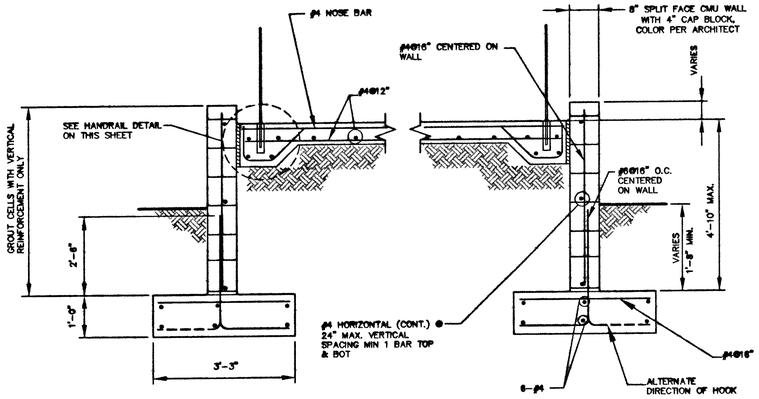


SECTION B-B

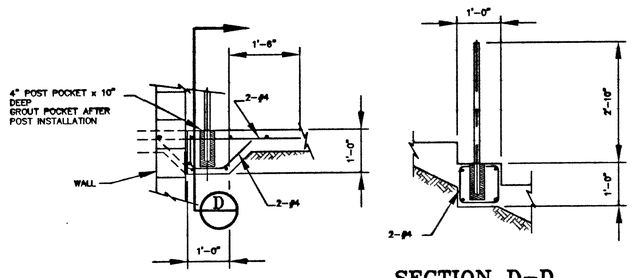


SECTION H-H
STAIRS SECTION

NTS



SECTION C-C



SECTION D-D

HANDRAIL DETAIL

REVISIONS

REV	DESCRIPTION	DATE	BY	DATE	BY

Call before you DIG 1-800-227-2600

Call before you OVERHEAD 1-702-227-2929

CCSD PROJECT NO.	1515		
CCSD REVIEW	-		
APPROVED BY	-		
DATE	JAN 14, 2003	DRAWN BY	KOH
CHECKED BY	VRH		
SUBMITTAL	BID SET		
PCF NUMBER NO.	WP-0214		

PROFESSIONAL ENGINEER STATE OF NEVADA JAIME M. CHANG No. 10673 CIVIL

PBSJ
2275 Corporate Circle Drive
Suite 300
Henderson, Nevada 89074
T 702.382.2616
F 702.382.2775
ENGINEERING PLANNING SURVEYING CONSTRUCTION MANAGEMENT

Architecture Design Planning
2460 EAST TOMPKINS AVENUE SUITE 222
LAS VEGAS, NEVADA 89121
(702) 435-1150
WELLES-PUGSLEY ARCHITECTS

CLARK COUNTY SCHOOL DISTRICT
CONSTRUCTION MANAGEMENT 4828 PEARL STREET LAS VEGAS, NEVADA 89121

ANTHONY SAVILLE MIDDLE SCHOOL
FORMERLY KNOWN AS GRAND TETON - TORREY PINES MIDDLE SCHOOL

RETAINING WALL, STAIR & RAMP DETAILS

715-15D

SHEET NO. C7.02

SHEET 33 OF 34

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